



February 21, 2023

Maryland Department of the Environment  
Oil Control Program  
1800 Washington Boulevard  
Baltimore, Maryland 21230-1719  
Attn: Ms. Lindley Campbell  
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**RE: Combined Quarterly Remediation and Groundwater Monitoring Report  
Fourth Quarter 2022**  
Calvert Citgo  
2815 North East Road  
North East, MD  
MDE OCP Case No. 1992-2616CE  
Facility No. 5678  
**REPSG Project Reference Numbers 5977.130.01 and 5977.130.02**

## 1.0 INTRODUCTION

### 1.1 Site Location and Description

The Site consists of an irregularly shaped parcel of land located at the street address of 2815 North East Road, in the Town of North East, Cecil County, Maryland. The Site measures approximately 1.05 acres in area; it is bounded by North East Road (MD Route 272) to the east, several single-family residences across North East Road; Quaker Lane (old MD Route 272) and agricultural land to the west, an access road and agricultural land to the south, and a mixture of residential, commercial, and agricultural land to the north. A diagram depicting Site location is provided in **Attachment 1**.

### 1.2 Site Features and Usage

The Site has operated as a retail petroleum station since the late 1950's and it continues to be operated in that capacity. Development at the Site consists of a single-story convenience store structure, located centrally at the Site, surrounded by landscaping, parking and drive areas typical of a service station. Gasoline and diesel pump islands are located east of the structure, parallel to Route 272. A kerosene pump island is located adjacent to and directly north of the structure. An on-Site septic tank is located to the southwest of the existing building. An on-Site potable well (DW-001) is

located approximately 33 feet west of the existing structure at the Site. This potable well is actively used by the facility occupying the Site and has a dedicated carbon filtration treatment system.

At present, the Site contains a total of three (3) USTs: one (1) 8,000-gallon steel-constructed UST containing gasoline; one (1) 12,000-gallon steel-constructed UST containing gasoline; and one (1) 12,000-gallon, steel-constructed compartmentalized (two (2) 6,000-gallon compartments) UST containing diesel fuel and kerosene. The gasoline USTs are located in a single tank field to the north of the structure. The diesel/kerosene fuel UST is situated beneath the diesel fuel pump island. All three (3) USTs were installed at the Site in February 1997, following the removal and disposal of the previous gasoline/diesel tank system. A diagram depicting Site features is provided as **Figure 2** in **Attachment 1**.

### 1.3 Area Topography

According to USGS topographic mapping (7.5-minute series, Bay View, Maryland Quadrangle) the Site is located at an elevation of approximately 420 feet above mean sea level (MSL). Topography at the Site slopes very gently towards the east and southeast (see **Figure 1** in **Attachment 1**).

### 1.4 Physiographic Province & Regional Geology

Based on review of mapping prepared by the Maryland Geological Survey<sup>1</sup>, the site lies within the Upland Section of the Piedmont Plateau Physiographic Province in Maryland. The Piedmont Plateau Province extends from the inner edge of the Coastal Plain westward to Catoctin Mountain, the eastern boundary of the Blue Ridge Province. The site is located in the eastern portion of the Piedmont Plateau, approximately five (5) miles to the northwest of the boundary between the Piedmont and the Coastal Plain province.

The Piedmont Plateau has considerably more topographic relief than the Coastal Plain, with gently rolling uplands having as much as 500 ft. of local relief. Landforms within this province are generally underlain by extremely deformed and folded schist, gneiss and quartzite bedrock, with an overburden of unconsolidated material known as regolith. In several places these rocks have been intruded by granitic plutons and pegmatites. Differential erosion of these contrasting rock types has produced a distinctive topography in this part of the Piedmont.

Geologic mapping<sup>2</sup> indicates that the Site and its vicinity are underlain by the Pelitic Gneiss rock unit (formerly mapped as a section of the Wissahickon Formation) of metasedimentary rocks. The Pelitic Gneiss is described as “*lustrous, brown, medium to coarse-grained muscovite-biotite-quartz-plagioclase*

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<sup>1</sup> Physiographic Provinces and their Subdivisions in Maryland, MGS, 2001: <http://www.mgs.md.gov/esic/brochures/mdgeology.html>

<sup>2</sup> Geologic Map of Cecil County, Maryland Geological Survey, 1986



*gneiss with... locally abundant red garnets... Unit has a streaked appearance due to...layers, veins, and stringers.”*  
Locally, the unit has an apparent thickness of up to 15,000 feet.

Based on Soil Survey mapping<sup>3</sup> for the area, soil at the Site is mapped as Glenelg loam (GeB), with 3 to 8 percent slopes. This soil type occurs on hillslopes and is described as “loamy residuum weathered from schist and phyllite.” The Glenelg loam is further described as well drained, with moderately high to high permeability, and with a seasonal high-water table greater than 80 inches from the surface.

## 1.5 Site Geology

### 1.5.1 *Lithology*

Based on the observations reported from soil investigations at the Site, the shallow subsurface materials consist primarily of brown to yellow-brown silty to sandy clay, and brown sand and gravel from the surface to a depth of approximately 10 to 15 feet below grade (fbg). Beginning at the depth of 10 to 15 fbg, the boring logs indicate the presence of highly weathered, dense, clayey unconsolidated materials, with significant mica content, that retain the foliation and schistosity of underlying bedrock (i.e., saprolite). Saprolite was observed to approximately 40 fbg. Competent bedrock was observed at a depth of 98 fbg during construction of the on-Site deep monitoring well MW-008D, at 67 fbg in off-Site deep monitoring well MW-009D, and at 67.4 fbg in off-Site deep monitoring well MW-010D.

### 1.5.2 *Other Geologic Structures*

A downhole acoustic test was completed on MW-008D on October 3, 2011 by Advanced Geologic Services (AGS). The results of this test indicated that the most prominent borehole fractures observable within the deep well were at 103 fbg, 110 fbg, and 111 fbg. The fractures noted at 110 fbg and 111 fbg were indicative of the presence of a water bearing zone. In addition to these primary fractures, two secondary fractures were observed at 117 fbg and 120 fbg. These fractures did not appear to supply a significant amount of water.

A downhole geophysical survey was completed on off-Site drinking water well DW-005 (located at 2802 Northeast Road) on April 21-22, 2015 by AGS. The geophysical borehole evaluation indicated that bedrock fractures are a combination of foliation fractures, non-foliation fractures, and high angle joint fractures; with a zone between depths of 200 feet and 230 feet containing several intersecting discontinuous fractures that, combined with the continuous fractures, may contribute water to the well. The results further indicated that the largest grouping of fractures within the well

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<sup>3</sup> Natural Resources Conservation Service, Web Soil Survey, <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>



is from 210 to 218 fbg. Packer testing conducted in conjunction with the downhole survey did not indicate a clear and distinct water bearing zone within the 0-250 foot depth range.

## 1.6 Hydrogeology

### 1.6.1 *Surface Water*

No surface water bodies are present on the Site. An unnamed drainage swale runs along the west side of North East Road, beginning just south of the intersection of North East Road and Quaker Lane. The nearest permanent body of water in the vicinity of the Site is a small pond connected to North East Creek and located approximately 1,695 feet southwest of the Site. Surface water drainage follows the general direction of the slope at the Site (southeasterly). Storm drain collection basins are located on the roads to the east and west the Site. No stormwater collection basins are present on the Site.

### 1.6.2 *Hydrology*

The Site is underlain by the Piedmont crystalline-rock aquifer systems; fractured igneous and metamorphic rock aquifers. This crystalline rock tends to possess low primary porosity; groundwater occurs and flows primarily through secondary porosity, i.e., rock joints and fractures. Groundwater in the fractured rock aquifers may occur in either confined or unconfined conditions. Groundwater flow patterns are dependent on multiple factors including regional topography, and various characteristics of rock fracturing, including orientation, density, and connectivity of the fractures. There is a shallow water table (i.e., unconfined) aquifer in the overburden and weathered rock layers above the top of competent fractured rock. Subsurface investigations at the Site indicated that groundwater table was generally first observed in the fine-grained overburden materials at the Site at depths of 20.0 to 24.5 fbg. Depths to water of 16.05-17.92 fbg were measured in the shallow groundwater monitoring wells included within the groundwater monitoring program during the June 2021 groundwater monitoring event. (See **Attachment 2** for recent groundwater level information.)

Based on review of water elevations in groundwater monitoring wells at the Site, as calculated from measurements obtained quarterly groundwater events (see **Attachment 2**), shallow groundwater at the Site is estimated to flow in a southeasterly direction, while deep groundwater has historically be interpreted to flow in a more east-southeasterly direction. It is not known whether variations in groundwater flow directions may be attributable to pumping in nearby potable wells, seasonal variations, or other factors. Recent groundwater contour diagrams are included in **Attachment 1**.



## 2.0 BACKGROUND

The Site has been under investigation in some capacity since at least 1991, with an ongoing groundwater monitoring program and drinking water monitoring program in progress under REPSG's oversight at the Site, as well as an off-Site drinking water monitoring program, since 2008. A summarized chronology of site activities since 2009, including dates of field activities, report submittals, and MDE directive letters, is included below.

### 2009

03/2009 Quarterly Groundwater and Drinking Water Sampling Event conducted March 12, 2009  
07/2009 Quarterly Groundwater and Drinking Water Sampling Event conducted July 21, 2009  
10/2009 MDE Site Status Letter Issued  
12/2009 Quarterly Groundwater and Drinking Water Sampling Event conducted December 11, 2009

### 2010

03/2010 Quarterly Groundwater and Drinking Water Sampling Event Conducted March 18, 2010  
04/2010 Site Status Report and Site Investigation Workplan (SSR/SIW) submitted by REPSG  
05/2010 Sentry I Open-Air volatilization system installed at both 2794 and 2802 Northeast residences  
05/2010 Quarterly Groundwater and Drinking Water Sampling Event Conducted May 24, 2010  
08/2010 Revised Subsurface Investigation Workplan (SIW) submitted by REPSG  
09/2010 Quarterly Groundwater and Drinking Water Sampling Event conducted September 15, 2010  
09/2010 Downhole acoustic test completed on DW-001 on September 29, 2010  
10/2010 Soil boring investigation (borings B-0013 through B-025) completed on October 5-6, 2010  
11/2010 Replacement shallow groundwater monitoring wells MW-001R, MW-003R, and MW-005R installed on November 10, 2010  
11/2010 Quarterly Groundwater and Drinking Water Sampling Event conducted November 28-29, 2010  
12/2010 Site Status Report (SSR) submitted by REPSG

### 2011

03/2011 Quarterly Groundwater and Drinking Water Sampling Event conducted March 23-24, 2011  
05/2011 Formal Request for Sampling Program Revision submitted by REPSG  
06/2011 MDE Extension Approval Directive Letter Issued  
06/2011 Quarterly Groundwater and Drinking Water Sampling Event Conducted June 19-20, 2011  
08/2011 Deep groundwater monitoring well MW-008D installed on August 8, 2011  
08/2011 Intermediate zone groundwater monitoring well MW-008 installed on August 26, 2011  
08/2011 Active Remedial Technologies Report submitted by REPSG  
09/2011 Quarterly Groundwater and Drinking Water Sampling Event conducted September 14-16, 2011  
10/2011 Downhole acoustic test completed on MW-008D on October 3, 2011  
11/2011 Quarterly Groundwater and Drinking Water Sampling Event conducted November 26-27, 2011



## 2012

02/2012 Quarterly Groundwater and Drinking Water Sampling Event conducted February 28-29, 2012

03/2012 Formal Request for Sampling Program Revision submitted by REPSG

05/2012 MDE Site Status Directive Letter Issued

05/2012 Discrete Zone Sampling Methodology information submitted by REPSG

05/2012 Quarterly Groundwater and Drinking Water Sampling Event conducted May 7-8, 2012

07/2012 Pilot Test Workplan (PTW) submitted by REPSG

08/2012 Quarterly Groundwater and Drinking Water Sampling Event conducted August 13-14, 2012

11/2012 Bench Test Workplan submitted by REPSG

11/2012 Quarterly Groundwater and Drinking Water Sampling Event conducted November 15-16, 2012

12/2012 MDE Denial of Bench Test Work Plan and Request for Additional Information Directive Letter Issued

12/2012 Response to Request for Additional Pilot Testing Information submitted by REPSG

## 2013

03/2013 Vapor monitoring points VMP-001, VMP-002, VMP-003, and VMP-004 installed on March 7, 2013

03/2013 Quarterly Groundwater and Drinking Water Sampling Event conducted March 7-8, 2013

03/2013 Full-scale Dual-Phase Extraction (DPE) Single-Well Pilot Test completed on March 13, 2013

04/2013 Sentry I Open-Air volatilization system removed from both 2794 and 2802 Northeast residences

04/2013 Quarterly Groundwater and Drinking Water Sampling Event conducted April 1-2, 2013

05/2013 Corrective Action Plan (CAP) submitted by REPSG

07/2013 CAP Addendum submitted by REPSG

09/2013 Quarterly Groundwater and Drinking Water Sampling Event conducted September 12-13, 2013

10/2013 MDE CAP Approval Letter Issued

10/2013 REPSG Response to MDE CAP Approval Letter

12/2013 Quarterly Groundwater and Drinking Water Sampling Event conducted December 17-18, 2013

## 2014

01/2014 Quarterly Groundwater and Drinking Water Sampling Event conducted January 13-14, 2014

02/2014 Proposed Interim Remedial Measures (PIRM) Letter submitted by REPSG

02/2014 Remedial Measures Update Letter submitted by REPSG

03/2014 Vapor Monitoring Points (VMP-001 through VMP-004) installed March 7-8, 2014

03/2014 Shallow and intermediate groundwater zone monitoring wells (MW-009, MW-009D, MW-010, and MW-010D) installed at off-Site residence properties March 10-12, 2014

04/2014 Quarterly Groundwater and Drinking Water Sampling Event conducted on April 21-23, 2014

07/2014 Quarterly Groundwater and Drinking Water Sampling Event conducted on July 29-31, 2014

08/2014 MDE Letter Request for In-Person Meeting

10/2014 In-Person Meeting at MDE between MDE, REPSG, and Responsible Parties to Discuss CAP and PIRM



10/2014 Quarterly Groundwater and Drinking Water Sampling Event Conducted October 20-22, 2014

11/2014 Revised Scope of Work/Supplemental Work Plan (SOW) submitted by REPSG

### 2015

01/2015 Quarterly Groundwater and Drinking Water Sampling Event Conducted January 20-22, 2015

02/2015 MDE Partial Workplan Approval Letter Issued

04/2015 Geophysical borehole survey (“downhole acoustic”) and discrete-zone (“packer testing”) was conducted at DW-005 on April 21-24, 2015

05/2015 Quarterly Groundwater and Drinking Water Sampling Event Conducted April 27-May 1, 2015

06/2015 Supplemental Investigation Report submitted by REPSG

07/2015 Quarterly Groundwater and Drinking Water Sampling Event Conducted July 13-15, 2015

09/2015 Response to Request for Ozone Pilot Testing and Full System Install Information submitted by REPSG

10/2015 Quarterly Groundwater and Drinking Water Sampling Event Conducted October 20-22, 2015

### 2016

01/2016 Quarterly Groundwater and Drinking Water Sampling Event Conducted January 19-21, 2016

02/2016 MDE Ozone Pilot Test Approval Letter Issued

03/2016 REPSG response to MDE Ozone Pilot Test Approval Letter

04/2016 Quarterly Groundwater and Drinking Water Sampling Event Conducted April 12-15, 2016

08/2016 Off-Site Ozone Treatability Bench-Test Study conducted on August 23, 2016

08/2016 Quarterly Groundwater and Drinking Water Sampling Event Conducted August 23-25, 2016

10/2016 Off-Site Ozone Treatability Bench-Test Study submitted by REPSG

10/2016 MDE Notice of Non-Compliance of CAP Implementation Letter Issued

10/2016 REPSG Response to MDE Notice of Non-Compliance Letter Issued

11/2016 Quarterly Groundwater and Drinking Water Sampling Event Conducted November 8-10, 2016

12/2016 Installation of Dual-Phase Extraction (DPE) System Components at Site begun on December 12, 2016

### 2017

03/2017 Quarterly Groundwater and Drinking Water Sampling Event Conducted March 6-8, 2017

04/2017 DPE System Installation Completed and System Started on April 24, 2017

05/2017 DPE System Startup Summary submitted by REPSG

05/2017 Quarterly effluent water sample collected from frac tank inlet and quarterly vapor emissions sample collected from DPE system on May 12, 2017

06/2017 Quarterly Groundwater and Drinking Water Sampling Event Conducted May 30-June 1, 2017

06/2017 Effluent water sample collected from frac tank inlet on June 21, 2017

06/2017 First Dual-Phase Extraction System Remedial Action Progress Report submitted by REPSG



07/2017 Quarterly effluent water sample collected from frac tank inlet and quarterly vapor emissions sample collected from DPE system on July 11, 2017  
08/2017 Quarterly Groundwater and Drinking Water Sampling Event Conducted August 14-16, 2017  
11/2017 Quarterly Groundwater and Drinking Water Sampling Event Conducted November 14-16, 2017  
11/2017 Quarterly effluent water sample collected from frac tank inlet and quarterly vapor emissions sample collected from DPE system on November 15, 2017  
12/2017 Second Dual-Phase Extraction System Remedial Action Progress Report submitted by REPSG

**2018**

02/2018 Damage sustained by DPE system during winter assessed on February 27-28, 2018  
03/2018 MDE Reporting Requirements Directive Letter Issued  
03/2018 Quarterly Groundwater and Drinking Water Sampling Event Conducted March 6-8, 2018  
03/2018 Repairs to DPE system completed between March 8-29, 2018; system restarted on March 30, 2018  
05/2018 Off-Site Ozone/Ultraviolet Treatment Pilot Test at 2794 Northeast Road Event Conducted May 29-31, 2018 (Report will be provided under separate cover)  
06/2018 Quarterly Groundwater and Drinking Water Sampling Event Conducted June 12-13, 2018  
06/2018 Quarterly effluent water sample collected from frac tank inlet at DPE system on June 15, 2018  
06/2018 Quarterly vapor emissions samples collected from DPE system on June 19, 2018  
09/2018 Quarterly Groundwater and Drinking Water Sampling Event Conducted September 18-19, 2018  
09/2018 Quarterly effluent water sample collected from frac tank inlet at DPE system on September 26, 2018  
09/2018 Quarterly vapor emissions samples collected from DPE system on September 26, 2018  
11-12/2018 DPE System Trenching and Discharge Point Installation Conducted November 26, 2018 through December 14, 2018  
12/2018 Quarterly Groundwater and Drinking Water Sampling Event Conducted December 10-12, 2018

**2019**

03/2019 Quarterly Groundwater and Drinking Water Sampling Event Conducted March 4-6, 2019  
04/2019 Repairs to DPE system completed in April 2019 with the system restarted on April 16, 2019  
06/2019 Quarterly Groundwater and Drinking Water Sampling Event Conducted June 11-13, 2019  
06/2019 Quarterly effluent water sample collected from frac tank inlet at DPE system on June 13, 2019  
06/2019 Quarterly vapor emissions samples collected from DPE system on June 13, 2019  
09/2019 Quarterly Groundwater and Drinking Water Sampling Event Conducted September 18-20, 2019  
09/2019 Quarterly effluent water sample collected from frac tank inlet at DPE system on September 30, 2019  
09/2019 Quarterly vapor emissions samples collected from DPE system on September 30, 2019  
10/2019 Quarterly Drinking Water Sampling Event for VOCs from On-Site Conducted on





October 24, 2019  
11/2019 Quarterly Drinking Water Sampling Event for chlorine from On-Site Conducted on November 25, 2019  
11/2019 Quarterly Groundwater and Drinking Water Sampling Event Conducted November 25, 2019  
11/2019 Quarterly effluent water sample collected from frac tank inlet at DPE system on November 26, 2019  
11/2019 Quarterly vapor emissions samples collected from DPE system on November 25, 2019

### 2020

03/2020 Quarterly Groundwater Sampling Event Conducted March 30-31, 2020  
Drinking water was not collected from on-site during the March 2020 mobilization as a precaution during the COVID-19 pandemic health crisis.  
06/2020 Quarterly Groundwater and Drinking Water Sampling Event Conducted June 9-12, 2020  
06/2020 Quarterly Drinking Water Sampling Event for chlorine from On-Site Conducted on June 26, 2020  
06/2020 Quarterly effluent water sample collected from frac tank inlet at DPE system on June 26, 2019  
06/2020 Quarterly vapor emissions samples collected from DPE system on June 26, 2020  
07/2020 Effluent water sample collected from frac tank inlet at DPE system on July 14, 2020  
07/2020 Effluent water sample collected from frac tank inlet at DPE system on July 31, 2020  
07/2020 Quarterly Drinking Water Sampling Event from On-Site Conducted on July 31, 2020  
09/2020 Quarterly Groundwater Sampling Event Conducted September 14-17, 2020  
09/2020 Effluent water sample collected from DPE system outfall on September 16, 2020  
09/2020 Quarterly vapor emissions samples collected from DPE system on September 30, 2020  
10/2020 Quarterly drinking water sample collected from on-Site on October 30, 2020  
11/2020 Effluent water sample collected from DPE system outfall on November 19, 2020  
11/2020 Effluent water sample collected from DPE system outfall on November 24, 2020  
12/2020 Quarterly groundwater sampling, quarterly vapor emissions sampling from DPE system, and effluent water sample collected from DPE system outfall conducted December 1-4, 2020  
12/2020 Effluent water sample collected from DPE system outfall on December 22, 2020

### 2021

01/2021 Effluent water sample collected from DPE system outfall on January 6, 2021  
Effluent water sample collected from DPE system outfall on January 25, 2021  
02/2021 Quarterly Drinking Water Sampling Event from On-Site Conducted on February 26, 2021  
03/2021 Quarterly groundwater sampling, quarterly vapor emissions sampling from DPE system, and effluent water sample collected from DPE system outfall conducted March 16-19, 2021  
04/2021 Effluent water sample collected from DPE system outfall on April 7, 2021  
05/2021 Effluent water sample collected from DPE system outfall on May 6, 2021  
05/2021 Quarterly Drinking Water Sampling Event from On-Site Conducted on May 6, 2021  
05/2021 Effluent water sample collected from DPE system outfall on May 26, 2021  
06/2021 Quarterly groundwater sampling, quarterly vapor emissions sampling from DPE system, and effluent water sample collected from DPE system outfall conducted June 14-17, 2021



07/2021 Effluent water sample collected from DPE system outfall on July 7, 2021  
08/2021 Effluent water sample collected from DPE system outfall on August 19, 2021  
09/2021 Quarterly groundwater sampling, quarterly vapor emissions sampling from DPE system, and effluent water sample collected from DPE system outfall conducted September 7-10, 2021  
10/2021 Effluent water sample collected from DPE system outfall on October 14, 2021  
11/2021 Effluent water sample collected from DPE system outfall on November 18, 2021  
12/2021 Quarterly groundwater sampling, quarterly vapor emissions sampling from DPE system, and effluent water sample collected from DPE system outfall conducted December 13-17, 2021

## 2022

01/2022 Effluent water sample collected from DPE system outfall on January 11, 2022  
02/2022 Effluent water sample collected from DPE system outfall on February 17, 2022  
03/2022 Quarterly groundwater sampling, quarterly vapor emissions sampling from DPE system, and effluent water sample collected from DPE system outfall conducted March 13-15, 2022  
04/2022 Effluent water sample collected from DPE system outfall on April 20, 2022  
05/2022 Effluent water sample collected from DPE system outfall on May 18, 2022  
06/2022 Quarterly groundwater sampling, quarterly vapor emissions sampling from DPE system, and effluent water sample collected from DPE system outfall conducted June 13-15, 2022  
07/2022 Effluent water samples collected from DPE system outfall on July 25, 2022  
08/2022  
09/2022 Quarterly Drinking Water Sampling Event from On-Site conducted on September 1, 2022. Effluent water sample collected from DPE system outfall on September 1, 2022. Quarterly groundwater sampling and quarterly vapor emissions sampling from DPE system conducted September 19-20, 2022.  
10/2022 Effluent water sample collected from DPE system outfall on October 19, 2022.  
11/2022 Effluent water sample collected from DPE system outfall on November 18, 2022.  
12/2022 Quarterly Drinking Water Sampling Event from On-Site, quarterly vapor emissions sampling from DPE system, and effluent water sample collected from DPE system outfall conducted on December 15, 2022. Quarterly groundwater sampling conducted December 29-30, 2022.

In addition to the above listed items, off-Site drinking water samples have been collected on an approximately monthly basis at both 2794 and 2802 North East Road since 2009. Exceptions to this collection schedule only occur when access to a property is restricted/unavailable due to the homeowner's lack of response to requests for access, and more recently as a precaution during the COVID-19 pandemic health crisis. During this reporting period, drinking water samples were not collected at 2802 North East Road due to lack of access. REPSG understands via communication with the property owner that the property is expected to remain vacant until May 2023.

### **3.0 ONGOING GROUNDWATER MONITORING**

#### **3.1 Groundwater Monitoring Methodology**

All historical groundwater monitoring wells and measuring points at the Site are gauged and sampled via purge-method sampling as follows:



- Open well and immediately collect an air reading via a photoionization detector (PID) to analyze for volatile organic compounds (VOCs) to determine if any possible health and safety issues are present. Readings are recorded. If necessary, any appropriate health and safety measures are taken.
- Using liquid level measuring device, water level and total depth of the well is gauged and record on appropriate groundwater sampling data sheets.
- PID readings, water level and total depth of well are taken at each well included within the scope of sampling prior to conducting any purging activities.
- Following water measurement collection at each well, equipment is decontaminated before use in any other wells.
- Calculate the water volume of the well.
- Begin purging of the well, using a submersible pump, and take Water Quality Indication Parameters (WQIP). WQIP includes pH, temperature, turbidity, dissolved oxygen, and specific conductivity of the water. Readings are subsequently taken for every (3) gallons of purge water after the initial. Notes on the initial color, clarity and odor(s) of the water are taken as appropriate.
- All purged water is pumped directly into drum for future disposal by a licensed disposal facility.
- Continue purging of the well until three (3) consecutive readings of the WQIP are consistent in succession.
- Once the parameters hold constant, the pump and tubing are removed from the well to prepare for sample collection.
- Using a disposable bailer, water is collected from the well and deposited in the necessary bottleware, according to the specific regulations.
- Following the completion of sampling at each well, equipment is decontaminated before use in any other wells.
- Samples are labeled and placed in a cooler and sent to the lab for analysis under chain of custody.

### 3.2 Groundwater Monitoring Activities

This Combined Report covers the period of time that includes the fourth quarter of 2022.

#### 3.2.3 *Groundwater Gauging and Sampling Program*

Prior to the second quarter 2017, REPSG collected samples from thirteen (13) on-Site monitoring wells/measuring points. Beginning in April 2017, REPSG began active remediation via dual phase extraction (DPE). As outlined in REPSG's *DPE System Start-Up Report*, dated May 19, 2017, three (3) monitoring wells (MW-001, MW-003R, and MW-005R) were converted to extraction wells and are no longer accessible for collecting groundwater samples. A figure depicting the groundwater monitoring well network, as well as on-Site and off-Site potable wells is included as **Figure 3 in Attachment 1**.



Therefore, beginning in the third quarter of 2017, there are ten (10) monitoring wells/measuring points on-Site and four (4) off-Site monitoring wells gauged and sampled quarterly. The wells currently included in the groundwater monitoring program are listed in **Table 1**, below.

**Table 1 - Current Monitoring Well Network**

MP-001	MW-002	MW-006	MW-008D	MW-010*
MP-002	MW-003	MW-007	MW-009*	MW-010D*
MW-001R	MW-005	MW-008	MW-009D*	

\* = Off-Site well

### 3.2.3.1 Groundwater Gauging Results

No liquid phase hydrocarbon (LPH) was observed in any of the wells included within the groundwater monitoring program during this period. Field collection notes are included in **Attachment 4**. Well gauging and elevation data is provided in **Attachment 2**. Groundwater contour diagrams for this groundwater sampling event are included as **Figures 5 and 6** in **Attachment 1**.

### 3.2.3.2 Groundwater Sampling Results

Groundwater samples were collected on December 29-30, 2022. All groundwater samples were submitted, packed on ice and under chain of custody, to Eurofins Testing America Laboratories in Edison, NJ for analysis of VOCs including fuel oxygenates via EPA method 8260. Eurofins Testing America Laboratories is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP (NJ Cert No. 12028).

Results of the groundwater investigation laboratory analyses were compared against the applicable MDE VCP groundwater standards. Laboratory analytical results indicated the presence of several VOCs at concentrations above the applicable MDE VCP Groundwater Standards<sup>4</sup>. This comparison indicated that results for this reporting period were consistent with prior sampling events, with the following exceptions and outliers:

- MP-001 did not have an exceedance of methyl bromide, following the first recorded exceedance of this compound since September 2020 that occurred in September 2022
- MW-001R did not have an exceedance of methyl bromide, following the first recorded exceedance of this compound since June 2019 that occurred in September 2022

<sup>4</sup> Maryland Department of the Environment (MDE) Voluntary Cleanup Program (VCP): Generic Numeric Cleanup Standards for Groundwater for Type I & II Aquifers, Tables 1 and 2 (October 2018).



- MW-001R did not have an exceedance of benzene for the second consecutive quarter after having one for fourteen consecutive quarters;
- MW-001R had a decrease of TBA by two orders of magnitude from the previous four quarters;
- MW-001R did not have an exceedance of 1,2-dichloroethane after having one for twelve consecutive quarters;
- MW-002 had an exceedance of benzene for the fourth consecutive quarter;
- MW-003 had an exceedance of benzene after not having one for the first quarter in two quarters in September 2022;
- MW-005 did not have an exceedance for ethylbenzene for the fifth consecutive quarter, following the last recorded exceedance for this compound that occurred in September 2021;
- MW-005 did not have an exceedance of methyl bromide, following the first recorded exceedance for this compound since June 2019 that occurred in September 2022;
- MW-005 did not have an exceedance of methyl chloride, following the first recorded exceedance for this compound since March 2020 that occurred in September 2022;
- MW-007 did not have an exceedance of methyl bromide, following the first recorded exceedance for this compound since November 2019 that occurred in September 2022;
- MW-007 showed a continued decrease in compound of concern concentrations for the fifth consecutive quarter, with the exception of benzene, which remained above the clean-up standard; and acetone which was below the respective clean-up standard;
- MW-008 had an exceedance of benzene after not having one for three consecutive quarters;
- MW-008 showed an exceedance of MTBE for the third consecutive quarter after a below standard result that occurred in March 2022 after being above the standard for the previous six consecutive quarters;
- MW-008D did not have exceedance of methyl bromide, following the only recorded exceedance of this compound that occurred in September 2022;
- MW-009 did not have exceedance of methyl bromide, following the only recorded exceedance of this compound that occurred in September 2022;
- MW-009D did not have exceedance of methyl bromide, following the only recorded exceedance of this compound that occurred in September 2022;
- MW-009D had an exceedance of 1,2-dichloroethane for the second consecutive quarter, after having an exceedance in the second quarter of 2021, which was the first recorded exceedance for this compound since November 2019;
- MW-009D had an increase of TBA of two orders of magnitude from the previous quarter;
- MW-010 had an exceedance of 1,2-dichloroethane for the second consecutive quarter, after not having one for the first quarter in ten quarters in June 2022;



- MW-010D had an exceedance of 1,2-dichloroethane after not having one for three consecutive quarters;

The exceedances of methyl bromide and methyl chloride that occurred during Q3 appear to be anomalous, and will continue to be monitored to confirm. The results from the fourth quarter 2022 groundwater sampling program generally reflect overall trends observed over the most recent year of characterization.

A comparison summary of groundwater analytical results is provided in **Attachment 2**. The complete analytical laboratory reports and associated chains of custody are provided in **Attachment 3**. Contaminant distribution maps for the groundwater sampling event showing compound concentrations above the applicable MDE VCP groundwater standards in groundwater at the Site is presented as **Figure 7** in **Attachment 1**.

#### 4.0 ONGOING DRINKING WATER MONITORING PROGRAM

This Combined Report covers the period of time that includes the fourth quarter 2022.

##### 4.1 On-Site Drinking Water Monitoring Program

Drinking water samples are collected on a quarterly basis on-Site. A Granular Activated Carbon Filtration (GAC) system is in place at this location. The carbon in this system was rotated/replaced during the third quarter 2022 on August 29, 2022. These samples are historically collected as follows:

- DW-001: Pre-Carbon Filtration
- DW-001A: Mid-Carbon Filtration
- DW-001B: Post-Carbon Filtration

During this reporting period, quarterly drinking water samples were collected on-Site on December 15, 2022.

All drinking water samples are submitted, packed on ice and under chain of custody, to ALS for the analysis of VOCs including fuel oxygenates via EPA method 524.2 and for total residual chlorine via method S4500ClG-00. ALS is a NELAP accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP (MD Cert No. 128)<sup>5</sup>.

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<sup>5</sup> For the compound 1,1-Dichloroethene it should be noted that ALS no longer holds NELAP accreditation. NELAP accreditation for this compound was held by ALS prior to the second quarter 2018 reporting period. This compound has not been detected in



The results of the drinking water analysis are compared against the drinking water standards set by the U.S. Environmental Protection Agency (USEPA)<sup>6</sup>, which sets legal limits that certain compounds in drinking water should meet in order to be protective of human health. Not all compounds analyzed for in drinking water samples have standards set by the USEPA. MTBE for which no standard is set by the EPA, is therefore compared against the MDE's recommended control level of 20 parts per billion.

Analysis results did not identify the presence of any target VOCs or residual chlorine at concentrations above the applicable standards in any samples. This comparison indicated that results for this reporting period were consistent with prior sampling events, with no unanticipated exceedances or outliers. A comparison summary of on-Site drinking water analytical results is provided in **Attachment 2**.

The complete analytical laboratory reports and associated chains of custody are provided in **Attachment 3**.

#### 4.2 Off-Site Drinking Water Monitoring Program

In addition to the on-Site drinking water sampling program, off-Site drinking water samples are collected on a monthly basis from the residences located at 2794 Northeast Road and 2802 Northeast Road. Drinking water samples were not collected at 2802 Northeast Road for the December sampling event due to the homeowner refusing access. GAC systems are in place at both of these residences. The carbon in the system at 2794 Northeast Road was rotated/replaced during the third quarter on September 1, 2022. The carbon in the system at 2802 Northeast Road was also rotated/replaced on September 1, 2022. These samples are collected as follows:

- Off-Site, 2794 Northeast Road (O'Brien Residence)
  - DW-004C: Pre-Carbon Filtration
  - DW-004I: Mid-Carbon Filtration 1
  - DW-004J: Mid-Carbon Filtration 2
  - DW-004K: Post-Carbon Filtration
  
- Off-Site, 2802 Northeast Road (Harrison Residence)
  - DW-005A: Pre-Carbon Filtration

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drinking water at the Site or at the Off-Site residences in sampling events for the last 9 years. It is not a compound of concern at the Site.

<sup>6</sup> EPA National Primary Drinking Water Standards: Office of Water (June 2003) and the most conservative of EPA Drinking Water Advisory levels: Office of Water (April 2012).



- DW-005I: Mid-Carbon Filtration 1
- DW-005J: Mid-Carbon Filtration 2
- DW-005K: Post-Carbon Filtration

During this reporting period, monthly drinking water samples were collected as follows:

- *Off-Site, 2794 Northeast Road (O'Brien Residence):* October 19, 2022, November 18, 2022, and December 15, 2022.
- *Off-Site, 2802 Northeast Road (Harrison Residence):*

All drinking water samples are submitted, packed on ice and under chain of custody, to ALS of VOCs including fuel oxygenates via EPA method 524.2.

The results of the drinking water analysis were compared against the drinking water standards set by the U.S. Environmental Protection Agency (USEPA)<sup>7</sup>, which sets legal limits that certain compounds in drinking water should meet in order to be protective of human health. Not all compounds analyzed for in drinking water samples have standards set by the USEPA. MTBE for which no standard is set by the EPA, is therefore compared against the MDE's recommended control level of 20 parts per billion.

Laboratory analytical results indicated the presence of MTBE and 1,2-dichloroethane at concentrations above the applicable standard in pre-filtration sample DW-004C. This comparison indicated that results for this reporting period were otherwise consistent with prior sampling events, with no unanticipated exceedances or outliers. A comparison summary of off-Site drinking water analytical results is provided in **Attachment 2**.

The complete analytical laboratory reports and associated chains of custody are provided in **Attachment 3**.

#### 4.3 Drinking Water Monitoring Notice of Violation

A MDE Notice of Violation (NoV) dated January 27, 2021 was received and responded to on March 31, 2021. The NoV required the continuous operation of the DPE system as well as treatment system upgrades for the off-Site properties to remediate persistent tertiary-butyl alcohol (TBA) concentrations.

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<sup>7</sup> EPA National Primary Drinking Water Standards: Office of Water (June 2003) and the most conservative of EPA Drinking Water Advisory levels: Office of Water (April 2012).





Upgrades to the DPE system were undertaken during the 2020-2021 winter season. This Quarterly Report as well as future reports will document the results of the continued remediation efforts. Furthermore, REPSG has improved the remediation efforts of TBA by increasing the frequency of changeout of GAC at the off-Site properties to a quarterly schedule, beginning in April 2021, as was documented in the correspondence provided to MDE dated March 31, 2021. The next planned Changeout will occur in Q1 2023.

## 5.0 ONGOING DPE SYSTEM OPERATION

This Combined Report covers the period of time that includes the fourth quarter 2022.

### 5.1 DPE System Set-Up

The Dual-Phase Extraction (DPE) system at the Site was initially started on April 24, 2017. The system consists of a network of monitoring wells that have been converted to extraction wells piped to a central remediation system. The DPE system utilizes extraction of vapor and groundwater for mass removal of petroleum-related regulated compounds in the unsaturated zone from the subsurface. A figure depicting the vapor extraction wells, vapor monitoring points, and the DPE system is included in **Attachment 1**. A copy of the Soil Vacuum Extraction & Groundwater Air Stripping (SVE) System Permit (No. 015-0173-9-0226) is included in **Attachment 5**.

System performance is monitored through readings taken from diagnostic gauges on system equipment.

### 5.2 DPE System Downtime and Maintenance

During the third quarter 2020 reporting period, updates were completed to the DPE system to allow the system to begin drawing from an additional two (2) wells (MW-001 and MW-003R) and to begin discharging to the surface in accordance with the approved NPDES permit. These updates included the installation of both a liquid-phase carbon filtration system as well as a vapor-phase carbon filtration system. With these additions and adjustments in place, beginning in August 2020, the system is now operating on three (3) wells (MW-001, MW-003R, and MW-005R), and is discharging to the surface in accordance with the approved NPDES permit.

During the fourth quarter 2022 reporting period, the DPE system did not experience any. REPSG is in the process of installing a remote monitoring control system in order to limit downtime due to outages. System maintenance during this reporting period included routine monitoring and maintenance, including on December 15 and 17, 2022.



### 5.3 DPE System Performance

The period and cumulative operating time for the DPE system is shown on **Table 2**, below.

**Table 2: DPE System Operating Time**

Monitoring Period		Operating Days	Operating Hours, Period	Operating Hours, Cumulative
start	end	(days)	(hours)	(hours)
4/24/17	6/21/17	58	1,056	1,056
6/21/17	9/30/17	101	1,414	2,470
10/1/17	12/31/17	92	1,776	4,246
1/1/18	3/29/18	Not Operational - Winter Downtime		
3/30/18	6/30/18	93	1,680	5,926
7/1/18	9/30/18	92	816	6,742
10/1/18	12/31/18	92	720	7,462
1/1/19	3/31/19	Not Operational - Winter Downtime		
4/1/19	6/30/19	65	1,560	9,022
7/1/19	9/30/19	79	1,896	10,918
10/1/19	12/31/19	60	1,440	12,358
1/1/20	5/31/20	Not Operational - Winter Downtime & System Repairs		
6/1/20	6/30/20	5	120	12,478
7/1/20	9/30/20	51	1,224	13,702
10/1/20	10/6/20	6	144	13,846
10/7/20	11/18/20	Not Operational - System Repairs		
11/19/20	12/31/20	35	840	14,686
01/01/21	1/19/21	Not Operational - Winter Downtime		
01/20/21	03/11/21	Not Operational - System Repairs		
03/12/21	03/31/21	19	456	15,142
04/01/21	4/09/21	9	216	15,358
4/10/21	5/5/21	Not Operational - System Down		
5/6/21	6/30/21	56	1,344	16,702
7/1/21	7/26/21	26	624	17,326
7/27/21	8/9/21	Not Operational - System Down		
8/10/21	9/1/21	23	552	17,878
9/2/21	9/10/21	Not Operational - System Down		
9/11/21	9/30/21	20	480	18,358
10/1/21	12/11/21	72	1,728	20,086
12/12/21	12/16/21	Not Operational - System Down		
12/17/21	12/31/21	15	360	20,446
1/1/22	1/21/22	21	504	20,950
1/22/22	2/16/22	Not Operational - System Down		
2/17/22	2/27/22	11	264	21,214
2/28/22	3/13/22	Not Operational - System Down		



Monitoring Period		Operating Days	Operating Hours, Period	Operating Hours, Cumulative
start	end	(days)	(hours)	(hours)
3/14/22	3/31/22	18	432	21,646
4/1/22	4/4/22	Not Operational - System Down		
4/5/22	6/8/22	65 <sup>8</sup>	1,560	23,206
6/9/22	9/1/22	85	2,040	25,246
9/2/22	9/19/22	Not Operational - System Down		
9/20/22	12/8/22	80	1,920	27,166

### 5.3.4 DPE System Liquid Recovery

Prior to surface discharging under the approved NPDES permit beginning in August 2020, liquid extracted from the DPE system used to be stored on-Site in a frac tank since system startup. This frac tank has remained empty since July 15, 2020 and was removed on January 19, 2021. During the NPDES DMR periods which correspond with the timeframe documented by this Combined Report (September 8, 2022 through December 8, 2022), approximately, 13,522.24 gallons of water was treated and discharged to the approved surface discharge point at the Site. Beginning with the groundwater sampling event conducted in Q2 2022 this volume also includes purge water generated during the sampling of the monitoring well network.

Effluent water samples are collected via a sampling port attached to the piping run between the system trailer and liquid-phase carbon filtration systems. During the NPDES DMR periods which correspond with the timeframe documented by this Quarterly Report (September 8, 2022 through December 8, 2022), effluent water samples were collected on October 19, and November 18. These samples were submitted, packed on ice and under chain of custody, to ALS for analysis of VOCs including fuel oxygenates via EPA method 8260.

The effluent analytical results were compared to the applicable MDE VCP Groundwater Standards. This comparison indicated that results for this reporting period were consistent with prior sampling events, with no unanticipated exceedances or outliers. A comparison summary of effluent water analytical results is provided in **Attachment 2**. The complete analytical laboratory reports and associated chains of custody are provided in **Attachment 3**.

Utilizing data provided via the DPE system and associated water effluent samples, total contaminate mass removed via liquid by the DPE system has been calculated. **Table 3** shows relevant values both

<sup>8</sup> Mathematical error identified from previous reporting. The Q2 2022 report indicated this timeframe as 57 days, 1,368 hours operational time.



for this reporting period and cumulative since system start up. No light non-aqueous phase liquid was recovered during this reporting period.

**Table 3 - Contaminant Mass Removed - Liquid**

Monitoring Period		GW Recovered, Period	GW Recovered, Cumulative	Average Total Dissolved VOC Concentration in Recovered GW, Period	VOC Recovery, Period	VOC Recovery, Cumulative
start	end	(gallons)	(gallons)	(µg/l)	(lbs)	(lbs)
4/24/17	6/21/17	8,250	8,250	14,963	0.460	0.460
6/21/17	9/30/17	13,995	22,245	9,914	0.868	1.328
10/1/17	12/31/17	5,287	27,532	3,524	0.155	1.483
1/1/18	3/29/18	Not Operational - Winter Downtime				
3/30/18	6/30/18	10,756	38,288	1,612	0.145	1.628
7/1/18	9/30/18	8,090	46,378	2,028	0.137	1.765
10/1/18	12/30/18	4,451	50,829	No Data Available	No Data Available	No Data Available
1/1/19	3/31/19	Not Operational - Winter Downtime				
4/1/19	6/30/19	6,891	57,720	1,321	0.125	1.890
7/1/19	9/30/19	7,225	64,945	2,496	0.105	1.995
10/1/19	12/31/19	2,850	67,795	2,056	0.049	2.044
1/1/20	5/31/20	Not Operational - Winter Downtime & System Repair				
6/1/20	6/30/20	2,840	70,735	119.85	0.0028	2.046
7/1/20	9/30/20	67,602	138,337	4,470.02	2.68	4.721
10/1/20	1/8/21	41,275	179,612	9,163.13	3.16	7.878
1/9/21	4/9/21	1,996	181,608	8,456.23	0.141	8.019
4/10/21	5/5/21	Not Operational - Winter Downtime & System Repair				
5/6/21	7/26/21	967	182,575	25779.44	0.092	8.111
7/27/21	8/9/21	Not Operational - Downtime & System Repair				
8/10/21	9/1/21	271	182,846	6506.17	0.024	8.135
9/2/21	9/8/21	Not Operational - Downtime & System Repair				
9/9/21	9/10/21	Not Operational - Downtime & System Repair				
9/11/21	12/8/21	50,273	233,119	10837.71	5.417	13.552
12/8/21	12/11/21	6,201.2	239,321	13089.04	3.0162	16.574
12/12/21	12/16/21	Not Operational - Downtime & System Repair				
12/17/21	1/21/22	77,515	316,836	11030.00	4.0453	20.620
1/22/22	2/16/22	Not Operational - Downtime & System Repair				
2/17/22	2/27/22	55,811.4	372,647	15953.43	3.3258	23.946
2/28/22	3/13/22	Not Operational - Downtime & System Repair				
3/14/22	3/31/22	3,042.51	375,692	7770.40	0.1973	24.143
4/1/22	4/4/22	Not Operational - Downtime & System Repair				



Monitoring Period		GW Recovered, Period	GW Recovered, Cumulative	Average Total Dissolved VOC Concentration in Recovered GW, Period	VOC Recovery, Period	VOC Recovery, Cumulative
start	end	(gallons)	(gallons)	(µg/l)	(lbs)	(lbs)
4/5/22	6/8/22	11,789.73	387,482	6308.0	0.6206	24.764
6/9/22	9/1/22	14,367.38	401849	0.39	0.000047	24.764
9/2/22	9/19/22	Not Operational - Downtime & System Repair				
9/20/22	12/8/22	13,522.24	415371	345.1	0.0389	24.803

### 5.3.5 DPE System Vapor Extraction

REPSG measures concentrations of VOCs in the exhaust of the system to ensure acceptable levels are being emitted into the atmosphere. These measurements are conducted via two methods: collection of PID readings and TO-15 sample collection.

PID readings are collected at two discrete locations: pre-GAC and post-GAC. A summary of the observed PID readings during previous reporting periods is provided in **Table 4**, below.

**Table 4 - DPE System PID Readings**

Date	Pre-GAC (ppm)	Post-GAC (ppm)
September 19, 2017	234.7	0.6
October 16, 2017	275.2	0.2
October 17, 2017	347.6	0.0
November 2, 2017	199.1	0.8
November 7, 2017	267.0	0.0
November 16, 2017	275.0	0.3
June 19, 2018	343.0	0.4
September 26, 2018	301.0	0.1
October 23, 2018	305.0	0.1
June 13, 2019	300.0	0.1
September 30, 2019	126.2	3.4
November 26, 2019	Not Recorded	Not Recorded
June 26, 2020	0.0	0.0
September 30, 2020	5.6	0.2
December 2, 2020	0.2	0.1
March 17, 2021	Not Recorded	Not Recorded
June 17, 2021	Not Recorded	Not Recorded
September 10, 2021	Not Recorded	Not Recorded
December 17, 2021	69.1	17.5
March 18, 2022	73.5	37.6
June 15, 2022	88.2	21.1



Date	Pre-GAC (ppm)	Post-GAC (ppm)
September 20, 2022	Not Recorded	Not Recorded
December 15, 2022	Not Recorded	Not Recorded

On December 15, 2022, vapor influent (pre-GAC, sample name “PRE-VES”) and effluent (post-GAC, sample name “POST-VES”) samples were collected. The vapor samples were analyzed for VOCs via EPA Method TO-15 at Alpha Analytical (Alpha) of Mansfield, MA. Alpha is an NELAP accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP (MD Cert No. 350).

Analytical results were received and compared to the EPA’s Regional Screening Values for Composite Workers<sup>9</sup>. The EPA provides both carcinogenic and noncarcinogenic screening levels for certain compounds due to differences in exposure. A composite worker is defined as a long-term receptor exposed during the workday who is a full-time employee working on-Site and who spends most of the workday conducting maintenance activities outdoors. REPSG considers this screening value to be the most appropriate comparison criteria for the Site.

This comparison indicated no exceedances for the post-GAC sample (“POST-VES”). Results for pre-GAC samples (“PRE\_VES”), are consistent with prior sampling events, with the exception of methyl ethyl ketone which was not detected following 4 quarters of detections and MTBE which was below the standards for the second consecutive quarter, following three quarters of exceedances.

A comparison summary of both influent and effluent vapor analytical results is provided in **Attachment 2**. The complete analytical laboratory reports and associated chains of custody are provided in **Attachment 3**.

Utilizing data provided via the DPE system and associated vapor influent and effluent samples, total contaminate mass removed via vapor by the DPE system has been calculated. **Table 5** shows relevant values both for this reporting period and cumulative since system start up.

**Table 5 - Contaminant Mass Removed - Vapor**

Monitoring Period		Avg. Airflow	Total VOC Concentration in Vapor	VOC Recovery, Period	VOC Recovery, Cumulative
Start	End	(cfm)	(ppmv)	(lbs)	(lbs)
4/24/17	6/21/17	38.22	134.46	76.41	76.41
6/21/17	9/30/17	23.16	111.4	12.41	88.82

<sup>9</sup> United States Environmental Protection Agency. Regional Screening Levels for Chemical Contaminants at Superfund Sites. (May 31, 2017).



Monitoring Period		Avg. Airflow	Total VOC Concentration in Vapor	VOC Recovery, Period	VOC Recovery, Cumulative
Start	End	(cfm)	(ppmv)	(lbs)	(lbs)
10/1/17	12/31/17	65.87	56.22	17.03	105.85
1/1/18	3/29/18	Not Operational - Winter Downtime			
3/30/18	6/30/18	90.57	81.19	23.61	129.46
7/1/18	9/30/18	88.49	74.01	22.52	151.98
10/1/18	12/31/18	91.82	No Data Available	No Data Available	No Data Available
1/1/19	3/31/19	Not Operational - Winter Downtime			
4/1/19	6/30/19	60.67	23.61	7.09	159.07
7/1/19	9/30/19	21.47	22.22	6.81	165.88
10/1/19	12/31/19	92.00	29.69	9.04	174.92
1/1/20	5/31/20	Not Operational - Winter Downtime & System Repair			
6/1/20	6/30/20	16.47	0.042	0.09	175.01
7/1/20	9/30/20	42.52	14.70	4.21	179.22
10/1/20	12/31/20	54.05	0.012	0.008	179.228
1/1/21	3/31/21	69.31	0.020	0.005	179.233
4/1/21	6/30/21	32.60	3.30	2.17	181.403
7/1/21	7/26/21	73.49	8.275	5.64	187.048
7/27/21	8/9/21	Not Operational - Downtime & System Repair			
8/10/21	9/1/21	89.28	8.275	4.99	192.041
9/2/21	9/10/21	Not Operational - Downtime & System Repair			
9/11/21	9/30/21	61.68	8.275	4.34	196.383
10/1/21	12/11/21	91.21	12.61	28.62	225.003
12/12/21	12/16/21	Not Operational - Downtime & System Repair			
12/17/21	1/21/22	91.98	14.225	14.25	239.253
1/22/22	2/16/22	Not Operational - Downtime & System Repair			
2/17/22	2/27/22	84.40	14.225	4.13	243.383
2/28/22	3/13/22	Not Operational - Downtime & System Repair			
3/14/22	3/31/22	90.58	1.568	1.01	244.393
4/1/22	4/4/22	Not Operational - Downtime & System Repair			
4/5/22	6/8/22	89.44	1.568	3.18	247.573
6/9/22	9/1/22	92	0.4	0.05	247.623
9/2/22	9/19/22	Not Operational - Downtime & System Repair			
9/20/22	12/8/22	92	0.8	0.09	247.713

#### 5.4 Future System Activities

The DPE system will continue to operate into 2023. Installation of a new remote monitoring system is in progress, which will allow greater functionality from a remote location, including restarting the system as needed. As appropriate, preparations for winter downtime will be made to the DPE system



Quarterly Combined Report  
Fourth Quarter 2022  
February 21, 2023

Calvert Citgo  
2815 North East Road  
North East, MD  
REPSG Global Project No. 5977

to prevent freezing damage to system components, with the system scheduled to run throughout the winter season.

If you have any additional questions regarding this request, please contact the undersigned at 215-729-3220.

Sincerely,

**React Environmental Professional Services Group, Inc**



Shad Manning  
Project Manager



James Manuel  
Senior Project Manager

**Enclosures**

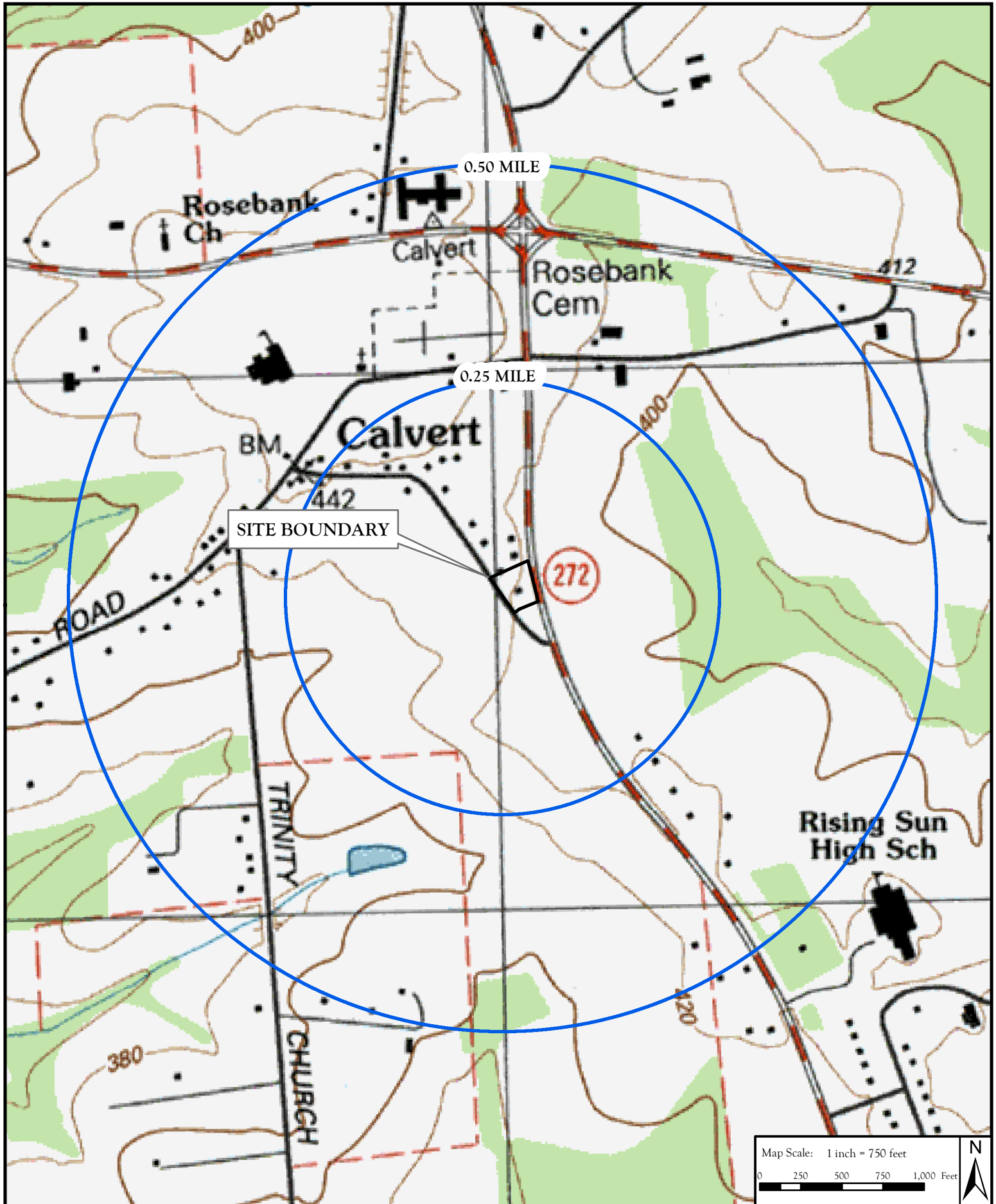
- Attachment 1: Figures
- Attachment 2: Sampling Results Summary Tables
- Attachment 3: Laboratory Reports and Chains of Custody
- Attachment 4: Field Sampling Sheets
- Attachment 5: Permits
- Attachment 6: Disposal Manifests






## ATTACHMENT 1: FIGURES





Imagery Provided by National Geographic Society, icubed, 2013.

<p><b>FIGURE 1. SITE LOCATION DIAGRAM</b></p>	<p>PROJECT NAME: CALVERT CITGO          PROJECT ADDRESS: 2815 NORTH EAST ROAD, NORTH EAST, MD          PROJECT NUMBER: 005977          DATE: SEPTEMBER 2022</p>	 <p><b>REPSG</b>          React Environmental          Professional Services Group, Inc.</p>
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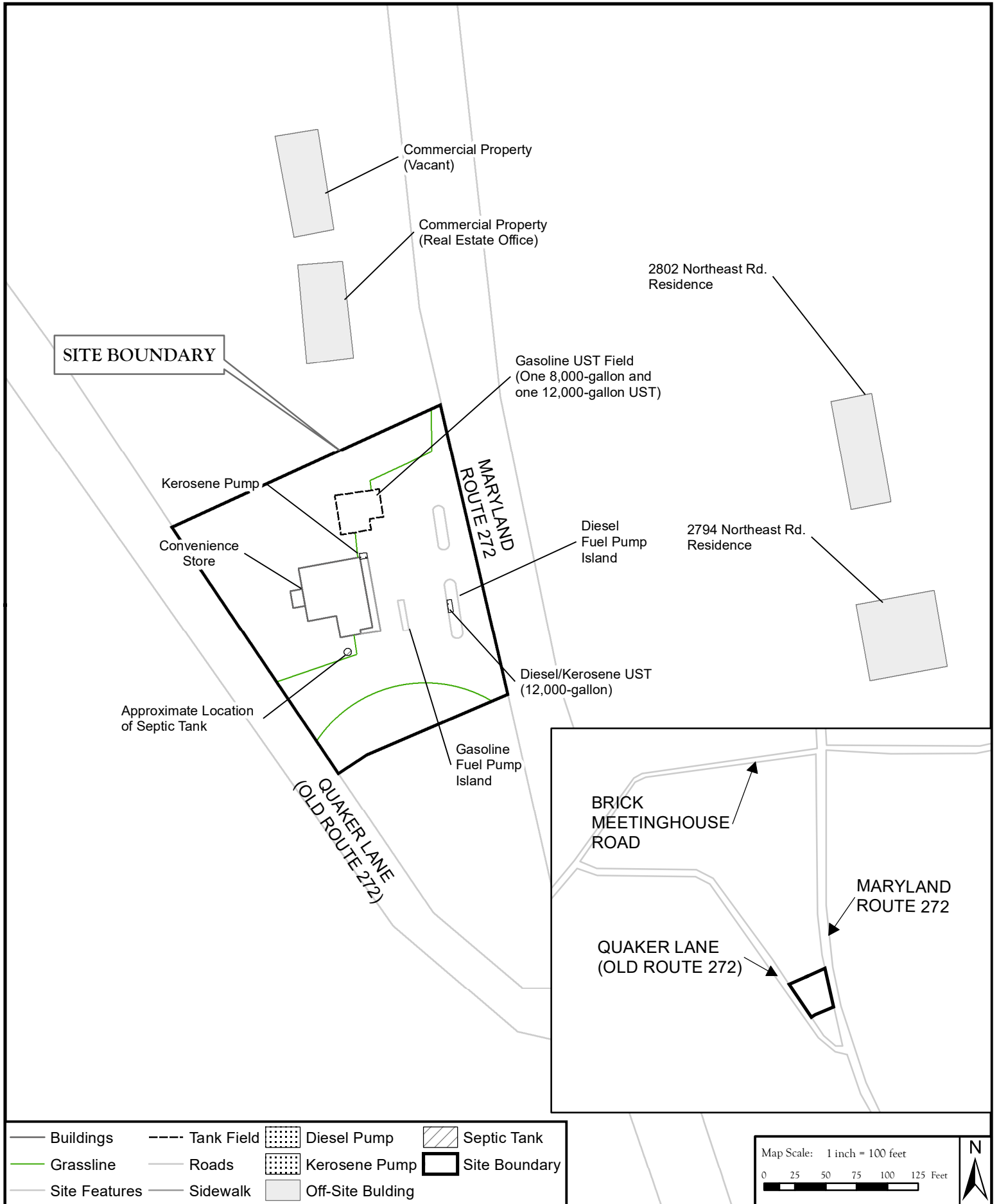


FIGURE 2. SITE DIAGRAM

PROJECT NAME: CALVERT CITGO  
 PROJECT ADDRESS: 2815 NORTH EAST ROAD, NORTH EAST, MD  
 PROJECT NUMBER: 005977  
 DATE: SEPTEMBER 2022



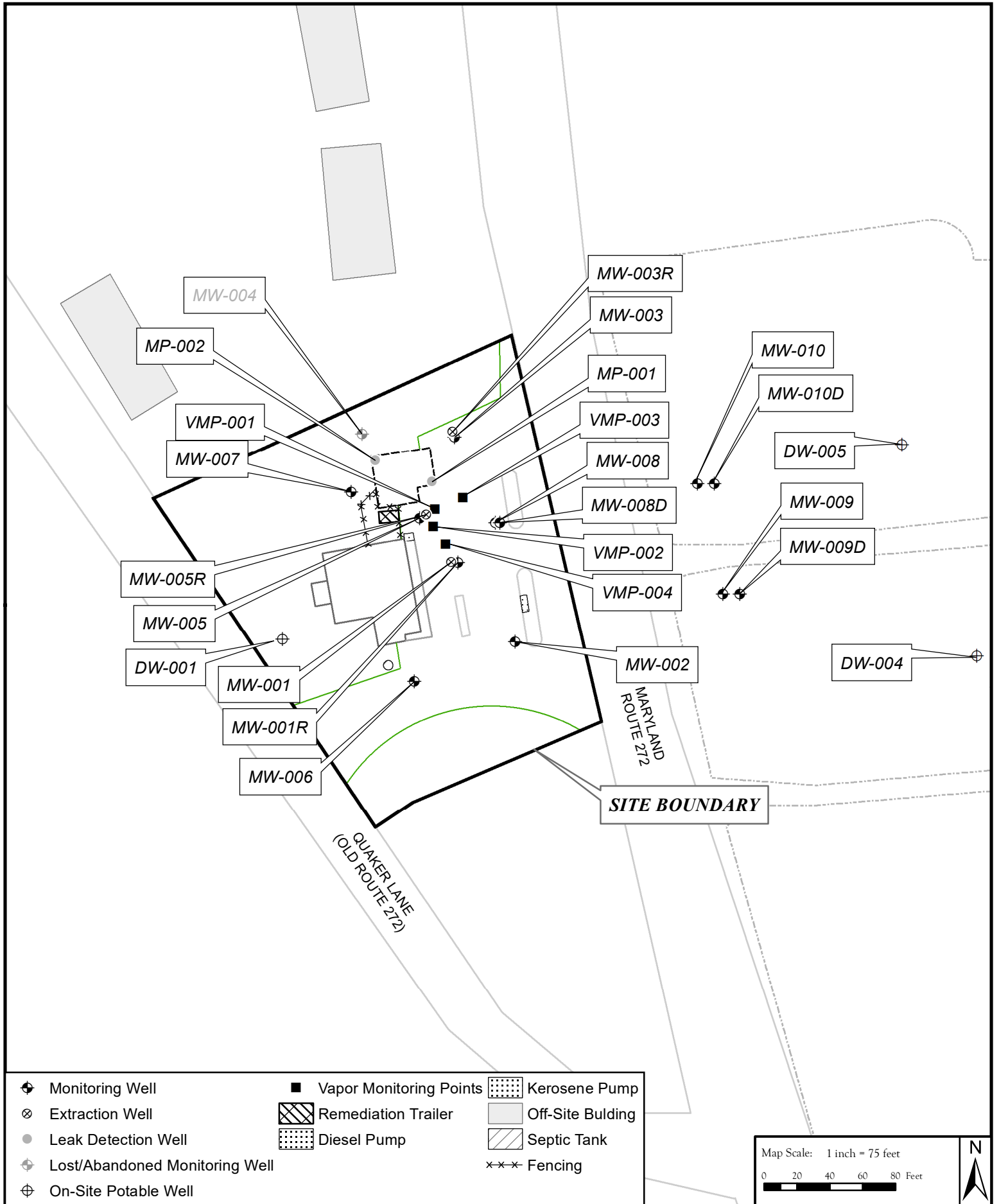


FIGURE 3. ALL WELLS LOCATION

PROJECT NAME: CALVERT CITGO  
 PROJECT ADDRESS: 2815 NORTH EAST ROAD, NORTH EAST, MD  
 PROJECT NUMBER: 005977  
 DATE: SEPTEMBER 2022



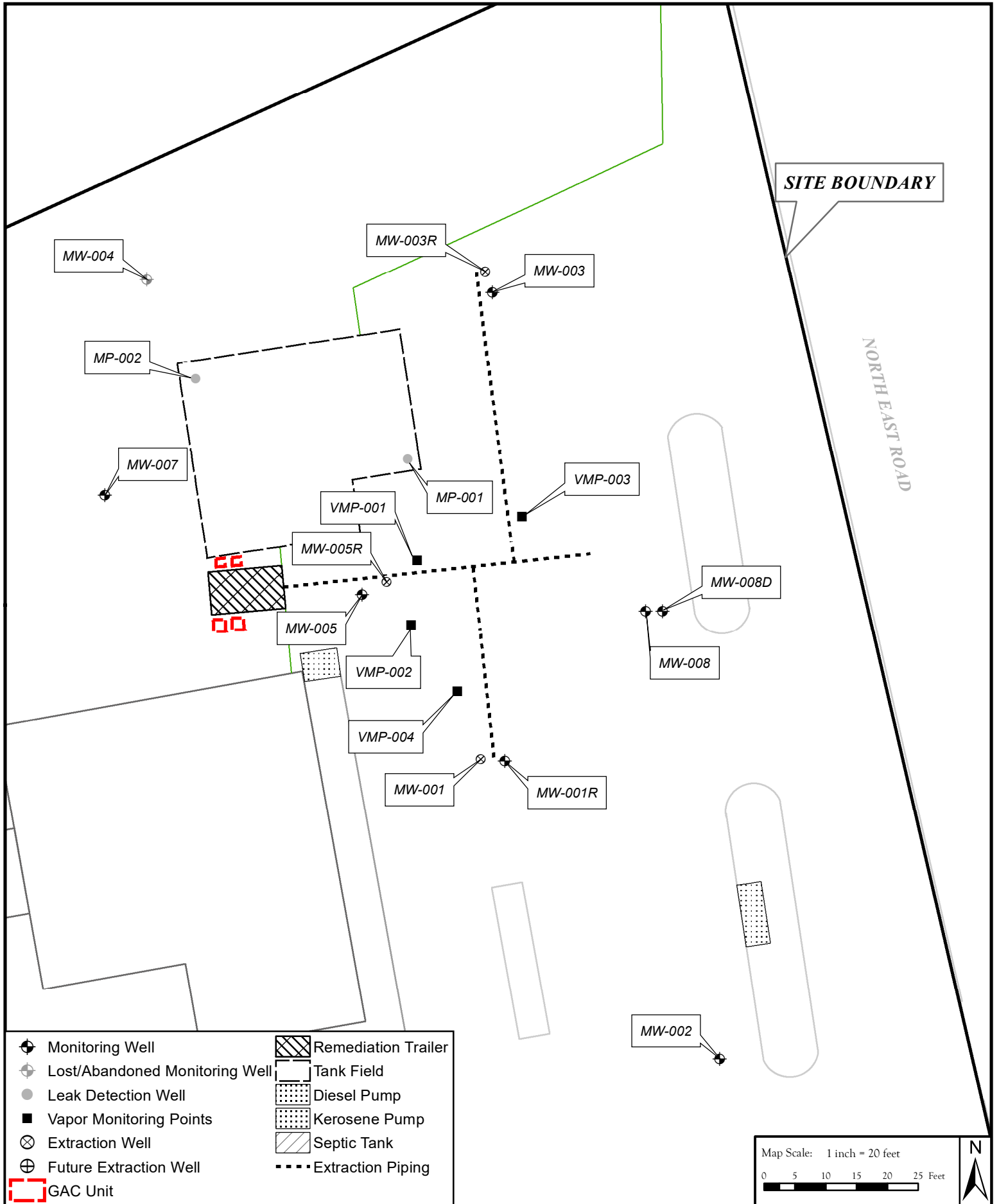
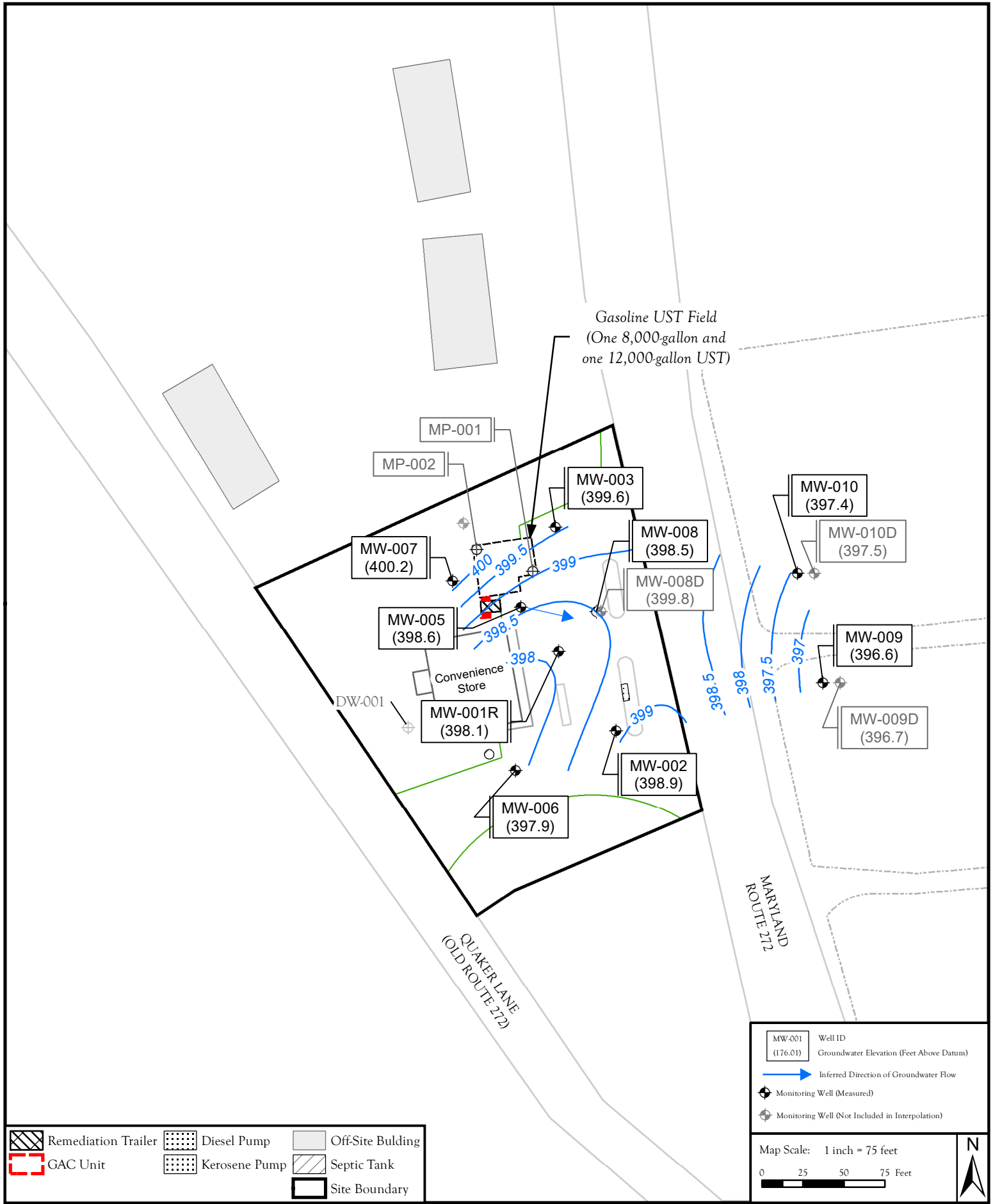


FIGURE 4. REMEDIATION SYSTEM

PROJECT NAME: CALVERT CITGO  
 PROJECT ADDRESS: 2815 NORTH EAST ROAD, NORTH EAST, MD  
 PROJECT NUMBER: 005977  
 DATE: SEPTEMBER 2022

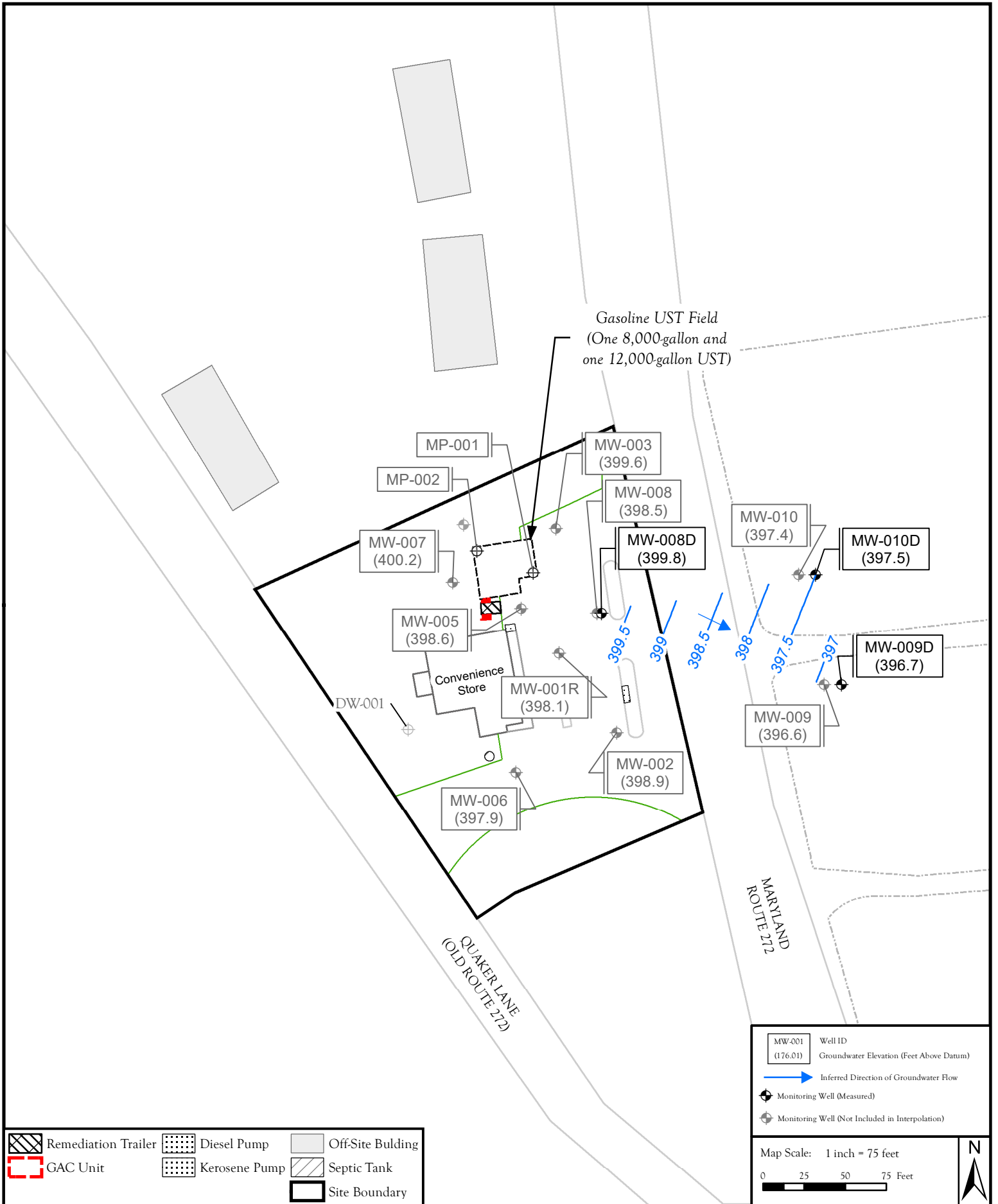




GROUNDWATER CONTOUR MAP  
(SHALLOW WELLS)  
(DECEMBER 29, 2022)

PROJECT NAME: CALVERT CITGO  
PROJECT ADDRESS: 2815 NORTH EAST ROAD, NORTH EAST, MD  
PROJECT NUMBER: 005977  
DATE: JANUARY 2023

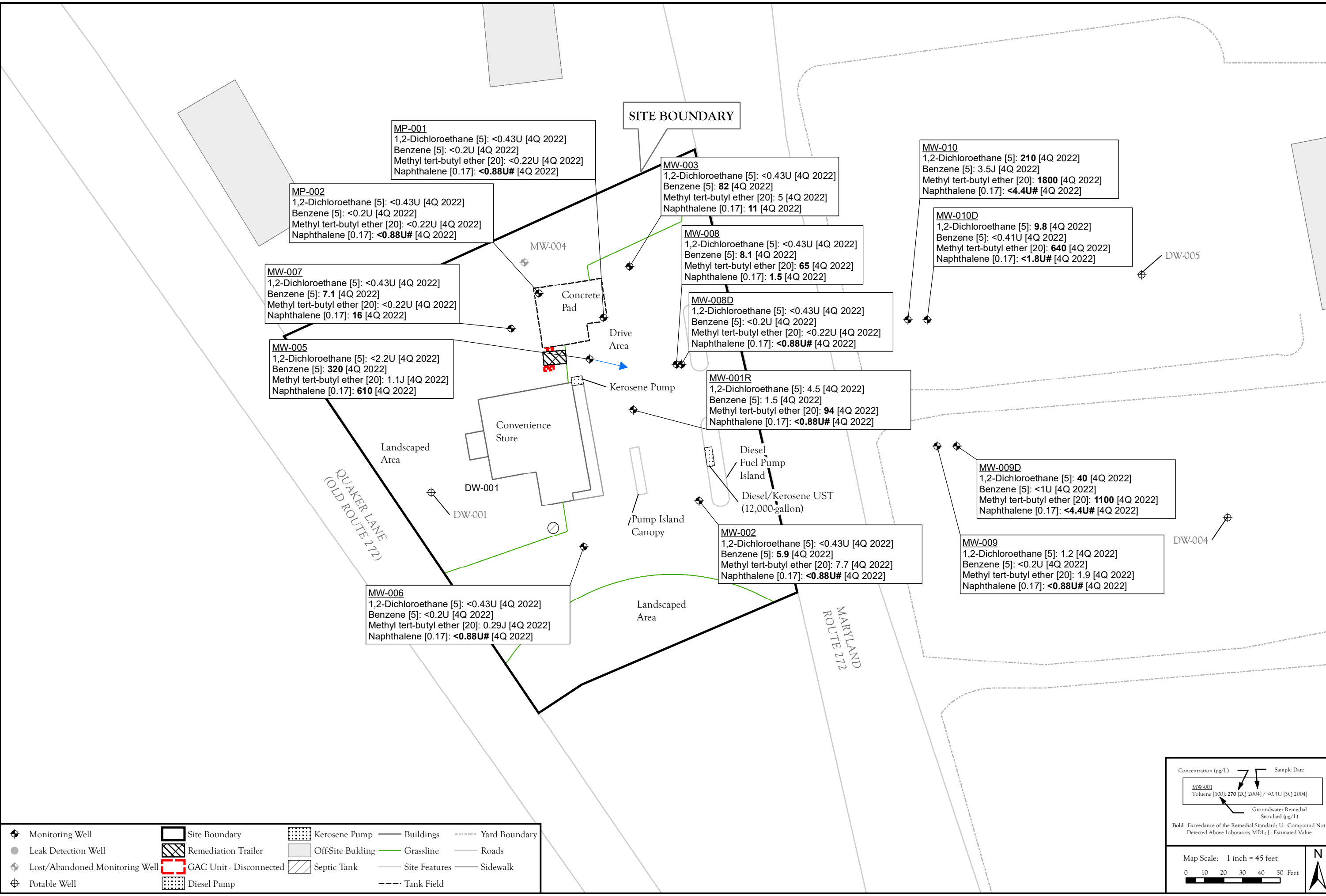




GROUNDWATER CONTOUR MAP  
 (DEEP WELLS)  
 (DECEMBER 29, 2022)

PROJECT NAME: CALVERT CITGO  
 PROJECT ADDRESS: 2815 NORTH EAST ROAD, NORTH EAST, MD  
 PROJECT NUMBER: 005977  
 DATE: JANUARY 2023





	Monitoring Well		Site Boundary		Kerosene Pump		Buildings		Yard Boundary
	Leak Detection Well		Remediation Trailer		Off-Site Building		Grassline		Roads
	Lost/Abandoned Monitoring Well		GAC Unit - Disconnected		Septic Tank		Site Features		Sidewalk
	Potable Well		Diesel Pump		Tank Field				

Concentration (µg/L)      Sample Date

MW-001	Toluene [100]: 270 [2Q 2004] / <0.3U [3Q 2004]
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Groundwater Remedial Standard (µg/L)

Bold - Exceedance of the Remedial Standard; U - Compound Not Detected Above Laboratory MDL; J - Estimated Value

Map Scale: 1 inch = 45 feet



## ATTACHMENT 2: SAMPLING RESULTS SUMMARY TABLES



**GROUNDWATER  
RESULTS SUMMARY TABLES**





MDE GW Clean-Up Standards

Compound	1,2-Dichloroethane	Acetone	Benzene	Chloroform	Ethylbenzene	Methyl bromide	Methyl chloride	Methyl tert-butyl ether	Methylene chloride	tert-Butylalcohol	Tetrachloroethylene	Toluene	Xylene (total)
Unit	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
	5	550	5	80	700	0.75	19	20	5	**	5	1000	10000

Well ID	Sample Date	Top of Casing Elevation*	Screen start depth	Screen end depth	Depth to Water (ft)	GW Elevation	1,2-Dichloroethane	Acetone	Benzene	Chloroform	Ethylbenzene	Methyl bromide	Methyl chloride	Methyl tert-butyl ether	Methylene chloride	tert-Butylalcohol	Tetrachloroethylene	Toluene	Xylene (total)
MP-001	12/11/2009	415.6	NA	NA	4.42	411.2	<3.3U	<31U	372	2.4J	6.4J	<2.4U	<1.6U	<1.8U	<3.2U	248	<2.8U	630	155
	03/18/2010				3.1	412.5	<3.3U	<31U	421	<2.3U	<2.3U	<2.4U	<1.6U	<1.8U	<3.2U	<46U	<2.8U	895	258
	05/24/2010				8.3	407.3	<0.36U	<1.8U	1100D	<0.49U	12D	<0.36U	<0.56U	9.6	<0.76U	<21U	<0.91U	1800D	410D
	03/08/2013				3.1	412.5	<3.2U	<31U	1230	<2.1U	57.2	<3.9U	438	39.9	<4.5U	1210	<3.5U	3180	948
	04/02/2013				6.08	409.5	<1.6U	366	673	<1.1U	28.5	<2U	<1.6U	7.3	<2.3U	658	<1.8U	2830	873
	09/12/2013				4.03	411.6	<6.4U	<62U	384	<4.2U	13.9J	<7.8U	18.8J	88.5	<9U	125J	<7U	989	273
	12/18/2013				4.72	410.9	<3.2U	<31U	423	<2.1U	<3.4U	<3.9U	63	83.2	<4.5U	225	<3.5U	725	145
	01/13/2014				2.9	412.7	<3.2U	<31U	640	<2.1U	<3.4U	<3.9U	89.3	65.7	<4.5U	249	<3.5U	1500	195
	04/21/2014				1.61	414	<3.2U	89.4J	970	6.9J	28.1	<3.9U	<3.1U	28.6	<4.5U	194	<3.5U	4770	487
	07/29/2014				5.13	410.4	<3.2U	<31U	621	8J	<3.4U	<3.9U	<3.1U	37.6	<4.5U	211	<3.5U	1860	427
	10/20/2014				7.1	408.5	<3.2U	<31U	1260	7.1J	<3.4U	<3.9U	73.1	48.6	6.4J	150	<3.5U	2990	989
	01/20/2015				6.1	409.5	<6.4U	81.2J	2030	11.7J	<6.8U	<7.8U	367	105	<9U	74.8J	<7U	6260	599
	04/27/2015				4.91	410.6	<6.4U	<62U	1360	<4.2U	56	<7.8U	<6.2U	48.8	<9U	266	<7U	5470	1160
	07/13/2015				5.35	410.2	<6.4U	<62U	463	<4.2U	26.1	<7.8U	<6.2U	37.8	<9U	149J	<7U	1610	468
	10/21/2015				9.99	405.6	<6.4U	<62U	878	4.4J	<6.8U	9.8J	<6.2U	44.6	<9U	442	<7U	3130	1190
	01/19/2016				7.38	408.2	33.7	<62U	<4.6U	11.1J	11.2J	<7.8U	<6.2U	1060	<9U	7050	<7U	10.1J	65.8
	04/12/2016				6.61	409	<6.4U	<62U	1130	<4.2U	37.1	<7.8U	<6.2U	18.6J	<9U	337	<7U	6070	832
	08/23/2016				10.46	405.1	<6.4U	<62U	1200	4.5J	<6.8U	<7.8U	66.7	12.1J	<9U	423	<7U	1990	1160
	03/06/2017				11.15	404.4	<1.6U	20.9J	4.6J	2.5J	<1.7U	<2U	<1.6U	5.4	<2.3U	1050	<1.8U	21.1	24.3
	06/01/2017				7.81	407.8	<1.6U	<15.5U	24.5	1.7J	<1.7U	<2U	7.8	1.9J	<2.3U	233	<1.8U	270	101
	08/14/2017				9.42	406.1	<1.6U	<15.5U	6	<1.1U	<1.7U	<2U	<1.6U	<1.7U	<2.3U	76.2	<1.8U	39.5	47.6
	11/14/2017				9.48	406.1	<1.6U	<15.5U	<1.2U	<1.1U	<1.7U	<2U	<1.6U	<1.7U	<2.3U	26.9J	<1.8U	5.3	4.8J
	03/06/2018				6.22	409.3	<0.32U	<3.1U	0.89J	<0.21U	0.36J	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	8.2	5.7
	6/12/2018				6.65	408.9	<0.32U	7.4J	0.78J	<0.21U	<0.34U	<0.39U	1.1	<0.33U	<0.45U	<2.2U	<0.35U	6.4	11.4
	09/19/2018				3.97	411.6	<0.32U	5.1J	0.85J	<0.21U	<0.34U	<0.39U	0.85J	<0.31U	<0.45U	4.7J	<0.35U	2.9	10.8
	12/12/2018				3.18	412.4	5.8	<3.1U	1	0.51J	<0.34U	<0.39U	0.93J	14.5	<0.45U	130	<0.35U	0.66J	1.9J
	3/6/2019				2.39	413.21	<0.32U	13.1	9.3	<0.21U	0.42J	<0.39U	<0.31U	<0.33U	<0.45U	5.3J	<0.35U	21.8	2.8J
	6/12/2019				5.66	409.9	<0.32U	<3.1U	1.3	<0.21U	<0.34U	0.94J	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	6.9	8.7
	9/18/2019				11	404.6	<0.28U	5.3J	0.46J	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	2.5	3.8
	11/26/2019				6.96	408.64	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	1	<0.45U	49.6	<0.35U	<0.23U	<0.66U
	3/30/2020				7.28	408.32	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	0.34J	<0.45U	<2.2U	<0.35U	<0.23U	<0.66U
	06/10/2020				8.85	406.75	<0.32U	<3.1U	<0.23U	<0.21U	0.4J	<0.39U	<0.31U	<0.33U	<0.45U	2.7J	<0.35U	<0.23U	0.82J
9/15/2020	9.35	406.25	<0.32U	<3.1U	0.23J	<0.21U	<0.34U	1.1	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.45J	<0.66U				
12/02/2020	8.29	407.31	<0.32U	4.6J	0.54J	<0.21U	1.3	0.6J	0.33J	<0.33U	<0.45U	<2.2U	<0.35U	0.36J	2.9J				
03/17/2021	6.95	408.65	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.23J	<0.66U				
06/16/2021	8.15	407.45	<0.32U	4.4J	<0.23U	<0.21U	<0.34U	0.48J	0.34J	<0.33U	<0.45U	640	<0.35U	0.38J	<0.66U				
09/07/2021	7.71	407.9	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	<0.23U	<0.66U				
12/13/2021	11.8	403.76	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
3/14/2022	10.44	405.12	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	2.8J	<0.35U	<0.23U	<0.66U				
06/14/2022	10.21	405.4	<0.28U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	<0.23U	<0.66U				
09/19/2022	11.45	404.1	<0.32U	3.4J	<0.23U	<0.21U	<0.34U	0.77J	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	<0.23U	<0.66U				
12/30/2022	9.3	406.3	<0.43U	<4.4U*+	<0.2U	<0.33U	<0.3U	<0.55U	<0.4U	<0.22U	<0.32U	<8.3U	<0.25U	<0.38U	<0.65U				



MDE GW Clean-Up Standards

							Compound	1,2-Dichloroethane	Acetone	Benzene	Chloroform	Ethylbenzene	Methyl bromide	Methyl chloride	Methyl tert-butyl ether	Methylene chloride	tert-Butylalcohol	Tetrachloroethylene	Toluene	Xylene (total)	
							Unit	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
								5	550	5	80	700	0.75	19	20	5	**	5	1000	10000	
Well ID	Sample Date	Top of Casing Elevation*	Screen start depth	Screen end depth	Depth to Water (ft)	GW Elevation															
MP-002	12/11/2009	416	NA	NA	4.93	411.1	<0.33U	<3.1U	135	<0.23U	1.7	<0.24U	<0.16U	<0.18U	<0.32U	380	<0.28U	172	44.3		
	03/18/2010				3.6	412.4	<0.33U	<3.1U	24.3	<0.23U	<0.23U	<0.24U	<0.16U	<0.18U	<0.32U	132	<0.28U	57.3	11.4		
	05/24/2010				8.78	407.2	<0.36U	<1.8U	540D	<0.49U	<4UD	<0.36U	<0.56U	4.6	<0.76U	<21U	<0.91U	860D	150D		
	03/08/2013				6.8	409.2	<0.32U	<3.1U	357	<0.21U	<0.34U	<0.39U	190	5.1	<0.45U	534	<0.35U	2180	186		
	04/02/2013				6.55	409.5	<1.6U	53.1	400	<1.1U	9.8	<2U	<1.6U	5.7	<2.3U	597	<1.8U	2670	492		
	09/12/2013				4.66	411.3	<1.6U	27.7J	138	<1.1U	<1.7U	<2U	12	63.5	<2.3U	110	<1.8U	255	141		
	12/18/2013				5.11	410.9	<1.6U	<15.5U	220	<1.1U	<1.7U	<2U	<1.6U	32.6	<2.3U	159	<1.8U	764	95.7		
	01/13/2014				3.11	412.9	<1.6U	<15.5U	111	<1.1U	<1.7U	<2U	<1.6U	9	<2.3U	125	<1.8U	273	31.3		
	04/21/2014				2.09	413.9	<0.32U	<3.1U	170	<0.21U	<0.34U	<0.39U	<0.31U	6	<0.45U	146	<0.35U	543	49.6		
	07/29/2014				5.61	410.4	<1.6U	21.7J	166	3.6J	<1.7U	<2U	18.7	15.7	12.2	149	<1.8U	334	142		
	10/20/2014				9.19	406.8	<1.6U	<15.5U	453	<1.1U	<1.7U	<2U	77.1	37.2	<2.3U	145	<1.8U	503	386		
	01/20/2015				6.51	409.5	<1.6U	157	1290	<1.1U	<1.7U	<2U	494	26.8	<2.3U	158	<1.8U	3950	536		
	04/27/2015				5.43	410.6	<1.6U	171	626	<1.1U	26.1	<2U	<1.6U	14.1	<2.3U	306	<1.8U	2280	607		
	07/13/2015				5.71	410.3	<1.6U	49.7J	244	<1.1U	<1.7U	<2U	<1.6U	16.6	<2.3U	113	<1.8U	682	227		
	10/20/2015				10.46	405.5	<0.32U	45.2	236	<0.21U	<0.34U	<0.39U	91.1	48	<0.45U	280	<0.35U	369	420		
	01/19/2016				7.92	408.1	<1.6U	<15.5U	1290	<1.1U	<1.7U	<2U	<1.6U	5.4	<2.3U	588	<1.8U	5910	846		
	04/15/2016				6.58	409.4	<1.6U	41.4J	926	2.5J	<1.7U	<2U	<1.6U	6.7	2.5J	417	<1.8U	4470	683		
	08/23/2016				10.89	405.1	<1.6U	70.9	289	<1.1U	<1.7U	<2U	30.2	10	<2.3U	565	<1.8U	376	260		
	03/06/2017				11.67	404.3	<0.32U	22.1	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	2260	<0.35U	<0.23U	<0.66U		
	05/31/2017				8.29	407.7	<0.32U	3.4J	0.73J	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	6.5J	<0.35U	5.7	5.3		
	08/14/2017				10.84	405.1	<0.32U	5.4J	1.2	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	11.2	<0.35U	0.74J	2.6J		
	11/14/2017				9.97	406	<0.32U	8.6J	1.2	<0.21U	0.43J	0.65J	<0.31U	<0.33U	<0.45U	7J	<0.35U	1.5	6.3		
	03/06/2018				6.78	409.2	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	<0.23U	1.1J		
	6/12/2018				7.1	408.9	<0.32U	3.3J	0.27J	<0.21U	<0.34U	<0.39U	0.86J	<0.33U	<0.45U	<2.2U	<0.35U	1.2	2J		
	09/19/2018				4.45	411.5	<0.32U	6.9J	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	28.9	<0.35U	0.8J	1.3J		
	12/11/2018				3.67	412.3	<0.32U	<3.1U	<0.23U	0.41J	<0.34U	<0.39U	0.62J	<0.33U	<0.45U	<2.2U	<0.35U	0.38J	<0.66U		
	3/6/2019				2.82	413.18	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.37J	2.1J		
	6/12/19				6.12	409.87	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	0.81J	0.59J	<0.33U	<0.45U	<2.2U	<0.35U	2.2	1.4J		
	9/18/2019				11.35	404.65	<0.28U	6.8J	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	<0.23U	<0.66U		
	11/26/2019				7.41	408.59	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	2.6	<0.45U	470	<0.35U	<0.23U	<0.66U		
	3/31/2020				7.85	408.15	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	<0.23U	<0.66U		
	06/09/2020				9.6	406.40	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	1.6	<0.66U		
	9/15/2020				9.87	406.13	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	0.92J	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	<0.23U	<0.66U		
12/02/2020	8.84	407.16	<0.32U	<3.1U	<0.23U	<0.21U	0.45J	0.49J	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	<0.23U	1.2J						
03/17/2021	7.93	408.07	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	<0.23U	<0.66U						
06/16/2021	8.67	407.33	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	82.7	<0.35U	<0.23U	<0.66U						
09/07/2021	8.39	407.6	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	<0.23U	<0.66U						
12/13/2021	12.05	403.94	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA						
3/14/2022	11.04	404.95	<0.32U	4.3J	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	4J	<0.35U	<0.23U	<0.66U						
06/14/2022	10.71	405.30	<0.28U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	295	<0.35U	<0.23U	<0.66U						
09/19/2022	10.8	405.2	<0.32U	3.2J	<0.23U	<0.21U	<0.34U	0.7J	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	<0.23U	<0.66U						
12/30/2022	9.79	406.2	<0.43U	<4.4U	<0.2U	<0.33U	<0.3U	<0.55U	<0.4U	<0.22U	<0.32U	<8.3U	<0.25U	<0.38U	<0.65U						



MDE GW Clean-Up Standards							Compound	1,2-Dichloroethane	Acetone	Benzene	Chloroform	Ethylbenzene	Methyl bromide	Methyl chloride	Methyl tert-butyl ether	Methylene chloride	tert-Butylalcohol	Tetrachloroethylene	Toluene	Xylene (total)	
							Unit	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
								5	550	5	80	700	0.75	19	20	5	**	5	1000	10000	
Well ID	Sample Date	Top of Casing Elevation*	Screen start depth	Screen end depth	Depth to Water (ft)	GW Elevation															
MW-001	03/12/2009	416.3	NA	NA	17.2	399.1	<2U	<40U	10500	<2U	779	<2U	<2U	<2U	<2U	<1U	485	<4U	468	1800	
	07/21/2009				16.31	400	19.5	<31U	14400	<2.3U	1210	<2.4U	<1.6U	8J	<3.2U	586	<2.8U	1440	3760		
	12/11/2009				16.18	400.1	<3.3U	<31U	8120	<2.3U	962	<2.4U	<1.6U	4J	<3.2U	291	<2.8U	58.4	1930		
	03/18/2010				13.16	403.1	42.5	451	5850	<2.3U	606	<2.4U	<1.6U	3.6J	<3.2U	343	<2.8U	2690	1860		
	05/24/2010				13.48	402.8	<0.36U	250	10000D	<0.49U	1000D	<0.36U	<0.56U	6.3	<0.76U	680	<0.91U	4500D	3200D		
	09/15/2010				18.01	398.3	<3.3U	<31U	17300	<2.3U	2270	<2.4U	<1.6U	12.2	<3.2U	597	<2.8U	5850	4810		
	11/29/2010				19.3	397	16.2	92.7J	13100	<2.1U	1110	<3.9U	<3.1U	17	<4.5U	707	<3.5U	957	3510		
	03/24/2011				16.42	399.9	16.1	<31U	9880	4.1J	858	<3.9U	<3.1U	14.3	<4.5U	743	<3.5U	176	2060		
	06/20/2011				16.11	400.2	13.9	<15.5U	12600	<1.1U	1190	<2U	<1.6U	14	<2.3U	655	<1.8U	2210	3370		
	10/26/2011				16.63	399.7	33.8	165	11300	<1.1U	1300	<2U	<1.6U	13.4	<2.3U	700	<1.8U	2570	2630		
	02/29/2012				14.65	401.6	18.1	181	6230	<1.1U	797	<2U	<1.6U	13.2	<2.3U	585	<1.8U	2210	2000		
	05/08/2012				16.88	399.4	6.8	<15.5U	11200	<1.1U	991	<2U	<1.6U	10.5	<2.3U	475	<1.8U	1130	2410		
	08/14/2012				18.9	397.4	10.6	<15.5U	13000	<1.1U	1260	<2U	<1.6U	17.8	<2.3U	574	<1.8U	1240	3190		
	11/15/2012				20.04	396.3	8.5	<3.1U	14500	<0.21U	1590	<0.39U	<0.31U	27.8	<0.45U	691	<0.35U	522	2540		
	03/07/2013				19.7	396.6	3.9J	<15.5U	9640	<1.1U	872	<2U	<1.6U	23.7	4.5J	611	<1.8U	385	1530		
	04/02/2013				16.92	399.4	<16U	<155U	356	<10.5U	2580	<19.5U	<15.5U	<16.5U	<22.5U	313J	<17.5U	20600	14600		
	09/12/2013				15.26	401	<1.6U	<15.5U	279	<1.1U	22.6	<2U	<1.6U	<1.7U	<2.3U	<11U	<1.8U	3.6J	54.7		
	12/17/2013				17.99	398.3	1.1	<3.1U	132	<0.21U	4.8	<0.39U	<0.31U	<0.33U	<0.45U	10.4	<0.35U	4.6	14.5		
	01/14/2014	14.35	401.9	<0.32U	<3.1U	95.2	<0.21U	2260	<0.39U	<0.31U	6.8	<0.45U	218	<0.35U	18500	12500					
	04/21/2014	15.28	400.3	1.5	<3.1U	1570	<0.21U	38.7	<0.39U	<0.31U	2.8	0.71J	80.9	<0.35U	24.1	107					
	07/30/2014	15.66	399.9	<16U	<155U	8710	<10.5U	857	<19.5U	<15.5U	16.7J	124	<110U	<17.5U	4810	3600					
	10/21/2014	17.35	398.2	<0.32U	<3.1U	2120	<0.21U	124	<0.39U	<0.31U	8	<0.45U	84.9	<0.35U	148	593					
	01/21/2015	15.27	400.3	<0.32U	<3.1U	97.6	<0.21U	4.4	<0.39U	<0.31U	0.47J	<0.45U	8.7J	<0.35U	17.6	18.2					
	04/29/2015	15.51	400	2	11.6	188	<0.21U	28.4	0.52J	3.4	1.9	<0.45U	23.8	<0.35U	14.2	52.9					
	07/14/2015	15.34	400.2	1.2	5.4J	112	<0.21U	10.1	<0.39U	<0.31U	0.72J	<0.45U	15.5	<0.35U	42.6	41.6					
	10/21/2015	17.84	397.7	<0.32U	12.1	2390	<0.21U	217	0.41J	<0.31U	20.1	<0.45U	135	<0.35U	1790	1120					
	01/20/2016	17.75	397.8	0.72J	<3.1U	110	<0.21U	4.4	<0.39U	1.3	0.99J	<0.45U	32.8	<0.35U	2.7	17.7					
	04/12/2016	14.73	400.8	<0.32U	5.6J	11.3	<0.21U	2.4	<0.39U	0.54J	<0.33U	<0.45U	3.6J	<0.35U	1.3	3.9					
08/23/2016	18.21	397.4	4.1	57.6	884	<0.21U	87.5	<0.39U	<0.31U	6.7	<0.45U	9J	<0.35U	572	409						
11/08/2016	19.72	395.8	10.1	4.1J	3210	<0.21U	263	<0.39U	7.4	32.8	<0.45U	183	<0.35U	4000	1310						



MDE GW Clean-Up Standards							Compound	1,2-Dichloroethane	Acetone	Benzene	Chloroform	Ethylbenzene	Methyl bromide	Methyl chloride	Methyl tert-butyl ether	Methylene chloride	tert-Butylalcohol	Tetrachloroethylene	Toluene	Xylene (total)	
Well ID	Sample Date	Top of Casing Elevation*	Screen start depth	Screen end depth	Depth to Water (ft)	GW Elevation	Unit	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
								5	550	5	80	700	0.75	19	20		5	**	5	1000	10000
MW-001R	11/29/2010	416.5	30	45	17.87	398.6		121	583	322	<1.1U	7.3	<2U	<1.6U	65.9	<2.3U	1020	<1.8U	51.1	43.3	
	03/24/2011				15.59	400.9	116	<15.5U	128	<1.1U	8.1	<2U	<1.6U	64.4	<2.3U	876	<1.8U	26.6	34.3		
	06/20/2011				15.98	400.5	106	<15.5U	133	<1.1U	4.7J	<2U	<1.6U	58.8	<2.3U	1110	<1.8U	32.3	27.6		
	10/26/2011				15.35	401.1	<1.6U	<15.5U	65.9	<1.1U	<1.7U	<2U	<1.6U	73.8	<2.3U	1320	<1.8U	7.7	14.4J		
	02/29/2012				14.71	401.8	153	<15.5U	63.8	<1.1U	<1.7U	<2U	<1.6U	121	<2.3U	1510	<1.8U	10.3	9.1J		
	05/08/2012				16.05	400.5	124	<3.1U	68.5	<0.21U	0.43J	<0.39U	<0.31U	109	<0.45U	1880	<0.35U	5.5	10.3		
	08/14/2012				18.33	398.2	136	<3.1U	43.5	<0.21U	0.93J	<0.39U	<0.31U	53	<0.45U	756	<0.35U	1.6	3.1		
	11/15/2012				18.81	397.7	114	<3.1U	81.9	<0.21U	12.3	<0.39U	<0.31U	89	<0.45U	1360	<0.35U	59.5	58.8		
	03/07/2013				17.25	399.3	141	<15.5U	89.3	<1.1U	<1.7U	<2U	<1.6U	156	4.3J	1640	<1.8U	<1.2U	<3.3U		
	04/02/2013				16.39	400.1	<1.6U	<15.5U	2890	10.5	1390	<2U	<1.6U	15.6	<2.3U	230	<1.8U	14800	7570		
	09/12/2013				13.97	402.5	194	<15.5U	141	<1.1U	6.2	<2U	<1.6U	311	<2.3U	2540	<1.8U	26.4	24.7		
	12/17/2013				15.46	401	118	<15.5U	21.7	<1.1U	<1.7U	<2U	<1.6U	80.4	<2.3U	825	<1.8U	2.3J	8.9J		
	01/14/2014				14.57	401.9	<1.6U	740	6300	<1.1U	1370	<2U	<1.6U	12.5	<2.3U	549	<1.8U	25600	7850		
	04/21/2014				12.84	402.4	142	<15.5U	141	4J	2J	<2U	<1.6U	357	<2.3U	2480	<1.8U	49.9	29.8		
	07/30/2014				14.97	400.3	122	<3.1U	37.7	<0.21U	2	<0.39U	1.1	187	3.4	1690	<0.35U	21.1	24.5		
	10/21/2014				16.97	398.3	114	<3.1U	42.3	<0.21U	0.55J	<0.39U	<0.31U	93.8	<0.45U	1540	<0.35U	1.3	3.4		
	01/21/2015				15.27	400	129	<15.5U	40.8	<1.1U	1.9J	<2U	<1.6U	295	<2.3U	2730	<1.8U	10.4	11.3J		
	04/29/2015				15.74	399.5	118	<15.5U	28.5	2.5J	<1.7U	2.2J	<1.6U	160	<2.3U	1470	<1.8U	<1.2U	<3.3U		
	07/14/2015				14.76	400.5	115	<15.5U	96	<1.1U	3J	2.2J	<1.6U	165	<2.3U	1730	<1.8U	39	29.2		
	10/21/2015				17.49	397.7	113	<3.1U	56.5	<0.21U	8.8	0.6J	<0.31U	124	<0.45U	1200	<0.35U	31.6	39.9		
	01/20/2016				15.84	399.4	47.1	<3.1U	62.5	<0.21U	1.9	<0.39U	1.5	15.2	<0.45U	290	<0.35U	4.7	7.7		
	04/12/2016				14.71	400.5	50.6	<3.1U	62.9	<0.21U	2.5	<0.39U	<0.31U	15.9	<0.45U	330	<0.35U	29.7	19.6		
	08/23/2016				17.92	397.3	65.3	<3.1U	8.4	<0.21U	0.84J	<0.39U	2.5	19.5	<0.45U	377	<0.35U	2	2J		
	11/09/2016				19.36	395.9	42.4	10.7	67.7	<0.21U	2.3	<0.39U	1.6	28.7	<0.45U	480	<0.35U	13.9	8.9		
	03/06/2017				18.58	396.6	51.5	<15.5U	75.7	17700	4.7J	<2U	<1.6U	29	<2.3U	452	<1.8U	13.9	15.8		
	05/31/2017				16.23	399	35.2	25.6J	14	<1.1U	<1.7U	<2U	<1.6U	23.1	<2.3U	244	<1.8U	<1.2U	<3.3U		
	08/14/2017				16.47	398.8	23.5	<15.5U	4.1J	<1.1U	<1.7U	<2U	<1.6U	11.5	<2.3U	178	<1.8U	<1.2U	<3.3U		
	11/15/2017				17.19	398	24.2	<15.5U	<1.2U	3.9J	2.6J	<2U	<1.6U	11	<2.3U	152	<1.8U	<1.2U	<3.3U		
	03/06/2018				16.2	399	18.4	<3.1U	0.65J	<0.21U	0.59J	<0.39U	<0.31U	9.4	<0.45U	149	<0.35U	1.9	2.3J		
	6/13/2018				15	400.2	66.1	<3.1U	2	<0.21U	<0.34U	<0.39U	<0.31U	98.5	<0.45U	865	<0.35U	<0.23U	<0.66U		
	09/19/2018				13.91	401.3	41.6	<3.1U	3.8	<0.21U	3.3	<0.39U	<0.31U	61.3	<0.45U	362	<0.35U	5.9	15		
	12/11/2018				11.92	403.3	64.9	<3.1U	0.93J	1.1	1.5	<0.39U	0.84J	147	<0.45U	1160	<0.35U	3.9	7.6		
	3/6/2019				10.54	404.66	83.3	<3.1U	9.1	<0.21U	<0.34U	<0.39U	<0.31U	179	<0.45U	2460	<0.35U	<0.23U	<0.66U		
	6/12/2019				12.05	403.15	77.8	<3.1U	6.6	<0.21U	0.39J	1.3J	0.7J	182	<0.45U	675	<0.35U	0.79J	1.6J		
	9/18/2019				15.3	399.9	<0.28U	31.8	22.2	375	2.2	0.61J	<0.31U	143	<0.45U	912	<0.35U	0.8J	1.8J		
	11/26/2019	19.31	395.89	191	<3.1U	21.3	<0.21U	<0.34U	<0.39U	<0.31U	1610	<0.45U	<2.2U	<0.35U	0.49J	<0.66U					
	3/31/2020	13.73	401.47	96.3	<3.1U	9.9	<0.21U	<0.34U	<0.39U	3	2340	<0.45U	6530	<0.35U	0.23J	<0.66U					
	06/10/2020	14.1	401.10	150	<3.1U	23	<0.21U	0.87J	<0.39U	<0.31U	2450	<0.45U	9940	<0.35U	<0.23U	0.69J					
	9/15/2020	19.5	395.70	196	<3.1U	173	<0.21U	0.53J	<0.39U	<0.31U	3090	<0.45U	8430	<0.35U	1.4	2.7J					
	12/1/2020	15.38	399.82	154	<3.1U	211	<0.21U	1.6	<0.39U	<0.31U	5010	<0.45U	13700	<0.35U	3.5	4.4					
	03/18/2021	13.73	401.47	90	<3.1U	157	<0.21U	1	<0.39U	<0.31U	<0.33U	<0.45U	1730	<0.35U	3.2	1.9J					
	06/17/2021	14	401.20	19.8	<3.1U	15	<0.21U	1.1	<0.39U	<0.31U	855	<0.45U	5560	<0.35U	<0.23U	0.76J					
	9/9/2021	15.14	400.1	90	<3.1U	174	<0.21U	0.91J	<0.39U	<0.31U	3360	<0.45U	<2.2U	<0.35U	5.9	2.1J					
	12/15/2021	17.02	398.20	60.9	<3.1U	66.2	<2.1U	<3.4U	<3.9U	<3.1U	2390	<4.5U	17200	<3.5U	<2.3U	<6.6U					
	3/18/2022	16.76	398.46	140	<3.1U	86.4	<0.21U	0.6J	<0.39U	<0.31U	4230	<0.45U	42600	<0.35U	1.6	2J					
	06/15/2022	19.16	396.10	<5.6U	<62U	25.2	<4.2U	<6.8U	<7.8U	<6.2U	4580	<9U	75900	<7U	<4.6U	<13.2U					
	09/19/2022	17.25	398	125	<310U	<23U	<21U	<34U	55.1J	<31U	3510	<45U	40900	<35U	<23U	<66U					
	12/29/2022	17.1	398.1	4.5	4.7J	1.5	<0.33U	<0.3U	<0.55U	<0.4U	94	<0.32U	980	<0.25U	<0.38U	<0.65U					









MDE GW Clean-Up Standards

Compound	1,2-Dichloroethane	Acetone	Benzene	Chloroform	Ethylbenzene	Methyl bromide	Methyl chloride	Methyl tert-butyl ether	Methylene chloride	tert-Butylalcohol	Tetrachloroethylene	Toluene	Xylene (total)
Unit	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
	5	550	5	80	700	0.75	19	20	5	**	5	1000	10000

Well ID	Sample Date	Top of Casing Elevation*	Screen start depth	Screen end depth	Depth to Water (ft)	GW Elevation	1,2-Dichloroethane (µg/l)	Acetone (µg/l)	Benzene (µg/l)	Chloroform (µg/l)	Ethylbenzene (µg/l)	Methyl bromide (µg/l)	Methyl chloride (µg/l)	Methyl tert-butyl ether (µg/l)	Methylene chloride (µg/l)	tert-Butylalcohol (µg/l)	Tetrachloroethylene (µg/l)	Toluene (µg/l)	Xylene (total) (µg/l)
MW-003R	11/29/2010	416.3	15	25	16.49	399.8	<1.6U	<15.5U	31.2	<1.1U	25.5	<2U	<1.6U	<1.7U	<2.3U	<11U	<1.8U	54.6	302
	03/24/2011				13.9	402.4	<1.6U	<15.5U	118	2.2J	217	<2U	<1.6U	<1.7U	<2.3U	344	<1.8U	426	2490
	06/20/2011				14.47	401.8	<1.6U	<15.5U	109	<1.1U	146	<2U	<1.6U	<1.7U	<2.3U	65.3	<1.8U	70.2	1620
	09/14/2011				13.59	402.7	<1.6U	<15.5U	249	8.6	441	<2U	<1.6U	<1.7U	<2.3U	177	<1.8U	1490	2480
	10/26/2011				13.67	402.6	<1.6U	28.5J	105	<1.1U	117	<2U	<1.6U	5.5	<2.3U	216	<1.8U	109	626
	02/28/2012				13.62	402.7	<1.6U	<15.5U	149	<1.1U	627	<2U	<1.6U	<1.7U	<2.3U	423	<1.8U	410	1900
	05/07/2012				14.75	401.5	<1.6U	<15.5U	122	<1.1U	91.4	<2U	<1.6U	9.5	<2.3U	354	<1.8U	169	535
	08/14/2012				17.3	399	<1.6U	<15.5U	204	<1.1U	38.5	<2U	<1.6U	17.9	<2.3U	401	<1.8U	129	267
	11/15/2012				16.92	399.4	<0.32U	<3.1U	152	<0.21U	56.6	<0.39U	<0.31U	17	<0.45U	296	<0.35U	79.9	187
	03/08/2013				15.45	400.8	<0.32U	<3.1U	70.8	<0.21U	10	<0.39U	7	17.7	<0.45U	542	<0.35U	9	71.8
	04/01/2013				14.7	401.6	<0.32U	<3.1U	85.5	<0.21U	24	<0.39U	<0.31U	13	<0.45U	402	<0.35U	198	425
	09/12/2013				12.69	403.6	0.39J	81.2	84.3	<0.21U	339	<0.39U	5	8.4	<0.45U	764	<0.35U	167	2600
	12/17/2013				13.35	402.9	<0.32U	<3.1U	23.8	<0.21U	28.5	<0.39U	<0.31U	1.1	<0.45U	44.9	<0.35U	67.8	176
	01/13/2014				12.01	404.3	<0.32U	<3.1U	23.3	<0.21U	21.8	<0.39U	<0.31U	2.6	<0.45U	173	<0.35U	24.3	178
	04/21/2014				10.74	404.7	<0.32U	15.6	43.3	<0.21U	117	<0.39U	<0.31U	10.6	<0.45U	193	<0.35U	93.6	983
	07/29/2014	13.21	402.2	<1.6U	17.6J	172	<1.1U	243	<2U	2.3J	29.3	12.8	378	<1.8U	158	1530			
	10/20/2014	15.45	400	<0.32U	63.7	119	2.1	11.6	<0.39U	<0.31U	13.4	<0.45U	355	<0.35U	4.9	33.1			
	01/20/2015	13.17	402.3	<0.32U	100	31.6	<0.21U	21.1	<0.39U	<0.31U	2.5	<0.45U	76.5	<0.35U	25.9	88			
	04/27/2015	13.25	402.2	<0.32U	107	43.2	<0.21U	19.4	<0.39U	<0.31U	9.6	<0.45U	96.2	<0.35U	16.2	191			
	07/13/2015	12.85	402.6	<1.6U	171	170	<1.1U	68	<2U	<1.6U	29.6	<2.3U	309	<1.8U	174	506			
10/20/2015	19.39	396.1	<1.6U	19.9J	88.7	<1.1U	21.3	<2U	8.3	27.1	<2.3U	187	<1.8U	10.2	73.2				
01/19/2016	14.14	401.3	<0.32U	<3.1U	82.9	<0.21U	8.4	<0.39U	<0.31U	24.4	<0.45U	132	<0.35U	6.5	34.2				
04/12/2016	13.02	402.4	<0.32U	16.5	77.6	<0.21U	16.2	<0.39U	0.51J	18.6	<0.45U	203	<0.35U	14.3	144				
08/24/2016	16.95	398.5	<0.32U	<3.1U	74.6	<0.21U	4.9	<0.39U	<0.31U	17.5	<0.45U	317	<0.35U	3.7	43.5				
11/08/2016	18.4	397.1	<0.32U	6.9J	36.2	<0.21U	6.2	<0.39U	5.6	9	<0.45U	84.9	<0.35U	2.7	32.4				





MDE GW Clean-Up Standards							Compound	1,2-Dichloroethane	Acetone	Benzene	Chloroform	Ethylbenzene	Methyl bromide	Methyl chloride	Methyl tert-butyl ether	Methylene chloride	tert-Butylalcohol	Tetrachloroethylene	Toluene	Xylene (total)	
							Unit	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
								5	550	5	80	700	0.75	19	20	5	**	5	1000	10000	
Well ID	Sample Date	Top of Casing Elevation*	Screen start depth	Screen end depth	Depth to Water (ft)	GW Elevation															
MW-005R	11/29/2010	416.9	15	25	18.2	398.7	<1.6U	335	3750	<1.1U	1100	<2U	<1.6U	396	<2.3U	983	<1.8U	14600	7770		
	03/24/2011				15.42	401.5	2.7J	<15.5U	17000	3.7J	1870	<2U	<1.6U	51.9	<2.3U	370	<1.8U	36800	10200		
	06/20/2011				15.96	400.9	3.1J	976	16000	<1.1U	1830	<2U	<1.6U	14.6	<2.3U	204	<1.8U	38100	9560		
	09/14/2011				15.41	401.5	<1.6U	909	16300	<1.1U	2380	<2U	<1.6U	25	<2.3U	287	<1.8U	36800	13300		
	10/27/2011				15.68	401.2	<1.6U	1150	16200	<1.1U	2180	<2U	<1.6U	8.7	<2.3U	324	<1.8U	39900	11600		
	02/28/2012				15.17	401.7	<1.6U	<15.5U	12100	<1.1U	1770	<2U	<1.6U	8.1	<2.3U	596	<1.8U	48400	9490		
	05/07/2012				16.08	400.8	<32U	1260	15200	<21U	2220	<39U	60.7J	<33U	<45U	522J	<35U	38000	12200		
	08/14/2012				18.3	398.6	<32U	<310U	14000	<21U	2230	<39U	<31U	<33U	<45U	3090	<35U	36100	11600		
	11/15/2012				19.78	397.1	<1.6U	387	8660	<1.1U	2740	<2U	<1.6U	8.7	<2.3U	242	<1.8U	26200	15000		
	03/08/2013				18.3	398.6	<1.6U	<15.5U	6000	<1.1U	2150	<2U	39.3	13.4	<2.3U	375	<1.8U	28500	13000		
	03/13/2013				16.9	400	<2.6	291	872	<2	224	<2.2	<2.1	4.7J	<7	249J	<2.8	2290	1140		
	04/02/2013				16.55	400.4	<1.6U	<15.5U	178	<1.1U	<1.7U	<2U	<1.6U	146	<2.3U	1930	<1.8U	10.8	33		
	09/12/2013				14.05	402.9	<160U	1660J	9920	173J	1710	<195U	<155U	<165U	<225U	<1100U	<175U	36600	10100		
	12/17/2013				15.25	401.6	<32U	653J	6140	<21U	1240	<39U	<31U	<33U	<45U	502J	<35U	20900	6300		
	01/13/2014				14.33	402.6	278	<15.5U	203	<1.1U	<1.7U	<2U	<1.6U	579	2.7J	3490	<1.8U	<1.2U	4J		
	04/21/2014	12.56	403.2	<16U	800	7180	36.1J	1630	<19.5U	22.4J	18.3J	34J	583	<17.5U	33900	10400					
	07/30/2014	14.8	400.9	<320U	<3100U	8950	<210U	1980	<390U	<310U	<330U	<450U	<2200U	<350U	37900	11700					
	10/20/2014	18.85	396.9	<16U	<155U	7570	30.3J	2190	<19.5U	44.6J	19.4J	28.8J	618	<17.5U	35100	13500					
	01/20/2015	15.31	400.4	<16U	178J	4100	<10.5U	1320	<19.5U	18J	<16.5U	<22.5U	190J	<17.5U	21200	8910					
	04/27/2015	15.12	400.6	<16U	<155U	3100	<10.5U	1600	<19.5U	33.7J	<16.5U	<22.5U	302J	<17.5U	15400	10100					
	07/13/2015	14.55	401.2	<160U	<1550U	3620	325J	1350	301J	<155U	<165U	<225U	<1100U	<175U	22200	8040					
	10/21/2015	17.59	398.1	<32U	<310U	1600	<21U	598	44.2J	<31U	<33U	<45U	366J	<35U	4760	3710					
	01/19/2016	15.78	399.9	<32U	<310U	2550	73J	1400	<39U	<31U	38.7J	<45U	330J	<35U	10900	7470					
04/12/2016	14.7	401	<32U	<310U	3050	<21U	1050	<39U	49.3J	<33U	<45U	308J	<35U	8370	6210						
08/23/2016	18.07	397.6	<6.4U	<62U	3730	<4.2U	854	<7.8U	<6.2U	26	<9U	272	<7U	916	4170						
11/08/2016	19.84	395.9	<6.4U	<62U	2210	<4.2U	954	<7.8U	<6.2U	32.7	<9U	263	<7U	303	4520						







MDE GW Clean-Up Standards							Compound	1,2-Dichloroethane	Acetone	Benzene	Chloroform	Ethylbenzene	Methyl bromide	Methyl chloride	Methyl tert-butyl ether	Methylene chloride	tert-Butylalcohol	Tetrachloroethylene	Toluene	Xylene (total)	
							Unit	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
								5	550	5	80	700	0.75	19	20	5	**	5	1000	10000	
Well ID	Sample Date	Top of Casing Elevation*	Screen start depth	Screen end depth	Depth to Water (ft)	GW Elevation															
MW-008	09/15/2011	416.4	55	75	15.82	400.6	3	<3.1U	279	<0.21U	68.2	<0.39U	<0.31U	723	<0.45U	230	<0.35U	254	181		
	10/27/2011				16.65	399.8	13.1	<3.1U	569	<0.21U	275	<0.39U	<0.31U	737	<0.45U	583	<0.35U	249	350		
	02/29/2012				27.4	389	11.3	<3.1U	275	<0.21U	157	<0.39U	<0.31U	742	<0.45U	749	<0.35U	15.8	13.7		
	05/07/2012				16.31	400.1	3.2J	370	343	<1.1U	223	<2U	23.8	667	<2.3U	609	<1.8U	61.5	69.5		
	08/14/2012				18.15	398.3	9.2	<15.5U	417	<1.1U	221	<2U	<1.6U	599	<2.3U	699	<1.8U	43	49.9		
	11/16/2012				19.36	397	<3.2U	<31U	449	<2.1U	197	<3.9U	<3.1U	664	<4.5U	737	<3.5U	20.5	41.1		
	03/08/2013				18.51	397.9	6.5	<15.5U	418	<1.1U	139	<2U	<1.6U	550	4.3J	347	<1.8U	11.9	30.9		
	04/02/2013				16.56	399.9	<0.32U	<3.1U	51	<0.21U	6.2	<0.39U	<0.31U	485	<0.45U	<2.2U	1.7	5.1	9.1		
	09/12/2013				14.19	402.2	<1.6U	34.8J	32.9	2.5J	4.8J	<2U	<1.6U	326	<2.3U	111	<1.8U	5J	<3.3U		
	12/17/2013				16.5	399.9	16.3	<31U	359	<2.1U	63.3	<3.9U	<3.1U	532	<4.5U	459	<3.5U	16.9	28.9J		
	01/13/2014				15.04	401.4	7.6J	<62U	323	24.5	65.8	<7.8U	29.6	516	<9U	<44U	<7U	13.8J	158		
	04/22/2014				12.75	402.8	4J	258	248	8.9	36.8	3.9J	<1.6U	478	<2.3U	428	1.8J	6.8	14.2J		
	07/29/2014				14.6	401	7.8	<15.5U	380	<1.1U	73.2	<2U	32.9	668	13	618	<1.8U	27.1	32.1		
	10/21/2014				18.07	397.5	8.6	<15.5U	441	<1.1U	60.7	<2U	<1.6U	870	<2.3U	906	<1.8U	24.2	30.6		
	01/22/2015				14.97	400.6	6.1	<15.5U	366	8	40.6	<2U	<1.6U	545	<2.3U	532	<1.8U	10.2	17		
	05/01/2015	16.01	399.5	4.8J	686	383	<1.1U	60.1	<2U	<1.6U	516	<2.3U	588	<1.8U	10.9	37.1					
	07/14/2015	15.8	399.8	4.2J	<15.5U	350	<1.1U	55.9	<2U	<1.6U	539	10.4	506	<1.8U	16	24.8					
	10/22/2015	17.64	397.9	1.8	<3.1U	160	<0.21U	23.2	0.63J	<0.31U	575	<0.45U	768	<0.35U	12.1	12.7					
	01/19/2016	16.1	399.5	<1.6U	<15.5U	61.3	4.9J	8	<2U	9.1	222	<2.3U	122	<1.8U	5.7	14J					
	04/13/2016	15.57	400	<1.6U	17.5J	35.9	1.5J	2.8J	<2U	2J	173	<2.3U	111	<1.8U	3.9J	7.4J					
	08/24/2016	18.14	397.4	<1.6U	<15.5U	59.2	<1.1U	7.3	<2U	<1.6U	211	<2.3U	173	<1.8U	5J	22.6					
	11/09/2016	19.55	396	<1.6U	<15.5U	32.9	<1.1U	3.2J	<2U	1.6J	189	<2.3U	183	<1.8U	5.7	10.7J					
	03/07/2017	18.5	397.1	<1.6U	<15.5U	29.1	<1.1U	<1.7U	<2U	<1.6U	142	<2.3U	93.9	<1.8U	1.6J	<3.3U					
	06/01/2017	16.76	398.8	<1.6U	28.2J	3.3J	1.1J	2.2J	<2U	<1.6U	110	<2.3U	123	<1.8U	1.4J	16.6					
	08/15/2017	16.64	398.9	<1.6U	<15.5U	5.1	<1.1U	<1.7U	<2U	<1.6U	111	<2.3U	78.1	<1.8U	<1.2U	<3.3U					
	11/16/2017	17.44	398.1	<1.6U	<15.5U	4.7J	<1.1U	<1.7U	<2U	<1.6U	98.9	<2.3U	54.6	<1.8U	1.5J	<3.3U					
	03/08/2018	16.17	399.4	<0.32U	<3.1U	11.3	<0.21U	0.78J	<0.39U	<0.31U	46.6	<0.45U	65.9	<0.35U	0.6J	0.72J					
	6/13/2018	15.12	400.4	<0.32U	<3.1U	6.6	<0.21U	0.5J	<0.39U	0.87J	76.8	<0.45U	16.9	<0.35U	0.31J	<0.66U					
	09/19/2018	14.13	401.4	<0.32U	<3.1U	3.5	<0.21U	0.42J	<0.39U	<0.31U	79.8	<0.45U	53.1	<0.35U	0.25J	<0.66U					
	12/12/2018	11.98	403.6	<0.32U	14.3	13.1	<0.21U	1.4	<0.39U	<0.31U	73.7	<0.45U	36.2	<0.35U	1.4	2.4J					
	3/06/2019	10.58	405.02	<0.32U	19.4	10.2	<0.21U	1.1	<0.39U	<0.31U	43.9	<0.45U	25.1	<0.35U	1.1	1.6J					
	6/12/2019	12.14	403.46	<0.32U	<3.1U	12.2	<0.21U	2.4	<0.39U	<0.31U	58	<0.45U	35.2	<0.35U	0.74J	12.2					
	9/18/2019	15.2	400.4	<0.28U	<3.1U	24.5	<0.21U	2.7	<0.39U	<0.31U	82.2	<0.45U	127	<0.35U	1.9	10.9					
	11/26/2019	17.84	397.76	<0.32U	<3.1U	18.8	<0.21U	1.7	<0.39U	<0.31U	69.2	<0.45U	100	<0.35U	1.8	7.6					
	3/30/2020	12.23	403.33	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	18.7	<0.35U	<0.23U	<0.66U					
	06/11/2020	14.5	401.06	<0.32U	<3.1U	27.1	<0.21U	<0.34U	<0.39U	<0.31U	9.7	<0.45U	38.9	<0.35U	<0.23U	<0.66U					
	9/16/2020	15.65	399.91	<0.32U	<3.1U	8.4	<0.21U	0.79J	0.41J	<0.31U	82.9	<0.45U	147	<0.35U	1.3	4.7					
	12/01/2020	15.55	400.01	<0.32U	<3.1U	7.8	<0.21U	0.68J	<0.39U	<0.31U	72.2	<0.45U	57.1	<0.35U	1.8	4.6					
	03/16/2021	13.82	401.74	<0.32U	<3.1U	2.3	<0.21U	<0.34U	<0.39U	<0.31U	65.6	<0.45U	42.6	<0.35U	0.34J	1.4J					
	06/15/2021	14.08	401.48	<0.32U	<3.1U	2	<0.21U	0.62J	<0.39U	<0.31U	63.9	<0.45U	201	<0.35U	0.36J	2.5J					
09/09/2021	15.1	400.5	<0.32U	<3.1U	6.1	0.75J	2.4	<0.39U	<0.31U	75.9	<0.45U	68.9	<0.35U	1.5	6.4						
12/15/2021	17.15	398.41	<0.32U	<3.1U	5.7	<0.21U	0.67J	<0.39U	<0.31U	65.7	<0.45U	405	<0.35U	1.4	2.1J						
3/14/2022	16.85	398.71	<0.32U	<3.1U	0.43J	<0.21U	0.34J	<0.39U	<0.31U	0.38J	<0.45U	<2.2U	<0.35U	0.74J	1.3J						
06/14/2022	16.69	398.90	<0.28U	14.3	2.6	6.8	0.35J	<0.39U	0.31J	27.5	<0.45U	131	<0.35U	2.9	1.1J						
9/20/2022	17.3	398.3	<1.6U	17.5J	3.3J	2.7J	<1.7U	<2U	<1.6U	31.8	<2.3U	52.1	<1.8U	2.5J	<3.3U						
12/30/2022	17.11	398.5	<0.43U	<4.4U	8.1	<0.33U	<0.3U	<0.55U	<0.4U	65	<0.32U	170	<0.25U	0.4J	<0.65U						



MDE GW Clean-Up Standards

							Compound	1,2-Dichloroethane	Acetone	Benzene	Chloroform	Ethylbenzene	Methyl bromide	Methyl chloride	Methyl tert-butyl ether	Methylene chloride	tert-Butylalcohol	Tetrachloroethylene	Toluene	Xylene (total)	
							Unit	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
								5	550	5	80	700	0.75	19	20	5	**	5	1000	10000	
Well ID	Sample Date	Top of Casing Elevation*	Screen start depth	Screen end depth	Depth to Water (ft)	GW Elevation															
MW-008D	09/15/2011	416.5			13.85	402.6	<0.32U	4J	0.46J	<0.21U	<0.34U	<0.39U	<0.31U	1.8	<0.45U	<2.2U	<0.35U	1.1	<0.66U		
	10/26/2011				13.95	402.5	<0.32U	5.3J	0.29J	<0.21U	<0.34U	<0.39U	<0.31U	1.4	<0.45U	<2.2U	<0.35U	0.93J	<0.66U		
	02/28/2012				13.26	403.2	<0.32U	<3.1U	0.33J	<0.21U	<0.34U	<0.39U	<0.31U	1.2	<0.45U	9.6J	<0.35U	0.49J	<0.66U		
	05/08/2012				14.18	402.3	<0.32U	3.5J	0.23J	<0.21U	<0.34U	<0.39U	<0.31U	0.99J	<0.45U	<2.2U	<0.35U	0.23J	<0.66U		
	08/13/2012				17.3	399.2	<0.32U	<3.1U	0.27J	<0.21U	<0.34U	<0.39U	<0.31U	0.69J	<0.45U	<2.2U	<0.35U	1.3	<0.66U		
	11/16/2012				17.25	399.3	<0.32U	<3.1U	0.43J	<0.21U	<0.34U	<0.39U	<0.31U	0.75J	<0.45U	<2.2U	<0.35U	0.87J	<0.66U		
	03/07/2013				15.55	401	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	0.55J	<0.45U	<2.2U	<0.35U	0.38J	<0.66U		
	04/01/2013				14.93	401.6	<0.32U	4.3J	0.37J	<0.21U	<0.34U	<0.39U	<0.31U	0.49J	<0.45U	2.3J	<0.35U	0.8J	<0.66U		
	09/12/2013				12.83	403.7	<0.32U	6.6J	1.1	<0.21U	<0.34U	<0.39U	<0.31U	1J	<0.45U	9.5J	<0.35U	0.64J	<0.66U		
	12/18/2013				13.59	402.9	<0.32U	<3.1U	0.97J	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	1.4	2J		
	01/14/2014				12.07	404.4	<0.32U	<3.1U	0.42J	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.93J	<0.66U		
	04/22/2014				10.9	404.5	<0.32U	<3.1U	0.23J	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.44J	<0.66U		
	07/30/2014				13.61	401.8	<0.32U	<3.1U	0.38J	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.43J	<0.66U		
	10/21/2014				15.51	399.9	<0.32U	<3.1U	0.64J	<0.21U	<0.34U	<0.39U	0.5J	<0.33U	<0.45U	3.1J	<0.35U	0.79J	<0.66U		
	01/22/2015				13.29	402.1	<0.32U	<3.1U	0.58J	<0.21U	<0.34U	<0.39U	0.32J	<0.33U	<0.45U	<2.2U	<0.35U	0.6J	<0.66U		
	04/28/2015	13.46	402	<0.32U	5.9J	0.24J	<0.21U	<0.34U	0.49J	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.54J	2.7J					
	07/15/2015	13.11	402.3	<0.32U	4.2J	0.28J	<0.21U	<0.34U	0.45J	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.38J	<0.66U					
	10/22/2015	16.45	399	<0.32U	7.8J	0.48J	<0.21U	<0.34U	0.58J	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.63J	<0.66U					
	01/19/2016	14.04	401.4	<0.32U	6.4J	0.4J	<0.21U	<0.34U	<0.39U	0.48J	<0.33U	<0.45U	<2.2U	<0.35U	0.55J	<0.66U					
	04/12/2016	13.31	402.1	<0.32U	4.5J	0.32J	<0.21U	<0.34U	<0.39U	0.71J	<0.33U	<0.45U	<2.2U	<0.35U	0.77J	<0.66U					
	08/23/2016	16.93	398.5	<0.32U	5.8J	0.3J	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.49J	<0.66U					
	11/08/2016	18.4	397	<0.32U	6.8J	0.39J	<0.21U	<0.34U	<0.39U	0.46J	<0.33U	<0.45U	3.5J	<0.35U	0.76J	<0.66U					
	03/06/2017	17.13	398.3	<0.32U	4.6J	0.24J	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.37J	<0.66U					
	06/01/2017	15	400.4	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	<0.23U	<0.66U					
	08/14/2017	15.26	400.1	<0.32U	5.9J	0.31J	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.42J	<0.66U					
	11/15/2017	16.21	399.2	<0.32U	6.6J	0.59J	<0.21U	<0.34U	0.62J	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.9J	<0.66U					
	03/06/2018	14.44	401	<0.32U	8.2J	0.39J	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.63J	<0.66U					
	6/12/2018	13.57	401.8	<0.32U	14	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.29J	<0.66U					
	09/18/2018	12.18	403.2	<0.32U	9.2J	0.38J	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	31.3	<0.35U	0.73J	<0.66U					
	12/12/2018	10.5	404.9	<0.32U	8.6J	0.84J	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	3.9J	<0.35U	1.6	<0.66U					
	3/6/2019	8.94	406.46	<0.32U	13.6	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	<0.23U	<0.66U					
	6/13/2019	10.83	404.57	<0.32U	10.3	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.31J	<0.66U					
	9/18/2019	14.8	400.6	<0.28U	9.5J	0.6J	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.86J	<0.66U					
	11/26/2019	15.26	400.14	<0.32U	7.5J	0.32J	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	13.5	<0.35U	0.66J	0.69J					
	3/30/2020	13.83	401.57	<0.32U	<3.1U	3.6	<0.21U	0.6J	<0.39U	0.61J	<b>68.3</b>	<0.45U	107	<0.35U	1.5	6.8					
	06/12/2020	13.2	402.20	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	20.9	<0.35U	<0.23U	<0.66U					
	9/16/2020	14	401.40	<0.32U	<3.1U	0.46J	<0.21U	<0.34U	0.4J	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.92J	<0.66U					
	12/03/2020	13.8	401.60	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	10.3	<0.35U	<0.23U	<0.66U					
	03/18/2021	12.36	403.04	<0.32U	<3.1U	0.3J	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.37J	<0.66U					
06/17/2021	12.65	402.75	<0.32U	<3.1U	0.79J	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	0.88J	<0.66U						
09/10/2021	13.88	401.5	<0.32U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	<0.23U	<0.66U						
12/16/2021	15.85	399.56	<0.32U	<3.1U	0.97J	<0.21U	<0.34U	<0.39U	<0.31U	1.1	<0.45U	288	<0.35U	1.5	0.71J						
3/15/2022	15.73	399.68	<0.32U	4.3J	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	<0.33U	<0.45U	5.7J	<0.35U	<0.23U	<0.66U						
06/14/2022	20.4	395.00	<0.28U	5.7J	0.47J	<0.21U	<0.34U	<0.39U	0.46J	<0.33U	<0.45U	13.3	<0.35U	0.64J	<0.66U						
09/20/2022	16.15	399.3	<0.32U	11.1	2.9	<0.21U	0.41J	<b>1.1</b>	<0.31U	<0.33U	<0.45U	<2.2U	<0.35U	4	1.8J						
12/30/2022	15.58	399.8	<0.43U	<4.4U	<0.2U	<0.33U	<0.3U	<0.55U	<0.4U	<0.22U	<0.32U	<8.3U	<0.25U	<0.38U	<0.65U						







MDE GW Clean-Up Standards							Compound	1,2-Dichloroethane	Acetone	Benzene	Chloroform	Ethylbenzene	Methyl bromide	Methyl chloride	Methyl tert-butyl ether	Methylene chloride	tert-Butylalcohol	Tetrachloroethylene	Toluene	Xylene (total)	
Well ID	Sample Date	Top of Casing Elevation*	Screen start depth	Screen end depth	Depth to Water (ft)	GW Elevation	Unit	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
								5	550	5	80	700	0.75	19	20	5	**	5	1000	10000	
	9/17/2020				17.13	397.87		4.4	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	116	<0.45U	293	<0.35U	<0.23U	<0.66U	
	12/03/2020				16.8	398.2		3.7	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	123	<0.45U	<2.2U	<0.35U	<0.23U	<0.66U	
	03/18/2021				15.38	399.62		2.7	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	102	<0.45U	580	<0.35U	<0.23U	<0.66U	
	06/14/2021				15.93	399.07		5.6	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	133	<0.45U	1860	<0.35U	<0.23U	<0.66U	
	09/08/2021				16.94	398		<3.1U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	73.7	<0.45U	316	<0.35U	<0.23U	<0.66U	
	12/14/2021				18.18	396.78		1.4	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	19.4	<0.45U	153	<0.35U	<0.23U	<0.66U	
	3/14/2022				18.14	396.82		3.6	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	77.8	<0.45U	684	<0.35U	<0.23U	<0.66U	
	06/13/2022				17.45	397.51		<0.28U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	1260	<0.45U	10500	<0.35U	<0.23U	<0.66U	
	09/19/2022				18.65	396.3		8J	<3.1U	<2.3U	<2.1U	<3.4U	8.4J	<3.1U	149	<4.5U	813	<3.5U	<2.3U	<6.6U	
	12/29/2022				18.29	396.7		40	<22U	<1U	<1.6U	<1.5U	<2.8U	<2U	1100	<1.6U	10000	<1.2U	<1.9U	<3.3U	





MDE GW Clean-Up Standards							Compound	1,2-Dichloroethane	Acetone	Benzene	Chloroform	Ethylbenzene	Methyl bromide	Methyl chloride	Methyl tert-butyl ether	Methylene chloride	tert-Butylalcohol	Tetrachloroethylene	Toluene	Xylene (total)	
Well ID	Sample Date	Top of Casing Elevation*	Screen start depth	Screen end depth	Depth to Water (ft)	GW Elevation	Unit	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
								5	550	5	80	700	0.75	19	20	5	**	5	1000	10000	
	9/17/2020				16.04	399.06		2.9	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	33.6	<0.45U	21.2	<0.35U	<0.23U	<0.66U	
	12/03/2020				16.1	399.00		3.5	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	54.8	<0.45U	11	<0.35U	<0.23U	<0.66U	
	03/18/2021				14.63	400.47		2.8	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	42.3	<0.45U	82.7	<0.35U	<0.23U	<0.66U	
	06/14/2021				15	400.10		0.66J	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	8.2	<0.45U	65.4	<0.35U	<0.23U	<0.66U	
	09/08/2021				15.3	399.8		6.6	<3.1U	<0.23U	<0.21U	<0.34U	0.67J	0.47J	386	<0.45U	<2.2U	<0.35U	<0.23U	<0.66U	
	12/14/2021				17.7	397.41		7.3	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	348	<0.45U	119	<0.35U	<0.23U	<0.66U	
	3/14/2022				17.44	397.67		2.9	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	56.9	<0.45U	<2.2U	<0.35U	<0.23U	<0.66U	
	06/13/2022				17.2	397.91		<0.28U	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	<0.31U	539	<0.45U	690	<0.35U	<0.23U	<0.66U	
	09/19/2022				17.95	397.2		1.8	<3.1U	<0.23U	<0.21U	<0.34U	<0.39U	0.43J	37	<0.45U	16	<0.35U	<0.23U	<0.66U	
	12/29/2022				17.62	397.5		9.8	<8.8U	<0.41U	<0.65U	<0.6U	<1.1U	<0.8U	640	<0.63U	360	<0.5U	<0.76U	<1.3U	

**Notes**  
 U = Not detected, method detection limit reported  
 J = Estimated Value  
 D = Compound identified at a secondary dilution factor  
 B = Analyte reported in associated field or trip blank  
 (µg/l) = Micrograms per liter  
 NA = Not analyzed/Not available  
 Bold values (highlighted in yellow) indicate exceedence of MDE Groundwater Clean-Up Standards for Type I & II Aquifers (2018)  
 \* Well casing survey completed based on vertical datum: NAVD 1988.  
 † Well casings were re-surveyed in 2014, the updated casing elevations were used to determine GW elevations in April 2014 and subsequent measurements

**ON-SITE DRINKING WATER  
RESULTS SUMMARY TABLES**











Compound:	1,2-Dichloro ethane	Acetone	Benzene	Ethyl benzene	Isopro panol	Isopropyl Ether	Methyl chloride	Methyl ethyl ketone	Methyl tert-butyl ether	Methylene chloride	Naphthalene	Tert-Amyl alcohol	Tert-Amyl Methyl Ether	tert-Butylalcohol	Toluene	Xylene (total)		
MDE DW Standards	5	**	5	700	**	**	**	**	20	5	**	**	**	**	1000	10000		
Unit	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)		
Stage	Location	Sample Date																
		06/12/2020	<0.1U	22.7	<0.07U	<0.18U	<3.9U	<0.21U	<0.22U	<1.3U	<0.09U	<0.32U	<0.15U	<1.6U	<0.15U	<1.4U	<0.12U	<0.27U
		06/12/2020	<0.1U	22.7	<0.07U	<0.18U	<0.21U	0.19J	<1.3U	<0.09U	<0.32U	<0.15U	<0.11U	<1.6U	<0.15U	<1.4U	<0.12U	<0.27U
		07/31/2020	<0.1U	4.5J	<0.07U	<0.18U	<3.9U	<0.21U	<0.22U	<1.3U	<0.09U	<0.32U	<0.15U	<1.6U	<0.15U	7.1	<0.12U	<0.27U
		10/30/2020	<0.1U	<2.2U	<0.07U	<0.18U	<3.9U	<0.21U	<0.22U	<1.3U	<0.09U	<0.32U	<0.15U	<1.6U	<0.15U	4.1J	<0.12U	<0.27U
		02/26/2021	<0.1U	<2.2U	<0.07U	<0.18U	<3.9U	<0.21U	<0.22U	<1.3U	<0.09U	<0.32U	<0.15U	<1.6U	<0.15U	12.6	<0.12U	<0.27U
		05/06/2021	<0.1U	<2.2U	<0.07U	<0.18U	<3.9U	<0.21U	<0.22U	<1.3U	<0.09U	<0.32U	<0.15U	<1.6U	<0.15U	<1.4U	<0.12U	<0.27U
		08/19/2021	<0.1U	13.5	<0.07U	<0.18U	<3.9U	<0.21U	<0.22U	<1.3U	<0.09U	<0.32U	<0.15U	<1.6U	<0.15U	<1.4U	<0.12U	<0.27U
		11/22/2021	<0.1U	<2.2U	<0.07U	<0.18U	<3.9U	<0.21U	<0.22U	<1.3U	<0.09U	<0.32U	<0.15U	<1.6U	<0.15U	6.4	<0.12U	<0.27U
		02/10/2022	<0.1U	<2.2U	<0.07U	<0.18U	<3.9U	<0.21U	<0.22U	<1.3U	<0.09U	<0.32U	<0.15U	<1.6U	<0.15U	8	<0.12U	<0.27U
		05/19/2022	<0.1U	<2.2U	<0.07U	<0.18U	<3.9U	<0.21U	<0.22U	<1.3U	<0.09U	<0.32U	<0.15U	<1.6U	<0.15U	10.6	<0.12U	<0.27U
		09/01/2022	<0.1U	10.2	<0.07U	<0.18U	<3.9U	<0.21U	<0.22U	<1.3U	<0.09U	<0.32U	<0.15U	<1.6U	<0.15U	<1.4U	<0.12U	<0.27U
		12/15/2022	<0.1U	7.4	<0.1U	<0.15U	<1.4U	<0.08U	<0.19U	<0.31U	<0.06U	<0.13U	<0.17U	<0.52U	<0.08U	6.9	<0.08U	<0.33U

**Notes**

U = Not detected, method detection limit reported

J = Estimated Value

(µg/l) = Micrograms per liter

NA = Not analyzed/Not available

**Bold values (highlighted in yellow) indicate exceedence of MDE Drinking Water Standards (2008)**



2794 NORTHEAST ROAD DRINKING WATER  
RESULTS SUMMARY TABLES























2802 NORTHEAST ROAD DRINKING WATER  
RESULTS SUMMARY TABLES

















**DPE EFFLUENT WATER  
RESULTS SUMMARY TABLES**





Compound		1,2-Dibromoethane	2-Hexanone	Acetone	Benzene	Ethylbenzene	Isopropyl Ether	methyl bromide	Methyl chloride	Methyl ethyl ketone	Methyl tert-butyl ether	Methylene chloride	Tert-Amyl alcohol	tert-Butylalcohol	Tetrachloroethylene	Toluene	Xylene (total)
MDE GW Cleanup Standards		0.05	**	550	5	700	**	0.75	19	700	20	5	**	**	5	1000	10000
Unit		(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
Location	Sample Date																
OUTFALL-001	04/26/2017	<0.28U	36.7	170	<b>1300</b>	261	<0.25U	<0.39U	3	257	7.8	<0.45U	770	344	<0.35U	<b>2870</b>	1550
	05/12/2017	<2.8U	<13U	164	<b>867</b>	142	2.5J	<3.9U	<3.1U	65.9J	5.5J	<b>56.8</b>	587	340	<3.5U	<b>1710</b>	950
	06/21/2017	<b>7J</b>	14.2J	103	<b>665</b>	97.1	<2.5U	<3.9U	<3.1U	43.5J	<b>21.1</b>	<b>5.7J</b>	713	239	<3.5U	<b>1660</b>	823
	07/11/2017	<b>9</b>	<1.3U	101	<b>521</b>	48.9	2.9	0.5J	<0.31U	41.8	<b>23.9</b>	<0.45U	892	422	<0.35U	<b>1180</b>	706
	11/15/2017	<2.8U	<13U	119	<b>248</b>	63.9	<2.5U	<3.9U	<3.1U	36.3J	17.7	<4.5U	852	336	<3.5U	843	499
EFFLUENT-001	06/15/2018	<b>1.7</b>	15.5	117	<b>58.1</b>	8.9	<0.25U	<0.39U	<0.31U	41.3	8.5	<0.45U	691	283	<0.35U	139	123
	09/26/2018	<b>2</b>	13.9	138	<b>38.2</b>	14	<0.25U	<0.39U	<0.31U	63.2	4.8	<0.45U	1030	446	<0.35U	154	108
	6/13/2019	<b>0.97J</b>	13.6	80.8	<b>10.7</b>	2.7	<0.25U	<0.39U	<0.31U	43.6	2.9	<0.45U	764	322	<0.35U	33.3	31.6
	09/30/2019	<0.28U	46.3	112	<b>303</b>	36	1	<0.39U	<0.31U	210	<b>53.9</b>	<0.45U	648	199	<0.35U	315	262
	11/26/2019	<b>2.2</b>	66	548	<b>96.2</b>	30.4	<0.25U	<0.39U	<0.31U	488	<b>125</b>	<0.45U	<6.6U	<2.2U	<0.35U	253	205
	2020-06-26	<0.28U	<1.3U	<3.1U	<0.23U	<0.34U	<0.25U	0.74J	<0.31U	<1.8U	2.2	0.63J	<6.6U	116	<0.35U	0.28J	<0.66U
	2020-07-14	<b>1</b>	<1.3U	184	0.73J	<0.34U	<0.25U	<0.39U	<0.31U	46.2	<b>84.1</b>	<0.45U	3250	2250	<0.35U	0.45J	2.6J
	07/31/2020	<0.28U	<1.3U	<3.1U	<0.23U	<0.34U	<0.25U	<0.39U	0.43J	<1.8U	<0.33U	0.6J	<0.2U	8.6J	<0.35U	<0.23U	<0.66U
	09/16/2020	<1U	<5U	<10U	<1U	<1U	<1U	<1U	<1U	<10U	<b>96.1</b>	0.54J	3750	3720	<1U	<1U	<3U
	11/19/2020	<0.28U	<1.3U	<3.1U	<0.23U	<0.34U	<0.25U	<0.39U	0.37J	<1.8U	<b>88.6</b>	<0.45U	2710	2140	<0.35U	<0.23U	<0.66U
	11/24/2020	<0.28U	<1.3U	267	0.26J	<0.34U	<0.25U	<0.39U	<0.31U	105	<b>211</b>	<0.45U	8180	5760	<0.35U	<0.23U	<0.66U
	12/02/2020	<0.28U	<1.3U	130	<0.23U	<0.34U	<0.25U	<0.39U	<0.31U	33.5	<b>169</b>	<0.45U	4590	<2.2U	<0.35U	0.33J	<0.66U
	12/22/2020	<0.28U	<1.3U	171	2.2	<0.34U	<0.25U	<0.39U	<0.31U	117	<b>295</b>	<0.45U	6280	5380	<0.35U	0.47J	<0.66U
	01/06/2021	<0.28U	<1.3U	<3.1U	0.49J	<0.34U	<0.25U	<0.39U	<0.31U	45.7	<b>165</b>	<0.45U	5810	4310	<0.35U	<0.23U	<0.66U
	01/25/2021	<1.4U	<6.5U	58.6	<1.2U	<1.7U	<1.3U	<2U	<1.6U	28.9J	160	<2.3U	4790	4000	<1.8U	<1.2U	<3.3U
	03/16/2021	<1.4U	<6.5U	42.6J	<1.2U	<1.7U	<1.3U	<2U	<1.6U	20.2J	<b>128</b>	<2.3U	3220	3500	<1.8U	<1.2U	<3.3U
	04/07/2021	<0.28U	<1.3U	<3.1U	0.34J	<0.34U	<0.25U	<0.39U	<0.31U	<1.8U	<b>250</b>	<0.45U	7280	<110U	<0.35U	<0.23U	<0.66U
	05/06/2021	<0.28U	<1.3U	<3.1U	0.27J	<0.34U	<0.25U	<0.39U	<0.31U	<1.8U	<b>195</b>	<0.45U	<6.6U	<2.2U	<0.35U	<0.23U	<0.66U
	05/26/2021	<1.4U	<6.5U	<15.5U	<1.2U	<1.7U	<1.3U	<b>3.2J</b>	<1.6U	<9U	<b>184</b>	<2.3U	4540	2770	<1.8U	<1.2U	<3.3U
	06/17/2021	<0.28U	<1.3U	<3.1U	0.27J	<0.34U	<0.25U	<0.39U	0.46J	<1.8U	<b>191</b>	<0.45U	3060	2280	<0.35U	<0.23U	<0.66U
	07/09/2021	<0.28U	<1.3U	<3.1U	0.27J	<0.34U	<0.25U	<0.39U	<0.31U	<1.8U	<b>167</b>	<0.45U	6320	2880	<0.35U	<0.23U	<0.66U
	08/19/2021	<0.28U	<1.3U	52.8	0.29J	<0.34U	<0.25U	<0.39U	0.69J	12.7	<b>118</b>	<0.45U	3860	3370	<0.35U	<0.23U	<0.66U
	09/10/2021	<0.28U	<1.3U	<3.1U	0.28J	<0.34U	<0.25U	<0.39U	<0.31U	<1.8U	<b>104</b>	<0.45U	2310	1420	<0.35U	<0.23U	<0.66U
	10/14/2021	<0.28U	7.3	<3.1U	<0.23U	<0.34U	<0.25U	<0.39U	0.5J	<1.8U	<b>134</b>	<0.45U	3010	3870	<0.35U	<0.23U	<0.66U
	11/22/2021	<0.28U	7	220	4.4	<0.34U	<0.25U	<0.39U	0.39J	123	<b>221</b>	<0.45U	5780	6020	<0.35U	0.9J	<0.66U
	12/15/2021	<0.28U	<1.3U	<3.1U	0.94J	<0.34U	<0.25U	<0.39U	<0.31U	13.2	<b>286</b>	<0.45U	5880	6900	<0.35U	<0.23U	<0.66U
	01/11/2022	<2.8U	<130U	<310U	<23U	<34U	<25U	<39U	<31U	<180U	<33U	<45U	1030	10000	<35U	<23U	<66U
	02/17/2022	<0.28U	<1.3U	<3.1U	<0.23U	<0.34U	<0.25U	<0.39U	<0.31U	<1.8U	<b>113</b>	<0.45U	5440	10400	<0.35U	<0.23U	<0.66U
	03/18/2022	<0.28U	<1.3U	<3.1U	<0.23U	<0.34U	<0.25U	<0.39U	<0.31U	<1.8U	<0.33U	<0.45U	<6.6U	6.3J	<0.35U	<0.23U	<0.66U
	06/13/2022	<0.28U	<1.3U	<3.1U	0.58J	<0.34U	<0.25U	<0.39U	<0.31U	<1.8U	40.4	<0.45U	1890	7240	<0.35U	0.68J	<0.66U
	07/25/2022	<0.28U	<1.3U	<3.1U	<0.23U	<0.34U	<0.25U	<0.39U	<0.31U	<1.8U	<0.33U	<0.45U	15.1	1620	<0.35U	<0.23U	<0.66U
	09/01/2022	<0.28U	<1.3U	<3.1U	<0.23U	<0.34U	<0.25U	<0.39U	<0.31U	<1.8U	0.39J	<0.45U	<6.6U	<2.2U	<0.35U	<0.23U	<0.66U
	10/19/2022	<0.32U	<1.3U	4.2J	<0.23U	<0.34U	<0.25U	0.63J	0.32J	<1.8U	1	<0.45U	66.5	<0.2U	284	<0.23U	<0.66U
11/18/2022	<0.32U	<1.3U	<3.1U	<0.23U	<0.34U	<0.25U	<0.39U	<0.31U	<1.8U	2.4	<0.45U	139	<0.2U	197	<0.23U	<0.66U	
12/15/2022	<0.28U	<1.3U	<3.1U	<0.23U	<0.34U	<0.25U	<0.39U	<0.31U	<1.8U	2.1	<0.45U	190	153	<0.35U	<0.23U	<0.66U	

**Notes**  
 U = Not detected, method detection limit reported  
 J = Estimated Value  
 (µg/l) = Micrograms per liter  
 Bold values (highlighted in yellow) indicate exceedence of MDE Groundwater Clean-Up Standards for Type I & II Aquifers (2018)

DPE INFLUENT AND EFFLUENT VAPOR  
RESULTS SUMMARY TABLES





DPE Influent and Effluent Vapor Analytical Data Summary  
 Calvert Ctgo, 2815 North East Road, North East, MD

Compound	Acetone	Benzene	Ethylbenzene	Methyl bromide	Methyl chloride	Methyl ethyl ketone	Methyl isobutylketone (MIBK)	Methyl tert-butyl ether	Naphthalene	Toluene	Xylene (total)	
USEPA RSL - Carcinogenic Risk	**	1.6	4.9	**	**	**	**	47	0.36	**	**	
USEPA RSL - Noncarcinogenic Risk	14000	13	440	2.2	39	2200	1300	1300	1.3	2200	44	
Unit	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	ug/m3	
Location	Sample Date											
POST-VES	05/12/2017	<28U	119	<10.6U	<11.8U	<8.67U	<6.75U	<10.9U	<7.14U	<9.91U	<10.4U	<0U
	07/11/2017	6.77	3.67	5.99	2.1	0.45	2.16	2.09	<0.163U	<0.227U	21	27.48
	11/16/2017	<0.392U	17.5	3.99	18.3	8.3	4.28	<0.249U	<0.163U	<0.223U	25.2	21.65
	6/19/2018	<0.489U	11.9	4.09	24.1	14	NA	<0.311U	<0.204U	1.43	32.2	20.65
	09/26/2018	<54.4U	83.1	<8.25U	61.7	41.5	<6.25U	<8.85U	<8.98U	<14.6U	81.4	<0U
	6/14/2019	<1.96U	1.7	<0.308U	11	<0.368U	5.9	<0.288U	<0.321U	<0.781U	4.11	<0.336U
	9/30/2019	<12.9U	22	<2.03U	8.81	23.5	<1.4U	<1.9U	<2.06U	<5.16U	13.7	<2.22U
	11/26/2019	<54.6U	438	<6.25U	26.2	86.9	<4.75U	<5.74U	<6.31U	<15.5U	49.4	<6.56U
	06/26/2020	47.5	<0.639U	<0.869U	<0.777U	1.62	21.3	<2.05U	<0.721U	<1.05U	0.78	<0.869U
	09/30/2020	<134U	13600	<48.6U	<43.5U	<23.1U	135	<1.15U	<40.4U	<58.7U	5350	<48.6U
	12/02/2020	72.2	<0.156U	<0.188U	<0.3U	0.704	<0.142U	<0.173U	<0.189U	<0.464U	0.78	<0.197U
	03/17/2021	<10.2U	15.6	<1.17U	<1.88U	<0.89U	<0.888U	<1.08U	<1.18U	<2.9U	1100	<1.23U
	06/17/2021	380	12	<0.669U	<1.07U	1.77	90.2	<0.615U	<0.674U	<1.66U	<0.701U	<0.704U
	09/10/2021	3660	738	<2.35U	<3.75U	<1.78U	1320	<2.16U	<2.37U	<5.82U	68.2	<2.46U
	12/17/2021	<55.3U	1830	<6.34U	<10.1U	<4.81U	<4.81U	<5.82U	<6.38U	<15.7U	141	<6.65U
	03/18/2022	<11.7U	1620	<1.34U	<2.14U	<1.02U	<1.01U	<1.23U	750	<3.31U	86.3	<1.41U
06/15/2022	708	7730	51.7	<9.36U	<4.42U	1240	<5.37U	2160	<14.5U	6260	70.8	
09/20/2022	68.7	1.11	2.94	<0.326U	0.985	135	<0.188U	<0.206U	<0.504U	13.3	16.6	
12/15/2022	<1.64U	<0.156U	<0.188U	<0.3U	1.14	<0.142U	<0.173U	<0.189U	<0.464U	<0.196U	<0.197U	
PRE-VES	05/12/2017	<347U	34800	5520	<147U	<108U	<83.8U	<135U	<88.7U	<123U	67100	23000
	07/11/2017	<152U	36100	5910	<64.5U	<47.1U	<36.6U	<59U	<38.9U	<54U	68600	23870
	11/16/2017	<50.4U	13300	5040	<34.6U	<25.4U	<19.7U	<31.9U	<20.9U	<28.6U	41100	24450
	6/19/2018	<264U	22900	6340	<183U	<134U	NA	<168U	<110U	<150U	67100	31760
	09/26/2018	<929U	16800	7080	<103U	<59.5U	<107U	<151U	<153U	<249U	60700	34320
	6/14/2019	<115U	73800	1480	<24.6U	<21.6U	183	<16.9U	<18.3U	<45.9U	15300	8170
	9/30/2019	<103U	12800	2090	<22.1U	<12.1U	<11.2U	<15.2U	<16.4U	<41.2U	16000	11300
	11/26/2019	<285U	10700	2400	<52U	<24.8U	330	<30U	772	<80.7U	20700	11700
	06/26/2020	20.7	<1.58U	<2.15U	<1.92U	1.09	7.2	<5.08U	<1.78U	<2.6U	<1.87U	<2.15U
	9/30/2020	4.77	4.25	<1.32U	<1.18U	0.684	<2.25U	<3.13U	<1.1U	<1.6U	5.92	<1.32U
	12/2/2020	5.27	<0.319U	<0.387U	<0.617U	1.13	<0.293U	<0.356U	<0.389U	<0.954U	<0.403U	<0.406U
	03/17/2021	<5.58U	<0.53U	<0.639U	<1.03U	<0.485U	<0.484U	<0.59U	<0.645U	<1.58U	3.06	<0.673U
	06/17/2021	278	434	136	<5.01U	<2.37U	<2.38U	<2.89U	<3.17U	48	987	1430
	09/10/2021	<45.4U	3740	738	<8.31U	<3.94U	<3.92U	<4.75U	<5.23U	231	3960	3980
	12/17/2021	176	10700	1330	<19.6U	<9.29U	649	<11.3U	3820	<30.3U	13600	7250
	3/18/2022	1330	7280	830	<7.57U	<3.59U	5660	<4.34U	2820	<11.7U	7050	3840
06/15/2022	328	1500	218	<1.67U	<0.791U	86.7	<0.959U	508	<2.58U	1750	1100	
09/20/2022	<2.4U	23.9	16.2	<0.443U	1.04	64.9	<0.254U	<0.278U	<0.682U	62.9	111	
12/15/2022	<3.28U	23.9	25.8	<0.602U	1.04	<0.284U	<0.345U	<0.379U	<0.928U	119	132	

**Notes**  
 U = Not detected, method detection limit reported  
 (ug/m3) = Micrograms per cubic meter  
 Bold values (highlighted in yellow) indicate exceedence of USEPA Regional Screening Levels (RSLs) for Worker Ambient Air, Carcinogenic and Noncarcinogenic Risk - Based on a Carcinogenic Target Risk of 1E-06 and Noncarcinogenic Hazard Index of 0.1 (May 2018)  
 Italic values (highlighted in yellow) indicate exceedence of USEPA Regional Screening Levels (RSLs) for Worker Ambient Air, Carcinogenic Risk - Based on a Carcinogenic Target Risk of 1E-06 (May 2018)

**ATTACHMENT 3: LABORATORY ANALYTICAL REPORTS  
AND CHAINS OF CUSTODY**



**GROUNDWATER  
LABORATORY REPORTS AND CHAINS OF CUSTODY**



 **ANALYTICAL REPORT****PREPARED FOR**

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**JOB DESCRIPTION**

Calvert Citgo (005977)

**JOB NUMBER**

460-272260-1



# Eurofins Edison

## Job Notes

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## Authorization



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# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	3
Definitions/Glossary . . . . .	4
Case Narrative . . . . .	5
Client Sample Results . . . . .	7
Lab Chronicle . . . . .	29
Certification Summary . . . . .	32
Method Summary . . . . .	33
Sample Summary . . . . .	34
Chain of Custody . . . . .	35
Field Data Sheets . . . . .	38
Receipt Checklists . . . . .	67

# Definitions/Glossary

Client: React Environmental Professional Service  
Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
*1	LCS/LCSD RPD exceeds control limits.
*3	ISTD response or retention time outside acceptable limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

## Glossary

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

# Case Narrative

Client: React Environmental Professional Service  
Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

## Job ID: 460-272260-1

### Laboratory: Eurofins Edison

#### Narrative

#### Job Narrative 460-272260-1

#### Revision(1)

VOC list expanded at the client's request.

#### Receipt

The samples were received on 12/30/2022 8:00 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.5° C.

#### GC/MS VOA

Method 8260D: The continuing calibration verification (CCV) associated with batch 460-886446 recovered above the upper control limit for Dichlorofluoromethane, Isopropyl ether and Vinyl chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D: The laboratory control sample duplicate (LCSD) for analytical batch 460-886446 recovered outside control limits for the following analyte: Isopropyl ether. This analyte was biased high in the LCSD and was not detected in the associated samples; therefore, the data have been reported.

Method 8260D: The continuing calibration verification (CCV) associated with batch 460-886630 recovered above the upper control limit for Dichlorodifluoromethane, 1,1-Dichloroethane and Isopropyl ether. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8260D: The laboratory control sample (LCS) for analytical batch 460-886630 recovered outside control limits for the following analyte: Acetone. This analyte was biased high in the LCS and was within control limits in the LCSD. The associated sample data has been flagged and reported.

Method 8260D: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-010D (460-272260-17). Elevated reporting limits (RLs) are provided.

Method 8260D: The continuing calibration verification (CCV) analyzed in batch 460-887124 was outside the method criteria for the following analyte: Dichlorodifluoromethane. A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte is considered estimated.

Method 8260D: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for analytical batch 460-887124 recovered outside control limits for the following analytes: Chloroethane.

Method 8260D: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-009D (460-272260-15) and MW-010 (460-272260-16). Elevated reporting limits (RLs) are provided.

Method 8260D: The continuing calibration verification (CCV) analyzed in batch 460-887125 was outside the method criteria for the following analyte(s): Dichlorofluoromethane (biased high) and Dichlorofluoromethane (biased low). A CCV standard at or below the reporting limit (RL) was analyzed with the affected samples and found to be acceptable. As indicated in the reference method, sample analysis may proceed; however, any detection for the affected analyte(s) is considered estimated.

Method 8260D: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-005 (460-272260-9). Elevated reporting limits (RLs) are provided.

Method 8260D: Internal standard (ISTD) response for TBA-d9 for the following sample was outside of acceptance limits: MW-005 (460-272260-9). The corresponding target analyte TBA was not detected. The sample was not re-analyzed due to insufficient volume remaining.

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

# Case Narrative

Client: React Environmental Professional Service  
Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

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## Job ID: 460-272260-1 (Continued)

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### Laboratory: Eurofins Edison (Continued)

#### VOA Prep

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

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# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: TB-001**

**Lab Sample ID: 460-272260-1**

**Date Collected: 12/29/22 00:00**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L			01/04/23 08:37	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/04/23 08:37	1
1,2-Dichloroethane	0.43	U	1.0	0.43	ug/L			01/04/23 08:37	1
Methyl tert-butyl ether	0.22	U	1.0	0.22	ug/L			01/04/23 08:37	1
Naphthalene	0.88	U	1.0	0.88	ug/L			01/04/23 08:37	1
Toluene	0.38	U	1.0	0.38	ug/L			01/04/23 08:37	1
o-Xylene	0.36	U	1.0	0.36	ug/L			01/04/23 08:37	1
Xylenes, Total	0.65	U	2.0	0.65	ug/L			01/04/23 08:37	1
m-Xylene & p-Xylene	0.30	U	1.0	0.30	ug/L			01/04/23 08:37	1
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/04/23 08:37	1
cis-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/04/23 08:37	1
Carbon disulfide	0.82	U	1.0	0.82	ug/L			01/04/23 08:37	1
Chlorobromomethane	0.41	U	1.0	0.41	ug/L			01/04/23 08:37	1
Bromoform	0.54	U	1.0	0.54	ug/L			01/04/23 08:37	1
Tetrachloroethylene	0.25	U	1.0	0.25	ug/L			01/04/23 08:37	1
1,1-Dichloroethane	0.26	U	1.0	0.26	ug/L			01/04/23 08:37	1
1,2-Dichloropropane	0.35	U	1.0	0.35	ug/L			01/04/23 08:37	1
1,1,2-Trichloroethane	0.20	U	1.0	0.20	ug/L			01/04/23 08:37	1
Acetone	4.4	U	5.0	4.4	ug/L			01/04/23 08:37	1
Dichlorodifluoromethane	0.31	U	1.0	0.31	ug/L			01/04/23 08:37	1
Methyl isobutyl ketone (MIBK)	1.3	U	5.0	1.3	ug/L			01/04/23 08:37	1
tert-Butyl alcohol	8.3	U	10	8.3	ug/L			01/04/23 08:37	1
Methylene Chloride	0.32	U	1.0	0.32	ug/L			01/04/23 08:37	1
Dibromochloromethane	0.28	U	1.0	0.28	ug/L			01/04/23 08:37	1
Chlorobenzene	0.38	U	1.0	0.38	ug/L			01/04/23 08:37	1
Styrene	0.42	U	1.0	0.42	ug/L			01/04/23 08:37	1
trans-1,2-Dichloroethene	0.24	U	1.0	0.24	ug/L			01/04/23 08:37	1
1,1,2,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			01/04/23 08:37	1
Chloroethane	0.32	U	1.0	0.32	ug/L			01/04/23 08:37	1
1,1-Dichloroethene	0.26	U	1.0	0.26	ug/L			01/04/23 08:37	1
Trichloroethylene	0.31	U	1.0	0.31	ug/L			01/04/23 08:37	1
2-Hexanone	1.1	U	5.0	1.1	ug/L			01/04/23 08:37	1
Methyl ethyl ketone (MEK)	1.9	U	5.0	1.9	ug/L			01/04/23 08:37	1
Isopropyl ether	0.19	U *+	1.0	0.19	ug/L			01/04/23 08:37	1
Tert-amyl methyl ether	0.21	U	1.0	0.21	ug/L			01/04/23 08:37	1
trans-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/04/23 08:37	1
cis-1,2-Dichloroethene	0.22	U	1.0	0.22	ug/L			01/04/23 08:37	1
Chloroform	0.33	U	1.0	0.33	ug/L			01/04/23 08:37	1
Dichlorofluoromethane	0.34	U	1.0	0.34	ug/L			01/04/23 08:37	1
Vinyl chloride	0.17	U	1.0	0.17	ug/L			01/04/23 08:37	1
1,2-Dibromoethane	0.50	U	1.0	0.50	ug/L			01/04/23 08:37	1
Carbon tetrachloride	0.21	U	1.0	0.21	ug/L			01/04/23 08:37	1
Bromodichloromethane	0.34	U	1.0	0.34	ug/L			01/04/23 08:37	1
Methyl chloride	0.40	U	1.0	0.40	ug/L			01/04/23 08:37	1
Methyl bromide	0.55	U	1.0	0.55	ug/L			01/04/23 08:37	1
DBCP	0.38	U	1.0	0.38	ug/L			01/04/23 08:37	1
Ethyl tert-butyl ether	0.41	U	1.0	0.41	ug/L			01/04/23 08:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	113		70 - 128		01/04/23 08:37	1

Eurofins Edison

# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: TB-001**

**Date Collected: 12/29/22 00:00**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-1**

**Matrix: Water**

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	106		76 - 120		01/04/23 08:37	1
Dibromofluoromethane (Surr)	90		77 - 124		01/04/23 08:37	1
Toluene-d8 (Surr)	91		80 - 120		01/04/23 08:37	1

**Client Sample ID: FB-001**

**Date Collected: 12/29/22 11:00**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-2**

**Matrix: Water**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L			01/04/23 08:59	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/04/23 08:59	1
1,2-Dichloroethane	0.43	U	1.0	0.43	ug/L			01/04/23 08:59	1
Methyl tert-butyl ether	0.22	U	1.0	0.22	ug/L			01/04/23 08:59	1
Naphthalene	0.88	U	1.0	0.88	ug/L			01/04/23 08:59	1
Toluene	0.38	U	1.0	0.38	ug/L			01/04/23 08:59	1
o-Xylene	0.36	U	1.0	0.36	ug/L			01/04/23 08:59	1
Xylenes, Total	0.65	U	2.0	0.65	ug/L			01/04/23 08:59	1
m-Xylene & p-Xylene	0.30	U	1.0	0.30	ug/L			01/04/23 08:59	1
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/04/23 08:59	1
cis-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/04/23 08:59	1
Carbon disulfide	0.82	U	1.0	0.82	ug/L			01/04/23 08:59	1
Chlorobromomethane	0.41	U	1.0	0.41	ug/L			01/04/23 08:59	1
Bromoform	0.54	U	1.0	0.54	ug/L			01/04/23 08:59	1
Tetrachloroethylene	0.25	U	1.0	0.25	ug/L			01/04/23 08:59	1
1,1-Dichloroethane	0.26	U	1.0	0.26	ug/L			01/04/23 08:59	1
1,2-Dichloropropane	0.35	U	1.0	0.35	ug/L			01/04/23 08:59	1
1,1,2-Trichloroethane	0.20	U	1.0	0.20	ug/L			01/04/23 08:59	1
Acetone	4.4	U	5.0	4.4	ug/L			01/04/23 08:59	1
Dichlorodifluoromethane	0.31	U	1.0	0.31	ug/L			01/04/23 08:59	1
Methyl isobutyl ketone (MIBK)	1.3	U	5.0	1.3	ug/L			01/04/23 08:59	1
tert-Butyl alcohol	8.3	U	10	8.3	ug/L			01/04/23 08:59	1
Methylene Chloride	0.32	U	1.0	0.32	ug/L			01/04/23 08:59	1
Dibromochloromethane	0.28	U	1.0	0.28	ug/L			01/04/23 08:59	1
Chlorobenzene	0.38	U	1.0	0.38	ug/L			01/04/23 08:59	1
Styrene	0.42	U	1.0	0.42	ug/L			01/04/23 08:59	1
trans-1,2-Dichloroethene	0.24	U	1.0	0.24	ug/L			01/04/23 08:59	1
1,1,2,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			01/04/23 08:59	1
Chloroethane	0.32	U	1.0	0.32	ug/L			01/04/23 08:59	1
1,1-Dichloroethene	0.26	U	1.0	0.26	ug/L			01/04/23 08:59	1
Trichloroethylene	0.31	U	1.0	0.31	ug/L			01/04/23 08:59	1
2-Hexanone	1.1	U	5.0	1.1	ug/L			01/04/23 08:59	1
Methyl ethyl ketone (MEK)	1.9	U	5.0	1.9	ug/L			01/04/23 08:59	1
Isopropyl ether	0.19	U **	1.0	0.19	ug/L			01/04/23 08:59	1
Tert-amyl methyl ether	0.21	U	1.0	0.21	ug/L			01/04/23 08:59	1
trans-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/04/23 08:59	1
cis-1,2-Dichloroethene	0.22	U	1.0	0.22	ug/L			01/04/23 08:59	1
Chloroform	0.33	U	1.0	0.33	ug/L			01/04/23 08:59	1
Dichlorofluoromethane	0.34	U	1.0	0.34	ug/L			01/04/23 08:59	1

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# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: FB-001**

**Lab Sample ID: 460-272260-2**

**Date Collected: 12/29/22 11:00**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.17	U	1.0	0.17	ug/L			01/04/23 08:59	1
1,2-Dibromoethane	0.50	U	1.0	0.50	ug/L			01/04/23 08:59	1
Carbon tetrachloride	0.21	U	1.0	0.21	ug/L			01/04/23 08:59	1
Bromodichloromethane	0.34	U	1.0	0.34	ug/L			01/04/23 08:59	1
Methyl chloride	0.40	U	1.0	0.40	ug/L			01/04/23 08:59	1
Methyl bromide	0.55	U	1.0	0.55	ug/L			01/04/23 08:59	1
DBCP	0.38	U	1.0	0.38	ug/L			01/04/23 08:59	1
Ethyl tert-butyl ether	0.41	U	1.0	0.41	ug/L			01/04/23 08:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		70 - 128		01/04/23 08:59	1
4-Bromofluorobenzene	108		76 - 120		01/04/23 08:59	1
Dibromofluoromethane (Surr)	92		77 - 124		01/04/23 08:59	1
Toluene-d8 (Surr)	92		80 - 120		01/04/23 08:59	1

**Client Sample ID: FB-002**

**Lab Sample ID: 460-272260-3**

**Date Collected: 12/30/22 08:00**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L			01/04/23 09:20	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/04/23 09:20	1
1,2-Dichloroethane	0.43	U	1.0	0.43	ug/L			01/04/23 09:20	1
Methyl tert-butyl ether	0.22	U	1.0	0.22	ug/L			01/04/23 09:20	1
Naphthalene	0.88	U	1.0	0.88	ug/L			01/04/23 09:20	1
Toluene	0.38	U	1.0	0.38	ug/L			01/04/23 09:20	1
o-Xylene	0.36	U	1.0	0.36	ug/L			01/04/23 09:20	1
Xylenes, Total	0.65	U	2.0	0.65	ug/L			01/04/23 09:20	1
m-Xylene & p-Xylene	0.30	U	1.0	0.30	ug/L			01/04/23 09:20	1
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/04/23 09:20	1
cis-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/04/23 09:20	1
Carbon disulfide	0.82	U	1.0	0.82	ug/L			01/04/23 09:20	1
Chlorobromomethane	0.41	U	1.0	0.41	ug/L			01/04/23 09:20	1
Bromoform	0.54	U	1.0	0.54	ug/L			01/04/23 09:20	1
Tetrachloroethylene	0.25	U	1.0	0.25	ug/L			01/04/23 09:20	1
1,1-Dichloroethane	0.26	U	1.0	0.26	ug/L			01/04/23 09:20	1
1,2-Dichloropropane	0.35	U	1.0	0.35	ug/L			01/04/23 09:20	1
1,1,2-Trichloroethane	0.20	U	1.0	0.20	ug/L			01/04/23 09:20	1
Acetone	4.4	U	5.0	4.4	ug/L			01/04/23 09:20	1
Dichlorodifluoromethane	0.31	U	1.0	0.31	ug/L			01/04/23 09:20	1
Methyl isobutyl ketone (MIBK)	1.3	U	5.0	1.3	ug/L			01/04/23 09:20	1
tert-Butyl alcohol	8.3	U	10	8.3	ug/L			01/04/23 09:20	1
Methylene Chloride	0.32	U	1.0	0.32	ug/L			01/04/23 09:20	1
Dibromochloromethane	0.28	U	1.0	0.28	ug/L			01/04/23 09:20	1
Chlorobenzene	0.38	U	1.0	0.38	ug/L			01/04/23 09:20	1
Styrene	0.42	U	1.0	0.42	ug/L			01/04/23 09:20	1
trans-1,2-Dichloroethene	0.24	U	1.0	0.24	ug/L			01/04/23 09:20	1
1,1,2,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			01/04/23 09:20	1
Chloroethane	0.32	U	1.0	0.32	ug/L			01/04/23 09:20	1

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# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: FB-002**

**Lab Sample ID: 460-272260-3**

**Date Collected: 12/30/22 08:00**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.26	U	1.0	0.26	ug/L			01/04/23 09:20	1
Trichloroethylene	0.31	U	1.0	0.31	ug/L			01/04/23 09:20	1
2-Hexanone	1.1	U	5.0	1.1	ug/L			01/04/23 09:20	1
Methyl ethyl ketone (MEK)	1.9	U	5.0	1.9	ug/L			01/04/23 09:20	1
Isopropyl ether	0.19	U **+	1.0	0.19	ug/L			01/04/23 09:20	1
Tert-amyl methyl ether	0.21	U	1.0	0.21	ug/L			01/04/23 09:20	1
trans-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/04/23 09:20	1
cis-1,2-Dichloroethene	0.22	U	1.0	0.22	ug/L			01/04/23 09:20	1
Chloroform	0.33	U	1.0	0.33	ug/L			01/04/23 09:20	1
Dichlorofluoromethane	0.34	U	1.0	0.34	ug/L			01/04/23 09:20	1
Vinyl chloride	0.17	U	1.0	0.17	ug/L			01/04/23 09:20	1
1,2-Dibromoethane	0.50	U	1.0	0.50	ug/L			01/04/23 09:20	1
Carbon tetrachloride	0.21	U	1.0	0.21	ug/L			01/04/23 09:20	1
Bromodichloromethane	0.34	U	1.0	0.34	ug/L			01/04/23 09:20	1
Methyl chloride	0.40	U	1.0	0.40	ug/L			01/04/23 09:20	1
Methyl bromide	0.55	U	1.0	0.55	ug/L			01/04/23 09:20	1
DBCP	0.38	U	1.0	0.38	ug/L			01/04/23 09:20	1
Ethyl tert-butyl ether	0.41	U	1.0	0.41	ug/L			01/04/23 09:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	112		70 - 128		01/04/23 09:20	1
4-Bromofluorobenzene	111		76 - 120		01/04/23 09:20	1
Dibromofluoromethane (Surr)	90		77 - 124		01/04/23 09:20	1
Toluene-d8 (Surr)	93		80 - 120		01/04/23 09:20	1

**Client Sample ID: MP-001**

**Lab Sample ID: 460-272260-4**

**Date Collected: 12/30/22 09:35**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L			01/05/23 09:41	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/05/23 09:41	1
1,2-Dichloroethane	0.43	U	1.0	0.43	ug/L			01/05/23 09:41	1
Methyl tert-butyl ether	0.22	U	1.0	0.22	ug/L			01/05/23 09:41	1
Naphthalene	0.88	U	1.0	0.88	ug/L			01/05/23 09:41	1
Toluene	0.38	U	1.0	0.38	ug/L			01/05/23 09:41	1
o-Xylene	0.36	U	1.0	0.36	ug/L			01/05/23 09:41	1
Xylenes, Total	0.65	U	2.0	0.65	ug/L			01/05/23 09:41	1
m-Xylene & p-Xylene	0.30	U	1.0	0.30	ug/L			01/05/23 09:41	1
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/05/23 09:41	1
cis-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/05/23 09:41	1
Carbon disulfide	0.82	U	1.0	0.82	ug/L			01/05/23 09:41	1
Chlorobromomethane	0.41	U	1.0	0.41	ug/L			01/05/23 09:41	1
Bromoform	0.54	U	1.0	0.54	ug/L			01/05/23 09:41	1
Tetrachloroethylene	0.25	U	1.0	0.25	ug/L			01/05/23 09:41	1
1,1-Dichloroethane	0.26	U	1.0	0.26	ug/L			01/05/23 09:41	1
1,2-Dichloropropane	0.35	U	1.0	0.35	ug/L			01/05/23 09:41	1
1,1,2-Trichloroethane	0.20	U	1.0	0.20	ug/L			01/05/23 09:41	1
Acetone	4.4	U **+	5.0	4.4	ug/L			01/05/23 09:41	1

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# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MP-001**

**Lab Sample ID: 460-272260-4**

**Date Collected: 12/30/22 09:35**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	0.31	U	1.0	0.31	ug/L			01/05/23 09:41	1
Methyl isobutyl ketone (MIBK)	1.3	U	5.0	1.3	ug/L			01/05/23 09:41	1
tert-Butyl alcohol	8.3	U	10	8.3	ug/L			01/05/23 09:41	1
Methylene Chloride	0.32	U	1.0	0.32	ug/L			01/05/23 09:41	1
Dibromochloromethane	0.28	U	1.0	0.28	ug/L			01/05/23 09:41	1
Chlorobenzene	0.38	U	1.0	0.38	ug/L			01/05/23 09:41	1
Styrene	0.42	U	1.0	0.42	ug/L			01/05/23 09:41	1
trans-1,2-Dichloroethene	0.24	U	1.0	0.24	ug/L			01/05/23 09:41	1
1,1,2,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			01/05/23 09:41	1
Chloroethane	0.32	U	1.0	0.32	ug/L			01/05/23 09:41	1
1,1-Dichloroethene	0.26	U	1.0	0.26	ug/L			01/05/23 09:41	1
Trichloroethylene	0.31	U	1.0	0.31	ug/L			01/05/23 09:41	1
2-Hexanone	1.1	U	5.0	1.1	ug/L			01/05/23 09:41	1
Methyl ethyl ketone (MEK)	1.9	U	5.0	1.9	ug/L			01/05/23 09:41	1
Isopropyl ether	0.19	U	1.0	0.19	ug/L			01/05/23 09:41	1
Tert-amyl methyl ether	0.21	U	1.0	0.21	ug/L			01/05/23 09:41	1
trans-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/05/23 09:41	1
cis-1,2-Dichloroethene	0.22	U	1.0	0.22	ug/L			01/05/23 09:41	1
Chloroform	0.33	U	1.0	0.33	ug/L			01/05/23 09:41	1
Dichlorofluoromethane	0.34	U	1.0	0.34	ug/L			01/05/23 09:41	1
Vinyl chloride	0.17	U	1.0	0.17	ug/L			01/05/23 09:41	1
1,2-Dibromoethane	0.50	U	1.0	0.50	ug/L			01/05/23 09:41	1
Carbon tetrachloride	0.21	U	1.0	0.21	ug/L			01/05/23 09:41	1
Bromodichloromethane	0.34	U	1.0	0.34	ug/L			01/05/23 09:41	1
Methyl chloride	0.40	U	1.0	0.40	ug/L			01/05/23 09:41	1
Methyl bromide	0.55	U	1.0	0.55	ug/L			01/05/23 09:41	1
DBCP	0.38	U	1.0	0.38	ug/L			01/05/23 09:41	1
Ethyl tert-butyl ether	0.41	U	1.0	0.41	ug/L			01/05/23 09:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		70 - 128		01/05/23 09:41	1
4-Bromofluorobenzene	92		76 - 120		01/05/23 09:41	1
Dibromofluoromethane (Surr)	98		77 - 124		01/05/23 09:41	1
Toluene-d8 (Surr)	98		80 - 120		01/05/23 09:41	1

**Client Sample ID: MP-002**

**Lab Sample ID: 460-272260-5**

**Date Collected: 12/30/22 10:25**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L			01/04/23 12:33	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/04/23 12:33	1
1,2-Dichloroethane	0.43	U	1.0	0.43	ug/L			01/04/23 12:33	1
Methyl tert-butyl ether	0.22	U	1.0	0.22	ug/L			01/04/23 12:33	1
Naphthalene	0.88	U	1.0	0.88	ug/L			01/04/23 12:33	1
Toluene	0.38	U	1.0	0.38	ug/L			01/04/23 12:33	1
o-Xylene	0.36	U	1.0	0.36	ug/L			01/04/23 12:33	1
Xylenes, Total	0.65	U	2.0	0.65	ug/L			01/04/23 12:33	1
m-Xylene & p-Xylene	0.30	U	1.0	0.30	ug/L			01/04/23 12:33	1

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# Client Sample Results

Client: React Environmental Professional Service  
Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MP-002**

**Lab Sample ID: 460-272260-5**

**Date Collected: 12/30/22 10:25**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/04/23 12:33	1
cis-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/04/23 12:33	1
Carbon disulfide	0.82	U	1.0	0.82	ug/L			01/04/23 12:33	1
Chlorobromomethane	0.41	U	1.0	0.41	ug/L			01/04/23 12:33	1
Bromoform	0.54	U	1.0	0.54	ug/L			01/04/23 12:33	1
Tetrachloroethylene	0.25	U	1.0	0.25	ug/L			01/04/23 12:33	1
1,1-Dichloroethane	0.26	U	1.0	0.26	ug/L			01/04/23 12:33	1
1,2-Dichloropropane	0.35	U	1.0	0.35	ug/L			01/04/23 12:33	1
1,1,2-Trichloroethane	0.20	U	1.0	0.20	ug/L			01/04/23 12:33	1
Acetone	4.4	U	5.0	4.4	ug/L			01/04/23 12:33	1
Dichlorodifluoromethane	0.31	U	1.0	0.31	ug/L			01/04/23 12:33	1
Methyl isobutyl ketone (MIBK)	1.3	U	5.0	1.3	ug/L			01/04/23 12:33	1
tert-Butyl alcohol	8.3	U	10	8.3	ug/L			01/04/23 12:33	1
Methylene Chloride	0.32	U	1.0	0.32	ug/L			01/04/23 12:33	1
Dibromochloromethane	0.28	U	1.0	0.28	ug/L			01/04/23 12:33	1
Chlorobenzene	0.38	U	1.0	0.38	ug/L			01/04/23 12:33	1
Styrene	0.42	U	1.0	0.42	ug/L			01/04/23 12:33	1
trans-1,2-Dichloroethene	0.24	U	1.0	0.24	ug/L			01/04/23 12:33	1
1,1,1,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			01/04/23 12:33	1
Chloroethane	0.32	U	1.0	0.32	ug/L			01/04/23 12:33	1
1,1-Dichloroethene	0.26	U	1.0	0.26	ug/L			01/04/23 12:33	1
Trichloroethylene	0.31	U	1.0	0.31	ug/L			01/04/23 12:33	1
2-Hexanone	1.1	U	5.0	1.1	ug/L			01/04/23 12:33	1
Methyl ethyl ketone (MEK)	1.9	U	5.0	1.9	ug/L			01/04/23 12:33	1
Isopropyl ether	0.19	U**	1.0	0.19	ug/L			01/04/23 12:33	1
Tert-amyl methyl ether	0.21	U	1.0	0.21	ug/L			01/04/23 12:33	1
trans-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/04/23 12:33	1
cis-1,2-Dichloroethene	0.22	U	1.0	0.22	ug/L			01/04/23 12:33	1
Chloroform	0.33	U	1.0	0.33	ug/L			01/04/23 12:33	1
Dichlorofluoromethane	0.34	U	1.0	0.34	ug/L			01/04/23 12:33	1
Vinyl chloride	0.17	U	1.0	0.17	ug/L			01/04/23 12:33	1
1,2-Dibromoethane	0.50	U	1.0	0.50	ug/L			01/04/23 12:33	1
Carbon tetrachloride	0.21	U	1.0	0.21	ug/L			01/04/23 12:33	1
Bromodichloromethane	0.34	U	1.0	0.34	ug/L			01/04/23 12:33	1
Methyl chloride	0.40	U	1.0	0.40	ug/L			01/04/23 12:33	1
Methyl bromide	0.55	U	1.0	0.55	ug/L			01/04/23 12:33	1
DBCP	0.38	U	1.0	0.38	ug/L			01/04/23 12:33	1
Ethyl tert-butyl ether	0.41	U	1.0	0.41	ug/L			01/04/23 12:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	124		70 - 128		01/04/23 12:33	1
4-Bromofluorobenzene	109		76 - 120		01/04/23 12:33	1
Dibromofluoromethane (Surr)	102		77 - 124		01/04/23 12:33	1
Toluene-d8 (Surr)	92		80 - 120		01/04/23 12:33	1

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# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MW-001R**

**Lab Sample ID: 460-272260-6**

**Date Collected: 12/29/22 11:55**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>1.5</b>		1.0	0.20	ug/L			01/09/23 10:46	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/09/23 10:46	1
<b>1,2-Dichloroethane</b>	<b>4.5</b>		1.0	0.43	ug/L			01/09/23 10:46	1
<b>Methyl tert-butyl ether</b>	<b>94</b>		1.0	0.22	ug/L			01/09/23 10:46	1
Naphthalene	0.88	U	1.0	0.88	ug/L			01/09/23 10:46	1
Toluene	0.38	U	1.0	0.38	ug/L			01/09/23 10:46	1
o-Xylene	0.36	U	1.0	0.36	ug/L			01/09/23 10:46	1
Xylenes, Total	0.65	U	2.0	0.65	ug/L			01/09/23 10:46	1
m-Xylene & p-Xylene	0.30	U	1.0	0.30	ug/L			01/09/23 10:46	1
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/09/23 10:46	1
cis-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/09/23 10:46	1
Carbon disulfide	0.82	U	1.0	0.82	ug/L			01/09/23 10:46	1
Chlorobromomethane	0.41	U	1.0	0.41	ug/L			01/09/23 10:46	1
Bromoform	0.54	U	1.0	0.54	ug/L			01/09/23 10:46	1
Tetrachloroethylene	0.25	U	1.0	0.25	ug/L			01/09/23 10:46	1
1,1-Dichloroethane	0.26	U	1.0	0.26	ug/L			01/09/23 10:46	1
1,2-Dichloropropane	0.35	U	1.0	0.35	ug/L			01/09/23 10:46	1
1,1,2-Trichloroethane	0.20	U	1.0	0.20	ug/L			01/09/23 10:46	1
<b>Acetone</b>	<b>4.7 J</b>		5.0	4.4	ug/L			01/09/23 10:46	1
Dichlorodifluoromethane	0.31	U	1.0	0.31	ug/L			01/09/23 10:46	1
Methyl isobutyl ketone (MIBK)	1.3	U	5.0	1.3	ug/L			01/09/23 10:46	1
<b>tert-Butyl alcohol</b>	<b>980</b>		10	8.3	ug/L			01/09/23 10:46	1
Methylene Chloride	0.32	U	1.0	0.32	ug/L			01/09/23 10:46	1
Dibromochloromethane	0.28	U	1.0	0.28	ug/L			01/09/23 10:46	1
Chlorobenzene	0.38	U	1.0	0.38	ug/L			01/09/23 10:46	1
Styrene	0.42	U	1.0	0.42	ug/L			01/09/23 10:46	1
trans-1,2-Dichloroethene	0.24	U	1.0	0.24	ug/L			01/09/23 10:46	1
1,1,2,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			01/09/23 10:46	1
Chloroethane	0.32	U *1	1.0	0.32	ug/L			01/09/23 10:46	1
1,1-Dichloroethene	0.26	U	1.0	0.26	ug/L			01/09/23 10:46	1
Trichloroethylene	0.31	U	1.0	0.31	ug/L			01/09/23 10:46	1
2-Hexanone	1.1	U	5.0	1.1	ug/L			01/09/23 10:46	1
Methyl ethyl ketone (MEK)	1.9	U	5.0	1.9	ug/L			01/09/23 10:46	1
<b>Isopropyl ether</b>	<b>3.8</b>		1.0	0.19	ug/L			01/09/23 10:46	1
<b>Tert-amyl methyl ether</b>	<b>1.0</b>		1.0	0.21	ug/L			01/09/23 10:46	1
trans-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/09/23 10:46	1
cis-1,2-Dichloroethene	0.22	U	1.0	0.22	ug/L			01/09/23 10:46	1
Chloroform	0.33	U	1.0	0.33	ug/L			01/09/23 10:46	1
Dichlorofluoromethane	0.34	U	1.0	0.34	ug/L			01/09/23 10:46	1
Vinyl chloride	0.17	U	1.0	0.17	ug/L			01/09/23 10:46	1
1,2-Dibromoethane	0.50	U	1.0	0.50	ug/L			01/09/23 10:46	1
Carbon tetrachloride	0.21	U	1.0	0.21	ug/L			01/09/23 10:46	1
Bromodichloromethane	0.34	U	1.0	0.34	ug/L			01/09/23 10:46	1
Methyl chloride	0.40	U	1.0	0.40	ug/L			01/09/23 10:46	1
Methyl bromide	0.55	U	1.0	0.55	ug/L			01/09/23 10:46	1
DBCP	0.38	U	1.0	0.38	ug/L			01/09/23 10:46	1
Ethyl tert-butyl ether	0.41	U	1.0	0.41	ug/L			01/09/23 10:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	108		70 - 128		01/09/23 10:46	1

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# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MW-001R**

**Lab Sample ID: 460-272260-6**

Date Collected: 12/29/22 11:55

Matrix: Water

Date Received: 12/30/22 20:00

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	90		76 - 120		01/09/23 10:46	1
Dibromofluoromethane (Surr)	93		77 - 124		01/09/23 10:46	1
Toluene-d8 (Surr)	98		80 - 120		01/09/23 10:46	1

**Client Sample ID: MW-002**

**Lab Sample ID: 460-272260-7**

Date Collected: 12/29/22 09:45

Matrix: Water

Date Received: 12/30/22 20:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>5.9</b>		1.0	0.20	ug/L			01/09/23 09:20	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/09/23 09:20	1
1,2-Dichloroethane	0.43	U	1.0	0.43	ug/L			01/09/23 09:20	1
<b>Methyl tert-butyl ether</b>	<b>7.7</b>		1.0	0.22	ug/L			01/09/23 09:20	1
Naphthalene	0.88	U	1.0	0.88	ug/L			01/09/23 09:20	1
Toluene	0.38	U	1.0	0.38	ug/L			01/09/23 09:20	1
o-Xylene	0.36	U	1.0	0.36	ug/L			01/09/23 09:20	1
Xylenes, Total	0.65	U	2.0	0.65	ug/L			01/09/23 09:20	1
m-Xylene & p-Xylene	0.30	U	1.0	0.30	ug/L			01/09/23 09:20	1
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/09/23 09:20	1
cis-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/09/23 09:20	1
Carbon disulfide	0.82	U	1.0	0.82	ug/L			01/09/23 09:20	1
Chlorobromomethane	0.41	U	1.0	0.41	ug/L			01/09/23 09:20	1
Bromoform	0.54	U	1.0	0.54	ug/L			01/09/23 09:20	1
Tetrachloroethylene	0.25	U	1.0	0.25	ug/L			01/09/23 09:20	1
1,1-Dichloroethane	0.26	U	1.0	0.26	ug/L			01/09/23 09:20	1
1,2-Dichloropropane	0.35	U	1.0	0.35	ug/L			01/09/23 09:20	1
1,1,2-Trichloroethane	0.20	U	1.0	0.20	ug/L			01/09/23 09:20	1
Acetone	4.4	U	5.0	4.4	ug/L			01/09/23 09:20	1
Dichlorodifluoromethane	0.31	U	1.0	0.31	ug/L			01/09/23 09:20	1
Methyl isobutyl ketone (MIBK)	1.3	U	5.0	1.3	ug/L			01/09/23 09:20	1
<b>tert-Butyl alcohol</b>	<b>16</b>		10	8.3	ug/L			01/09/23 09:20	1
Methylene Chloride	0.32	U	1.0	0.32	ug/L			01/09/23 09:20	1
Dibromochloromethane	0.28	U	1.0	0.28	ug/L			01/09/23 09:20	1
<b>Chlorobenzene</b>	<b>0.67</b>	<b>J</b>	1.0	0.38	ug/L			01/09/23 09:20	1
Styrene	0.42	U	1.0	0.42	ug/L			01/09/23 09:20	1
trans-1,2-Dichloroethene	0.24	U	1.0	0.24	ug/L			01/09/23 09:20	1
1,1,2,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			01/09/23 09:20	1
Chloroethane	0.32	U *1	1.0	0.32	ug/L			01/09/23 09:20	1
1,1-Dichloroethene	0.26	U	1.0	0.26	ug/L			01/09/23 09:20	1
Trichloroethylene	0.31	U	1.0	0.31	ug/L			01/09/23 09:20	1
2-Hexanone	1.1	U	5.0	1.1	ug/L			01/09/23 09:20	1
Methyl ethyl ketone (MEK)	1.9	U	5.0	1.9	ug/L			01/09/23 09:20	1
Isopropyl ether	0.19	U	1.0	0.19	ug/L			01/09/23 09:20	1
Tert-amyl methyl ether	0.21	U	1.0	0.21	ug/L			01/09/23 09:20	1
trans-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/09/23 09:20	1
cis-1,2-Dichloroethene	0.22	U	1.0	0.22	ug/L			01/09/23 09:20	1
<b>Chloroform</b>	<b>1.2</b>		1.0	0.33	ug/L			01/09/23 09:20	1
Dichlorofluoromethane	0.34	U	1.0	0.34	ug/L			01/09/23 09:20	1

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# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MW-002**

**Lab Sample ID: 460-272260-7**

**Date Collected: 12/29/22 09:45**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.17	U	1.0	0.17	ug/L			01/09/23 09:20	1
1,2-Dibromoethane	0.50	U	1.0	0.50	ug/L			01/09/23 09:20	1
Carbon tetrachloride	0.21	U	1.0	0.21	ug/L			01/09/23 09:20	1
Bromodichloromethane	0.34	U	1.0	0.34	ug/L			01/09/23 09:20	1
Methyl chloride	0.40	U	1.0	0.40	ug/L			01/09/23 09:20	1
Methyl bromide	0.55	U	1.0	0.55	ug/L			01/09/23 09:20	1
DBCP	0.38	U	1.0	0.38	ug/L			01/09/23 09:20	1
Ethyl tert-butyl ether	0.41	U	1.0	0.41	ug/L			01/09/23 09:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 128		01/09/23 09:20	1
4-Bromofluorobenzene	98		76 - 120		01/09/23 09:20	1
Dibromofluoromethane (Surr)	98		77 - 124		01/09/23 09:20	1
Toluene-d8 (Surr)	93		80 - 120		01/09/23 09:20	1

**Client Sample ID: MW-003**

**Lab Sample ID: 460-272260-8**

**Date Collected: 12/30/22 09:45**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>82</b>		1.0	0.20	ug/L			01/09/23 12:54	1
<b>Ethylbenzene</b>	<b>8.5</b>		1.0	0.30	ug/L			01/09/23 12:54	1
1,2-Dichloroethane	0.43	U	1.0	0.43	ug/L			01/09/23 12:54	1
<b>Methyl tert-butyl ether</b>	<b>5.0</b>		1.0	0.22	ug/L			01/09/23 12:54	1
<b>Naphthalene</b>	<b>11</b>		1.0	0.88	ug/L			01/09/23 12:54	1
<b>Toluene</b>	<b>67</b>		1.0	0.38	ug/L			01/09/23 12:54	1
<b>o-Xylene</b>	<b>3.3</b>		1.0	0.36	ug/L			01/09/23 12:54	1
<b>Xylenes, Total</b>	<b>18</b>		2.0	0.65	ug/L			01/09/23 12:54	1
<b>m-Xylene &amp; p-Xylene</b>	<b>14</b>		1.0	0.30	ug/L			01/09/23 12:54	1
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/09/23 12:54	1
cis-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/09/23 12:54	1
Carbon disulfide	0.82	U	1.0	0.82	ug/L			01/09/23 12:54	1
Chlorobromomethane	0.41	U	1.0	0.41	ug/L			01/09/23 12:54	1
Bromoform	0.54	U	1.0	0.54	ug/L			01/09/23 12:54	1
Tetrachloroethylene	0.25	U	1.0	0.25	ug/L			01/09/23 12:54	1
1,1-Dichloroethane	0.26	U	1.0	0.26	ug/L			01/09/23 12:54	1
1,2-Dichloropropane	0.35	U	1.0	0.35	ug/L			01/09/23 12:54	1
1,1,2-Trichloroethane	0.20	U	1.0	0.20	ug/L			01/09/23 12:54	1
<b>Acetone</b>	<b>6.4</b>		5.0	4.4	ug/L			01/09/23 12:54	1
Dichlorodifluoromethane	0.31	U	1.0	0.31	ug/L			01/09/23 12:54	1
<b>Methyl isobutyl ketone (MIBK)</b>	<b>5.9</b>		5.0	1.3	ug/L			01/09/23 12:54	1
<b>tert-Butyl alcohol</b>	<b>76</b>		10	8.3	ug/L			01/09/23 12:54	1
Methylene Chloride	0.32	U	1.0	0.32	ug/L			01/09/23 12:54	1
Dibromochloromethane	0.28	U	1.0	0.28	ug/L			01/09/23 12:54	1
Chlorobenzene	0.38	U	1.0	0.38	ug/L			01/09/23 12:54	1
Styrene	0.42	U	1.0	0.42	ug/L			01/09/23 12:54	1
trans-1,2-Dichloroethene	0.24	U	1.0	0.24	ug/L			01/09/23 12:54	1
1,1,2,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			01/09/23 12:54	1
Chloroethane	0.32	U *1	1.0	0.32	ug/L			01/09/23 12:54	1

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# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MW-003**

**Lab Sample ID: 460-272260-8**

**Date Collected: 12/30/22 09:45**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.26	U	1.0	0.26	ug/L			01/09/23 12:54	1
Trichloroethylene	0.31	U	1.0	0.31	ug/L			01/09/23 12:54	1
2-Hexanone	1.1	U	5.0	1.1	ug/L			01/09/23 12:54	1
Methyl ethyl ketone (MEK)	1.9	U	5.0	1.9	ug/L			01/09/23 12:54	1
<b>Isopropyl ether</b>	<b>9.0</b>		1.0	0.19	ug/L			01/09/23 12:54	1
<b>Tert-amyl methyl ether</b>	<b>0.58</b>	<b>J</b>	1.0	0.21	ug/L			01/09/23 12:54	1
trans-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/09/23 12:54	1
cis-1,2-Dichloroethene	0.22	U	1.0	0.22	ug/L			01/09/23 12:54	1
Chloroform	0.33	U	1.0	0.33	ug/L			01/09/23 12:54	1
Dichlorofluoromethane	0.34	U	1.0	0.34	ug/L			01/09/23 12:54	1
Vinyl chloride	0.17	U	1.0	0.17	ug/L			01/09/23 12:54	1
1,2-Dibromoethane	0.50	U	1.0	0.50	ug/L			01/09/23 12:54	1
Carbon tetrachloride	0.21	U	1.0	0.21	ug/L			01/09/23 12:54	1
Bromodichloromethane	0.34	U	1.0	0.34	ug/L			01/09/23 12:54	1
Methyl chloride	0.40	U	1.0	0.40	ug/L			01/09/23 12:54	1
Methyl bromide	0.55	U	1.0	0.55	ug/L			01/09/23 12:54	1
DBCP	0.38	U	1.0	0.38	ug/L			01/09/23 12:54	1
Ethyl tert-butyl ether	0.41	U	1.0	0.41	ug/L			01/09/23 12:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	102		70 - 128		01/09/23 12:54	1
4-Bromofluorobenzene	87		76 - 120		01/09/23 12:54	1
Dibromofluoromethane (Surr)	83		77 - 124		01/09/23 12:54	1
Toluene-d8 (Surr)	101		80 - 120		01/09/23 12:54	1

**Client Sample ID: MW-005**

**Lab Sample ID: 460-272260-9**

**Date Collected: 12/29/22 13:20**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>320</b>		5.0	1.0	ug/L			01/04/23 10:46	5
<b>Ethylbenzene</b>	<b>530</b>		5.0	1.5	ug/L			01/04/23 10:46	5
1,2-Dichloroethane	2.2	U	5.0	2.2	ug/L			01/04/23 10:46	5
<b>Methyl tert-butyl ether</b>	<b>1.1</b>	<b>J</b>	5.0	1.1	ug/L			01/04/23 10:46	5
<b>Naphthalene</b>	<b>610</b>		5.0	4.4	ug/L			01/04/23 10:46	5
<b>Toluene</b>	<b>250</b>		5.0	1.9	ug/L			01/04/23 10:46	5
<b>o-Xylene</b>	<b>75</b>		5.0	1.8	ug/L			01/04/23 10:46	5
<b>Xylenes, Total</b>	<b>1200</b>		10	3.3	ug/L			01/04/23 10:46	5
<b>m-Xylene &amp; p-Xylene</b>	<b>1100</b>		5.0	1.5	ug/L			01/04/23 10:46	5
1,1,1-Trichloroethane	1.2	U	5.0	1.2	ug/L			01/04/23 10:46	5
cis-1,3-Dichloropropene	1.1	U	5.0	1.1	ug/L			01/04/23 10:46	5
Carbon disulfide	4.1	U	5.0	4.1	ug/L			01/04/23 10:46	5
Chlorobromomethane	2.1	U	5.0	2.1	ug/L			01/04/23 10:46	5
Bromoform	2.7	U	5.0	2.7	ug/L			01/04/23 10:46	5
Tetrachloroethylene	1.2	U	5.0	1.2	ug/L			01/04/23 10:46	5
1,1-Dichloroethane	1.3	U	5.0	1.3	ug/L			01/04/23 10:46	5
1,2-Dichloropropane	1.8	U	5.0	1.8	ug/L			01/04/23 10:46	5
1,1,2-Trichloroethane	1.0	U	5.0	1.0	ug/L			01/04/23 10:46	5
<b>Acetone</b>	<b>24</b>	<b>J</b>	25	22	ug/L			01/04/23 10:46	5

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# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MW-005**

**Lab Sample ID: 460-272260-9**

Date Collected: 12/29/22 13:20

Matrix: Water

Date Received: 12/30/22 20:00

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	1.6	U	5.0	1.6	ug/L			01/04/23 10:46	5
<b>Methyl isobutyl ketone (MIBK)</b>	<b>86</b>		25	6.5	ug/L			01/04/23 10:46	5
tert-Butyl alcohol	41	U *3	50	41	ug/L			01/04/23 10:46	5
Methylene Chloride	1.6	U	5.0	1.6	ug/L			01/04/23 10:46	5
Dibromochloromethane	1.4	U	5.0	1.4	ug/L			01/04/23 10:46	5
Chlorobenzene	1.9	U	5.0	1.9	ug/L			01/04/23 10:46	5
Styrene	2.1	U	5.0	2.1	ug/L			01/04/23 10:46	5
trans-1,2-Dichloroethene	1.2	U	5.0	1.2	ug/L			01/04/23 10:46	5
1,1,2,2-Tetrachloroethane	1.8	U	5.0	1.8	ug/L			01/04/23 10:46	5
Chloroethane	1.6	U	5.0	1.6	ug/L			01/04/23 10:46	5
1,1-Dichloroethene	1.3	U	5.0	1.3	ug/L			01/04/23 10:46	5
Trichloroethylene	1.6	U	5.0	1.6	ug/L			01/04/23 10:46	5
2-Hexanone	5.7	U	25	5.7	ug/L			01/04/23 10:46	5
<b>Methyl ethyl ketone (MEK)</b>	<b>9.3</b>	<b>J</b>	25	9.3	ug/L			01/04/23 10:46	5
Isopropyl ether	0.95	U *+	5.0	0.95	ug/L			01/04/23 10:46	5
Tert-amyl methyl ether	1.1	U	5.0	1.1	ug/L			01/04/23 10:46	5
trans-1,3-Dichloropropene	1.1	U	5.0	1.1	ug/L			01/04/23 10:46	5
cis-1,2-Dichloroethene	1.1	U	5.0	1.1	ug/L			01/04/23 10:46	5
Chloroform	1.6	U	5.0	1.6	ug/L			01/04/23 10:46	5
Dichlorofluoromethane	1.7	U	5.0	1.7	ug/L			01/04/23 10:46	5
Vinyl chloride	0.86	U	5.0	0.86	ug/L			01/04/23 10:46	5
1,2-Dibromoethane	2.5	U	5.0	2.5	ug/L			01/04/23 10:46	5
Carbon tetrachloride	1.0	U	5.0	1.0	ug/L			01/04/23 10:46	5
Bromodichloromethane	1.7	U	5.0	1.7	ug/L			01/04/23 10:46	5
Methyl chloride	2.0	U	5.0	2.0	ug/L			01/04/23 10:46	5
Methyl bromide	2.8	U	5.0	2.8	ug/L			01/04/23 10:46	5
DBCP	1.9	U	5.0	1.9	ug/L			01/04/23 10:46	5
Ethyl tert-butyl ether	2.0	U	5.0	2.0	ug/L			01/04/23 10:46	5
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
1,2-Dichloroethane-d4 (Surr)	107		70 - 128					01/04/23 10:46	5
4-Bromofluorobenzene	104		76 - 120					01/04/23 10:46	5
Dibromofluoromethane (Surr)	93		77 - 124					01/04/23 10:46	5
Toluene-d8 (Surr)	93		80 - 120					01/04/23 10:46	5

**Client Sample ID: MW-006**

**Lab Sample ID: 460-272260-10**

Date Collected: 12/29/22 10:30

Matrix: Water

Date Received: 12/30/22 20:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L			01/05/23 10:01	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/05/23 10:01	1
1,2-Dichloroethane	0.43	U	1.0	0.43	ug/L			01/05/23 10:01	1
<b>Methyl tert-butyl ether</b>	<b>0.29</b>	<b>J</b>	1.0	0.22	ug/L			01/05/23 10:01	1
Naphthalene	0.88	U	1.0	0.88	ug/L			01/05/23 10:01	1
Toluene	0.38	U	1.0	0.38	ug/L			01/05/23 10:01	1
o-Xylene	0.36	U	1.0	0.36	ug/L			01/05/23 10:01	1
Xylenes, Total	0.65	U	2.0	0.65	ug/L			01/05/23 10:01	1
m-Xylene & p-Xylene	0.30	U	1.0	0.30	ug/L			01/05/23 10:01	1

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# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MW-006**

**Lab Sample ID: 460-272260-10**

**Date Collected: 12/29/22 10:30**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/05/23 10:01	1
cis-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/05/23 10:01	1
Carbon disulfide	0.82	U	1.0	0.82	ug/L			01/05/23 10:01	1
Chlorobromomethane	0.41	U	1.0	0.41	ug/L			01/05/23 10:01	1
Bromoform	0.54	U	1.0	0.54	ug/L			01/05/23 10:01	1
Tetrachloroethylene	0.25	U	1.0	0.25	ug/L			01/05/23 10:01	1
1,1-Dichloroethane	0.26	U	1.0	0.26	ug/L			01/05/23 10:01	1
1,2-Dichloropropane	0.35	U	1.0	0.35	ug/L			01/05/23 10:01	1
1,1,2-Trichloroethane	0.20	U	1.0	0.20	ug/L			01/05/23 10:01	1
Acetone	4.4	U*	5.0	4.4	ug/L			01/05/23 10:01	1
Dichlorodifluoromethane	0.31	U	1.0	0.31	ug/L			01/05/23 10:01	1
Methyl isobutyl ketone (MIBK)	1.3	U	5.0	1.3	ug/L			01/05/23 10:01	1
tert-Butyl alcohol	8.3	U	10	8.3	ug/L			01/05/23 10:01	1
Methylene Chloride	0.32	U	1.0	0.32	ug/L			01/05/23 10:01	1
Dibromochloromethane	0.28	U	1.0	0.28	ug/L			01/05/23 10:01	1
Chlorobenzene	0.38	U	1.0	0.38	ug/L			01/05/23 10:01	1
Styrene	0.42	U	1.0	0.42	ug/L			01/05/23 10:01	1
trans-1,2-Dichloroethene	0.24	U	1.0	0.24	ug/L			01/05/23 10:01	1
1,1,2,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			01/05/23 10:01	1
Chloroethane	0.32	U	1.0	0.32	ug/L			01/05/23 10:01	1
1,1-Dichloroethene	0.26	U	1.0	0.26	ug/L			01/05/23 10:01	1
Trichloroethylene	0.31	U	1.0	0.31	ug/L			01/05/23 10:01	1
2-Hexanone	1.1	U	5.0	1.1	ug/L			01/05/23 10:01	1
Methyl ethyl ketone (MEK)	1.9	U	5.0	1.9	ug/L			01/05/23 10:01	1
Isopropyl ether	0.19	U	1.0	0.19	ug/L			01/05/23 10:01	1
Tert-amyl methyl ether	0.21	U	1.0	0.21	ug/L			01/05/23 10:01	1
trans-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/05/23 10:01	1
cis-1,2-Dichloroethene	0.22	U	1.0	0.22	ug/L			01/05/23 10:01	1
Chloroform	0.33	U	1.0	0.33	ug/L			01/05/23 10:01	1
Dichlorofluoromethane	0.34	U	1.0	0.34	ug/L			01/05/23 10:01	1
Vinyl chloride	0.17	U	1.0	0.17	ug/L			01/05/23 10:01	1
1,2-Dibromoethane	0.50	U	1.0	0.50	ug/L			01/05/23 10:01	1
Carbon tetrachloride	0.21	U	1.0	0.21	ug/L			01/05/23 10:01	1
Bromodichloromethane	0.34	U	1.0	0.34	ug/L			01/05/23 10:01	1
Methyl chloride	0.40	U	1.0	0.40	ug/L			01/05/23 10:01	1
Methyl bromide	0.55	U	1.0	0.55	ug/L			01/05/23 10:01	1
DBCP	0.38	U	1.0	0.38	ug/L			01/05/23 10:01	1
Ethyl tert-butyl ether	0.41	U	1.0	0.41	ug/L			01/05/23 10:01	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 128					01/05/23 10:01	1
4-Bromofluorobenzene	91		76 - 120					01/05/23 10:01	1
Dibromofluoromethane (Surr)	101		77 - 124					01/05/23 10:01	1
Toluene-d8 (Surr)	98		80 - 120					01/05/23 10:01	1

# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MW-007**

**Lab Sample ID: 460-272260-11**

**Date Collected: 12/29/22 13:20**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>7.1</b>		1.0	0.20	ug/L			01/05/23 10:22	1
<b>Ethylbenzene</b>	<b>54</b>		1.0	0.30	ug/L			01/05/23 10:22	1
1,2-Dichloroethane	0.43	U	1.0	0.43	ug/L			01/05/23 10:22	1
Methyl tert-butyl ether	0.22	U	1.0	0.22	ug/L			01/05/23 10:22	1
<b>Naphthalene</b>	<b>16</b>		1.0	0.88	ug/L			01/05/23 10:22	1
<b>Toluene</b>	<b>33</b>		1.0	0.38	ug/L			01/05/23 10:22	1
<b>o-Xylene</b>	<b>50</b>		1.0	0.36	ug/L			01/05/23 10:22	1
<b>Xylenes, Total</b>	<b>310</b>		2.0	0.65	ug/L			01/05/23 10:22	1
<b>m-Xylene &amp; p-Xylene</b>	<b>260</b>		1.0	0.30	ug/L			01/05/23 10:22	1
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/05/23 10:22	1
cis-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/05/23 10:22	1
Carbon disulfide	0.82	U	1.0	0.82	ug/L			01/05/23 10:22	1
Chlorobromomethane	0.41	U	1.0	0.41	ug/L			01/05/23 10:22	1
Bromoform	0.54	U	1.0	0.54	ug/L			01/05/23 10:22	1
Tetrachloroethylene	0.25	U	1.0	0.25	ug/L			01/05/23 10:22	1
1,1-Dichloroethane	0.26	U	1.0	0.26	ug/L			01/05/23 10:22	1
1,2-Dichloropropane	0.35	U	1.0	0.35	ug/L			01/05/23 10:22	1
1,1,2-Trichloroethane	0.20	U	1.0	0.20	ug/L			01/05/23 10:22	1
<b>Acetone</b>	<b>6.3</b>	<b>*+</b>	5.0	4.4	ug/L			01/05/23 10:22	1
Dichlorodifluoromethane	0.31	U	1.0	0.31	ug/L			01/05/23 10:22	1
Methyl isobutyl ketone (MIBK)	1.3	U	5.0	1.3	ug/L			01/05/23 10:22	1
tert-Butyl alcohol	8.3	U	10	8.3	ug/L			01/05/23 10:22	1
Methylene Chloride	0.32	U	1.0	0.32	ug/L			01/05/23 10:22	1
Dibromochloromethane	0.28	U	1.0	0.28	ug/L			01/05/23 10:22	1
Chlorobenzene	0.38	U	1.0	0.38	ug/L			01/05/23 10:22	1
Styrene	0.42	U	1.0	0.42	ug/L			01/05/23 10:22	1
trans-1,2-Dichloroethene	0.24	U	1.0	0.24	ug/L			01/05/23 10:22	1
1,1,2,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			01/05/23 10:22	1
Chloroethane	0.32	U	1.0	0.32	ug/L			01/05/23 10:22	1
1,1-Dichloroethene	0.26	U	1.0	0.26	ug/L			01/05/23 10:22	1
Trichloroethylene	0.31	U	1.0	0.31	ug/L			01/05/23 10:22	1
2-Hexanone	1.1	U	5.0	1.1	ug/L			01/05/23 10:22	1
Methyl ethyl ketone (MEK)	1.9	U	5.0	1.9	ug/L			01/05/23 10:22	1
Isopropyl ether	0.19	U	1.0	0.19	ug/L			01/05/23 10:22	1
Tert-amyl methyl ether	0.21	U	1.0	0.21	ug/L			01/05/23 10:22	1
trans-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/05/23 10:22	1
cis-1,2-Dichloroethene	0.22	U	1.0	0.22	ug/L			01/05/23 10:22	1
Chloroform	0.33	U	1.0	0.33	ug/L			01/05/23 10:22	1
Dichlorofluoromethane	0.34	U	1.0	0.34	ug/L			01/05/23 10:22	1
Vinyl chloride	0.17	U	1.0	0.17	ug/L			01/05/23 10:22	1
1,2-Dibromoethane	0.50	U	1.0	0.50	ug/L			01/05/23 10:22	1
Carbon tetrachloride	0.21	U	1.0	0.21	ug/L			01/05/23 10:22	1
Bromodichloromethane	0.34	U	1.0	0.34	ug/L			01/05/23 10:22	1
Methyl chloride	0.40	U	1.0	0.40	ug/L			01/05/23 10:22	1
Methyl bromide	0.55	U	1.0	0.55	ug/L			01/05/23 10:22	1
DBCP	0.38	U	1.0	0.38	ug/L			01/05/23 10:22	1
Ethyl tert-butyl ether	0.41	U	1.0	0.41	ug/L			01/05/23 10:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 128		01/05/23 10:22	1

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# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MW-007**

**Lab Sample ID: 460-272260-11**

Date Collected: 12/29/22 13:20

Matrix: Water

Date Received: 12/30/22 20:00

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	93		76 - 120		01/05/23 10:22	1
Dibromofluoromethane (Surr)	99		77 - 124		01/05/23 10:22	1
Toluene-d8 (Surr)	98		80 - 120		01/05/23 10:22	1

**Client Sample ID: MW-008**

**Lab Sample ID: 460-272260-12**

Date Collected: 12/30/22 10:50

Matrix: Water

Date Received: 12/30/22 20:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>8.1</b>		1.0	0.20	ug/L			01/09/23 10:25	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/09/23 10:25	1
1,2-Dichloroethane	0.43	U	1.0	0.43	ug/L			01/09/23 10:25	1
<b>Methyl tert-butyl ether</b>	<b>65</b>		1.0	0.22	ug/L			01/09/23 10:25	1
<b>Naphthalene</b>	<b>1.5</b>		1.0	0.88	ug/L			01/09/23 10:25	1
<b>Toluene</b>	<b>0.40</b>	<b>J</b>	1.0	0.38	ug/L			01/09/23 10:25	1
o-Xylene	0.36	U	1.0	0.36	ug/L			01/09/23 10:25	1
Xylenes, Total	0.65	U	2.0	0.65	ug/L			01/09/23 10:25	1
<b>m-Xylene &amp; p-Xylene</b>	<b>0.52</b>	<b>J</b>	1.0	0.30	ug/L			01/09/23 10:25	1
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/09/23 10:25	1
cis-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/09/23 10:25	1
Carbon disulfide	0.82	U	1.0	0.82	ug/L			01/09/23 10:25	1
Chlorobromomethane	0.41	U	1.0	0.41	ug/L			01/09/23 10:25	1
Bromoform	0.54	U	1.0	0.54	ug/L			01/09/23 10:25	1
Tetrachloroethylene	0.25	U	1.0	0.25	ug/L			01/09/23 10:25	1
1,1-Dichloroethane	0.26	U	1.0	0.26	ug/L			01/09/23 10:25	1
1,2-Dichloropropane	0.35	U	1.0	0.35	ug/L			01/09/23 10:25	1
1,1,2-Trichloroethane	0.20	U	1.0	0.20	ug/L			01/09/23 10:25	1
Acetone	4.4	U	5.0	4.4	ug/L			01/09/23 10:25	1
Dichlorodifluoromethane	0.31	U	1.0	0.31	ug/L			01/09/23 10:25	1
Methyl isobutyl ketone (MIBK)	1.3	U	5.0	1.3	ug/L			01/09/23 10:25	1
<b>tert-Butyl alcohol</b>	<b>170</b>		10	8.3	ug/L			01/09/23 10:25	1
Methylene Chloride	0.32	U	1.0	0.32	ug/L			01/09/23 10:25	1
Dibromochloromethane	0.28	U	1.0	0.28	ug/L			01/09/23 10:25	1
Chlorobenzene	0.38	U	1.0	0.38	ug/L			01/09/23 10:25	1
Styrene	0.42	U	1.0	0.42	ug/L			01/09/23 10:25	1
trans-1,2-Dichloroethene	0.24	U	1.0	0.24	ug/L			01/09/23 10:25	1
1,1,2,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			01/09/23 10:25	1
Chloroethane	0.32	U *1	1.0	0.32	ug/L			01/09/23 10:25	1
1,1-Dichloroethene	0.26	U	1.0	0.26	ug/L			01/09/23 10:25	1
Trichloroethylene	0.31	U	1.0	0.31	ug/L			01/09/23 10:25	1
2-Hexanone	1.1	U	5.0	1.1	ug/L			01/09/23 10:25	1
Methyl ethyl ketone (MEK)	1.9	U	5.0	1.9	ug/L			01/09/23 10:25	1
<b>Isopropyl ether</b>	<b>24</b>		1.0	0.19	ug/L			01/09/23 10:25	1
<b>Tert-amyl methyl ether</b>	<b>2.0</b>		1.0	0.21	ug/L			01/09/23 10:25	1
trans-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/09/23 10:25	1
cis-1,2-Dichloroethene	0.22	U	1.0	0.22	ug/L			01/09/23 10:25	1
Chloroform	0.33	U	1.0	0.33	ug/L			01/09/23 10:25	1
Dichlorofluoromethane	0.34	U	1.0	0.34	ug/L			01/09/23 10:25	1

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# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MW-008**

**Lab Sample ID: 460-272260-12**

**Date Collected: 12/30/22 10:50**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.17	U	1.0	0.17	ug/L			01/09/23 10:25	1
1,2-Dibromoethane	0.50	U	1.0	0.50	ug/L			01/09/23 10:25	1
Carbon tetrachloride	0.21	U	1.0	0.21	ug/L			01/09/23 10:25	1
Bromodichloromethane	0.34	U	1.0	0.34	ug/L			01/09/23 10:25	1
Methyl chloride	0.40	U	1.0	0.40	ug/L			01/09/23 10:25	1
Methyl bromide	0.55	U	1.0	0.55	ug/L			01/09/23 10:25	1
DBCP	0.38	U	1.0	0.38	ug/L			01/09/23 10:25	1
<b>Ethyl tert-butyl ether</b>	<b>1.2</b>		1.0	0.41	ug/L			01/09/23 10:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		70 - 128		01/09/23 10:25	1
4-Bromofluorobenzene	97		76 - 120		01/09/23 10:25	1
Dibromofluoromethane (Surr)	91		77 - 124		01/09/23 10:25	1
Toluene-d8 (Surr)	94		80 - 120		01/09/23 10:25	1

**Client Sample ID: MW-008D**

**Lab Sample ID: 460-272260-13**

**Date Collected: 12/30/22 12:00**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L			01/09/23 09:41	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/09/23 09:41	1
1,2-Dichloroethane	0.43	U	1.0	0.43	ug/L			01/09/23 09:41	1
Methyl tert-butyl ether	0.22	U	1.0	0.22	ug/L			01/09/23 09:41	1
Naphthalene	0.88	U	1.0	0.88	ug/L			01/09/23 09:41	1
Toluene	0.38	U	1.0	0.38	ug/L			01/09/23 09:41	1
o-Xylene	0.36	U	1.0	0.36	ug/L			01/09/23 09:41	1
Xylenes, Total	0.65	U	2.0	0.65	ug/L			01/09/23 09:41	1
m-Xylene & p-Xylene	0.30	U	1.0	0.30	ug/L			01/09/23 09:41	1
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/09/23 09:41	1
cis-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/09/23 09:41	1
Carbon disulfide	0.82	U	1.0	0.82	ug/L			01/09/23 09:41	1
Chlorobromomethane	0.41	U	1.0	0.41	ug/L			01/09/23 09:41	1
Bromoform	0.54	U	1.0	0.54	ug/L			01/09/23 09:41	1
Tetrachloroethylene	0.25	U	1.0	0.25	ug/L			01/09/23 09:41	1
1,1-Dichloroethane	0.26	U	1.0	0.26	ug/L			01/09/23 09:41	1
1,2-Dichloropropane	0.35	U	1.0	0.35	ug/L			01/09/23 09:41	1
1,1,2-Trichloroethane	0.20	U	1.0	0.20	ug/L			01/09/23 09:41	1
Acetone	4.4	U	5.0	4.4	ug/L			01/09/23 09:41	1
Dichlorodifluoromethane	0.31	U	1.0	0.31	ug/L			01/09/23 09:41	1
Methyl isobutyl ketone (MIBK)	1.3	U	5.0	1.3	ug/L			01/09/23 09:41	1
tert-Butyl alcohol	8.3	U	10	8.3	ug/L			01/09/23 09:41	1
Methylene Chloride	0.32	U	1.0	0.32	ug/L			01/09/23 09:41	1
Dibromochloromethane	0.28	U	1.0	0.28	ug/L			01/09/23 09:41	1
Chlorobenzene	0.38	U	1.0	0.38	ug/L			01/09/23 09:41	1
Styrene	0.42	U	1.0	0.42	ug/L			01/09/23 09:41	1
trans-1,2-Dichloroethene	0.24	U	1.0	0.24	ug/L			01/09/23 09:41	1
1,1,2,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			01/09/23 09:41	1
Chloroethane	0.32	U *1	1.0	0.32	ug/L			01/09/23 09:41	1

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# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MW-008D**

**Lab Sample ID: 460-272260-13**

**Date Collected: 12/30/22 12:00**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,1-Dichloroethene</b>	<b>1.2</b>		1.0	0.26	ug/L			01/09/23 09:41	1
Trichloroethylene	0.31	U	1.0	0.31	ug/L			01/09/23 09:41	1
2-Hexanone	1.1	U	5.0	1.1	ug/L			01/09/23 09:41	1
Methyl ethyl ketone (MEK)	1.9	U	5.0	1.9	ug/L			01/09/23 09:41	1
Isopropyl ether	0.19	U	1.0	0.19	ug/L			01/09/23 09:41	1
Tert-amyl methyl ether	0.21	U	1.0	0.21	ug/L			01/09/23 09:41	1
trans-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/09/23 09:41	1
cis-1,2-Dichloroethene	0.22	U	1.0	0.22	ug/L			01/09/23 09:41	1
Chloroform	0.33	U	1.0	0.33	ug/L			01/09/23 09:41	1
Dichlorofluoromethane	0.34	U	1.0	0.34	ug/L			01/09/23 09:41	1
Vinyl chloride	0.17	U	1.0	0.17	ug/L			01/09/23 09:41	1
1,2-Dibromoethane	0.50	U	1.0	0.50	ug/L			01/09/23 09:41	1
Carbon tetrachloride	0.21	U	1.0	0.21	ug/L			01/09/23 09:41	1
Bromodichloromethane	0.34	U	1.0	0.34	ug/L			01/09/23 09:41	1
Methyl chloride	0.40	U	1.0	0.40	ug/L			01/09/23 09:41	1
Methyl bromide	0.55	U	1.0	0.55	ug/L			01/09/23 09:41	1
DBCP	0.38	U	1.0	0.38	ug/L			01/09/23 09:41	1
Ethyl tert-butyl ether	0.41	U	1.0	0.41	ug/L			01/09/23 09:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		70 - 128		01/09/23 09:41	1
4-Bromofluorobenzene	99		76 - 120		01/09/23 09:41	1
Dibromofluoromethane (Surr)	98		77 - 124		01/09/23 09:41	1
Toluene-d8 (Surr)	93		80 - 120		01/09/23 09:41	1

**Client Sample ID: MW-009**

**Lab Sample ID: 460-272260-14**

**Date Collected: 12/29/22 10:55**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.20	U	1.0	0.20	ug/L			01/09/23 10:03	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/09/23 10:03	1
<b>1,2-Dichloroethane</b>	<b>1.2</b>		1.0	0.43	ug/L			01/09/23 10:03	1
<b>Methyl tert-butyl ether</b>	<b>1.9</b>		1.0	0.22	ug/L			01/09/23 10:03	1
Naphthalene	0.88	U	1.0	0.88	ug/L			01/09/23 10:03	1
Toluene	0.38	U	1.0	0.38	ug/L			01/09/23 10:03	1
o-Xylene	0.36	U	1.0	0.36	ug/L			01/09/23 10:03	1
Xylenes, Total	0.65	U	2.0	0.65	ug/L			01/09/23 10:03	1
m-Xylene & p-Xylene	0.30	U	1.0	0.30	ug/L			01/09/23 10:03	1
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/09/23 10:03	1
cis-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/09/23 10:03	1
Carbon disulfide	0.82	U	1.0	0.82	ug/L			01/09/23 10:03	1
Chlorobromomethane	0.41	U	1.0	0.41	ug/L			01/09/23 10:03	1
Bromoform	0.54	U	1.0	0.54	ug/L			01/09/23 10:03	1
Tetrachloroethylene	0.25	U	1.0	0.25	ug/L			01/09/23 10:03	1
1,1-Dichloroethane	0.26	U	1.0	0.26	ug/L			01/09/23 10:03	1
1,2-Dichloropropane	0.35	U	1.0	0.35	ug/L			01/09/23 10:03	1
1,1,2-Trichloroethane	0.20	U	1.0	0.20	ug/L			01/09/23 10:03	1
Acetone	4.4	U	5.0	4.4	ug/L			01/09/23 10:03	1

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# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MW-009**

**Lab Sample ID: 460-272260-14**

**Date Collected: 12/29/22 10:55**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	0.31	U	1.0	0.31	ug/L			01/09/23 10:03	1
Methyl isobutyl ketone (MIBK)	1.3	U	5.0	1.3	ug/L			01/09/23 10:03	1
tert-Butyl alcohol	8.3	U	10	8.3	ug/L			01/09/23 10:03	1
Methylene Chloride	0.32	U	1.0	0.32	ug/L			01/09/23 10:03	1
Dibromochloromethane	0.28	U	1.0	0.28	ug/L			01/09/23 10:03	1
Chlorobenzene	0.38	U	1.0	0.38	ug/L			01/09/23 10:03	1
Styrene	0.42	U	1.0	0.42	ug/L			01/09/23 10:03	1
trans-1,2-Dichloroethene	0.24	U	1.0	0.24	ug/L			01/09/23 10:03	1
1,1,2,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			01/09/23 10:03	1
Chloroethane	0.32	U *1	1.0	0.32	ug/L			01/09/23 10:03	1
1,1-Dichloroethene	0.26	U	1.0	0.26	ug/L			01/09/23 10:03	1
Trichloroethylene	0.31	U	1.0	0.31	ug/L			01/09/23 10:03	1
2-Hexanone	1.1	U	5.0	1.1	ug/L			01/09/23 10:03	1
Methyl ethyl ketone (MEK)	1.9	U	5.0	1.9	ug/L			01/09/23 10:03	1
Isopropyl ether	0.19	U	1.0	0.19	ug/L			01/09/23 10:03	1
Tert-amyl methyl ether	0.21	U	1.0	0.21	ug/L			01/09/23 10:03	1
trans-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/09/23 10:03	1
cis-1,2-Dichloroethene	0.22	U	1.0	0.22	ug/L			01/09/23 10:03	1
Chloroform	0.33	U	1.0	0.33	ug/L			01/09/23 10:03	1
Dichlorofluoromethane	0.34	U	1.0	0.34	ug/L			01/09/23 10:03	1
Vinyl chloride	0.17	U	1.0	0.17	ug/L			01/09/23 10:03	1
1,2-Dibromoethane	0.50	U	1.0	0.50	ug/L			01/09/23 10:03	1
Carbon tetrachloride	0.21	U	1.0	0.21	ug/L			01/09/23 10:03	1
Bromodichloromethane	0.34	U	1.0	0.34	ug/L			01/09/23 10:03	1
Methyl chloride	0.40	U	1.0	0.40	ug/L			01/09/23 10:03	1
Methyl bromide	0.55	U	1.0	0.55	ug/L			01/09/23 10:03	1
DBCP	0.38	U	1.0	0.38	ug/L			01/09/23 10:03	1
Ethyl tert-butyl ether	0.41	U	1.0	0.41	ug/L			01/09/23 10:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	100		70 - 128		01/09/23 10:03	1
4-Bromofluorobenzene	98		76 - 120		01/09/23 10:03	1
Dibromofluoromethane (Surr)	97		77 - 124		01/09/23 10:03	1
Toluene-d8 (Surr)	99		80 - 120		01/09/23 10:03	1

**Client Sample ID: MW-009D**

**Lab Sample ID: 460-272260-15**

**Date Collected: 12/29/22 11:45**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	1.0	U	5.0	1.0	ug/L			01/09/23 13:57	5
Ethylbenzene	1.5	U	5.0	1.5	ug/L			01/09/23 13:57	5
<b>1,2-Dichloroethane</b>	<b>40</b>		5.0	2.2	ug/L			01/09/23 13:57	5
<b>Methyl tert-butyl ether</b>	<b>1100</b>		5.0	1.1	ug/L			01/09/23 13:57	5
Naphthalene	4.4	U	5.0	4.4	ug/L			01/09/23 13:57	5
Toluene	1.9	U	5.0	1.9	ug/L			01/09/23 13:57	5
o-Xylene	1.8	U	5.0	1.8	ug/L			01/09/23 13:57	5
Xylenes, Total	3.3	U	10	3.3	ug/L			01/09/23 13:57	5
m-Xylene & p-Xylene	1.5	U	5.0	1.5	ug/L			01/09/23 13:57	5

Euromins Edison

# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MW-009D**

**Lab Sample ID: 460-272260-15**

**Date Collected: 12/29/22 11:45**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.2	U	5.0	1.2	ug/L			01/09/23 13:57	5
cis-1,3-Dichloropropene	1.1	U	5.0	1.1	ug/L			01/09/23 13:57	5
Carbon disulfide	4.1	U	5.0	4.1	ug/L			01/09/23 13:57	5
Chlorobromomethane	2.1	U	5.0	2.1	ug/L			01/09/23 13:57	5
Bromoform	2.7	U	5.0	2.7	ug/L			01/09/23 13:57	5
Tetrachloroethylene	1.2	U	5.0	1.2	ug/L			01/09/23 13:57	5
1,1-Dichloroethane	1.3	U	5.0	1.3	ug/L			01/09/23 13:57	5
1,2-Dichloropropane	1.8	U	5.0	1.8	ug/L			01/09/23 13:57	5
1,1,2-Trichloroethane	1.0	U	5.0	1.0	ug/L			01/09/23 13:57	5
Acetone	22	U	25	22	ug/L			01/09/23 13:57	5
Dichlorodifluoromethane	1.6	U	5.0	1.6	ug/L			01/09/23 13:57	5
Methyl isobutyl ketone (MIBK)	6.5	U	25	6.5	ug/L			01/09/23 13:57	5
<b>tert-Butyl alcohol</b>	<b>10000</b>		50	41	ug/L			01/09/23 13:57	5
Methylene Chloride	1.6	U	5.0	1.6	ug/L			01/09/23 13:57	5
Dibromochloromethane	1.4	U	5.0	1.4	ug/L			01/09/23 13:57	5
Chlorobenzene	1.9	U	5.0	1.9	ug/L			01/09/23 13:57	5
Styrene	2.1	U	5.0	2.1	ug/L			01/09/23 13:57	5
trans-1,2-Dichloroethene	1.2	U	5.0	1.2	ug/L			01/09/23 13:57	5
1,1,2,2-Tetrachloroethane	1.8	U	5.0	1.8	ug/L			01/09/23 13:57	5
Chloroethane	1.6	U	5.0	1.6	ug/L			01/09/23 13:57	5
1,1-Dichloroethene	1.3	U	5.0	1.3	ug/L			01/09/23 13:57	5
Trichloroethylene	1.6	U	5.0	1.6	ug/L			01/09/23 13:57	5
2-Hexanone	5.7	U	25	5.7	ug/L			01/09/23 13:57	5
Methyl ethyl ketone (MEK)	9.3	U	25	9.3	ug/L			01/09/23 13:57	5
<b>Isopropyl ether</b>	<b>13</b>		5.0	0.95	ug/L			01/09/23 13:57	5
<b>Tert-amyl methyl ether</b>	<b>13</b>		5.0	1.1	ug/L			01/09/23 13:57	5
trans-1,3-Dichloropropene	1.1	U	5.0	1.1	ug/L			01/09/23 13:57	5
cis-1,2-Dichloroethene	1.1	U	5.0	1.1	ug/L			01/09/23 13:57	5
Chloroform	1.6	U	5.0	1.6	ug/L			01/09/23 13:57	5
Dichlorofluoromethane	1.7	U	5.0	1.7	ug/L			01/09/23 13:57	5
Vinyl chloride	0.86	U	5.0	0.86	ug/L			01/09/23 13:57	5
1,2-Dibromoethane	2.5	U	5.0	2.5	ug/L			01/09/23 13:57	5
Carbon tetrachloride	1.0	U	5.0	1.0	ug/L			01/09/23 13:57	5
Bromodichloromethane	1.7	U	5.0	1.7	ug/L			01/09/23 13:57	5
Methyl chloride	2.0	U	5.0	2.0	ug/L			01/09/23 13:57	5
Methyl bromide	2.8	U	5.0	2.8	ug/L			01/09/23 13:57	5
DBCP	1.9	U	5.0	1.9	ug/L			01/09/23 13:57	5
Ethyl tert-butyl ether	2.0	U	5.0	2.0	ug/L			01/09/23 13:57	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	99		70 - 128		01/09/23 13:57	5
4-Bromofluorobenzene	93		76 - 120		01/09/23 13:57	5
Dibromofluoromethane (Surr)	102		77 - 124		01/09/23 13:57	5
Toluene-d8 (Surr)	97		80 - 120		01/09/23 13:57	5

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# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MW-010**

**Lab Sample ID: 460-272260-16**

Date Collected: 12/29/22 09:15

Matrix: Water

Date Received: 12/30/22 20:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>3.5</b>	<b>J</b>	5.0	1.0	ug/L			01/09/23 13:36	5
Ethylbenzene	1.5	U	5.0	1.5	ug/L			01/09/23 13:36	5
<b>1,2-Dichloroethane</b>	<b>210</b>		5.0	2.2	ug/L			01/09/23 13:36	5
<b>Methyl tert-butyl ether</b>	<b>1800</b>		5.0	1.1	ug/L			01/09/23 13:36	5
Naphthalene	4.4	U	5.0	4.4	ug/L			01/09/23 13:36	5
Toluene	1.9	U	5.0	1.9	ug/L			01/09/23 13:36	5
o-Xylene	1.8	U	5.0	1.8	ug/L			01/09/23 13:36	5
Xylenes, Total	3.3	U	10	3.3	ug/L			01/09/23 13:36	5
m-Xylene & p-Xylene	1.5	U	5.0	1.5	ug/L			01/09/23 13:36	5
1,1,1-Trichloroethane	1.2	U	5.0	1.2	ug/L			01/09/23 13:36	5
cis-1,3-Dichloropropene	1.1	U	5.0	1.1	ug/L			01/09/23 13:36	5
Carbon disulfide	4.1	U	5.0	4.1	ug/L			01/09/23 13:36	5
Chlorobromomethane	2.1	U	5.0	2.1	ug/L			01/09/23 13:36	5
Bromoform	2.7	U	5.0	2.7	ug/L			01/09/23 13:36	5
Tetrachloroethylene	1.2	U	5.0	1.2	ug/L			01/09/23 13:36	5
1,1-Dichloroethane	1.3	U	5.0	1.3	ug/L			01/09/23 13:36	5
1,2-Dichloropropane	1.8	U	5.0	1.8	ug/L			01/09/23 13:36	5
1,1,2-Trichloroethane	1.0	U	5.0	1.0	ug/L			01/09/23 13:36	5
Acetone	22	U	25	22	ug/L			01/09/23 13:36	5
Dichlorodifluoromethane	1.6	U	5.0	1.6	ug/L			01/09/23 13:36	5
Methyl isobutyl ketone (MIBK)	6.5	U	25	6.5	ug/L			01/09/23 13:36	5
<b>tert-Butyl alcohol</b>	<b>8300</b>		50	41	ug/L			01/09/23 13:36	5
Methylene Chloride	1.6	U	5.0	1.6	ug/L			01/09/23 13:36	5
Dibromochloromethane	1.4	U	5.0	1.4	ug/L			01/09/23 13:36	5
Chlorobenzene	1.9	U	5.0	1.9	ug/L			01/09/23 13:36	5
Styrene	2.1	U	5.0	2.1	ug/L			01/09/23 13:36	5
trans-1,2-Dichloroethene	1.2	U	5.0	1.2	ug/L			01/09/23 13:36	5
1,1,2,2-Tetrachloroethane	1.8	U	5.0	1.8	ug/L			01/09/23 13:36	5
Chloroethane	1.6	U	5.0	1.6	ug/L			01/09/23 13:36	5
1,1-Dichloroethene	1.3	U	5.0	1.3	ug/L			01/09/23 13:36	5
Trichloroethylene	1.6	U	5.0	1.6	ug/L			01/09/23 13:36	5
2-Hexanone	5.7	U	25	5.7	ug/L			01/09/23 13:36	5
Methyl ethyl ketone (MEK)	9.3	U	25	9.3	ug/L			01/09/23 13:36	5
<b>Isopropyl ether</b>	<b>53</b>		5.0	0.95	ug/L			01/09/23 13:36	5
Tert-amyl methyl ether	1.1	U	5.0	1.1	ug/L			01/09/23 13:36	5
trans-1,3-Dichloropropene	1.1	U	5.0	1.1	ug/L			01/09/23 13:36	5
cis-1,2-Dichloroethene	1.1	U	5.0	1.1	ug/L			01/09/23 13:36	5
Chloroform	1.6	U	5.0	1.6	ug/L			01/09/23 13:36	5
Dichlorofluoromethane	1.7	U	5.0	1.7	ug/L			01/09/23 13:36	5
Vinyl chloride	0.86	U	5.0	0.86	ug/L			01/09/23 13:36	5
1,2-Dibromoethane	2.5	U	5.0	2.5	ug/L			01/09/23 13:36	5
Carbon tetrachloride	1.0	U	5.0	1.0	ug/L			01/09/23 13:36	5
Bromodichloromethane	1.7	U	5.0	1.7	ug/L			01/09/23 13:36	5
Methyl chloride	2.0	U	5.0	2.0	ug/L			01/09/23 13:36	5
Methyl bromide	2.8	U	5.0	2.8	ug/L			01/09/23 13:36	5
DBCP	1.9	U	5.0	1.9	ug/L			01/09/23 13:36	5
Ethyl tert-butyl ether	2.0	U	5.0	2.0	ug/L			01/09/23 13:36	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 128		01/09/23 13:36	5

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# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MW-010**

**Lab Sample ID: 460-272260-16**

Date Collected: 12/29/22 09:15

Matrix: Water

Date Received: 12/30/22 20:00

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene	94		76 - 120		01/09/23 13:36	5
Dibromofluoromethane (Surr)	100		77 - 124		01/09/23 13:36	5
Toluene-d8 (Surr)	97		80 - 120		01/09/23 13:36	5

**Client Sample ID: MW-010D**

**Lab Sample ID: 460-272260-17**

Date Collected: 12/29/22 10:05

Matrix: Water

Date Received: 12/30/22 20:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	0.41	U	2.0	0.41	ug/L			01/09/23 11:29	2
Ethylbenzene	0.60	U	2.0	0.60	ug/L			01/09/23 11:29	2
<b>1,2-Dichloroethane</b>	<b>9.8</b>		2.0	0.86	ug/L			01/09/23 11:29	2
<b>Methyl tert-butyl ether</b>	<b>640</b>		2.0	0.43	ug/L			01/09/23 11:29	2
Naphthalene	1.8	U	2.0	1.8	ug/L			01/09/23 11:29	2
Toluene	0.76	U	2.0	0.76	ug/L			01/09/23 11:29	2
o-Xylene	0.72	U	2.0	0.72	ug/L			01/09/23 11:29	2
Xylenes, Total	1.3	U	4.0	1.3	ug/L			01/09/23 11:29	2
m-Xylene & p-Xylene	0.59	U	2.0	0.59	ug/L			01/09/23 11:29	2
1,1,1-Trichloroethane	0.48	U	2.0	0.48	ug/L			01/09/23 11:29	2
cis-1,3-Dichloropropene	0.44	U	2.0	0.44	ug/L			01/09/23 11:29	2
Carbon disulfide	1.6	U	2.0	1.6	ug/L			01/09/23 11:29	2
Chlorobromomethane	0.82	U	2.0	0.82	ug/L			01/09/23 11:29	2
Bromoform	1.1	U	2.0	1.1	ug/L			01/09/23 11:29	2
Tetrachloroethylene	0.50	U	2.0	0.50	ug/L			01/09/23 11:29	2
1,1-Dichloroethane	0.53	U	2.0	0.53	ug/L			01/09/23 11:29	2
1,2-Dichloropropane	0.71	U	2.0	0.71	ug/L			01/09/23 11:29	2
1,1,2-Trichloroethane	0.41	U	2.0	0.41	ug/L			01/09/23 11:29	2
Acetone	8.8	U	10	8.8	ug/L			01/09/23 11:29	2
Dichlorodifluoromethane	0.62	U	2.0	0.62	ug/L			01/09/23 11:29	2
Methyl isobutyl ketone (MIBK)	2.6	U	10	2.6	ug/L			01/09/23 11:29	2
<b>tert-Butyl alcohol</b>	<b>360</b>		20	17	ug/L			01/09/23 11:29	2
Methylene Chloride	0.63	U	2.0	0.63	ug/L			01/09/23 11:29	2
Dibromochloromethane	0.56	U	2.0	0.56	ug/L			01/09/23 11:29	2
Chlorobenzene	0.75	U	2.0	0.75	ug/L			01/09/23 11:29	2
Styrene	0.83	U	2.0	0.83	ug/L			01/09/23 11:29	2
trans-1,2-Dichloroethene	0.47	U	2.0	0.47	ug/L			01/09/23 11:29	2
1,1,2,2-Tetrachloroethane	0.73	U	2.0	0.73	ug/L			01/09/23 11:29	2
Chloroethane	0.64	U *1	2.0	0.64	ug/L			01/09/23 11:29	2
1,1-Dichloroethene	0.53	U	2.0	0.53	ug/L			01/09/23 11:29	2
Trichloroethylene	0.63	U	2.0	0.63	ug/L			01/09/23 11:29	2
2-Hexanone	2.3	U	10	2.3	ug/L			01/09/23 11:29	2
Methyl ethyl ketone (MEK)	3.7	U	10	3.7	ug/L			01/09/23 11:29	2
<b>Isopropyl ether</b>	<b>7.5</b>		2.0	0.38	ug/L			01/09/23 11:29	2
<b>Tert-amyl methyl ether</b>	<b>3.5</b>		2.0	0.42	ug/L			01/09/23 11:29	2
trans-1,3-Dichloropropene	0.45	U	2.0	0.45	ug/L			01/09/23 11:29	2
cis-1,2-Dichloroethene	0.44	U	2.0	0.44	ug/L			01/09/23 11:29	2
Chloroform	0.65	U	2.0	0.65	ug/L			01/09/23 11:29	2
Dichlorofluoromethane	0.68	U	2.0	0.68	ug/L			01/09/23 11:29	2

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# Client Sample Results

Client: React Environmental Professional Service  
 Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MW-010D**

**Lab Sample ID: 460-272260-17**

**Date Collected: 12/29/22 10:05**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	0.34	U	2.0	0.34	ug/L			01/09/23 11:29	2
1,2-Dibromoethane	1.0	U	2.0	1.0	ug/L			01/09/23 11:29	2
Carbon tetrachloride	0.42	U	2.0	0.42	ug/L			01/09/23 11:29	2
Bromodichloromethane	0.69	U	2.0	0.69	ug/L			01/09/23 11:29	2
Methyl chloride	0.80	U	2.0	0.80	ug/L			01/09/23 11:29	2
Methyl bromide	1.1	U	2.0	1.1	ug/L			01/09/23 11:29	2
DBCP	0.75	U	2.0	0.75	ug/L			01/09/23 11:29	2
Ethyl tert-butyl ether	0.81	U	2.0	0.81	ug/L			01/09/23 11:29	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	101		70 - 128		01/09/23 11:29	2
4-Bromofluorobenzene	99		76 - 120		01/09/23 11:29	2
Dibromofluoromethane (Surr)	101		77 - 124		01/09/23 11:29	2
Toluene-d8 (Surr)	95		80 - 120		01/09/23 11:29	2

**Client Sample ID: Dup-001**

**Lab Sample ID: 460-272260-18**

**Date Collected: 12/29/22 00:00**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Benzene</b>	<b>1.3</b>		1.0	0.20	ug/L			01/09/23 11:07	1
Ethylbenzene	0.30	U	1.0	0.30	ug/L			01/09/23 11:07	1
<b>1,2-Dichloroethane</b>	<b>4.0</b>		1.0	0.43	ug/L			01/09/23 11:07	1
<b>Methyl tert-butyl ether</b>	<b>90</b>		1.0	0.22	ug/L			01/09/23 11:07	1
Naphthalene	0.88	U	1.0	0.88	ug/L			01/09/23 11:07	1
Toluene	0.38	U	1.0	0.38	ug/L			01/09/23 11:07	1
o-Xylene	0.36	U	1.0	0.36	ug/L			01/09/23 11:07	1
Xylenes, Total	0.65	U	2.0	0.65	ug/L			01/09/23 11:07	1
m-Xylene & p-Xylene	0.30	U	1.0	0.30	ug/L			01/09/23 11:07	1
1,1,1-Trichloroethane	0.24	U	1.0	0.24	ug/L			01/09/23 11:07	1
cis-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/09/23 11:07	1
Carbon disulfide	0.82	U	1.0	0.82	ug/L			01/09/23 11:07	1
Chlorobromomethane	0.41	U	1.0	0.41	ug/L			01/09/23 11:07	1
Bromoform	0.54	U	1.0	0.54	ug/L			01/09/23 11:07	1
Tetrachloroethylene	0.25	U	1.0	0.25	ug/L			01/09/23 11:07	1
1,1-Dichloroethane	0.26	U	1.0	0.26	ug/L			01/09/23 11:07	1
1,2-Dichloropropane	0.35	U	1.0	0.35	ug/L			01/09/23 11:07	1
1,1,2-Trichloroethane	0.20	U	1.0	0.20	ug/L			01/09/23 11:07	1
<b>Acetone</b>	<b>4.4 J</b>		5.0	4.4	ug/L			01/09/23 11:07	1
Dichlorodifluoromethane	0.31	U	1.0	0.31	ug/L			01/09/23 11:07	1
Methyl isobutyl ketone (MIBK)	1.3	U	5.0	1.3	ug/L			01/09/23 11:07	1
<b>tert-Butyl alcohol</b>	<b>960</b>		10	8.3	ug/L			01/09/23 11:07	1
Methylene Chloride	0.32	U	1.0	0.32	ug/L			01/09/23 11:07	1
Dibromochloromethane	0.28	U	1.0	0.28	ug/L			01/09/23 11:07	1
Chlorobenzene	0.38	U	1.0	0.38	ug/L			01/09/23 11:07	1
Styrene	0.42	U	1.0	0.42	ug/L			01/09/23 11:07	1
trans-1,2-Dichloroethene	0.24	U	1.0	0.24	ug/L			01/09/23 11:07	1
1,1,2,2-Tetrachloroethane	0.37	U	1.0	0.37	ug/L			01/09/23 11:07	1
Chloroethane	0.32	U *1	1.0	0.32	ug/L			01/09/23 11:07	1

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# Client Sample Results

Client: React Environmental Professional Service  
Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: Dup-001**

**Lab Sample ID: 460-272260-18**

**Date Collected: 12/29/22 00:00**

**Matrix: Water**

**Date Received: 12/30/22 20:00**

**Method: SW846 8260D - Volatile Organic Compounds by GC/MS (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	0.26	U	1.0	0.26	ug/L			01/09/23 11:07	1
Trichloroethylene	0.31	U	1.0	0.31	ug/L			01/09/23 11:07	1
2-Hexanone	1.1	U	5.0	1.1	ug/L			01/09/23 11:07	1
Methyl ethyl ketone (MEK)	1.9	U	5.0	1.9	ug/L			01/09/23 11:07	1
<b>Isopropyl ether</b>	<b>2.9</b>		1.0	0.19	ug/L			01/09/23 11:07	1
<b>Tert-amyl methyl ether</b>	<b>0.98</b>	<b>J</b>	1.0	0.21	ug/L			01/09/23 11:07	1
trans-1,3-Dichloropropene	0.22	U	1.0	0.22	ug/L			01/09/23 11:07	1
cis-1,2-Dichloroethene	0.22	U	1.0	0.22	ug/L			01/09/23 11:07	1
Chloroform	0.33	U	1.0	0.33	ug/L			01/09/23 11:07	1
Dichlorofluoromethane	0.34	U	1.0	0.34	ug/L			01/09/23 11:07	1
Vinyl chloride	0.17	U	1.0	0.17	ug/L			01/09/23 11:07	1
1,2-Dibromoethane	0.50	U	1.0	0.50	ug/L			01/09/23 11:07	1
Carbon tetrachloride	0.21	U	1.0	0.21	ug/L			01/09/23 11:07	1
Bromodichloromethane	0.34	U	1.0	0.34	ug/L			01/09/23 11:07	1
Methyl chloride	0.40	U	1.0	0.40	ug/L			01/09/23 11:07	1
Methyl bromide	0.55	U	1.0	0.55	ug/L			01/09/23 11:07	1
DBCP	0.38	U	1.0	0.38	ug/L			01/09/23 11:07	1
Ethyl tert-butyl ether	0.41	U	1.0	0.41	ug/L			01/09/23 11:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		70 - 128		01/09/23 11:07	1
4-Bromofluorobenzene	98		76 - 120		01/09/23 11:07	1
Dibromofluoromethane (Surr)	99		77 - 124		01/09/23 11:07	1
Toluene-d8 (Surr)	93		80 - 120		01/09/23 11:07	1

# Lab Chronicle

Client: React Environmental Professional Service  
Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: TB-001**

**Date Collected: 12/29/22 00:00**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	886446	SZD	EET EDI	01/04/23 08:37

**Client Sample ID: FB-001**

**Date Collected: 12/29/22 11:00**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	886446	SZD	EET EDI	01/04/23 08:59

**Client Sample ID: FB-002**

**Date Collected: 12/30/22 08:00**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	886446	SZD	EET EDI	01/04/23 09:20

**Client Sample ID: MP-001**

**Date Collected: 12/30/22 09:35**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	886630	SZD	EET EDI	01/05/23 09:41

**Client Sample ID: MP-002**

**Date Collected: 12/30/22 10:25**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-5**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	886446	SZD	EET EDI	01/04/23 12:33

**Client Sample ID: MW-001R**

**Date Collected: 12/29/22 11:55**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-6**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	887124	SZD	EET EDI	01/09/23 10:46

**Client Sample ID: MW-002**

**Date Collected: 12/29/22 09:45**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-7**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	887124	SZD	EET EDI	01/09/23 09:20

Eurofins Edison

# Lab Chronicle

Client: React Environmental Professional Service  
Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MW-003**

**Date Collected: 12/30/22 09:45**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-8**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	887124	SZD	EET EDI	01/09/23 12:54

**Client Sample ID: MW-005**

**Date Collected: 12/29/22 13:20**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-9**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		5	886446	SZD	EET EDI	01/04/23 10:46

**Client Sample ID: MW-006**

**Date Collected: 12/29/22 10:30**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-10**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	886630	SZD	EET EDI	01/05/23 10:01

**Client Sample ID: MW-007**

**Date Collected: 12/29/22 13:20**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-11**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	886630	SZD	EET EDI	01/05/23 10:22

**Client Sample ID: MW-008**

**Date Collected: 12/30/22 10:50**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-12**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	887124	SZD	EET EDI	01/09/23 10:25

**Client Sample ID: MW-008D**

**Date Collected: 12/30/22 12:00**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-13**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	887124	SZD	EET EDI	01/09/23 09:41

**Client Sample ID: MW-009**

**Date Collected: 12/29/22 10:55**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-14**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	887124	SZD	EET EDI	01/09/23 10:03

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# Lab Chronicle

Client: React Environmental Professional Service  
Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

**Client Sample ID: MW-009D**

**Date Collected: 12/29/22 11:45**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-15**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		5	887125	SZD	EET EDI	01/09/23 13:57

**Client Sample ID: MW-010**

**Date Collected: 12/29/22 09:15**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-16**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		5	887125	SZD	EET EDI	01/09/23 13:36

**Client Sample ID: MW-010D**

**Date Collected: 12/29/22 10:05**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-17**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		2	887124	SZD	EET EDI	01/09/23 11:29

**Client Sample ID: Dup-001**

**Date Collected: 12/29/22 00:00**

**Date Received: 12/30/22 20:00**

**Lab Sample ID: 460-272260-18**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	887124	SZD	EET EDI	01/09/23 11:07

## Laboratory References:

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

# Accreditation/Certification Summary

Client: React Environmental Professional Service  
Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

## Laboratory: Eurofins Edison

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

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0200	11-10-22 *
DE Haz. Subst. Cleanup Act (HSCA)	State	N/A	01-01-24
Georgia	State	12028 (NJ)	06-30-23
Massachusetts	State	M-NJ312	06-30-23
New Jersey	NELAP	12028	06-30-23
New York	NELAP	11452	04-01-23
Pennsylvania	NELAP	68-00522	02-28-23
Rhode Island	State	LAO00376	12-31-22 *
USDA	US Federal Programs	P330-20-00244	11-03-23

\* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins Edison

# Method Summary

Client: React Environmental Professional Service  
Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	EET EDI
5030C	Purge and Trap	SW846	EET EDI

**Protocol References:**

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

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

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# Sample Summary

Client: React Environmental Professional Service  
Project/Site: Calvert Citgo (005977)

Job ID: 460-272260-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
460-272260-1	TB-001	Water	12/29/22 00:00	12/30/22 20:00
460-272260-2	FB-001	Water	12/29/22 11:00	12/30/22 20:00
460-272260-3	FB-002	Water	12/30/22 08:00	12/30/22 20:00
460-272260-4	MP-001	Water	12/30/22 09:35	12/30/22 20:00
460-272260-5	MP-002	Water	12/30/22 10:25	12/30/22 20:00
460-272260-6	MW-001R	Water	12/29/22 11:55	12/30/22 20:00
460-272260-7	MW-002	Water	12/29/22 09:45	12/30/22 20:00
460-272260-8	MW-003	Water	12/30/22 09:45	12/30/22 20:00
460-272260-9	MW-005	Water	12/29/22 13:20	12/30/22 20:00
460-272260-10	MW-006	Water	12/29/22 10:30	12/30/22 20:00
460-272260-11	MW-007	Water	12/29/22 13:20	12/30/22 20:00
460-272260-12	MW-008	Water	12/30/22 10:50	12/30/22 20:00
460-272260-13	MW-008D	Water	12/30/22 12:00	12/30/22 20:00
460-272260-14	MW-009	Water	12/29/22 10:55	12/30/22 20:00
460-272260-15	MW-009D	Water	12/29/22 11:45	12/30/22 20:00
460-272260-16	MW-010	Water	12/29/22 09:15	12/30/22 20:00
460-272260-17	MW-010D	Water	12/29/22 10:05	12/30/22 20:00
460-272260-18	Dup-001	Water	12/29/22 00:00	12/30/22 20:00

<b>Client Information</b>		Sampler: <i>D. Miller / TH</i>	Lab PM: Miller, Jill K	Carrier Tracking No(s): 460-163610-106511.1						
Client Contact: James Manuel		Phone:	E-Mail: Jill.Miller@et.eurofins.com	State of Origin:						
Company: React Environmental Professional Service		PWSID:		Job #: <i>27260</i>						
Address: 6901 Kingessing Avenue STE 201 PO BOX 5377		Due Date Requested:		Page: 1 of 2						
City: Philadelphia		TAT Requested (days):		Analysis Requested						
State, Zip: PA, 19142		Compliance Project: <input type="checkbox"/> Yes <input type="checkbox"/> No		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - MCAA K - DI Water L - EDTA M - EDA N - other (specify) Other:						
Phone: 215-729-3220(Tel)		Purchase Order Requested		 460-272260 Chain of Custody						
Email: jmanuel@repsg.com		WO #:								
Project Name: React - DE		Project #: 46039749								
Site:		SSOW#:								
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)		Preservation Code	Field Filtered Sample (Yes or No)	Form MS/MSL (Yes or No)	8260D - VOC	Total N	Special Instructions/Note:
TB-001	12-29-22	-	G		W	X	X	X	1	
FB-001	12-29-22	1100				X	X	X	2	
FB-002	12-30-22	0800				X	X	X	3	
MP-001	12-30-22	0935				X	X	X	3	
MP-002	12-30-22	1025				X	X	X	3	
MW-001R	12-29-22	1155			X	X	X	3		
MW-002	12-29-22	0945			X	X	X	3		
MW-003	12-30-22	0945			X	X	X	3		
MW-005	12-29-22	1320			X	X	X	3		
MW-006	12-29-22	1030			X	X	X	3		
MW-007	12-29-22	1320			X	X	X	3		
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological										
<b>Deliverable Requested:</b> <input type="checkbox"/> I, II, III, IV, Other (specify)										
<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b> <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months										
<b>Special Instructions/QC Requirements:</b>										
Empty Kit Relinquished by:		Date/Time:		Method of Shipment:						
Relinquished by: <i>[Signature]</i>		12-30-22		Company: EETA		Received by: <i>[Signature]</i>				
Relinquished by: <i>[Signature]</i>		12-30-22		Company: <i>[Signature]</i>		Received by: <i>[Signature]</i>				
Relinquished by: <i>[Signature]</i>		12-30-22		Company: <i>[Signature]</i>		Received by: <i>[Signature]</i>				
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:						

*S.G./S.S #10*

<b>Client Information</b>		Sampler: <u>D.Mc / TH</u>		Lab PM: <u>Miller, Jill K</u>		Carrier Tracking No(s):		COC No: <u>460-163610-106511.1</u>	
Client Contact: <u>James Manuel</u>		Phone:		E-Mail: <u>Jill.Miller@et.eurofins.com</u>		State of Origin:		Page: <u>2</u> of <u>2</u>	
Company: <u>React Environmental Professional Service</u>		PWSID:		Analysis Requested		Job #: <u>272260</u>		Preservation Codes:	
Address: <u>6901 Kingsessing Avenue STE 201 PO BOX 5377</u>		Due Date Requested:		Field Filtered Sample (Yes or No)		Total Number of Containers		Special Instructions/Note:	
City: <u>Philadelphia</u>		TAT Requested (days):		8260D - VOC					
State, Zip: <u>PA, 19142</u>		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		A					
Phone: <u>215-729-3220(Tel)</u>		Purchase Order Requested		X					
Email: <u>jmanuel@repsg.com</u>		WO #:		X					
Project Name: <u>React - DE</u>		Project #: <u>46039749</u>		X					
Site:		SSOW#:		X					
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Preservation Code	Field Filtered Sample (Yes or No)	8260D - VOC	Special Instructions/Note:		
<u>MW-00A</u>	<u>12-30-22</u>	<u>1050</u>	<u>G</u>	<u>W</u>		<u>X</u>	<u>17</u>		
<u>MW-00B</u>	<u>12-30-22</u>	<u>1300</u>				<u>X</u>	<u>13</u>		
<u>MW-009</u>	<u>12-29-22</u>	<u>1055</u>				<u>X</u>	<u>14</u>		
<u>MW-009B</u>	<u>12-29-22</u>	<u>1145</u>				<u>X</u>	<u>15</u>		
<u>MW-010</u>	<u>12-29-22</u>	<u>0915</u>				<u>X</u>	<u>16</u>		
<u>MW-010B</u>	<u>12-29-22</u>	<u>1005</u>				<u>X</u>	<u>17</u>		
<u>Dup-001</u>	<u>12-29-22</u>	<u>-</u>				<u>X</u>	<u>18</u>		
<b>Possible Hazard Identification</b> <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)									
<b>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</b> <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <u>Months</u>									
<b>Empty Kit Relinquished by:</b> Date: _____ Time: _____ Method of Shipment: _____									
Relinquished by: <u>[Signature]</u> Date/Time: <u>12-30-22</u> Company: <u>ETA</u>									
Relinquished by: _____ Date/Time: _____ Company: _____									
Relinquished by: <u>[Signature]</u> Date/Time: <u>12/30/22</u> Company: <u>[Signature]</u>									
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <u>300</u> Cooler Temperature(s) °C and Other Remarks:									







**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date 12-30-22

Field Personnel TH

Well ID MP-001

A) Well Depth (ft) 12.25

B) Depth to Water (ft) 9.30

C) Liquid Level (ft) (A-B) 2.95

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (CxD) 1.92

F) Total Purge Volume (E X total number of well volumes (3))  
5.77

Purge Start Time 905

Sample Time 935

Sampling Method: TAP      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

0.8 PID

## Stabilized Readings MP-001

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
9.38	925	1.55	5.06	12.2	<del>3</del> 1.5
9.42	916	1.29	5.20	13.2	<del>6</del> 3
9.39	910	1.36	5.17	13.6	<del>9</del> 4.5
9.36	904	1.40	5.22	13.9	<del>12</del> 6
					15
					18
					21
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					66
					69
					72
					75
					78
					81
					84
					87
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					102
					105
					108
					111
					114
					117
					120
					123

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### Field Measurement Worksheet

Job# \_\_\_\_\_

Date 12-30-22

Field Personnel TH

Well ID MP-002

A) Well Depth (ft) 11.72

B) Depth to Water (ft) 9.79

C) Liquid Level (ft) (A-B) 1.93

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (Cx D) 1.26

F) Total Purge Volume (E X total number of well volumes (3))  
3.78

Purge Start Time 945

Sample Time 1025

Sampling Method: TAP      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

1.9 PID

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Stabilized Readings *MP-002*

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
9.66	588	1.19	2.02	13.7	3 1.5
9.71	597	1.14	2.17	14.5	6 3
9.74	603	1.21	2.30	14.7	9 4.5
					12
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					114
					117
					120
					123

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**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date 12-29-22

Field Personnel TH

Well ID MW-001R

A) Well Depth (ft) 43.3

B) Depth to Water (ft) 17.16

C) Liquid Level (ft) (A-B) 26.2

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (CxD) ~~17.16~~ 17.1

F) Total Purge Volume (E X total number of well volumes (3))  
51.32

Purge Start Time 1050

Sample Time 1155

Sampling Method: TAP          SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1 + 1

Notes and PID readings:

0.2 PID  
Temp Collected  
ran dry at 50 gallons

## Stabilized Readings MW-001 R

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
8.59	641	5.42	1.60	14.7	3
8.11	654	5.80	1.28	15.5	6
7.41	509	5.13	1.51	15.9	9
7.18	500	4.93	0.73	15.6	12
6.88	<del>477</del> 492	4.77	0.89	15.7	15
6.65	488	4.21	0.71	15.2	18
6.53	501	3.91	0.63	15.5	21
6.42	520	3.97	0.76	15.0	24
6.37	531	3.83	0.89	14.8	27
6.34	544	3.59	0.79	15.1	30
6.36	549	3.22	0.75	15.0	33
6.36	555	2.70	0.81	15.2	36
6.35	562	2.56	0.83	15.2	39
6.34	570	2.45	0.88	15.3	42
6.35	576	2.37	0.91	15.4	45
6.33	580	2.42	0.86	15.3	48
6.32	588	2.45	0.90	15.1	<del>51</del>
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### Field Measurement Worksheet

Job# \_\_\_\_\_

Date 12-29-22

Field Personnel TH

Well ID MW-002

A) Well Depth (ft) 32.2

B) Depth to Water (ft) 17.10

C) Liquid Level (ft) (A-B) 15.1

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (CxD) 9.85

F) Total Purge Volume (E X total number of well volumes (3))  
29.5

Purge Start Time 855

Sample Time 945

Sampling Method: TAP      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

0.0 PID  
30 gallons purged

MW-002

## Stabilized Readings

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
7.04	1322	12.4	2.14	14.9	3
7.76	1292	<del>16.5</del> 8.76	1.68	16.5	6
7.60	1344	6.53	2.21	17.0	9
7.16	1326	5.77	2.10	16.2	12
7.02	1301	5.59	2.16	15.6	15
6.91	1292	5.51	2.26	15.3	18
6.83	1281	5.39	2.31	15.4	21
6.79	1277	5.41	2.26	15.3	24
6.77	1270	5.27	2.20	15.5	27
6.75	1265	5.14	2.22	15.5	30
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**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date 12-30-22

Field Personnel TH

Well ID MW-003

A) Well Depth (ft) 27.2

B) Depth to Water (ft) 15.67

C) Liquid Level (ft) (A-B) 11.53

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (Cx D) 7.52

F) Total Purge Volume (E X total number of well volumes (3))  
22.58

Purge Start Time 840

Sample Time 945

Sampling Method: TAP          SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

0.0 PID

Stabilized Readings *MW-503*

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
6.88	1964	3.05	1.70	14.2	3
6.82	1886	3.52	0.96	15.8	6
6.93	1861	3.81	1.22	16.1	9
7.01	1849	3.31	1.50	16.5	12
7.06	1856	3.46	1.53	16.8	15
7.10	1850	3.35	1.41	16.9	18
7.05	1861	3.22	1.37	16.9	21
7.03	1864	3.16	1.49	16.8	24
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**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date 12-29-22

Field Personnel TH

Well ID MW-005

A) Well Depth (ft) 30.40

B) Depth to Water (ft) 17.47

C) Liquid Level (ft) (A-B) 12.93

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (Cx D) 8.44

F) Total Purge Volume (E X total number of well volumes (3))  
25.32

Purge Start Time 12.35

Sample Time 1320

Sampling Method: TAP                      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

1.4 PID  
Product detected  
Strong odor



MW-005

Stabilized Readings

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
6.71	1763	2.37	1.13	13.3	3
6.72	1730	2.12	1.66	15.4	6
6.78	1714	2.28	1.81	16.1	9
6.82	1702	2.51	1.91	15.8	12
6.84	1684	2.66	1.99	15.9	15
6.85	1683	2.71	2.24	15.9	18
6.85	1680	2.80	2.33	15.8	21
6.86	1672	2.77	2.37	15.7	24
6.86	1674	2.73	2.41	15.8	27
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**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date 12-29-22

Field Personnel TH

Well ID MW-006

A) Well Depth (ft) 31.1

B) Depth to Water (ft) 17.72

C) Liquid Level (ft) (A-B) \_\_\_\_\_

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (Cx D) 8.73

F) Total Purge Volume (E X total number of well volumes (3))  
26.19

Purge Start Time 1005

Sample Time 1030

Sampling Method: TAP      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

0.0 PID  
Dry after 18.5 gallons

Stabilized Readings MW-006

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
6.67	654	3.75	1.73	14.6	3
8.73	438	4.29	5.24	17.2	6
10.34	383	5.44	5.75	16.8	9
10.45	369	<del>6.03</del> 5.79	6.03	17.0	12
10.40	377	6.14	6.16	17.2	15
10.31	385	6.27	5.99	17.3	18
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### Field Measurement Worksheet

Job# \_\_\_\_\_

Date 12.27.22

Field Personnel D. McCarty

Well ID MW-007

A) Well Depth (ft) 28.75

B) Depth to Water (ft) 16.68

C) Liquid Level (ft) (A-B) 12.07

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (CxD) 1.967

F) Total Purge Volume (E X total number of well volumes (3))  
5.902

Purge Start Time 1210

Sample Time 1320

Sampling Method: TAP      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:  
PID 0.0, no well cap.  
\_\_\_\_\_  
\_\_\_\_\_

## Stabilized Readings MW-0017

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
6.62	92.9	29.8	2.78	14.9	28
					48
					69
					12
					15
					18
					21
					24
6.31	124.3	39.0	5.97	17.2	25
					30
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Dry @ 1226

Restart @ 1310

0.5 gallons

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### Field Measurement Worksheet

Job# \_\_\_\_\_

Date 12-30-22

Field Personnel D. MEEHY

Well ID MW-00A

A) Well Depth (ft) 71.4

B) Depth to Water (ft) 17.11

C) Liquid Level (ft) (A-B) 54.29

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (Cx D) 8.849

F) Total Purge Volume (E X total number of well volumes (3))  
26.548

Purge Start Time 1010

Sample Time 1050

Sampling Method: TAP                      SUBMERSIBLE PUMP

BAILER

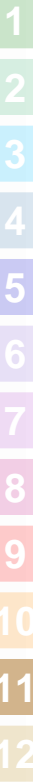
Number of Samples Collected 1

Notes and PID readings:

PID 0.8  
\_\_\_\_\_  
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## Stabilized Readings MW-00A

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
6.61	825	7.48	1.41	15.1	3
6.54	899	7.48	0.98	14.7	6
6.47	917	7.20	0.60	14.4	9
6.50	920	6.42	0.59	14.5	12
6.51	924	6.25	0.52	14.6	15
6.53	910	5.51	0.60	14.5	18
6.54	896	5.24	0.62	14.4	21
6.52	902	5.37	0.61	14.3	24
6.49	909	5.49	0.61	14.2	27
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**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date 12-30-22

Field Personnel D. McCarty

Well ID MW-00AD

A) Well Depth (ft) 144

B) Depth to Water (ft) 15.58

C) Liquid Level (ft) (A-B) 128.42

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (Cx D) 188.649

F) Total Purge Volume (E X total number of well volumes (3))  
565.947

Purge Start Time 0834

Sample Time 1200

Sampling Method: TAP                      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

PID 1.4  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Stabilized Readings *MW-00FD*

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
7.22	178.4	22.4	2.11	15.7	15 8
7.09	189.7	19.2	1.67	15.5	30 8
7.02	194.3	18.7	1.24	15.3	45 8
6.96	198.5	18.6	1.02	15.1	60 12
6.91	204.4	16.5	0.99	14.7	75 15
6.85	209.8	14.7	0.98	14.4	90 18
6.89	211.4	15.4	0.96	14.5	105 21
6.93	213.9	16.5	0.94	14.5	120 24
6.97	215.7	17.1	0.92	14.6	135 27
6.98	216.9	17.6	0.87	14.6	150 30
7.00	218.1	18.4	0.84	14.7	165 33
7.01	217.9	19.8	0.82	14.8	180 36
7.02	217.8	20.8	0.75	14.8	195 39
7.04	217.6	21.7	0.69	14.8	210 42
7.05	217.4	23.3	0.63	14.9	225 45
7.05	217.5	24.1	0.64	14.9	240 48
7.06	217.7	24.9	0.62	14.9	255 51
7.07	217.6	25.9	0.62	14.8	270 54
7.01	219.4	27.1	0.68	14.7	285 57
6.94	220	28.4	0.75	14.6	300 60
6.87	221	29.1	0.80	14.5	315 63
6.87	221	29.7	0.82	14.5	330 66
6.87	221	30.6	0.84	14.6	345 69
6.88	222	31.7	0.85	14.6	360 72
6.88	222	31.9	0.87	14.6	375 75
6.88	222	32.0	0.90	14.5	390 78
6.88	221	32.4	0.94	14.5	405 81
6.89	221	32.5	0.98	14.6	420 84
6.89	222	34.1	1.04	14.5	435 87
6.88	221	35.1	1.08	14.6	450 90
6.88	222	35.4	1.11	14.6	465 93
6.88	221	35.8	1.16	14.5	480 96
6.88	222	36.4	1.24	14.5	495 99
6.89	221	37.2	1.27	14.5	510 102
6.89	221	36.9	1.30	14.6	525 105
6.89	221	37.6	1.34	14.7	540 108
6.89	221	37.4	1.37	14.6	555 111
6.89	221	37.4	1.40	14.6	570 114
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**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date \_\_\_\_\_

Field Personnel D. McElroy

Well ID MW-009

A) Well Depth (ft) 70.25

B) Depth to Water (ft) 18.37

C) Liquid Level (ft) (A-B) 11.88

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (CxD) 1.976

F) Total Purge Volume (E X total number of well volumes (3))  
5.909

Purge Start Time 1039

Sample Time 1055

Sampling Method: TAP          SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

PID 0.0  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Stabilized Readings *MW-009*

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
<i>5.65</i>	<i>658</i>	<i>3.84</i>	<i>4.94</i>	<i>12.1</i>	<i>28</i>
<i>5.63</i>	<i>664</i>	<i>3.77</i>	<i>4.83</i>	<i>13.9</i>	<i>48</i>
<i>5.61</i>	<i>648</i>	<i>3.70</i>	<i>4.64</i>	<i>15.5</i>	<i>69</i>
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**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date 12-29-22

Field Personnel D. McCarty

Well ID MW-0090

A) Well Depth (ft) 66.6

B) Depth to Water (ft) 18.29

C) Liquid Level (ft) (A-B) 48.31

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (Cx D) 7.475

F) Total Purge Volume (E X total number of well volumes (3))  
23.624

Purge Start Time 1105

Sample Time 1145

Sampling Method: TAP                      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

PID 0.0  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Stabilized Readings *MW-009D*

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
6.43	130.7	16.4	1.60	14.8	3
6.53	212.5	4.90	0.92	14.9	6
6.46	210.4	4.50	1.17	14.6	9
6.46	209.2	3.96	0.70	14.5	12
6.45	205.7	3.66	1.22	14.4	15
6.47	204.9	3.65	0.95	14.7	18
6.45	204.5	3.80	0.93	14.7	21
6.51	205.2	3.56	0.96	14.7	24
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**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date 12-29-22

Field Personnel D. McCarty

Well ID MW-010

A) Well Depth (ft) 29.97

B) Depth to Water (ft) 17.73

C) Liquid Level (ft) (A-B) 12.24

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (Cx D) 1,995

F) Total Purge Volume (E X total number of well volumes (3))  
5,985

Purge Start Time 0854

Sample Time 0915

Sampling Method: TAP                      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

PID 0.0  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Stabilized Readings *MW-010*

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
6.40	539	6.64	1.19	13.2	28
6.36	543	6.19	1.12	13.4	48
6.37	551	6.46	1.10	13.4	68
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**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date 12-29-22

Field Personnel D. MCG-4

Well ID MW-010 D

A) Well Depth (ft) 65.70

B) Depth to Water (ft) 17.62

C) Liquid Level (ft) (A-B) 48.08

D) Casing Diameter:

- a) 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (Cx D) 7.837

F) Total Purge Volume (E X total number of well volumes (3))  
23.511

Purge Start Time 0922

Sample Time 1005

Sampling Method: TAP                      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

PID 0.0  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Stabilized Readings *MW-0100*

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
6.70	210.2	18.9	1.22	11.9	3
6.43	359	5.07	1.55	12.5	6
6.17	359	3.60	1.73	13.7	9
6.09	367	3.17	1.42	13.9	12
6.07	370	2.66	1.53	13.8	15
6.02	372	2.47	1.48	14.1	18
6.00	372	2.55	1.54	13.9	21
6.01	374	2.44	1.59	14.0	24
					27
					30
					33
					36
					39
					42
					45
					48
					51
					54
					57
					60
					63
					66
					69
					72
					75
					78
					81
					84
					87
					90
					93
					96
					99
					102
					105
					108
					111
					114
					117
					120
					123



# Login Sample Receipt Checklist

Client: React Environmental Professional Service

Job Number: 460-272260-1

**Login Number: 272260**

**List Number: 1**

**Creator: Rivera, Kenneth**

**List Source: Eurofins Edison**

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



**ON-SITE DRINKING WATER  
LABORATORY REPORTS AND CHAINS OF CUSTODY**





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NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618  
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For

**REPSG**

Project 2022 Calvert Citgo/5977.130.01  
Workorder 3279298  
Report ID 215743 on 12/28/2022

**Certificate of Analysis**

Enclosed are the analytical results for samples received by the laboratory on Dec 16, 2022.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.  
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):

- Natalie Griffith - REPSG
- Brenda Kellogg - REPSG
- James Manuel - REPSG
- Jonathan Singh - REPSG
- Jonathan Wallace - REPSG
- Melissa Keogh - REPSG

*Susan Scherer*

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



## Sample Summary

<u>Lab ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>	<u>Collector</u>	<u>Collection Company</u>
3279298001	DW-001	Drinking Water	12/15/2022 16:14	12/16/2022 20:30	CBC	Collected By Client
3279298002	DW-001A	Drinking Water	12/15/2022 16:12	12/16/2022 20:30	CBC	Collected By Client
3279298003	DW-001B	Drinking Water	12/15/2022 16:10	12/16/2022 20:30	CBC	Collected By Client
3279298004	TB-003	Drinking Water	12/15/2022 16:16	12/16/2022 20:30	CBC	Collected By Client



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## Reference

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### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

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### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

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### Project Notations

### Sample Notations

Lab ID Sample ID

### Result Notations

**Notation Ref.**

1	The QC sample type LCS for method EPA 524.2 was outside the control limits for the analyte Iodomethane. The % Recovery was reported as 52.6 and the control limits were 70 to 130.
2	Iodomethane was recovered below the 30% 524 CCV limit.
3	Nitrobenzene was recovered below the 30% 524 CCV limit.
4	The chlorine analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory.
5	The QC sample type MS for method EPA 524.2 was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 138 and the control limits were 70 to 130.
6	The QC sample type MS for method EPA 524.2 was outside the control limits for the analyte Iodomethane. The % Recovery was reported as 54.4 and the control limits were 70 to 130.
7	The QC sample type MSD for method EPA 524.2 was outside the control limits for the analyte Iodomethane. The % Recovery was reported as 59.9 and the control limits were 70 to 130.
8	The QC sample type MSD for method EPA 524.2 was outside the control limits for the analyte tert-Butyl Alcohol. The % Recovery was reported as 131 and the control limits were 70 to 130.
9	The QC sample type MS for method EPA 524.2 was outside the control limits for the analyte 2,2-Dichloropropane. The % Recovery was reported as 133 and the control limits were 70 to 130.
10	The QC sample type MSD for method EPA 524.2 was outside the control limits for the analyte 1,4-Dioxane. The % Recovery was reported as 168 and the control limits were 70 to 130.
11	The QC sample type MSD for method EPA 524.2 was outside the control limits for the analyte 1,4-Dioxane. The RPD was reported as 65.1 and the upper control limit is 40.
12	The QC sample type MSD for method EPA 524.2 was outside the control limits for the analyte Bromoform. The % Recovery was reported as 63.9 and the control limits were 70 to 130.
13	The QC sample type MSD for method EPA 524.2 was outside the control limits for the analyte Isopropyl Alcohol. The % Recovery was reported as 146 and the control limits were 70 to 130.
14	The QC sample type MSD for method EPA 524.2 was outside the control limits for the analyte Isopropyl Alcohol. The RPD was reported as 45.8 and the upper control limit is 40.
15	The QC sample type MS for method EPA 524.2 was outside the control limits for the analyte Hexane. The % Recovery was reported as 149 and the control limits were 70 to 130.
16	The QC sample type MSD for method EPA 524.2 was outside the control limits for the analyte Hexane. The % Recovery was reported as 140 and the control limits were 70 to 130.



### Detected Results Summary

Client Sample ID	DW-001	Collected	12/15/2022 16:14
Lab Sample ID	3279298001	Lab Receipt	12/16/2022 20:30

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>MDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>						
Acetone	6.0	ug/L	5.0	1.3	EPA 524.2	#
Methyl t-Butyl Ether	8.6	ug/L	0.50	0.060	EPA 524.2	#
tert-Butyl Alcohol	9.3	ug/L	5.0	1.4	EPA 524.2	#
<b>WET CHEMISTRY</b>						
Chlorine, Total Residual	0.35	mg/L	0.10	0.06	SM4500-Cl G-2011	#





### Detected Results Summary

Client Sample ID	DW-001B	Collected	12/15/2022 16:10
Lab Sample ID	3279298003	Lab Receipt	12/16/2022 20:30

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>MDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>						
Acetone	7.4	ug/L	5.0	1.3	EPA 524.2	#
tert-Butyl Alcohol	6.9	ug/L	5.0	1.4	EPA 524.2	#



### Detected Results Summary

Client Sample ID	TB-003	Collected	12/15/2022 16:16
Lab Sample ID	3279298004	Lab Receipt	12/16/2022 20:30

Compound	Result	Units	RDL	MDL	Method	Flag
<b>VOLATILE ORGANICS</b>						
Acetone	707	ug/L	50.0	12.9	EPA 524.2	#
Chloroform	0.41J	ug/L	1.0	0.070	EPA 524.2	#



## Results

Client Sample ID	DW-001	Collected	12/15/2022 16:14
Lab Sample ID	3279298001	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,2-Dichloroethane	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 17:09	TMP	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	12/20/2022 17:09	TMP	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 17:09	TMP	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 17:09	TMP	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	12/20/2022 17:09	TMP	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	12/20/2022 17:09	TMP	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	12/20/2022 17:09	TMP	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 17:09	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	12/20/2022 17:09	TMP	A
Acetone	6.0		ug/L	5.0	1.3	EPA 524.2	1	12/20/2022 17:09	TMP	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	12/20/2022 17:09	TMP	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 17:09	TMP	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 17:09	TMP	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 17:09	TMP	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 17:09	TMP	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	12/20/2022 17:09	TMP	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	12/20/2022 17:09	TMP	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 17:09	TMP	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 17:09	TMP	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	12/20/2022 17:09	TMP	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 17:09	TMP	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 17:09	TMP	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 17:09	TMP	A
Chloroform	ND	ND	ug/L	1.0	0.070	EPA 524.2	1	12/20/2022 17:09	TMP	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 17:09	TMP	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 17:09	TMP	A



## Results

Client Sample ID	DW-001	Collected	12/15/2022 16:14
Lab Sample ID	3279298001	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 17:09	TMP	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 17:09	TMP	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 17:09	TMP	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 17:09	TMP	A
Diisopropyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 17:09	TMP	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 17:09	TMP	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 17:09	TMP	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 17:09	TMP	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 17:09	TMP	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	12/20/2022 17:09	TMP	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 17:09	TMP	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 17:09	TMP	A
Iodomethane	ND	ND,1,2	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 17:09	TMP	A
Isopropyl Alcohol	ND	ND	ug/L	25.0	1.4	EPA 524.2	1	12/20/2022 17:09	TMP	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 17:09	TMP	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 17:09	TMP	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	12/20/2022 17:09	TMP	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 17:09	TMP	A
Methyl t-Butyl Ether	8.6		ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 17:09	TMP	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 17:09	TMP	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	12/20/2022 17:09	TMP	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 17:09	TMP	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 17:09	TMP	A
Nitrobenzene	ND	ND,3	ug/L	5.0	3.1	EPA 524.2	1	12/20/2022 17:09	TMP	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 17:09	TMP	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 17:09	TMP	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	12/20/2022 17:09	TMP	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 17:09	TMP	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 17:09	TMP	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 17:09	TMP	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	12/20/2022 17:09	TMP	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 17:09	TMP	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 17:09	TMP	A
tert-Amyl Alcohol	ND	ND	ug/L	5.0	0.52	EPA 524.2	1	12/20/2022 17:09	TMP	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 17:09	TMP	A
tert-Amyl methyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 17:09	TMP	A
tert-Butyl Alcohol	9.3		ug/L	5.0	1.4	EPA 524.2	1	12/20/2022 17:09	TMP	A
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 17:09	TMP	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	12/20/2022 17:09	TMP	A
Tetrahydrofuran	ND	ND	ug/L	2.5	0.43	EPA 524.2	1	12/20/2022 17:09	TMP	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 17:09	TMP	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	12/20/2022 17:09	TMP	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 17:09	TMP	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 17:09	TMP	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 17:09	TMP	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 17:09	TMP	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 17:09	TMP	A



## Results

Client Sample ID	DW-001	Collected	12/15/2022 16:14
Lab Sample ID	3279298001	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 17:09	TMP	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 17:09	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	93%	70 - 130	12/20/2022 17:09	
4-Bromofluorobenzene	460-00-4	91%	70 - 130	12/20/2022 17:09	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorine, Total Residual	0.35	4	mg/L	0.10	0.06	SM4500-Cl G-2011	1	12/17/2022 05:05	NRB	E



## Results

Client Sample ID	DW-001A	Collected	12/15/2022 16:12
Lab Sample ID	3279298002	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,2-Dichloroethane	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 17:35	TMP	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	12/20/2022 17:35	TMP	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 17:35	TMP	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 17:35	TMP	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	12/20/2022 17:35	TMP	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	12/20/2022 17:35	TMP	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	12/20/2022 17:35	TMP	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 17:35	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	12/20/2022 17:35	TMP	A
Acetone	ND	ND	ug/L	5.0	1.3	EPA 524.2	1	12/20/2022 17:35	TMP	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	12/20/2022 17:35	TMP	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 17:35	TMP	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 17:35	TMP	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 17:35	TMP	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 17:35	TMP	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	12/20/2022 17:35	TMP	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	12/20/2022 17:35	TMP	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 17:35	TMP	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 17:35	TMP	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	12/20/2022 17:35	TMP	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 17:35	TMP	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 17:35	TMP	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 17:35	TMP	A
Chloroform	ND	ND	ug/L	1.0	0.070	EPA 524.2	1	12/20/2022 17:35	TMP	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 17:35	TMP	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 17:35	TMP	A



## Results

Client Sample ID	DW-001A	Collected	12/15/2022 16:12
Lab Sample ID	3279298002	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 17:35	TMP	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 17:35	TMP	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 17:35	TMP	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 17:35	TMP	A
Diisopropyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 17:35	TMP	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 17:35	TMP	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 17:35	TMP	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 17:35	TMP	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 17:35	TMP	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	12/20/2022 17:35	TMP	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 17:35	TMP	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 17:35	TMP	A
Iodomethane	ND	ND,1,2	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 17:35	TMP	A
Isopropyl Alcohol	ND	ND	ug/L	25.0	1.4	EPA 524.2	1	12/20/2022 17:35	TMP	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 17:35	TMP	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 17:35	TMP	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	12/20/2022 17:35	TMP	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 17:35	TMP	A
Methyl t-Butyl Ether	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 17:35	TMP	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 17:35	TMP	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	12/20/2022 17:35	TMP	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 17:35	TMP	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 17:35	TMP	A
Nitrobenzene	ND	ND,3	ug/L	5.0	3.1	EPA 524.2	1	12/20/2022 17:35	TMP	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 17:35	TMP	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 17:35	TMP	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	12/20/2022 17:35	TMP	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 17:35	TMP	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 17:35	TMP	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 17:35	TMP	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	12/20/2022 17:35	TMP	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 17:35	TMP	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 17:35	TMP	A
tert-Amyl Alcohol	ND	ND	ug/L	5.0	0.52	EPA 524.2	1	12/20/2022 17:35	TMP	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 17:35	TMP	A
tert-Amyl methyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 17:35	TMP	A
tert-Butyl Alcohol	ND	ND	ug/L	5.0	1.4	EPA 524.2	1	12/20/2022 17:35	TMP	A
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 17:35	TMP	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	12/20/2022 17:35	TMP	A
Tetrahydrofuran	ND	ND	ug/L	2.5	0.43	EPA 524.2	1	12/20/2022 17:35	TMP	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 17:35	TMP	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	12/20/2022 17:35	TMP	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 17:35	TMP	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 17:35	TMP	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 17:35	TMP	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 17:35	TMP	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 17:35	TMP	A



## Results

Client Sample ID	DW-001A	Collected	12/15/2022 16:12
Lab Sample ID	3279298002	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 17:35	TMP	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 17:35	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	94.1%	70 - 130	12/20/2022 17:35	
4-Bromofluorobenzene	460-00-4	90.9%	70 - 130	12/20/2022 17:35	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorine, Total Residual	ND	ND,4	mg/L	0.10	0.06	SM4500-Cl G-2011	1	12/17/2022 05:05	NRB	E





## Results

Client Sample ID	DW-001B	Collected	12/15/2022 16:10
Lab Sample ID	3279298003	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,2-Dichloroethane	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:01	TMP	A
1,4-Dioxane	ND	ND,10,11	ug/L	25.0	18.3	EPA 524.2	1	12/20/2022 18:01	TMP	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 18:01	TMP	A
2,2-Dichloropropane	ND	ND,9	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 18:01	TMP	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	12/20/2022 18:01	TMP	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	12/20/2022 18:01	TMP	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	12/20/2022 18:01	TMP	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:01	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	12/20/2022 18:01	TMP	A
Acetone	7.4		ug/L	5.0	1.3	EPA 524.2	1	12/20/2022 18:01	TMP	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	12/20/2022 18:01	TMP	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 18:01	TMP	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 18:01	TMP	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 18:01	TMP	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 18:01	TMP	A
Bromoform	ND	ND,12	ug/L	1.0	0.12	EPA 524.2	1	12/20/2022 18:01	TMP	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	12/20/2022 18:01	TMP	A
Carbon Disulfide	ND	ND,5	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 18:01	TMP	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:01	TMP	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	12/20/2022 18:01	TMP	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 18:01	TMP	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 18:01	TMP	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 18:01	TMP	A
Chloroform	ND	ND	ug/L	1.0	0.070	EPA 524.2	1	12/20/2022 18:01	TMP	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:01	TMP	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 18:01	TMP	A



## Results

Client Sample ID	DW-001B	Collected	12/15/2022 16:10
Lab Sample ID	3279298003	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:01	TMP	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 18:01	TMP	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:01	TMP	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 18:01	TMP	A
Diisopropyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:01	TMP	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 18:01	TMP	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 18:01	TMP	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 18:01	TMP	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:01	TMP	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	12/20/2022 18:01	TMP	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 18:01	TMP	A
Hexane	ND	ND,15,16	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 18:01	TMP	A
Iodomethane	ND	ND,1,2,6,7	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 18:01	TMP	A
Isopropyl Alcohol	ND	ND,13,14	ug/L	25.0	1.4	EPA 524.2	1	12/20/2022 18:01	TMP	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 18:01	TMP	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 18:01	TMP	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	12/20/2022 18:01	TMP	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 18:01	TMP	A
Methyl t-Butyl Ether	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 18:01	TMP	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 18:01	TMP	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	12/20/2022 18:01	TMP	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 18:01	TMP	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:01	TMP	A
Nitrobenzene	ND	ND,3	ug/L	5.0	3.1	EPA 524.2	1	12/20/2022 18:01	TMP	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:01	TMP	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 18:01	TMP	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	12/20/2022 18:01	TMP	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 18:01	TMP	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 18:01	TMP	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:01	TMP	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	12/20/2022 18:01	TMP	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 18:01	TMP	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 18:01	TMP	A
tert-Amyl Alcohol	ND	ND	ug/L	5.0	0.52	EPA 524.2	1	12/20/2022 18:01	TMP	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 18:01	TMP	A
tert-Amyl methyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:01	TMP	A
tert-Butyl Alcohol	6.9	8	ug/L	5.0	1.4	EPA 524.2	1	12/20/2022 18:01	TMP	A
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:01	TMP	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	12/20/2022 18:01	TMP	A
Tetrahydrofuran	ND	ND	ug/L	2.5	0.43	EPA 524.2	1	12/20/2022 18:01	TMP	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:01	TMP	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	12/20/2022 18:01	TMP	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 18:01	TMP	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:01	TMP	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 18:01	TMP	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:01	TMP	A



## Results

Client Sample ID	DW-001B	Collected	12/15/2022 16:10
Lab Sample ID	3279298003	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 18:01	TMP	A
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:01	TMP	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:01	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	98.3%	70 - 130	12/20/2022 18:01	
4-Bromofluorobenzene	460-00-4	91.8%	70 - 130	12/20/2022 18:01	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorine, Total Residual	ND	ND,4	mg/L	0.10	0.06	SM4500-Cl G-2011	1	12/17/2022 05:05	NRB	E



## Results

Client Sample ID	TB-003	Collected	12/15/2022 16:16
Lab Sample ID	3279298004	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,2-Dichloroethane	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 15:25	TMP	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	12/20/2022 15:25	TMP	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 15:25	TMP	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 15:25	TMP	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	12/20/2022 15:25	TMP	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	12/20/2022 15:25	TMP	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	12/20/2022 15:25	TMP	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 15:25	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	12/20/2022 15:25	TMP	A
Acetone	707		ug/L	50.0	12.9	EPA 524.2	10	12/24/2022 02:08	PDK	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	12/20/2022 15:25	TMP	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 15:25	TMP	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 15:25	TMP	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 15:25	TMP	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 15:25	TMP	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	12/20/2022 15:25	TMP	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	12/20/2022 15:25	TMP	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 15:25	TMP	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 15:25	TMP	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	12/20/2022 15:25	TMP	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 15:25	TMP	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 15:25	TMP	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 15:25	TMP	A
Chloroform	0.41J	J	ug/L	1.0	0.070	EPA 524.2	1	12/20/2022 15:25	TMP	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 15:25	TMP	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 15:25	TMP	A



## Results

Client Sample ID	TB-003	Collected	12/15/2022 16:16
Lab Sample ID	3279298004	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 15:25	TMP	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 15:25	TMP	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 15:25	TMP	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 15:25	TMP	A
Diisopropyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 15:25	TMP	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 15:25	TMP	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 15:25	TMP	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 15:25	TMP	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 15:25	TMP	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	12/20/2022 15:25	TMP	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 15:25	TMP	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 15:25	TMP	A
Iodomethane	ND	ND,1,2	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 15:25	TMP	A
Isopropyl Alcohol	ND	ND	ug/L	25.0	1.4	EPA 524.2	1	12/20/2022 15:25	TMP	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 15:25	TMP	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 15:25	TMP	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	12/20/2022 15:25	TMP	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 15:25	TMP	A
Methyl t-Butyl Ether	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 15:25	TMP	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 15:25	TMP	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	12/20/2022 15:25	TMP	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 15:25	TMP	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 15:25	TMP	A
Nitrobenzene	ND	ND,3	ug/L	5.0	3.1	EPA 524.2	1	12/20/2022 15:25	TMP	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 15:25	TMP	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 15:25	TMP	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	12/20/2022 15:25	TMP	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 15:25	TMP	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 15:25	TMP	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 15:25	TMP	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	12/20/2022 15:25	TMP	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 15:25	TMP	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 15:25	TMP	A
tert-Amyl Alcohol	ND	ND	ug/L	5.0	0.52	EPA 524.2	1	12/20/2022 15:25	TMP	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 15:25	TMP	A
tert-Amyl methyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 15:25	TMP	A
tert-Butyl Alcohol	ND	ND	ug/L	5.0	1.4	EPA 524.2	1	12/20/2022 15:25	TMP	A
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 15:25	TMP	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	12/20/2022 15:25	TMP	A
Tetrahydrofuran	ND	ND	ug/L	2.5	0.43	EPA 524.2	1	12/20/2022 15:25	TMP	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 15:25	TMP	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	12/20/2022 15:25	TMP	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 15:25	TMP	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 15:25	TMP	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 15:25	TMP	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 15:25	TMP	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 15:25	TMP	A



## Results

Client Sample ID	TB-003	Collected	12/15/2022 16:16
Lab Sample ID	3279298004	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 15:25	TMP	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 15:25	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	99%	70 - 130	12/24/2022 02:08	
1,2-Dichlorobenzene-d4	2199-69-1	94.1%	70 - 130	12/20/2022 15:25	
4-Bromofluorobenzene	460-00-4	95.7%	70 - 130	12/24/2022 02:08	
4-Bromofluorobenzene	460-00-4	92.4%	70 - 130	12/20/2022 15:25	



### Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3279298001	DW-001	EPA 524.2	N/A	
		SM4500-CI G-2011	N/A	
3279298002	DW-001A	EPA 524.2	N/A	
		SM4500-CI G-2011	N/A	
3279298003	DW-001B	EPA 524.2	N/A	
		SM4500-CI G-2011	N/A	
3279298004	TB-003	EPA 524.2	N/A	
		EPA 524.2	N/A	



### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3279298001	DW-001	N/A	N/A	N/A		EPA 524.2	927297
		N/A	N/A	N/A		SM4500-CI G-2011	926594
3279298002	DW-001A	N/A	N/A	N/A		EPA 524.2	927297
		N/A	N/A	N/A		SM4500-CI G-2011	926594
3279298003	DW-001B	N/A	N/A	N/A		EPA 524.2	927297
		N/A	N/A	N/A		SM4500-CI G-2011	926594
3279298004	TB-003	N/A	N/A	N/A		EPA 524.2	929810
		N/A	N/A	N/A		EPA 524.2	927297





301 Fulling Mill Rd  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

**CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS**  
ALL SHADED AREAS MUST BE COMPLETED BY THE  
SAMPLER. INSTRUCTIONS ON THE BAG

3279298  
Logged By: SLS  
PM: SJB

279298  
#: 40-894102  
of



**Client Name:** REPSG Inc.  
**Address:** 6901 Kingessing Avenue  
Philadelphia, PA 19142  
**Contact:** James Manuel  
**Phone#:** 215-729-3220  
**Project Name#:** Calvert Citgo/6977  
**Bill To:** REPSG Inc.

**Container Type:** VOA  
**Container Size:** 40mL  
**Preservative:** ASC/HCL  
**Temp By:** MSE  
**WO Temp (°C):** 3  
**Therm ID:** S70

**Receipt Info Completed By:**  
 Cooler Custody Seal Intact  
 Sample Custody Seal Intact  
 Received on Ice  
 Cooler & Samples Intact  
 Correct Containers Provided  
 Sample Label/COC Agree  
 Adequate Sample Volumes  
 CRG Samples Filtered  
 OP Samples Filtered  
 VOA Headspace Present  
 VOA Trip Blank  
 NUS 4 Days?  
 Rad Screen (uCi)  
**Courier/Tracking#:**

Sample Description/Location (as it will appear on the lab report)	Date Collected mm/dd/yy	Time hh:mm	*G or C	**Matrix	Enter Number of Con	Residual Chlorine
1 DW-001	12/15/22	16:14	G	DW	4	1
2 DW-001A	12/15/22	16:12	G	DW	4	1
3 DW-001B	12/15/22	16:10	G	DW	4	1
4 TB-003	12/15/22	16:16	G	DW	AA	
5						
6						
7						
8						
9						
10						

**ALS Field Services:**  Pickup  Labor  
 Composite Sampling  Rental Equipment  
**Other:**

**Sample/COC Comments:**

**Pre-Filtration:**  
**Mid-Carbon:**  
**Post-Filtration:**

**Receipt Information**  
(completed by Receiving Lab)  
**W.O. Temp:** 3°C **Therm ID:** 74570  
**Courier/Tracking #:**  
**Purchase Order #:** 23428  
**Project Comments:**

**SDWA Compliance:** Y (N)  
**PWSID:** Y (N) (M)  
**WV Containers 0-6°C:** NO collector

**SAMPLER COMMENTS:**

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
Ray Fuly for REPSG	12/16/22	14:49	Paul Zamarcowke ALS	12/16/22	14:49
P. Zamarcowke ALS	12/16/22	16:25	ALS	12/16/22	16:25
ALS	12/16/22	20:30	Manuel	12/16/22	20:00

**Deliverables:**  Standard  CLP-like  USACE/DOD

**Special Processing:** USACE  Navy

**Reportable to PADEP?:** Yes  No

**Sample Disposal:** Lab  Special

**State Samples Collected In:** NY  NJ  PA  NC  MD  other

**PWSID #:**  
**EDDS: Format Type- REPSG EQUIS**

2794 NORTHEAST ROAD  
LABORATORY REPORTS AND CHAINS OF CUSTODY





301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | [www.alsglobal.com](http://www.alsglobal.com)

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618  
 State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For

**REPSG**

Project Calvert Citgo/5977.130.01  
 Workorder 3269928  
 Report ID 203670 on 10/28/2022

**Certificate of Analysis**

Enclosed are the analytical results for samples received by the laboratory on Oct 20, 2022.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.  
 ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):

- Natalie Griffith - REPSG
- Brenda Kellogg - REPSG
- James Manuel - REPSG
- Jonathan Singh - REPSG
- Jonathan Wallace - REPSG
- Melissa Keogh - REPSG

*Susan Scherer*

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

**Susan Scherer**  
 Project Coordinator

(ALS Digital Signature)



## Sample Summary

<u>Lab ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>	<u>Collector</u>	<u>Collection Company</u>
3269928001	DW-004C	Drinking Water	10/19/2022 17:20	10/20/2022 21:30	CBC	Collected By Client
3269928002	DW-004I	Drinking Water	10/19/2022 17:25	10/20/2022 21:30	CBC	Collected By Client
3269928003	DW-004J	Drinking Water	10/19/2022 17:30	10/20/2022 21:30	CBC	Collected By Client
3269928004	DW-004K	Drinking Water	10/19/2022 17:35	10/20/2022 21:30	CBC	Collected By Client
3269928005	TB-001	Drinking Water	10/19/2022 17:35	10/20/2022 21:30	CBC	Collected By Client



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## Reference

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### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

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### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

---



**Project** Calvert Citgo/5977.130.01  
**Workorder** 3269928

**Project Notations**

**Sample Notations**

**Lab ID**      **Sample ID**

**Result Notations**

**Notation Ref.**

1      The QC sample type LCS for method EPA 524.2 was outside the control limits for the analyte Iodomethane. The % Recovery was reported as 142 and the control limits were 70 to 130.



**Detected Results Summary**

Client Sample ID	<b>DW-004C</b>	Collected	<b>10/19/2022 17:20</b>
Lab Sample ID	<b>3269928001</b>	Lab Receipt	<b>10/20/2022 21:30</b>

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>MDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>						
1,2-Dichloroethane	9.1	ug/L	0.50	0.10	EPA 524.2	#
Acetone	10.3	ug/L	5.0	1.3	EPA 524.2	#
Diisopropyl ether	4.0	ug/L	0.50	0.080	EPA 524.2	#
Methyl t-Butyl Ether	268	ug/L	10.0	1.2	EPA 524.2	#
tert-Amyl Alcohol	102	ug/L	5.0	0.52	EPA 524.2	#
tert-Amyl methyl ether	1.7	ug/L	0.50	0.080	EPA 524.2	#
tert-Butyl Alcohol	2240	ug/L	100	27.2	EPA 524.2	#
Tetrahydrofuran	6.1	ug/L	2.5	0.43	EPA 524.2	#



### Detected Results Summary

Client Sample ID **DW-0041** Collected **10/19/2022 17:25**  
Lab Sample ID **3269928002** Lab Receipt **10/20/2022 21:30**

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>MDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>						
Acetone	4.5J	ug/L	5.0	1.3	EPA 524.2	#
Methyl t-Butyl Ether	0.28J	ug/L	0.50	0.060	EPA 524.2	#
tert-Butyl Alcohol	466	ug/L	50.0	13.6	EPA 524.2	#





### Detected Results Summary

Client Sample ID	DW-004J	Collected	10/19/2022 17:30
Lab Sample ID	3269928003	Lab Receipt	10/20/2022 21:30

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>MDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>						
Acetone	4.5J	ug/L	5.0	1.3	EPA 524.2	#
tert-Butyl Alcohol	17.4	ug/L	5.0	1.4	EPA 524.2	#



### Detected Results Summary

Client Sample ID	DW-004K	Collected	10/19/2022 17:35
Lab Sample ID	3269928004	Lab Receipt	10/20/2022 21:30

Compound	Result	Units	RDL	MDL	Method	Flag
<b>VOLATILE ORGANICS</b>						
Acetone	4.1J	ug/L	5.0	1.3	EPA 524.2	#
tert-Butyl Alcohol	8.2	ug/L	5.0	1.4	EPA 524.2	#



### Detected Results Summary

Client Sample ID **TB-001** Collected **10/19/2022 17:35**  
Lab Sample ID **3269928005** Lab Receipt **10/20/2022 21:30**

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>MDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>						
Acetone	82.9	ug/L	5.0	1.3	EPA 524.2	#
Ethyl tert-butyl ether	0.19J	ug/L	0.50	0.12	EPA 524.2	#
Isopropyl Alcohol	8.7J	ug/L	25.0	1.4	EPA 524.2	#
tert-Butyl Alcohol	31.9	ug/L	5.0	1.4	EPA 524.2	#



## Results

Client Sample ID	DW-004C	Collected	10/19/2022 17:20
Lab Sample ID	3269928001	Lab Receipt	10/20/2022 21:30

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,2-Dichloroethane	9.1		ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 07:11	PDK	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	10/26/2022 07:11	PDK	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	10/26/2022 07:11	PDK	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	10/26/2022 07:11	PDK	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	10/26/2022 07:11	PDK	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	10/26/2022 07:11	PDK	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	10/26/2022 07:11	PDK	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 07:11	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	10/26/2022 07:11	PDK	A
Acetone	10.3		ug/L	5.0	1.3	EPA 524.2	1	10/26/2022 07:11	PDK	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	10/26/2022 07:11	PDK	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 07:11	PDK	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 07:11	PDK	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 07:11	PDK	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	10/26/2022 07:11	PDK	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	10/26/2022 07:11	PDK	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	10/26/2022 07:11	PDK	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	10/26/2022 07:11	PDK	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 07:11	PDK	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	10/26/2022 07:11	PDK	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 07:11	PDK	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	10/26/2022 07:11	PDK	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	10/26/2022 07:11	PDK	A
Chloroform	ND	ND	ug/L	1.0	0.070	EPA 524.2	1	10/26/2022 07:11	PDK	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 07:11	PDK	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 07:11	PDK	A



## Results

Client Sample ID	DW-004C	Collected	10/19/2022 17:20
Lab Sample ID	3269928001	Lab Receipt	10/20/2022 21:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 07:11	PDK	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 07:11	PDK	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 07:11	PDK	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 07:11	PDK	A
Diisopropyl ether	4.0		ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 07:11	PDK	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	10/26/2022 07:11	PDK	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 07:11	PDK	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	10/26/2022 07:11	PDK	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 07:11	PDK	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	10/26/2022 07:11	PDK	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	10/26/2022 07:11	PDK	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 07:11	PDK	A
Iodomethane	ND	ND,1	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 07:11	PDK	A
Isopropyl Alcohol	ND	ND	ug/L	25.0	1.4	EPA 524.2	1	10/26/2022 07:11	PDK	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	10/26/2022 07:11	PDK	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	10/26/2022 07:11	PDK	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	10/26/2022 07:11	PDK	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 07:11	PDK	A
Methyl t-Butyl Ether	268		ug/L	10.0	1.2	EPA 524.2	20	10/27/2022 11:23	TMP	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 07:11	PDK	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	10/26/2022 07:11	PDK	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	10/26/2022 07:11	PDK	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 07:11	PDK	A
Nitrobenzene	ND	ND	ug/L	5.0	3.1	EPA 524.2	1	10/26/2022 07:11	PDK	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 07:11	PDK	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	10/26/2022 07:11	PDK	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	10/26/2022 07:11	PDK	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	10/26/2022 07:11	PDK	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 07:11	PDK	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 07:11	PDK	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	10/26/2022 07:11	PDK	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	10/26/2022 07:11	PDK	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 07:11	PDK	A
tert-Amyl Alcohol	102		ug/L	5.0	0.52	EPA 524.2	1	10/26/2022 07:11	PDK	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 07:11	PDK	A
tert-Amyl methyl ether	1.7		ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 07:11	PDK	A
tert-Butyl Alcohol	2240		ug/L	100	27.2	EPA 524.2	20	10/27/2022 11:23	TMP	A
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 07:11	PDK	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	10/26/2022 07:11	PDK	A
Tetrahydrofuran	6.1		ug/L	2.5	0.43	EPA 524.2	1	10/26/2022 07:11	PDK	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 07:11	PDK	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	10/26/2022 07:11	PDK	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 07:11	PDK	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 07:11	PDK	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	10/26/2022 07:11	PDK	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 07:11	PDK	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	10/26/2022 07:11	PDK	A



## Results

Client Sample ID	DW-004C	Collected	10/19/2022 17:20
Lab Sample ID	3269928001	Lab Receipt	10/20/2022 21:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 07:11	PDK	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 07:11	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	90.2%	70 – 130	10/26/2022 07:11	
1,2-Dichlorobenzene-d4	2199-69-1	95.4%	70 – 130	10/27/2022 11:23	
4-Bromofluorobenzene	460-00-4	91.3%	70 – 130	10/26/2022 07:11	
4-Bromofluorobenzene	460-00-4	91.2%	70 – 130	10/27/2022 11:23	



## Results

Client Sample ID	DW-0041	Collected	10/19/2022 17:25
Lab Sample ID	3269928002	Lab Receipt	10/20/2022 21:30

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,2-Dichloroethane	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 07:37	PDK	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	10/26/2022 07:37	PDK	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	10/26/2022 07:37	PDK	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	10/26/2022 07:37	PDK	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	10/26/2022 07:37	PDK	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	10/26/2022 07:37	PDK	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	10/26/2022 07:37	PDK	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 07:37	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	10/26/2022 07:37	PDK	A
Acetone	4.5J	J	ug/L	5.0	1.3	EPA 524.2	1	10/26/2022 07:37	PDK	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	10/26/2022 07:37	PDK	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 07:37	PDK	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 07:37	PDK	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 07:37	PDK	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	10/26/2022 07:37	PDK	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	10/26/2022 07:37	PDK	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	10/26/2022 07:37	PDK	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	10/26/2022 07:37	PDK	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 07:37	PDK	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	10/26/2022 07:37	PDK	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 07:37	PDK	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	10/26/2022 07:37	PDK	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	10/26/2022 07:37	PDK	A
Chloroform	ND	ND	ug/L	1.0	0.070	EPA 524.2	1	10/26/2022 07:37	PDK	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 07:37	PDK	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 07:37	PDK	A



## Results

Client Sample ID	DW-0041	Collected	10/19/2022 17:25
Lab Sample ID	3269928002	Lab Receipt	10/20/2022 21:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 07:37	PDK	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 07:37	PDK	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 07:37	PDK	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 07:37	PDK	A
Diisopropyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 07:37	PDK	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	10/26/2022 07:37	PDK	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 07:37	PDK	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	10/26/2022 07:37	PDK	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 07:37	PDK	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	10/26/2022 07:37	PDK	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	10/26/2022 07:37	PDK	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 07:37	PDK	A
Iodomethane	ND	ND,1	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 07:37	PDK	A
Isopropyl Alcohol	ND	ND	ug/L	25.0	1.4	EPA 524.2	1	10/26/2022 07:37	PDK	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	10/26/2022 07:37	PDK	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	10/26/2022 07:37	PDK	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	10/26/2022 07:37	PDK	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 07:37	PDK	A
Methyl t-Butyl Ether	0.28J	J	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 07:37	PDK	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 07:37	PDK	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	10/26/2022 07:37	PDK	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	10/26/2022 07:37	PDK	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 07:37	PDK	A
Nitrobenzene	ND	ND	ug/L	5.0	3.1	EPA 524.2	1	10/26/2022 07:37	PDK	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 07:37	PDK	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	10/26/2022 07:37	PDK	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	10/26/2022 07:37	PDK	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	10/26/2022 07:37	PDK	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 07:37	PDK	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 07:37	PDK	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	10/26/2022 07:37	PDK	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	10/26/2022 07:37	PDK	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 07:37	PDK	A
tert-Amyl Alcohol	ND	ND	ug/L	5.0	0.52	EPA 524.2	1	10/26/2022 07:37	PDK	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 07:37	PDK	A
tert-Amyl methyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 07:37	PDK	A
tert-Butyl Alcohol	466		ug/L	50.0	13.6	EPA 524.2	10	10/27/2022 11:49	TMP	A
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 07:37	PDK	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	10/26/2022 07:37	PDK	A
Tetrahydrofuran	ND	ND	ug/L	2.5	0.43	EPA 524.2	1	10/26/2022 07:37	PDK	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 07:37	PDK	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	10/26/2022 07:37	PDK	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 07:37	PDK	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 07:37	PDK	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	10/26/2022 07:37	PDK	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 07:37	PDK	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	10/26/2022 07:37	PDK	A





## Results

Client Sample ID	DW-0041	Collected	10/19/2022 17:25
Lab Sample ID	3269928002	Lab Receipt	10/20/2022 21:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 07:37	PDK	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 07:37	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	91.6%	70 – 130	10/27/2022 11:49	
1,2-Dichlorobenzene-d4	2199-69-1	91.8%	70 – 130	10/26/2022 07:37	
4-Bromofluorobenzene	460-00-4	91.2%	70 – 130	10/27/2022 11:49	
4-Bromofluorobenzene	460-00-4	91.9%	70 – 130	10/26/2022 07:37	



## Results

Client Sample ID	DW-004J	Collected	10/19/2022 17:30
Lab Sample ID	3269928003	Lab Receipt	10/20/2022 21:30

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,2-Dichloroethane	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 08:03	PDK	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	10/26/2022 08:03	PDK	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	10/26/2022 08:03	PDK	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	10/26/2022 08:03	PDK	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	10/26/2022 08:03	PDK	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	10/26/2022 08:03	PDK	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	10/26/2022 08:03	PDK	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 08:03	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	10/26/2022 08:03	PDK	A
Acetone	4.5J	J	ug/L	5.0	1.3	EPA 524.2	1	10/26/2022 08:03	PDK	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	10/26/2022 08:03	PDK	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 08:03	PDK	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 08:03	PDK	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 08:03	PDK	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	10/26/2022 08:03	PDK	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	10/26/2022 08:03	PDK	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	10/26/2022 08:03	PDK	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	10/26/2022 08:03	PDK	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 08:03	PDK	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	10/26/2022 08:03	PDK	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 08:03	PDK	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	10/26/2022 08:03	PDK	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	10/26/2022 08:03	PDK	A
Chloroform	ND	ND	ug/L	1.0	0.070	EPA 524.2	1	10/26/2022 08:03	PDK	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 08:03	PDK	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 08:03	PDK	A



## Results

Client Sample ID	DW-004J	Collected	10/19/2022 17:30
Lab Sample ID	3269928003	Lab Receipt	10/20/2022 21:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 08:03	PDK	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 08:03	PDK	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 08:03	PDK	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 08:03	PDK	A
Diisopropyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 08:03	PDK	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	10/26/2022 08:03	PDK	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 08:03	PDK	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	10/26/2022 08:03	PDK	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 08:03	PDK	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	10/26/2022 08:03	PDK	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	10/26/2022 08:03	PDK	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 08:03	PDK	A
Iodomethane	ND	ND,1	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 08:03	PDK	A
Isopropyl Alcohol	ND	ND	ug/L	25.0	1.4	EPA 524.2	1	10/26/2022 08:03	PDK	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	10/26/2022 08:03	PDK	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	10/26/2022 08:03	PDK	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	10/26/2022 08:03	PDK	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 08:03	PDK	A
Methyl t-Butyl Ether	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 08:03	PDK	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 08:03	PDK	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	10/26/2022 08:03	PDK	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	10/26/2022 08:03	PDK	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 08:03	PDK	A
Nitrobenzene	ND	ND	ug/L	5.0	3.1	EPA 524.2	1	10/26/2022 08:03	PDK	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 08:03	PDK	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	10/26/2022 08:03	PDK	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	10/26/2022 08:03	PDK	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	10/26/2022 08:03	PDK	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 08:03	PDK	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 08:03	PDK	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	10/26/2022 08:03	PDK	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	10/26/2022 08:03	PDK	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 08:03	PDK	A
tert-Amyl Alcohol	ND	ND	ug/L	5.0	0.52	EPA 524.2	1	10/26/2022 08:03	PDK	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 08:03	PDK	A
tert-Amyl methyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 08:03	PDK	A
tert-Butyl Alcohol	17.4		ug/L	5.0	1.4	EPA 524.2	1	10/26/2022 08:03	PDK	A
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 08:03	PDK	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	10/26/2022 08:03	PDK	A
Tetrahydrofuran	ND	ND	ug/L	2.5	0.43	EPA 524.2	1	10/26/2022 08:03	PDK	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 08:03	PDK	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	10/26/2022 08:03	PDK	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 08:03	PDK	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 08:03	PDK	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	10/26/2022 08:03	PDK	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 08:03	PDK	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	10/26/2022 08:03	PDK	A



## Results

Client Sample ID	DW-004J	Collected	10/19/2022 17:30
Lab Sample ID	3269928003	Lab Receipt	10/20/2022 21:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 08:03	PDK	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 08:03	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	93.3%	70 – 130	10/26/2022 08:03	
4-Bromofluorobenzene	460-00-4	92.7%	70 – 130	10/26/2022 08:03	



## Results

Client Sample ID	DW-004K	Collected	10/19/2022 17:35
Lab Sample ID	3269928004	Lab Receipt	10/20/2022 21:30

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,2-Dichloroethane	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 08:29	PDK	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	10/26/2022 08:29	PDK	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	10/26/2022 08:29	PDK	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	10/26/2022 08:29	PDK	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	10/26/2022 08:29	PDK	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	10/26/2022 08:29	PDK	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	10/26/2022 08:29	PDK	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 08:29	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	10/26/2022 08:29	PDK	A
Acetone	4.1J	J	ug/L	5.0	1.3	EPA 524.2	1	10/26/2022 08:29	PDK	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	10/26/2022 08:29	PDK	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 08:29	PDK	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 08:29	PDK	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 08:29	PDK	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	10/26/2022 08:29	PDK	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	10/26/2022 08:29	PDK	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	10/26/2022 08:29	PDK	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	10/26/2022 08:29	PDK	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 08:29	PDK	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	10/26/2022 08:29	PDK	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 08:29	PDK	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	10/26/2022 08:29	PDK	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	10/26/2022 08:29	PDK	A
Chloroform	ND	ND	ug/L	1.0	0.070	EPA 524.2	1	10/26/2022 08:29	PDK	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 08:29	PDK	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 08:29	PDK	A



## Results

Client Sample ID	DW-004K	Collected	10/19/2022 17:35
Lab Sample ID	3269928004	Lab Receipt	10/20/2022 21:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 08:29	PDK	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 08:29	PDK	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 08:29	PDK	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 08:29	PDK	A
Diisopropyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 08:29	PDK	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	10/26/2022 08:29	PDK	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 08:29	PDK	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	10/26/2022 08:29	PDK	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 08:29	PDK	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	10/26/2022 08:29	PDK	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	10/26/2022 08:29	PDK	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 08:29	PDK	A
Iodomethane	ND	ND,1	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 08:29	PDK	A
Isopropyl Alcohol	ND	ND	ug/L	25.0	1.4	EPA 524.2	1	10/26/2022 08:29	PDK	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	10/26/2022 08:29	PDK	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	10/26/2022 08:29	PDK	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	10/26/2022 08:29	PDK	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 08:29	PDK	A
Methyl t-Butyl Ether	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 08:29	PDK	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 08:29	PDK	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	10/26/2022 08:29	PDK	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	10/26/2022 08:29	PDK	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 08:29	PDK	A
Nitrobenzene	ND	ND	ug/L	5.0	3.1	EPA 524.2	1	10/26/2022 08:29	PDK	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 08:29	PDK	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	10/26/2022 08:29	PDK	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	10/26/2022 08:29	PDK	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	10/26/2022 08:29	PDK	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 08:29	PDK	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 08:29	PDK	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	10/26/2022 08:29	PDK	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	10/26/2022 08:29	PDK	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 08:29	PDK	A
tert-Amyl Alcohol	ND	ND	ug/L	5.0	0.52	EPA 524.2	1	10/26/2022 08:29	PDK	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 08:29	PDK	A
tert-Amyl methyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 08:29	PDK	A
tert-Butyl Alcohol	8.2		ug/L	5.0	1.4	EPA 524.2	1	10/26/2022 08:29	PDK	A
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 08:29	PDK	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	10/26/2022 08:29	PDK	A
Tetrahydrofuran	ND	ND	ug/L	2.5	0.43	EPA 524.2	1	10/26/2022 08:29	PDK	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 08:29	PDK	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	10/26/2022 08:29	PDK	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 08:29	PDK	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 08:29	PDK	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	10/26/2022 08:29	PDK	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 08:29	PDK	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	10/26/2022 08:29	PDK	A



**Results**

Client Sample ID	<b>DW-004K</b>	Collected	<b>10/19/2022 17:35</b>
Lab Sample ID	<b>3269928004</b>	Lab Receipt	<b>10/20/2022 21:30</b>

**VOLATILE ORGANICS (cont.)**

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 08:29	PDK	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 08:29	PDK	A

*SURROGATES*

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	93.9%	70 – 130	10/26/2022 08:29	
4-Bromofluorobenzene	460-00-4	93.8%	70 – 130	10/26/2022 08:29	



## Results

Client Sample ID	TB-001	Collected	10/19/2022 17:35
Lab Sample ID	3269928005	Lab Receipt	10/20/2022 21:30

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,2-Dichloroethane	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 06:45	PDK	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	10/26/2022 06:45	PDK	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	10/26/2022 06:45	PDK	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	10/26/2022 06:45	PDK	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	10/26/2022 06:45	PDK	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	10/26/2022 06:45	PDK	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	10/26/2022 06:45	PDK	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 06:45	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	10/26/2022 06:45	PDK	A
Acetone	82.9		ug/L	5.0	1.3	EPA 524.2	1	10/26/2022 06:45	PDK	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	10/26/2022 06:45	PDK	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 06:45	PDK	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 06:45	PDK	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	10/26/2022 06:45	PDK	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	10/26/2022 06:45	PDK	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	10/26/2022 06:45	PDK	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	10/26/2022 06:45	PDK	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	10/26/2022 06:45	PDK	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 06:45	PDK	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	10/26/2022 06:45	PDK	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 06:45	PDK	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	10/26/2022 06:45	PDK	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	10/26/2022 06:45	PDK	A
Chloroform	ND	ND	ug/L	1.0	0.070	EPA 524.2	1	10/26/2022 06:45	PDK	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 06:45	PDK	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 06:45	PDK	A





## Results

Client Sample ID	TB-001	Collected	10/19/2022 17:35
Lab Sample ID	3269928005	Lab Receipt	10/20/2022 21:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 06:45	PDK	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 06:45	PDK	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 06:45	PDK	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 06:45	PDK	A
Diisopropyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 06:45	PDK	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	10/26/2022 06:45	PDK	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 06:45	PDK	A
Ethyl tert-butyl ether	0.19J	J	ug/L	0.50	0.12	EPA 524.2	1	10/26/2022 06:45	PDK	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 06:45	PDK	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	10/26/2022 06:45	PDK	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	10/26/2022 06:45	PDK	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	10/26/2022 06:45	PDK	A
Iodomethane	ND	ND,1	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 06:45	PDK	A
Isopropyl Alcohol	8.7J	J	ug/L	25.0	1.4	EPA 524.2	1	10/26/2022 06:45	PDK	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	10/26/2022 06:45	PDK	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	10/26/2022 06:45	PDK	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	10/26/2022 06:45	PDK	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 06:45	PDK	A
Methyl t-Butyl Ether	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	10/26/2022 06:45	PDK	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 06:45	PDK	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	10/26/2022 06:45	PDK	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	10/26/2022 06:45	PDK	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 06:45	PDK	A
Nitrobenzene	ND	ND	ug/L	5.0	3.1	EPA 524.2	1	10/26/2022 06:45	PDK	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 06:45	PDK	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	10/26/2022 06:45	PDK	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	10/26/2022 06:45	PDK	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	10/26/2022 06:45	PDK	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	10/26/2022 06:45	PDK	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 06:45	PDK	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	10/26/2022 06:45	PDK	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	10/26/2022 06:45	PDK	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	10/26/2022 06:45	PDK	A
tert-Amyl Alcohol	ND	ND	ug/L	5.0	0.52	EPA 524.2	1	10/26/2022 06:45	PDK	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 06:45	PDK	A
tert-Amyl methyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 06:45	PDK	A
tert-Butyl Alcohol	31.9		ug/L	5.0	1.4	EPA 524.2	1	10/26/2022 06:45	PDK	A
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	10/26/2022 06:45	PDK	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	10/26/2022 06:45	PDK	A
Tetrahydrofuran	ND	ND	ug/L	2.5	0.43	EPA 524.2	1	10/26/2022 06:45	PDK	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 06:45	PDK	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	10/26/2022 06:45	PDK	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	10/26/2022 06:45	PDK	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 06:45	PDK	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	10/26/2022 06:45	PDK	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	10/26/2022 06:45	PDK	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	10/26/2022 06:45	PDK	A



## Results

Client Sample ID	TB-001	Collected	10/19/2022 17:35
Lab Sample ID	3269928005	Lab Receipt	10/20/2022 21:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 06:45	PDK	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	10/26/2022 06:45	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	94%	70 – 130	10/26/2022 06:45	
4-Bromofluorobenzene	460-00-4	97.6%	70 – 130	10/26/2022 06:45	



### Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3269928001	DW-004C	EPA 524.2	N/A	
		EPA 524.2	N/A	
3269928002	DW-004I	EPA 524.2	N/A	
		EPA 524.2	N/A	
3269928003	DW-004J	EPA 524.2	N/A	
3269928004	DW-004K	EPA 524.2	N/A	
3269928005	TB-001	EPA 524.2	N/A	



### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3269928001	DW-004C	N/A	N/A	N/A		EPA 524.2	894187
		N/A	N/A	N/A		EPA 524.2	895683
3269928002	DW-004I	N/A	N/A	N/A		EPA 524.2	895683
		N/A	N/A	N/A		EPA 524.2	894187
3269928003	DW-004J	N/A	N/A	N/A		EPA 524.2	894187
3269928004	DW-004K	N/A	N/A	N/A		EPA 524.2	894187
3269928005	TB-001	N/A	N/A	N/A		EPA 524.2	894187



301 Fulling Mill Rd  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

**CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS**  
ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER. INSTRUCTIONS ON THE BACK.

3269928  
Logged By: CKM  
PM: SUB



COC #: \_\_\_\_\_  
ALS Qu \_\_\_\_\_

Client Name: REPSG Inc.		Container Type	VOA		
Address: 6901 Kingessing Avenue Philadelphia, PA 19142		Container Size	40mL		
Contact: James Manuel		Perservative	ASC/HCL		
Phone#: 215-729-3220		ANALYSES/METHOD			
Project Name#: Calvert Citigo/5977.130.01					
Bill To: REPSG Inc.		Enter Number of Containers Per			
TAT <input checked="" type="checkbox"/> Normal-Standard TAT is 10-12 business days. <input type="checkbox"/> Rush-Subject to ALS approval and surcharges. Approved?					
Date Required: _____		*G or C			
Email? <input checked="" type="checkbox"/> -Y jmanuel@repsg.com					
Fax? <input type="checkbox"/> -Y No.:		*Matrix			
Sample Description/Location (as it will appear on the lab report)					
1	DW-004C	10/19/22	mm/dd/yy	17:00	hh:mm
2	DW-004I	10/19/22	mm/dd/yy	17:25	hh:mm
3	DW-004J	10/19/22	mm/dd/yy	17:30	hh:mm
4	DW-004K	10/19/22	mm/dd/yy	17:35	hh:mm
5	TB-001				
6					
7					
8					
9					
10					
SAMPLER COMMENTS: _____					
SAMPLER COMMENTS: _____					
Relinquished By / Company Name		Date	Time	Received By / Company Name	Date
1 <i>Ann Foley REPSG</i>		10/20/22	17:12	<i>zy</i>	10/20/22 17:12
3 <i>Ann Foley REPSG</i>		10/20/22	18:16	<i>REPSG/ALS</i>	10/20/22 21:20
5					
7					
9					
Temp Taken By: _____		Temp (°C) _____			
Therm ID: _____		Therm ID: _____			
Cooler Custody Seal Intact		Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>			
Sample Custody Seal Intact		Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>			
Received on Ice		Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>			
Cooler & Samples Intact		Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>			
Correct Containers Provided		Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>			
Sample Label/COC Agree		Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>			
Adequate Sample Volumes		Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>			
VOA Headspace Present		Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>			
VOA Trip Blank		Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>			
NI ≤ 4 Days?		Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>			
Rad Screen (uCi)		Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>			
Courier/Tracking #:		_____			
SDWA Compliance		Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>			
PWSID		_____			
WV Containers 0-6°C		Y <input checked="" type="checkbox"/> N <input type="checkbox"/> NA <input type="checkbox"/>			
*No Sampler					
Pre-Filtration		_____			
Mid-Carbon 1		_____			
Mid-Carbon 2		_____			
Post-Filtration		_____			
ALS Field Services: <input type="checkbox"/> Pickup <input type="checkbox"/> Labor					
<input type="checkbox"/> Composite Sampling <input type="checkbox"/> Rental Equipment					
Other: _____					
Sample/COC Comments					
Special Processing					
USACE <input type="checkbox"/>					
Navy <input type="checkbox"/>					
USACE/DOD <input type="checkbox"/>					
Reportable to PADEP?		Yes <input type="checkbox"/> No <input type="checkbox"/>			
Sample Disposal		Lab <input checked="" type="checkbox"/> Special <input type="checkbox"/>			
PWSID #		_____			
EDDS: Format Type- REPSG EQUIS		_____			
State Samples Collected In		NY <input type="checkbox"/> NJ <input type="checkbox"/> PA <input type="checkbox"/> NC <input type="checkbox"/> MD <input checked="" type="checkbox"/> other _____			



301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | [www.alsglobal.com](http://www.alsglobal.com)

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For

**REPSG**

Project 2022 Calvert Citgo/5977.130.01  
Workorder 3275102  
Report ID 210403 on 12/1/2022

**Certificate of Analysis**

Enclosed are the analytical results for samples received by the laboratory on Nov 21, 2022.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

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ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):

- Natalie Griffith - REPSG
- Brenda Kellogg - REPSG
- James Manuel - REPSG
- Jonathan Singh - REPSG
- Jonathan Wallace - REPSG
- Melissa Keogh - REPSG

*Susan Scherer*

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



## Sample Summary

<u>Lab ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>	<u>Collector</u>	<u>Collection Company</u>
3275102001	DW-004C	Drinking Water	11/18/2022 16:50	11/21/2022 16:10	CBC	Collected By Client
3275102002	DW-004I	Drinking Water	11/18/2022 16:52	11/21/2022 16:10	CBC	Collected By Client
3275102003	DW-004J	Drinking Water	11/18/2022 16:55	11/21/2022 16:10	CBC	Collected By Client
3275102004	DW-004K	Drinking Water	11/18/2022 16:54	11/21/2022 16:10	CBC	Collected By Client
3275102005	TB-002	Drinking Water	11/18/2022 00:00	11/21/2022 16:10	CBC	Collected By Client



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## Reference

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### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

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### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

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**Project** 2022 Calvert Citgo/5977.130.01

**Workorder** 3275102

**Project Notations**

**Sample Notations**

**Lab ID**      **Sample ID**

**Result Notations**

**Notation Ref.**



### Detected Results Summary

Client Sample ID	DW-004C	Collected	11/18/2022 16:50
Lab Sample ID	3275102001	Lab Receipt	11/21/2022 16:10

Compound	Result	Units	RDL	MDL	Method	Flag
<b>VOLATILE ORGANICS</b>						
1,2-Dichloroethane	10.2	ug/L	0.50	0.10	EPA 524.2	#
Acetone	23.9	ug/L	5.0	1.3	EPA 524.2	#
Diisopropyl ether	4.2	ug/L	0.50	0.080	EPA 524.2	#
Methyl t-Butyl Ether	264	ug/L	25.0	3.0	EPA 524.2	#
tert-Amyl Alcohol	107	ug/L	5.0	0.52	EPA 524.2	#
tert-Amyl methyl ether	1.9	ug/L	0.50	0.080	EPA 524.2	#
tert-Butyl Alcohol	2780	ug/L	250	68.0	EPA 524.2	#
Tetrahydrofuran	4.5	ug/L	2.5	0.43	EPA 524.2	#



### Detected Results Summary

Client Sample ID	DW-0041	Collected	11/18/2022 16:52
Lab Sample ID	3275102002	Lab Receipt	11/21/2022 16:10

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>MDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>						
Acetone	35.0	ug/L	5.0	1.3	EPA 524.2	#
tert-Butyl Alcohol	1970	ug/L	250	68.0	EPA 524.2	#
Tetrahydrofuran	4.3	ug/L	2.5	0.43	EPA 524.2	#



### Detected Results Summary

Client Sample ID	DW-004J	Collected	11/18/2022 16:55
Lab Sample ID	3275102003	Lab Receipt	11/21/2022 16:10

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>MDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>						
Acetone	14.0	ug/L	5.0	1.3	EPA 524.2	#
tert-Butyl Alcohol	74.3	ug/L	5.0	1.4	EPA 524.2	#
Tetrahydrofuran	4.0	ug/L	2.5	0.43	EPA 524.2	#



### Detected Results Summary

Client Sample ID	DW-004K	Collected	11/18/2022 16:54
Lab Sample ID	3275102004	Lab Receipt	11/21/2022 16:10

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>MDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>						
Acetone	4.3J	ug/L	5.0	1.3	EPA 524.2	#
tert-Butyl Alcohol	9.0	ug/L	5.0	1.4	EPA 524.2	#
Tetrahydrofuran	5.8	ug/L	2.5	0.43	EPA 524.2	#



### Detected Results Summary

Client Sample ID	TB-002	Collected	11/18/2022 00:00
Lab Sample ID	3275102005	Lab Receipt	11/21/2022 16:10

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>MDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>						
Acetone	761	ug/L	50.0	12.9	EPA 524.2	#
Chloroform	0.20J	ug/L	1.0	0.070	EPA 524.2	#



## Results

Client Sample ID	DW-004C	Collected	11/18/2022 16:50
Lab Sample ID	3275102001	Lab Receipt	11/21/2022 16:10

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,2-Dichloroethane	10.2		ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 09:44	PDK	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	11/30/2022 09:44	PDK	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	11/30/2022 09:44	PDK	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	11/30/2022 09:44	PDK	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	11/30/2022 09:44	PDK	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	11/30/2022 09:44	PDK	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	11/30/2022 09:44	PDK	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 09:44	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	11/30/2022 09:44	PDK	A
Acetone	23.9		ug/L	5.0	1.3	EPA 524.2	1	11/30/2022 09:44	PDK	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	11/30/2022 09:44	PDK	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 09:44	PDK	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 09:44	PDK	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 09:44	PDK	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	11/30/2022 09:44	PDK	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	11/30/2022 09:44	PDK	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	11/30/2022 09:44	PDK	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	11/30/2022 09:44	PDK	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 09:44	PDK	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	11/30/2022 09:44	PDK	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 09:44	PDK	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	11/30/2022 09:44	PDK	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	11/30/2022 09:44	PDK	A
Chloroform	ND	ND	ug/L	1.0	0.070	EPA 524.2	1	11/30/2022 09:44	PDK	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 09:44	PDK	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 09:44	PDK	A



## Results

Client Sample ID	DW-004C	Collected	11/18/2022 16:50
Lab Sample ID	3275102001	Lab Receipt	11/21/2022 16:10

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 09:44	PDK	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 09:44	PDK	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 09:44	PDK	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 09:44	PDK	A
Diisopropyl ether	4.2		ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 09:44	PDK	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	11/30/2022 09:44	PDK	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 09:44	PDK	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	11/30/2022 09:44	PDK	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 09:44	PDK	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	11/30/2022 09:44	PDK	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	11/30/2022 09:44	PDK	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 09:44	PDK	A
Iodomethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 09:44	PDK	A
Isopropyl Alcohol	ND	ND	ug/L	25.0	1.4	EPA 524.2	1	11/30/2022 09:44	PDK	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	11/30/2022 09:44	PDK	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	11/30/2022 09:44	PDK	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	11/30/2022 09:44	PDK	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 09:44	PDK	A
Methyl t-Butyl Ether	264		ug/L	25.0	3.0	EPA 524.2	50	11/30/2022 15:28	TMP	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 09:44	PDK	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	11/30/2022 09:44	PDK	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	11/30/2022 09:44	PDK	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 09:44	PDK	A
Nitrobenzene	ND	ND	ug/L	5.0	3.1	EPA 524.2	1	11/30/2022 09:44	PDK	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 09:44	PDK	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	11/30/2022 09:44	PDK	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	11/30/2022 09:44	PDK	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	11/30/2022 09:44	PDK	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 09:44	PDK	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 09:44	PDK	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	11/30/2022 09:44	PDK	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	11/30/2022 09:44	PDK	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 09:44	PDK	A
tert-Amyl Alcohol	107		ug/L	5.0	0.52	EPA 524.2	1	11/30/2022 09:44	PDK	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 09:44	PDK	A
tert-Amyl methyl ether	1.9		ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 09:44	PDK	A
tert-Butyl Alcohol	2780		ug/L	250	68.0	EPA 524.2	50	11/30/2022 15:28	TMP	A
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 09:44	PDK	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	11/30/2022 09:44	PDK	A
Tetrahydrofuran	4.5		ug/L	2.5	0.43	EPA 524.2	1	11/30/2022 09:44	PDK	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 09:44	PDK	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	11/30/2022 09:44	PDK	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 09:44	PDK	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 09:44	PDK	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	11/30/2022 09:44	PDK	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 09:44	PDK	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	11/30/2022 09:44	PDK	A





## Results

Client Sample ID	DW-004C	Collected	11/18/2022 16:50
Lab Sample ID	3275102001	Lab Receipt	11/21/2022 16:10

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 09:44	PDK	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 09:44	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	93.2%	70 - 130	11/30/2022 09:44	
1,2-Dichlorobenzene-d4	2199-69-1	89.4%	70 - 130	11/30/2022 15:28	
4-Bromofluorobenzene	460-00-4	87.5%	70 - 130	11/30/2022 09:44	
4-Bromofluorobenzene	460-00-4	87.2%	70 - 130	11/30/2022 15:28	



## Results

Client Sample ID	DW-0041	Collected	11/18/2022 16:52
Lab Sample ID	3275102002	Lab Receipt	11/21/2022 16:10

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,2-Dichloroethane	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 09:18	PDK	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	11/30/2022 09:18	PDK	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	11/30/2022 09:18	PDK	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	11/30/2022 09:18	PDK	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	11/30/2022 09:18	PDK	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	11/30/2022 09:18	PDK	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	11/30/2022 09:18	PDK	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 09:18	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	11/30/2022 09:18	PDK	A
Acetone	35.0		ug/L	5.0	1.3	EPA 524.2	1	11/30/2022 09:18	PDK	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	11/30/2022 09:18	PDK	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 09:18	PDK	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 09:18	PDK	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 09:18	PDK	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	11/30/2022 09:18	PDK	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	11/30/2022 09:18	PDK	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	11/30/2022 09:18	PDK	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	11/30/2022 09:18	PDK	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 09:18	PDK	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	11/30/2022 09:18	PDK	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 09:18	PDK	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	11/30/2022 09:18	PDK	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	11/30/2022 09:18	PDK	A
Chloroform	ND	ND	ug/L	1.0	0.070	EPA 524.2	1	11/30/2022 09:18	PDK	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 09:18	PDK	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 09:18	PDK	A



## Results

Client Sample ID	DW-0041	Collected	11/18/2022 16:52
Lab Sample ID	3275102002	Lab Receipt	11/21/2022 16:10

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 09:18	PDK	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 09:18	PDK	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 09:18	PDK	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 09:18	PDK	A
Diisopropyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 09:18	PDK	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	11/30/2022 09:18	PDK	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 09:18	PDK	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	11/30/2022 09:18	PDK	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 09:18	PDK	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	11/30/2022 09:18	PDK	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	11/30/2022 09:18	PDK	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 09:18	PDK	A
Iodomethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 09:18	PDK	A
Isopropyl Alcohol	ND	ND	ug/L	25.0	1.4	EPA 524.2	1	11/30/2022 09:18	PDK	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	11/30/2022 09:18	PDK	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	11/30/2022 09:18	PDK	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	11/30/2022 09:18	PDK	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 09:18	PDK	A
Methyl t-Butyl Ether	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 09:18	PDK	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 09:18	PDK	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	11/30/2022 09:18	PDK	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	11/30/2022 09:18	PDK	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 09:18	PDK	A
Nitrobenzene	ND	ND	ug/L	5.0	3.1	EPA 524.2	1	11/30/2022 09:18	PDK	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 09:18	PDK	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	11/30/2022 09:18	PDK	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	11/30/2022 09:18	PDK	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	11/30/2022 09:18	PDK	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 09:18	PDK	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 09:18	PDK	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	11/30/2022 09:18	PDK	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	11/30/2022 09:18	PDK	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 09:18	PDK	A
tert-Amyl Alcohol	ND	ND	ug/L	5.0	0.52	EPA 524.2	1	11/30/2022 09:18	PDK	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 09:18	PDK	A
tert-Amyl methyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 09:18	PDK	A
tert-Butyl Alcohol	1970		ug/L	250	68.0	EPA 524.2	50	11/30/2022 15:02	TMP	A
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 09:18	PDK	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	11/30/2022 09:18	PDK	A
Tetrahydrofuran	4.3		ug/L	2.5	0.43	EPA 524.2	1	11/30/2022 09:18	PDK	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 09:18	PDK	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	11/30/2022 09:18	PDK	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 09:18	PDK	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 09:18	PDK	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	11/30/2022 09:18	PDK	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 09:18	PDK	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	11/30/2022 09:18	PDK	A



## Results

Client Sample ID	DW-0041	Collected	11/18/2022 16:52
Lab Sample ID	3275102002	Lab Receipt	11/21/2022 16:10

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 09:18	PDK	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 09:18	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	97.2%	70 - 130	11/30/2022 09:18	
1,2-Dichlorobenzene-d4	2199-69-1	85%	70 - 130	11/30/2022 15:02	
4-Bromofluorobenzene	460-00-4	88.6%	70 - 130	11/30/2022 09:18	
4-Bromofluorobenzene	460-00-4	85.1%	70 - 130	11/30/2022 15:02	



## Results

Client Sample ID	DW-004J	Collected	11/18/2022 16:55
Lab Sample ID	3275102003	Lab Receipt	11/21/2022 16:10

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,2-Dichloroethane	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 08:25	PDK	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	11/30/2022 08:25	PDK	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	11/30/2022 08:25	PDK	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	11/30/2022 08:25	PDK	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	11/30/2022 08:25	PDK	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	11/30/2022 08:25	PDK	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	11/30/2022 08:25	PDK	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 08:25	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	11/30/2022 08:25	PDK	A
Acetone	14.0		ug/L	5.0	1.3	EPA 524.2	1	11/30/2022 08:25	PDK	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	11/30/2022 08:25	PDK	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 08:25	PDK	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 08:25	PDK	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 08:25	PDK	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	11/30/2022 08:25	PDK	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	11/30/2022 08:25	PDK	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	11/30/2022 08:25	PDK	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	11/30/2022 08:25	PDK	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 08:25	PDK	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	11/30/2022 08:25	PDK	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 08:25	PDK	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	11/30/2022 08:25	PDK	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	11/30/2022 08:25	PDK	A
Chloroform	ND	ND	ug/L	1.0	0.070	EPA 524.2	1	11/30/2022 08:25	PDK	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 08:25	PDK	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 08:25	PDK	A



## Results

Client Sample ID	DW-004J	Collected	11/18/2022 16:55
Lab Sample ID	3275102003	Lab Receipt	11/21/2022 16:10

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 08:25	PDK	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 08:25	PDK	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 08:25	PDK	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 08:25	PDK	A
Diisopropyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 08:25	PDK	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	11/30/2022 08:25	PDK	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 08:25	PDK	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	11/30/2022 08:25	PDK	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 08:25	PDK	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	11/30/2022 08:25	PDK	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	11/30/2022 08:25	PDK	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 08:25	PDK	A
Iodomethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 08:25	PDK	A
Isopropyl Alcohol	ND	ND	ug/L	25.0	1.4	EPA 524.2	1	11/30/2022 08:25	PDK	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	11/30/2022 08:25	PDK	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	11/30/2022 08:25	PDK	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	11/30/2022 08:25	PDK	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 08:25	PDK	A
Methyl t-Butyl Ether	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 08:25	PDK	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 08:25	PDK	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	11/30/2022 08:25	PDK	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	11/30/2022 08:25	PDK	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 08:25	PDK	A
Nitrobenzene	ND	ND	ug/L	5.0	3.1	EPA 524.2	1	11/30/2022 08:25	PDK	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 08:25	PDK	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	11/30/2022 08:25	PDK	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	11/30/2022 08:25	PDK	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	11/30/2022 08:25	PDK	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 08:25	PDK	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 08:25	PDK	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	11/30/2022 08:25	PDK	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	11/30/2022 08:25	PDK	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 08:25	PDK	A
tert-Amyl Alcohol	ND	ND	ug/L	5.0	0.52	EPA 524.2	1	11/30/2022 08:25	PDK	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 08:25	PDK	A
tert-Amyl methyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 08:25	PDK	A
tert-Butyl Alcohol	74.3		ug/L	5.0	1.4	EPA 524.2	1	11/30/2022 08:25	PDK	A
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 08:25	PDK	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	11/30/2022 08:25	PDK	A
Tetrahydrofuran	4.0		ug/L	2.5	0.43	EPA 524.2	1	11/30/2022 08:25	PDK	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 08:25	PDK	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	11/30/2022 08:25	PDK	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 08:25	PDK	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 08:25	PDK	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	11/30/2022 08:25	PDK	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 08:25	PDK	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	11/30/2022 08:25	PDK	A



## Results

Client Sample ID	DW-004J	Collected	11/18/2022 16:55
Lab Sample ID	3275102003	Lab Receipt	11/21/2022 16:10

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 08:25	PDK	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 08:25	PDK	A

### *SURROGATES*

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	85.3%	70 - 130	11/30/2022 08:25	
4-Bromofluorobenzene	460-00-4	88%	70 - 130	11/30/2022 08:25	



## Results

Client Sample ID	DW-004K	Collected	11/18/2022 16:54
Lab Sample ID	3275102004	Lab Receipt	11/21/2022 16:10

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,2-Dichloroethane	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 08:51	PDK	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	11/30/2022 08:51	PDK	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	11/30/2022 08:51	PDK	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	11/30/2022 08:51	PDK	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	11/30/2022 08:51	PDK	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	11/30/2022 08:51	PDK	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	11/30/2022 08:51	PDK	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 08:51	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	11/30/2022 08:51	PDK	A
Acetone	4.3J	J	ug/L	5.0	1.3	EPA 524.2	1	11/30/2022 08:51	PDK	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	11/30/2022 08:51	PDK	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 08:51	PDK	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 08:51	PDK	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 08:51	PDK	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	11/30/2022 08:51	PDK	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	11/30/2022 08:51	PDK	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	11/30/2022 08:51	PDK	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	11/30/2022 08:51	PDK	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 08:51	PDK	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	11/30/2022 08:51	PDK	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 08:51	PDK	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	11/30/2022 08:51	PDK	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	11/30/2022 08:51	PDK	A
Chloroform	ND	ND	ug/L	1.0	0.070	EPA 524.2	1	11/30/2022 08:51	PDK	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 08:51	PDK	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 08:51	PDK	A





## Results

Client Sample ID	DW-004K	Collected	11/18/2022 16:54
Lab Sample ID	3275102004	Lab Receipt	11/21/2022 16:10

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 08:51	PDK	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 08:51	PDK	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 08:51	PDK	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 08:51	PDK	A
Diisopropyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 08:51	PDK	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	11/30/2022 08:51	PDK	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 08:51	PDK	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	11/30/2022 08:51	PDK	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 08:51	PDK	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	11/30/2022 08:51	PDK	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	11/30/2022 08:51	PDK	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 08:51	PDK	A
Iodomethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 08:51	PDK	A
Isopropyl Alcohol	ND	ND	ug/L	25.0	1.4	EPA 524.2	1	11/30/2022 08:51	PDK	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	11/30/2022 08:51	PDK	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	11/30/2022 08:51	PDK	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	11/30/2022 08:51	PDK	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 08:51	PDK	A
Methyl t-Butyl Ether	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 08:51	PDK	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 08:51	PDK	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	11/30/2022 08:51	PDK	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	11/30/2022 08:51	PDK	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 08:51	PDK	A
Nitrobenzene	ND	ND	ug/L	5.0	3.1	EPA 524.2	1	11/30/2022 08:51	PDK	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 08:51	PDK	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	11/30/2022 08:51	PDK	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	11/30/2022 08:51	PDK	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	11/30/2022 08:51	PDK	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 08:51	PDK	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 08:51	PDK	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	11/30/2022 08:51	PDK	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	11/30/2022 08:51	PDK	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 08:51	PDK	A
tert-Amyl Alcohol	ND	ND	ug/L	5.0	0.52	EPA 524.2	1	11/30/2022 08:51	PDK	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 08:51	PDK	A
tert-Amyl methyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 08:51	PDK	A
tert-Butyl Alcohol	9.0		ug/L	5.0	1.4	EPA 524.2	1	11/30/2022 08:51	PDK	A
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 08:51	PDK	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	11/30/2022 08:51	PDK	A
Tetrahydrofuran	5.8		ug/L	2.5	0.43	EPA 524.2	1	11/30/2022 08:51	PDK	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 08:51	PDK	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	11/30/2022 08:51	PDK	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 08:51	PDK	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 08:51	PDK	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	11/30/2022 08:51	PDK	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 08:51	PDK	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	11/30/2022 08:51	PDK	A



## Results

Client Sample ID	DW-004K	Collected	11/18/2022 16:54
Lab Sample ID	3275102004	Lab Receipt	11/21/2022 16:10

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 08:51	PDK	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 08:51	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	97.7%	70 - 130	11/30/2022 08:51	
4-Bromofluorobenzene	460-00-4	88%	70 - 130	11/30/2022 08:51	



## Results

Client Sample ID	TB-002	Collected	11/18/2022 00:00
Lab Sample ID	3275102005	Lab Receipt	11/21/2022 16:10

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,2-Dichloroethane	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 07:59	PDK	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	11/30/2022 07:59	PDK	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	11/30/2022 07:59	PDK	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	11/30/2022 07:59	PDK	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	11/30/2022 07:59	PDK	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	11/30/2022 07:59	PDK	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	11/30/2022 07:59	PDK	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 07:59	PDK	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	11/30/2022 07:59	PDK	A
Acetone	761		ug/L	50.0	12.9	EPA 524.2	10	11/30/2022 14:08	TMP	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	11/30/2022 07:59	PDK	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 07:59	PDK	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 07:59	PDK	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	11/30/2022 07:59	PDK	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	11/30/2022 07:59	PDK	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	11/30/2022 07:59	PDK	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	11/30/2022 07:59	PDK	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	11/30/2022 07:59	PDK	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 07:59	PDK	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	11/30/2022 07:59	PDK	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 07:59	PDK	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	11/30/2022 07:59	PDK	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	11/30/2022 07:59	PDK	A
Chloroform	0.20J	J	ug/L	1.0	0.070	EPA 524.2	1	11/30/2022 07:59	PDK	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 07:59	PDK	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 07:59	PDK	A



## Results

Client Sample ID	TB-002	Collected	11/18/2022 00:00
Lab Sample ID	3275102005	Lab Receipt	11/21/2022 16:10

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 07:59	PDK	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 07:59	PDK	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 07:59	PDK	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 07:59	PDK	A
Diisopropyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 07:59	PDK	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	11/30/2022 07:59	PDK	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 07:59	PDK	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	11/30/2022 07:59	PDK	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 07:59	PDK	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	11/30/2022 07:59	PDK	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	11/30/2022 07:59	PDK	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	11/30/2022 07:59	PDK	A
Iodomethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 07:59	PDK	A
Isopropyl Alcohol	ND	ND	ug/L	25.0	1.4	EPA 524.2	1	11/30/2022 07:59	PDK	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	11/30/2022 07:59	PDK	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	11/30/2022 07:59	PDK	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	11/30/2022 07:59	PDK	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 07:59	PDK	A
Methyl t-Butyl Ether	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	11/30/2022 07:59	PDK	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 07:59	PDK	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	11/30/2022 07:59	PDK	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	11/30/2022 07:59	PDK	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 07:59	PDK	A
Nitrobenzene	ND	ND	ug/L	5.0	3.1	EPA 524.2	1	11/30/2022 07:59	PDK	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 07:59	PDK	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	11/30/2022 07:59	PDK	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	11/30/2022 07:59	PDK	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	11/30/2022 07:59	PDK	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	11/30/2022 07:59	PDK	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 07:59	PDK	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	11/30/2022 07:59	PDK	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	11/30/2022 07:59	PDK	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	11/30/2022 07:59	PDK	A
tert-Amyl Alcohol	ND	ND	ug/L	5.0	0.52	EPA 524.2	1	11/30/2022 07:59	PDK	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 07:59	PDK	A
tert-Amyl methyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 07:59	PDK	A
tert-Butyl Alcohol	ND	ND	ug/L	5.0	1.4	EPA 524.2	1	11/30/2022 07:59	PDK	A
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	11/30/2022 07:59	PDK	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	11/30/2022 07:59	PDK	A
Tetrahydrofuran	ND	ND	ug/L	2.5	0.43	EPA 524.2	1	11/30/2022 07:59	PDK	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 07:59	PDK	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	11/30/2022 07:59	PDK	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	11/30/2022 07:59	PDK	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 07:59	PDK	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	11/30/2022 07:59	PDK	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	11/30/2022 07:59	PDK	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	11/30/2022 07:59	PDK	A



## Results

Client Sample ID	TB-002	Collected	11/18/2022 00:00
Lab Sample ID	3275102005	Lab Receipt	11/21/2022 16:10

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 07:59	PDK	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	11/30/2022 07:59	PDK	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	84.4%	70 - 130	11/30/2022 07:59	
1,2-Dichlorobenzene-d4	2199-69-1	86.5%	70 - 130	11/30/2022 14:08	
4-Bromofluorobenzene	460-00-4	88.4%	70 - 130	11/30/2022 07:59	
4-Bromofluorobenzene	460-00-4	85.9%	70 - 130	11/30/2022 14:08	



### Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3275102001	DW-004C	EPA 524.2	N/A	
		EPA 524.2	N/A	
3275102002	DW-004I	EPA 524.2	N/A	
		EPA 524.2	N/A	
3275102003	DW-004J	EPA 524.2	N/A	
3275102004	DW-004K	EPA 524.2	N/A	
3275102005	TB-002	EPA 524.2	N/A	
		EPA 524.2	N/A	



### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3275102001	DW-004C	N/A	N/A	N/A		EPA 524.2	914299
		N/A	N/A	N/A		EPA 524.2	914522
3275102002	DW-004I	N/A	N/A	N/A		EPA 524.2	914299
		N/A	N/A	N/A		EPA 524.2	914522
3275102003	DW-004J	N/A	N/A	N/A		EPA 524.2	914299
3275102004	DW-004K	N/A	N/A	N/A		EPA 524.2	914299
3275102005	TB-002	N/A	N/A	N/A		EPA 524.2	914299
		N/A	N/A	N/A		EPA 524.2	914522



301 Fulling Mill Rd  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

**CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS**  
**ALL SHADED AREAS MUST BE COMPLETED BY  
SAMPLER. INSTRUCTIONS ON THE BA**



3275102

Logged By: SLS  
PH: SJB



? 75102  
#: 40-894102

Client Name: REPSG Inc.		Container Type	VOA		
Address: 6901 Kingessing Avenue Philadelphia, PA 19142		Container Size	40mL		
Contact: James Manuel		Preservative	ASC/HCL		
Phone#: 215-729-3220		ANALYSES/METHOD REQUESTED			
Project Name#: Calvert Cito/5977.130.01					
Bill To: REPSG Inc.					
TAT <input checked="" type="checkbox"/> Normal-Standard TAT is 10-12 business days. <input type="checkbox"/> Rush-Subject to ALS approval and surcharges.					
Date Required: Approved?					
Email? <input checked="" type="checkbox"/> -Y jmanuel@repsg.com					
Fax? <input type="checkbox"/> -Y No.:					
Sample Description/Location (as it will appear on the lab report)		Date Collected mm/dd/yy	Time hh:mm	Matrix	Enter Number of Contai
1 DW-004C		11/18/22	1650	G DW	4
2 DW-004I		11/18/22	1652	G DW	4
3 DW-004J		11/18/22	1655	G DW	4
4 DW-004K		11/18/22	1654	G DW	4
5 TB-001 TB-002		11/18/22	-	G DW	3
6					
7					
8					
9					
10					

Temp Taken By: SLS  
WO Temp (°C): 570  
Therm ID: BLP  
Receipt Info Completed by: Y N NA  
Cooler Custody Seal Intact: Y N NA  
Sample Custody Seal Intact: Y N NA  
Received on Ice: Y N NA  
Cooler & Samples Intact: Y N NA  
Correct Containers Provided: Y N NA  
Sample Label/COC Agree: Y N NA  
Adequate Sample Volumes: Y N NA  
VOA Headspace Present: Y N NA  
VOA Trip Blank: Y N NA  
NUS 4 Days? Y N NA  
Rad Screen (uCi): Y N NA  
Courier/Tracking #: NO SAMPLER

ALS Field Services:  Pickup  Labor  
 Composite Sampling  Rental Equipment  
Other:

Receipt Information (completed by Receiving Lab)  
W.O. Temp: 1 Therm ID: 570  
Courier/Tracking #: 23348  
Purchase Order #: 23348  
Project Comments:

Temp Taken By: SLS  
WO Temp (°C): 570  
Therm ID: BLP  
Receipt Info Completed by: Y N NA  
Cooler Custody Seal Intact: Y N NA  
Sample Custody Seal Intact: Y N NA  
Received on Ice: Y N NA  
Cooler & Samples Intact: Y N NA  
Correct Containers Provided: Y N NA  
Sample Label/COC Agree: Y N NA  
Adequate Sample Volumes: Y N NA  
VOA Headspace Present: Y N NA  
VOA Trip Blank: Y N NA  
NUS 4 Days? Y N NA  
Rad Screen (uCi): Y N NA  
Courier/Tracking #: NO SAMPLER

SDWA Compliance: Y N  
PWSID: Y N NA  
WV Containers, 0-6°C: Y N NA

SAMPLER COMMENTS:	Data		Special Processing		State	
	<input checked="" type="checkbox"/> Standard	<input type="checkbox"/> CLP-like	USACE	USACE	NY	NY
	<input type="checkbox"/> USACE/DOD		Navy		NJ	NJ
	Reportable to PADEP?		Sample Disposal		PA	
	Yes <input type="checkbox"/> No <input type="checkbox"/>		Lab <input checked="" type="checkbox"/>		NC	
	PWSID #		Special		MD	
	EDDS: Format Type- REPSG EQUIS		other		other	





301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | [www.alsglobal.com](http://www.alsglobal.com)

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618  
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For

**REPSG**

Project 2022 Calvert Citgo/5977.130.01  
Workorder 3279297  
Report ID 215742 on 12/28/2022

**Certificate of Analysis**

Enclosed are the analytical results for samples received by the laboratory on Dec 16, 2022.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

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ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):

- Natalie Griffith - REPSG
- Brenda Kellogg - REPSG
- James Manuel - REPSG
- Jonathan Singh - REPSG
- Jonathan Wallace - REPSG
- Melissa Keogh - REPSG

*Susan Scherer*

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



## Sample Summary

<u>Lab ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>	<u>Collector</u>	<u>Collection Company</u>
3279297001	DW-004C	Drinking Water	12/15/2022 17:07	12/16/2022 20:30	CBC	Collected By Client
3279297002	DW-004I	Drinking Water	12/15/2022 17:10	12/16/2022 20:30	CBC	Collected By Client
3279297003	DW-004J	Drinking Water	12/15/2022 17:05	12/16/2022 20:30	CBC	Collected By Client
3279297004	DW-004K	Drinking Water	12/15/2022 17:12	12/16/2022 20:30	CBC	Collected By Client
3279297005	TB-001	Drinking Water	12/15/2022 17:14	12/16/2022 20:30	CBC	Collected By Client



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## Reference

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### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

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### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

---



**Project Notations**

**Sample Notations**

**Lab ID**      **Sample ID**

**Result Notations**

**Notation Ref.**

- |   |   |
|---|---|
| 1 | The QC sample type LCS for method EPA 524.2 was outside the control limits for the analyte Iodomethane. The % Recovery was reported as 52.6 and the control limits were 70 to 130.  |
| 2 | Iodomethane was recovered below the 30% 524 CCV limit.  |
| 3 | Nitrobenzene was recovered below the 30% 524 CCV limit.   |
| 4 | The chlorine analysis is an "analyze immediately" analysis. Parameters identified as "analyze immediately" require analysis within 15 minutes of collection, and are therefore analyzed outside of the method holding time when analyzed in the laboratory. |



### Detected Results Summary

Client Sample ID	DW-004C	Collected	12/15/2022 17:07
Lab Sample ID	3279297001	Lab Receipt	12/16/2022 20:30

Compound	Result	Units	RDL	MDL	Method	Flag
<b>VOLATILE ORGANICS</b>						
1,2-Dichloroethane	10.6	ug/L	0.50	0.10	EPA 524.2	#
Acetone	15.3	ug/L	5.0	1.3	EPA 524.2	#
Diisopropyl ether	4.7	ug/L	0.50	0.080	EPA 524.2	#
Methyl t-Butyl Ether	223	ug/L	10.0	1.2	EPA 524.2	#
tert-Amyl Alcohol	103	ug/L	5.0	0.52	EPA 524.2	#
tert-Amyl methyl ether	2.0	ug/L	0.50	0.080	EPA 524.2	#
tert-Butyl Alcohol	2290	ug/L	100	27.2	EPA 524.2	#
<b>WET CHEMISTRY</b>						
Chlorine, Total Residual	0.24	mg/L	0.10	0.06	SM4500-Cl G-2011	#



### Detected Results Summary

Client Sample ID	DW-0041	Collected	12/15/2022 17:10
Lab Sample ID	3279297002	Lab Receipt	12/16/2022 20:30

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>MDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>						
Acetone	20.0	ug/L	5.0	1.3	EPA 524.2	#
tert-Butyl Alcohol	2500	ug/L	100	27.2	EPA 524.2	#



### Detected Results Summary

Client Sample ID	DW-004J	Collected	12/15/2022 17:05
Lab Sample ID	3279297003	Lab Receipt	12/16/2022 20:30

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>MDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>						
Acetone	4.7J	ug/L	5.0	1.3	EPA 524.2	#
tert-Butyl Alcohol	422	ug/L	50.0	13.6	EPA 524.2	#



### Detected Results Summary

Client Sample ID	DW-004K	Collected	12/15/2022 17:12
Lab Sample ID	3279297004	Lab Receipt	12/16/2022 20:30

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>MDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>						
Isopropyl Alcohol	39.8	ug/L	25.0	1.4	EPA 524.2	#
tert-Butyl Alcohol	12.8	ug/L	5.0	1.4	EPA 524.2	#





### Detected Results Summary

Client Sample ID	TB-001	Collected	12/15/2022 17:14
Lab Sample ID	3279297005	Lab Receipt	12/16/2022 20:30

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>MDL</u>	<u>Method</u>	<u>Flag</u>
<b>VOLATILE ORGANICS</b>						
Acetone	961	ug/L	50.0	12.9	EPA 524.2	#
Chloroform	0.41J	ug/L	1.0	0.070	EPA 524.2	#



## Results

Client Sample ID	DW-004C	Collected	12/15/2022 17:07
Lab Sample ID	3279297001	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,2-Dichloroethane	10.6		ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 19:20	TMP	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	12/20/2022 19:20	TMP	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 19:20	TMP	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 19:20	TMP	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	12/20/2022 19:20	TMP	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	12/20/2022 19:20	TMP	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	12/20/2022 19:20	TMP	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 19:20	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	12/20/2022 19:20	TMP	A
Acetone	15.3		ug/L	5.0	1.3	EPA 524.2	1	12/20/2022 19:20	TMP	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	12/20/2022 19:20	TMP	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 19:20	TMP	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 19:20	TMP	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 19:20	TMP	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 19:20	TMP	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	12/20/2022 19:20	TMP	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	12/20/2022 19:20	TMP	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 19:20	TMP	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 19:20	TMP	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	12/20/2022 19:20	TMP	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 19:20	TMP	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 19:20	TMP	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 19:20	TMP	A
Chloroform	ND	ND	ug/L	1.0	0.070	EPA 524.2	1	12/20/2022 19:20	TMP	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 19:20	TMP	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 19:20	TMP	A



## Results

Client Sample ID	DW-004C	Collected	12/15/2022 17:07
Lab Sample ID	3279297001	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 19:20	TMP	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 19:20	TMP	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 19:20	TMP	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 19:20	TMP	A
Diisopropyl ether	4.7		ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 19:20	TMP	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 19:20	TMP	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 19:20	TMP	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 19:20	TMP	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 19:20	TMP	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	12/20/2022 19:20	TMP	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 19:20	TMP	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 19:20	TMP	A
Iodomethane	ND	ND,1,2	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 19:20	TMP	A
Isopropyl Alcohol	ND	ND	ug/L	25.0	1.4	EPA 524.2	1	12/20/2022 19:20	TMP	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 19:20	TMP	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 19:20	TMP	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	12/20/2022 19:20	TMP	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 19:20	TMP	A
Methyl t-Butyl Ether	223		ug/L	10.0	1.2	EPA 524.2	20	12/24/2022 04:45	PDK	B
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 19:20	TMP	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	12/20/2022 19:20	TMP	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 19:20	TMP	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 19:20	TMP	A
Nitrobenzene	ND	ND,3	ug/L	5.0	3.1	EPA 524.2	1	12/20/2022 19:20	TMP	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 19:20	TMP	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 19:20	TMP	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	12/20/2022 19:20	TMP	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 19:20	TMP	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 19:20	TMP	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 19:20	TMP	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	12/20/2022 19:20	TMP	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 19:20	TMP	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 19:20	TMP	A
tert-Amyl Alcohol	103		ug/L	5.0	0.52	EPA 524.2	1	12/20/2022 19:20	TMP	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 19:20	TMP	A
tert-Amyl methyl ether	2.0		ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 19:20	TMP	A
tert-Butyl Alcohol	2290		ug/L	100	27.2	EPA 524.2	20	12/24/2022 04:45	PDK	B
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 19:20	TMP	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	12/20/2022 19:20	TMP	A
Tetrahydrofuran	ND	ND	ug/L	2.5	0.43	EPA 524.2	1	12/20/2022 19:20	TMP	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 19:20	TMP	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	12/20/2022 19:20	TMP	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 19:20	TMP	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 19:20	TMP	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 19:20	TMP	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 19:20	TMP	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 19:20	TMP	A



## Results

Client Sample ID	DW-004C	Collected	12/15/2022 17:07
Lab Sample ID	3279297001	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 19:20	TMP	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 19:20	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	96.3%	70 - 130	12/20/2022 19:20	
1,2-Dichlorobenzene-d4	2199-69-1	98.5%	70 - 130	12/24/2022 04:45	
4-Bromofluorobenzene	460-00-4	93.8%	70 - 130	12/24/2022 04:45	
4-Bromofluorobenzene	460-00-4	90%	70 - 130	12/20/2022 19:20	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorine, Total Residual	0.24	4	mg/L	0.10	0.06	SM4500-Cl G-2011	1	12/17/2022 05:05	NRB	E



## Results

Client Sample ID	DW-0041	Collected	12/15/2022 17:10
Lab Sample ID	3279297002	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,2-Dichloroethane	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 19:46	TMP	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	12/20/2022 19:46	TMP	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 19:46	TMP	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 19:46	TMP	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	12/20/2022 19:46	TMP	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	12/20/2022 19:46	TMP	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	12/20/2022 19:46	TMP	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 19:46	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	12/20/2022 19:46	TMP	A
Acetone	20.0		ug/L	5.0	1.3	EPA 524.2	1	12/20/2022 19:46	TMP	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	12/20/2022 19:46	TMP	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 19:46	TMP	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 19:46	TMP	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 19:46	TMP	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 19:46	TMP	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	12/20/2022 19:46	TMP	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	12/20/2022 19:46	TMP	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 19:46	TMP	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 19:46	TMP	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	12/20/2022 19:46	TMP	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 19:46	TMP	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 19:46	TMP	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 19:46	TMP	A
Chloroform	ND	ND	ug/L	1.0	0.070	EPA 524.2	1	12/20/2022 19:46	TMP	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 19:46	TMP	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 19:46	TMP	A



## Results

Client Sample ID	DW-0041	Collected	12/15/2022 17:10
Lab Sample ID	3279297002	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 19:46	TMP	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 19:46	TMP	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 19:46	TMP	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 19:46	TMP	A
Diisopropyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 19:46	TMP	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 19:46	TMP	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 19:46	TMP	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 19:46	TMP	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 19:46	TMP	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	12/20/2022 19:46	TMP	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 19:46	TMP	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 19:46	TMP	A
Iodomethane	ND	ND,1,2	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 19:46	TMP	A
Isopropyl Alcohol	ND	ND	ug/L	25.0	1.4	EPA 524.2	1	12/20/2022 19:46	TMP	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 19:46	TMP	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 19:46	TMP	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	12/20/2022 19:46	TMP	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 19:46	TMP	A
Methyl t-Butyl Ether	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 19:46	TMP	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 19:46	TMP	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	12/20/2022 19:46	TMP	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 19:46	TMP	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 19:46	TMP	A
Nitrobenzene	ND	ND,3	ug/L	5.0	3.1	EPA 524.2	1	12/20/2022 19:46	TMP	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 19:46	TMP	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 19:46	TMP	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	12/20/2022 19:46	TMP	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 19:46	TMP	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 19:46	TMP	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 19:46	TMP	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	12/20/2022 19:46	TMP	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 19:46	TMP	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 19:46	TMP	A
tert-Amyl Alcohol	ND	ND	ug/L	5.0	0.52	EPA 524.2	1	12/20/2022 19:46	TMP	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 19:46	TMP	A
tert-Amyl methyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 19:46	TMP	A
tert-Butyl Alcohol	2500		ug/L	100	27.2	EPA 524.2	20	12/24/2022 05:11	PDK	B
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 19:46	TMP	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	12/20/2022 19:46	TMP	A
Tetrahydrofuran	ND	ND	ug/L	2.5	0.43	EPA 524.2	1	12/20/2022 19:46	TMP	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 19:46	TMP	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	12/20/2022 19:46	TMP	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 19:46	TMP	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 19:46	TMP	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 19:46	TMP	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 19:46	TMP	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 19:46	TMP	A



## Results

Client Sample ID	DW-0041	Collected	12/15/2022 17:10
Lab Sample ID	3279297002	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 19:46	TMP	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 19:46	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	97.4%	70 - 130	12/20/2022 19:46	
1,2-Dichlorobenzene-d4	2199-69-1	98.9%	70 - 130	12/24/2022 05:11	
4-Bromofluorobenzene	460-00-4	90.5%	70 - 130	12/20/2022 19:46	
4-Bromofluorobenzene	460-00-4	95%	70 - 130	12/24/2022 05:11	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorine, Total Residual	ND	ND,4	mg/L	0.10	0.06	SM4500-Cl G-2011	1	12/17/2022 05:05	NRB	E



## Results

Client Sample ID	DW-004J	Collected	12/15/2022 17:05
Lab Sample ID	3279297003	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,2-Dichloroethane	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:28	TMP	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	12/20/2022 18:28	TMP	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 18:28	TMP	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 18:28	TMP	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	12/20/2022 18:28	TMP	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	12/20/2022 18:28	TMP	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	12/20/2022 18:28	TMP	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:28	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	12/20/2022 18:28	TMP	A
Acetone	4.7J	J	ug/L	5.0	1.3	EPA 524.2	1	12/20/2022 18:28	TMP	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	12/20/2022 18:28	TMP	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 18:28	TMP	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 18:28	TMP	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 18:28	TMP	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 18:28	TMP	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	12/20/2022 18:28	TMP	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	12/20/2022 18:28	TMP	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 18:28	TMP	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:28	TMP	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	12/20/2022 18:28	TMP	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 18:28	TMP	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 18:28	TMP	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 18:28	TMP	A
Chloroform	ND	ND	ug/L	1.0	0.070	EPA 524.2	1	12/20/2022 18:28	TMP	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:28	TMP	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 18:28	TMP	A





## Results

Client Sample ID	DW-004J	Collected	12/15/2022 17:05
Lab Sample ID	3279297003	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:28	TMP	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 18:28	TMP	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:28	TMP	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 18:28	TMP	A
Diisopropyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:28	TMP	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 18:28	TMP	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 18:28	TMP	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 18:28	TMP	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:28	TMP	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	12/20/2022 18:28	TMP	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 18:28	TMP	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 18:28	TMP	A
Iodomethane	ND	ND,1,2	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 18:28	TMP	A
Isopropyl Alcohol	ND	ND	ug/L	25.0	1.4	EPA 524.2	1	12/20/2022 18:28	TMP	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 18:28	TMP	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 18:28	TMP	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	12/20/2022 18:28	TMP	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 18:28	TMP	A
Methyl t-Butyl Ether	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 18:28	TMP	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 18:28	TMP	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	12/20/2022 18:28	TMP	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 18:28	TMP	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:28	TMP	A
Nitrobenzene	ND	ND,3	ug/L	5.0	3.1	EPA 524.2	1	12/20/2022 18:28	TMP	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:28	TMP	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 18:28	TMP	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	12/20/2022 18:28	TMP	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 18:28	TMP	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 18:28	TMP	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:28	TMP	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	12/20/2022 18:28	TMP	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 18:28	TMP	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 18:28	TMP	A
tert-Amyl Alcohol	ND	ND	ug/L	5.0	0.52	EPA 524.2	1	12/20/2022 18:28	TMP	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 18:28	TMP	A
tert-Amyl methyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:28	TMP	A
tert-Butyl Alcohol	422		ug/L	50.0	13.6	EPA 524.2	10	12/24/2022 03:00	PDK	B
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:28	TMP	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	12/20/2022 18:28	TMP	A
Tetrahydrofuran	ND	ND	ug/L	2.5	0.43	EPA 524.2	1	12/20/2022 18:28	TMP	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:28	TMP	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	12/20/2022 18:28	TMP	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 18:28	TMP	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:28	TMP	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 18:28	TMP	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:28	TMP	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 18:28	TMP	A



## Results

Client Sample ID	DW-004J	Collected	12/15/2022 17:05
Lab Sample ID	3279297003	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:28	TMP	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:28	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	97%	70 - 130	12/20/2022 18:28	
1,2-Dichlorobenzene-d4	2199-69-1	93.6%	70 - 130	12/24/2022 03:00	
4-Bromofluorobenzene	460-00-4	92.2%	70 - 130	12/20/2022 18:28	
4-Bromofluorobenzene	460-00-4	93.4%	70 - 130	12/24/2022 03:00	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorine, Total Residual	ND	ND,4	mg/L	0.10	0.06	SM4500-Cl G-2011	1	12/17/2022 05:05	NRB	E



## Results

Client Sample ID	DW-004K	Collected	12/15/2022 17:12
Lab Sample ID	3279297004	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,2-Dichloroethane	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:54	TMP	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	12/20/2022 18:54	TMP	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 18:54	TMP	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 18:54	TMP	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	12/20/2022 18:54	TMP	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	12/20/2022 18:54	TMP	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	12/20/2022 18:54	TMP	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:54	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	12/20/2022 18:54	TMP	A
Acetone	ND	ND	ug/L	5.0	1.3	EPA 524.2	1	12/20/2022 18:54	TMP	A
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	12/20/2022 18:54	TMP	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 18:54	TMP	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 18:54	TMP	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 18:54	TMP	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 18:54	TMP	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	12/20/2022 18:54	TMP	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	12/20/2022 18:54	TMP	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 18:54	TMP	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:54	TMP	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	12/20/2022 18:54	TMP	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 18:54	TMP	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 18:54	TMP	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 18:54	TMP	A
Chloroform	ND	ND	ug/L	1.0	0.070	EPA 524.2	1	12/20/2022 18:54	TMP	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:54	TMP	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 18:54	TMP	A



## Results

Client Sample ID	DW-004K	Collected	12/15/2022 17:12
Lab Sample ID	3279297004	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:54	TMP	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 18:54	TMP	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:54	TMP	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 18:54	TMP	A
Diisopropyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:54	TMP	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 18:54	TMP	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 18:54	TMP	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 18:54	TMP	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:54	TMP	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	12/20/2022 18:54	TMP	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 18:54	TMP	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 18:54	TMP	A
Iodomethane	ND	ND,1,2	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 18:54	TMP	A
Isopropyl Alcohol	39.8		ug/L	25.0	1.4	EPA 524.2	1	12/20/2022 18:54	TMP	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 18:54	TMP	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 18:54	TMP	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	12/20/2022 18:54	TMP	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 18:54	TMP	A
Methyl t-Butyl Ether	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 18:54	TMP	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 18:54	TMP	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	12/20/2022 18:54	TMP	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 18:54	TMP	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:54	TMP	A
Nitrobenzene	ND	ND,3	ug/L	5.0	3.1	EPA 524.2	1	12/20/2022 18:54	TMP	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:54	TMP	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 18:54	TMP	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	12/20/2022 18:54	TMP	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 18:54	TMP	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 18:54	TMP	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:54	TMP	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	12/20/2022 18:54	TMP	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 18:54	TMP	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 18:54	TMP	A
tert-Amyl Alcohol	ND	ND	ug/L	5.0	0.52	EPA 524.2	1	12/20/2022 18:54	TMP	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 18:54	TMP	A
tert-Amyl methyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:54	TMP	A
tert-Butyl Alcohol	12.8		ug/L	5.0	1.4	EPA 524.2	1	12/20/2022 18:54	TMP	A
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 18:54	TMP	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	12/20/2022 18:54	TMP	A
Tetrahydrofuran	ND	ND	ug/L	2.5	0.43	EPA 524.2	1	12/20/2022 18:54	TMP	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:54	TMP	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	12/20/2022 18:54	TMP	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 18:54	TMP	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:54	TMP	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 18:54	TMP	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 18:54	TMP	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 18:54	TMP	A



## Results

Client Sample ID	DW-004K	Collected	12/15/2022 17:12
Lab Sample ID	3279297004	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:54	TMP	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 18:54	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	98.8%	70 - 130	12/20/2022 18:54	
4-Bromofluorobenzene	460-00-4	91.8%	70 - 130	12/20/2022 18:54	

### WET CHEMISTRY

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Chlorine, Total Residual	ND	ND,4	mg/L	0.10	0.06	SM4500-Cl G-2011	1	12/17/2022 05:05	NRB	E



## Results

Client Sample ID	TB-001	Collected	12/15/2022 17:14
Lab Sample ID	3279297005	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,1,1-Trichloroethane	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,1,2-Trichloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,1-Dichloro-2-Propanone	ND	ND	ug/L	12.5	1.6	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,1-Dichloroethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,1-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,1-Dichloropropene	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,2,3-Trichlorobenzene	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,2,3-Trichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,2,4-Trichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,2,4-Trimethylbenzene	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,2-Dibromoethane	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,2-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,2-Dichloroethane	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,2-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,3,5-Trimethylbenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,3-Dichlorobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,3-Dichloropropane	ND	ND	ug/L	0.50	0.090	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,3-Dichloropropene, Total	ND	ND	ug/L	1.0	0.13	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,4-Dichlorobenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 14:58	TMP	A
1,4-Dioxane	ND	ND	ug/L	25.0	18.3	EPA 524.2	1	12/20/2022 14:58	TMP	A
1-Chlorobutane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 14:58	TMP	A
2,2-Dichloropropane	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 14:58	TMP	A
2-Butanone	ND	ND	ug/L	2.5	0.31	EPA 524.2	1	12/20/2022 14:58	TMP	A
2-Hexanone	ND	ND	ug/L	2.5	0.65	EPA 524.2	1	12/20/2022 14:58	TMP	A
2-Nitropropane	ND	ND	ug/L	2.5	0.33	EPA 524.2	1	12/20/2022 14:58	TMP	A
3-Chloro-1-propene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 14:58	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	2.5	0.45	EPA 524.2	1	12/20/2022 14:58	TMP	A
Acetone	961		ug/L	50.0	12.9	EPA 524.2	10	12/24/2022 02:34	PDK	B
Acrylonitrile	ND	ND	ug/L	2.5	0.57	EPA 524.2	1	12/20/2022 14:58	TMP	A
Benzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 14:58	TMP	A
Bromobenzene	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 14:58	TMP	A
Bromochloromethane	ND	ND	ug/L	0.50	0.16	EPA 524.2	1	12/20/2022 14:58	TMP	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.080	EPA 524.2	1	12/20/2022 14:58	TMP	A
Bromoform	ND	ND	ug/L	1.0	0.12	EPA 524.2	1	12/20/2022 14:58	TMP	A
Bromomethane	ND	ND	ug/L	0.50	0.21	EPA 524.2	1	12/20/2022 14:58	TMP	A
Carbon Disulfide	ND	ND	ug/L	0.50	0.050	EPA 524.2	1	12/20/2022 14:58	TMP	A
Carbon Tetrachloride	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 14:58	TMP	A
Chloroacetonitrile	ND	ND	ug/L	2.5	1.2	EPA 524.2	1	12/20/2022 14:58	TMP	A
Chlorobenzene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 14:58	TMP	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 14:58	TMP	A
Chloroethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 14:58	TMP	A
Chloroform	0.41J	J	ug/L	1.0	0.070	EPA 524.2	1	12/20/2022 14:58	TMP	A
Chloromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 14:58	TMP	A
cis-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 14:58	TMP	A



## Results

Client Sample ID	TB-001	Collected	12/15/2022 17:14
Lab Sample ID	3279297005	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
cis-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 14:58	TMP	A
Dibromomethane	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 14:58	TMP	A
Dichlorodifluoromethane	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 14:58	TMP	A
Dichlorofluoromethane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 14:58	TMP	A
Diisopropyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 14:58	TMP	A
Ethyl Ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 14:58	TMP	A
Ethyl Methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 14:58	TMP	A
Ethyl tert-butyl ether	ND	ND	ug/L	0.50	0.12	EPA 524.2	1	12/20/2022 14:58	TMP	A
Ethylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 14:58	TMP	A
Hexachlorobutadiene	ND	ND	ug/L	0.50	0.32	EPA 524.2	1	12/20/2022 14:58	TMP	A
Hexachloroethane	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 14:58	TMP	A
Hexane	ND	ND	ug/L	0.50	0.20	EPA 524.2	1	12/20/2022 14:58	TMP	A
Iodomethane	ND	ND,1,2	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 14:58	TMP	A
Isopropyl Alcohol	ND	ND	ug/L	25.0	1.4	EPA 524.2	1	12/20/2022 14:58	TMP	A
Isopropylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 14:58	TMP	A
Methacrylonitrile	ND	ND	ug/L	1.0	0.090	EPA 524.2	1	12/20/2022 14:58	TMP	A
Methyl acrylate	ND	ND	ug/L	1.0	0.10	EPA 524.2	1	12/20/2022 14:58	TMP	A
Methyl methacrylate	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 14:58	TMP	A
Methyl t-Butyl Ether	ND	ND	ug/L	0.50	0.060	EPA 524.2	1	12/20/2022 14:58	TMP	A
Methylene Chloride	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 14:58	TMP	A
mp-Xylene	ND	ND	ug/L	0.25	0.23	EPA 524.2	1	12/20/2022 14:58	TMP	A
Naphthalene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 14:58	TMP	A
n-Butylbenzene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 14:58	TMP	A
Nitrobenzene	ND	ND,3	ug/L	5.0	3.1	EPA 524.2	1	12/20/2022 14:58	TMP	A
n-Propylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 14:58	TMP	A
o-Chlorotoluene	ND	ND	ug/L	0.50	0.11	EPA 524.2	1	12/20/2022 14:58	TMP	A
o-Xylene	ND	ND	ug/L	0.25	0.10	EPA 524.2	1	12/20/2022 14:58	TMP	A
p-Chlorotoluene	ND	ND	ug/L	0.50	0.17	EPA 524.2	1	12/20/2022 14:58	TMP	A
Pentachloroethane	ND	ND	ug/L	0.50	0.13	EPA 524.2	1	12/20/2022 14:58	TMP	A
p-Isopropyltoluene	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 14:58	TMP	A
Propionitrile	ND	ND	ug/L	2.5	0.50	EPA 524.2	1	12/20/2022 14:58	TMP	A
sec-Butylbenzene	ND	ND	ug/L	0.50	0.14	EPA 524.2	1	12/20/2022 14:58	TMP	A
Styrene	ND	ND	ug/L	0.50	0.10	EPA 524.2	1	12/20/2022 14:58	TMP	A
tert-Amyl Alcohol	ND	ND	ug/L	5.0	0.52	EPA 524.2	1	12/20/2022 14:58	TMP	A
tert-Amyl Ethylether	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 14:58	TMP	A
tert-Amyl methyl ether	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 14:58	TMP	A
tert-Butyl Alcohol	ND	ND	ug/L	5.0	1.4	EPA 524.2	1	12/20/2022 14:58	TMP	A
tert-Butylbenzene	ND	ND	ug/L	0.50	0.15	EPA 524.2	1	12/20/2022 14:58	TMP	A
Tetrachloroethene	ND	ND	ug/L	0.50	0.22	EPA 524.2	1	12/20/2022 14:58	TMP	A
Tetrahydrofuran	ND	ND	ug/L	2.5	0.43	EPA 524.2	1	12/20/2022 14:58	TMP	A
Toluene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 14:58	TMP	A
Total Xylenes	ND	ND	ug/L	0.50	0.33	EPA 524.2	1	12/20/2022 14:58	TMP	A
trans-1,2-Dichloroethene	ND	ND	ug/L	0.50	0.070	EPA 524.2	1	12/20/2022 14:58	TMP	A
trans-1,3-Dichloropropene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 14:58	TMP	A
trans-1,4-Dichloro-2-butene	ND	ND	ug/L	1.0	0.15	EPA 524.2	1	12/20/2022 14:58	TMP	A
Trichloroethene	ND	ND	ug/L	0.50	0.080	EPA 524.2	1	12/20/2022 14:58	TMP	A
Trichlorofluoromethane	ND	ND	ug/L	0.50	0.24	EPA 524.2	1	12/20/2022 14:58	TMP	A



## Results

Client Sample ID	TB-001	Collected	12/15/2022 17:14
Lab Sample ID	3279297005	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Vinyl Acetate	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 14:58	TMP	A
Vinyl Chloride	ND	ND	ug/L	0.50	0.19	EPA 524.2	1	12/20/2022 14:58	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichlorobenzene-d4	2199-69-1	95.8%	70 - 130	12/24/2022 02:34	
1,2-Dichlorobenzene-d4	2199-69-1	93.2%	70 - 130	12/20/2022 14:58	
4-Bromofluorobenzene	460-00-4	93.5%	70 - 130	12/24/2022 02:34	
4-Bromofluorobenzene	460-00-4	90.2%	70 - 130	12/20/2022 14:58	





### Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3279297001	DW-004C	EPA 524.2	N/A	
		EPA 524.2	N/A	
		SM4500-CI G-2011	N/A	
3279297002	DW-004I	EPA 524.2	N/A	
		EPA 524.2	N/A	
		SM4500-CI G-2011	N/A	
3279297003	DW-004J	EPA 524.2	N/A	
		EPA 524.2	N/A	
		SM4500-CI G-2011	N/A	
3279297004	DW-004K	EPA 524.2	N/A	
		SM4500-CI G-2011	N/A	
3279297005	TB-001	EPA 524.2	N/A	
		EPA 524.2	N/A	



**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3279297001	DW-004C	N/A	N/A	N/A		EPA 524.2	929810
		N/A	N/A	N/A		EPA 524.2	927297
		N/A	N/A	N/A		SM4500-CI G-2011	926594
3279297002	DW-004I	N/A	N/A	N/A		EPA 524.2	927297
		N/A	N/A	N/A		EPA 524.2	929810
		N/A	N/A	N/A		SM4500-CI G-2011	926594
3279297003	DW-004J	N/A	N/A	N/A		EPA 524.2	927297
		N/A	N/A	N/A		EPA 524.2	929810
		N/A	N/A	N/A		SM4500-CI G-2011	926594
3279297004	DW-004K	N/A	N/A	N/A		EPA 524.2	927297
		N/A	N/A	N/A		SM4500-CI G-2011	926594
3279297005	TB-001	N/A	N/A	N/A		EPA 524.2	929810
		N/A	N/A	N/A		EPA 524.2	927297



301 Fulling Mill Rd  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

**CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS**  
ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT  
SAMPLER. INSTRUCTIONS ON THE BACK.

3279297  
Logged By: SLS  
PM: SJB



297 of

Client Name: REPSG Inc.		Container Type	VOA	Poly	Sipt Information (completed by Receiving Lab)	
Address: 6901 Kingsessing Avenue Philadelphia, PA 19142		Container Size	40mL	250mL	W.O. Temp: 3°C Therm ID: TH576	
Contact: James Manuel		Preservative	ASC/HCL	UP	Courier/Tracking #: 23429	
Phone#: 215-729-3220		Project Comments:				
Project Name#: Calvert Citgo/6977		ANALYSES/METHOD REQUESTED				
Bill To: REPSG Inc.		Temp By: MSB W.O. Temp (°C) 3 Therm ID 576				
TAT <input checked="" type="checkbox"/> Normal-Standard TAT is 10-12 business days. <input type="checkbox"/> Rush-Subject to ALS approval and surcharges.		Receipt Info Completed By: AMRF Cooler Custody Seal Intact Y N NA Sample Custody Seal Intact Y N NA Received on Ice Y N NA Cooler & Samples Intact Y N NA Correct Containers Provided Y N NA Sample Label/COC Agree Y N NA Adequate Sample Volumes Y N NA CFC6 Samples Filtered Y N NA OP Samples Filtered Y N NA VOA Headspace Present Y N NA VOA Trip Blank Y N NA NLS 4 Days? Y N NA Rad Screen (uCi) Y N NA Courier/Tracking #: Y N NA SDWA Compliance Y N NA PWSID WV Containers 0-6°C Y N NA				
Date Required: Approved?		ALS Field Services: <input type="checkbox"/> Pickup <input type="checkbox"/> Labor <input type="checkbox"/> Composite Sampling <input type="checkbox"/> Rental Equipment Other:				
Email? <input checked="" type="checkbox"/> Y Jmanuel@repsg.com		Sample/COC Comments				
Fax? <input type="checkbox"/> Y No.:		Pre-Filtration				
Sample Description/Location (as it will appear on the lab report)		Date Collected mm/dd/yy	Time hh:mm	* Matrix	Enter Number of Contain	Mid-Carbon 1
1 DW-004C		12/15/22	1707	DW	4	Mid-Carbon 2
2 DW-004I		12/15/22	1710	DW	4	Post-Filtration
3 DW-004J		12/15/22	1705	DW	4	
4 DW-004K		12/15/22	1712	DW	4	
5 TB-001		12/15/22	1714	DW	4	
6						
7						
8						
9						
10						
SAMPLED BY (Please Print):		Data Deliverables				
Relinquished By / Company Name		Date	Time	Received By / Company Name	Date	Time
1 Ann Foley AND REPSA		12/16/22	1448	Paul Zimarewski ALS	12/16/22	1448
3		12/16/22	1625	ALS	12/16/22	1625
5 ALS		12/16/22	2030	Michelle	12/16/22	2030
7						
9						
Special Processing		Reportable to PADEP?		Sample Disposal		
<input checked="" type="checkbox"/> Standard <input type="checkbox"/> CLP-like <input type="checkbox"/> USACE/DOD		Yes <input type="checkbox"/> No <input type="checkbox"/>		Lab <input checked="" type="checkbox"/> Special <input type="checkbox"/>		
State Samples Collected In		PWSID #				
USACE <input type="checkbox"/> Navy <input type="checkbox"/> NJ <input type="checkbox"/> PA <input type="checkbox"/> NC <input type="checkbox"/> MD <input checked="" type="checkbox"/>		EDDS: Format Type- REPSG/EQUIS				
other						

2802 NORTHEAST ROAD  
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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For

**REPSG**

Project Calvert Citgo/5977.130.02  
Workorder 3269926  
Report ID 203712 on 10/28/2022

**Certificate of Analysis**

Enclosed are the analytical results for samples received by the laboratory on Oct 20, 2022.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

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ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):

- Natalie Griffith - REPSG
- Brenda Kellogg - REPSG
- James Manuel - REPSG
- Jonathan Singh - REPSG
- Jonathan Wallace - REPSG
- Melissa Keogh - REPSG

*Susan Scherer*

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



## Sample Summary

<u>Lab ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>	<u>Collector</u>	<u>Collection Company</u>
3269926001	EFF-001	Ground Water	10/19/2022 15:30	10/20/2022 21:30	CBC	Collected By Client



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## Reference

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### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

---

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

---





**Project** Calvert Citgo/5977.130.02  
**Workorder** 3269926

**Project Notations**

**Sample Notations**

**Lab ID**      **Sample ID**

**Result Notations**

**Notation Ref.**



### Detected Results Summary

Client Sample ID	EFF-001	Collected	10/19/2022 15:30
Lab Sample ID	3269926001	Lab Receipt	10/20/2022 21:30

Compound	Result	Units	RDL	MDL	Method	Flag
<b>GASOLINE RANGE ORGANICS</b>						
Gasoline Range Organics	43.7J	ug/L	100	17.0	SW846 8015D	#
<b>VOLATILE ORGANICS</b>						
Acetone	4.2J	ug/L	10.0	3.1	SW846 8260C	#
Bromomethane	0.63J	ug/L	1.0	0.39	SW846 8260C	#
Chloromethane	0.32J	ug/L	1.0	0.31	SW846 8260C	#
Methyl t-Butyl Ether	1.0	ug/L	1.0	0.33	SW846 8260C	#
tert-Amyl Alcohol	66.5	ug/L	10.0	6.6	SW846 8260C	#
tert-Butyl Alcohol	284	ug/L	10.0	2.2	SW846 8260C	#



## Results

Client Sample ID	EFF-001	Collected	10/19/2022 15:30
Lab Sample ID	3269926001	Lab Receipt	10/20/2022 21:30

### GASOLINE RANGE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Gasoline Range Organics	43.7J	J	ug/L	100	17.0	SW846 8015D	1	10/26/2022 08:56	CHS	D

#### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
a,a,a-Trifluorotoluene	98-08-8	120%	90 - 129	10/26/2022 08:56	

### PETROLEUM HC's

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Diesel Range Organics C10-C28	ND	ND	mg/L	0.16	0.030	SW846 8015D	1	10/27/2022 03:42	EGO	F

#### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
o-Terphenyl	84-15-1	87.8%	26 - 139	10/27/2022 03:42	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	10/25/2022 15:47	TMP	A
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	10/25/2022 15:47	TMP	A
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	10/25/2022 15:47	TMP	A
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	10/25/2022 15:47	TMP	A
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	10/25/2022 15:47	TMP	A
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	10/25/2022 15:47	TMP	A
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	10/25/2022 15:47	TMP	A
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	10/25/2022 15:47	TMP	A
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	10/25/2022 15:47	TMP	A
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	10/25/2022 15:47	TMP	A
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	10/25/2022 15:47	TMP	A
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	10/25/2022 15:47	TMP	A
Acetone	4.2J	J	ug/L	10.0	3.1	SW846 8260C	1	10/25/2022 15:47	TMP	A
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	10/25/2022 15:47	TMP	A
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	10/25/2022 15:47	TMP	A
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	10/25/2022 15:47	TMP	A
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	10/25/2022 15:47	TMP	A
Bromomethane	0.63J	J	ug/L	1.0	0.39	SW846 8260C	1	10/25/2022 15:47	TMP	A
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	10/25/2022 15:47	TMP	A
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	10/25/2022 15:47	TMP	A
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	10/25/2022 15:47	TMP	A
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	10/25/2022 15:47	TMP	A
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	10/25/2022 15:47	TMP	A
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	10/25/2022 15:47	TMP	A
Chloromethane	0.32J	J	ug/L	1.0	0.31	SW846 8260C	1	10/25/2022 15:47	TMP	A
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	10/25/2022 15:47	TMP	A
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	10/25/2022 15:47	TMP	A



## Results

Client Sample ID	EFF-001	Collected	10/19/2022 15:30
Lab Sample ID	3269926001	Lab Receipt	10/20/2022 21:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	10/25/2022 15:47	TMP	A
Dichlorofluoromethane	ND	ND	ug/L	1.0	0.37	SW846 8260C	1	10/25/2022 15:47	TMP	A
Diisopropyl ether	ND	ND	ug/L	1.0	0.25	SW846 8260C	1	10/25/2022 15:47	TMP	A
Ethyl tert-butyl ether	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	10/25/2022 15:47	TMP	A
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	10/25/2022 15:47	TMP	A
Methyl t-Butyl Ether	1.0		ug/L	1.0	0.33	SW846 8260C	1	10/25/2022 15:47	TMP	A
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	10/25/2022 15:47	TMP	A
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	10/25/2022 15:47	TMP	A
Naphthalene	ND	ND	ug/L	2.0	0.34	SW846 8260C	1	10/25/2022 15:47	TMP	A
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	10/25/2022 15:47	TMP	A
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	10/25/2022 15:47	TMP	A
tert-Amyl Alcohol	66.5		ug/L	10.0	6.6	SW846 8260C	1	10/25/2022 15:47	TMP	A
tert-Amyl Ethylether	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	10/25/2022 15:47	TMP	A
tert-Amyl methyl ether	ND	ND	ug/L	1.0	0.20	SW846 8260C	1	10/25/2022 15:47	TMP	A
tert-Butyl Alcohol	284		ug/L	10.0	2.2	SW846 8260C	1	10/25/2022 15:47	TMP	A
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	10/25/2022 15:47	TMP	A
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	10/25/2022 15:47	TMP	A
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	10/25/2022 15:47	TMP	A
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	10/25/2022 15:47	TMP	A
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	10/25/2022 15:47	TMP	A
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	10/25/2022 15:47	TMP	A
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	10/25/2022 15:47	TMP	A

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	106%	62 – 133	10/25/2022 15:47	
4-Bromofluorobenzene	460-00-4	112%	79 – 114	10/25/2022 15:47	
Dibromofluoromethane	1868-53-7	98%	78 – 116	10/25/2022 15:47	
Toluene-d8	2037-26-5	111%	76 – 127	10/25/2022 15:47	



**Sample - Method Cross Reference Table**

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3269926001	EFF-001	SW846 8015D	SW846 3510C	
		SW846 8015D	N/A	
		SW846 8260C	N/A	



### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3269926001	EFF-001	SW846 3510C	894579	10/26/2022 10:10	LDC	SW846 8015D	895074
		N/A	N/A	N/A		SW846 8015D	894574
		N/A	N/A	N/A		SW846 8260C	893892





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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For

**REPSG**

Project 2022 Calvert Citgo/5977.130.02  
Workorder 3275103  
Report ID 210785 on 12/5/2022

### Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Nov 21, 2022.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

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ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):

Natalie Griffith - REPSG  
Brenda Kellogg - REPSG  
James Manuel - REPSG  
Jonathan Singh - REPSG  
Jonathan Wallace - REPSG  
Melissa Keogh - REPSG

*Susan Scherer*

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



**Project** 2022 Calvert Citgo/5977.130.02

**Workorder** 3275103



## Sample Summary

<u>Lab ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>	<u>Collector</u>	<u>Collection Company</u>
3275103001	EFF-001	Ground Water	11/18/2022 18:10	11/21/2022 16:10	CBC	Collected By Client



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## Reference

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### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
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- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

---

### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
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PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
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MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

---



**Project** 2022 Calvert Citgo/5977.130.02  
**Workorder** 3275103

**Project Notations**

**Sample Notations**

**Lab ID**      **Sample ID**

**Result Notations**

**Notation Ref.**

1      The QC sample type LCS for method SW846 8260C was outside the control limits for the analyte Carbon Disulfide. The % Recovery was reported as 138 and the control limits were 57 to 131.



**Detected Results Summary**

Client Sample ID	EFF-001	Collected	11/18/2022 18:10
Lab Sample ID	3275103001	Lab Receipt	11/21/2022 16:10

<u>Compound</u>	<u>Result</u>	<u>Units</u>	<u>RDL</u>	<u>MDL</u>	<u>Method</u>	<u>Flag</u>
<b>GASOLINE RANGE ORGANICS</b>						
Gasoline Range Organics	37.0J	ug/L	100	17.0	SW846 8015D	#
<b>VOLATILE ORGANICS</b>						
Methyl t-Butyl Ether	2.4	ug/L	1.0	0.33	SW846 8260C	#
Naphthalene	3.3	ug/L	2.0	0.34	SW846 8260C	#
tert-Amyl Alcohol	139	ug/L	10.0	6.6	SW846 8260C	#
tert-Butyl Alcohol	197	ug/L	10.0	2.2	SW846 8260C	#



## Results

Client Sample ID	EFF-001	Collected	11/18/2022 18:10
Lab Sample ID	3275103001	Lab Receipt	11/21/2022 16:10

### GASOLINE RANGE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Gasoline Range Organics	37.0J	J	ug/L	100	17.0	SW846 8015D	1	11/23/2022 19:40	JTH	D

#### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
a,a,a-Trifluorotoluene	98-08-8	126%	90 - 129	11/23/2022 19:40	

### PETROLEUM HC's

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Diesel Range Organics C10-C28	ND	ND	mg/L	0.15	0.029	SW846 8015D	1	11/24/2022 00:27	KJH	F

#### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
o-Terphenyl	84-15-1	76%	26 - 139	11/24/2022 00:27	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	11/30/2022 03:33	PDK	D
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	11/30/2022 03:33	PDK	D
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	11/30/2022 03:33	PDK	D
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	11/30/2022 03:33	PDK	D
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	11/30/2022 03:33	PDK	D
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	11/30/2022 03:33	PDK	D
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	11/30/2022 03:33	PDK	D
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	11/30/2022 03:33	PDK	D
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	11/30/2022 03:33	PDK	D
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	11/30/2022 03:33	PDK	D
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	11/30/2022 03:33	PDK	D
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	11/30/2022 03:33	PDK	D
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	11/30/2022 03:33	PDK	D
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	11/30/2022 03:33	PDK	D
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	11/30/2022 03:33	PDK	D
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	11/30/2022 03:33	PDK	D
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	11/30/2022 03:33	PDK	D
Bromomethane	ND	ND	ug/L	1.0	0.39	SW846 8260C	1	11/30/2022 03:33	PDK	D
Carbon Disulfide	ND	ND,1	ug/L	1.0	0.23	SW846 8260C	1	11/30/2022 03:33	PDK	D
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	11/30/2022 03:33	PDK	D
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	11/30/2022 03:33	PDK	D
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	11/30/2022 03:33	PDK	D
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	11/30/2022 03:33	PDK	D
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	11/30/2022 03:33	PDK	D
Chloromethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	11/30/2022 03:33	PDK	D
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	11/30/2022 03:33	PDK	D
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	11/30/2022 03:33	PDK	D



## Results

Client Sample ID	EFF-001	Collected	11/18/2022 18:10
Lab Sample ID	3275103001	Lab Receipt	11/21/2022 16:10

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	11/30/2022 03:33	PDK	D
Dichlorofluoromethane	ND	ND	ug/L	1.0	0.37	SW846 8260C	1	11/30/2022 03:33	PDK	D
Diisopropyl ether	ND	ND	ug/L	1.0	0.25	SW846 8260C	1	11/30/2022 03:33	PDK	D
Ethyl tert-butyl ether	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	11/30/2022 03:33	PDK	D
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	11/30/2022 03:33	PDK	D
Methyl t-Butyl Ether	2.4		ug/L	1.0	0.33	SW846 8260C	1	11/30/2022 03:33	PDK	D
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	11/30/2022 03:33	PDK	D
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	11/30/2022 03:33	PDK	D
Naphthalene	3.3		ug/L	2.0	0.34	SW846 8260C	1	11/30/2022 03:33	PDK	D
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	11/30/2022 03:33	PDK	D
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	11/30/2022 03:33	PDK	D
tert-Amyl Alcohol	139		ug/L	10.0	6.6	SW846 8260C	1	11/30/2022 03:33	PDK	D
tert-Amyl Ethylether	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	11/30/2022 03:33	PDK	D
tert-Amyl methyl ether	ND	ND	ug/L	1.0	0.20	SW846 8260C	1	11/30/2022 03:33	PDK	D
tert-Butyl Alcohol	197		ug/L	10.0	2.2	SW846 8260C	1	11/30/2022 03:33	PDK	D
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	11/30/2022 03:33	PDK	D
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	11/30/2022 03:33	PDK	D
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	11/30/2022 03:33	PDK	D
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	11/30/2022 03:33	PDK	D
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	11/30/2022 03:33	PDK	D
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	11/30/2022 03:33	PDK	D
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	11/30/2022 03:33	PDK	D

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	94.8%	62 - 133	11/30/2022 03:33	
4-Bromofluorobenzene	460-00-4	110%	79 - 114	11/30/2022 03:33	
Dibromofluoromethane	1868-53-7	98.6%	78 - 116	11/30/2022 03:33	
Toluene-d8	2037-26-5	104%	76 - 127	11/30/2022 03:33	



### Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3275103001	EFF-001	SW846 8015D	SW846 3510C	
		SW846 8015D	N/A	
		SW846 8260C	N/A	



**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3275103001	EFF-001	SW846 3510C	911956	11/22/2022 16:45	AJW	SW846 8015D	912350
		N/A	N/A	N/A		SW846 8015D	912325
		N/A	N/A	N/A		SW846 8260C	914395





301 Fulling Mill Rd  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

**CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS**  
**ALL SHADED AREAS MUST BE COMPLETED BY THE  
SAMPLER. INSTRUCTIONS ON THE BAG**

3275103  
Logged By: SLS  
PH: SJB

275103 of  
#: 40-894102

**Client Name:** REPSG Inc.  
**Address:** 6901 Kingsessing Avenue  
Philadelphia, PA 19142  
**Contact:** James Manuel  
**Phone#:** 215-729-3220  
**Project Name#:** Calvert Citgo/5977.130.02  
**Bill To:** REPSG Inc.

**TAT**  Normal-Standard TAT is 10-12 business days.  
 Rush-Subject to ALS approval and surcharges.  
**Date Required:**  -Y jmanuel@repsg.com  
 -Y No.:

Sample Description/Location (as it will appear on the lab report)	Date Collected		Time hh:mm	Matrix	G or C	Enter Number of Containers Per Sample or Field Results Below.	
	mm/dd/yy	mm/dd/yy				TPH-GRO	TPH-DRO
1 EFF-001	11/18/22	11/18/22	16:10	G	GW	3	2
2							
3							
4							
5							
6							
7							
8							
9							
10							

**VOCs via 8260 & fuel oxygenates**

**Temp Taken By:** SLS  
**WO Temp (°C):** 570  
**Therm ID:** BLP  
**Receipt Info Completed By:** [Signature]  
**Cooler Custody Seal Intact:** Y N NA  
**Sample Custody Seal Intact:** Y N NA  
**Received on Ice:** Y N NA  
**Cooler & Samples Intact:** Y N NA  
**Correct Containers Provided:** Y N NA  
**Sample Label/COC Agree:** Y N NA  
**Adequate Sample Volumes:** Y N NA  
**VOA Headspace Present:** Y N NA  
**Voa Trip Blank:** Y N NA  
**NJS 4 Days?** Y N NA  
**Rad Screen (uCi):** Y N NA  
**Courier/Tracking #:** Y N NA

**SDWA Compliance:** Y N  
**PWSID:** Y N NA  
**WV Containers 0-6°C:** Y N NA  
**NO SAMPLER**

**Receipt Information**  
(completed by Receiving Lab)  
**W.O. Temp:** 2 Therm ID: 570  
**Courier/Tracking #:**  
**Purchase Order #: 23349**  
**Project Comments:**

**SAMPLER COMMENTS:**

Relinquished By / Company Name	Date	Time	Received By / Company Name	Date	Time
Ann Foley for REPSG	11/21	11:25	Paul Zimorowski ACS	11/22	12:5
Paul Zimorowski ALS	11/22	16:10	[Signature]	11/22	16:10

**Special Processing:** USACE  Navy   
**State Samples Collected In:** NY  NJ  PA  NC  MD  other

**Deliverables:**  Standard  CLP-like  USACE/DOD  
**Reportable to PADEP?** Yes  No   
**PWSID #:**  
**EDDS:** Format Type: REPSG EQUIS  
Soil: WP=Wipe; WW=Wastewater



301 Fulling Mill Road | Middletown, PA 17057 | Phone: 717-944-5541 | Fax: 717-944-1430 | [www.alsglobal.com](http://www.alsglobal.com)

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293 DoD ELAP: PJLA 74618  
State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

Analytical Results Report For

**REPSG**

Project 2022 Calvert Citgo/5977.130.01  
Workorder 3279299  
Report ID 215702 on 12/28/2022

### Certificate of Analysis

Enclosed are the analytical results for samples received by the laboratory on Dec 16, 2022.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Susan Scherer (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at [www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Global.  
ALS Middletown: 301 Fulling Mill Road, Middletown, PA 17057 : 717-944-5541.

Recipient(s):

Natalie Griffith - REPSG  
Brenda Kellogg - REPSG  
James Manuel - REPSG  
Jonathan Singh - REPSG  
Jonathan Wallace - REPSG  
Melissa Keogh - REPSG

*Susan Scherer*

*This page is included as part of the Analytical Report and must be retained as a permanent record thereof.*

**Susan Scherer**  
Project Coordinator

(ALS Digital Signature)



## Sample Summary

<u>Lab ID</u>	<u>Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>	<u>Collector</u>	<u>Collection Company</u>
3279299001	EFF-001	Ground Water	12/15/2022 15:30	12/16/2022 20:30	CBC	Collected By Client



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## Reference

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### Notes

- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
- Except as qualified, Clean Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 136.
- Except as qualified, Safe Drinking Water Act sample analyses are consistent with methodology requirements in 40 CFR Part 141.
- The Chain of Custody document is included as part of this report.
- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are performed in the laboratory and are therefore analyzed out of hold time.
- Method references listed on this report beginning with the prefix "S" followed by a method number (such as S2310B-97) refer to methods from "Standard Methods for the Examination of Water and Wastewater".
- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.
- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.

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### Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND) above the MDL
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Practical Quantitation Limit for this Project
ND	Not Detected - indicates that the analyte was Not Detected
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits
#	Please reference the result in the Results Section for analyte-level flags.

---



**Project** 2022 Calvert Citgo/5977.130.01

**Workorder** 3279299

**Project Notations**

**Sample Notations**

**Lab ID**      **Sample ID**

**Result Notations**

**Notation Ref.**

1      The QC sample type LCS for method SW846 8260C was outside the control limits for the analyte tert-Amyl Alcohol. The % Recovery was reported as 69.2 and the control limits were 70 to 130.



### Detected Results Summary

Client Sample ID	EFF-001	Collected	12/15/2022 15:30
Lab Sample ID	3279299001	Lab Receipt	12/16/2022 20:30

Compound	Result	Units	RDL	MDL	Method	Flag
<b>GASOLINE RANGE ORGANICS</b>						
Gasoline Range Organics	33.6	ug/L	100	17.0	SW846 8015D	#
<b>VOLATILE ORGANICS</b>						
Methyl t-Butyl Ether	2.1	ug/L	1.0	0.33	SW846 8260C	#
tert-Amyl Alcohol	190	ug/L	10.0	6.6	SW846 8260C	#
tert-Butyl Alcohol	153	ug/L	10.0	2.2	SW846 8260C	#



## Results

Client Sample ID	EFF-001	Collected	12/15/2022 15:30
Lab Sample ID	3279299001	Lab Receipt	12/16/2022 20:30

### GASOLINE RANGE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Gasoline Range Organics	33.6J	J	ug/L	100	17.0	SW846 8015D	1	12/19/2022 14:03	JTH	A

#### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
a,a,a-Trifluorotoluene	98-08-8	122%	90 - 129	12/19/2022 14:03	

### PETROLEUM HC's

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Diesel Range Organics C10-C28	ND	ND	mg/L	0.16	0.031	SW846 8015D	1	12/20/2022 05:30	DXL	F

#### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
o-Terphenyl	84-15-1	85%	26 - 139	12/20/2022 05:30	

### VOLATILE ORGANICS

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
1,1,1-Trichloroethane	ND	ND	ug/L	1.0	0.22	SW846 8260C	1	12/21/2022 18:57	TMP	B
1,1,2,2-Tetrachloroethane	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	12/21/2022 18:57	TMP	B
1,1,2-Trichloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	12/21/2022 18:57	TMP	B
1,1-Dichloroethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	12/21/2022 18:57	TMP	B
1,1-Dichloroethene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	12/21/2022 18:57	TMP	B
1,2-Dibromo-3-chloropropane	ND	ND	ug/L	7.0	1.5	SW846 8260C	1	12/21/2022 18:57	TMP	B
1,2-Dibromoethane	ND	ND	ug/L	1.0	0.28	SW846 8260C	1	12/21/2022 18:57	TMP	B
1,2-Dichloroethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	12/21/2022 18:57	TMP	B
1,2-Dichloropropane	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	12/21/2022 18:57	TMP	B
2-Butanone	ND	ND	ug/L	10.0	1.8	SW846 8260C	1	12/21/2022 18:57	TMP	B
2-Hexanone	ND	ND	ug/L	5.0	1.3	SW846 8260C	1	12/21/2022 18:57	TMP	B
4-Methyl-2-Pentanone(MIBK)	ND	ND	ug/L	5.0	1.5	SW846 8260C	1	12/21/2022 18:57	TMP	B
Acetone	ND	ND	ug/L	10.0	3.1	SW846 8260C	1	12/21/2022 18:57	TMP	B
Benzene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	12/21/2022 18:57	TMP	B
Bromochloromethane	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	12/21/2022 18:57	TMP	B
Bromodichloromethane	ND	ND	ug/L	1.0	0.27	SW846 8260C	1	12/21/2022 18:57	TMP	B
Bromoform	ND	ND	ug/L	1.0	0.40	SW846 8260C	1	12/21/2022 18:57	TMP	B
Bromomethane	ND	ND	ug/L	1.0	0.39	SW846 8260C	1	12/21/2022 18:57	TMP	B
Carbon Disulfide	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	12/21/2022 18:57	TMP	B
Carbon Tetrachloride	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	12/21/2022 18:57	TMP	B
Chlorobenzene	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	12/21/2022 18:57	TMP	B
Chlorodibromomethane	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	12/21/2022 18:57	TMP	B
Chloroethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	12/21/2022 18:57	TMP	B
Chloroform	ND	ND	ug/L	1.0	0.21	SW846 8260C	1	12/21/2022 18:57	TMP	B
Chloromethane	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	12/21/2022 18:57	TMP	B
cis-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.32	SW846 8260C	1	12/21/2022 18:57	TMP	B
cis-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.31	SW846 8260C	1	12/21/2022 18:57	TMP	B



## Results

Client Sample ID	EFF-001	Collected	12/15/2022 15:30
Lab Sample ID	3279299001	Lab Receipt	12/16/2022 20:30

### VOLATILE ORGANICS (cont.)

Compound	Result	Flag	Units	RDL	MDL	Method	Dilution	Analysis Date/Time	By	Cntr
Dichlorodifluoromethane	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	12/21/2022 18:57	TMP	B
Dichlorofluoromethane	ND	ND	ug/L	1.0	0.37	SW846 8260C	1	12/21/2022 18:57	TMP	B
Diisopropyl ether	ND	ND	ug/L	1.0	0.25	SW846 8260C	1	12/21/2022 18:57	TMP	B
Ethyl tert-butyl ether	ND	ND	ug/L	1.0	0.19	SW846 8260C	1	12/21/2022 18:57	TMP	B
Ethylbenzene	ND	ND	ug/L	1.0	0.34	SW846 8260C	1	12/21/2022 18:57	TMP	B
Methyl t-Butyl Ether	2.1		ug/L	1.0	0.33	SW846 8260C	1	12/21/2022 18:57	TMP	B
Methylene Chloride	ND	ND	ug/L	1.0	0.45	SW846 8260C	1	12/21/2022 18:57	TMP	B
mp-Xylene	ND	ND	ug/L	2.0	0.52	SW846 8260C	1	12/21/2022 18:57	TMP	B
Naphthalene	ND	ND	ug/L	2.0	0.34	SW846 8260C	1	12/21/2022 18:57	TMP	B
o-Xylene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	12/21/2022 18:57	TMP	B
Styrene	ND	ND	ug/L	1.0	0.24	SW846 8260C	1	12/21/2022 18:57	TMP	B
tert-Amyl Alcohol	190	1	ug/L	10.0	6.6	SW846 8260C	1	12/21/2022 18:57	TMP	B
tert-Amyl Ethylether	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	12/21/2022 18:57	TMP	B
tert-Amyl methyl ether	ND	ND	ug/L	1.0	0.20	SW846 8260C	1	12/21/2022 18:57	TMP	B
tert-Butyl Alcohol	153		ug/L	10.0	2.2	SW846 8260C	1	12/21/2022 18:57	TMP	B
Tetrachloroethene	ND	ND	ug/L	1.0	0.35	SW846 8260C	1	12/21/2022 18:57	TMP	B
Toluene	ND	ND	ug/L	1.0	0.23	SW846 8260C	1	12/21/2022 18:57	TMP	B
Total Xylenes	ND	ND	ug/L	3.0	0.66	SW846 8260C	1	12/21/2022 18:57	TMP	B
trans-1,2-Dichloroethene	ND	ND	ug/L	1.0	0.26	SW846 8260C	1	12/21/2022 18:57	TMP	B
trans-1,3-Dichloropropene	ND	ND	ug/L	1.0	0.29	SW846 8260C	1	12/21/2022 18:57	TMP	B
Trichloroethene	ND	ND	ug/L	1.0	0.33	SW846 8260C	1	12/21/2022 18:57	TMP	B
Vinyl Chloride	ND	ND	ug/L	1.0	0.30	SW846 8260C	1	12/21/2022 18:57	TMP	B

### SURROGATES

Compound	CAS No	Recovery	Limits(%)	Analysis Date/Time	Qualifiers
1,2-Dichloroethane-d4	17060-07-0	90.5%	62 - 133	12/21/2022 18:57	
4-Bromofluorobenzene	460-00-4	102%	79 - 114	12/21/2022 18:57	
Dibromofluoromethane	1868-53-7	93.8%	78 - 116	12/21/2022 18:57	
Toluene-d8	2037-26-5	94.8%	76 - 127	12/21/2022 18:57	





### Sample - Method Cross Reference Table

Lab ID	Sample ID	Analysis Method	Preparation Method	Leachate Method
3279299001	EFF-001	SW846 8015D	SW846 3510C	
		SW846 8015D	N/A	
		SW846 8260C	N/A	



**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Lab ID	Sample ID	Preparation Method	Prep Batch	Prep Date/Time	By	Analysis Method	Anly Batch
3279299001	EFF-001	SW846 3510C	926900	12/19/2022 10:45	LDC	SW846 8015D	927194
		N/A	N/A	N/A		SW846 8015D	926901
		N/A	N/A	N/A		SW846 8260C	927877



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## ANALYTICAL REPORT

Lab Number:	L2270993
Client:	REPSG, Inc. 6901 Kingsessing Ave. Suite 201 Philadelphia, PA 19142-0377
ATTN:	James Manuel
Phone:	(215) 729-3220
Project Name:	CALVERT CITGO
Project Number:	5977
Report Date:	01/03/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

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320 Forbes Boulevard, Mansfield, MA 02048-1806  
508-822-9300 (Fax) 508-822-3288 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2270993-01	PRE-VES	SOIL_VAPOR	2815 NORTHEAST RD, NE, MD	12/15/22 16:41	12/16/22
L2270993-02	POST-VES	SOIL_VAPOR	2815 NORTHEAST RD, NE, MD	12/15/22 16:38	12/16/22

**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

**HOLD POLICY** - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

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**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

### Case Narrative (continued)

#### Volatile Organics in Air

Canisters were released from the laboratory on December 14, 2022. The canister certification results are provided as an addendum.

L2270993-01D: The sample was re-analyzed on dilution in order to quantitate the results within the calibration range. The result(s) should be considered estimated, and are qualified with an E flag, for any compound(s) that exceeded the calibration range in the initial analysis. The re-analysis was performed only for the compound(s) that exceeded the calibration range.

L2270993-01D2: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:  Christopher J. Anderson

Title: Technical Director/Representative

Date: 01/03/23



**AIR**

**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

### SAMPLE RESULTS

Lab ID: L2270993-01 D  
 Client ID: PRE-VES  
 Sample Location: 2815 NORTHEAST RD, NE, MD

Date Collected: 12/15/22 16:41  
 Date Received: 12/16/22  
 Field Prep: Not Specified

Sample Depth:  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 12/31/22 05:13  
 Analyst: TJS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Propylene	1.38	1.00	--	2.38	1.72	--		2
Dichlorodifluoromethane	0.500	0.400	--	2.47	1.98	--		2
Chloromethane	0.502	0.400	--	1.04	0.826	--		2
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.400	--	ND	2.80	--		2
Vinyl chloride	ND	0.400	--	ND	1.02	--		2
1,3-Butadiene	ND	0.400	--	ND	0.885	--		2
Bromomethane	ND	0.400	--	ND	1.55	--		2
Chloroethane	ND	0.400	--	ND	1.06	--		2
Ethyl Alcohol	ND	10.0	--	ND	18.8	--		2
Vinyl bromide	ND	0.400	--	ND	1.75	--		2
Acetone	ND	2.00	--	ND	4.75	--		2
Trichlorofluoromethane	ND	0.400	--	ND	2.25	--		2
iso-Propyl Alcohol	ND	1.00	--	ND	2.46	--		2
1,1-Dichloroethene	ND	0.400	--	ND	1.59	--		2
Methylene chloride	ND	1.00	--	ND	3.47	--		2
3-Chloropropene	ND	0.400	--	ND	1.25	--		2
Carbon disulfide	ND	0.400	--	ND	1.25	--		2
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.400	--	ND	3.07	--		2
trans-1,2-Dichloroethene	ND	0.400	--	ND	1.59	--		2
1,1-Dichloroethane	ND	0.400	--	ND	1.62	--		2
Methyl tert butyl ether	ND	0.400	--	ND	1.44	--		2
Vinyl acetate	ND	2.00	--	ND	7.04	--		2
2-Butanone	ND	1.00	--	ND	2.95	--		2



**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

### SAMPLE RESULTS

Lab ID: L2270993-01 D  
 Client ID: PRE-VES  
 Sample Location: 2815 NORTHEAST RD, NE, MD

Date Collected: 12/15/22 16:41  
 Date Received: 12/16/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
cis-1,2-Dichloroethene	ND	0.400	--	ND	1.59	--		2
Ethyl Acetate	ND	1.00	--	ND	3.60	--		2
Chloroform	ND	0.400	--	ND	1.95	--		2
Tetrahydrofuran	ND	1.00	--	ND	2.95	--		2
1,2-Dichloroethane	ND	0.400	--	ND	1.62	--		2
n-Hexane	341	0.400	--	1200	1.41	--	E	2
1,1,1-Trichloroethane	ND	0.400	--	ND	2.18	--		2
Benzene	7.48	0.400	--	23.9	1.28	--		2
Carbon tetrachloride	ND	0.400	--	ND	2.52	--		2
Cyclohexane	66.4	0.400	--	229	1.38	--		2
1,2-Dichloropropane	ND	0.400	--	ND	1.85	--		2
Xylene (Total)	30.3	0.400	--	132	1.74	--		2
Bromodichloromethane	ND	0.400	--	ND	2.68	--		2
1,4-Dioxane	ND	0.400	--	ND	1.44	--		2
Trichloroethene	ND	0.400	--	ND	2.15	--		2
2,2,4-Trimethylpentane	139	0.400	--	649	1.87	--		2
Heptane	127	0.400	--	520	1.64	--		2
cis-1,3-Dichloropropene	ND	0.400	--	ND	1.82	--		2
4-Methyl-2-pentanone	ND	1.00	--	ND	4.10	--		2
trans-1,3-Dichloropropene	ND	0.400	--	ND	1.82	--		2
1,1,2-Trichloroethane	ND	0.400	--	ND	2.18	--		2
1,2-Dichloroethene (total)	ND	0.400	--	ND	1.59	--		2
Toluene	31.6	0.400	--	119	1.51	--		2
2-Hexanone	ND	0.400	--	ND	1.64	--		2
1,3-Dichloropropene, Total	ND	0.400	--	ND	1.82	--		2
Dibromochloromethane	ND	0.400	--	ND	3.41	--		2



**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

### SAMPLE RESULTS

Lab ID: L2270993-01 D  
 Client ID: PRE-VES  
 Sample Location: 2815 NORTHEAST RD, NE, MD

Date Collected: 12/15/22 16:41  
 Date Received: 12/16/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
1,2-Dibromoethane	ND	0.400	--	ND	3.07	--		2
Tetrachloroethene	ND	0.400	--	ND	2.71	--		2
Chlorobenzene	ND	0.400	--	ND	1.84	--		2
Ethylbenzene	5.95	0.400	--	25.8	1.74	--		2
p/m-Xylene	20.2	0.800	--	87.7	3.47	--		2
Bromoform	ND	0.400	--	ND	4.14	--		2
Styrene	ND	0.400	--	ND	1.70	--		2
1,1,1,2-Tetrachloroethane	ND	0.400	--	ND	2.75	--		2
o-Xylene	10.1	0.400	--	43.9	1.74	--		2
4-Ethyltoluene	2.30	0.400	--	11.3	1.97	--		2
1,3,5-Trimethylbenzene	3.04	0.400	--	14.9	1.97	--		2
1,2,4-Trimethylbenzene	4.08	0.400	--	20.1	1.97	--		2
Benzyl chloride	ND	0.400	--	ND	2.07	--		2
1,3-Dichlorobenzene	ND	0.400	--	ND	2.40	--		2
1,4-Dichlorobenzene	ND	0.400	--	ND	2.40	--		2
1,2-Dichlorobenzene	ND	0.400	--	ND	2.40	--		2
1,2,4-Trichlorobenzene	ND	0.400	--	ND	2.97	--		2
Naphthalene	ND	0.400	--	ND	2.10	--		2
Hexachlorobutadiene	ND	0.400	--	ND	4.27	--		2

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	98		60-140



**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

### SAMPLE RESULTS

Lab ID: L2270993-01 D2  
 Client ID: PRE-VES  
 Sample Location: 2815 NORTHEAST RD, NE, MD

Date Collected: 12/15/22 16:41  
 Date Received: 12/16/22  
 Field Prep: Not Specified

Sample Depth:  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 12/31/22 08:00  
 Analyst: TJS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
n-Hexane	390	2.50	--	1370	8.81	--		12.5

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	93		60-140
Bromochloromethane	96		60-140
chlorobenzene-d5	96		60-140



**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

### SAMPLE RESULTS

Lab ID: L2270993-02  
 Client ID: POST-VES  
 Sample Location: 2815 NORTHEAST RD, NE, MD

Date Collected: 12/15/22 16:38  
 Date Received: 12/16/22  
 Field Prep: Not Specified

Sample Depth:  
 Matrix: Soil\_Vapor  
 Analytical Method: 48,TO-15  
 Analytical Date: 12/31/22 03:56  
 Analyst: TJS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Propylene	0.838	0.500	--	1.44	0.861	--		1
Dichlorodifluoromethane	0.489	0.200	--	2.42	0.989	--		1
Chloromethane	0.551	0.200	--	1.14	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.200	--	ND	1.40	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethyl Alcohol	ND	5.00	--	ND	9.42	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	0.257	0.200	--	1.44	1.12	--		1
iso-Propyl Alcohol	ND	0.500	--	ND	1.23	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1



**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

### SAMPLE RESULTS

Lab ID: L2270993-02  
 Client ID: POST-VES  
 Sample Location: 2815 NORTHEAST RD, NE, MD

Date Collected: 12/15/22 16:38  
 Date Received: 12/16/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	1.04	0.200	--	3.58	0.688	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Xylene (Total)	ND	0.200	--	ND	0.869	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,2-Dichloroethene (total)	ND	0.200	--	ND	0.793	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropene, Total	ND	0.200	--	ND	0.908	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1



**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

### SAMPLE RESULTS

Lab ID: L2270993-02  
 Client ID: POST-VES  
 Sample Location: 2815 NORTHEAST RD, NE, MD

Date Collected: 12/15/22 16:38  
 Date Received: 12/16/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
<b>Volatile Organics in Air - Mansfield Lab</b>								
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	93		60-140
Bromochloromethane	95		60-140
chlorobenzene-d5	93		60-140





Project Name: CALVERT CITGO

Lab Number: L2270993

Project Number: 5977

Report Date: 01/03/23

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 12/30/22 18:20

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-02 Batch: WG1729000-4								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethyl Alcohol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
iso-Propyl Alcohol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1
tert-Butyl Alcohol	ND	0.500	--	ND	1.52	--		1



Project Name: CALVERT CITGO

Lab Number: L2270993

Project Number: 5977

Report Date: 01/03/23

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 12/30/22 18:20

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-02 Batch: WG1729000-4								
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
Xylene (Total)	ND	0.200	--	ND	0.869	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Isopropyl Ether	ND	0.200	--	ND	0.836	--		1
Ethyl-Tert-Butyl-Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	0.200	--	ND	0.793	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,3-Dichloropropene, Total	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1



Project Name: CALVERT CITGO

Lab Number: L2270993

Project Number: 5977

Report Date: 01/03/23

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 12/30/22 18:20

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-02 Batch: WG1729000-4								
Cyclohexane	ND	0.200	--	ND	0.688	--		1
Tertiary-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl Acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1

Project Name: CALVERT CITGO

Lab Number: L2270993

Project Number: 5977

Report Date: 01/03/23

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 12/30/22 18:20

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-02 Batch: WG1729000-4								
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane (C9)	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
o-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
p-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane (C10)	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1

Project Name: CALVERT CITGO

Lab Number: L2270993

Project Number: 5977

Report Date: 01/03/23

### Method Blank Analysis Batch Quality Control

Analytical Method: 48,TO-15

Analytical Date: 12/30/22 18:20

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab for sample(s): 01-02 Batch: WG1729000-4								
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane (C12)	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

Parameter	LCS	Qual	LCS	Qual	%Recovery	RPD	Qual	RPD
	%Recovery		%Recovery		Limits			Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG1729000-3								
Chlorodifluoromethane	89		-		70-130	-		
Propylene	100		-		70-130	-		
Propane	93		-		70-130	-		
Dichlorodifluoromethane	95		-		70-130	-		
Chloromethane	95		-		70-130	-		
1,2-Dichloro-1,1,2,2-tetrafluoroethane	99		-		70-130	-		
Methanol	81		-		70-130	-		
Vinyl chloride	95		-		70-130	-		
1,3-Butadiene	101		-		70-130	-		
Butane	86		-		70-130	-		
Bromomethane	95		-		70-130	-		
Chloroethane	94		-		70-130	-		
Ethyl Alcohol	96		-		40-160	-		
Dichlorofluoromethane	86		-		70-130	-		
Vinyl bromide	94		-		70-130	-		
Acrolein	93		-		60-113	-		
Acetone	95		-		40-160	-		
Acetonitrile	90		-		70-130	-		
Trichlorofluoromethane	96		-		70-130	-		
iso-Propyl Alcohol	100		-		40-160	-		
Acrylonitrile	98		-		70-130	-		
Pentane	93		-		70-130	-		
Ethyl ether	85		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG1729000-3								
1,1-Dichloroethene	108		-		70-130	-		
tert-Butyl Alcohol	106		-		70-130	-		
Methylene chloride	105		-		70-130	-		
3-Chloropropene	110		-		70-130	-		
Carbon disulfide	97		-		70-130	-		
1,1,2-Trichloro-1,2,2-Trifluoroethane	106		-		70-130	-		
trans-1,2-Dichloroethene	100		-		70-130	-		
1,1-Dichloroethane	104		-		70-130	-		
Methyl tert butyl ether	109		-		70-130	-		
Vinyl acetate	102		-		70-130	-		
2-Butanone	104		-		70-130	-		
cis-1,2-Dichloroethene	108		-		70-130	-		
Ethyl Acetate	108		-		70-130	-		
Chloroform	107		-		70-130	-		
Tetrahydrofuran	102		-		70-130	-		
2,2-Dichloropropane	101		-		70-130	-		
1,2-Dichloroethane	105		-		70-130	-		
n-Hexane	106		-		70-130	-		
Isopropyl Ether	101		-		70-130	-		
Ethyl-Tert-Butyl-Ether	101		-		70-130	-		
1,2-Dichloroethene (total)	104		-			-		
1,2-Dichloroethene (total)	104		-			-		
1,1,1-Trichloroethane	108		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG1729000-3								
1,1-Dichloropropene	105		-		70-130	-		
Benzene	101		-		70-130	-		
Carbon tetrachloride	111		-		70-130	-		
Cyclohexane	106		-		70-130	-		
Tertiary-Amyl Methyl Ether	103		-		70-130	-		
Dibromomethane	98		-		70-130	-		
1,2-Dichloropropane	106		-		70-130	-		
Bromodichloromethane	106		-		70-130	-		
1,4-Dioxane	106		-		70-130	-		
Trichloroethene	107		-		70-130	-		
2,2,4-Trimethylpentane	107		-		70-130	-		
Methyl Methacrylate	111		-		40-160	-		
Heptane	108		-		70-130	-		
cis-1,3-Dichloropropene	118		-		70-130	-		
4-Methyl-2-pentanone	111		-		70-130	-		
trans-1,3-Dichloropropene	102		-		70-130	-		
1,1,2-Trichloroethane	109		-		70-130	-		
Toluene	100		-		70-130	-		
1,3-Dichloropropane	99		-		70-130	-		
2-Hexanone	108		-		70-130	-		
Dibromochloromethane	108		-		70-130	-		
1,2-Dibromoethane	109		-		70-130	-		
Butyl Acetate	104		-		70-130	-		



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG1729000-3								
Octane	100		-		70-130	-		
Tetrachloroethene	106		-		70-130	-		
1,1,1,2-Tetrachloroethane	102		-		70-130	-		
Chlorobenzene	107		-		70-130	-		
Ethylbenzene	110		-		70-130	-		
p/m-Xylene	110		-		70-130	-		
Bromoform	113		-		70-130	-		
Styrene	112		-		70-130	-		
1,1,2,2-Tetrachloroethane	109		-		70-130	-		
o-Xylene	112		-		70-130	-		
1,2,3-Trichloropropane	101		-		70-130	-		
Nonane (C9)	102		-		70-130	-		
Isopropylbenzene	107		-		70-130	-		
Bromobenzene	101		-		70-130	-		
o-Chlorotoluene	98		-		70-130	-		
n-Propylbenzene	100		-		70-130	-		
p-Chlorotoluene	101		-		70-130	-		
4-Ethyltoluene	107		-		70-130	-		
1,3,5-Trimethylbenzene	112		-		70-130	-		
tert-Butylbenzene	101		-		70-130	-		
1,2,4-Trimethylbenzene	116		-		70-130	-		
Decane (C10)	102		-		70-130	-		
Benzyl chloride	123		-		70-130	-		

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

Parameter	<i>LCS</i> %Recovery	<i>Qual</i>	<i>LCSD</i> %Recovery	<i>Qual</i>	<i>%Recovery</i> Limits	<i>RPD</i>	<i>Qual</i>	<i>RPD</i> Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 Batch: WG1729000-3								
1,3-Dichlorobenzene	113		-		70-130	-		
1,4-Dichlorobenzene	111		-		70-130	-		
sec-Butylbenzene	106		-		70-130	-		
p-Isopropyltoluene	98		-		70-130	-		
1,2-Dichlorobenzene	110		-		70-130	-		
n-Butylbenzene	107		-		70-130	-		
1,2-Dibromo-3-chloropropane	107		-		70-130	-		
Undecane	105		-		70-130	-		
Dodecane (C12)	106		-		70-130	-		
1,2,4-Trichlorobenzene	115		-		70-130	-		
Naphthalene	104		-		70-130	-		
1,2,3-Trichlorobenzene	104		-		70-130	-		
Hexachlorobutadiene	103		-		70-130	-		

## Lab Duplicate Analysis

Batch Quality Control

Project Name: CALVERT CITGO

Project Number: 5977

Lab Number: L2270993

Report Date: 01/03/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1729000-5 QC Sample: L2270993-02 Client ID: POST-VES						
Propylene	0.838	0.869	ppbV	4		25
Dichlorodifluoromethane	0.489	0.509	ppbV	4		25
Chloromethane	0.551	0.546	ppbV	1		25
1,2-Dichloro-1,1,2,2-tetrafluoroethane	ND	ND	ppbV	NC		25
Vinyl chloride	ND	ND	ppbV	NC		25
1,3-Butadiene	ND	ND	ppbV	NC		25
Bromomethane	ND	ND	ppbV	NC		25
Chloroethane	ND	ND	ppbV	NC		25
Ethyl Alcohol	ND	ND	ppbV	NC		25
Vinyl bromide	ND	ND	ppbV	NC		25
Acetone	ND	ND	ppbV	NC		25
Trichlorofluoromethane	0.257	0.255	ppbV	1		25
iso-Propyl Alcohol	ND	ND	ppbV	NC		25
1,1-Dichloroethene	ND	ND	ppbV	NC		25
Methylene chloride	ND	ND	ppbV	NC		25
3-Chloropropene	ND	ND	ppbV	NC		25
Carbon disulfide	ND	ND	ppbV	NC		25
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	ND	ppbV	NC		25
trans-1,2-Dichloroethene	ND	ND	ppbV	NC		25
1,1-Dichloroethane	ND	ND	ppbV	NC		25
Methyl tert butyl ether	ND	ND	ppbV	NC		25

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1729000-5 QC Sample: L2270993-02 Client ID: POST-VES						
Vinyl acetate	ND	ND	ppbV	NC		25
2-Butanone	ND	ND	ppbV	NC		25
cis-1,2-Dichloroethene	ND	ND	ppbV	NC		25
Ethyl Acetate	ND	ND	ppbV	NC		25
Chloroform	ND	ND	ppbV	NC		25
Tetrahydrofuran	ND	ND	ppbV	NC		25
1,2-Dichloroethane	ND	ND	ppbV	NC		25
n-Hexane	ND	ND	ppbV	NC		25
1,1,1-Trichloroethane	ND	ND	ppbV	NC		25
Benzene	ND	ND	ppbV	NC		25
Carbon tetrachloride	ND	ND	ppbV	NC		25
Cyclohexane	1.04	1.04	ppbV	0		25
1,2-Dichloropropane	ND	ND	ppbV	NC		25
Xylene (Total)	ND	ND	ppbV	NC		25
Bromodichloromethane	ND	ND	ppbV	NC		25
1,4-Dioxane	ND	ND	ppbV	NC		25
Trichloroethene	ND	ND	ppbV	NC		25
2,2,4-Trimethylpentane	ND	ND	ppbV	NC		25
Heptane	ND	ND	ppbV	NC		25
cis-1,3-Dichloropropene	ND	ND	ppbV	NC		25
4-Methyl-2-pentanone	ND	ND	ppbV	NC		25

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1729000-5 QC Sample: L2270993-02 Client ID: POST-VES						
trans-1,3-Dichloropropene	ND	ND	ppbV	NC		25
1,1,2-Trichloroethane	ND	ND	ppbV	NC		25
1,2-Dichloroethene (total)	ND	ND	ppbV	NC		25
Toluene	ND	ND	ppbV	NC		25
2-Hexanone	ND	ND	ppbV	NC		25
1,3-Dichloropropene, Total	ND	ND	ppbV	NC		25
Dibromochloromethane	ND	ND	ppbV	NC		25
1,2-Dibromoethane	ND	ND	ppbV	NC		25
Tetrachloroethene	ND	ND	ppbV	NC		25
Chlorobenzene	ND	ND	ppbV	NC		25
Ethylbenzene	ND	ND	ppbV	NC		25
p/m-Xylene	ND	ND	ppbV	NC		25
Bromoform	ND	ND	ppbV	NC		25
Styrene	ND	ND	ppbV	NC		25
1,1,1,2-Tetrachloroethane	ND	ND	ppbV	NC		25
o-Xylene	ND	ND	ppbV	NC		25
4-Ethyltoluene	ND	ND	ppbV	NC		25
1,3,5-Trimethylbenzene	ND	ND	ppbV	NC		25
1,2,4-Trimethylbenzene	ND	ND	ppbV	NC		25
Benzyl chloride	ND	ND	ppbV	NC		25
1,3-Dichlorobenzene	ND	ND	ppbV	NC		25

## Lab Duplicate Analysis

Batch Quality Control

**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Volatile Organics in Air - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1729000-5 QC Sample: L2270993-02 Client ID: POST-VES						
1,4-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2-Dichlorobenzene	ND	ND	ppbV	NC		25
1,2,4-Trichlorobenzene	ND	ND	ppbV	NC		25
Naphthalene	ND	ND	ppbV	NC		25
Hexachlorobutadiene	ND	ND	ppbV	NC		25

Project Name: CALVERT CITGO

Project Number: 5977

Serial\_No:01032316:31  
Lab Number: L2270993

Report Date: 01/03/23

### Canister and Flow Controller Information

Samplenum	Client ID	Media ID	Media Type	Date Prepared	Bottle Order	Cleaning Batch ID	Can Leak Check	Initial Pressure (in. Hg)	Pressure on Receipt (in. Hg)	Flow Controller Leak Chk	Flow Out mL/min	Flow In mL/min	% RPD
L2270993-01	PRE-VES	0490	Flow 2	12/14/22	408677		-	-	-	Pass	160	152	5
L2270993-01	PRE-VES	2583	6.0L Can	12/14/22	408677	L2268533-08	Pass	-30.2	-4.4	-	-	-	-
L2270993-02	POST-VES	01589	Flow 2	12/14/22	408677		-	-	-	Pass	160	54	99
L2270993-02	POST-VES	2831	6.0L Can	12/14/22	408677	L2268533-08	Pass	-29.3	-2.4	-	-	-	-

**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L2268533  
**Report Date:** 01/03/23

### Air Canister Certification Results

Lab ID: L2268533-08  
 Client ID: CAN 3344 SHELF 30  
 Sample Location:

Date Collected: 12/07/22 10:00  
 Date Received: 12/07/22  
 Field Prep: Not Specified

Sample Depth:  
 Matrix: Air  
 Analytical Method: 48,TO-15  
 Analytical Date: 12/08/22 06:29  
 Analyst: TJS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Chlorodifluoromethane	ND	0.200	--	ND	0.707	--		1
Propylene	ND	0.500	--	ND	0.861	--		1
Propane	ND	0.500	--	ND	0.902	--		1
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.200	--	ND	1.40	--		1
Methanol	ND	5.00	--	ND	6.55	--		1
Vinyl chloride	ND	0.200	--	ND	0.511	--		1
1,3-Butadiene	ND	0.200	--	ND	0.442	--		1
Butane	ND	0.200	--	ND	0.475	--		1
Bromomethane	ND	0.200	--	ND	0.777	--		1
Chloroethane	ND	0.200	--	ND	0.528	--		1
Ethanol	ND	5.00	--	ND	9.42	--		1
Dichlorofluoromethane	ND	0.200	--	ND	0.842	--		1
Vinyl bromide	ND	0.200	--	ND	0.874	--		1
Acrolein	ND	0.500	--	ND	1.15	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Acetonitrile	ND	0.200	--	ND	0.336	--		1
Trichlorofluoromethane	ND	0.200	--	ND	1.12	--		1
Isopropanol	ND	0.500	--	ND	1.23	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
Pentane	ND	0.200	--	ND	0.590	--		1
Ethyl ether	ND	0.200	--	ND	0.606	--		1
1,1-Dichloroethene	ND	0.200	--	ND	0.793	--		1





**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L2268533  
**Report Date:** 01/03/23

### Air Canister Certification Results

Lab ID: L2268533-08  
 Client ID: CAN 3344 SHELF 30  
 Sample Location:

Date Collected: 12/07/22 10:00  
 Date Received: 12/07/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Tertiary butyl Alcohol	ND	0.500	--	ND	1.52	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
3-Chloropropene	ND	0.200	--	ND	0.626	--		1
Carbon disulfide	ND	0.200	--	ND	0.623	--		1
Freon-113	ND	0.200	--	ND	1.53	--		1
trans-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
1,1-Dichloroethane	ND	0.200	--	ND	0.809	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
Vinyl acetate	ND	1.00	--	ND	3.52	--		1
Xylenes, total	ND	0.600	--	ND	0.869	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.200	--	ND	0.793	--		1
Ethyl Acetate	ND	0.500	--	ND	1.80	--		1
Chloroform	ND	0.200	--	ND	0.977	--		1
Tetrahydrofuran	ND	0.500	--	ND	1.47	--		1
2,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
1,2-Dichloroethane	ND	0.200	--	ND	0.809	--		1
n-Hexane	ND	0.200	--	ND	0.705	--		1
Diisopropyl ether	ND	0.200	--	ND	0.836	--		1
tert-Butyl Ethyl Ether	ND	0.200	--	ND	0.836	--		1
1,2-Dichloroethene (total)	ND	1.00	--	ND	1.00	--		1
1,1,1-Trichloroethane	ND	0.200	--	ND	1.09	--		1
1,1-Dichloropropene	ND	0.200	--	ND	0.908	--		1
Benzene	ND	0.200	--	ND	0.639	--		1
Carbon tetrachloride	ND	0.200	--	ND	1.26	--		1
Cyclohexane	ND	0.200	--	ND	0.688	--		1
tert-Amyl Methyl Ether	ND	0.200	--	ND	0.836	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L2268533  
**Report Date:** 01/03/23

### Air Canister Certification Results

Lab ID: L2268533-08  
 Client ID: CAN 3344 SHELF 30  
 Sample Location:

Date Collected: 12/07/22 10:00  
 Date Received: 12/07/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
Dibromomethane	ND	0.200	--	ND	1.42	--		1
1,2-Dichloropropane	ND	0.200	--	ND	0.924	--		1
Bromodichloromethane	ND	0.200	--	ND	1.34	--		1
1,4-Dioxane	ND	0.200	--	ND	0.721	--		1
Trichloroethene	ND	0.200	--	ND	1.07	--		1
2,2,4-Trimethylpentane	ND	0.200	--	ND	0.934	--		1
Methyl Methacrylate	ND	0.500	--	ND	2.05	--		1
Heptane	ND	0.200	--	ND	0.820	--		1
cis-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.200	--	ND	0.908	--		1
1,1,2-Trichloroethane	ND	0.200	--	ND	1.09	--		1
Toluene	ND	0.200	--	ND	0.754	--		1
1,3-Dichloropropane	ND	0.200	--	ND	0.924	--		1
2-Hexanone	ND	0.200	--	ND	0.820	--		1
Dibromochloromethane	ND	0.200	--	ND	1.70	--		1
1,2-Dibromoethane	ND	0.200	--	ND	1.54	--		1
Butyl acetate	ND	0.500	--	ND	2.38	--		1
Octane	ND	0.200	--	ND	0.934	--		1
Tetrachloroethene	ND	0.200	--	ND	1.36	--		1
1,1,1,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1
Chlorobenzene	ND	0.200	--	ND	0.921	--		1
Ethylbenzene	ND	0.200	--	ND	0.869	--		1
p/m-Xylene	ND	0.400	--	ND	1.74	--		1
Bromoform	ND	0.200	--	ND	2.07	--		1
Styrene	ND	0.200	--	ND	0.852	--		1
1,1,2,2-Tetrachloroethane	ND	0.200	--	ND	1.37	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L2268533  
**Report Date:** 01/03/23

### Air Canister Certification Results

Lab ID: L2268533-08  
 Client ID: CAN 3344 SHELF 30  
 Sample Location:

Date Collected: 12/07/22 10:00  
 Date Received: 12/07/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								
o-Xylene	ND	0.200	--	ND	0.869	--		1
1,2,3-Trichloropropane	ND	0.200	--	ND	1.21	--		1
Nonane	ND	0.200	--	ND	1.05	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
Bromobenzene	ND	0.200	--	ND	0.793	--		1
2-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
n-Propylbenzene	ND	0.200	--	ND	0.983	--		1
4-Chlorotoluene	ND	0.200	--	ND	1.04	--		1
4-Ethyltoluene	ND	0.200	--	ND	0.983	--		1
1,3,5-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
tert-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trimethylbenzene	ND	0.200	--	ND	0.983	--		1
Decane	ND	0.200	--	ND	1.16	--		1
Benzyl chloride	ND	0.200	--	ND	1.04	--		1
1,3-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
1,4-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.200	--	ND	1.20	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2-Dibromo-3-chloropropane	ND	0.200	--	ND	1.93	--		1
Undecane	ND	0.200	--	ND	1.28	--		1
Dodecane	ND	0.200	--	ND	1.39	--		1
1,2,4-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Naphthalene	ND	0.200	--	ND	1.05	--		1
1,2,3-Trichlorobenzene	ND	0.200	--	ND	1.48	--		1
Hexachlorobutadiene	ND	0.200	--	ND	2.13	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L2268533  
**Report Date:** 01/03/23

### Air Canister Certification Results

Lab ID: L2268533-08  
 Client ID: CAN 3344 SHELF 30  
 Sample Location:

Date Collected: 12/07/22 10:00  
 Date Received: 12/07/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air - Mansfield Lab								

Results	Qualifier	Units	RDL	Dilution Factor
Tentatively Identified Compounds				

No Tentatively Identified Compounds

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-Difluorobenzene	97		60-140
Bromochloromethane	97		60-140
chlorobenzene-d5	91		60-140



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L2268533  
**Report Date:** 01/03/23

### Air Canister Certification Results

Lab ID: L2268533-08  
 Client ID: CAN 3344 SHELF 30  
 Sample Location:

Date Collected: 12/07/22 10:00  
 Date Received: 12/07/22  
 Field Prep: Not Specified

Sample Depth:  
 Matrix: Air  
 Analytical Method: 48,TO-15-SIM  
 Analytical Date: 12/08/22 06:29  
 Analyst: TJS

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
Dichlorodifluoromethane	ND	0.200	--	ND	0.989	--		1
Chloromethane	ND	0.200	--	ND	0.413	--		1
Freon-114	ND	0.050	--	ND	0.349	--		1
Vinyl chloride	ND	0.020	--	ND	0.051	--		1
1,3-Butadiene	ND	0.020	--	ND	0.044	--		1
Bromomethane	ND	0.020	--	ND	0.078	--		1
Chloroethane	ND	0.100	--	ND	0.264	--		1
Acrolein	ND	0.050	--	ND	0.115	--		1
Acetone	ND	1.00	--	ND	2.38	--		1
Trichlorofluoromethane	ND	0.050	--	ND	0.281	--		1
Acrylonitrile	ND	0.500	--	ND	1.09	--		1
1,1-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Methylene chloride	ND	0.500	--	ND	1.74	--		1
Freon-113	ND	0.050	--	ND	0.383	--		1
trans-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
1,1-Dichloroethane	ND	0.020	--	ND	0.081	--		1
Methyl tert butyl ether	ND	0.200	--	ND	0.721	--		1
2-Butanone	ND	0.500	--	ND	1.47	--		1
cis-1,2-Dichloroethene	ND	0.020	--	ND	0.079	--		1
Chloroform	ND	0.020	--	ND	0.098	--		1
1,2-Dichloroethane	ND	0.020	--	ND	0.081	--		1
1,1,1-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Benzene	ND	0.100	--	ND	0.319	--		1
Carbon tetrachloride	ND	0.020	--	ND	0.126	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L2268533  
**Report Date:** 01/03/23

### Air Canister Certification Results

Lab ID: L2268533-08  
 Client ID: CAN 3344 SHELF 30  
 Sample Location:

Date Collected: 12/07/22 10:00  
 Date Received: 12/07/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
1,2-Dichloropropane	ND	0.020	--	ND	0.092	--		1
Bromodichloromethane	ND	0.020	--	ND	0.134	--		1
1,4-Dioxane	ND	0.100	--	ND	0.360	--		1
Trichloroethene	ND	0.020	--	ND	0.107	--		1
cis-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
4-Methyl-2-pentanone	ND	0.500	--	ND	2.05	--		1
trans-1,3-Dichloropropene	ND	0.020	--	ND	0.091	--		1
1,1,2-Trichloroethane	ND	0.020	--	ND	0.109	--		1
Toluene	ND	0.100	--	ND	0.377	--		1
Dibromochloromethane	ND	0.020	--	ND	0.170	--		1
1,2-Dibromoethane	ND	0.020	--	ND	0.154	--		1
Tetrachloroethene	ND	0.020	--	ND	0.136	--		1
1,1,1,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
Chlorobenzene	ND	0.100	--	ND	0.461	--		1
Ethylbenzene	ND	0.020	--	ND	0.087	--		1
p/m-Xylene	ND	0.040	--	ND	0.174	--		1
Bromoform	ND	0.020	--	ND	0.207	--		1
Styrene	ND	0.020	--	ND	0.085	--		1
1,1,2,2-Tetrachloroethane	ND	0.020	--	ND	0.137	--		1
o-Xylene	ND	0.020	--	ND	0.087	--		1
Isopropylbenzene	ND	0.200	--	ND	0.983	--		1
4-Ethyltoluene	ND	0.020	--	ND	0.098	--		1
1,3,5-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
1,2,4-Trimethylbenzene	ND	0.020	--	ND	0.098	--		1
Benzyl chloride	ND	0.100	--	ND	0.518	--		1
1,3-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
1,4-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1



**Project Name:** BATCH CANISTER CERTIFICATION  
**Project Number:** CANISTER QC BAT

**Lab Number:** L2268533  
**Report Date:** 01/03/23

### Air Canister Certification Results

Lab ID: L2268533-08  
 Client ID: CAN 3344 SHELF 30  
 Sample Location:

Date Collected: 12/07/22 10:00  
 Date Received: 12/07/22  
 Field Prep: Not Specified

Sample Depth:

Parameter	ppbV			ug/m3			Qualifier	Dilution Factor
	Results	RL	MDL	Results	RL	MDL		
Volatile Organics in Air by SIM - Mansfield Lab								
sec-Butylbenzene	ND	0.200	--	ND	1.10	--		1
p-Isopropyltoluene	ND	0.200	--	ND	1.10	--		1
1,2-Dichlorobenzene	ND	0.020	--	ND	0.120	--		1
n-Butylbenzene	ND	0.200	--	ND	1.10	--		1
1,2,4-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Naphthalene	ND	0.050	--	ND	0.262	--		1
1,2,3-Trichlorobenzene	ND	0.050	--	ND	0.371	--		1
Hexachlorobutadiene	ND	0.050	--	ND	0.533	--		1

Internal Standard	% Recovery	Qualifier	Acceptance Criteria
1,4-difluorobenzene	97		60-140
bromochloromethane	96		60-140
chlorobenzene-d5	91		60-140

**Project Name:** CALVERT CITGO**Lab Number:** L2270993**Project Number:** 5977**Report Date:** 01/03/23**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information****Cooler**                      **Custody Seal**

NA                                      Present/Intact

**Container Information****Container ID**    **Container Type**

L2270993-01A    Canister - 6 Liter

L2270993-02A    Canister - 6 Liter

<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
NA	NA			Y	Absent		TO15-LL(30)
NA	NA			Y	Absent		TO15-LL(30)



**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

## GLOSSARY

### Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)  Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report



**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

### Footnotes

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

**Chlordane:** The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA, this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

**Difference:** With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

**Final pH:** As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

**Frozen Date/Time:** With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

**Gasoline Range Organics (GRO):** Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

**Initial pH:** As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

**PAH Total:** With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

**PFAS Total:** With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report



**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

#### **Data Qualifiers**

- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.
- V** - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)
- Z** - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

**Project Name:** CALVERT CITGO  
**Project Number:** 5977

**Lab Number:** L2270993  
**Report Date:** 01/03/23

## REFERENCES

- 48 Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air. Second Edition. EPA/625/R-96/010b, January 1999.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certification Information

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The following analytes are not included in our Primary NELAP Scope of Accreditation:

### Westborough Facility

**EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene

**EPA 625/625.1:** alpha-Terpineol

**EPA 8260C/8260D:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

**EPA 8270D/8270E:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

### Mansfield Facility

**SM 2540D:** TSS

**EPA 8082A:** NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** EPA 3050B

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The following analytes are included in our Massachusetts DEP Scope of Accreditation

### Westborough Facility:

#### Drinking Water

**EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

**EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**

**EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

#### Non-Potable Water

**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LCHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

**SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.

**EPA 624.1:** Volatile Halocarbons & Aromatics,

**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

### Mansfield Facility:

#### Drinking Water

**EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

**EPA 522, EPA 537.1.**

#### Non-Potable Water

**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

**EPA 245.1 Hg.**

**SM2340B**

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For a complete listing of analytes and methods, please contact your Alpha Project Manager.



# AIR ANALYSIS

PAGE \_\_\_\_\_ OF \_\_\_\_\_

320 Forbes Blvd, Mansfield, MA 02048  
 TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 12/17/22

ALPHA Job #: L2270993

**Client Information**

Client: REPSG  
 Address: 6901 Kingessing Ave  
 Phila, PA  
 Phone: 215 729 3220  
 Fax: 215 729 1557  
 Email: ODM@repsg.com

**Project Information**

Project Name: Calvert Citgo  
 Project Location: 2815 Northeast Rd, NE, MD  
 Project #: 5977  
 Project Manager:  
 ALPHA Quote #:

**Report Information - Data Deliverables**

FAX  
 ADEx  
 Criteria Checker:  
 (Default based on Regulatory Criteria Indicated)  
 Other Formats:  
 EMAIL (standard pdf report)  
 Additional Deliverables:  
 Report to: (if different than Project Manager)  
 EQUIS EOD  
 James Manuel

**Billing Information**

Same as Client info PO #: 23427

**Turn-Around Time**

Standard  RUSH (only confirmed if pre-approved)

Date Due: Time:

Other Project Specific Requirements/Comments:

Project-Specific Target Compound List:

**Regulatory Requirements/Report Limits**

State/Fed	Program	Res / Comm

**ANALYSIS**

TO-15  
 TO-15 SIM  
 APH  
 Fixed Gases  
 Sulfides & Mercaptans by TO-15

**All Columns Below Must Be Filled Out**

ALPHA Lab ID (Lab Use Only)	Sample ID	COLLECTION						Sample Matrix*	Sampler's Initials	Can Size	ID Can	ID - Flow Controller	TO-15	TO-15 SIM	APH	Fixed Gases	Sulfides & Mercaptans by TO-15	Sample Comments (i.e. PID)
		End Date	Start Time	End Time	Initial Vacuum	Final Vacuum												
70993-01	Pre-VES	12/15/22	11:05	16:41	2.9.16	-3.89	GSV	SM	61	2583	0490	X						
-02	Post-VES	12/15/22	16:02	16:38	30.08	-3.78	GSV	SM	61	2831	01589	X						

**\*SAMPLE MATRIX CODES**

AA = Ambient Air (Indoor/Outdoor)  
 SV = Soil Vapor/Landfill Gas/SVE  
 Other = Please Specify

Container Type

Relinquished By: [Signature] Date/Time: 12/16/22 12:08  
 Received By: [Signature] Date/Time: 12/16/22 18:00  
 [Signature] Date/Time: 12/16/22 22:00  
 [Signature] Date/Time: 12-16-22  
 [Signature] Date/Time: 12/17/22 09:20  
 [Signature] Date/Time: 12-16-22  
 [Signature] Date/Time: 12/17/22 01:00

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

ATTACHMENT 4: FIELD SAMPLING SHEETS







**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date 12-30-22

Field Personnel TH

Well ID MP-001

A) Well Depth (ft) 12.25

B) Depth to Water (ft) 9.30

C) Liquid Level (ft) (A-B) 2.95

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (CxD) 1.92

F) Total Purge Volume (E X total number of well volumes (3))  
5.77

Purge Start Time 905

Sample Time 935

Sampling Method: TAP      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

0.8 PID

## Stabilized Readings MP-001

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
9.38	925	1.55	5.06	12.2	<del>3</del> 1.5
9.42	916	1.29	5.20	13.2	<del>6</del> 3
9.39	910	1.36	5.17	13.6	<del>9</del> 4.5
9.36	904	1.40	5.22	13.9	<del>12</del> 6
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- 12

**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date 12-30-22

Field Personnel TH

Well ID MP-002

A) Well Depth (ft) 11.72

B) Depth to Water (ft) 9.79

C) Liquid Level (ft) (A-B) 1.93

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (Cx D) 1.26

F) Total Purge Volume (E X total number of well volumes (3))  
3.78

Purge Start Time 945

Sample Time 1025

Sampling Method: TAP      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

1.9 PID

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Stabilized Readings *MP-002*

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
9.66	588	1.19	2.02	13.7	3 1.5
9.71	597	1.14	2.17	14.5	6 3
9.74	603	1.21	2.30	14.7	9 4.5
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Field Measurement Worksheet

Job# \_\_\_\_\_

Date 12-29-22

Field Personnel TH

Well ID MW-001R

A) Well Depth (ft) 43.3

B) Depth to Water (ft) 17.16

C) Liquid Level (ft) (A-B) 26.2

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (CxD) ~~17.1~~ 17.1

F) Total Purge Volume (E X total number of well volumes (3))  
51.32

Purge Start Time 1050

Sample Time 1155

Sampling Method: TAP          SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1 + 1

Notes and PID readings:

0.2 PID  
Temp Collected  
ran dry at 50 gallons

## Stabilized Readings MW-001 R

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
8.59	641	5.42	1.60	14.7	3
8.11	654	5.80	1.28	15.5	6
7.41	509	5.13	1.51	15.9	9
7.18	500	4.93	0.73	15.6	12
6.88	<del>477</del> 492	4.77	0.89	15.7	15
6.65	488	4.21	0.71	15.2	18
6.53	501	3.91	0.63	15.5	21
6.42	520	3.97	0.76	15.0	24
6.37	531	3.83	0.89	14.8	27
6.34	544	3.59	0.79	15.1	30
6.36	549	3.22	0.75	15.0	33
6.36	555	2.70	0.81	15.2	36
6.35	562	2.56	0.83	15.2	39
6.34	570	2.45	0.88	15.3	42
6.35	576	2.37	0.91	15.4	45
6.33	580	2.42	0.86	15.3	48
6.32	588	2.45	0.90	15.1	<del>51</del>
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 50  
 max. dsy


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### Field Measurement Worksheet

Job# \_\_\_\_\_

Date 12-29-22

Field Personnel TH

Well ID MW-002

A) Well Depth (ft) 32.2

B) Depth to Water (ft) 17.10

C) Liquid Level (ft) (A-B) 15.1

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (CxD) 9.85

F) Total Purge Volume (E X total number of well volumes (3))  
29.5

Purge Start Time 855

Sample Time 945

Sampling Method: TAP      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

0.0 PID  
30 gallons purged

MW-002

## Stabilized Readings

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
7.04	1322	12.4	2.14	14.9	3
7.76	1292	<del>16.5</del> 8.76	1.68	16.5	6
7.60	1344	6.53	2.21	17.0	9
7.16	1326	5.77	2.10	16.2	12
7.02	1301	5.59	2.16	15.6	15
6.91	1292	5.51	2.26	15.3	18
6.83	1281	5.39	2.31	15.4	21
6.79	1277	5.41	2.26	15.3	24
6.77	1270	5.27	2.20	15.5	27
6.75	1265	5.14	2.22	15.5	30
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**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date 12-30-22

Field Personnel TH

Well ID MW-003

A) Well Depth (ft) 27.2

B) Depth to Water (ft) 15.67

C) Liquid Level (ft) (A-B) 11.53

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (Cx D) 7.52

F) Total Purge Volume (E X total number of well volumes (3))  
22.58

Purge Start Time 840

Sample Time 945

Sampling Method: TAP          SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

0.0 PID

Stabilized Readings *MW-503*

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
6.88	1964	3.05	1.70	14.2	3
6.82	1886	3.52	0.96	15.8	6
6.93	1861	3.81	1.22	16.1	9
7.01	1849	3.31	1.50	16.5	12
7.06	1856	3.46	1.53	16.8	15
7.10	1850	3.35	1.41	16.9	18
7.05	1861	3.22	1.37	16.9	21
7.03	1864	3.16	1.49	16.8	24
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### Field Measurement Worksheet

Job# \_\_\_\_\_

Date 12-29-22

Field Personnel TH

Well ID MW-005

A) Well Depth (ft) 30.40

B) Depth to Water (ft) 17.47

C) Liquid Level (ft) (A-B) 12.93

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (Cx D) 8.44

F) Total Purge Volume (E X total number of well volumes (3))  
25.32

Purge Start Time 12.35

Sample Time 1320

Sampling Method: TAP                      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

1.4 PID  
Product detected  
Strong odor

MW-005

### Stabilized Readings

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
6.71	1763	2.37	1.13	13.3	3
6.72	1730	2.12	1.66	15.4	6
6.78	1714	2.28	1.81	16.1	9
6.82	1702	2.51	1.91	15.8	12
6.84	1684	2.66	1.99	15.9	15
6.85	1683	2.71	2.24	15.9	18
6.85	1680	2.80	2.33	15.8	21
6.86	1672	2.77	2.37	15.7	24
6.86	1674	2.73	2.41	15.8	<del>27</del>
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**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date 12-29-22

Field Personnel TH

Well ID MW-006

A) Well Depth (ft) 31.1

B) Depth to Water (ft) 17.72

C) Liquid Level (ft) (A-B) \_\_\_\_\_

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (Cx D) 8.73

F) Total Purge Volume (E X total number of well volumes (3))  
26.19

Purge Start Time 1005

Sample Time 1030

Sampling Method: TAP      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

0.0 PID  
Dry after 18.5 gallons

Stabilized Readings MW-006

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
6.67	654	3.75	1.73	14.6	3
8.73	438	4.29	5.24	17.2	6
10.34	383	5.44	5.75	16.8	9
10.45	369	<del>6.03</del> 5.79	6.03	17.0	12
10.40	377	6.14	6.16	17.2	15
10.31	385	6.27	5.99	17.3	18
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**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date 12.27.22

Field Personnel D. McCarty

Well ID MW-007

A) Well Depth (ft) 28.75

B) Depth to Water (ft) 16.68

C) Liquid Level (ft) (A-B) 12.07

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (CxD) 1.967

F) Total Purge Volume (E X total number of well volumes (3))  
5.902

Purge Start Time 1210

Sample Time 1320

Sampling Method: TAP      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

PID 0.0, no well cap.  
\_\_\_\_\_  
\_\_\_\_\_

Stabilized Readings *MW-007*

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
6.62	92.9	29.8	2.78	14.9	28
					48
					69
					12
					15
					18
					21
					24
6.31	124.3	39.0	5.97	17.2	25
					30
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					48
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Dry @ 1226  
 Restart @  
 1310  
 0.5 gallons

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### Field Measurement Worksheet

Job# \_\_\_\_\_

Date 12-30-22

Field Personnel D. MEEHY

Well ID MW-00A

A) Well Depth (ft) 71.4

B) Depth to Water (ft) 17.11

C) Liquid Level (ft) (A-B) 54.29

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (Cx D) 8.849

F) Total Purge Volume (E X total number of well volumes (3))  
26.548

Purge Start Time 1010

Sample Time 1050

Sampling Method: TAP                      SUBMERSIBLE PUMP

BAILER

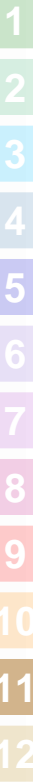
Number of Samples Collected 1

Notes and PID readings:

PID 0.8  
\_\_\_\_\_  
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## Stabilized Readings MW-00A

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
6.61	825	7.48	1.41	15.1	3
6.54	899	7.48	0.98	14.7	6
6.47	917	7.20	0.60	14.4	9
6.50	920	6.42	0.59	14.5	12
6.51	924	6.25	0.52	14.6	15
6.53	910	5.51	0.60	14.5	18
6.54	896	5.24	0.62	14.4	21
6.52	902	5.37	0.61	14.3	24
6.49	909	5.49	0.61	14.2	27
					30
					33
					36
					39
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**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date 12-30-22

Field Personnel D. McCarty

Well ID MW-00AD

A) Well Depth (ft) 144

B) Depth to Water (ft) 15.58

C) Liquid Level (ft) (A-B) 128.42

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (Cx D) 188.649

F) Total Purge Volume (E X total number of well volumes (3))  
565.947

Purge Start Time 0834

Sample Time 1200

Sampling Method: TAP                      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

PID 1.4  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Stabilized Readings *MW-00FD*

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
7.22	178.4	22.4	2.11	15.7	15 8
7.09	189.7	19.2	1.67	15.5	30 8
7.02	194.3	18.7	1.24	15.3	45 8
6.96	198.5	18.6	1.02	15.1	60 12
6.91	204.4	16.5	0.99	14.7	75 15
6.85	209.8	14.7	0.98	14.4	90 18
6.89	211.4	15.4	0.96	14.5	105 21
6.93	213.9	16.5	0.94	14.5	120 24
6.97	215.7	17.1	0.92	14.6	135 27
6.98	216.9	17.6	0.87	14.6	150 30
7.00	218.1	18.4	0.84	14.7	165 33
7.01	217.9	19.8	0.82	14.8	180 36
7.02	217.8	20.8	0.75	14.8	195 39
7.04	217.6	21.7	0.69	14.8	210 42
7.05	217.4	23.3	0.63	14.9	225 45
7.05	217.5	24.1	0.64	14.9	240 48
7.06	217.7	24.9	0.62	14.9	255 51
7.07	217.6	25.9	0.62	14.8	270 54
7.01	219.4	27.1	0.68	14.7	285 57
6.94	220	28.4	0.75	14.6	300 60
6.87	221	29.1	0.80	14.5	315 63
6.87	221	29.7	0.82	14.5	330 66
6.87	221	30.6	0.84	14.6	345 69
6.88	222	31.7	0.85	14.6	360 72
6.88	222	31.9	0.87	14.6	375 75
6.88	222	32.0	0.90	14.5	390 78
6.88	221	32.4	0.94	14.5	405 81
6.89	221	32.5	0.98	14.6	420 84
6.89	222	34.1	1.04	14.5	435 87
6.88	221	35.1	1.08	14.6	450 90
6.88	222	35.4	1.11	14.6	465 93
6.88	221	35.8	1.16	14.5	480 96
6.88	222	36.4	1.24	14.5	495 99
6.89	221	37.2	1.27	14.5	510 102
6.89	221	36.9	1.30	14.6	525 105
6.89	221	37.6	1.34	14.7	540 108
6.89	221	37.4	1.37	14.6	555 111
6.89	221	37.4	1.40	14.6	570 114
					117
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**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date \_\_\_\_\_

Field Personnel D. McLaughlin

Well ID MW-009

A) Well Depth (ft) 70.25

B) Depth to Water (ft) 18.37

C) Liquid Level (ft) (A-B) 11.88

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (CxD) 1.976

F) Total Purge Volume (E X total number of well volumes (3))  
5.909

Purge Start Time 1039

Sample Time 1055

Sampling Method: TAP                      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

PID 0.0  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Stabilized Readings *MW-009*

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
<i>5.65</i>	<i>658</i>	<i>3.84</i>	<i>4.94</i>	<i>12.1</i>	<i>28</i>
<i>5.63</i>	<i>664</i>	<i>3.77</i>	<i>4.83</i>	<i>13.9</i>	<i>48</i>
<i>5.61</i>	<i>648</i>	<i>3.70</i>	<i>4.64</i>	<i>15.5</i>	<i>69</i>
					12
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					18
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### Field Measurement Worksheet

Job# \_\_\_\_\_

Date 12-29-22

Field Personnel D. McCarty

Well ID MW-0090

A) Well Depth (ft) 66.6

B) Depth to Water (ft) 18.29

C) Liquid Level (ft) (A-B) 48.31

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (CxD) 7.475

F) Total Purge Volume (E X total number of well volumes (3))  
23.624

Purge Start Time 1105

Sample Time 1145

Sampling Method: TAP                      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

PID 0.0  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Stabilized Readings *MW-009D*

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
6.43	130.7	16.4	1.60	14.8	3
6.53	212.5	4.90	0.92	14.9	6
6.46	210.4	4.50	1.17	14.6	9
6.46	209.2	3.96	0.70	14.5	12
6.45	205.7	3.66	1.22	14.4	15
6.47	204.9	3.65	0.95	14.7	18
6.45	204.5	3.80	0.93	14.7	21
6.51	205.2	3.56	0.96	14.7	24
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**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date 12-29-22

Field Personnel D. McCarty

Well ID MW-010

A) Well Depth (ft) 29.97

B) Depth to Water (ft) 17.73

C) Liquid Level (ft) (A-B) 12.24

D) Casing Diameter:

- a. 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (CxD) 1,995

F) Total Purge Volume (E X total number of well volumes (3))  
5,985

Purge Start Time 0854

Sample Time 0915

Sampling Method: TAP                  SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

PID 0.0  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Stabilized Readings *MW-010*

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
6.40	539	6.64	1.19	13.2	28
6.36	543	6.19	1.12	13.4	48
6.37	551	6.46	1.10	13.4	68
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**Field Measurement Worksheet**

Job# \_\_\_\_\_

Date 12-29-22

Field Personnel D. MCG-4

Well ID MW-010 D

A) Well Depth (ft) 65.70

B) Depth to Water (ft) 17.62

C) Liquid Level (ft) (A-B) 48.08

D) Casing Diameter:

- a) 2 inches (D factor = 0.163)
- b. 4 inches (D factor = 0.653)
- c. 6 inches (D factor = 1.469)

E) Well Volume (gallons) (Cx D) 7.837

F) Total Purge Volume (E X total number of well volumes (3))  
23.511

Purge Start Time 0922

Sample Time 1005

Sampling Method: TAP                      SUBMERSIBLE PUMP

BAILER

Number of Samples Collected 1

Notes and PID readings:

PID 0.0  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## Stabilized Readings MW-0100

pH	Conductivity	Turbidity	D.O.	Temperature	Gallons
6.70	210.2	18.9	1.22	11.9	3
6.43	359	5.07	1.55	12.5	6
6.17	359	3.60	1.73	13.7	9
6.09	367	3.17	1.42	13.9	12
6.07	370	2.66	1.53	13.8	15
6.02	372	2.47	1.48	14.1	18
6.00	372	2.55	1.54	13.9	21
6.01	374	2.44	1.59	14.0	24
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ATTACHMENT 5: PERMITS





**Maryland**  
Department of  
the Environment

TR # 16402

Larry Hogan  
Governor  
Boyd Rutherford  
Lieutenant Governor  
Ben Grumbles  
Secretary

DEC 27 2016

Mr. Chandrakant Patel  
Calvert Citgo  
2815 North East Road  
North East, MD 21901

Dear Mr. Patel:

The Department has received your completed Request for Coverage form and fee for an Air Quality General Permit to Construct for Ground Water Air Strippers and Soil Vapor xtraction Equipment at the following location:

Source Name: Calvert Citgo  
Street Address: 2815 North East Road  
North East, MD 21901  
Equipment: RES Vacuum Extraction Truck  
I.D. No.: 015-0173-9-0226  
AI No.: 25712

The permit is effective as stated in the General Permit. The cancelled check or other receipt, a copy of the Request for Coverage, the permit conditions from the application package, this letter, and any other supporting documents should be retained on site.

In the event that you have misplaced the permit conditions from the application package, they can be downloaded from the Departments web page:  
<http://www.mde.state.md.us/programs/Permits/AirManagementPermits/AirQualityGeneralPermit>.  
The blue bordered pages within the application package are the permit conditions applicable to you.

If you have any questions, please contact Nolan Penney at [nolan.penney@maryland.gov](mailto:nolan.penney@maryland.gov) or (410) 537-3219.

Sincerely,

Karen G. Irons, P.E., Administrator  
Air Quality Permits Program  
Air and Radiation Management Administration

KG/np

## Suzanne Shourds

---

**From:** Suzanne Shourds  
**Sent:** Wednesday, May 3, 2017 10:00 AM  
**To:** 'nolan.penney@maryland.gov'  
**Subject:** Air Quality General Permit, Source Name Calvert Citgo (ID No. 015-0173-9-0226)  
**Attachments:** SVE Air Permit Application Signed11212016.pdf; (20161227) MDE SVE Permit Approval Letter.pdf

Nolan – It was great speaking with you earlier. This email is to confirm that, as discussed, the vacuum extraction truck associated with the attached Air Quality General Permit has a catalytic oxidation component as well as an activated carbon component.

Regards,

Suzanne Shourds  
Project Manager

## REPSG

**React Environmental  
Professional Services Group, Inc.**

6901 Kingsessing Avenue, Suite 201  
P.O. Box 5377  
Philadelphia, PA 19142-0377  
Phone: 215-729-3220 Ext. 378  
Cell: 267-688-7311  
Fax: 215-729-1557  
Email: [sshourds@repsg.com](mailto:sshourds@repsg.com)  
Website: <http://www.repsg.com>  
[Facebook](#), [Twitter](#), and [LinkedIn](#)

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 Please consider the environment before printing this email



# Maryland

## Department of the Environment

Larry Hogan, Governor  
Boyd K. Rutherford, Lt. Governor

Ben Grumbles, Secretary  
Horacio Tablada, Deputy Secretary

SEP - 9 2019

Mr. Prag Patel  
Calvert Citgo  
2815 North East Road  
North East, Maryland 21901

**RE: NOTICE OF INTENT APPROVAL**  
**Calvert Citgo**  
**2815 North East Road**  
**Noerth East, Maryland 21901**  
**General Discharge Permit No: 20OGR-25712 (MDG919013)**

Dear Mr. Patel:

This is in response to your Notice of Intent (NOI) request for authorization to discharge under a general discharge permit for the discharge of treated ground water from oil contaminated ground water sources for the following location:

Facility Name:	Calvert Citgo
Location:	2815 North East Road North East, Maryland 21901
Cognizant Official:	Prag Patel
Phone:	(410) 658-3687
Latitude:	39°41'49.6" N
Longitude:	75°58'45.9" W
Sic Code:	4953 - Refuse Systems
Date received:	August 23, 2019
Analysis Requirement:	BTEX, MTBE, TPH, Napthalene

The NOI certifies your agreement to comply with terms of this permit, including your responsibility to (a) notify the owner of the receiving surface water system of this authorization and (b) obtain any required approvals from that owner prior to discharging. Your facility's permit coverage extends until December 11, 2022 or as specified in Part I.F of the general discharge permit.

The following documents are enclosed:

1. General Discharge Permit No. 20OGR-25712 (MDG919013).
2. A blank Discharge Monitoring Report (DMR) form set up for your facility's discharge reporting requirements. All DMR forms must be submitted electronically through the EPA's online Central Data Exchange (CDX) system.
3. A Removed Substances Reporting Form as required in Part VII. General Conditions, Paragraph F.
4. A list of Significant Noncompliance Criteria (SNC) Violations.



This general discharge permit only addresses the requirements for the discharge of treated oil contaminated ground water to surface waters of the State. It does not:

1. Authorize the reinjection or infiltration of treated water directly to ground water of the State without specific approval from the Department;
2. Authorize the discharge of treated water into a municipal sanitary system; or
3. Interfere with evaluation and monitoring requirements for testing ground water monitoring wells prior to treatment and that are part of a site's cleanup activities.

This permit may be suspended or revoked upon a final, unreviewable determination that the permittee lacks, or is in violation of, any federal, State, or local approval necessary to conduct the activity authorized by this permit.

A copy of this discharge permit letter shall be maintained at the facility location and be made available for inspection when requested. If you have any questions, please contact me at 410-537-3442 or by email at [chris.ralston@maryland.gov](mailto:chris.ralston@maryland.gov)) or Juraj Masiar at 410-537-3412 or by email at [juraj.masiar@maryland.gov](mailto:juraj.masiar@maryland.gov).

Sincerely,



Christopher Ralston, Program Manager  
Oil Control Program

Enclosures.

cc: Mr. Juraj Masiar

# ATTACHMENT 1

## EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The permittee is authorized to discharge treated petroleum hydrocarbon contaminated ground water to surface or ground waters of the State. Each point of discharge shall constitute an individual outfall which is subject to the below listed effluent limitations and monitoring requirements. Such discharge shall be monitored by the permittee and limited at a sampling port at the discharge of the treatment system as specified below:

<u>EFFLUENT PARAMETERS</u> <sup>(1)</sup>	<u>Analytical Method</u>	<u>EFFLUENT LIMITATIONS</u>		<u>Measurement Frequency</u>	<u>Sample Type</u>
		<u>Quarterly Average</u>	<u>Daily Maximum</u>		
Flow (gpd)		(2)	(2)	(5)	estimated
Total BTEX <sup>(3)(4)</sup>	5030/ 8260	(2)	100 ppb	(5)	grab
Benzene <sup>(4)</sup>	5030/ 8260	(2)	5 ppb	(5)	grab
Toluene <sup>(4)</sup>	5030/ 8260	(2)	(2)	(5)	grab
Ethylbenzene <sup>(4)</sup>	5030/ 8260	(2)	(2)	(5)	grab
Xylene <sup>(4)</sup>	5030/ 8260	(2)	(2)	(5)	grab
Naphthalene <sup>(4)</sup>	5030/ 8260	(2)	(2)	(5)	grab
MtBE <sup>(4)</sup>	5030/ 8260	(2)	(2)	(5)	grab
TPH	(6) / 8015B	(2)	15 ppm	(5)	grab

For discharges to surface waters, there shall be no discharge of floating solids or persistent foam in other than trace amounts. Persistent foam is foam that does not dissipate within one half-hour of point of discharge. Additionally, there shall be no visible petroleum sheen discharged to waters of the State.

- (1) Required effluent characteristics to be monitored for ground water contaminated with:
  - a. Gasoline: Flow, Total BTEX, Benzene, Toluene, Ethylbenzene, and Xylene.
  - b. Oil products other than gasoline: Flow, Naphthalene, and TPH.
  - c. Unknown or mixed sources of contamination: All listed effluent characteristics.
- (2) Monitoring required without limits unless specified in the general permit.
- (3) Total BTEX is defined as the sum of the benzene, toluene, ethylbenzene, and xylene concentrations.
- (4) EPA test method 5030/ 8260 is required for all listed purgeable aromatic hydrocarbons and MtBE.
  - (5) 1 sample per month (1/month) if treating 25,000 gallons or less per month
  - 1 sample every two weeks (2/month) if treating 25,001 - 500,000 gallons per month
  - 1 sample per week (4/month) if treating 500,001 gallons or more per month
- (6) TPH preparation method for GRO=5030; for DRO=3510 or 3520.



Land and Materials Administration • Oil Control Program

**Removed Substances Reporting Form**

INSTRUCTIONS: Use this form to report the disposal of substances resulting from (1) treatment of wastewaters and (2) related manufacturing processes as required by the State of Maryland "Water Quality and Water Pollution Control Regulations," COMAR 26.08.01. Use a separate form for each waste, which is disposed of in a different manner. If several wastes are mixed before disposal, each waste must be separately described regardless of the quantity. Note: Submission of this form does not replace annual reporting of hazardous wastes as required by State of Maryland Regulation "Disposal of Controlled Hazardous Substances." COMAR 26.13.01.

1. DISCHARGE PERMIT NUMBER: \_\_\_\_\_

2. NAME OF FACILITY: \_\_\_\_\_

3. FACILITY MAILING ADDRESS: \_\_\_\_\_

\_\_\_\_\_

4. LOCATION OF FACILITY (if different from Item 3): \_\_\_\_\_

\_\_\_\_\_

5. FACILITY CONTACT: \_\_\_\_\_

6. Describe the nature of the removed substance (waste oil, sludge, etc.): \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

7. Describe the treatment process or the manufacturing process that generated the removed substance (precipitation, settling, etc.)

\_\_\_\_\_

\_\_\_\_\_

8. Describe the precise character of the Removed Substance (liquid, solid, sludge, etc.):

\_\_\_\_\_

\_\_\_\_\_

If sludge, what percent solids? \_\_\_\_\_

Is a chemical analysis attached?  Yes  No

# Significant Noncompliance Criteria (SNC) for National Pollutant Discharge Elimination System Violations

## I. Effluent Violations of Daily Maximum Limits

- a. A 40% exceedance of any daily maximum limit listed in Table 1 for any two or more months during two consecutive Discharge Monitoring Reporting (DMR) periods is **SNC**.
- b. Violations of any daily maximum effluent limit by **any** amount for any four or more months during two consecutive Discharge Monitoring Reporting (DMR) periods is **SNC**.

**Table 1**

<u>Pollutant</u>	<u>Daily Maximum</u>	<u>SNC 40% exceedance</u>
MTBE	(1)	
TBA	(1)	
Total BTEX <sup>(3)</sup>	100 ppb	140ppb
Benzene	5 ppb	7ppb
TPH	15 ppm	21ppm
Toluene	(2)	
Ethylbenzene	(2)	
Xylene	(2)	
Naphthalene	(2)	
Flow (gpd)	(2)	

- (1) MTBE, TBA: (when directed by the Department)
- (2) Monitoring required without limits
- (3) Total BTEX is defined as the sum of the benzene, toluene, ethylbenzene, and xylene concentrations.

- c. Exceedance of 10 times or greater of the Daily Maximum Limits in any one month, regardless of the volume discharged is **SNC**.

## II. Other Effluent Violations

Any effluent violation that causes or has the potential to cause a water quality or human health problem is **SNC**.

## III. Non-Effluent Violations

Any unauthorized bypass, unpermitted discharge, or pass through of pollutants which causes or has the potential to cause a water quality problem (e.g., fish kills, oil sheens) or health problems is **SNC**.

## IV. Reporting Violations

(DMRs) Discharge Monitoring Reports, **including** a final DMR in which a discharge permit expires, or is canceled, that are not submitted at all or are submitted 30 or more days late are **SNC**. Laboratory analyses shall accompany all DMRs.

### DMR Reporting Dates

<u>Quarter</u>	<u>Months Reporting</u>	<u>Due Date</u>
1	01/01 - 03/31	04/30
2	04/01 - 06/30	07/31
3	07/01 - 09/30	10/31
4	10/01 - 12/31	01/31

DMR mailing address: Maryland Department of the Environment-Oil Control Program  
1800 Washington Boulevard, Suite 620  
Baltimore MD 21230-1719

Significant Noncompliance Criteria (SNC) for National Pollutant Discharge Elimination System Violations may be subject to an Administrative Action. Questions: Please call the Permits Section, Oil Control Program, 410-537-3442

**GENERAL PERMIT FOR THE DISCHARGE OF TREATED GROUND WATER  
FROM OIL CONTAMINATED GROUND WATER SOURCES TO SURFACE OR  
GROUND WATERS OF THE STATE**

**DISCHARGE PERMIT NO. 20OGR-25712**

**NPDES PERMIT NO. MDG919013**

**Effective Date: SEP - 9 2019**

**Expiration Date: December 11, 2022**

<b>PART I. APPLICABILITY AND COVERAGE.....</b>	<b>3</b>
A. GEOGRAPHIC COVERAGE.....	3
B. ELIGIBLE DISCHARGES.....	3
C. INELIGIBLE DISCHARGES.....	3
D. NO GENERAL PERMIT REQUIRED.....	3
E. INDIVIDUAL PERMIT OR ANOTHER GENERAL PERMIT REQUIRED.....	3
F. TERMINATION OF GENERAL PERMIT.....	4
G. AUTHORIZATION.....	5
H. TRANSFER OF AUTHORIZATION.....	5
I. CONTINUATION OF AN EXPIRED GENERAL PERMIT.....	6
J. CHANGE IN LOCATION.....	6
K. RESPONSIBILITY OF PERMITTEE WITH REGARD TO FACILITY USERS.....	6
<b>PART II. DEFINITIONS.....</b>	<b>6</b>
<b>PART III. CONDITIONS OF REGISTRATION.....</b>	<b>9</b>
A. REQUEST FOR REGISTRATION AND FEE REQUIREMENTS.....	9
B. DEADLINES FOR NOTIFICATION.....	10
C. REQUIRED SIGNATURES.....	10
D. FAILURE TO NOTIFY.....	11
E. CHANGE IN DISCHARGE.....	11
F. ADDITIONAL NOTIFICATION.....	12
G. PERMIT EXPIRATION AND RENEWAL.....	12
<b>PART IV. SPECIAL CONDITIONS.....</b>	<b>12</b>
A. NOTIFICATIONS.....	12
B. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS.....	12
<b>PART V. MONITORING AND REPORTING.....</b>	<b>12</b>
A. REPRESENTATIVE SAMPLING.....	12
B. SAMPLING AND ANALYTICAL METHODS.....	13
C. DATA RECORDING REQUIREMENTS.....	13
D. MONITORING EQUIPMENT MAINTENANCE.....	13
E. ADDITIONAL MONITORING BY PERMITTEE.....	13
F. REPORTING MONITORING RESULTS.....	13
G. RECORDS RETENTION.....	13
H. NONCOMPLIANCE WITH DISCHARGE LIMITS.....	14
<b>PART VI. VIOLATION OF GENERAL PERMIT CONDITIONS.....</b>	<b>14</b>
A. COMPLIANCE WITH THIS GENERAL PERMIT AND WATER POLLUTION ABATEMENT STATUTES.....	14
B. CIVIL AND CRIMINAL LIABILITY.....	14
C. ACTION ON VIOLATIONS.....	14
D. CIVIL PENALTIES FOR VIOLATIONS OF GENERAL PERMIT CONDITIONS.....	15
E. CRIMINAL PENALTIES FOR VIOLATIONS OF GENERAL PERMIT CONDITIONS.....	15
F. PENALTIES FOR FALSIFICATION AND TAMPERING.....	15

## **PART I. APPLICABILITY AND COVERAGE.**

Pursuant to the provisions of Title 9 of the Environment Article, Annotated Code of Maryland, and the provisions of the Federal Clean Water Act (CWA) 33 U.S.C. §1251 et seq. and implementing regulations 40 CFR Parts 122, 123, 124, and 125, the Maryland Department of the Environment (the Department), herein referred to as the "Department", hereby authorizes operators located in the State of Maryland, who have submitted a notice of intent (NOI) and received written approval from the Department, to discharge treated ground water from oil contaminated ground water sources described herein to waters of the State of Maryland in accordance with the eligibility requirements and other conditions set forth in this general permit and consistent with the permittee's NOI on file with the Department.

### **A. Geographic Coverage.**

This general permit covers discharges to surface or ground waters within the territorial boundaries of the State of Maryland.

### **B. Eligible Discharges.**

This general permit covers the following discharges: all new and existing discharges of treated ground water from oil-contaminated ground water sources.

### **C. Ineligible Discharges.**

The following discharges are not eligible for coverage under this general permit:

1. Discharges of treated ground water contaminated with other volatile organic compounds or hazardous materials (such as, but not limited to, TCE, TCA, DCE, etc.), other than oil unless prior written approval is authorized by the Department.
2. Remediation by injection of chemicals into the ground water unless prior written approval is authorized by the Department.
3. ReInjection of treated ground water into ground water wells unless prior written approval is authorized by the Department.

### **D. No General Permit Required.**

No general permit is required for establishments where there is no discharge of wastewater to waters of the State and where the operator has certified, in accordance with criteria established by the Department on form WMA/MDE/PER.067, that there is no potential for exposure of pollutants to storm water being discharged to waters of the State. This exemption is non-transferable, does not require a fee, and is valid for five years or until conditions change. The form can be found on MDE's website at <http://9nl.at/MD-NEC>.

### **E. Individual Permit Required or Another General Permit Required.**

1. If the Department determines that a discharge may cause an in-stream exceedance of water quality standards, the Department may require additional actions, including an application for an individual permit.
2. The Department may require any person authorized by this general permit to apply for and obtain an Individual State or State/NPDES discharge permit or obtain coverage under another type of general permit. If an owner or operator fails to submit, in a timely manner, an application for the Department-required individual State or State/NPDES discharge permit or a Notice of Intent (NOI) for another type of general permit as required by this condition, the applicability of this general permit to the owner or operator is automatically terminated. Effective at the end of such day that was specified by the Department for the application or NOI to be submitted, this general permit is terminated and the permittee's continuance of discharges that are covered by the general permit is no longer authorized.

2. If the Department terminates permit coverage as a result of one of the conditions listed in Section F.1 above, the permittee must apply for an individual permit immediately. The permittee must also cease any and all activities listed in Part I, Section B until coverage is granted under an individual permit. If there are periods of discharge between the termination of the general permit and the effective date of the individual permit, the facility operator and owner are accountable for those discharges and any violations of State and federal law are subject to penalty as detailed in PART VI.
3. Any permittee not requesting termination of general permit coverage remains responsible for meeting all permit requirements, including monitoring and reporting. A permittee should request permit termination by submitting a Notice of Termination (NOT) MDE/LMA/PER.070 form if:
  - a. All discharges have permanently ceased;
  - b. For discharge of storm water from containment structures, all oil has been permanently removed from storage tanks and all residual contamination in the containment structures has been removed; or
  - c. A new owner or operator has taken over responsibility for the facility in accordance with Part I, Section H of this general permit.

**G. Authorization.**

1. To be authorized to discharge under this general permit, a person is required to submit an NOI in accordance with the requirements of PART III of this general permit, pay the required fee, receive notification from the Department of registration, and comply with the terms and conditions of this general permit.
2. Coverage under this general permit is effective on the date that the NOI is accepted by the Department, provided the NOI fee has been paid to the Department in accordance with the terms stipulated in PART III of this general permit. A person, who submits such an NOI, is notified of its acceptance by the Department, complies with the terms and conditions of this general permit, and pays the required fee, is authorized to discharge under the terms and conditions of this general permit.
3. If the NOI fee is paid by check which does not clear for any reason, the person will be given 30 calendar days to make proper payment including any interest and other charges that are due. If payment is not received by the 31<sup>st</sup> calendar day, coverage under this general permit shall be considered void from the outset. The permittee should save the cancelled check, a copy of the completed NOI, and the registration letter from the Department. These documents shall be provided to the Department upon request.

**H. Transfer of Authorization.**

1. The authorization under this general permit is not transferable to a change in facility location.
2. The authorization under this general permit is not transferable to any person except in accordance with this section.
3. Authorization to discharge under this general permit may be transferred to another person if:
  - a. The current permittee notifies the Department's Oil Control Program in writing of the proposed transfer and submits form MDE/LMA/PER.079.
  - b. A written agreement, indicating the specific date of the proposed transfer of permit coverage and acknowledging the responsibilities of the current and new permittee for compliance with and liability for the terms and conditions of this general permit, is submitted to the Department;



- H. **"Estimated flow"** means a calculated volume or discharge rate that is based on a technical evaluation of the sources contributing to the discharge including, but not limited to, pump capabilities, water meters, and batch discharge volumes.
- I. **"Federal Clean Water Act"** (CWA) means the Federal Water Pollution Control Act Amendments of 1972, its amendments and all rules and regulation adopted there under.
- J. **"General permit"** means a discharge permit issued for a class of dischargers.
- K. **"Grab sample"** means an individual sample collected over a period of time not exceeding 15 minutes. Grab samples collected for pH and total residual chlorine shall be analyzed within 15 minutes of time of sample collection.
- L. **"Groundwater"** means underground water in a zone of saturation.
- M. **"Impaired water"** means water whose quality does not meet its designated use(s). For purposes of this general permit 'impaired' refers to threatened and impaired waters:
1. For which TMDLs have been established,
  2. For which existing controls such as permits are expected to resolve the impairment, or
  3. For which a TMDL is required.
- Impaired waters compilations are also sometimes referred to as 303(d) lists, and are included in Maryland's most current list of Impaired Surface Waters (as category 4 or 5) which can be found at the following link:
- <http://mde.maryland.gov/programs/Water/TMDL/DataCenter/Pages/index.aspx>
- N. **"Impervious area"** means any surface that does not allow storm water to infiltrate into the ground. Consistent with the Maryland Critical Area Commission, it also means human-made surfaces that are not vegetated will be considered impervious. Impervious surfaces include roof tops, roads, parking lots, driveways and other surfaces which no longer allow rainfall to soak into the ground.
- O. **"Includes" or "including"** means includes or including by way of illustration and not by way of limitation.
- P. **"NOI"** means Notice of Intent to be covered by this general permit (see PART III of this general permit).
- Q. **"NPDES permit"** means a National Pollutant Discharge Elimination System permit issued under the Federal Clean Water Act.
- R. **"Oil"** means oil of any kind and in any liquid form including, but not limited to, petroleum, fuel oil, sludge, oil refuse, oil mixed with other waste, crude oils, aviation fuel, gasoline, kerosene, light and heavy fuel oils, diesel motor fuel including biodiesel fuel regardless of whether the fuel is petroleum based, asphalt, ethanol that is to be intended to be used as a motor fuel or fuel source, and regardless of specific gravity, every other non-edible non-substituted liquid petroleum fraction unless that fraction is specifically identified as a hazardous substance under CERCLA. "Oil" does not include liquefied natural gas, liquefied propane, or any edible oils.
- S. **"Operator"** means that person or those persons with responsibility for the management and performance of each facility.
- T. **"Permittee"** means the person holding a permit issued by the Department and authorized to discharge under the provisions of this general permit.

**GG. "Waters of the State" includes:**

1. Both surface and underground waters within the boundaries of this State subject to its jurisdiction, including that part of the Atlantic Ocean within the boundaries of this State, the Chesapeake Bay and its tributaries, and all ponds, lakes, rivers, streams, tidal and non-tidal wetlands, public ditches, tax ditches, and public drainage systems within this State, other than those designed and used to collect, convey, or dispose of sanitary sewage; and
2. The flood plain of free-flowing waters determined by the Department of Natural Resources on the basis of the 100-year flood frequency.

**HH. "Water Quality Standard"** means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in COMAR 26.08.02.

**PART III. CONDITIONS OF REGISTRATION.**

**A. Requests for Registration and Fee Requirements.**

1. Notice of Intent (NOI)

- a. Applicants shall complete all required information on this general permit's corresponding NOI Form MDE/ LMA/ PER.009 (<http://www.mde.state.md.us/Pages/Home.aspx>), including: owner and permittee names, addresses, electronic mail (email) addresses, and telephone numbers; facility address; description of treatment process to be employed; a copy of analytical data generated within the past 6 months; and estimated effluent volume in gallons per day for each outfall.
- b. A site map identifying discharge locations shall be included with the NOI. The map should provide significant points of reference (i.e. roads, buildings, etc.) near the discharge location and must identify all surface waters within a quarter mile of the discharge point and all potable, monitoring, and recovery wells on the site and surrounding properties within ¼ mile. All discharge locations shall correspond to those identified on the NOI.
- c. A latitude and longitude must be provided for each discharge point. All locations are to be provided in North American Datum (NAD83), Geographic Projection of Latitude/Longitude in Decimal Degrees.
- d. If a person operates multiple facilities, a separate NOI is required for each noncontiguous site.

2. Permit Fee

- a. Persons who intend to obtain coverage under this general permit shall submit an initial fee of \$120 to the Department with the NOI form.
- b. Facilities owned or operated by local and State governments and their consultants are not required to pay a fee.
- c. All fees shall be made payable to the Maryland Department of the Environment and mailed with the first page of the NOI to:

Maryland Department of the Environment  
P.O. Box 1417  
Baltimore, MD 21203-1417

c. For a municipal, State, Federal, or other public agency: By either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:

- i.) The chief executive officer of the agency; or
- ii.) A senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of the EPA).

3. Report Submission.

a. All reports required by the general permit, and other information requested by the Department shall be signed by a person described in PART III, Section C.2 or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- i.) The authorization is made in writing by a person described in PART III, Section C.2;
- ii.) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, a position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company; and
- iii.) The written authorization is submitted to the Department.

b. If an authorization under this subsection is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of PART III, Section C.3(a) must be submitted to the Department prior to or together with any reports, information or applications to be signed by an authorized representative.

**D. Failure to Notify.**

Persons who engage in an activity covered under this general permit, who fail to notify the Department of their intent to be covered under this general permit, and who discharge to waters of the State without an individual State or State/NPDES discharge permit, are in violation of the CWA and of the Environment Article, Annotated Code of Maryland.

**E. Change in Discharge.**

All discharges authorized herein shall be consistent with the terms and conditions of this general permit. The discharge of any pollutant identified in this general permit at a level in excess of that authorized shall constitute a violation of the terms and conditions of this general permit. The permittee shall report any anticipated facility expansions, additional or relocated outfalls, or process modifications which will result in new, different, or an increased discharge of pollutants by submitting a new NOI at least 90 days prior to the commencement of the changed discharge. Based on its evaluation of the revised NOI, the Department may:

- 1. Continue to authorize the discharge under this general permit; or
- 2. Require the permittee to apply for an individual State or State/NPDES discharge permit.

**B. Sampling and Analytical Methods.**

The sampling and analytical methods used shall conform to procedures for the analysis of pollutants as identified in 40 CFR 136 - "Guidelines Establishing Test Procedures for the Analysis of Pollutants" unless otherwise specified.

**C. Data Recording Requirements.**

For each measurement or sample taken to satisfy the requirements of this general permit, the permittee shall record the following information:

1. The exact place, date, and time of sampling or measurement;
2. The person(s) who performed the sampling or measurement;
3. The dates and times the analyses were performed;
4. The person(s) who performed the analyses;
5. The analytical techniques or methods used; and
6. The results of all required analyses.

**D. Monitoring Equipment Maintenance.**

The permittee shall periodically calibrate in accordance with manufacturer's specifications and perform maintenance procedures on all monitoring and analytical instrumentation to insure accuracy of measurements.

**E. Additional Monitoring by Permittee.**

If the permittee monitors any pollutant more frequently than required by this general permit, the permittee shall use approved analytical methods as specified in Part V. Section B and shall report the results of such monitoring, including the increased frequency, in the calculation and reporting of the values as required in Part V. Section F.

**F. Reporting Monitoring Results.**

1. Discharge Monitoring Report (DMR) data obtained by the permittee during each calendar quarter shall be summarized for each outfall as provided with registration under this general permit. DMR data shall be submitted electronically via the EPA's online Central Data Exchange (CDX) system no later than the 28<sup>th</sup> day of the month following the end of each calendar quarter (March, June, September, and December). To obtain information regarding the CDX system and DMR submissions, please contact the Department's Water and Science Administration via email at [mde.netdmr@maryland.gov](mailto:mde.netdmr@maryland.gov) or by telephone at (410) 537-3520.
2. Permittees shall submit the name and address of the laboratory performing analyses within 30 days of registration under this general permit. If the permittee changes laboratories during the general permit term, the Department shall be notified in writing within 30 days. This information shall be sent to the address listed in Part V, Section F.1
3. All reports required by this general permit and other information requested by the Department shall be signed by a person described in Part III, Section C.2, or by a duly authorized representative of that person, as described in Part III, Section C.3.

**G. Records Retention.**

All records and information resulting from the monitoring activities required by this general permit, including all records of analyses performed, calibration and maintenance of instrumentation, and original recordings from continuous monitoring instrumentation, shall be retained for a minimum of five (5) years. This period shall be extended automatically during the course of litigation, or when requested by the Department.

**D. Civil Penalties for Violations of General Permit Conditions.**

In addition to civil penalties for violations of State water pollution control laws set forth in Section 9-342 of the Environment Article, Annotated Code of Maryland, the Federal Clean Water Act (CWA) provides that any person who violates Section 301, 302, 306, 307, 308, 318, or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the Act or in a permit issued under Section 404 of the CWA, is subject to a civil penalty not to exceed \$37,500 per day for each violation.

**E. Criminal Penalties for Violations of General Permit Conditions.**

In addition to criminal penalties for violations of State water pollution control laws set forth in Section 9-343 of the Environment Article, Annotated Code of Maryland, the CWA provides that:

1. Any person who negligently violates Section 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA, or in a permit issued under Section 404 of the CWA, is subject to a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one (1) year, or by both.
2. Any person who knowingly violates Section 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA, or in a permit issued under Section 404 of the CWA, is subject to a fine of not less than \$5,000 nor more than \$50,000 per day of violation, or by imprisonment for not more than three (3) years, or by both.
3. Any person who knowingly violates Section 301, 302, 306, 307, 308, 318, or 405 of the CWA, or any permit condition or limitation implementing any of such sections in a permit issued under Section 402 of the CWA, or in a permit issued under Section 404 of the CWA, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, is subject to a fine of not more than \$250,000 or imprisonment of not more than fifteen (15) years, or both. A person that is a corporation, shall, upon conviction, be subject to a penalty of not more than \$1,000,000.

**F. Penalties for Falsification and Tampering.**

The Environment Article, §9-343, Annotated Code of Maryland provides that any person who knowingly makes any false material statement, representation, or certification in any application, record, report, plan, or other document filed or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, or who knowingly falsifies, tampers with or renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than 6 months per violation, or by both. The Federal Clean Water Act provides that any person who knowingly falsifies, tampers with, or renders inaccurate any monitoring device or method required to be maintained under the CWA, or who knowingly makes any false statement, representation, or certification in any records or other documents submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two years, or by both.

**E. Conditions Necessary for Demonstration of an Upset.**

An upset shall constitute an affirmative defense to an action brought for noncompliance with technology-based effluent limitations only if the permittee demonstrates, through properly signed, contemporaneous operating logs, or other relevant evidence, that:

1. An upset occurred and that the permittee can identify the specific cause(s) of the upset;
2. The permitted facility was at the time being operated in a prudent and workman-like manner and in compliance with proper operation and maintenance procedures;
3. The permittee submitted to the Department notification of an upset within 24 hours in accordance with the reporting requirements identified in PART V, Section H (Noncompliance with Discharge Limits) of this general permit;
4. The permittee submitted to the Department, within five calendar days of becoming aware of the upset, documentation to support and justify the upset in accordance with the reporting requirements identified in Part V, Section H.
5. The permittee complied with any remedial measures required to minimize adverse impact.

**F. Removed Substances.**

Wastes such as solids, sludges, or other pollutants removed from or resulting from treatment or control of wastewaters, or facility operations, shall be disposed in a manner to prevent any removed substances or runoff from such substances from being discharged to Waters of the State. The permittee shall keep a record of the following information and make it available to the Department upon request:

1. The location of all areas used for the disposal of any removed substances as described above;
2. The physical, chemical, and biological characteristics of the removed substances (as appropriate), quantities of any removed substances handled, and the method of disposal; and
3. Identification of the contractor or subcontractor, their mailing addresses, and the information specified in F.1 and F.2 of this Section if disposal is handled by persons other than the permittee.

**G. Facility Operation and Maintenance.**

The permittee must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used to achieve compliance with the conditions of the general permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems installed by the permittee only when the operation is necessary to achieve compliance with the conditions of the general permit.

**H. Power Failure**

In order to maintain compliance with the terms and conditions of this general permit, the permittee shall:

1. Provide an alternative power source sufficient to operate the wastewater collection and treatment facilities; or
2. Halt, reduce, or otherwise control production and all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater collection and treatment facilities.

**I. Other Information.**

When the permittee becomes aware that incorrect information has been included in the NOI or in any other report submitted to the Department, or relevant facts have been omitted from the NOI, or

**P. Impaired Receiving Waters and Total Maximum Daily Loads.**

The NOI for any discharge must identify whether any receiving water is on Maryland's impaired waters list for sediments, which can be found at the Department's 303(d) Searchable Integrated Report Database which can be found at the following link:

<http://mde.maryland.gov/programs/water/TMDL/Integrated303dReports/Pages/303d.aspx>

If the water body has an approved TMDL for sediments, the Department may require individual permit coverage. The permittee must implement all necessary controls to meet the specified waste load allocation (WLA), if one exists, and verify that the discharge complies with the WLA through the discharge monitoring requirements included in this general permit. Failure to comply with a relevant WLA is a violation of this general permit.

**Q. Total Maximum Daily Load (TMDL).**

The general permit may be reopened in accordance with Maryland's Administrative Procedures Act to incorporate future Total Maximum Daily Load requirements.

**R. Severability.**

The provisions of this general permit are severable. If any provisions of this general permit shall be held invalid for any reason, the remaining provisions shall remain in full force and effect. If the application of any provision of this general permit to any circumstances is held invalid, its application to other circumstances shall not be affected.

**PART VIII. AUTHORITY TO ISSUE GENERAL NPDES PERMITS.**

On September 5, 1974, the Administrator of the EPA approved the proposal submitted by the State of Maryland for the operation of a permit program for discharges into navigable waters under Section 402 of the Federal Clean Water Act, 33 U.S.C. Section 1342.

On September 30, 1990, the Administrator of the U.S. Environmental Protection Agency approved the proposal submitted by the State of Maryland for the operation of a general permit program.

Under the approvals described above, this general discharge permit is both a State of Maryland general discharge permit and a NPDES general permit.



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Christopher Ralston, Program Manager  
Oil Control Program

**MARYLAND DEPARTMENT OF THE ENVIRONMENT**  
 Air and Radiation Management Administration / Air Quality Permits Program  
 1800 Washington Boulevard, STE 720 Baltimore, MD 21230-1720  
 (410) 537-3230 • 1-800-633-6101 • [www.mde.state.md.us](http://www.mde.state.md.us)

Mail application and payment to  
**MDE/ARMA, PO Box 2037**  
**Baltimore, MD 21203-2037**  
 Don't forget to sign the application!

Make checks payable to  
**MDE Clean Air Fund**  
 \$250 per piece of equipment

Request for Coverage: Air Quality General Permit to Construct  
**SOIL VAPOR EXTRACTION & GROUNDWATER AIR STRIPPING**

**1) Business/Institution/Facility where the equipment will be located**  Check if this is a federal facility

Name: Calvert Citgo Phone: (410) 658-3687  
 Street Address: 2815 North East Road  
 City: North East State: MD Zip Code: 21901 County: Cecil

**2) Owner**  Check if different than above. If checked, complete the following:

Name: Mr. Chandrakant Patel Phone: (410) 658-3687  
 Mailing Address: 2815 North East Road  
 City: North East State: MD Zip Code: 21901

**3) Installer**  
 Contact Name: Suzanne Shourds (Project Manager at REPSG) Phone: (215)729-3220 x378

**4) Equipment Information**

Manufacturer / Model	Installation date	Soil /	Water	Activated carbon	Thermal oxidation	Catalytic oxidation
<u>Vacuum Extraction Truck</u>	_____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>(Custom Built by RES)</u>	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\*Projected Installation Date for all equipment is before 12/31/2016.

**5) Site Information**

Site status:  Active  Inactive Type of contamination: BTEX, and MTBE from UST Release  
 Estimated/anticipated VOC emission per day, per unit: 2.1

**6) Workers Compensation (Environmental article §1-202)**

Workers insurance policy or binder number: WC8555578  
 Check if self employed or otherwise exempt from this requirement

"I CERTIFY UNDER PENALTY OF LAW THAT THE INFORMATION SUBMITTED IN THIS REQUEST FOR COVERAGE IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS."

P. Patel PRAGNESH PATEL / OWNER 11-21-16  
 Owners Signature Printed Name & Title Date