

**2020  
Periodic Review Report  
Davis-Howland Oil Corporation  
Site  
NYSDEC Site No. 828088  
City of Rochester  
Monroe County, New York**

**March 2021**

**Prepared for:**

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
DEPARTMENT OF ENVIRONMENTAL REMEDIATION  
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# List of Abbreviations and Acronyms

AOC	area of concern
AS	air sparge
BTEX	benzene, toluene, ethyl benzene, and xylene
chem-ox	chemical-oxidation
cVOC	chlorinated aliphatic (straight-chained) volatile organic compound
DHOC	Davis-Howland Oil Corporation
DO	dissolved oxygen
DUSR	Data Usability Summary Report
E & E	Ecology and Environment Engineering and Geology, P.C
EC	engineering controls
EPA	(United States) Environmental Protection Agency
HDPE	high-density polyethylene
IC	institutional controls
IDW	investigation-derived waste
LaBella	LaBella Associates, DPC
µg/L	micrograms per liter
µg/m <sup>3</sup>	micrograms per cubic meter
MS/MSD	matrix spike/matrix spike duplicate
MW	monitoring well
NYCRR	New York Codes, Rules, and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
O&M	operations and management
OM&M	operations, maintenance, and monitoring
ORP	oxidation-reduction potential
Patriot	Patriot Design & Consulting
PCE	perchloroethylene or tetrachloroethylene

## List of Abbreviations and Acronyms (cont.)

PPE	personal protective equipment
PRR	Periodic Review Report
QA/QC	quality assurance/quality control
ROD	record of decision
RSO	Remedial Site Optimization
SCG	standards, criteria, and guidance value
Site	Davis-Howland Oil Corporation (DHOC) Site
SMP	Site Management Plan
SSD	sub-slab depressurization
SVE	soil vapor extraction
TCA	trichloroethane
TCE	trichloroethene
TestAmerica	Eurofins TestAmerica Laboratories, Inc.
VOC	volatile organic compound

# **Enclosure 1**

## **Engineering Controls – Standby Consultant/Contractor Certification Form**

**Davis-Howland Oil Corporation Site  
NYSDEC Site No. 828088**



Enclosure 1  
Engineering Controls - Standby Consultant/Contractor Certification Form



Site Details

Box 1

Site No. 828088

Site Name Davis-Howland Oil Corporation

Site Address: 200 ANDERSON AVENUE Zip Code: 14607  
City/Town: Rochester  
County: Monroe  
Site Acreage: 2.0

Reporting Period: December 31, 2019 to December 31, 2020

YES NO

1. Is the information above correct? ☒ ☐

If NO, include handwritten above or on a separate sheet.

2. To your knowledge has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period? ☐ ☒

3. To your knowledge has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))? ☐ ☒

4. To your knowledge have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period? ☒ ☐

County of Monroe discharge permit is attachment to PRR.

**If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.**

5. To your knowledge is the site currently undergoing development? ☐ ☒

Box 2

YES NO

6. Is the current site use consistent with the use(s) listed below? ☒ ☐  
Restricted-Residential, Commercial, and Industrial

7. Are all ICs/ECs in place and functioning as designed? ☒ ☐

E&E's ICs/ECs certification does not include the sub-slab depressurization systems (SSDs). Pursuant to the 2017 Consent Orders, the Department has no obligation to maintain the SSDS in each building; therefore, E&E cannot, and does not, certify that the vapor mitigation systems are in place and functioning as designed.

**DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.**

Signature of Standby Consultant/Contractor

Date

**Description of Institutional Controls**ParcelOwnerInstitutional Control**106.84-1-11**

Goodman Yard LLC

Soil Management Plan  
Monitoring Plan  
Site Management Plan  
O&M Plan

The site has two records of decision (RODs) dating from March 1997 and March 1998.

**106.84-1-4.002**

Gary I &amp; Marcia Stern

Soil Management Plan  
Monitoring Plan  
Site Management Plan  
O&M Plan

The site has two records of decision (RODs) dating from March 1997 and March 1998.

**106.84-1-5**

John Nacca, Esq.

Soil Management Plan  
Site Management Plan  
O&M Plan

Ground Water Use Restriction  
Landuse Restriction  
Monitoring Plan  
IC/EC Plan

An Environmental Easement was signed on 5/11/2018. The Controls requires:

No disturbance that threatens the integrity of the Engineering controls, no disturbance of the engineering controls, adherence to the Site Management Plan, allowance of access by the NYSDEC, land use is to be used for industrial use only, and no groundwater water is to be used for drinking water unless properly treated.

**106.84-1-6**

John Nacca

Ground Water Use Restriction  
Landuse Restriction  
IC/EC Plan

Monitoring Plan  
Site Management Plan

An Environmental Easement was signed on 5/11/2018. The Controls requires:

No disturbance that threatens the integrity of the Engineering controls, no disturbance of the engineering controls, adherence to the Site Management Plan, allowance of access by the NYSDEC, land use is to be used for industrial use only, and no groundwater water is to be used for drinking water unless properly treated.

**106.84-1-7**

Anderson Acquisitions, llc

Soil Management Plan  
Site Management Plan  
O&M Plan

Ground Water Use Restriction  
Landuse Restriction  
Monitoring Plan  
IC/EC Plan

Environmental Easement originally signed on July 27, 2017. Updated on Feb. 4, 2019.

**107.77-1-28.1**

New York Central Lines, CSXT

The site has two records of decision (RODs) dating from March 1997 and March 1998.

**121.28-2-4**

Allan Stern

Monitoring Plan  
Site Management Plan  
O&M Plan

The site has two records of decision (RODs) dating from March 1997 and March 1998.

**121.28-2-5**

Allan Stern

Monitoring Plan  
Site Management Plan  
O&M Plan

The site has two records of decision (RODs) dating from March 1997 and March 1998.

**Box 4**

### **Description of Engineering Controls**

Parcel

Engineering Control

**106.84-1-11**

Monitoring Wells

In 2018, it was shown that the groundwater treatment system and the air sparge/soil vapor extraction system had reached their performance limits whereby they were no longer cleaning up the groundwater. The treatment systems were shutdown and decommissioned in 2018. Groundwater monitoring wells are the only remaining engineering control.

**106.84-1-4.002**

Monitoring Wells

In 2018, it was shown that the groundwater treatment system and the air sparge/soil vapor extraction system had reached their performance limits whereby they were no longer cleaning up the groundwater. The treatment systems were shutdown and decommissioned in 2018. Groundwater monitoring wells are the only remaining engineering control.

**106.84-1-5**

Vapor Mitigation

A sub-slab depressurization system is the only remaining engineering control.

**106.84-1-6**

Vapor Mitigation  
Monitoring Wells

Groundwater monitoring wells and a sub-slab depressurization system are the only remaining engineering control.

**106.84-1-7**

Vapor Mitigation

A sub-slab depressurization system is the only remaining engineering control.

**107.77-1-28.1**

Monitoring Wells

In 2018, it was shown that the groundwater treatment system and the air sparge/soil vapor extraction system had reached their performance limits whereby they were no longer cleaning up the groundwater. The treatment systems were shutdown and decommissioned in 2018. Groundwater monitoring wells and piezometers are the only remaining engineering control.

**121.28-2-5**

Monitoring Wells

Monitoring wells are the only engineering control on this property.

### Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification, including data and material prepared by previous contractors for the current certifying period, if any;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

☒ ☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) nothing has occurred that would constitute a failure to comply with the Site Management Plan, or equivalent if no Site Management Plan exists.

E&E's ICs/ECs certification does not include the sub-slab depressurization systems (SSDSs). Pursuant to the 2017 Consent Orders, the Department has no obligation to maintain the SSDS in each building; therefore, E&E cannot, and does not, certify that the vapor mitigation systems are in place and functioning as designed.

YES NO

☒ ☐

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and contact the DEC PM regarding the development of a Corrective Measures Work Plan to address these issues.**

\_\_\_\_\_  
Signature of Standby Consultant/Contractor

\_\_\_\_\_  
Date



## IC/EC CERTIFICATIONS

## Professional Engineer Signature

I certify that all information in Boxes 2 through 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Neil J. Brown at 368 Pleasant View Drive  
print name

Lancaster, New York 14086

(print business address)

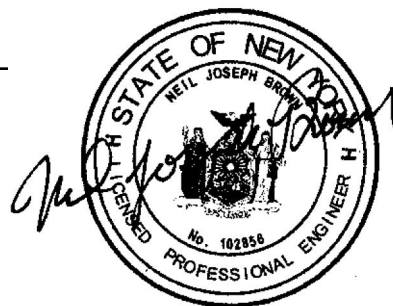
am certifying as a Professional Engineer.

*Neil J. Brown*

Signature of Professional Engineer

Stamp  
(Required for PE)

Date  
3-19-2021



# 1

## Introduction and Background

### 1.1 Introduction

This Periodic Review Report (PRR) provides information on the operations, maintenance, monitoring, compliance, operating costs, and pilot study at the Davis-Howland Oil Corporation (DHOC) Site (hereinafter referred to as the “Site”) during calendar year 2020. This PRR also provides information concerning the institutional controls (ICs) and engineering controls (ECs) facilitating the remedial cleanup of the Site.

This PRR was prepared by Ecology and Environment Engineering and Geology, P.C. (E & E) in accordance with the requirements in the *Site Management Plan, Former Davis-Howland Oil Corporation Site, NYSDEC Site No. 8-28-088* (EEEP 2014). This PRR also addresses comments from the New York State Department of Environmental Conservation (NYSDEC) contained in their email dated March 16, 2021.

### 1.2 Site Description

The Site was used from 1942 to 1972 to produce industrial chemicals, oils, greases, and other lubricants. From 1972 to 1994, the Site was used by DHOC to process and recycle waste oil, grease, and other lubricants. In 1994, DHOC closed and manufacturing and product-processing operations ceased.

Between 1974 and the early 1990s, NYSDEC received reports of releases of materials at the Site, including waste oil, mineral oil, hydrochloric acid, and sulfuric acid. However, no single incident has been identified that can account for a majority of the contamination found at the Site. NYSDEC inspected the Site in June 1991 and found several hundred drums of oils, solvents, and other materials. Some of the drums were leaking, and several areas with stained surficial soil were identified.

In 1993, the Site was listed on the New York State Inactive Hazardous Waste Disposal Site Remedial Program Registry as a Class 2 Site. The Site was defined as a single parcel (ID No. 106.84-1-6) located at 192 through 200 Anderson Avenue in the city of Rochester, Monroe County, New York (see Figure 1-1). Documentation in NYSDEC’s Environmental Site Remediation Database defines the Site as encompassing the parcels described as 190 through 220 Anderson Avenue and the portion of 176 Anderson Avenue immediately north and west of 190 through 220 Anderson Avenue. After site boundary modifications in 2017, the site now

## **1 Introduction and Background**

includes these additional parcels: 183 through 185 Anderson Avenue, 188 Anderson Avenue, 15 through 17 Norwood Avenue, 360 North Goodman, and 406 Atlantic Avenue.

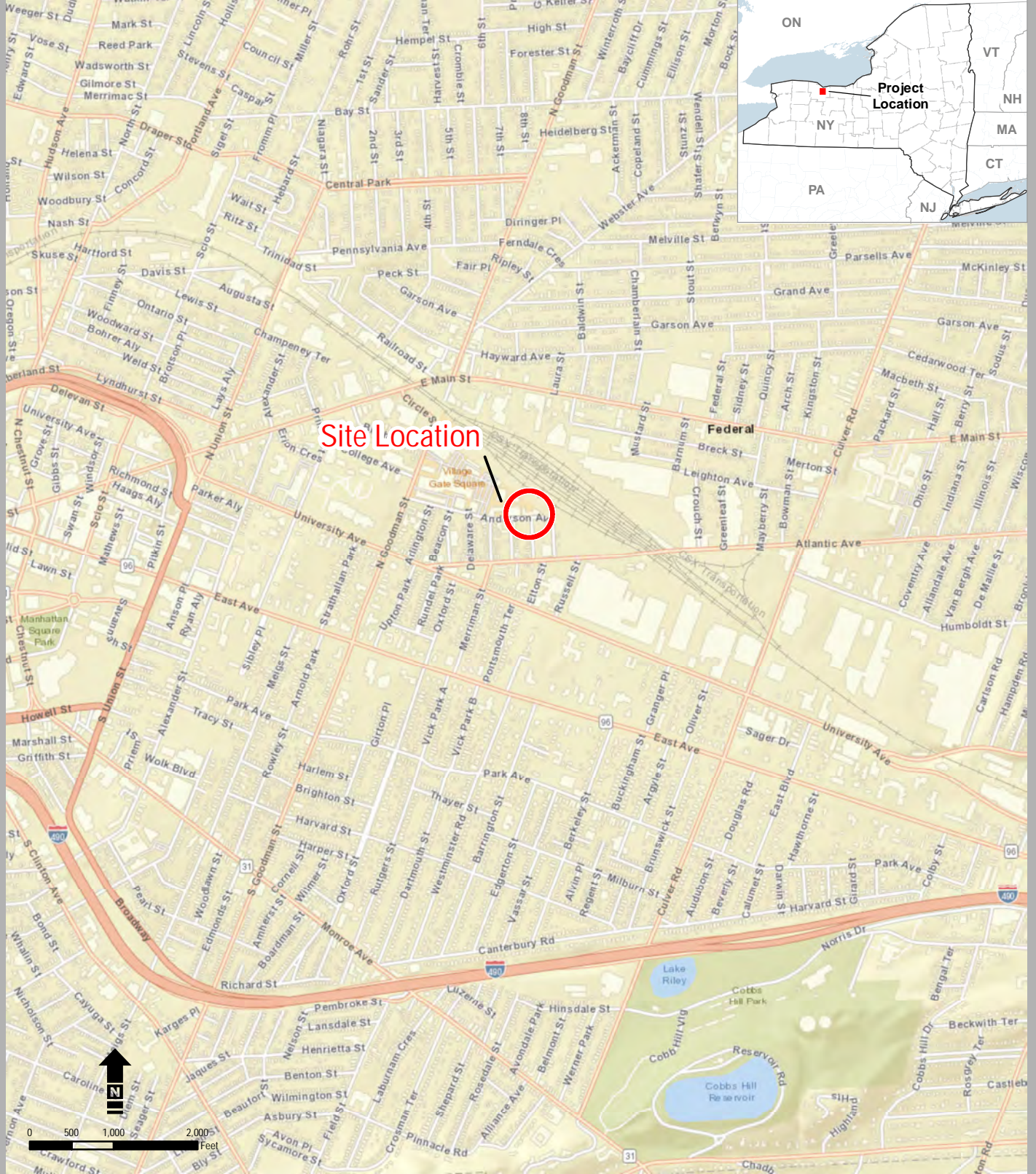
Remedial actions have been performed and remedial systems (air sparge [AS]/soil vapor extraction [SVE] and groundwater treatment systems) were installed at the Site, specifically at the parcel located at 192 through 200 Anderson Avenue, the adjacent parcels at 190 and 220 Anderson Avenue, the portion of 176 Anderson Avenue immediately north and west of 190 through 220 Anderson Avenue, a portion of the CSX Railroad right-of-way to the north of 188 Anderson Avenue, and a small area south of Anderson Avenue encompassing the northern portions of 183 through 185 Anderson Avenue and 15 through 17 Norwood Avenue.

The groundwater treatment and AS/SVE systems were shut off in 2016 when it was determined that the treatment systems had reached asymptotic conditions and were no longer effectively removing VOC contamination. In 2018, the groundwater treatment and AS/SVE systems were decommissioned and sub-slab depressurization (SSD) systems were installed at 190 Anderson Avenue, 192 through 200 Anderson Avenue, and 220 Anderson Avenue. These SSD systems were intended to mitigate potential sub-slab soil vapors that may enter each building via soil vapor intrusion, while also reducing operation costs by switching from AS/SVE systems to SSD systems. These SSD systems were installed between August 6 and August 13, 2018, in accordance with the *NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York* dated October 2006, as well as subsequent updates and the SSD system Work Plan dated April 2018. Following installation, indoor and outdoor air sampling was performed on December 11, 2018. These samples did not detect volatile organic compound (VOC) concentrations in indoor air that exceed the New York State Department of Health (NYSDOH) Air Guidance Values nor the United States Environmental Protection Agency (EPA) Building Assessment and Survey Evaluation Database 90<sup>th</sup> percentile values.

The approximately 2-acre Site is located in an area that includes residences and commercial and industrial facilities. Figure 1-2 presents the general Site layout. No significant surface water is located in the immediate vicinity of the Site.

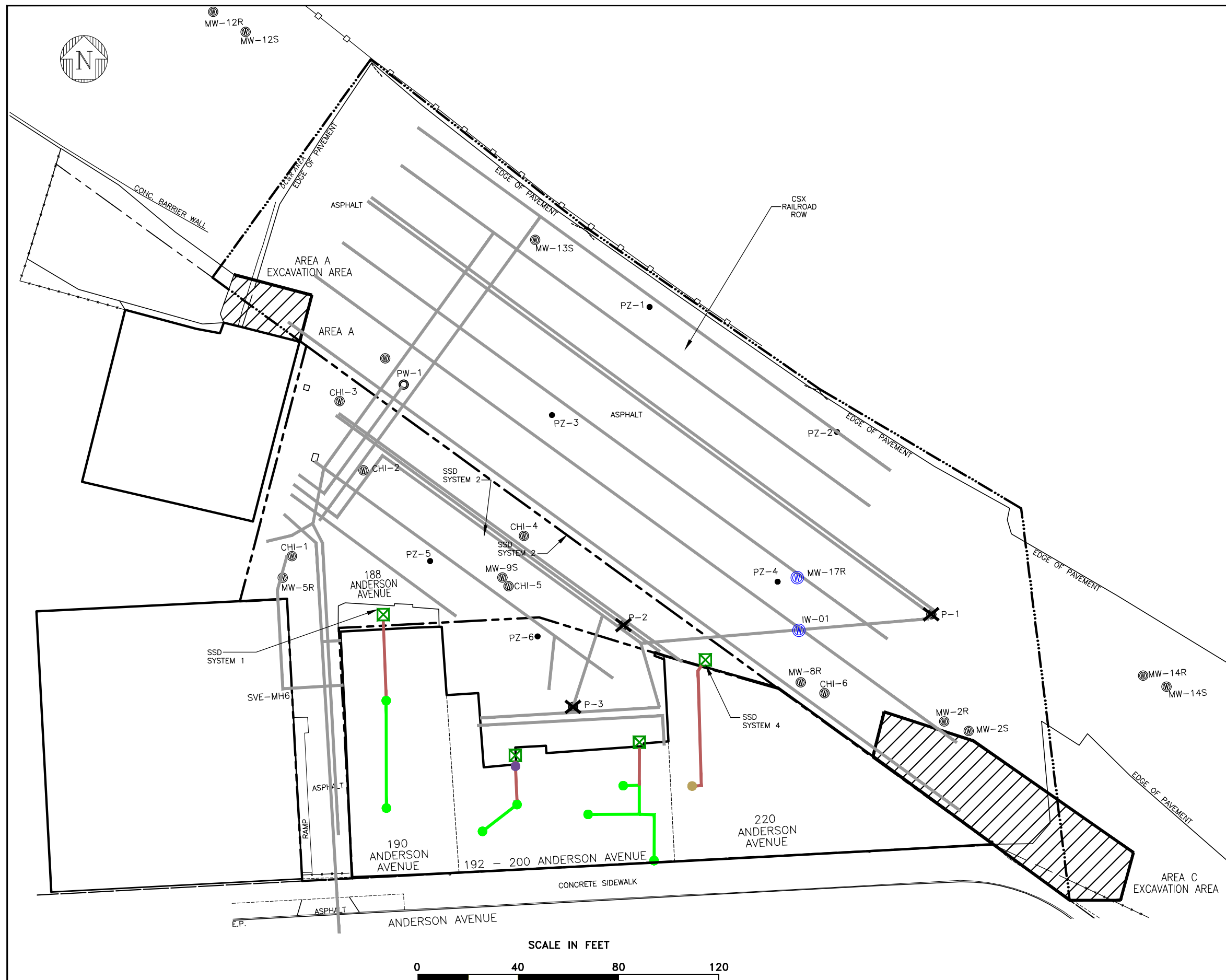


Path: L:\Buffalo\Davis\_Howland\maps\MXD\Site\_Location\_Map\_20210119.mxd



Source: ESRI 2012.

Figure 1-1  
Site Location Map  
Davis-Howland Oil Corporation  
Rochester, NY



## LEGEND

	MONITORING WELL
	PIEZOMETER
	PUMPING WELL
	NEW WELLS
	DECOMMISSIONED AIR SPARGE/SOIL EXTRACTION SYSTEM
	DECOMMISSIONED PUMPING WELL/MONITORING WELL
	FAN LOCATIONS (EXTERIOR)
	2 INCH SOLID SCHEDULE 40 PVC VERTICAL RISER
	3 INCH SOLID SCHEDULE 40 PVC VERTICAL RISER
	4 INCH SOLID SCHEDULE 40 PVC VERTICAL RISER
	3 INCH SOLID PVC SCHEDULE 40 PVC OVERHEAD HEADER PIPING
	4 INCH SOLID PVC SCHEDULE 40 PVC OVERHEAD HEADER PIPING

## ABBREVIATIONS

CH	CLEAN HARBOR
IW	INJECTION WELL
MH	MANHOLE
MW	MONITORING WELL
P	SHALLOW OVERBURDEN GROUNDWATER PUMPING WELLS
PW	BEDROCK GROUNDWATER PUMPING WELLS
PZ	PIEZOMETER
SSD	SUB-SLAB DEPRESSURIZATION

## NOTES

1. PIEZOMETERS, MONITORING WELLS, BUILDINGS AND PROPERTY LINES ARE BASED ON A SURVEY BY POPLI DESIGN GROUP, ARCHITECTURE AND ENGINEERING P.C. DATED DEC 7, 2012.
2. PUMPING WELL LINES, SOIL VAPOR EXTRACTION LINES AND AIR SPARGE LINES BASED ON AS-BUILT DRAWINGS BY ECOLOGY AND ENVIRONMENT P.C. DATED NOVEMBER 2006.
3. STREET LOCATIONS ARE APPROXIMATE.



# 2

## Evaluation of Site Institutional and Engineering Controls

### 2.1 Institutional Controls

No ICs were required by the two records of decision (RODs) issued for the Site; however, in accordance with 6 New York Codes, Rules, and Regulations (NYCRR) Part 375 regulations, NYSDEC required that ICs be applied to the DHOC Site. Programmatically, the ICs that are necessary to provide for the effectiveness of this phase of the remedial action include a Site Management Plan (SMP) and environmental easements. The following are currently listed as ICs for the Site on Enclosure 1 – Institutional Controls – Standby Consultant/Contractor Certification Form included with this report:

- SMP
- Soils Management Plan
- Monitoring Plan
- Operations and Management (O&M) Plan
- Ground Water Use Restriction
- Land Use Restriction
- IC/EC Plan

The current SMP (EEEEPC 2014) includes a soils management plan, monitoring plan, and O&M plan.

An environmental notice was filed and recorded with the Monroe County Clerk on August 15, 2013, in Book 11290, pages 171-176, as a record that informs future owners of development restrictions on the property due to environmental concerns. The ICs require that there be no disturbance that threatens the integrity of the ECs, no disturbance of the ECs, adherence to the SMP, allowance of access by NYSDEC, that land be used for industrial use only, and that no groundwater is to be used for drinking water unless properly treated. A copy of the environmental notice for the Site is provided in Appendix D of the SMP.

An environmental easement for 190 Anderson Avenue (parcel 106.84-1-7) was filed and recorded with the Monroe County Clerk on July 27, 2017, and updated

## **2 Evaluation of Site Institutional and Engineering Controls**

on February 4, 2019. An environmental easement for 192 through 220 Anderson Avenue (parcels 106.84-1-6 and 106-84-1-5) was filed and recorded with the Monroe County Clerk on May 3, 2018. Copies of the environmental easements for the Site are provided in Appendix D of the SMP.

Access agreements between NYSDEC and the property owners for 183 through 185 Anderson Avenue, 188 Anderson Avenue, 15 through 17 Norwood Avenue, and 400 North Goodman were signed on August 2, 2019.

The ICs at the Site restrict disturbance of on-site residual contaminated material. Current and future Site owners are required to perform soil characterization and disposal/reuse activities in accordance with NYSDEC regulations if residual contaminated soil is disturbed or excavated.

In 2020, the Site was in compliance with the ICs required by the SMP:

- The ICs employed at the Site are unchanged from the date the control was put in place and are compliant with NYSDEC-approved modifications;
- Nothing has occurred that would impair the ability of the ICs to protect the public health and environment;
- Nothing has occurred that would constitute a violation or failure to comply with Site-specific requirements of the SMP;
- Access to the Site will continue to be provided to NYSDEC to evaluate the remedy, including access to evaluate the continued maintenance of the ICs; and
- Use of the Site is in compliance with the environmental easements.

### **2.2 Engineering Controls**

The ECs that support remedial operations at the Site are consistent with the SMP regarding operations, maintenance, and monitoring (OM&M) of the Site. The following are currently listed as ECs for the Site on Enclosure 1 – Engineering Controls – Standby Consultant/Contractor Certification Form included with this report:

- A groundwater monitoring well network consisting of both overburden and bedrock monitoring wells; and
- SSD systems were installed in three buildings: 190 Anderson Avenue, 192-220 Anderson Avenue, and 220 Anderson Avenue.

The decision to shut down and decommission the active treatment systems was made by NYSDEC on February 26, 2018 (NYSDEC 2018). This decision was made based on the results of the Remedial Site Optimization (RSO) evaluations performed in 2016 and 2017, which indicated that the remedial systems, as installed, were no longer effective in removing the remaining contamination at the Site. The groundwater treatment system (treatment trailer) and AS/SVE system

## **2 Evaluation of Site Institutional and Engineering Controls**

(interior piping and AS/SVE points) were decommissioned between July and September 2018. The monitoring well system and piezometers remain in place; the status of each well in the monitoring network is provided in Section 5. The groundwater pumping wells, exterior below-grade AS points, lines, and trenches remain in place but are no longer operational. Further discussion regarding the decommissioning of the treatment system is provided in Section 7.1. Long-term groundwater monitoring of the well system will continue in order to evaluate the remaining VOC contamination.

Following the decommissioning of the active remedial systems, SSD systems were installed at 190 Anderson Avenue, 192 through 200 Anderson Avenue, and 220 Anderson Avenue in 2018. Locations of these systems are shown on Figure 1-2. These SSD systems were intended to mitigate potential sub-slab soil vapors that may enter each building via soil vapor intrusion, while also reducing operation costs by switching from AS/SVE systems to SSD systems. These SSD systems were installed between August 6 and August 13, 2018, in accordance with the *NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York* dated October 2006, as well as subsequent updates and the SSD system Work Plan dated April 2018. Following installation, indoor and outdoor air sampling was performed on December 11, 2018. These samples did not detect VOC concentrations in indoor air that exceed the NYSDOH Air Guidance Values nor the EPA Building Assessment and Survey Evaluation Database 90<sup>th</sup> percentile values.

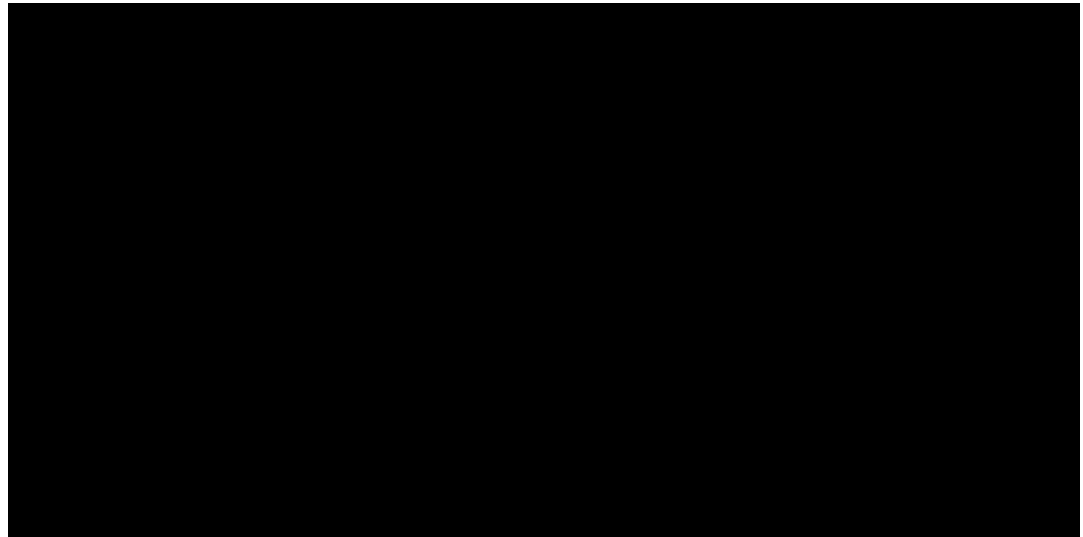
Indoor and outdoor air sampling was performed at [REDACTED] in 2020 and is discussed in Section 3.



# 3

## Soil Vapor Intrusion Sampling

On March 26 and March 27, 2020, E & E performed SVI sampling at two structures west of the Site, as requested by NYSDEC and NYSDOH. The structures are located at [REDACTED] (see Figure 3-1). One indoor air (BA005), one duplicate indoor air (BA006Q), and one sub-slab (SS004) sample were collected in the basement of the structure at [REDACTED]. One indoor air (BA001) and one sub-slab (SS002) sample were collected from the slab-on-grade [REDACTED]. One outdoor air (OD003) sample was collected between the two structures.



**Figure 3-1 March 2020 SVI Sample Locations**

E & E delivered the samples via mail carrier to NYSDEC's call-out laboratory, Eurofins TestAmerica Laboratories, Inc. (TestAmerica), in Knoxville, Tennessee. The samples were analyzed for VOCs using EPA Method TO-15. E & E validated the data and prepared a Data Usability Summary Report (DUSR).

The sample results were screened against the ambient air guideline values set forth in the October 2006 NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York* and subsequent updates. The indoor and outdoor sample results did not exceed the ambient indoor air screening criteria. NYSDOH does not provide guideline values for sub-slab vapor concentrations; however, the detected tetrachloroethylene (PCE) concentration for SS004 (310 micrograms per

### **3 Soil Vapor Intrusion Sampling**

cubic meter [ $\mu\text{g}/\text{m}^3$ ]) exceeded the ambient indoor air guideline value of  $30 \mu\text{g}/\text{m}^3$  and the trichloroethene (TCE) concentrations for SS002 ( $1,800 \mu\text{g}/\text{m}^3$ ) and SS004 ( $570 \mu\text{g}/\text{m}^3$ ) exceeded the ambient indoor air guideline value of  $2 \mu\text{g}/\text{m}^3$ . The analytical results for each sample location are presented in Table 3-1.

Photos, the analytical report, DUSR, and questionnaire and building inventories from the SVI sampling are provided in the 2020 SVI Sampling Report (E & E 2020a). A second round of SVI sampling is tentatively planned to be conducted at the [REDACTED] structures during the 2021/2022 heating season.

**Table 3-1 Summary of Positive Analytical Results for SVI Samples**  
**Davis-Howland Oil Corporation, Rochester, New York**

Analyte	Location ID:	BA001	BA005	BA006Q	OD003	SS002	SS004
	Sample Name:	BA001	BA005	BA006Q	OD003	SS002	SS004
	Date:	3/27/2020	3/27/2020	3/27/2020	3/27/2020	3/27/2020	3/27/2020
	Screening Criteria <sup>(1)</sup>						
<b>Volatile Organic Compounds by Method TO-15 (µg/m<sup>3</sup>)</b>							
1,1,1-Trichloroethane	NA	0.20 U	<b>1.1</b>	<b>0.91</b>	0.20 U	<b>37</b>	<b>670</b>
1,1-Dichloroethane	NA	0.028 U	0.028 U	0.028 U	0.028 U	2.2 U	<b>210</b>
1,2,4-Trimethylbenzene	NA	0.098 U	0.098 U	<b>0.42</b>	0.098 U	7.5 U	2.5 U
1,4-Dioxane (P-Dioxane)	NA	<b>5.6</b>	0.11 U	0.11 U	0.11 U	8.3 U	2.7 U
2,2,4-Trimethylpentane	NA	0.037 U	<b>1.3</b>	<b>1.3</b>	0.037 U	2.9 U	0.93 U
Benzene	NA	<b>0.48</b>	<b>0.70</b>	<b>0.58</b>	<b>0.46</b>	2.0 U	0.64 U
Carbon Tetrachloride	NA	<b>0.49</b>	<b>0.47</b>	<b>0.53</b>	<b>0.49</b>	3.4 U	1.1 U
Chloromethane	NA	<b>1.5</b>	<b>1.6</b>	<b>1.3</b>	<b>1.4</b>	10 U	3.4 U
Cis-1,2-Dichloroethylene	NA	0.040 U	<b>0.39</b>	<b>0.53</b>	0.040 U	<b>1900</b>	<b>320</b>
Cyclohexane	NA	0.079 U	0.079 U	0.079 U	0.079 U	<b>76</b>	2.0 U
Dichlorodifluoromethane	NA	<b>2.8</b>	<b>2.9</b>	<b>2.8</b>	<b>2.9</b>	5.3 U	1.7 U
Ethanol	NA	<b>20</b>	<b>240</b>	<b>250</b>	<b>9.1</b>	130 U	<b>120</b>
Ethylbenzene	NA	0.056 U	<b>1.3</b>	<b>1.1</b>	0.056 U	<b>28</b>	<b>11</b>
m,p-Xylene	NA	<b>0.47</b>	<b>4.9</b>	<b>4.3</b>	0.13 U	<b>120</b>	<b>52</b>
Methyl Ethyl Ketone (2-Butanone)	NA	<b>10</b>	<b>5.3</b>	<b>4.4</b>	<b>1.5</b>	16 U	5.4 U
Methyl Isobutyl Ketone (4-Methyl-2-Pentanone)	NA	0.22 U	0.22 U	<b>0.82</b>	0.22 U	17 U	5.5 U
Methylene Chloride	60	0.56 U	<b>3.4 J</b>	<b>27 J</b>	0.56 U	43 U	14 U
n-Hexane	NA	<b>0.92</b>	<b>1.1</b>	<b>1.6</b>	<b>0.79</b>	<b>140</b>	<b>22</b>
O-Xylene (1,2-Dimethylbenzene)	NA	0.065 U	<b>1.4</b>	<b>1.2</b>	0.065 U	<b>40</b>	<b>16</b>
Tetrachloroethylene (PCE)	30	0.047 U	<b>0.57</b>	<b>1.1</b>	0.047 U	3.6 U	<b>310</b>
Toluene	NA	<b>0.85</b>	<b>8.9</b>	<b>9.2</b>	<b>0.66</b>	<b>160</b>	<b>71</b>
Trans-1,2-Dichloroethene	NA	0.028 U	0.028 U	0.028 U	0.028 U	2.1 U	<b>10</b>
Trichloroethylene (TCE)	2	<b>0.63</b>	<b>0.57</b>	<b>0.76</b>	0.032 U	<b>1800</b>	<b>570</b>
Trichlorofluoromethane	NA	<b>1.4</b>	<b>3.1</b>	<b>4.5</b>	<b>1.4</b>	4.7 U	1.5 U

**Key:**

Qualifiers

J = Estimated value

U = Not detected (method detection limit shown)

Notes

N/A = Not regulated/no available criteria

Other

µg/m<sup>3</sup> = Micrograms per meter cubed

Bold values denote positive hits.

Exceeds soil vapor intrusion ambient air guideline.



1. New York State Department of Health, Guidance for Evaluating Soil Vapor Intrusion in the State of New York, October 2006 and subsequent updates.

# 4

## In Situ Chemical-Oxidation Pilot Study

A pilot study was performed at the Site in the fall of 2020 with the objective to determine the effectiveness of in situ chemical-oxidation (chem-ox) treatment to decrease VOC concentrations in the bedrock groundwater in the vicinity of monitoring well (MW)-8R.

### 4.1 Pilot Study Field Activities

Pilot study field activities to date include the following:

- **September 14, 2020 through September 18, 2020** – Installation and development of two new bedrock wells in the vicinity of MW-8R (MW-17R and IW-01);
- **September 25, 2020** – Slug testing of MW-8R, MW-17R, and IW-01 was conducted;
- **October 12, 2020 through October 15, 2020** – 2020 annual/baseline groundwater sampling for VOCs, sulfate, and alkalinity, and collection of field parameters (temperature, pH, conductivity, oxidation-reduction potential [ORP], dissolved oxygen [DO]) at the 10 bedrock monitoring wells (PW-1, MW-2R, MW-5R, MW-8R, MW-10R, MW-14R, MW-15R, MW-16R, and newly installed MW-17R and IW-01), and 2020 annual groundwater sampling for VOCs and collection of field parameters (temperature, pH, conductivity, ORP, DO) at the five overburden monitoring wells;
- **October 27, 2020 through October 29, 2020** – Injection of Regenesis PersulfOx reagent into MW-17R and MW-8R;
- **November 30, 2020 through December 3, 2020** – One-month post-injection groundwater sampling for VOCs, sulfate, and alkalinity and collection of field parameters at the ten bedrock monitoring wells; and
- **December 8, 2020** – Survey of MW-17R and IW-01.

Future pilot study activities include post-injection groundwater sampling of bedrock wells for VOCs, alkalinity, and sulfate at three months and six months.

#### **4 *In Situ Chemical-Oxidation Pilot Study***

E & E's subcontractor, LaBella Associates, DPC (LaBella), of Rochester, New York, installed MW-17R and IW-01 and performed injection of the chem-ox reagent into MW-17R and MW-8R. E & E developed MW-17R and IW-01 and conducted 2020 annual/baseline groundwater sampling and one-month post-injection groundwater sampling; and collected field parameters during injection. E & E's subcontractor, Patriot Design & Consulting (Patriot), of Rochester, New York, a service-disabled veteran-owned small business, surveyed the locations of MW-17R and IW-01. E & E was on-site to perform oversight of the subcontractors' field activities. Analytical services were provided by NYSDEC's call-out laboratory, TestAmerica.

Field activities were conducted by personnel wearing Level D personal protective equipment (PPE) during the work. Details of the pilot study activities are provided in the pilot study summary report (E & E 2021). Analytical results are presented and discussed in Section 6.

# 5

## General Status of Remedial Systems

### 5.1 SSD Systems

As part of E & E's scope of work for the Site, monitoring of the SSD systems was not required. SSD system operation and maintenance is the responsibility of the property owner. Therefore, conclusions as to their operation and effectiveness cannot be made for the reporting year of 2020.

### 5.2 Groundwater Monitoring Well Network Inspection

E & E conducted inspections of the overburden and bedrock groundwater monitoring wells and piezometers in 2020. The purpose of these inspections was to document the physical condition of the wells and identify maintenance actions required to keep the groundwater monitoring well network operational for sampling purposes. A summary of the monitoring well inspection findings is presented in Table 5-1.

**Table 5-1 Summary of 2020 Well Inspection, Former Davis-Howland Oil Corporation Site**

Well Identification	Date Inspection Documented	Well Casing ID (inches)	Inspection Observations
MW-1S	12/8/2020	2	Bolts do not fasten well cap.
MW-2S	10/15/2020	2	Missing well cap bolts; gasket damaged.
MW-9S	10/15/2020	2	Missing well cap bolts; gasket damaged.
MW-12S	10/12/2020	2	Could not be sampled; covered by gravel/debris.
MW-13S	12/8/2020	2	Could not be sampled; covered with jersey barrier/debris.
MW-14S	10/15/2020	2	Surrounded by overgrowth; missing well cap bolts; gasket damaged.
MW-2R	10/13/2020	4	Missing well cap bolts and J plug lock.
MW-5R	10/13/2020	4	Missing well cap bolts and J plug lock.
MW-8R	10/12/2020	4	Missing well cap bolts.
MW-10R	12/8/2020	4	Missing well cap bolt.
MW-12R	10/12/2020	4	Could not be sampled; covered by gravel/debris.
MW-14R	12/8/2020	4	Missing well cap bolts.
MW-15R	10/14/2020	4	Missing well cap bolts and J plug lock.
MW-16R	10/14/2020	4	Missing well cap lock; concrete pad mis-shapen around curb box; curb box damaged.
MW-17R	11/8/2020	4	No issues.
IW-01	11/8/2020	4	No issues.
PZ-1	12/8/2020	1	Could not be sampled; covered with jersey barrier.
PZ-2	12/8/2020	1	Could not be sampled; covered with jersey barrier.
PZ-3	12/8/2020	1	Missing well cap bolts.
PZ-4	12/8/2020	1	Could not be sampled; covered with dirt/stone debris pile.
PW-1	10/15/2020	6	Centrifugal pump and transducer with wires are in well.

Key:

ID = inner diameter

# 6

## 2020 Groundwater Sampling Summary

This section discusses the groundwater monitoring activities performed at the Site in 2020 and compares the results to historical data.

Field activities were conducted according to the Groundwater Monitoring and Long-term Well Sampling Procedures included as Appendix J of the Final SMP (EEEP 2014). Sampling locations are identified on Figure 1-2.

### 6.1 Field Activities

#### 6.1.1 Monitoring Well Sampling

The 2020 annual groundwater sampling event was conducted from October 12, 2020, through October 15, 2020. Groundwater samples were collected from one piezometer and four shallow overburden monitoring wells and 10 deeper bedrock monitoring wells. The samples from the overburden wells were analyzed for VOCs, and the samples from the bedrock wells were analyzed for VOCs, alkalinity, and sulfate. Monitoring wells MW-13S, PZ-1, and PZ-2 were not sampled because jersey barriers were located on top of the wells; and MW-12S, MW-12R, and PZ-4 were not sampled because debris piles were on top of the wells. This sampling event also served as the baseline sampling for the bedrock wells prior to the chem-ox pilot study injection that was conducted from October 27, 2020, through October 29, 2020.

The 2020 groundwater monitoring activities also included the one-month post-injection sampling of the bedrock wells from November 30, 2020, through December 3, 2020. These samples were analyzed for VOCs, alkalinity, and sulfate.

Prior to purging, static water levels were measured to the nearest 0.01 foot in each monitoring well using an electronic water-level indicator. The water level and total depth of each well were recorded (see Tables 6-1 and 6-2). The suffix “R” in a monitoring well designation (for example, MW-2R) denotes a bedrock well, and the suffix “S” denotes a monitoring well that is screened in the shallow overburden groundwater zone.



**Table 6-1 October 2020 Annual Groundwater Elevations,  
Former Davis-Howland Oil Corporation Site**

Well ID	Measurement Date	Measured Total Depth (feet TOIC)	Ground Elevation (feet amsl)	TOIC Elevation (feet amsl)	Depth to Water (feet TOIC)	Groundwater Elevation (feet amsl)
<b>Shallow Overburden Wells</b>						
MW-1S	10/15/2020	17.98	500.23	499.72	13.86	485.86
MW-2S	10/15/2020	13.97	496.03	497.48	6.10	491.38
MW-9S	10/15/2020	15.90	497.94	498.01	6.45	491.56
MW-14S	10/15/2020	12.93	495.48	495.16	4.38	490.78
PZ-3	10/15/2020	13.49	497.87	497.56	5.71	491.85
<b>Deep Bedrock Wells</b>						
MW-2R	10/13/2020	30.5	497.72	497.54	17.9	479.64
MW-5R	10/13/2020	34.71	498.63	498.23	14.12	484.11
MW-8R	10/12/2020	35.36	498.09	497.64	22.88	474.76
MW-10R	10/14/2020	35.57	497.81	497.44	20.22	477.22
MW-14R	10/13/2020	33.91	495.44	495.18	9.44	485.74
MW-15R	10/14/2020	30.3	494.5	494.14	16.91	477.23
MW-16R	10/14/2020	31.1	493.43	493.04	22.2	470.84
MW-17R	10/12/2020	36.85	497.81	497.43	27.79	469.64
IW-01	10/12/2020	37.48	497.99	497.66	27.95	469.71
PW-1	10/15/2020	29.34	498.02	494.41	10.46	483.95

Key:

amsl = Above mean sea level.

MW = Monitoring well.

TOIC = Top of inner casing.

-- = Data not applicable or not obtained for these wells.

**Table 6-2 2020 One-Month Post-Injection Bedrock Groundwater Elevations,  
Davis-Howland Oil Corporation Site**

Well ID	Measurement Date	Measured Total Depth (feet TOIC)	Ground Elevation (feet amsl)	TOIC Elevation (feet amsl)	Depth to Water (feet TOIC)	Groundwater Elevation (feet amsl)
<b>Deep Bedrock Wells</b>						
MW-2R	12/1/2020	30.41	497.72	497.54	14.21	483.33
MW-5R	12/2/2020	34.73	498.63	498.23	14.15	484.08
MW-8R	12/1/2020	33.9	498.09	497.64	14.36	483.28
MW-10R	12/2/2020	35.55	497.81	497.44	19.45	477.99
MW-14R	12/2/2020	23.7	495.44	495.18	11.09	484.09
MW-15R	12/1/2020	30.32	494.5	494.14	16.44	477.7
MW-16R	12/1/2020	31.05	493.43	493.04	19.4	473.64
MW-17R	11/30/2020	36.6	497.81	497.43	26.29	471.14
IW-01	11/30/2020	37.4	497.99	497.66	26.74	470.92
PW-1	11/30/2020	28	498.02	494.41	10.62	483.79

Key:

amsl = Above mean sea level.

MW = Monitoring well.

TOIC = Top of inner casing.

-- = Data not applicable or not obtained for these wells.

Monitoring wells were sampled using the EPA low-flow sampling procedure (EPA 1998) with a QED bladder pump with new high-density polyethylene (HDPE) tubing. Dedicated poly bailers were used to purge water where the water level could not be maintained for low-flow procedures. Each well was considered adequately purged and ready for sampling when water level and water quality parameters stabilized, indicating fresh aquifer water was being removed from the well; or if the well was purged dry, after the well had sufficiently recharged to allow sample collection. Measurements of temperature, pH, conductivity, turbidity, DO, and ORP were recorded at regular intervals throughout the well-purging process and immediately prior to sampling. The final groundwater quality field measurements are presented in Table 6-3 and Table 6-4. Appendix A presents copies of the monitoring well purge records for both sampling events.

Non-dedicated sampling equipment was decontaminated in accordance with the groundwater monitoring and long-term well sampling procedures included as Appendix J of the SMP. The bladder in the QED bladder pump was replaced between each well. Purged and decontamination water were handled according to procedures outlined in Section 6.1.3.

Upon collection, samples were labeled and immediately placed in a cooler maintained with ice at approximately 4°Celsius. The groundwater samples were delivered directly to TestAmerica in Amherst, New York, by the E & E field team with chain-of-custody documents. Groundwater samples were submitted for analysis of VOCs by EPA Method 624.1 (all wells); analysis of alkalinity by Standard Method SM 2320B and analysis of sulfate by EPA Method 300.0 (bedrock wells).

### **6.1.2 Quality Assurance/Quality Control Review**

In addition to the normal field samples, quality assurance/quality control (QA/QC) samples were collected. Trip blanks for VOC analysis accompanied each shipment to check for the possible introduction of VOCs from the time the samples were collected to the time they were analyzed. One field (equipment/rinsate) blank was collected for VOC analysis during each sampling event. The samples consisted of contaminant-free distilled water that was poured over a decontaminated bladder pump to check the thoroughness of decontamination procedures and to identify cross-contamination of samples.

To check consistency in sample collection, one duplicate sample was collected during each event. The samples consisted of aliquots of sample media placed in separate sample containers and labeled as separate samples. Additionally, extra volume for matrix spike/matrix spike duplicate (MS/MSD) analyses were collected to simulate the background effect and interferences found in the actual samples. The calculated percent recovery of the spike is used as a measure of the accuracy of the analytical method in the sample matrix, and the relative percent deviation between the recoveries of each spiked sample is used to measure the precision of the analytical method. Field duplicates and MS/MSD samples are typically collected at a rate of one per 20 field samples per the Master Quality Assurance Project Plan (E & E 2020b).

**Table 6-3 October 2020 Annual Groundwater Quality Field Measurements,  
Davis-Howland Oil Corporation Site**

Well ID	Measurement Date	pH (s.u.)	Temperature (°C)	ORP (mV)	Conductivity (mS/cm)	DO (mg/L)	Unfiltered Turbidity (NTU)
<b>Overburden Wells</b>							
MW-1S	10/15/2020	7.06	16.56	124	1.23	8.28	4.31
MW-2S	10/15/2020	6.45	17.38	-8	1.33	5.75	35.8
MW-9S	10/15/2020	6.71	19.58	95	0.97	5.53	0
MW-14S	10/15/2020	6.48	17.98	-23	0.59	3.70	0
PZ-3	10/15/2020	6.86	20.21	6	1.98	8.93	0
<b>Bedrock Wells</b>							
MW-2R	10/13/2020	6.95	14.83	-25	1.04	5.77	0
MW-5R	10/13/2020	6.91	16.29	-80	1.28	0.38	30.2
MW-8R	10/12/2020	7.44	14.84	-48	1.41	0	6.4
MW-10R	10/14/2020	6.51	14.57	25	1.04	0.07	0
MW-14R	10/13/2020	7.26	14.55	-157	0.87	0	23.1
MW-15R	10/14/2020	7.16	14	23	1.14	7.47	17.7
MW-16R	10/14/2020	7.02	15.6	-229	0.961	5.64	295
MW-17R	10/12/2020	7.67	15.45	-35	1.47	3.51	11.9
IW-01	10/12/2020	5.21	15.53	-36	1.09	0.51	1
PW-1	10/15/2020	6.78	16.8	-116	1.6	0	0.2

Key:

°C = degrees Celsius.

mV = millivolts

µS/cm = microsiemens per centimeter.

NTU = nephelometric turbidity unit.

s.u. = standard units.

**Table 6-4 One-Month Post-Injection Bedrock Groundwater Quality Field Measurements,  
Davis-Howland Oil Corporation Site**

Well ID	Measurement Date	pH (s.u.)	Temperature (°C)	ORP (mV)	Conductivity (mS/cm)	DO (mg/L)	Unfiltered Turbidity (NTU)
<b>Bedrock Wells</b>							
MW-2R	12/1/2020	7.52	11.25	273	0.129	11.42	35.6
MW-5R	12/2/2020	6.52	12.58	410	1.85	0.35	6.1
MW-8R	12/1/2020	8.17	13.53	350	23.4	0.79	31.5
MW-10R	12/2/2020	7.06	11.76	-146	1.0	0.52	0
MW-14R	12/1/2020	7.16	12.5	-65	0.819	0.56	16.6
MW-15R	12/1/2020	7.42	12.53	30	1.12	8.91	46.5
MW-16R	12/2/2020	6.11	14.03	165	1.07	11.55	66.5
MW-17R	11/30/2020	7.95	13.59	-92	1.29	0.93	7.6
IW-01	11/30/2020	7.55	12.43	-43	1.37	0	7.7
PW-1	11/30/2020	7.52	14.98	-52	1.96	0.3	12.9

Key:

°C = degrees Celsius.

mV = millivolts

µS/cm = microsiemens per centimeter.

NTU = nephelometric turbidity unit.

s.u. = standard units.

Analytical data were reviewed by an E & E chemist and DUSRs were prepared (see Appendix B). Data qualifiers were applied as described in the DUSRs and incorporated into the data summary tables. No significant issues were identified, and the analytical data is considered usable for the intended purpose.

### **6.1.3 Investigation-Derived Waste Management**

Investigation-derived waste (IDW) generated during these investigations was handled according to procedures outlined in E & E's Groundwater Sampling Procedures. Three types of IDW were generated during each event: purged groundwater, decontamination water, and expendable materials, including PPE. Purged and decontamination water from the installation of the wells during the pilot study was stored on-site in a 750-gallon poly tank, and purged and decontamination water from each groundwater sampling event was stored on-site in 50-gallon drums until approval was granted by Monroe County, in accordance with the County of Monroe Sewer Use Permit (see Appendix C), to discharge the water into a sewer discharge location inside the building at 220 Anderson Avenue, Rochester, New York.

Approval was received from Monroe County for discharge of the 2020 annual sampling purge water on November 4, 2021, and E & E discharged the water on November 30, 2021. Approval was received from Monroe County for discharge of the pilot study IDW water on November 10, 2021, and E & E discharged the water on November 30, 2021. Approval was received from Monroe County for discharge of the one-month post-injection sampling purge water on January 11, 2021, and E & E will discharge the water during the week of the three-month post-injection sampling in February 2021. E & E's requests to the County to discharge the purge water on-site are provided in Appendix D.

Expendable PPE generated during the investigation (including gloves and plastic sheeting) was bagged and removed from the site for disposal as non-hazardous solid waste.

### **6.1.4 Private Well Sampling**

On September 18, 2020, at the request of NYSDOH and NYSDEC, E & E collected a water sample at a private residence located approximately a half mile from the Site. The sample was collected from an outside tap and analyzed for perfluorinated alkyl substances by EPA Method 537-M and 1,4-dioxane by EPA Method SW-846 8270D-SIM (see Table 6-5).

## **6.2 Site Hydrogeology**

The Site is situated on alluvial organic silt and sand overlaying glacial till deposits and lacustrine sand and silt of varying thickness. Bedrock beneath the Site is the Penfield Dolostone of the Middle Silurian Lockport Group and is encountered at depths of about 15 to 27 feet.

Two groundwater aquifers have been identified beneath the Site: a shallow overburden aquifer and an upper bedrock aquifer. These aquifers are not listed by the EPA as sole-source aquifers (Lawler, Matusky & Skelly Engineers, LLP, and Galson/Lozier Engineers 1996). A summary description of each water-bearing zone is provided below.

### **6.2.1 Overburden Aquifer**

Historically, groundwater flow direction at the Site has been observed to be highly variable. In 1997, a flow divide existed near the railroad tracks, resulting in groundwater flow to the northeast, southeast, southwest, and south. In 2004, groundwater flow was observed to travel northeast across the Site, while in 2007 it was observed to travel southwest from a high area along the railroad tracks (EEEPC 2007). The overburden groundwater flow in 2009 through 2011 was observed to be primarily toward the south and west (EEEPC 2009, 2010, 2013). From 2012 through 2016, the flow was primarily to the southwest, with localized groundwater sinks in the middle of the Site, indicative of capture primarily by pumping well P-2 and, to a lesser extent, P-3 (EEEPC 2015, 2016a, 2017).

Overburden groundwater flow in November 2017 and August 2018 was primarily to the southwest, with localized variation in the northern portion of the site and without the localized sinks due to pumping well capture noted in prior years due to the shutdown of the groundwater extraction system (EEEPC 2018; E & E 2019).

In October 2020, the overburden groundwater flow was primarily to the south (see Figure 6-1).

### **6.2.2 Bedrock Aquifer**

Historically, the bedrock groundwater flow direction at the Site has generally been more consistent than that in the overburden. In 1997 and 2004, groundwater was observed flowing radially outward from a groundwater mound beneath the Site, with the primary flow directions to the northeast and southeast (EEEPC 2004). In 2007, 2009, 2010, and 2011, groundwater flow in the bedrock aquifer appeared to be more variable, with radial flow from high areas on the west (near MW-5R) and east (near MW-14R/MW-15R) sides of the Site and a groundwater sink near MW-2R (EEEPC 2007, 2009, 2010, 2013). From 2012 through 2015, similar outward radial flow from MW-5R and MW-14R was observed, with radial capture at pumping wells PW-1 and PW-2. Groundwater capture was enhanced beginning in 2012, likely the result of routine well maintenance producing higher flow rates (EEEPC 2015, 2016a).

In October 2019, the regional bedrock groundwater flow direction was generally to the south across the Site. Figures 6-1 and 6-2 show the bedrock groundwater elevation isopleths, which were modeled from the groundwater elevations measured during the 2020 annual/baseline and one-month post-injection sampling events. There appears to be a groundwater sink (lower groundwater elevation) around the two new bedrock wells installed at the Site as part of the in situ chem-

ox pilot study (IW-01 and MW-17R). Bedrock groundwater elevation data and flow direction will be evaluated when the remaining pilot study groundwater data is collected.

### **6.3 Analytical Results**

This subsection presents the analytical results for the 2020 annual overburden and bedrock groundwater samples and the one-month post-injection bedrock groundwater samples collected at the DHOC Site, and compares them to historical results. The laboratory results for VOCs detected in overburden monitoring well and piezometer samples during the October 2020 annual sampling event are presented in Table 6-6, and the laboratory results for VOCs detected in bedrock monitoring well samples during the October 2020 annual sampling and the December 2020 one-month post-injection sampling events are presented in Table 6-7 and Table 6-8. Groundwater sample results discussed in the following subsection were compared to the NYSDEC Class GA groundwater standards and guidance values (NYSDEC 1998). The laboratory reports for the sampling events are provided in Appendix E.

#### **6.3.1 Overburden Groundwater Results**

##### **October 2020 Annual Sampling**

Nine VOCs were detected in one or more groundwater samples collected from overburden wells. The majority of these compounds are chlorinated aliphatic (straight-chained) VOCs (cVOCs), including tetrachloroethylene (PCE); trichloroethene (TCE); 1,1,1-trichloroethane (TCA), and their degradation by-products. 1,2-dichlorobenzene and chloroform were also detected in one well at low concentrations.

Six VOCs were detected in one or more overburden monitoring wells at concentrations exceeding NYSDEC Class GA groundwater standards. These compounds are shaded in Table 6-6. The concentrations of VOCs in overburden groundwater were highest in MW-9S. The total concentration of VOCs was approximately 180 micrograms per liter ( $\mu\text{g/L}$ ) in MW-9S. The primary contributors to this total concentration were TCA, 1,1-dichloroethane, dichloroethylenes, PCE, trans-1,2-dichloroethene, and TCE. The overburden VOC analytical results are presented in Table 6-6.

The 2020 annual concentration isopleths of VOCs in the overburden groundwater samples are presented on Figure 6-3.



**Table 6-5 Summary of Analytical Results for Private Residence Water Samples**

Analyte	Location ID: Private Residence	
	Date: 09/18/20	
	Screening Criteria <sup>(1)</sup>	
Perfluorinated Alkyl Substances by EPA Method 537-M (ng/L)		
1H,1H, 2H, 2H-Perfluorodecane sulfonic acid	N/A	1.8 U
1H,1H, 2H, 2H-Perfluorooctane sulfonic acid	N/A	4.6 U
N-ethyl perfluorooctanesulfonamidoacetic acid	N/A	4.6 U
N-methyl perfluorooctanesulfonamidoacetic acid	N/A	4.6 U
Perfluorobutanesulfonic acid	N/A	1.8 U
Perfluorobutanoic acid	N/A	4.6 U
Perfluorodecanesulfonic acid	N/A	1.8 U
Perfluorodecanoic acid	N/A	1.8 U
Perfluorododecanoic acid	N/A	1.8 U
Perfluoroheptanesulfonic acid	N/A	1.8 U
Perfluoroheptanoic acid	N/A	0.52 J
Perfluorohexanesulfonic acid	N/A	1.8 U
Perfluorohexanoic acid	N/A	1.8 U
Perfluorononanoic acid	N/A	1.8 U
Perfluorooctane sulfonamide	N/A	1.2 J
Perfluorooctanesulfonic acid	10	1.8 U
Perfluorooctanoic acid	10	0.83 J
Perfluoropentanoic acid	N/A	0.60 J
Perfluorotetradecanoic acid	N/A	1.8 U
Perfluorotridecanoic acid	N/A	1.8 U
Perfluoroundecanoic acid	N/A	1.8 U
1,4-Dioxane by Method SW-846 8270D-SIM (µg/L)		
1,4-Dioxane	1	0.20 U

**Key:**

Qualifiers

J = Estimated value

U = Not detected (method detection limit shown)

Other

N/A = Not regulated/no available criteria

µg/L = Micrograms per liter

ng/L = Nanograms per liter

Bold values denote positive hits.

1. 10 NYCRR 5-1.51 (Effective 08/26/2020).

**Table 6-6 Summary of October 2020 Annual Positive VOC Analytical Results for Groundwater Samples from Overburden Monitoring Wells, Davis-Howland Oil Corporation Site, Rochester, NY**

Analyte	Location ID:		MW-1S	MW-2S	MW-9S	MW-14S	PZ-03
	Sample Name:		MW-1S-OCT20	MW-2S-OCT20	MW-9S-OCT20	MW-14S-OCT20	PZ-3-OCT20
	Depth:		13 - 18 ft	5.4 - 14 ft	4.9 - 16 ft	2.1 - 13 ft	4.5 - 13 ft
	Date:		10/15/20	10/15/20	10/15/20	10/15/20	10/15/20
	Screening Criteria <sup>(1)</sup>	Notes					
<b>Volatile Organic Compounds by EPA Method 624.1 (µg/L)</b>							
1,1,1-Trichloroethane (TCA)	5		<b>1.5 J</b>	0.39 U	<b>7.6</b>	0.39 U	<b>5.7</b>
1,1-Dichloroethane	5		<b>0.86 J</b>	<b>1.1 J</b>	<b>42</b>	0.59 U	<b>19</b>
1,1-Dichloroethene	5		0.85 U	0.85 U	0.85 U	0.85 U	<b>1.1 J</b>
1,2-Dichlorobenzene	3		0.44 U	0.44 U	<b>0.67 J</b>	0.44 U	0.44 U
Chloroform	7		0.54 U	0.54 U	<b>0.65 J</b>	0.54 U	0.54 U
Dichloroethylenes	5		<b>24</b>	3.2 U	<b>48</b>	3.2 U	<b>7.8 J</b>
Tetrachloroethylene (PCE)	5		<b>3.3 J</b>	0.34 U	<b>41</b>	0.34 U	<b>0.48 J</b>
Trans-1,2-Dichloroethene	5		0.59 U	0.59 U	<b>5.2</b>	0.59 U	0.59 U
Trichloroethylene (TCE)	5		<b>19</b>	0.60 U	<b>34</b>	0.60 U	<b>1.8 J</b>
<b>TOTAL VOCs</b>			<b>49</b>	<b>1.1</b>	<b>180</b>	<b>ND</b>	<b>36</b>

**Key:**

Qualifiers

J = Estimated value

U = Not detected (method detection limit shown)

Notes

N/A = Not regulated/no available criteria

Other

µg/L = Micrograms per liter

"-Q" denotes field duplicate sample

Bold values denote positive hits.

Shaded values exceed groundwater screening criteria.

1. New York State Department of Environmental Conservation, Technical and Operational Guidance Series Memorandum #1.1.1: *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*, 1998 (with updates), Class GA Groundwater Standards and Guidance Values.

Key at end of table.

Table 6-7 Summary of October 2020 Annual Positive VOC, Alkalinity, and Sulfate Analytical Results for Groundwater Samples from Bedrock Monitoring Wells, Davis-Howland Oil Corporation Site, Rochester, NY

Analyte	Location ID:		IW-01	MW-2R	MW-5R	MW-8R	MW-10R	MW-14R	MW-15R	MW-16R	MW-17R	MW-17R	PW-1
	Sample Name:		IW-01-OCT20	MW-2R-OCT20	MW-5R-OCT20	MW-8-OCT20	MW-10R-OCT20	MW-14R-OCT20	MW-15R-OCT20	MW-16R-OCT20	MW-17R-OCT20	Q	PW-1-OCT20
	Depth:		26 - 37 ft	21 - 28 ft	12 - 35 ft	20 - 38 ft	19 - 37 ft	6.1 - 24 ft	15 - 32 ft	20 - 33 ft	26 - 37 ft	26 - 37 ft	7.9 - 29 ft
	Date:		10/12/20	10/14/20	10/13/20	10/12/20	10/14/20	10/13/20	10/15/20	10/15/20	10/12/20	10/12/20	10/15/20
	Screening Criteria <sup>(1)</sup>	Notes											
Alkalinity by Standard Method 2320B (mg/L)													
Alkalinity, Bicarbonate (As CaCO3)	N/A		308 J	319	302	326	344	295	406	326	332 J	332 J	322
Alkalinity, Carbonate (As CaCO3)	N/A		0.79 UJ	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 UJ	0.79 UJ	0.79 U
Alkalinity, Hydroxide (As CaCO3)	N/A		0.79 UJ	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 UJ	0.79 UJ	0.79 U
Alkalinity, Total (As CaCO3)	N/A		308 J	319	302	326	344	295	406	326	332 J	332 J	322
Sulfate by EPA Method 300.0 (mg/L)													
Sulfate (As SO4)	250		118	152	277	152	57.0	73.8	69.4	122	204	206	498
Volatile Organic Compounds by EPA Method 624.1 (µg/L)													
1,1-Dichloroethane	5		11 J	11 J	12 U	76	12 U	0.59 U	12 U	12 U	100	98	34 J
1,1-Dichloroethene	5		4.3 U	6.8 U	17 U	35 J	17 U	0.85 U	17 U	17 U	23 J	23 J	17 U
Dichloroethylenes	5		290	270	450	4000	64 U	8.4 J	64 U	390	1400	1400	290
Tetrachloroethylene (PCE)	5		1.7 U	2.7 U	6.8 U	3.4 U	6.8 U	0.34 U	6.8 U	6.8 U	11 J	9.7 J	6.8 U
Trans-1,2-Dichloroethene	5		3.4 J	4.7 U	12 U	5.9 U	12 U	1.0 J	12 U	12 U	6.2 J	6.4 J	12 U
Trichloroethylene (TCE)	5		3.8 J	4.8 U	12 U	6.0 U	1100	1.7 J	12 U	12 U	120	110	12 U
Vinyl Chloride	2		56	140	75 J	550	15 U	9.3	15 U	140	280	260	73 J
TOTAL VOCs			310	420	530	4700	1100	20	ND	530	1900	1900	400

Key:

Qualifiers

J = Estimated value

U = Not detected (method detection limit shown)

Notes

N/A = Not regulated/no available criteria

Other

µg/L = Micrograms per liter

"-Q" denotes field duplicate sample

Bold values denote positive hits.

Shaded values exceed groundwater screening criteria.

1. New York State Department of Environmental Conservation, Technical and Operational Guidance Series Memorandum #1.1.1: *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*, 1998 (with updates), Class GA Groundwater Standards and Guidance Values.

Table 6-8 Summary of December 2020 One-Month Post-Injection Positive VOC Analytical Results for Groundwater Samples from Bedrock Monitoring Wells, Davis-Howland Oil Corporation Site, Rochester, NY

Analyte	Location ID:		IW-01	MW-2R	MW-5R	MW-8R	MW-8R	MW-10R	MW-14R	MW-15R	MW-16R	MW-17R	PW-1
	Sample Name:		IW-01-NOV20	MW-2R-DEC20	MW-5R-DEC20	MW-8-DEC20	MW-8-DEC20-Q	MW-10R-DEC20	MW-14R-DEC20	MW-15R-DEC20	MW-16R-DEC20	MW-17R-NOV20	PW-1-NOV20
	Depth:		26 - 37 ft	21 - 28 ft	12 - 35 ft	20 - 38 ft	20 - 38 ft	19 - 37 ft	6.1 - 24 ft	15 - 32 ft	20 - 33 ft	26 - 37 ft	7.9 - 29 ft
	Date:		11/30/20	12/01/20	12/02/20	12/01/20	12/01/20	12/02/20	12/02/20	12/01/20	12/02/20	11/30/20	11/30/20
Screening Criteria <sup>(1)</sup>		Notes											
Alkalinity by Standard Method 2320B (mg/L)													
Alkalinity, Bicarbonate (As CaCO3)	N/A		358	41.5	304 J	909	918	337	335	402	430	319	338
Alkalinity, Carbonate (As CaCO3)	N/A		0.79 U	0.79 U	0.79 UJ	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.96 J	0.79 U
Alkalinity, Hydroxide (As CaCO3)	N/A		0.79 U	0.79 U	0.79 UJ	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U	0.79 U
Alkalinity, Total (As CaCO3)	N/A		359	41.5	304 J	909	918	337	335	402	430	320	338
Sulfate by EPA Method 300.0 (mg/L)													
Sulfate (As SO4)	250		260	10.4	298	5780	5950	51.8	60.2	85.3	475	187	642
Volatile Organic Compounds by EPA Method 624.1 (µg/L)													
1,1,1-Trichloroethane (TCA)	5		1.5	0.24 U	0.24 U	0.24 U	0.24 U	5.8	0.24 U	0.24 U	0.24 U	0.48 U	1.0
1,1,2-Trichloroethane	1		0.15 U	0.15 U	0.15 U	0.83 J	0.67 J	0.30 U	0.15 U	0.15 U	0.15 U	0.30 U	0.15 U
1,1-Dichloroethane	5		13	0.26 U	13	21	21	2.9	0.26 U	0.55 J	15	31	34
1,1-Dichloroethene	5		4.3	0.12 U	2.8	0.12 U	0.12 U	7.5	0.12 U	0.12 U	4.4	7.6	3.7
Benzene	1		0.43 U	0.43 U	1.0	0.43 U	0.43 U	0.86 U	0.43 U	0.43 U	0.43 U	0.86 U	1.2
Bromomethane	5		0.45 U	0.45 U	0.45 U	0.60 J	0.53 J	0.90 U	0.45 U	0.45 U	0.45 U	0.90 U	0.45 U
Chloroethane	5		0.32 U	0.32 U	0.32 U	0.91 J	0.79 J	0.64 U	0.32 U	0.32 U	0.32 U	0.64 U	0.32 U
Chloroform	7		0.33 U	0.33 U	0.33 U	1.7	1.6	0.65 U	0.33 U	0.33 U	0.33 U	0.65 U	0.33 U
Chloromethane	5		0.43 U	0.43 U	0.43 U	21	21	0.87 U	0.43 U	0.43 U	0.43 U	0.87 U	0.43 U
Dichloroethylenes	5		180	2.5	390	170	180	21	10	11	350	570	280
Tetrachloroethylene (PCE)	5		0.34 J	0.25 U	0.25 U	0.25 U	0.25 U	3.1	0.25 U	0.25 U	0.25 U	4.2	0.25 U
Trans-1,2-Dichloroethene	5		2.2	0.24 U	6.3	5.9	6.0	4.3	0.93 J	0.91 J	2.3	6.1	4.1
Trichloroethylene (TCE)	5		2.4	0.31 U	19	0.97 J	1.2 J	680	1.5	1.8	0.31 U	37	20
Vinyl Chloride	2		23	0.42 J	53	4.5	5.4	0.68 U	3.2	0.85 J	110	83	65
TOTAL VOCs			230	2.9	490	230	240	730	16	15	480	740	410

**Key:**

Qualifiers

J = Estimated value

U = Not detected (method detection limit shown)

Notes

N/A = Not regulated/no available criteria

Other

µg/L = Micrograms per liter

"-Q" denotes field duplicate sample

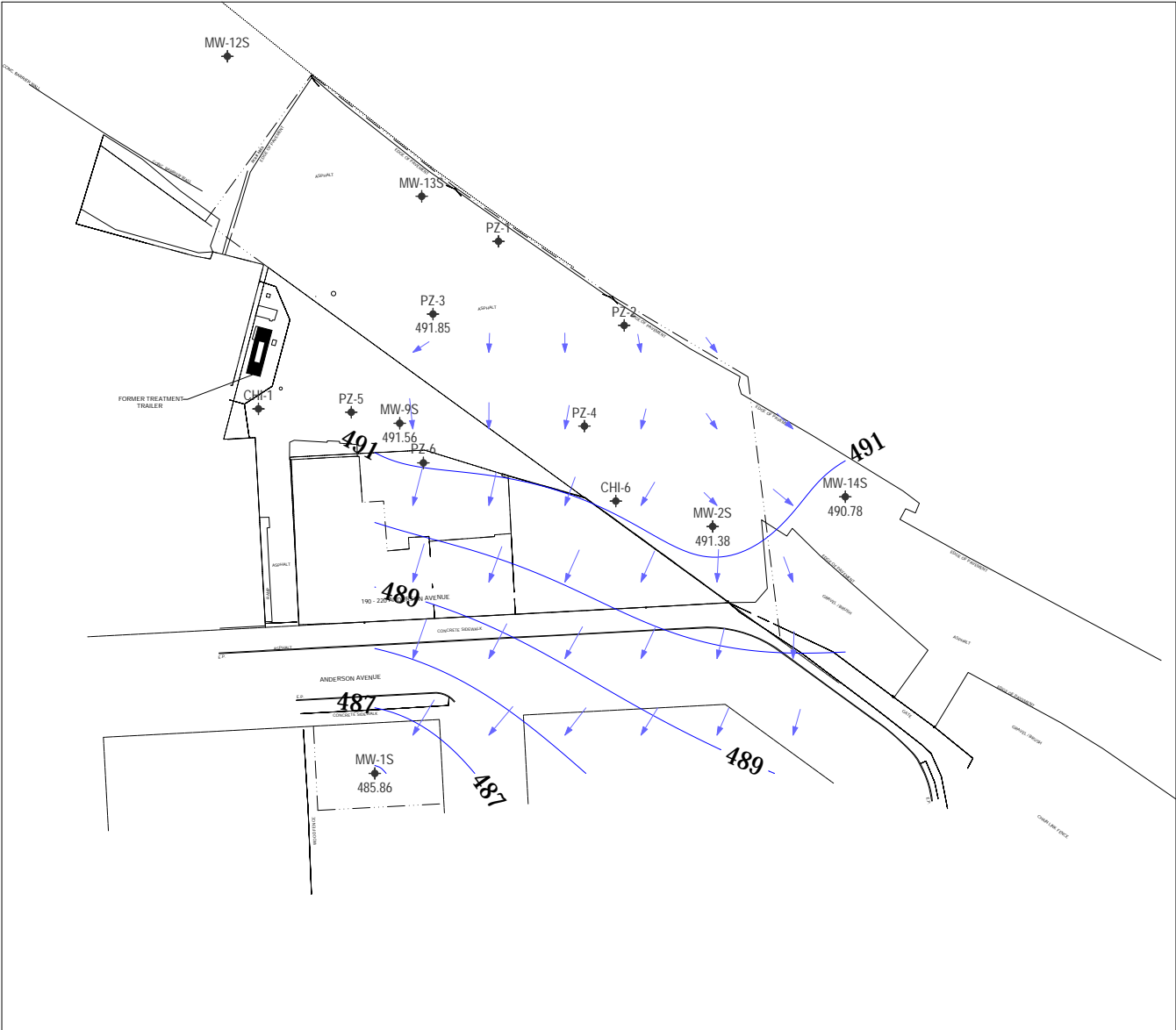
Bold values denote positive hits.

Shaded values exceed groundwater screening criteria.

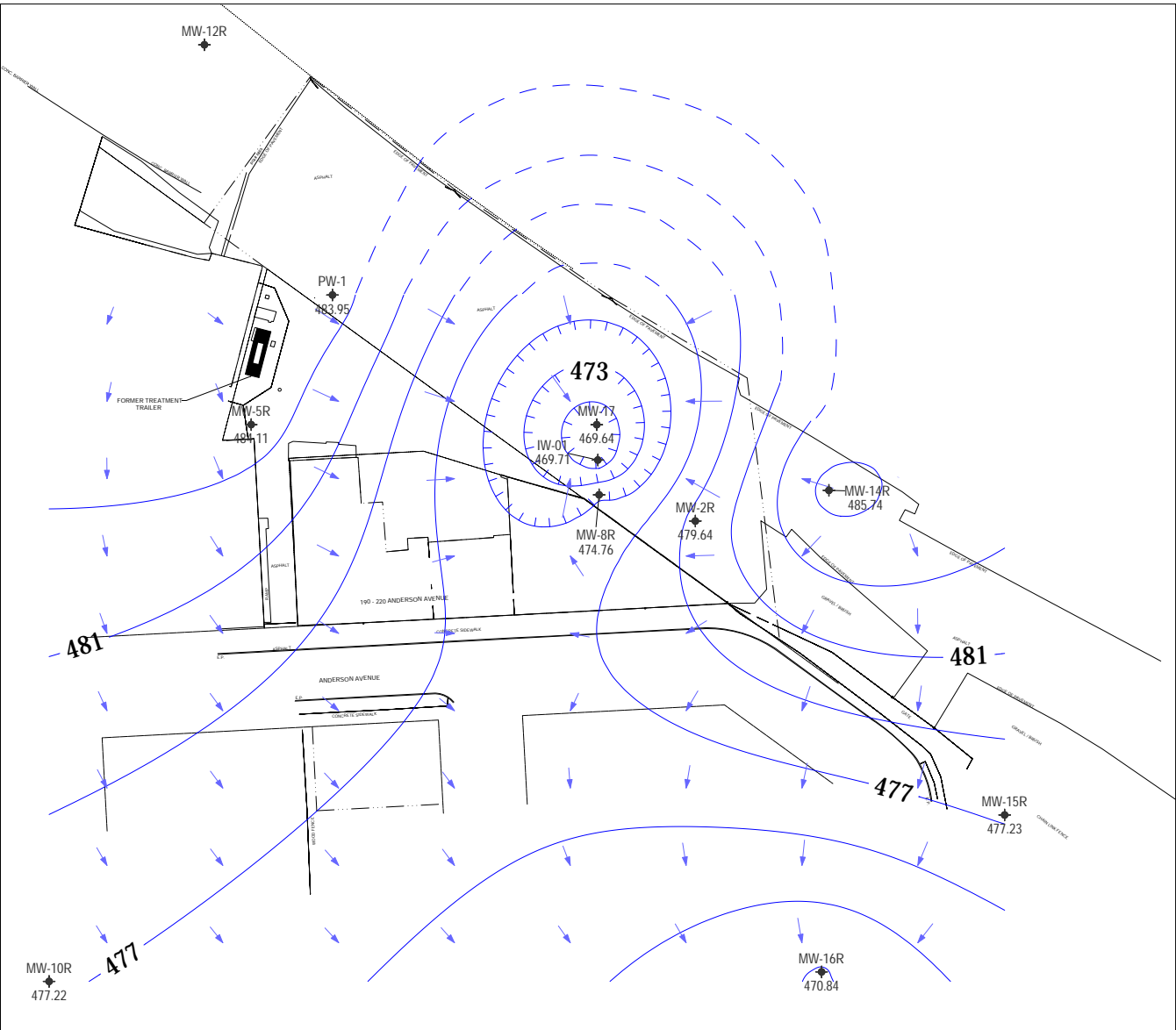
1. New York State Department of Environmental Conservation, Technical and Operational Guidance Series Memorandum #1.1.1: *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*, 1998 (with updates), Class GA Groundwater Standards and Guidance Values.

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Groundwater Elevation Isopleths  
Overburden Monitoring Wells



Groundwater Elevation Isopleths  
Bedrock Monitoring Wells



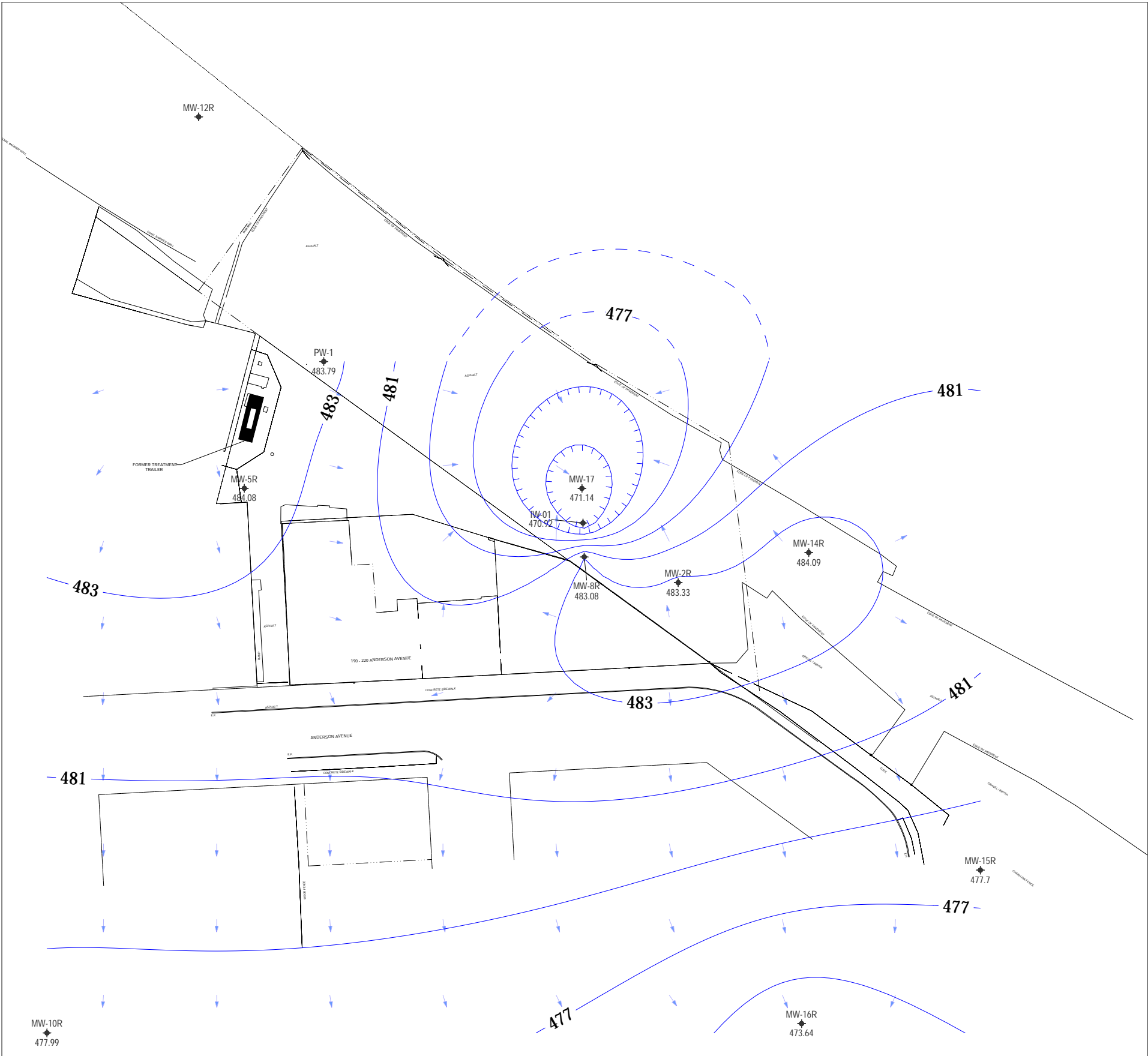
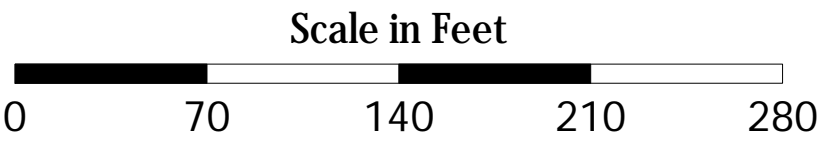
Notes:  
1) Groundwater elevations measured October 12 - 15, 2020.

**Legend**

- Groundwater Flow Direction and Relative Magnitude of Gradient
- Groundwater Elevation Isopleth
- Projected Groundwater Elevation Isopleth
- Depression

0 100 200 300  
SCALE IN FEET

FIGURE 6-1  
Groundwater Elevation Isopleths  
Overburden and Bedrock Monitoring Wells  
October 2020  
Davis-Howland Oil Corporation Site  
Rochester, NY



Notes:  
1) Groundwater elevations measured November 30 - December 2, 2020.

- Legend
- Groundwater Flow Direction and Relative Magnitude of Gradient
  - Groundwater Elevation Isopleth
  - Projected Groundwater Elevation Isopleth
  - Depression

FIGURE 6-2  
Groundwater Elevation Isopleths  
Bedrock Monitoring Wells, December 2020  
Davis-Howland Oil Corporation Site  
Rochester, New York

### **6.3.2 Bedrock Groundwater Results**

#### **October 2020 Annual Sampling**

Seven VOCs were detected in one or more of the groundwater samples collected from bedrock monitoring wells during the 2020 annual sampling event. These compounds are cVOCs (PCE, TCE, and their degradation by-products).

The concentrations of seven detected VOCs exceeded NYSDEC Class GA groundwater standards in at least one well. These compounds are shaded in Table 6-7 and Table 6-8. The highest concentrations of VOCs were detected in samples from MW-8R, with the total sum of VOCs reaching approximately 4,700 µg/L. The compounds detected in this well were 1,1-dichloroethane, 1,1-dichloroethene, dichloroethylenes, and vinyl chloride.

The 2020 annual concentration isopleths of VOCs in the bedrock groundwater samples are presented on Figure 6-4.

#### **December 2020 One-Month Post-Injection Sampling**

Fourteen VOCs were detected in one or more groundwater samples collected from bedrock monitoring wells during the one-month post-injection sampling event. The majority of these are cVOCs (PCE, TCE, and their degradation by-products). Bromomethane, chloroethane, chloroform, and chloromethane were also detected in MW-8R, and benzene was detected in MW-5R and PW-1.

It is noted that the October 2020 samples required a high dilution to bring the concentrations of dichloroethylenes within the calibration range. The high-level dilutions resulted in higher reporting limits for the non-detect results for benzene, bromomethane, and chloroethane than the concentrations of those compounds detected in the December 2020 samples. The concentrations of dichloroethylenes were significantly lower in the December samples; therefore, a lower dilution was used and the reporting limits for benzene, bromomethane, and chloroethane were low enough to be detected by the analytical method.

The detected concentrations of nine VOCs exceeded NYSDEC Class GA groundwater standards in at least one well. These compounds are shaded in Table 6-7 and Table 6-8. The highest concentrations of VOCs were detected in samples from MW-17R, with the total sum of VOCs approximately 740 µg/L. The primary compounds detected in this well were 1,1-dichloroethane, 1,1-dichloroethene, dichloroethylenes, trans-1,2-dichloroethene, TCE, and vinyl chloride.

The 2020 one-month post-injection concentration isopleths of VOCs in the bedrock groundwater samples are presented on Figure 6-5.

### **6.3.3 Comparison with Historical Analytical Data**

Table 6-9 presents historical cVOC results. The following is a summary of the findings:

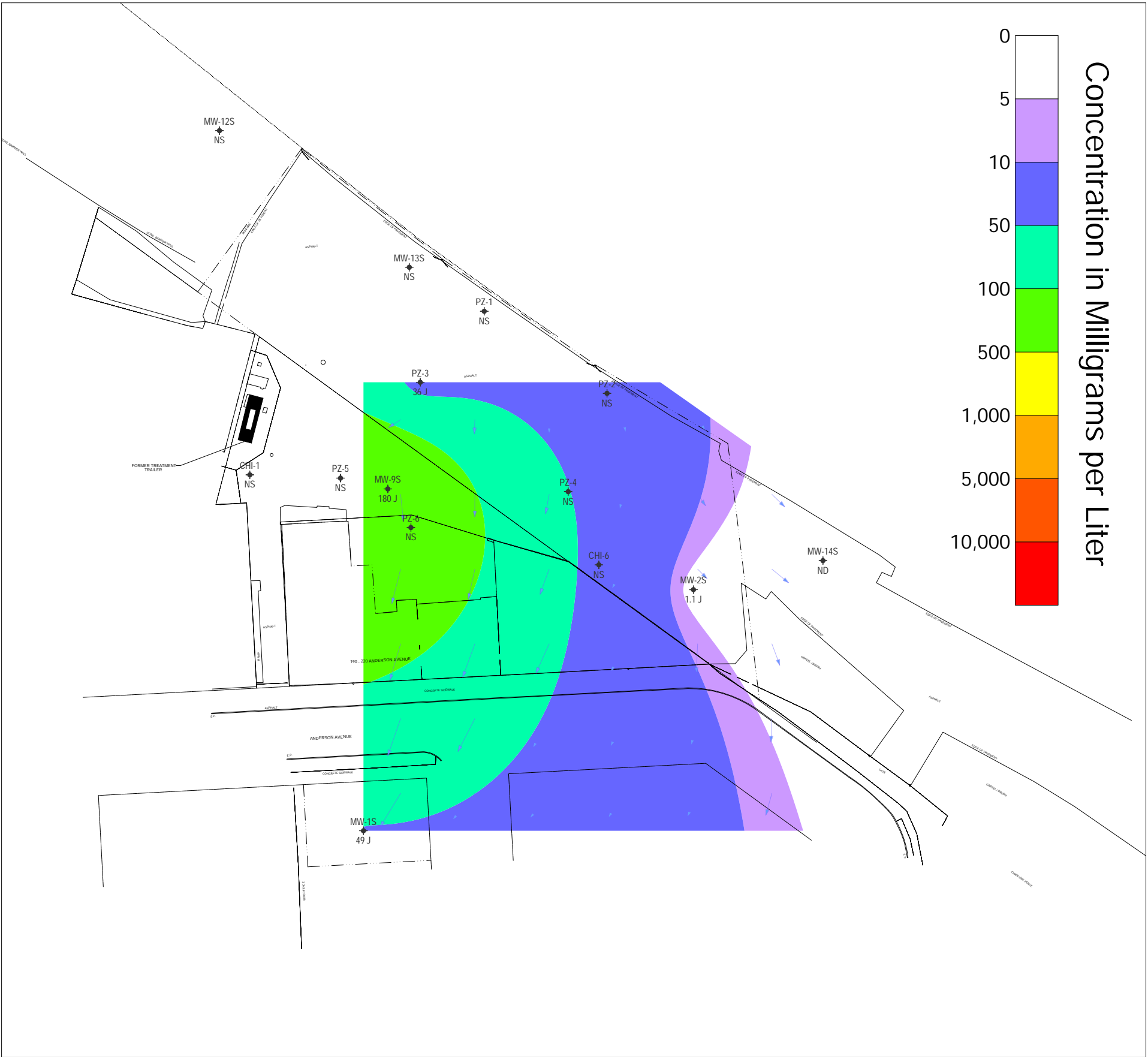
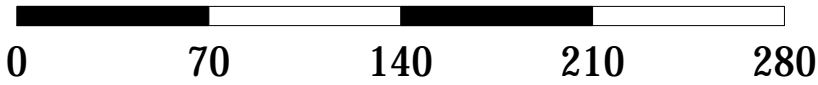
- **cVOCs in overburden groundwater.** Overall, cVOC concentrations in the overburden wells have decreased significantly since 1997 and 1998. The highest concentrations of cVOCs were detected in 1998 (15,000 µg/L in MW-9S and 40,000 µg/L in MW-13S). Total cVOC concentrations decreased significantly between 1998 and 2004. Following the significant decrease in concentrations between 1998 and 2004, the most significant cVOC concentrations were detected in MW-9S. By 2015 and with the introduction of sampling in PZ-04, the highest concentrations of cVOCs detected in the overburden occurred in MW-1S, MW-9S, and PZ-04. Concentrations detected in MW-1S have ranged from 32 to 76 µg/L, concentrations detected MW-9S ranged from 110 µg/L to 180 µg/L, and concentrations in PZ-04 ranged from 400 µg/L to 590 µg/L. The cVOC concentration in MW-9S increased from 111 µg/L in 2018 to 164 µg/L in 2019, to 180 µg/L in 2020; PZ-04 was not sampled in 2019 and 2020 because debris covered the well.
- **cVOCs in bedrock groundwater.** Overall, cVOC concentrations in most bedrock wells have decreased since 1997 or 1998, when significant concentrations (>1,000 µg/L) were detected in six of the nine wells (MW-2R, MW-3R, MW-5R, MW-8R, MW-10R, and MW-16R). The cVOC concentrations generally decreased until 2010 and have remained relatively consistent since 2010 (all less than 2,700 µg/L except in MW-8R). The total cVOC concentration in MW-8R increased to a maximum of approximately 14,000 µg/L in 2010 and has since decreased, but this well continues to exhibit the highest cVOC concentrations (4,700 µg/L in 2019) of the wells at the Site, due primarily to dichloroethylenes and vinyl chloride. In October 2020, the cVOC concentrations detected at MW-2R, MW-5R, MW-8R, MW-10R, and MW-16R were higher than those detected in 2019. The cVOC concentrations in MW-14R decreased to 20 µg/L, and cVOCs were not detected in MW-15R in October 2020. The cVOC concentrations detected in newly installed wells MW-17R and IW-01 were 1,900 µg/L and 310 µg/L, respectively.
- **cVOCs in bedrock groundwater one month after the chem-ox pilot study injection.** Total cVOC concentrations decreased in most bedrock wells from the October 2020 annual sampling event to the one-month post-injection sampling event conducted from November 30, 2020, through December 3, 2020. The most significant decreases in cVOC concentrations were in MW-8R (4,700 µg/L to 240 µg/L), MW-10R (1,100 µg/L to 730 µg/L), and MW-17R (1,900 µg/L to 740 µg/L). Two of the 10 bedrock wells sampled had a slight increase in concentration from the October sampling event to the one-month post-injection sampling event: non-detect to 15 µg/L in MW-15R, and 400 µg/L to 410 µg/L in PW-1.





Total VOC Concentrations (µg/L)

Scale in Feet



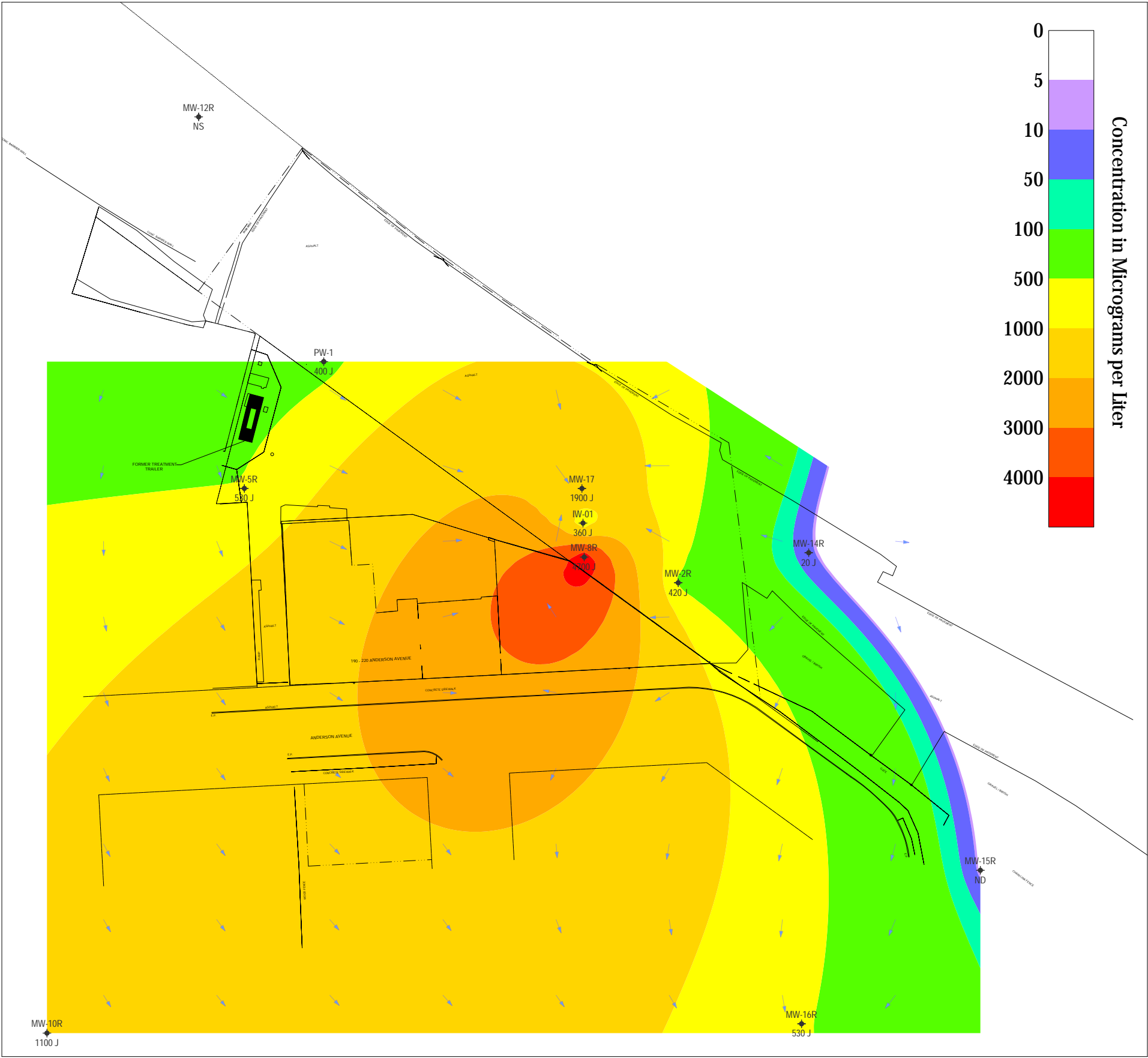
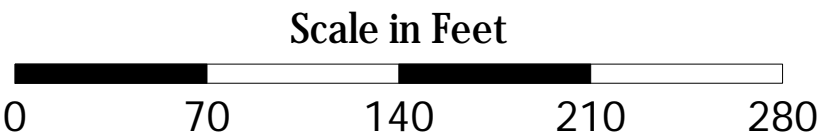
Notes:  
1) VOC = volatile organic compound.  
2) ND = not detected.  
3) NS = not sampled.

Legend  
Groundwater Flow Direction and Relative Magnitude of Gradient

FIGURE 6-3  
Total VOCs  
Overburden Groundwater, October 2020  
Davis-Howland Oil Corporation Site  
Rochester, New York



Total VOC Concentrations (µg/L)



- Notes:
- 1) VOC = volatile organic compound.
  - 2) ND = not detected
  - 3) NS = not sampled

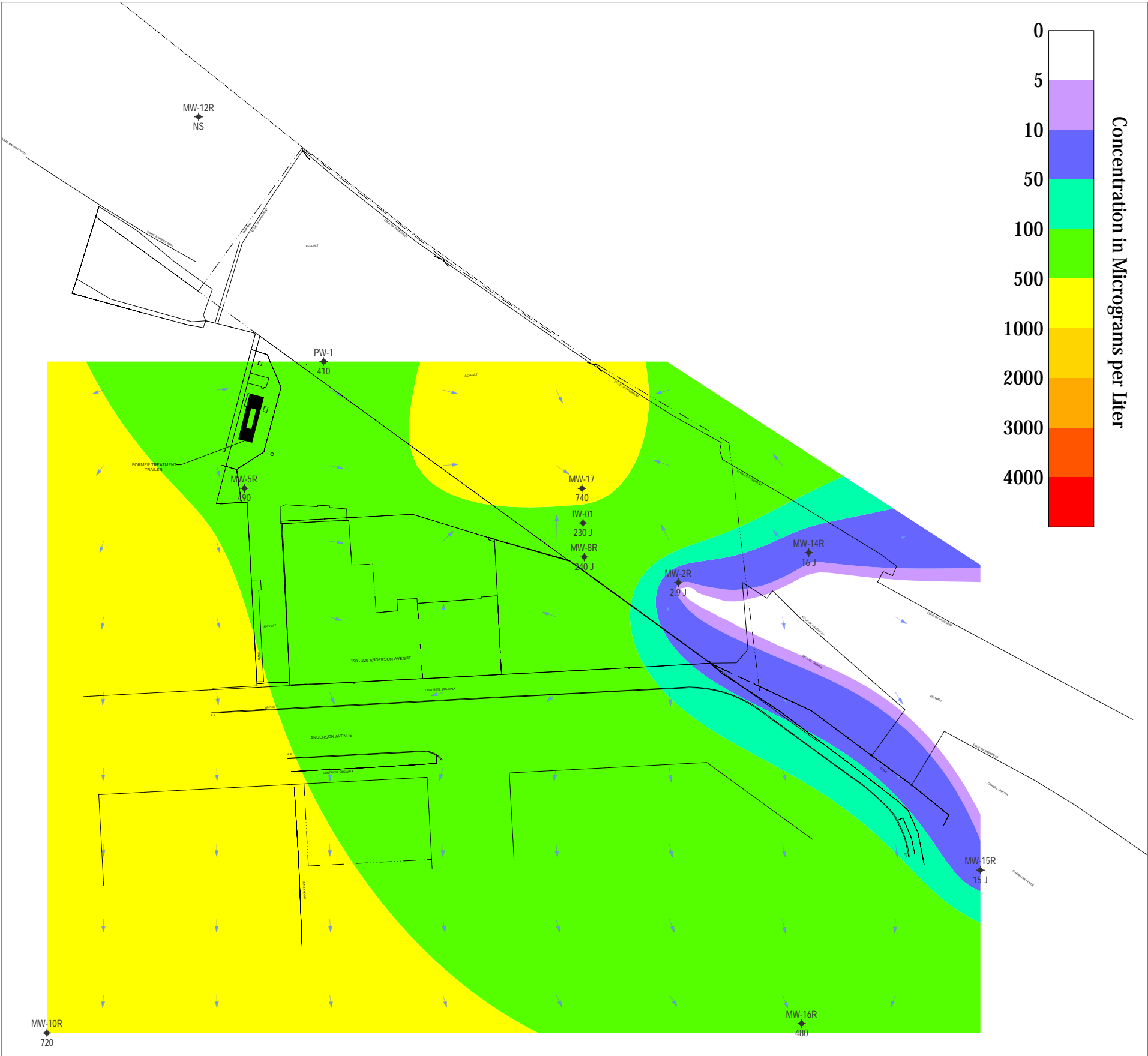
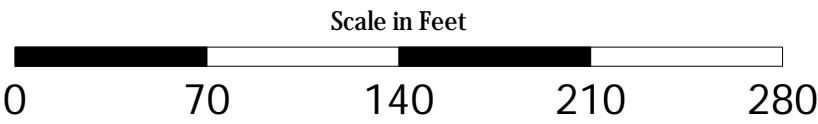
Legend

Groundwater Flow Direction and Relative Magnitude of Gradient

FIGURE 6-4  
Total VOCs  
Bedrock Groundwater, October 2020  
Davis-Howland Oil Corporation Site  
Rochester, New York



# Total VOC Concentrations (µg/L)



Notes:  
1) VOC = volatile organic compound.  
2) NS = not sampled

Legend

Groundwater Flow Direction and Relative Magnitude of Gradient

FIGURE 6-5  
Total VOCs  
Bedrock Groundwater, December 2020  
Davis-Howland Oil Corporation Site  
Rochester, New York

**Table 6-9 Historical Total Chlorinated VOCs Results for Monitoring Wells**

Sample Event																
Well ID	2020 One- Month Post- Injection	2020 Annual	2019 Annual	2018 Annual	2017 Annual	2016 Annual	2015 Annual	2014 Annual	2013 Annual	2012 Annual	2011 Annual	2010 Annual	2009 Annual	2007 Annual	2004 Annual	1998 Annual
Overburden Monitoring Wells																
MW-1S	NS	49	63	45	32	76	37	38	41	68	67	NS	45	98	410	120
MW-2S	NS	1.1	ND	ND	2	4.6	7.0	6.3	2.5	1.7	1.9	1.3	ND	1.4	ND	
MW-9S	NS	180	164	111	121	110	140	180	240	140	140	140	92	48	32	15,000
MW-12S	NS	NS	NS	NS	NS	NS	ND	0.30	0.36	13	ND	ND	ND	4.4	ND	6.0
MW-13S	NS	NS	NS	10	NS	7.8	12	9.9	12	33	ND	19	3.7	69	41	40,000
MW-14S	NS	ND	ND	ND	ND	ND	ND	ND	ND	4.2	ND	ND	ND	0.36	ND	2.0
PZ-01	NS	NS	NS	12	NS	NS	11	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-02	NS	NS	NS	NS	5	6.9	8.6	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-03	NS	36	51	36	20	20	29	NS	NS	NS	NS	NS	NS	NS	NS	NS
PZ-04	NS	NS	NS	505	400	590	430	NS	NS	NS	NS	NS	NS	NS	NS	NS
Bedrock Monitoring Wells																
MW-2R	2.9	420	350	770	2,670	1,500	1,100	350	31	940	1,200	240	NS	NS	940	NS
MW-5R	490	530	433	410	786	500	550	650	340	1,200	160	1,400	210	2,700	1,100	4,200
MW-8R	240	4,700	4,590	3,618	6,175	4,200	3,400	5,400	4,600	5,600	5,700	14,000	5,800	4,300	3,800	NS
MW-10R	730	1,100	480	1,364	951	910	990	1,200	1,400	1,500	1,400	160	1,200	1,600	1,200	3,000
MW-12R	NS	NS	NS	NS	NS	NS	26	41	34	ND	45	35	66	75	22	NS
MW-14R	16	20	27	35	43	59	45	59	72	59	61	54	45	67	17	50
MW-15R	15	ND	11	12	NS	NS	10	12	11	11	11	6.4	4.7	7.4	7.7	NS
MW-16R	480	530	254	420	203	720	200	230	180	210	220	48	320	250	260	2,400
MW-17R	740	1,900	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
PW-1	410	400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
IW-01	230	310	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

**Notes:**

Analytical results are all in micrograms per liter (µg/L).

**Key:**

ND = Not detected

NS = Not sampled

Chlorinated VOCs = sum of chlorinated aliphatic hydrocarbon concentrations (does not include dichlorobenzenes)

# 7

## Actions to Support Eventual Site Closure

The overall project goals identified in the ROD are to: (1) eliminate the potential for direct human contact with the contaminated soils onsite; (2) mitigate the impacts of contaminated groundwater on the environment to the extent practicable; (3) prevent, to the extent practicable, the migration of soil contaminants to groundwater; and (4) provide for attainment of standards, criteria, and guidance values (SCGs) for groundwater quality at the limits of the area of concern (AOC), to the extent practicable. Attaining these goals will allow for the eventual closure of the site.

The ICs described previously in this report were put in place to reduce human exposure to the remaining contaminated site soils. Since remedial construction at the site was completed, contaminant concentrations in the site soils have been reduced and now meet Part 375 soil cleanup objectives for restricted residential use.

Contaminant concentrations in the site groundwater had decreased since installation of the remedial treatment systems. However, evaluations completed as part of the 2016 Remedial Site Optimization (RSO) described in Section 7.1 led to the determination that the active treatment systems were no longer effective in the removal of VOCs from the site groundwater and that the systems should be decommissioned. Recommendations for continued site management activities at the site are provided in Section 7.3.

### 7.1 Remedial System Optimization and System Decommissioning

In June 2016, E & E submitted an RSO Alternatives Report to NYSDEC (EEEP-2016b). This report noted that contaminant removal by the pump-and-treat system had been declining over time, and VOC contamination in the groundwater remained above the SCGs. Recommendations in the RSO indicated that there was no single alternative that would result in optimization of the system. It was recommended that soil vapor mitigation systems be installed in on-site buildings impacted by soil vapor intrusion and a pilot bioremediation study be performed to evaluate the effectiveness of bioengineered materials injected into the overburden aquifer. Additionally, the groundwater monitoring network would be optimized by decommissioning damaged and unneeded wells, installing new wells, and re-

## 7 Actions to Support Eventual Site Closure

ducing the groundwater monitoring program based on historical results from annual sampling. The final recommendation was to implement a monitored natural attenuation pilot program to quantify the time frame in which attainment of the remedial action objectives is expected, and discontinue operation of the groundwater pump-and-treat system and the AS/SVE system.

Following submission of this report, NYSDEC made the determination to shut down the treatment systems on July 13, 2016, and to continue with long-term groundwater monitoring of the site. Following further review of site data and NYSDEC *DER-10/Technical Guidance for Site Investigation and Remediation* requirements, NYSDEC requested on September 14, 2016, that the treatment systems be restarted and additional sampling of the systems be performed, including a pulsed pumping evaluation and additional sampling of the AS/SVE system.

Following the completion of the pulse pumping evaluation of the groundwater treatment system and additional sampling of the AS/SVE system in 2017, the decision was made in February 2018 by NYSDEC to decommission the active treatment systems at the site. Decommissioning was completed in 2018.

### 7.2 In Situ Chem-Ox Pilot Study

In April 2020, E & E submitted a cost-benefit analysis for in situ groundwater treatment technologies that may be used to reduce cVOC groundwater concentrations at the Site (E & E 2020c). This report recommended implementation of an in situ chem-ox injection pilot study using Regenesis PersulfOx reagent in the area around MW-8R, where results of the annual groundwater monitoring program detected VOC concentrations that consistently exceeded 3,000 µg/L.

Two wells, MW-17R and IW-01, were installed in September 2020 and reagent was injected into MW-8R and MW-17R in October 2020. One-month post-injection groundwater sampling was performed at the Site bedrock wells in November/December 2020.

Total cVOC concentrations decreased in two of the 10 bedrock wells, including MW-8R and MW-17R, one month after injection. Future pilot study activities include two more rounds of post-injection groundwater sampling at the Site bedrock wells in 2021. The results will be evaluated to determine the effectiveness of the treatment in decreasing VOC concentrations in the bedrock groundwater in the vicinity of MW-8R, and if full-scale treatment is warranted.

### 7.3 Recommendations

Following the 2020 groundwater sampling, E & E recommends the following for the Site:

- Conduct a second round of SVI sampling at the structures at [REDACTED] during the 2021/2022 heating season.

## **7 Actions to Support Eventual Site Closure**

- Continue groundwater monitoring in the bedrock wells at three and nine months post-injection. Evaluate trends in VOCs concentrations to determine the effectiveness of the in situ chem-ox injection pilot study in decreasing VOC concentrations in the bedrock groundwater in the vicinity of MW-8R.
- Continue the long-term monitoring program. Continued long-term groundwater monitoring should occur on an annual basis to monitor VOC contamination at the site. It is recommended that the annual sampling be conducted every 15 months so that seasonal variations in concentrations can be assessed. The monitoring well network should be evaluated to determine whether some of the existing wells can be abandoned and whether new wells should be installed to better monitor the extent of the remaining contamination.
- Well cap bolts, locks, and gaskets should be replaced or fixed as appropriate.

# 8

## Annual Site Management Costs

The total 2020 cost of site management at the Site was approximately \$228,500, including E & E subcontracted services. The cost breakdown is presented in Table 8-1.

**Table 8-1 2020 Site Management Costs for the Davis-Howland Oil Corporation Site**

Description	WA D009807-9
E & E Scoping, Monitoring, and Reporting	\$82,100
E & E Cost-Benefit Analysis and Pilot Study	\$100,500
Subcontracted Pilot Study Services	\$45,900
<b>2020 Total</b>	<b>\$228,500</b>



# 9

## Department or Local Public Reporting

### 9.1 NYSDEC Fact Sheet

The most recent information regarding the DHOC Site is provided in the Environmental Site Remediation Database Search online at:

<http://www.dec.ny.gov/cfm/extapps/derexternal/index.cfm?pageid=3>.

### 9.2 Local Public Reporting

No local public reporting of the Site or remedial Site operations were brought to the attention of E & E in 2020. The local reporting newspaper in Rochester, New York, is the *Democrat and Chronicle*.

# 10

## References

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# A

## Monitoring Well Purge Records



## WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howlad Oil Corp.

Well ID: IW-01

E & E Project No.: FF1705007.0009

Date: 10-12-2020

Initial Depth to Water: 27.95 feet TOIC

Start Time: 11:45

Total Well Depth: 37.48 feet TOIC

End Time: 1245

Depth to Pump: 36.48 feet TOIC

☐ Bailer      ☒ Pump

Initial Pump Rate: 0.30 (Lpm)/ gpm

Pump Type: **BLADDER**

adjusted to: 0.20 at 1145

Well Diameter: 4 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: 6.22 gallons  $\times 3 = 18.66$

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm/mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
1120	1.50	5.46	15.50	-8	1.06	1.20	3.5	27.95
1125	2.00	5.45	15.41	-20	1.05	0.82	5.8	27.95
1130	4.50	5.43	15.44	-27	1.05	0.73	6.3	27.95
1135	6.00	5.41	15.46	-29	1.05	0.66	4.1	27.95
1140	7.50	5.38	15.50	-32	1.06	0.60	1.6	27.95
1145	8.50	5.35	15.55	-34	1.07	0.57	1.3	27.95
1150	9.50	5.32	15.67	-35	1.07	0.55	2.6	27.95
1155	10.50	5.28	15.68	-36	1.08	0.54	1.8	27.95
1200	11.50	5.26	15.66	-36	1.08	0.53	1.5	27.95
1205	12.50	5.23	15.56	-36	1.09	0.52	1.2	27.95
1210	13.50	5.21	15.53	-36	1.09	0.51	1.0	27.95
Final Sample Data:		5.21	15.53	-36	1.09	0.51	1.0	27.95

Sample ID: IW-01-OCT20

Duplicate? ☐

Dupe Samp ID:

Sample Time: 12<sup>15</sup>

MS/MSD? ☒

No. of Bottles: 15

### Analyses:

**Methods:**

Comments: clear, no sheen, no strong odor

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA☐ Pest.

☑ Alkalinity  
+ Sulfate

☐ Metals/CN☐ Dioxin

Sampler(s): CP



**WELL PURGE & SAMPLE RECORD**

Site Name/Location: Davis Howlad Oil Corp.

Well ID: MW-25

E & E Project No.: EE1705007.0009

Date: 10-15-20

Initial Depth to Water: 13.86 feet TOIC

Start Time: 13<sup>10</sup>

Total Well Depth: 17.98 feet TOIC

End Time: 13<sup>50</sup>

Depth to Pump: \_\_\_\_\_ feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.40 lpm / gpm

Pump Type: Peristaltic

adjusted to: 0.20 at 13<sup>35</sup>

Well Diameter: 2 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: 0.67 gallons x 3 = 2.01

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm/mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
13 <sup>15</sup>	1.0	7.28	18.19	97	1.14	9.55	24.7	13.98
13 <sup>20</sup>	3.0	7.27	17.00	104	1.17	7.61	20.2	14.09
13 <sup>25</sup>	5.0	7.22	16.88	106	1.18	6.96	16.2	14.15
13 <sup>30</sup>	7.0	7.07	16.64	116	1.19	6.33	14.7	14.24
13 <sup>35</sup>	9.0	7.01	16.48	119	1.19	6.02	13.1	14.28
13 <sup>40</sup>	10.0	7.04	16.33	121	1.21	8.03	4.73	14.14
13 <sup>45</sup>	11.0	7.07	16.60	122	1.22	8.12	4.38	14.09
13 <sup>50</sup>	12.0	7.06	16.56	124	1.23	8.28	4.31	14.09
Final Sample Data:		7.06	16.56	124	1.23	8.28	4.31	14.09

Sample ID: MW-1-OCT20

Duplicate? ☐

Dupe Samp ID: \_\_\_\_\_

Sample Time: 13<sup>55</sup>

MS/MSD? ☐

No. of Bottles: 3

**Analyses:**

**Methods:**

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☐ \_\_\_\_\_

☐ Metals/CN

☐ Dioxin

Comments: Clear, no sheen, no strong odor;  
air bubbles in tubing

Sampler(s): CP



**WELL PURGE & SAMPLE RECORD**

Site Name/Location: Davis Howlad Oil Corp.

Well ID: MW-2R

E & E Project No.: EE1705007.0009.01

Date: 10/13/2020

Initial Depth to Water: 17.90 feet TOIC

Start Time: 11:03

Total Well Depth: 30.50 feet TOIC

End Time: 13:10

Depth to Pump: 28.42 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.05 Lpm/gpm

Pump Type: Bladder

adjusted to: 0.225 Lpm at 11:30

Well Diameter: 4 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: 8.22 gallons 3x = 24.68 gallons

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
11:11	0.4	6.34	16.25	42	1.23	1.48	24.4	17.90
11:16	0.65	6.64	16.10	-16	1.25	1.30	25.3	17.99
11:21	0.9	6.73	16.07	-37	1.35	1.16	18.9	18.02
11:26	1.15	6.83	15.96	-52	1.40	0.87	16.6	18.24
11:31	1.4	6.88	15.40	-62	1.47	2.79	10.3	18.50
11:38	4	6.89	14.85	-67	1.38	6.07	9.7	19.37
11:43	6.5	7.00	14.80	-74	1.11	5.68	9.5	20.25
11:53	9	7.45	14.79	-91	0.700	5.19	0.0	21.49
12:03	13.5	7.29	14.81	-73	0.678	5.21	0.0	23.03
12:13	16.5	7.15	14.82	-59	0.696	7.08	0.0	24.33
12:23	23.5	7.10	14.87	-46	0.707	7.08	0.0	25.73
12:33	<u>25.5</u> 26	7.11	14.94	-40	0.704	6.22	0.0	26.72
12:43	30	7.01	14.92	-15	0.779	5.96	0.0	28.35
12:53	33	6.95	14.83	-25	1.04	5.77	0.0	29.07
13:07	35	—	—	DRY	—	—	—	30.50
Final Sample Data:		6.95	14.83	-25	1.04	5.77	0.0	

Sample ID: MW-2R-0CT20

Duplicate? ☐

Dupe Samp ID: \_\_\_\_\_

Sample Time: 10/14/2020 09:50

MS/MSD? ☐

No. of Bottles: 5

Analyses: \_\_\_\_\_ Methods: \_\_\_\_\_

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☐ \_\_\_\_\_

☐ Metals/CN

☐ Dioxin

☒ sulfate, alkalinity

Comments: Unable to stabilize water level for low-flow method at 50 mL/min.

Completed purging to total depth w/ poly bailer.

Water level at time of sample collection = 26.55 ft TOIC.

Sample collected via dedicated poly bailer.

Sampler(s): CW



**WELL PURGE & SAMPLE RECORD**

Site Name/Location: Davis Howlad Oil Corp.

Well ID: MW-25

E & E Project No.: EE1705007.0009.01

Date: 10/15/2020

Initial Depth to Water: 6.10 feet TOIC

Start Time: 10:15

Total Well Depth: 13.97 feet TOIC

End Time: 10:40

Depth to Pump: 12.5 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.9 lpm / gpm

Pump Type: perist

adjusted to: 0.2 lpm at 10:42

Well Diameter: 2 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: 1.28 gallons  $3x = 3.85 \text{ gal} = 14.6 \text{ L}$

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C / °F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
10:15	0	6.56	17.75	93	1.34	4.94	119	7.96
10:20	4.5	6.47	17.46	27	1.34	6.08	38.2	10.68
10:25	8	6.44	17.33	4	1.34	6.58	39.4	10.95
10:30	11	6.43	17.31	-2	1.34	6.04	36.3	10.95
10:35	14	6.44	17.34	-4	1.33	5.89	37.2	10.95
10:40	17	6.45	17.38	-8	1.33	5.75	35.8	10.95
Final Sample Data:		6.45	17.38	-8	1.33	5.75	35.8	10.95

Sample ID: MW-25-OCT20

Duplicate? ☐

Dupe Samp ID: \_\_\_\_\_

Sample Time: 10:42

MS/MSD? ☐

No. of Bottles: 3

Analyses:

Methods:

Comments:

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☐ \_\_\_\_\_

☐ Metals/CN

☐ Dioxin

Sampler(s): CW



## WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howlad Oil Corp.

Well ID: MW-SR

E & E Project No.: EE10075007.0009.01

Date: 10/13/2020

Initial Depth to Water: 14.12 feet TOIC

Start Time: 13:43

Total Well Depth: 34.71 feet TOIC

End Time: 14:20

Depth to Pump: 33.5 feet TOIC

☐ Bailer      ☒ Pump

Initial Pump Rate: 0.25 (Lpm) / gpm

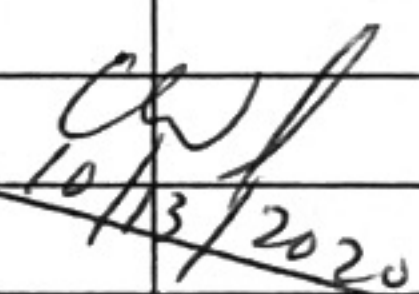
Pump Type: Bladder

adjusted to: 0.20 at 13:58

Well Diameter: 4 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume:                      gallons

Time	Purge Volume (gallons/ <u>liters</u> )	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity ( $\mu$ S/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
13:45	0.5	6.70	16.78	-8	1.18	2.05	77.3	14.16
13:48	1.75	6.87	16.95	-40	1.18	1.39	59.8	14.08
13:53	3	6.91	17.06	-43	1.18	1.28	51.5	14.08
13:58	4.25	6.94	17.22	-42	1.18	1.26	41.1	14.08
14:03	5.25	6.89	16.48	-76	1.27	0.59	33.2	14.18
14:08	6.25	6.89	16.40	-78	1.28	0.48	33.0	14.18
14:13	7.25	6.90	16.33	-80	1.28	0.41	30.8	14.18
14:18	8.25	6.91	16.29	-80	1.28	0.38	30.2	14.18
								
Final Sample Data:		6.91	16.29	-80	1.28	0.38	30.2	14.18

Sample ID: N11J-5R

Duplicate? ☐

Dupe Samp ID:

Sample Time: 14:20

MS/MSD? ☐

No. of Bottles: 5

### Analyses:

### Methods:

Comments:

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA☐ Pest.☐☐ Metals/CN☐ Dioxin

Sampler(s): *Ch*

- ☒ sulfate, alkalinity



**WELL PURGE & SAMPLE RECORD**

Site Name/Location: Davis Howlad Oil Corp.

Well ID: MW-8

E & E Project No.: EE/70.5007.0009

Date: 10-12-2020

Initial Depth to Water: 22.88 feet TOIC

Start Time: 1350

Total Well Depth: 35.36 feet TOIC

End Time: 1520

Depth to Pump: 34.36 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.10 (Lpm) gpm

Pump Type: BLADDER

adjusted to: 0.20 at 1410

Well Diameter: 4 inches

adjusted to: 0.10 at 1425

1x Well Volume: 8.15 gallons x 3 = 24.45

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
1400	1.0	7.46	15.21	-6	1.44	0.79	23.1	23.78
1410	2.0	7.43	14.88	-22	1.45	0.34	19.0	23.98
1415	<del>3.0</del>	7.42	14.73	-30	1.45	0.22	12.2	24.20
1420	<del>4.0</del>	7.42	14.70	-35	1.46	0.15	9.3	24.36
1425	5.0	7.41	14.66	-39	1.46	0.09	9.7	24.45
1430	5.5	7.41	14.95	-35	1.46	0.49	12.8	24.45
1435	6.0	7.41	15.00	-32	1.47	0.26	11.3	24.40
1440	6.5	7.41	15.01	-36	1.46	0.13	9.2	24.39
1445	7.0	7.42	14.96	-40	1.46	0.07	8.4	24.38
1450	7.5	7.42	14.91	-42	1.46	0.03	7.4	24.35
1455	8.0	7.43	14.88	-45	1.44	0.00	6.5	24.32
1500	8.5	7.43	14.87	-47	1.42	0.00	6.3	24.32
1505	9.0	7.44	14.84	-48	1.41	0.00	6.4	24.32
Final Sample Data:		7.44	14.84	-48	1.41	0.00	6.4	24.32

Sample ID: MW-8-OCT20

Duplicate? ☐

Dupe Samp ID: \_\_\_\_\_

Sample Time: 1510

MS/MSD? ☐

No. of Bottles: 5

Analyses:

Methods:

Comments: Clear, no sheen, no strong odor

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☒ Alkalinity,

☐ Metals/CN

Sulfate

☐ Dioxin

Sampler(s): CP, CW



**WELL PURGE & SAMPLE RECORD**

Site Name/Location: Davis Howlad Oil Corp.

Well ID: MW-95

E & E Project No.: EE1705007.0009.01

Date: 10/15/2020

Initial Depth to Water: 6.45 feet TOIC

Start Time: 9:26

Total Well Depth: 15.9 feet TOIC

End Time: 10:00

Depth to Pump: 14 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.7 ~~lpm~~ / gpm

Pump Type: peri

adjusted to: 0.20 lpm at 9:46

Well Diameter: 2 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: 1.54 gallons  $3x = 4.62$  gal

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C / °F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
9:26	0	5.92	18.28	182	1.00	8.90	9.4	7.59
9:31	<del>3.5</del> 4	6.49	19.41	136	0.983	8.00	0.0	9.69
9:36	8	6.60	19.69	119	0.977	7.21	0.0	10.68
9:41	12	6.62	19.67	112	0.975	6.72	0.0	11.57
9:46	16	6.66	19.61	104	0.972	5.00	0.0	12.44
9:51	17	6.70	19.57	97	0.969	5.56	0.0	12.49
9:56	18	6.71	19.58	95	0.968	5.53	0.0	12.49
<div style="text-align: center;"> </div>								
Final Sample Data:		6.71	19.58	95	0.968	5.53	0.0	12.49

Sample ID: MW-95-0CT20

Duplicate? ☐

Dupe Samp ID: \_\_\_\_\_

Sample Time: 10:00

MS/MSD? ☐

No. of Bottles: 3

Analyses:

Methods:

Comments:

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☐ \_\_\_\_\_

☐ Metals/CN

☐ Dioxin

Sampler(s): CW



**WELL PURGE & SAMPLE RECORD**

Site Name/Location: Davis Howlad Oil Corp.

Well ID: MW-10R

E & E Project No.: EE1705007.0009

Date: 10-14-20

Initial Depth to Water: 20.22 feet TOIC

Start Time: 10<sup>50</sup>

Total Well Depth: 35.57 feet TOIC

End Time: 1<sup>15</sup>

Depth to Pump: 34.57 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.2 (Lpm) gpm

Pump Type: BLADDER

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

Well Diameter: 4 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: 9.37 gallons x 3 = 28.11

Time	Purge Volume (gallons)(liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
10 <sup>55</sup>	1.0	6.63	13.78	111	1.11	0.00	0.0	20.50
11 <sup>00</sup>	2.0	6.66	13.84	93	1.09	Ø	Ø	20.54
11 <sup>05</sup>	3.0	6.62	13.79	67	1.05	Ø	Ø	20.61
11 <sup>10</sup>	4.0	6.63	13.79	64	1.05	Ø	Ø	20.69
11 <sup>20</sup>	5.0	6.75	13.84	124	1.07	Ø	Ø	20.67
11 <sup>25</sup>	6.0	6.87	13.75	107	1.05	Ø	Ø	20.74
11 <sup>30</sup>	7.0	6.89	13.76	92	1.05	6.00	Ø	20.78
11 <sup>35</sup>	8.0	6.89	13.77	78	1.05	3.22	Ø	20.83
11 <sup>40</sup>	9.0	6.91	13.79	65	1.05	0.00	Ø	20.89
11 <sup>45</sup>	10.0	6.92	13.80	58	1.05	4.81	Ø	20.93
11 <sup>50</sup>	11.0	6.93	13.81	52	1.05	4.33	Ø	20.99
11 <sup>55</sup>	12.0	6.94	13.82	47	1.04	0.0	Ø	21.03
12 <sup>00</sup>	13.0	6.93	13.82	43	1.05	6.59	Ø	21.06
12 <sup>05</sup>	14.0	6.90	13.83	41	1.05	5.21	Ø	21.09
12 <sup>10</sup>	15.0	6.57	13.88	40	1.05	4.00	Ø	21.12
Final Sample Data:		6.51	14.57	25	1.04	0.07	Ø	20.90

Sample ID: # MW-10R-OCT20

Duplicate? ☐

Dupe Samp ID: \_\_\_\_\_

Sample Time: 12<sup>20</sup>

MS/MSD? ☐

No. of Bottles: 5

Analyses:

Methods:

Comments: \* Pumped @ 11<sup>10</sup> to clean out flow-through cell; clear, no sheen, no strong odor

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☒ Alkalinity, Sulfates

☐ Metals/CN

☐ Dioxin

Sampler(s): LP



**WELL PURGE & SAMPLE RECORD**

Site Name/Location: Davis Howlad Oil Corp.

Well ID: MW-10R

E & E Project No.: EE1705007, 0009

Date: 10-14-20

Initial Depth to Water: 20.22 feet TOIC

Start Time: 10<sup>50</sup>

Total Well Depth: 35.57 feet TOIC

End Time: 13<sup>5</sup>

Depth to Pump: 34.57 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.2 Lpm / gpm

Pump Type: BLADDER

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

Well Diameter: 4 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: 9.37 gallons

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C / °F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
12 <sup>15</sup>	16.0	4.98	14.35	41	1.06	3.28	Ø	21.04
12 <sup>20</sup>	17.0	4.84	14.49	41	1.06	3.11	Ø	20.98
12 <sup>25</sup>	18.0	5.04	14.70	41	1.06	2.82	Ø	20.91
12 <sup>30</sup>	19.0	5.32	14.85	41	1.05	2.59	Ø	20.90
12 <sup>35</sup>	20.0	5.52	14.70	40	1.03	2.13	Ø	20.90
12 <sup>40</sup>	21.0	5.72	14.64	37	1.02	1.81	Ø	20.90
12 <sup>45</sup>	22.0	5.95	14.59	35	1.03	1.50	Ø	20.90
12 <sup>50</sup>	23.0	6.05	14.57	34	1.03	1.33	Ø	20.90
12 <sup>55</sup>	24.0	6.25	14.58	31	1.03	1.03	Ø	20.90
13 <sup>00</sup>	25.0	6.36	14.58	29	1.04	0.68	Ø	20.90
13 <sup>05</sup>	26.0	6.41	14.58	27	1.04	0.40	Ø	20.90
13 <sup>10</sup>	27.0	6.47	14.58	26	1.04	0.22	Ø	20.90
13 <sup>15</sup>	28.0	6.51	14.57	25	1.04	0.07	Ø	20.90
Final Sample Data:		6.51	14.57	25	1.04	0.07	Ø	20.90

Sample ID: MW-10R-OCT20

Duplicate? ☐

Dupe Samp ID: \_\_\_\_\_

Sample Time: 13<sup>20</sup>

MS/MSD? ☐

No. of Bottles: 5

**Analyses:**

**Methods:**

**Comments:**

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☒ Alkalinity,  
Sulfates

☐ Metals/CN

☐ Dioxin

Sampler(s): CP



**WELL PURGE & SAMPLE RECORD**

Site Name/Location: Davis Howlad Oil Corp.

Well ID: MW-14R

E & E Project No.: EE1705007.0009

Date: 10-13-20

Initial Depth to Water: 9.44 feet TOIC

Start Time: 1245

Total Well Depth: 33.91 feet TOIC

End Time: 1355

Depth to Pump: 32.91 feet TOIC

☐ Bailer ☒ Pump.

Initial Pump Rate: 0.20 Lpm / gpm

Pump Type: BLADDER

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

Well Diameter: 4 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: 15.97 gallons x 3 = 47.91

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C / °F)	ORP (mV)	Conductivity (µS/cm / mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
1250	0.50	7.43	15.54	-154	0.700	0.11	406	9.65
1255	1.00	7.23	14.93	-155	0.801	0.00	122	9.73
1300	2.00	7.33	14.81	-156	0.842	0.00	83.1	9.82
1305	3.00	7.32	14.73	-155	0.869	0.00	66.6	9.84
1310	4.00	7.30	14.64	-155	0.880	0.00	52.3	9.84
1315	5.00	7.27	14.60	-155	0.887	0.00	43.0	9.91
1320	6.00	7.26	14.60	-154	0.890	0.00	40.5	9.94
1325	7.00	7.23	14.57	-154	0.893	0.00	36.7	9.96
1330	8.00	7.23	14.51	-155	0.894	0.00	31.8	9.96
1335	9.00	7.24	14.52	-156	0.894	0.00	30.3	9.96
1340	10.00	7.26	14.54	-157	0.893	0.00	30.1	9.96
1345	11.00	7.27	14.55	-158	0.889	0.00	24.5	9.92
1350	12.00	7.27	14.56	-158	0.881	0.00	22.5	9.88
1355	13.00	7.26	14.55	-157	0.870	0.00	23.1	9.88
Final Sample Data:		7.26	14.55	-157	0.870	0.00	23.1	9.88

Sample ID: MW-14R-OCT20

Duplicate? ☐

Dupe Samp ID: \_\_\_\_\_

Sample Time: 1400

MS/MSD? ☐

No. of Bottles: 5

Analyses:

Methods:

Comments: Murky at first, becomes clear; no sheen,  
no strong odor

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☒ Alkalinity,

☐ Metals/CN

Sulfate

☐ Dioxin

Sampler(s): CP



## WELL PURGE &amp; SAMPLE RECORD

Site Name/Location: Davis Howlad Oil Corp.

Well ID: MW-145

E & E Project No.: EE1705007.0009.01

Date: 10/15/2020

Initial Depth to Water: 4.38 feet TOIC

Start Time: 11:09

Total Well Depth: 12.93 feet TOIC

End Time: 11:31

Depth to Pump: 11.5 feet TOIC

☐ Bailer      ☒ Pump

Initial Pump Rate: 0.9 lpm / gpm

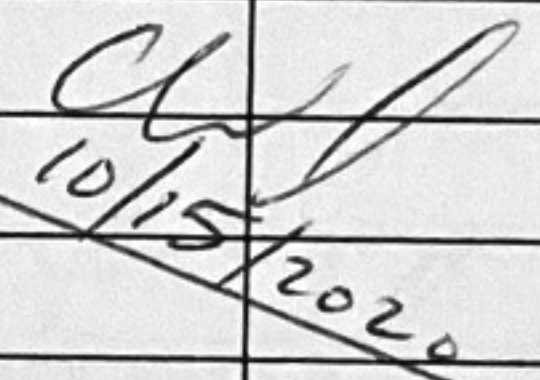
Pump Type: Peri

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

Well Diameter: 2 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: 1.39 gallons  $3 \times 2 = 4.18$

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C / °F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
11:10	0	6.57	17.97	-4	0.599	0.48	11.7	5.34
11:15	5	6.48	18.26	21	0.692	4.38	10.8	7.85
11:20	8	6.45	18.41	-2	0.571	3.93	11.3	10.29
11:25	12	6.44	18.10	-9	0.567	3.82	0.0	12.32
11:30	14	6.48	17.98	-23	0.586	3.70	0.0	12.85
11:31	14.5	DRY						12.93
								
Final Sample Data:								
		6.48	17.98	-23	0.586	3.70	0.0	

Sample ID: M.40-145

Duplicate? ☐

Dupe Samp ID:

Sample Time: 13:10

MS/MSD? ☐

No. of Bottles:

### Analyses:

### Methods:

Comments:

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA☐ Pest.☐☐ Metals/CN☐ Dioxin

Sampler(s):



**WELL PURGE & SAMPLE RECORD**

Site Name/Location: Davis Howlad Oil Corp.

Well ID: MW-15R

E & E Project No.: EE1705007.0009.01

Date: 10/14/2020

Initial Depth to Water: 16.91 feet TOIC

Start Time: 12:42

Total Well Depth: 30.30 feet TOIC

End Time: 14:00

Depth to Pump: — feet TOIC

☒ Bailer ☐ Pump

Initial Pump Rate: — Lpm / gpm

Pump Type: dedicated poly

adjusted to: — at —

Well Diameter: 4 inches

adjusted to: — at —

1x Well Volume: 8.74 gallons  $3x = 26.23$

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
12:52	1	7.45	14.76	-15	1.15	12.56	37.9	17.15
13:02	9.5	7.47	14.24	-8	1.15	9.32	39.1	19.10
13:12	6 gal	7.48	14.12	-1	1.15	9.14	32.7	20.95
13:22	10 gal	7.46	14.00	8	1.15	9.10	32.7	21.88
13:32	15 gal	7.34	14.00	15	1.15	8.84	27.8	22.89
13:42	17	7.16	14.00	23	1.14	7.47	17.7	25.98
14:00	23	—	—	DRY	—	—	—	29.92
Final Sample Data:		7.16	14.00	23	1.14	7.47	17.7	29.92

Sample ID: MW-15R-0CT20

Duplicate? ☐

Dupe Samp ID: —

Sample Time: 10/15/2020 11:55

MS/MSD? ☐

No. of Bottles: 5

Analyses: Methods:

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☐ —

☐ Metals/CN

☐ Dioxin

☒ Alkalinity, sulfate

Comments: Unable to stabilize water level at 50 mL/min.

Will purge sample w/ bailer.

Water level = 16.76' TOIC at time of sampling

Sampler(s): CH



**WELL PURGE & SAMPLE RECORD**

Site Name/Location: Davis Howlad Oil Corp.

Well ID: MW-16R

E & E Project No.: EE1705007.0009.01

Date: 10/14/2020

Initial Depth to Water: 22.2 feet TOIC

Start Time: 10:21

Total Well Depth: 31.1 feet TOIC

End Time: 11:55

Depth to Pump: 30 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.1 ~~lpm~~ gpm

Pump Type: Bladder

adjusted to: 0.375 at 10:51

Well Diameter: 4 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: 5.82 gallons  $3 \times = 17.44 \text{ gal.}$

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C) (°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
10:26	0.5	6.21	14.73	-86	155	3.09	13.4	20.3
10:31	1	6.65	15.04	-165	2.02	1.49	14.8	20.48
10:36	1.5	6.75	15.20	-203	2.20	0.86	8.4	20.67
10:41	2	6.78	15.23	-235	2.24	0.93	5.7	20.79
10:51	3	6.80	15.28	-260	2.23	0.81	1.3	21.05
11:01	6.75	6.85	14.87	-266	1.95	0.44	0.0	22.38
11:11	10.5	6.93	14.92	-254	1.39	0.44	0.0	22.83
11:21	14.25	6.94	15.03	-235	1.20	0.62	0.0	23.90
11:31	18	7.01	15.18	-230	1.03	2.09	0.0	24.89
11:41	21.75	7.17	15.34	-229	0.744	2.85	0.0	25.92
11:51	31	7.02	15.60	-229	0.961	5.64	295	28.90
11:54	34			DRY				29.90
<i>CLP</i> <i>10/14/2020</i>								
Final Sample Data:								
		7.02	15.60	-229	0.961	5.64	295	29.90

Sample ID: MW-16R-OCT20

Duplicate? ☐

Dupe Samp ID: \_\_\_\_\_

Sample Time: 10/15/2020 12:30

MS/MSD? ☐

No. of Bottles: 5

Analyses: Methods:

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☐ \_\_\_\_\_

☐ Metals/CN

☐ Dioxin

Comments: Unable to stabilize water level at 50ml/min.  
Switching from low-flow method to purge method at  
10:48. Cleaned out flow-through well at  
11:13. Switched to bailer at 11:51.  
Water level = 20.38' TOIC at time of sampling.  
Sulfur odor.

Sampler(s): CLP



**WELL PURGE & SAMPLE RECORD**

Site Name/Location: Davis Howlad Oil Corp.

Well ID: MW-17R

E & E Project No.: EE1705007.0009.01

Date: 10/12/2020

Initial Depth to Water: 27.79 feet TOIC

Start Time: 12:15

Total Well Depth: 36.85 feet TOIC

End Time: 13:05

Depth to Pump: 34 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.25 lpm / gpm

Pump Type: bladder

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

Well Diameter: 4 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: 5.92 gallons 3x = 17.75

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm (mS/cm))	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
12:20	1.25	7.71	17.68	-1	1.45	3.35	28.8	27.78
12:25	2.5	7.68	16.25	-14	1.47	3.19	27.8	27.78
12:30	3.75	7.68	15.86	-19	1.48	3.33	24.1	27.78
12:35	4.0	7.68	15.64	-24	1.48	3.37	21.3	27.78
12:40	<del>4.5</del> 5.25	7.66	15.52	-27	1.49	3.43	20.4	27.78
12:45	6.5	7.68	15.56	-29	1.48	3.45	19.0	27.78
12:50	7.75	7.67	15.40	-30	1.49	3.55	15.8	27.78
12:55	8.0	7.67	15.43	-32	1.48	3.55	13.2	27.78
13:00	9.25	7.67	15.65	-33	1.47	3.50	12.1	27.78
13:05	10.5	7.67	15.45	-35	1.47	3.51	11.9	27.78
Cleared 10/15/2020								
Final Sample Data:		7.67	15.45	-35	1.47	3.51	11.9	27.78

Sample ID: MW-17R-OCT20

Duplicate? ☒

Dupe Samp ID: MW-17R-OCT20-Q

Sample Time: 13:10

MS/MSD? ☐

No. of Bottles: 10

Analyses:

Methods:

Comments: no odor, no sheen

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☐ \_\_\_\_\_

☐ Metals/CN

☐ Dioxin

☒ sulfate  
☒ alkalinity

Sampler(s): CW



**WELL PURGE & SAMPLE RECORD**

Site Name/Location: Davis Howlad Oil Corp.

Well ID: PW-1

E & E Project No.: EE1705007.0009

Date: 10-15-20

Initial Depth to Water: 10.46 feet TOIC

Start Time: 9<sup>45</sup>

Total Well Depth: 29.34 feet TOIC

End Time: 10<sup>35</sup>

Depth to Pump: 28.34 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.2 (Lpm) gpm

Pump Type: BLADDER

adjusted to: 0.1 at 10<sup>10</sup>

Well Diameter: 8 inches

adjusted to: 0.2 at 10<sup>20</sup>

1x Well Volume: 49.30 gallons x 3 = 147.90

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
<u>9<sup>55</sup></u>	<u>0.5</u>	<u>6.66</u>	<u>17.48</u>	<u>-108</u>	<u>1.30</u>	<u>0.00</u>	<u>3.91</u>	<u>10.47</u>
<u>10<sup>00</sup></u>	<u>1.0</u>	<u>6.74</u>	<u>17.14</u>	<u>-119</u>	<u>1.50</u>	<u>Ø</u>	<u>2.64</u>	<u>10.48</u>
<u>10<sup>05</sup></u>	<u>2.0</u>	<u>6.77</u>	<u>17.07</u>	<u>-120</u>	<u>1.56</u>	<u>Ø</u>	<u>2.21</u>	<u>10.48</u>
<u>10<sup>10</sup></u>	<u>3.0</u>	<u>6.78</u>	<u>17.36</u>	<u>-121</u>	<u>1.57</u>	<u>Ø</u>	<u>2.21</u>	<u>10.47</u>
<u>10<sup>15</sup></u>	<u>3.5</u>	<u>6.79</u>	<u>17.46</u>	<u>-120</u>	<u>1.57</u>	<u>Ø</u>	<u>0.67</u>	<u>10.47</u>
<u>10<sup>20</sup></u>	<u>4.0</u>	<u>6.79</u>	<u>16.96</u>	<u>-118</u>	<u>1.58</u>	<u>Ø</u>	<u>0.29</u>	<u>10.47</u>
<u>10<sup>25</sup></u>	<u>5.0</u>	<u>6.79</u>	<u>16.85</u>	<u>-117</u>	<u>1.60</u>	<u>Ø</u>	<u>0.12</u>	<u>10.47</u>
<u>10<sup>30</sup></u>	<u>6.0</u>	<u>6.79</u>	<u>16.82</u>	<u>-117</u>	<u>1.60</u>	<u>Ø</u>	<u>0.00</u>	<u>10.47</u>
<u>10<sup>35</sup></u>	<u>7.0</u>	<u>6.78</u>	<u>16.80</u>	<u>-116</u>	<u>1.60</u>	<u>Ø</u>	<u>0.20</u>	<u>10.47</u>
Final Sample Data:		<u>6.78</u>	<u>16.80</u>	<u>-116</u>	<u>1.60</u>	<u>Ø</u>	<u>0.20</u>	<u>10.47</u>

Sample ID: PW-1-OCT20

Duplicate? ☐

Dupe Samp ID: \_\_\_\_\_

Sample Time: 10<sup>40</sup>

MS/MSD? ☐

No. of Bottles: 5

Analyses:

Methods:

Comments: Clear, no sheen, no strong odor

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☒ Alkalinity

☐ Metals/CN

Sulfates

☐ Dioxin

Sampler(s): CP



**WELL PURGE & SAMPLE RECORD**

Site Name/Location: Davis Howlad Oil Corp.

Well ID: PZ-3

E & E Project No.: 1705007.0009.01

Date: 10/15/2020

Initial Depth to Water: 5.71 feet TOIC

Start Time: 11:51

Total Well Depth: 13.49 feet TOIC

End Time: 13:00

Depth to Pump: 12.5 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.3 Lpm / gpm

Pump Type: peri

adjusted to: 0.14pm at 12:25  
+2:07 (CW)

Well Diameter: 2 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: 0.32 gallons  $3 \times = 0.96 \text{ gal}$   
 $= 3.63 \text{ L}$

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
11:52	0	6.61	20.47	54	1.66	8.86	55.5	—
11:57	2	6.62	20.15	35	1.72	8.32	140	8.23
12:02	3	6.72	20.33	33	1.76	8.96	90.5	7.61
12:07	5	6.70	20.37	22	1.76	8.22	2.4	8.45
12:20	5.5	6.93	20.58	39	1.89	8.52	259	—
12:25	6	6.37	21.48	93	1.47	8.31	55.9	7.23
12:30	6.5	6.94	20.60	18	1.93	8.81	15.5	7.11
<del>12:35</del>	<del>7</del>							
12:40	7.75	6.89	20.35	8	1.97	8.96	0.0	7.11
12:45	8.25	6.88	20.27	7	1.97	9.08	0.0	7.11
13:00	8.75	6.86	20.21	6	1.98	8.93	0.0	7.11
<div>Ch 10/15/2020</div>								
Final Sample Data:		6.86	20.21	6	1.98	8.93	0.0	7.11





WELL PURGE & SAMPLE RECORD

Site Name/Location: Eastman Business Park DROC

Well ID: MW-15R

E & E Project No.: \_\_\_\_\_

Date: 12/1/2020

Initial Depth to Water: 16.44 feet TOIC

Start Time: 11:24

Total Well Depth: 30.32 feet TOIC

End Time: 13:05

Depth to Pump: \_\_\_\_\_ feet TOIC

☒ Bailer ☐ Pump

Initial Pump Rate: \_\_\_\_\_ Lpm / gpm

Pump Type: dedicated poly bailer

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

Well Diameter: 4 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: 9.06 gallons  $3 \times 27.19 \text{ gal.}$

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C / °F)	ORP (mV)	Conductivity (µS/cm (mS/cm))	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
11:24	—	7.15	12.85	-43	0.513	9.66	25.3	—
11:33	<u>9.5</u>	7.10	13.09	-6	1.05	9.34	67.2	20.14
11:46	10	7.07	13.28	9	1.11	9.62	54.9	22.35
11:56	15	7.20	13.07	14	1.12	9.58	54.2	25.45
12:47	20	7.30	13.05	73	1.10	10.02	43.4	22.25
12:58	25	7.51	13.14	55	1.11	9.62	40.9	25.55
13:05	27.5	7.42	12.53	30	1.12	8.91	46.5	26.88
<i>CWJ</i> <i>12/1/2020</i>								
Final Sample Data:		7.42	12.53	30	1.12	8.91	46.5	26.88

Sample ID: MW-15R-DEC20

Duplicate? ☐

Dupe Samp ID: \_\_\_\_\_

Sample Time: 13:15

MS/MSD? ☐

No. of Bottles: \_\_\_\_\_

Analyses: \_\_\_\_\_ Methods: \_\_\_\_\_

Comments: Paused purging b/w 12:00 - 12:40

- ☒ VOCs ☐ CLP  
☐ SVOCs ☐ SW846  
☐ PCBs ☐ EPA/CWA  
☐ Pest. ☐ \_\_\_\_\_  
☐ Metals/CN  
☐ Dioxin  
☒ alk, sulf

Sampler(s): CWJ

## WELL PURGE &amp; SAMPLE RECORD

Site Name/Location: Eastman Business Park

Well ID: IW-01

E & E Project No.: EE/70 5007, 0059

Date: 11-30-2020

Initial Depth to Water: 36.74 feet TOIC

Start Time: 1025

Total Well Depth: 37.40 feet TOIC

End Time: 11:15

Depth to Pump: 36.40 feet TOIC

☐ Bailer      ☒ Pump

Initial Pump Rate: 0.2 Lpm/gpm

Pump Type: BLADDER

adjusted to: at

Well Diameter: 4 inches

adjusted to: at

1x Well Volume: 6.96 gallons  $\times 3 = 20.88$

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. ( $^{\circ}\text{C}$ / $^{\circ}\text{F}$ )	ORP (mV)	Conductivity $(\mu\text{S}/\text{cm})$ ( $\text{mS}/\text{cm}$ )	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
10 <sup>35</sup>	2.0	7.59	12.39	-43	1.36	Ø	39.0	26.94
10 <sup>40</sup>	3.0	7.59	12.51	-44	1.35	Ø	18.5	26.94
10 <sup>45</sup>	4.0	7.57	12.55	-44	1.37	Ø	10.5	26.94
10 <sup>50</sup>	5.0	7.57	12.50	-44	1.37	Ø	9.5	26.94
10 <sup>55</sup>	6.0	7.57	12.48	-43	1.36	Ø	9.6	26.94
11 <sup>00</sup>	7.0	7.55	12.43	-43	1.37	Ø	7.7	26.94
<b>Final Sample Data:</b>		7.55	12.43	-43	1.37	Ø	7.7	26.94

Sample ID: IW-02-NOV20

Duplicate? ☐

Dupe Samp ID:

Sample Time: 1105

MS/MSD? ☐

No. of Bottles:

**Analyses:**

**Methods:**

Comments: Clear : no sheen

 VOCs

☐ CLP

☐ SVOCs

☐ SW846

□ PCBs

☐ EPA/CWA☐ Pest.

☑ Alkalinity  
Sulfates

☐ Metals/CN

☐ Dioxin

Sampler(s): CF





WELL PURGE & SAMPLE RECORD

Site Name/Location: Eastman Business Park

Well ID: PW-1

E & E Project No.: \_\_\_\_\_

Date: 11/30/2020

Initial Depth to Water: 10.62 feet TOIC

Start Time: 12:20

Total Well Depth: 29.55 feet TOIC

End Time: 13:30

Depth to Pump: 28 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.2 LDN / gpm

Pump Type: Bladder

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

Well Diameter: \_\_\_\_\_ inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: \_\_\_\_\_ gallons

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
12:22	0.4	7.65	14.77	-29	1.83	1.19	653	10.58
12:27	1.4	7.60	15.04	-46	1.94	0.69	172	10.70
12:32	2.4	7.57	15.04	-46	1.96	0.63	81.5	10.70
12:37	3.4	7.55	15.04	-50	1.96	0.55	55.9	10.70
12:42	4.4	7.53	15.00	-49	1.97	0.53	44.2	10.70
12:47	5.4	7.57	14.98	-49	1.97	0.46	35.2	10.70
12:52	6.4	7.58	15.04	-48	1.97	0.43	26.3	10.70
12:57	7.4	7.58	14.98	-49	1.97	0.40	20.5	10.75
13:02	8.4	7.57	14.96	-52	1.97	0.38	19.8	10.75
13:07	9.4	7.53	14.99	-50	1.97	0.38	16.6	10.75
13:12	10.4	7.56	14.98	-50	1.97	0.34	16.2	10.75
13:17	11.4	7.52	14.97	-51	1.96	0.34	13.8	10.75
13:22	12.4	7.56	15.01	-51	1.96	0.31	13.2	10.75
13:27	13.4	7.52	14.98	-52	1.96	0.30	12.9	10.75
Final Sample Data:		7.52	14.98	-52	1.96	0.30	12.9	10.75

Sample ID: PW-1-nov20

Duplicate? ☐

Dupe Samp ID: \_\_\_\_\_

Sample Time: 13:20

MS/MSD? ☐

No. of Bottles: 5

Analyses:

Methods:

Comments:

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☐ \_\_\_\_\_

☐ Metals/CN

☐ Dioxin

☒ alk, sulf

Sampler(s): CW



**WELL PURGE & SAMPLE RECORD**

Site Name/Location: Eastman Business Park

Well ID: MW-17R

E & E Project No.: \_\_\_\_\_

Date: 11/30/2020

Initial Depth to Water: 26.29 feet TOIC

Start Time: 10:05

Total Well Depth: 36.60 feet TOIC

End Time: 10:50

Depth to Pump: 34 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.200 Lpm / gpm

Pump Type: Bladder

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

Well Diameter: 4 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: \_\_\_\_\_ gallons

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
10:07	<del>0.204</del>	7.84	13.31	-88	1.32	1.62	28.2	26.40
10:12	0.4	7.76	13.52	-83	1.30	1.08	12.5	26.40
10:17	2.4	7.86	13.57	-87	1.29	0.94	9.5	26.40
10:22	3.4	7.93	13.58	-90	1.29	0.92	9.6	26.40
10:27	4.4	7.88	13.57	-92	1.29	0.86	9.7	26.40
10:32	5.4	7.91	13.54	-92	1.29	0.87	10.9	26.40
10:37	6.4	7.95	13.61	-91	1.29	0.88	8.20	26.40
10:42	<del>7.4</del>	7.88	13.56	-89	1.29	0.89	7.5	26.40
10:47	8.4	7.95	13.59	-92	1.29	0.93	7.6	26.40
Final Sample Data:		7.95	13.59	-92	1.29	0.93	7.6	26.40

Sample ID: MW-17R-NOV20

Duplicate? ☐

Dupe Samp ID: \_\_\_\_\_

Sample Time: 10:50

MS/MSD? ☐

No. of Bottles: 5

**Analyses:**

**Methods:**

Comments: \_\_\_\_\_

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☐ \_\_\_\_\_

☐ Metals/CN

☐ Dioxin

☒ Alk, sulf

Sampler(s): CW



# WELL PURGE & SAMPLE RECORD

Site Name/Location: Eastman Business Park, DHD, Rochester, NY

Well ID: MW-10

E & E Project No.: EE1705007.0009

Date: 12-2-2020

Initial Depth to Water: 19.15 feet TOIC

Start Time: 9:50

Total Well Depth: 35.55 feet TOIC

End Time: 11:00

Depth to Pump: 34.55 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.2 (lpm) gpm

Pump Type: BLADDER

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

Well Diameter: 4 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: 10.51 gallons

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm (mS/cm))	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
10:00	2.0	6.94	11.83	-167	0.663	1.01	8.62	19.85
10:05	3.0	6.99	11.90	-172	0.692	0.81	7.13	19.85
10:10	4.0	7.01	12.11	-173	0.731	0.76	5.33	19.90
10:15	5.0	7.02	12.07	-173	0.753	0.73	4.58	19.95
10:20	6.0	7.04	12.02	-171	0.834	0.63	2.85	19.95
10:25	7.0	7.04	11.94	-169	0.864	0.60	3.29	20.00
10:30	8.0	7.04	11.81	-165	0.905	0.55	1.12	20.00
10:35	9.0	7.04	11.75	-162	0.930	0.53	0.90	20.00
10:40	10.0	7.05	11.77	-156	0.973	0.51	2.23	20.00
10:45	11.0	7.05	11.78	-152	0.987	0.50	Ø	20.00
10:50	12.0	7.06	11.76	-146	1.00	0.52	Ø	20.00
Final Sample Data:		7.06	11.76	-146	1.00	0.52	Ø	20.00

Sample ID: MW-10-DEC20

Duplicate? ☐

Dupe Samp ID: \_\_\_\_\_

Sample Time: 1055

MS/MSD? ☐

No. of Bottles: 5

Analyses:

Methods:

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☒ Alkalinity

☐ Metals/CN

Sulfates

☐ Dioxin

Comments:

Dark yellow tint at first - fades to light yellow; in sheer

Sampler(s): CP





# WELL PURGE & SAMPLE RECORD

Site Name/Location: Eastman Business Park DHOC / Rochester, NY Well ID: MW-14  
E & E Project No.: EE/705007.0009 Date: 12-2-2020  
Initial Depth to Water: 11.09 feet TOIC Start Time: 1215  
Total Well Depth: 23.70 feet TOIC End Time: \_\_\_\_\_  
Depth to Pump: 22.70 feet TOIC ☐ Bailer ☒ Pump  
Initial Pump Rate: 0.2 (Lpm) / gpm Pump Type: BLADDER  
adjusted to: 0.15 Lpm at 12:55 Well Diameter: 4 inches  
adjusted to: \_\_\_\_\_ at \_\_\_\_\_ 1x Well Volume: \_\_\_\_\_ gallons

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
1225	2.0	7.14	12.21	-89	0.820	1.37	61.2	11.60
1230	3.0	7.17	12.43	-97	0.832	0.93	45.4	11.75
1235	4.0	7.18	12.50	-101	0.836	0.70	27.7	11.80
1240	5.0	7.18	12.59	-97	0.834	0.63	21.0	11.80
1245	6.0	7.18	12.63	-94	0.834	0.60	16.6	11.80
1250	7.0	7.19	12.57	-114	0.841	0.57	16.6	11.78
1255	8.0	7.19	12.69	-118	0.837	0.55	16.6	11.78
1300	8.75	7.18	12.60	-103	0.832	0.55	16.6	11.78
1305	9.5	7.18	12.57	-89	0.829	0.57	16.6	11.78
1310	10.25	7.17	12.59	-83	0.828	0.56	16.6	11.78
1315	11	7.18	12.55	-75	0.826	0.56	16.6	11.78
1320	11.75	7.17	12.52	-67	0.821	0.56	16.6	11.78
1325	12.5	7.16	12.50	-65	0.819	0.56	16.6	11.78
Final Sample Data:								

Sample ID: MW-14R-DEC20 Duplicate? ☐ Dupe Samp ID: \_\_\_\_\_  
Sample Time: 13:25 MS/MSD? ☐ No. of Bottles: 5

Analyses: Methods: Comments: CW took over readings at 12:50 due to severe tire pressure drop on CP's truck.  
☒ VOCs ☐ CLP  
☐ SVOCs ☐ SW846  
☐ PCBs ☐ EPA/CWA  
☐ Pest. ☐ \_\_\_\_\_  
☐ Metals/CN  
☐ Dioxin  
☒ sulf, alk

Sampler(s): CW



WELL PURGE & SAMPLE RECORD

Site Name/Location: Eastman Business Park DHOC

Well ID: MW-SR

E & E Project No.: \_\_\_\_\_

Date: 12/2/2020

Initial Depth to Water: 14.15 feet TOIC

Start Time: 10:00

Total Well Depth: 34.73 feet TOIC

End Time: 11:00

Depth to Pump: 32 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 0.15 Lpm / gpm

Pump Type: Bladder

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

Well Diameter: 4 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: \_\_\_\_\_ gallons

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C) (°F)	ORP (mV)	Conductivity (µS/cm) (mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
10:03	0.45	6.72	12.74	212	1.90	1.76	167	14.17
10:08	1.2	6.52	13.28	362	2.47	0.63	138	14.22
10:13	1.95	6.51	12.98	388	2.51	0.52	110	14.22
10:18	2.7	6.51	12.99	402	2.51	0.47	81.5	14.22
10:23	3.45	6.51	12.82	409	2.48	0.47	37.3	14.22
10:28	4.2	6.52	12.89	412	2.42	0.47	22.7	14.22
10:33	4.95	6.53	12.88	417	2.37	0.39	13.4	14.25
10:38	5.7	6.55	12.82	416	2.25	0.41	9.1	14.25
10:43	6.45	6.59	12.72	414	1.91	0.40	8.86.8	14.25
10:48	7.2	6.56	12.60	412	1.88	0.40	6.5	14.25
10:53	7.95	6.52	12.60	408	1.88	0.35	5.9	14.25
10:58	8.7	6.52	12.58	410	1.85	0.35	6.1	14.25
C. H. / 12/2/2020								
Final Sample Data:								
		6.52	12.58	410	1.85	0.35	6.1	14.25

Sample ID: MW-SR-DEC20

Duplicate? ☐

Dupe Samp ID: \_\_\_\_\_

Sample Time: 11:05

MS/MSD? ☐

No. of Bottles: 15

Analyses: \_\_\_\_\_ Methods: \_\_\_\_\_

Comments: MS/MSD

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA

☐ Pest.

☐ \_\_\_\_\_

☐ Metals/CN

☐ Dioxin

☒ Subst. alk

Sampler(s): CH



## WELL PURGE &amp; SAMPLE RECORD

Site Name/Location: ~~Eastman Business Park~~ DHC

Well ID: MW-16R

E &amp; E Project No.: \_\_\_\_\_

Date: 12/1/2020

Initial Depth to Water: 19.4 feet TOIC

Start Time: 10:25

Total Well Depth: 31.05 feet TOIC

End Time: 10:52

Depth to Pump:      —      feet TOIC

☒ Bailer      ☐ Pump

Initial Pump Rate: — Lpm / gpm

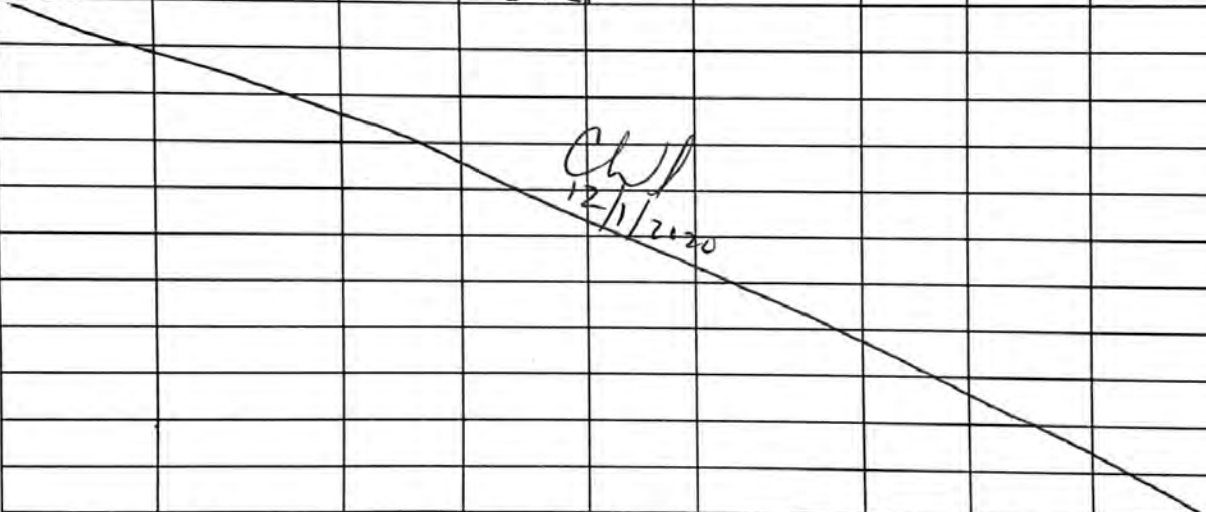
Pump Type: dedicated poly boiler

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

Well Diameter: \_\_\_\_\_ inches

adjusted to:                      at

1x Well Volume: 7.60 gallons  $3 \times = 22.82 \text{ gal.}$

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (μS/cm, mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
10:25	—	6.21	14.68	11	1.13	9.30	7.5	—
10:36	4	6.66	15.20	-40	1.41	9.92	196	25.14
10:49	7.5	7.14	15.60	-96	1.64	9.87	71000	29.60
10:52	8	DRY						
								
Final Sample Data:		6.11	14.03	165	1.07	11.55	66.5	19.37

Sample ID: MW-16R-DEC20

Duplicate? ☐

Dupe Samp ID:

Sample Time: 12/2 9:20

MS/MSD? ☐

No. of Bottles: 5

**Analyses:**      **Methods:**

Comments: Purged via poly bailer due to historical purge logs indicating this location doesn't produce water well enough to stabilize water level at purge rates the bladder pump + Horizontal flow-through cell I have are capable of.

☒ VOCs

☐ CLP

☐ SVOCs

☐ SW846

☐ PCBs

☐ EPA/CWA☐ Pest.☐ Metals/CN

☐ Dioxin

alk, sulf

Sampler(s): CW

### WELL PURGE & SAMPLE RECORD

Site Name/Location: Eastman Business Park

Well ID: Mw-ZR

E & E Project No.: EE 1705007.0009

Date: 17/1/2020

Initial Depth to Water: <sup>14.21</sup>~~30.32~~ feet TOIC

Start Time: 2:10

Total Well Depth: 30.41 feet TOIC

End Time: 1320

Depth to Pump:                      feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 200 ~~pm~~ Lpm / gpm

Pump Type: Bladder

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

Well Diameter: 21 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: 10.57 gallons

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm/mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
1210	0	7.77	10.21	353	0.641	17.18	29.8	14.87
1220	2	7.79	10.43	339	0.337	14.09	25.8	15.42
1230	4	7.74	10.74	307	0.099	11.94	24.7	16.08
1240	6	7.67	10.95	295	0.099	11.94	25.6	16.78
1250	8	7.58	11.10	290	0.106	11.82	25.4	17.41
1300	10	7.55	11.20	285	0.115	11.56	28.4	18.00
1310	12	7.54	11.23	278	0.125	11.50	32.4	18.53
1320	14	7.52	11.25	273	0.129	11.42	35.6	18.98
Final Sample Data:								

Sample ID: MW-22-DEC 20

Duplicate? ☐

Dupe Samp ID:

Sample Time: 1325

MS/MSD? ☐

No. of Bottles: 5

Analyses:      Methods:      Comments:

☒ VOCs      ☐ CLP☐ SVOCs      ☐ SW846☐ PCBs      ☐ EPA/CWA☐ Pest. ☒ Alkalinity☐ Metals/CN Sulfates☐ Dioxin      Sampler(s): 50

Sampler(s):  $C^1$





ecology and environment  
engineering and geology, p.c.

Environmental Specialists

WELL PURGE & SAMPLE RECORD

Site Name/Location: Eastman Business Park

Well ID: MW-5

E & E Project No.: EE470 30+1.000

Date: 12/1/2020

Initial Depth to Water: 14.30 feet TOIC

Start Time: 0955

Total Well Depth: 33.9 feet TOIC

End Time: \_\_\_\_\_

Depth to Pump: 32.9 feet TOIC

☐ Bailer ☒ Pump

Initial Pump Rate: 400 m Lpm / gpm

Pump Type: Booster

adjusted to: 200 mL/m at 1005

Well Diameter: 4 inches

adjusted to: \_\_\_\_\_ at \_\_\_\_\_

1x Well Volume: 12.75 gallons 73 = 35.27

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C / °F)	ORP (mV)	Conductivity (µS/cm (mS/cm))	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
0955	0	8.09	13.42	500	53.4	2.00	-	15.78
1005		8.16	13.83	463	36.1	1.21	-	16.08
1015		8.21	13.60	409	30.0	1.0	-	16.48
1025		8.22	13.48	395	28.4	0.90	-	16.68
1035		8.23	13.53	372	26.9	0.87	-	16.78
1045		8.21	13.52	361	25.5	0.85	-	16.81
1055		8.19	13.51	355	24.1	0.80	47.0	16.81
1100		8.17	13.53	350	23.4	0.79	31.5	16.82
Final Sample Data:								

Sample ID: MW-8-DEC20

Duplicate? ☒

Dupe Samp ID: MW-8-DEC20-Q

Sample Time: 1103

MS/MSD? ☐

No. of Bottles: 10

Analyses: \_\_\_\_\_ Methods: \_\_\_\_\_ Comments: \_\_\_\_\_

☒ VOCs ☐ CLP

☐ SVOCs ☐ SW846

☐ PCBs ☐ EPA/CWA

☐ Pest. ☒ Alkalinity

☐ Metals/CN ☒ Sulfates

☐ Dioxin

Sampler(s): SC

# B

## Data Usability Summary Reports



<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 17, 2020</b>	<b>Completed by: Lynne Parker</b>

The analytical data provided by the laboratory were reviewed for precision, accuracy, and completeness based on applicable sections of the following guidance:

- NYSDEC Division of Environmental Remediation Guidance for Data Deliverables and the Development of Data Usability Summary Reports (in DER-10, May 2010);
- EPA Region 2 Data Validation Standard Operating Procedures.

Specific criteria for QC limits were obtained from EEEPC's Master QAPP for NYSDEC projects. Compliance with the project QA program is indicated in the checklist and tables below. Any major or minor concerns affecting data usability are listed below. The checklist and tables also indicate whether data qualification is required and/or the type of qualifier assigned.

**Reference:**

<b>Project ID</b>	<b>Lab Work Order</b>	<b>Laboratory</b>
1705007.0009.01	480-178800-1	Test America; Buffalo

**Table 1 Sample Listing Summary**

<b>Work Order</b>	<b>Matrix</b>	<b>Sample ID</b>	<b>Lab ID</b>	<b>Sample Date</b>	<b>Field QC</b>	<b>Name Corrections</b>
480-178800-1	WG	IW-01-NOV20	480-178800-3	11/30/2020 11:05		
480-178800-1	WG	MW-17R-NOV20	480-178800-2	11/30/2020 10:50		
480-178800-1	WG	PW-1-NOV20	480-178800-1	11/30/2020 13:50		
480-178800-1	WQ	TB-20201130	480-178800-4	11/30/2020 09:00		

**Table 1A Sample Test Summary**

<b>Work Order</b>	<b>Matrix</b>	<b>Test Method</b>	<b>Method Name</b>	<b>Number of Samples</b>	<b>Sample Type</b>
480-178800-1	WG	E624.1	Purgeables by GC/MS	3	N
480-178800-1	WQ	E624.1	Purgeables by GC/MS	1	TB
480-178800-1	WG	E300.0	Anions - Sulfate	3	N
480-178800-1	WG	SM2320B	Alkalinity	3	N

**General Sample Information**

Do Samples and Analyses on COC check against Lab Sample Tracking Form?	No. Sample PW-1-NOV20 was inadvertently excluded from the COC. E & E provided the collection date and time to the lab for login.
Did coolers arrive at lab between 2 and 6°C and in good condition as indicated on COC and Cooler Receipt Form?	Yes.
Frequency of Field QC Samples Correct? Field Duplicate - 1/20 samples MS/MSD - 1/20 samples Trip Blank - Every cooler with VOCs waters only Equipment Blank - 1/ 20 samples	A MS/MSD was not included in the sample delivery group. A field duplicate was not included in the sample delivery group. A trip blank was included. An equipment blank was not included in the sample delivery group.
Case narrative present and complete?	Yes.
Any holding time violations?	No.

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 17, 2020</b>	<b>Completed by: Lynne Parker</b>

The following tables are presented at the end of this DUSR and provided summaries of results outside QC criteria:

- Method Blanks Results (Table 2)
- Surrogates Outside Limits (Table 3)
- MS/MSD Outside Limits (Table 4)
- LCS Outside Limits (Table 5)
- Re-analysis Results (Table 6)
- Field Duplicate Results (Table 7)

Go to [Tables](#) List

<b>Volatile Organic Compounds by Method E624.1</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data. Qualification also applies to TICs.	No qualification required.
Are surrogates for method blanks and LCS within limits?	Yes.
Are surrogates for samples and MS/MSD within limits? (See Table 3). If not, were all samples reanalyzed for VOCs? Matrix effects should be established.	Yes.
Is Laboratory QC frequency at least one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Yes.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	Yes.
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	No. Bromoform and carbon tetrachloride were recovered high in LCS 460-744142/4. The analytes were non-detect in the associated samples; therefore, no qualification was required.
Do internal standards areas and retention time meet criteria? If not was sample re-analyzed to establish matrix (see Table 6)?	Unable to be assessed. Category A report provided.
Is initial calibration for target compounds <20 %RSD or curve fit? Is ICV 80-120%? Is LCV 70-130%?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	The case narrative noted that the continuing calibration verification (CCV) associated with batch 460-744142 was recovered above the upper control limit for bromoform. The analyte in all samples were UJ qualified as estimated non-detect.
Does each target compound have a minimum response factor of 0.05 for the lowest calibration standard and for the average RF? Qualifications do not apply to ketones, alcohols and dioxanes due to poor purging efficiency.	Unable to be assessed. Category A report provided.

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 17, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>Volatile Organic Compounds by Method E624.1</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	Sample MW-17R-NOV20 was diluted to bring target analytes within the calibration range. Elevated reporting limits for non-detect analytes are provided. The dilutions should not impact data usability and should be comparable to historical data.
Do field duplicate results show good precision for all compounds (see Table 7)?	N/A

<b>Alkalinity by Standard Method 2320B</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data.	No qualification required.
Is Laboratory QC frequency at least one blank and LCS with each batch or 20 samples and one set of MS/MSD per 5 samples?	Yes.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	N/A
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Is initial calibration for target compounds <20 %RSD or curve fit?	Unable to be assessed. Category A report provided.
Is initial calibration verification frequency once immediately following calibration?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	No.
Do field duplicate results show good precision for all compounds (see Table 7)?	N/A

<b>Sulfate by EPA Method 300.0</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data.	N/A.
Is Laboratory QC frequency at least one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Yes.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	Yes.
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 17, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>Sulfate by EPA Method 300.0</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Is initial calibration for target compounds <20 %RSD or curve fit?	Unable to be assessed. Category A report provided.
Is initial calibration verification frequency once immediately following calibration?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	Samples IW-01-NOV20, MW-17R-NOV20, and PW-1-NOV20 were diluted to bring sulfate concentrations within the calibration range. No impacts to data usability.
Do field duplicate results show good precision for all compounds (see Table 7)?	N/A

<b>Summary of Findings</b>
<ul style="list-style-type: none"> <li>Bromoform in all samples was UJ qualified as estimated non-detect due exceedances in the CCV.</li> </ul>

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 17, 2020</b>	<b>Completed by: Lynne Parker</b>

**Table 2 – List of Positive Results for Blank Samples**

None

**Table 2A – List of Samples Qualified for Method Blank Contamination**

None

**Table 2B – List of Samples Qualified for Field Blank Contamination**

None

**Table 3 – List of Samples with Surrogates outside Control Limits**

None

**Table 4 – List MS/MSD Recoveries and RPDs outside Control Limits**

None

**Table 5 – List LCS Recoveries outside Control Limits**

Method	Sample ID	Analyte	Rec.	Low Limit	High Limit	Sample Qualifier
E624.1	LCS 460-744142/4	Bromoform	157	70	130	None: High & ND
E624.1	LCS 460-744142/4	Carbon Tetrachloride	134	70	130	None: High & ND

**Table 6 – Samples that were Re-analyzed**

Sample ID	Lab ID	Method	Sample Type	Action
IW-01-NOV20	480-178800-3	E300.0	N	5X: Diluted to bring the target analyte within the calibration range.
MW-17R-NOV20	480-178800-2	E300.0	N	5X: Diluted to bring the target analyte within the calibration range.
PW-1-NOV20	480-178800-1	E300.0	N	10X: Diluted to bring the target analyte within the calibration range.
MW-17R-NOV20	480-178800-2	E624.1	N	2X: Diluted to bring target analytes within the calibration range. Elevated reporting limits provided.

**Table 7 – Summary of Field Duplicate Results**

N/A



<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 17, 2020</b>	<b>Completed by: Lynne Parker</b>

**Acronym List and Table Key:**

CCV	=	continuing calibration verification
COC	=	chain of custody
DUSR	=	data usability summary report
FD	=	field duplicate sample
GC/MS	=	gas chromatography / mass spectrometry
LCS	=	laboratory control sample
LCSD	=	laboratory control sample duplicate
MBLK	=	method blank
MS	=	matrix spike
MSD	=	matrix spike duplicate
N	=	normal field sample
NC	=	not calculated
ND	=	not detected
NYSDEC	=	New York State Department of Environmental Conservation
PQL	=	practical quantitation limit
QA	=	quality assurance
QAPP	=	quality assurance project plan
QC	=	quality control
RB	=	Rinsate blank sample
RPD	=	relative percent difference
SDG	=	sample delivery group
TB	=	trip blank sample
TRG	=	target analyte
VOC	=	volatile organic compound
WG	=	groundwater (matrix)

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 21, 2020</b>	<b>Completed by: Lynne Parker</b>

The analytical data provided by the laboratory were reviewed for precision, accuracy, and completeness based on applicable sections of the following guidance:

- NYSDEC Division of Environmental Remediation Guidance for Data Deliverables and the Development of Data Usability Summary Reports (in DER-10, May 2010);
- EPA Region 2 Data Validation Standard Operating Procedures.

Specific criteria for QC limits were obtained from EEEPC's Master QAPP for NYSDEC projects. Compliance with the project QA program is indicated in the checklist and tables below. Any major or minor concerns affecting data usability are listed below. The checklist and tables also indicate whether data qualification is required and/or the type of qualifier assigned.

**Reference:**

<b>Project ID</b>	<b>Lab Work Order</b>	<b>Laboratory</b>
1705007.0009.01	480-178848-1	Test America; Buffalo

**Table 1 Sample Listing Summary**

<b>Work Order</b>	<b>Matrix</b>	<b>Sample ID</b>	<b>Lab ID</b>	<b>Sample Date</b>	<b>Field QC</b>	<b>Name Corrections</b>
480-178848-1	WG	MW-15R-DEC20	480-178848-4	12/01/2020 13:15		
480-178848-1	WG	MW-2R-DEC20	480-178848-5	12/01/2020 13:25		
480-178848-1	WG	MW-8-DEC20	480-178848-2	12/01/2020 11:03		MW-8R-DEC20
480-178848-1	WG	MW-8-DEC20-Q	480-178848-3	12/01/2020 11:03		MW-8R-DEC20-Q
480-178848-1	WQ	TB-20201201	480-178848-1	12/01/2020 10:00		

**Table 1A Sample Test Summary**

<b>Work Order</b>	<b>Matrix</b>	<b>Test Method</b>	<b>Method Name</b>	<b>Number of Samples</b>	<b>Sample Type</b>
480-178848-1	WG	E624.1	Purgeables by GC/MS	4	N/FD
480-178848-1	WQ	E624.1	Purgeables by GC/MS	1	TB
480-178848-1	WG	E300.0	Anions - Sulfate	4	N/FD
480-178848-1	WG	SM2320B	Alkalinity	4	N/FD

<b>General Sample Information</b>	
Do Samples and Analyses on COC check against Lab Sample Tracking Form?	Yes.
Did coolers arrive at lab between 2 and 6°C and in good condition as indicated on COC and Cooler Receipt Form?	Yes.
Frequency of Field QC Samples Correct? Field Duplicate - 1/20 samples MS/MSD - 1/20 samples Trip Blank - Every cooler with VOCs waters only Equipment Blank - 1/ 20 samples	A MS/MSD was not included in the sample delivery group. One field duplicate was collected. A trip blank was included. An equipment blank was not included in the sample delivery group.
Case narrative present and complete?	Yes.
Any holding time violations?	No.

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 21, 2020</b>	<b>Completed by: Lynne Parker</b>

The following tables are presented at the end of this DUSR and provided summaries of results outside QC criteria:

- Method Blanks Results (Table 2)
- Surrogates Outside Limits (Table 3)
- MS/MSD Outside Limits (Table 4)
- LCS Outside Limits (Table 5)
- Re-analysis Results (Table 6)
- Field Duplicate Results (Table 7)

Go to [Tables](#) List

<b>Volatile Organic Compounds by Method E624.1</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	Methylene chloride was detected in the trip blank TB-20201201 less than the PQL.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data. Qualification also applies to TICs.	The analyte was positively detected in samples MW-8-DEC20 and MW-8-DEC20-Q at approximately the same concentration. The analyte in the samples were U qualified as non-detect.
Are surrogates for method blanks and LCS within limits?	Yes.
Are surrogates for samples and MS/MSD within limits? (See Table 3). If not, were all samples reanalyzed for VOCs? Matrix effects should be established.	Yes.
Is Laboratory QC frequency at least one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Yes.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	Yes.
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Do internal standards areas and retention time meet criteria? If not was sample re-analyzed to establish matrix (see Table 6)?	Unable to be assessed. Category A report provided.
Is initial calibration for target compounds <20 %RSD or curve fit? Is ICV 80-120%? Is LCV 70-130%?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Does each target compound have a minimum response factor of 0.05 for the lowest calibration standard and for the average RF? Qualifications do not apply to ketones, alcohols and dioxanes due to poor purging efficiency.	Unable to be assessed. Category A report provided.
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	No.

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 21, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>Volatile Organic Compounds by Method E624.1</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Do field duplicate results show good precision for all compounds (see Table 7)?	1,1,2-Trichloroethane, methylene chloride, and trichloroethene exhibited poor precision in the field duplicate MW-8-DEC20. The results were J qualified as estimated; however, most of the results were already qualified due to the result being between the PQL and MDL.

<b>Alkalinity by Standard Method 2320B</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data.	No qualification required.
Is Laboratory QC frequency at least one blank and LCS with each batch or 20 samples and one set of MS/MSD per 5 samples?	Yes.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	N/A
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Is initial calibration for target compounds <20 %RSD or curve fit?	Unable to be assessed. Category A report provided.
Is initial calibration verification frequency once immediately following calibration?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	No.
Do field duplicate results show good precision for all compounds (see Table 7)?	Yes.

<b>Sulfate by EPA Method 300.0</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data.	N/A.
Is Laboratory QC frequency at least one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Yes.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	Yes.
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Is initial calibration for target compounds <20 %RSD or curve fit?	Unable to be assessed. Category A report provided.

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 21, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>Sulfate by EPA Method 300.0</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Is initial calibration verification frequency once immediately following calibration?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	Samples MW-15R-DEC20, MW-8-DEC20, and MW-8-DEC20-Q were diluted to bring sulfate concentrations within the calibration range. No impacts to data usability.
Do field duplicate results show good precision for all compounds (see Table 7)?	Yes.

<b>Summary of Findings</b>
<ul style="list-style-type: none"> <li>1,1,2-Trichloroethane, methylene chloride, and trichloroethene were J qualified as estimated in MW-8R-DEC20 and MW-8R-DEC20-Q due to poor precision in the field duplicate.</li> <li>Methylene chloride results in samples MW-8R-DEC20 and MW-8R-DEC20-Q were U qualified as non-detect due to positive detections in the trip blank.</li> </ul>



<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 21, 2020</b>	<b>Completed by: Lynne Parker</b>

**Table 2 – List of Positive Results for Blank Samples**

Method	Sample ID	Sample Type	Analyte	Result	Qualifier	Units	MDL	PQL
E624.1	TB-20201201	TB	Methylene Chloride	0.62	J	ug/L	0.32	1

**Table 2A – List of Samples Qualified for Method Blank Contamination**

None

**Table 2B – List of Samples Qualified for Field Blank Contamination**

Method	Field Blank	Matrix	Analyte	Blank Result	Sample Result	Lab Qualifier	PQL	Affected Samples	Sample Flag
E624.1	TB-20201201	WG	Methylene Chloride	0.62		U	1.0	MW-15R-DEC20	
E624.1	TB-20201201	WG	Methylene Chloride	0.62		U	1.0	MW-2R-DEC20	
E624.1	TB-20201201	WG	Methylene Chloride	0.62	0.62	J	1.0	MW-8-DEC20	U Flag
E624.1	TB-20201201	WG	Methylene Chloride	0.62	0.48	J	1.0	MW-8-DEC20-Q	U Flag

**Table 3 – List of Samples with Surrogates outside Control Limits**

None

**Table 4 – List MS/MSD Recoveries and RPDs outside Control Limits**

None

**Table 5 – List LCS Recoveries outside Control Limits**

None

**Table 6 – Samples that were Re-analyzed**

Sample ID	Lab ID	Method	Sample Type	Action
MW-15R-DEC20	480-178848-4	E300.0	N	5X: Diluted to bring the target analyte within the calibration range.
MW-8-DEC20	480-178848-2	E300.0	N	100X: Diluted to bring the target analyte within the calibration range.
MW-8-DEC20-Q	480-178848-3	E300.0	N	100X: Diluted to bring the target analyte within the calibration range.

**Table 7 – Summary of Field Duplicate Results**

Method	Analyte	Unit	Matrix	PQL	MW-8-DEC20	MW-8-DEC20-Q	RPD	RPD Rating	Sample Qual
A2320B	ALKALINITY, TOTAL (AS CaCO3)	mg/l	Water	5.0	909	918	1.0%	Good	None
E300.0	SULFATE (AS SO4)	mg/l	Water	200	5780	5950	2.9%	Good	None

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
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Method	Analyte	Unit	Matrix	PQL	MW-8-DEC20	MW-8-DEC20-Q	RPD	RPD Rating	Sample Qual
E624.1	1,1,2-TRICHLOROETHANE	ug/l	Water	1.0	0.83	0.67	21.3%	Poor	J Flag
E624.1	1,1-DICHLOROETHANE	ug/l	Water	1.0	21	21	0.0%	Good	None
E624.1	BROMOMETHANE	ug/l	Water	1.0	0.60	0.53	12.4%	Good	None
E624.1	CHLOROETHANE	ug/l	Water	1.0	0.91	0.79	14.1%	Good	None
E624.1	CHLOROFORM	ug/l	Water	1.0	1.7	1.6	6.1%	Good	None
E624.1	CHLOROMETHANE	ug/l	Water	1.0	21	21	0.0%	Good	None
E624.1	DICHLOROETHYLENES	ug/l	Water	2.0	170	180	5.7%	Good	None
E624.1	METHYLENE CHLORIDE	ug/l	Water	1.0	0.62	0.48	25.5%	Poor	J Flag
E624.1	TRANS-1,2-DICHLOROETHENE	ug/l	Water	1.0	5.9	6.0	1.7%	Good	None
E624.1	TRICHLOROETHYLENE (TCE)	ug/l	Water	1.0	0.97	1.2	21.2%	Poor	J Flag
E624.1	VINYL CHLORIDE	ug/l	Water	1.0	4.5	5.4	18.2%	Good	None

#### Acronym List and Table Key:

CCV	=	continuing calibration verification
COC	=	chain of custody
DUSR	=	data usability summary report
FD	=	field duplicate sample
GC/MS	=	gas chromatography / mass spectrometry
LCS	=	laboratory control sample
LCSD	=	laboratory control sample duplicate
MBLK	=	method blank
MS	=	matrix spike
MSD	=	matrix spike duplicate
N	=	normal field sample
NC	=	not calculated
ND	=	not detected
NYSDEC	=	New York State Department of Environmental Conservation
PQL	=	practical quantitation limit
QA	=	quality assurance
QAPP	=	quality assurance project plan
QC	=	quality control

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 21, 2020</b>	<b>Completed by: Lynne Parker</b>

**Acronym List and Table Key:**

RB	=	Rinsate blank sample
RPD	=	relative percent difference
SDG	=	sample delivery group
TB	=	trip blank sample
TRG	=	target analyte
VOC	=	volatile organic compound
WG	=	groundwater (matrix)

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 21, 2020</b>	<b>Completed by: Lynne Parker</b>

The analytical data provided by the laboratory were reviewed for precision, accuracy, and completeness based on applicable sections of the following guidance:

- NYSDEC Division of Environmental Remediation Guidance for Data Deliverables and the Development of Data Usability Summary Reports (in DER-10, May 2010);
- EPA Region 2 Data Validation Standard Operating Procedures.

Specific criteria for QC limits were obtained from EEEPC's Master QAPP for NYSDEC projects. Compliance with the project QA program is indicated in the checklist and tables below. Any major or minor concerns affecting data usability are listed below. The checklist and tables also indicate whether data qualification is required and/or the type of qualifier assigned.

**Reference:**

<b>Project ID</b>	<b>Lab Work Order</b>	<b>Laboratory</b>
1705007.0009.01	480-178915-1	Test America; Buffalo

**Table 1 Sample Listing Summary**

<b>Work Order</b>	<b>Matrix</b>	<b>Sample ID</b>	<b>Lab ID</b>	<b>Sample Date</b>	<b>Field QC</b>	<b>Name Corrections</b>
480-178915-1	WG	MW-10R-DEC20	480-178915-5	12/02/2020 10:55		
480-178915-1	WG	MW-14R-DEC20	480-178915-4	12/02/2020 13:25		
480-178915-1	WG	MW-16R-DEC20	480-178915-6	12/02/2020 09:20		
480-178915-1	WG	MW-5R-DEC20	480-178915-2	12/02/2020 11:05	MS/MSD	
480-178915-1	WH	RB-20201202-FA1805	480-178915-3	12/02/2020 12:30		
480-178915-1	WQ	TB-20201202	480-178915-1	12/02/2020 09:00		

**Table 1A Sample Test Summary**

<b>Work Order</b>	<b>Matrix</b>	<b>Test Method</b>	<b>Method Name</b>	<b>Number of Samples</b>	<b>Sample Type</b>
480-178915-1	WG	E624.1	Purgeables by GC/MS	4	N
480-178915-1	WQ	E624.1	Purgeables by GC/MS	1	TB
480-178915-1	WH	E624.1	Purgeables by GC/MS	1	RB
480-178915-1	WG	E300.0	Anions - Sulfate	4	N
480-178915-1	WG	SM2320B	Alkalinity	4	N

**General Sample Information**

Do Samples and Analyses on COC check against Lab Sample Tracking Form?	Yes.
Did coolers arrive at lab between 2 and 6°C and in good condition as indicated on COC and Cooler Receipt Form?	Yes. One container for the following samples were received broken or leaking: TB-20201202, MW-5R-DEC20, RB-20201202-FA1805, MW-14R-DEC20, MW-10R-DEC20, and MW-16R-DEC20.
Frequency of Field QC Samples Correct? Field Duplicate - 1/20 samples MS/MSD - 1/20 samples Trip Blank - Every cooler with VOCs waters only	A MS/MSD was collected. One field duplicate was not included in the sample delivery group. A trip blank was included.

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 21, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>General Sample Information</b>	
Equipment Blank - 1/ 20 samples	An equipment blank was not included in the sample delivery group.
Case narrative present and complete?	Yes.
Any holding time violations?	No.

The following tables are presented at the end of this DUSR and provided summaries of results outside QC criteria:

- Method Blanks Results (Table 2)
- Surrogates Outside Limits (Table 3)
- MS/MSD Outside Limits (Table 4)
- LCS Outside Limits (Table 5)
- Re-analysis Results (Table 6)
- Field Duplicate Results (Table 7)

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<b>Volatile Organic Compounds by Method E624.1</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	Methylene chloride was detected in the trip blank TB-20201202 less than the PQL.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data. Qualification also applies to TICs.	The associated sample results for the analyte were non-detect; therefore, no qualification was required.
Are surrogates for method blanks and LCS within limits?	Yes.
Are surrogates for samples and MS/MSD within limits? (See Table 3). If not, were all samples reanalyzed for VOCs? Matrix effects should be established.	Yes.
Is Laboratory QC frequency at least one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Yes.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	Yes.
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Do internal standards areas and retention time meet criteria? If not was sample re-analyzed to establish matrix (see Table 6)?	Unable to be assessed. Category A report provided.
Is initial calibration for target compounds <20 %RSD or curve fit? Is ICV 80-120%? Is LCV 70-130%?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Does each target compound have a minimum response factor of 0.05 for the lowest calibration standard and for the average RF? Qualifications do not apply to ketones, alcohols and dioxanes due to poor purging efficiency.	Unable to be assessed. Category A report provided.



<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 21, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>Volatile Organic Compounds by Method E624.1</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	Sample MW-10R-DEC20 was diluted to bring target analytes within the calibration range. Elevated reporting limits for non-detect analytes are provided. The dilutions should not impact data usability and should be comparable to historical data.
Do field duplicate results show good precision for all compounds (see Table 7)?	N/A

<b>Alkalinity by Standard Method 2320B</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data.	No qualification required.
Is Laboratory QC frequency at least one blank and LCS with each batch or 20 samples and one set of MS/MSD per 5 samples?	Yes.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	Alkalinity was recovered low in the MS and MSD of MW-5R-DEC20. The results in the parent sample were J qualified as estimated.
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Is initial calibration for target compounds <20 %RSD or curve fit?	Unable to be assessed. Category A report provided.
Is initial calibration verification frequency once immediately following calibration?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	No.
Do field duplicate results show good precision for all compounds (see Table 7)?	N/A

<b>Sulfate by EPA Method 300.0</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data.	N/A.
Is Laboratory QC frequency at least one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Yes.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	Yes.
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 21, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>Sulfate by EPA Method 300.0</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Is initial calibration for target compounds <20 %RSD or curve fit?	Unable to be assessed. Category A report provided.
Is initial calibration verification frequency once immediately following calibration?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	Samples MW-10R-DEC20, MW-14R-DEC20, MW-16R-DEC20, and MW-5R-DEC20 were diluted to bring sulfate concentrations within the calibration range. No impacts to data usability.
Do field duplicate results show good precision for all compounds (see Table 7)?	N/A

<b>Summary of Findings</b>
<ul style="list-style-type: none"> <li>The alkalinity results in sample MW-5R-DEC20 were J qualified as estimated due to low MS/MSD recovery.</li> </ul>

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 21, 2020</b>	<b>Completed by: Lynne Parker</b>

**Table 2 – List of Positive Results for Blank Samples**

Method	Sample ID	Sample Type	Analyte	Result	Qualifier	Units	MDL	PQL
E624.1	TB-20201202	TB	Methylene Chloride	0.35	J	ug/L	0.32	1

**Table 2A – List of Samples Qualified for Method Blank Contamination**

None

**Table 2B – List of Samples Qualified for Field Blank Contamination**

None

**Table 3 – List of Samples with Surrogates outside Control Limits**

None

**Table 4 – List MS/MSD Recoveries and RPDs outside Control Limits**

Method	Sample ID	Sample Type	Analyte	Orig. Result	Spike Amount	Rec.	Dil. Fac.	Low Limit	High Limit	Sample Qualifier
SM2320B	MW-5R-DEC20	MS	Alkalinity, Total	304	100	53	1	60	140	J Flag
SM2320B	MW-5R-DEC20	MSD	Alkalinity, Total	304	100	50	1	60	140	J Flag

**Table 5 – List LCS Recoveries outside Control Limits**

None

**Table 6 – Samples that were Re-analyzed**

Sample ID	Lab ID	Method	Sample Type	Action
MW-10R-DEC20	480-178915-5	E300.0	N	5X: Diluted to bring the target analyte within the calibration range.
MW-14R-DEC20	480-178915-4	E300.0	N	5X: Diluted to bring the target analyte within the calibration range.
MW-16R-DEC20	480-178915-6	E300.0	N	5X: Diluted to bring the target analyte within the calibration range.
MW-5R-DEC20	480-178915-2	E300.0	N	5X: Diluted to bring the target analyte within the calibration range.
MW-10R-DEC20	480-178915-5	E624.1	N	2X: Diluted to bring target analytes within the calibration range. Elevated reporting limits provided.

**Table 7 – Summary of Field Duplicate Results**

N/A

**Acronym List and Table Key:**

CCV = continuing calibration verification

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 21, 2020</b>	<b>Completed by: Lynne Parker</b>

**Acronym List and Table Key:**

COC	= chain of custody
DUSR	= data usability summary report
FD	= field duplicate sample
GC/MS	= gas chromatography / mass spectrometry
LCS	= laboratory control sample
LCSD	= laboratory control sample duplicate
MBLK	= method blank
MS	= matrix spike
MSD	= matrix spike duplicate
N	= normal field sample
NC	= not calculated
ND	= not detected
NYSDEC	= New York State Department of Environmental Conservation
PQL	= practical quantitation limit
QA	= quality assurance
QAPP	= quality assurance project plan
QC	= quality control
RB	= Rinsate blank sample
RPD	= relative percent difference
SDG	= sample delivery group
TB	= trip blank sample
TRG	= target analyte
VOC	= volatile organic compound
WG	= groundwater (matrix)

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 17, 2020</b>	<b>Completed by: Lynne Parker</b>

The analytical data provided by the laboratory were reviewed for precision, accuracy, and completeness based on applicable sections of the following guidance:

- NYSDEC Division of Environmental Remediation Guidance for Data Deliverables and the Development of Data Usability Summary Reports (in DER-10, May 2010);
- EPA Region 2 Data Validation Standard Operating Procedures.

Specific criteria for QC limits were obtained from EEEGPC's Master QAPP for NYSDEC projects. Compliance with the project QA program is indicated in the checklist and tables below. Any major or minor concerns affecting data usability are listed below. The checklist and tables also indicate whether data qualification is required and/or the type of qualifier assigned.

**Reference:**

<b>Project ID</b>	<b>Lab Work Order</b>	<b>Laboratory</b>
1705007.0009.01	480-178952-1	Test America; Buffalo

**Table 1 Sample Listing Summary**

<b>Work Order</b>	<b>Matrix</b>	<b>Sample ID</b>	<b>Lab ID</b>	<b>Sample Date</b>	<b>Field QC</b>	<b>Name Corrections</b>
480-178952-1	IDW	IDW-PURGEWATER-DEC20	480-178952-2	12/03/2020 12:00		
480-178952-1	WG	MW-16R-DEC20	480-178952-1	12/03/2020 11:40		
480-178952-1	WQ	TB-20201203	480-178952-3	12/03/2020 00:00		

**Table 1A Sample Test Summary**

<b>Work Order</b>	<b>Matrix</b>	<b>Test Method</b>	<b>Method Name</b>	<b>Number of Samples</b>	<b>Sample Type</b>
480-178952-1	WG	E624.1	Purgeables by GC/MS	1	N
480-178952-1	WQ	E624.1	Purgeables by GC/MS	1	TB
480-178952-1	IDW	E624.1	Purgeables by GC/MS	1	WC

**General Sample Information**

Do Samples and Analyses on COC check against Lab Sample Tracking Form?	Yes.
Did coolers arrive at lab between 2 and 6°C and in good condition as indicated on COC and Cooler Receipt Form?	Yes.
Frequency of Field QC Samples Correct? Field Duplicate - 1/20 samples MS/MSD – 1/20 samples Trip Blank - Every cooler with VOCs waters only Equipment Blank - 1/ 20 samples	A MS/MSD was not included in the sample delivery group. A field duplicate was not included in the sample delivery group. A trip blank was included. An equipment blank was not included in the sample delivery group.
Case narrative present and complete?	Yes.
Any holding time violations?	No.



<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 17, 2020</b>	<b>Completed by: Lynne Parker</b>

The following tables are presented at the end of this DUSR and provided summaries of results outside QC criteria:

- Method Blanks Results (Table 2)
- Surrogates Outside Limits (Table 3)
- MS/MSD Outside Limits (Table 4)
- LCS Outside Limits (Table 5)
- Re-analysis Results (Table 6)
- Field Duplicate Results (Table 7)

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<b>Volatile Organic Compounds by Method E624.1</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	Methylene chloride was detected in the trip blank TB-20201203 less than the PQL.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data. Qualification also applies to TICs.	The associated sample results for the analyte were non-detect; therefore, no qualification was required.
Are surrogates for method blanks and LCS within limits?	Yes.
Are surrogates for samples and MS/MSD within limits? (See Table 3). If not, were all samples reanalyzed for VOCs? Matrix effects should be established.	Yes.
Is Laboratory QC frequency at least one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Yes.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	Yes.
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Do internal standards areas and retention time meet criteria? If not was sample re-analyzed to establish matrix (see Table 6)?	Unable to be assessed. Category A report provided.
Is initial calibration for target compounds <20 %RSD or curve fit? Is ICV 80-120%? Is LCV 70-130%?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Does each target compound have a minimum response factor of 0.05 for the lowest calibration standard and for the average RF? Qualifications do not apply to ketones, alcohols and dioxanes due to poor purging efficiency.	Unable to be assessed. Category A report provided.
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	No.
Do field duplicate results show good precision for all compounds (see Table 7)?	N/A

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 17, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>Summary of Findings</b>
<ul style="list-style-type: none"> <li>• None.</li> </ul>

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 17, 2020</b>	<b>Completed by: Lynne Parker</b>

**Table 2 – List of Positive Results for Blank Samples**

Method	Sample ID	Sample Type	Analyte	Result	Qualifier	Units	MDL	PQL
E624.1	TB-20201203	TB	Methylene Chloride	0.39	J	ug/L	0.32	1

**Table 2A – List of Samples Qualified for Method Blank Contamination**

None

**Table 2B – List of Samples Qualified for Field Blank Contamination**

None

**Table 3 – List of Samples with Surrogates outside Control Limits**

None

**Table 4 – List MS/MSD Recoveries and RPDs outside Control Limits**

None

**Table 5 – List LCS Recoveries outside Control Limits**

None

**Table 6 – Samples that were Re-analyzed**

None

**Table 7 – Summary of Field Duplicate Results**

N/A

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: December 17, 2020</b>	<b>Completed by: Lynne Parker</b>

**Acronym List and Table Key:**

CCV	=	continuing calibration verification
COC	=	chain of custody
DUSR	=	data usability summary report
FD	=	field duplicate sample
GC/MS	=	gas chromatography / mass spectrometry
LCS	=	laboratory control sample
LCSD	=	laboratory control sample duplicate
MBLK	=	method blank
MS	=	matrix spike
MSD	=	matrix spike duplicate
N	=	normal field sample
NC	=	not calculated
ND	=	not detected
NYSDEC	=	New York State Department of Environmental Conservation
PQL	=	practical quantitation limit
QA	=	quality assurance
QAPP	=	quality assurance project plan
QC	=	quality control
RB	=	rinsate blank sample
RPD	=	relative percent difference
SDG	=	sample delivery group
TB	=	trip blank sample
TRG	=	target analyte
VOC	=	volatile organic compound
WG	=	groundwater (matrix)

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 05, 2020</b>	<b>Completed by: Lynne Parker</b>

The analytical data provided by the laboratory were reviewed for precision, accuracy, and completeness based on applicable sections of the following guidance:

- NYSDEC Division of Environmental Remediation Guidance for Data Deliverables and the Development of Data Usability Summary Reports (in DER-10, May 2010);
- EPA Region 2 Data Validation Standard Operating Procedures.

Specific criteria for QC limits were obtained from EEEPC's Master QAPP for NYSDEC projects. Compliance with the project QA program is indicated in the checklist and tables below. Any major or minor concerns affecting data usability are listed below. The checklist and tables also indicate whether data qualification is required and/or the type of qualifier assigned.

**Reference:**

<b>Project ID</b>	<b>Lab Work Order</b>	<b>Laboratory</b>
1705007.0009.01	480-176371-1	Test America; Buffalo

**Table 1 Sample Listing Summary**

<b>Work Order</b>	<b>Matrix</b>	<b>Sample ID</b>	<b>Lab ID</b>	<b>Sample Date</b>	<b>Field QC</b>	<b>Name Corrections</b>
480-176371-1	WG	IW-01-OCT20	480-176371-1	10/12/2020 12:15	MS/ MSD	
480-176371-1	WG	MW-17R-OCT20	480-176371-2	10/12/2020 13:10		
480-176371-1	WG	MW-17R-OCT20-Q	480-176371-3	10/12/2020 13:10		
480-176371-1	WG	MW-8-OCT20	480-176371-4	10/12/2020 15:10		MW-8R-OCT20

**Table 1A Sample Test Summary**

<b>Work Order</b>	<b>Matrix</b>	<b>Test Method</b>	<b>Method Name</b>	<b>Number of Samples</b>	<b>Sample Type</b>
480-176371-1	WG	E624.1	Purgeables by GC/MS	3	N
480-176371-1	WG	E624.1	Purgeables by GC/MS	1	FD
480-176371-1	WG	E300.0	Anions - Sulfate	3	N
480-176371-1	WG	E300.0	Anions - Sulfate	1	FD
480-176371-1	WG	SM2320B	Alkalinity	3	N
480-176371-1	WG	SM2320B	Alkalinity	1	FD

**General Sample Information**

Do Samples and Analyses on COC check against Lab Sample Tracking Form?	Yes. One sample name was changed to reflect the actual well sampled.
Did coolers arrive at lab between 2 and 6°C and in good condition as indicated on COC and Cooler Receipt Form?	Yes.
Frequency of Field QC Samples Correct? Field Duplicate - 1/20 samples MS/MSD - 1/20 samples Trip Blank - Every cooler with VOCs waters only Equipment Blank - 1/ 20 samples	1 MS/MSD was collected. 1 field duplicate was collected. A trip blank was not sent in with the samples. An equipment blank was not collected.
Case narrative present and complete?	Yes.
Any holding time violations?	No.

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 05, 2020</b>	<b>Completed by: Lynne Parker</b>

The following tables are presented at the end of this DUSR and provided summaries of results outside QC criteria:

- Method Blanks Results (Table 2)
- Surrogates Outside Limits (Table 3)
- MS/MSD Outside Limits (Table 4)
- LCS Outside Limits (Table 5)
- Re-analysis Results (Table 6)
- Field Duplicate Results (Table 7)

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<b>Volatile Organic Compounds by Method E624.1</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data. Qualification also applies to TICs.	No qualification required.
Are surrogates for method blanks and LCS within limits?	Yes.
Are surrogates for samples and MS/MSD within limits? (See Table 3). If not, were all samples reanalyzed for VOCs? Matrix effects should be established.	Yes.
Is Laboratory QC frequency at least one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Unable to determine from report if a MS/MSD was analyzed with batch 553610.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	1,1,-Dichloroethane, trans-1,2-dichloroethene, and trichloroethene were recovered outside of control limits in the MS and MSD of IW-01-OCT20. The native sample concentration was greater than 4X the spiking concentration; therefore, no qualification was required.
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Do internal standards areas and retention time meet criteria? If not was sample re-analyzed to establish matrix (see Table 6)?	Unable to be assessed. Category A report provided.
Is initial calibration for target compounds <20 %RSD or curve fit? Is ICV 80-120%? Is LCV 70-130%?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Does each target compound have a minimum response factor of 0.05 for the lowest calibration standard and for the average RF? Qualifications do not apply to ketones, alcohols and dioxanes due to poor purging efficiency.	Unable to be assessed. Category A report provided.



<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 05, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>Volatile Organic Compounds by Method E624.1</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	All of the samples were diluted to bring target analytes within the calibration range. Elevated reporting limits for non-detect analytes are provided. The dilutions should not impact data usability and should be comparable to historical data.
Do field duplicate results show good precision for all compounds (see Table 7)?	Yes.

<b>Alkalinity by Standard Method 2320B</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	Yes.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data.	No qualification required.
Is Laboratory QC frequency at least one blank and LCS with each batch or 20 samples and one set of MS/MSD per 5 samples?	Yes.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	No. Total alkalinity was recovered low in the MS and MSD of sample MW-17R-OCT20, and total alkalinity was recovered low in the MSD of IW-01-OCT20. The total alkalinity and bicarbonate results were J qualified as estimated and the carbonate and hydroxide results were UJ qualified as estimated in samples MW-17R-OCT20, MW-17R-OCT20-Q, and IW-01-OCT20.
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Is initial calibration for target compounds <20 %RSD or curve fit?	Unable to be assessed. Category A report provided.
Is initial calibration verification frequency once immediately following calibration?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	No.
Do field duplicate results show good precision for all compounds (see Table 7)?	Yes.

<b>Sulfate by EPA Method 300.0</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data.	No qualification required.
Is Laboratory QC frequency at least one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Yes.

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 05, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>Sulfate by EPA Method 300.0</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	Yes.
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Is initial calibration for target compounds <20 %RSD or curve fit?	Unable to be assessed. Category A report provided.
Is initial calibration verification frequency once immediately following calibration?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	All of the samples were diluted to bring the sulfate concentration within the calibration range. No impact to data usability.
Do field duplicate results show good precision for all compounds (see Table 7)?	Yes.

<b>Summary of Findings</b>
<ul style="list-style-type: none"> <li>• Total alkalinity and bicarbonate were J qualified as estimated in MW-17R-OCT20, MW-17R-OCT20-Q, and IW-01-OCT20.due to low MS/MSD recoveries.</li> <li>• Carbonate and hydroxide were UJ qualified as estimated non-detect in MW-17R-OCT20, MW-17R-OCT20-Q, and IW-01-OCT20.due to low MS/MSD recoveries.</li> </ul>

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 05, 2020</b>	<b>Completed by: Lynne Parker</b>

**Table 2 - List of Positive Results for Blank Samples**

None

**Table 2A - List of Samples Qualified for Method Blank Contamination**

None

**Table 2B - List of Samples Qualified for Field Blank Contamination**

None

**Table 3 - List of Samples with Surrogates outside Control Limits**

None

**Table 4 - List MS/MSD Recoveries and RPDs outside Control Limits**

Method	Sample ID	Sample Type	Analyte	Orig. Result	Spike Amount	MS	MSD	Low Limit	High Limit	Sample Qualifier
SM2320B	MW-17R-OCT20	N	Alkalinity, Total	332	100	39	39	60	140	J Flag
SM2320B	IW-01-OCT20	N	Alkalinity, Total	311	100	63	64	60	140	J Flag

**Table 5 - List LCS Recoveries outside Control Limits**

None

**Table 6 –Samples that were Re-analyzed**

Sample ID	Lab ID	Method	Sample Type	Action
IW-01-OCT20	480-176371-1	E624.1	N	5X: Diluted to bring target analytes within the calibration range. Elevated reporting limits provided.
MW-17R-OCT20	480-176371-2	E624.1	N	10X: Diluted to bring target analytes within the calibration range. Elevated reporting limits provided. 20X: Sample further diluted for dichloroethylenes.
MW-17R-OCT20-Q	480-176371-3	E624.1	FD	10X: Diluted to bring target analytes within the calibration range. Elevated reporting limits provided. 20X: Sample further diluted for dichloroethylenes.
MW-8-OCT20	480-176371-4	E624.1	N	10X: Diluted to bring target analytes within the calibration range. Elevated reporting limits provided. 50X: Sample further diluted for dichloroethylenes.
IW-01-OCT20	480-176371-1	E300.0	N	5X: Diluted to bring the target concentration within the calibration range.
MW-17R-OCT20	480-176371-2	E300.0	N	5X: Diluted to bring the target concentration within the calibration range.
MW-17R-OCT20-Q	480-176371-3	E300.0	FD	5X: Diluted to bring the target concentration within the calibration range.
MW-8-OCT20	480-176371-4	E300.0	N	5X: Diluted to bring the target concentration within the calibration range.



<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 05, 2020</b>	<b>Completed by: Lynne Parker</b>

**Table 7 – Summary of Field Duplicate Results**

<b>Method</b>	<b>Analyte</b>	<b>Unit</b>	<b>Matrix</b>	<b>PQL</b>	<b>MW-17R- OCT20</b>	<b>MW-17R- OCT20-Q</b>	<b>RPD</b>	<b>RPD Rating</b>	<b>Sample Qual</b>
A2320B	ALKALINITY, BICARBONATE (AS CaCO <sub>3</sub> )	mg/l	Water	5.0	332	332	0.0%	Good	None
A2320B	ALKALINITY, TOTAL (AS CaCO <sub>3</sub> )	mg/l	Water	5.0	332	332	0.0%	Good	None
E300.0	SULFATE (AS SO <sub>4</sub> )	mg/l	Water	10.0	204	206	1.0%	Good	None
E624.1	1,1-DICHLOROETHANE	ug/l	Water	50	100	98	2.0%	Good	None
E624.1	1,1-DICHLOROETHENE	ug/l	Water	50	23	23	0.0%	Good	None
E624.1	DICHLOROETHYLENES	ug/l	Water	200	1400	1400	0.0%	Good	None
E624.1	TETRACHLOROETHYLENE(PCE)	ug/l	Water	50	11	9.7	12.6%	Good	None
E624.1	TRANS-1,2-DICHLOROETHENE	ug/l	Water	50	6.2	6.4	3.2%	Good	None
E624.1	TRICHLOROETHYLENE (TCE)	ug/l	Water	50	120	110	8.7%	Good	None
E624.1	VINYL CHLORIDE	ug/l	Water	50	280	260	7.4%	Good	None

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 05, 2020</b>	<b>Completed by: Lynne Parker</b>

**Acronym List and Table Key:**

COC	= chain of custody
DUSR	= data usability summary report
FD	= field duplicate sample
GC/MS	= gas chromatography / mass spectrometry
LCS	= laboratory control sample
LCSD	= laboratory control sample duplicate
MBLK	= method blank
MS	= matrix spike
MSD	= matrix spike duplicate
N	= Normal field sample
NC	= not calculated
ND	= not detected
NYSDEC	= New York State Department of Environmental Conservation
PQL	= practical quantitation limit
QA	= quality assurance
QAPP	= quality assurance project plan
QC	= quality control
RB	= rinsate blank sample
RPD	= relative percent difference
SDG	= sample delivery group
TB	= trip blank sample
TRG	= target analyte
VOC	= volatile organic compound
WG	= Groundwater (matrix)

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 05, 2020</b>	<b>Completed by: Lynne Parker</b>

The analytical data provided by the laboratory were reviewed for precision, accuracy, and completeness based on applicable sections of the following guidance:

- NYSDEC Division of Environmental Remediation Guidance for Data Deliverables and the Development of Data Usability Summary Reports (in DER-10, May 2010);
- EPA Region 2 Data Validation Standard Operating Procedures.

Specific criteria for QC limits were obtained from EEEPC's Master QAPP for NYSDEC projects. Compliance with the project QA program is indicated in the checklist and tables below. Any major or minor concerns affecting data usability are listed below. The checklist and tables also indicate whether data qualification is required and/or the type of qualifier assigned.

**Reference:**

<b>Project ID</b>	<b>Lab Work Order</b>	<b>Laboratory</b>
1705007.0009.01	480-176469-1	Test America; Buffalo

**Table 1 Sample Listing Summary**

<b>Work Order</b>	<b>Matrix</b>	<b>Sample ID</b>	<b>Lab ID</b>	<b>Sample Date</b>	<b>Field QC</b>	<b>Name Corrections</b>
480-176469-1	WQ	TB-20201013	480-176469-1	10/13/2020 10:00		
480-176469-1	WG	MW-5R-OCT20	480-176469-2	10/13/2020 14:20		
480-176469-1	WG	MW-14R-OCT20	480-176469-3	10/13/2020 14:00		

**Table 1A Sample Test Summary**

<b>Work Order</b>	<b>Matrix</b>	<b>Test Method</b>	<b>Method Name</b>	<b>Number of Samples</b>	<b>Sample Type</b>
480-176469-1	WG	E624.1	Purgeables by GC/MS	2	N
480-176469-1	WG	E624.1	Purgeables by GC/MS	1	TB
480-176469-1	WG	E300.0	Anions - Sulfate	2	N
480-176469-1	WG	SM2320B	Alkalinity	2	N

<b>General Sample Information</b>	
Do Samples and Analyses on COC check against Lab Sample Tracking Form?	Yes.
Did coolers arrive at lab between 2 and 6°C and in good condition as indicated on COC and Cooler Receipt Form?	Yes.
Frequency of Field QC Samples Correct? Field Duplicate - 1/20 samples MS/MSD – 1/20 samples Trip Blank - Every cooler with VOCs waters only Equipment Blank - 1/ 20 samples	A MS/MSD was not included in the sample delivery group. A field duplicate was not included in the sample delivery group. A trip blank was included. An equipment blank was not collected.
Case narrative present and complete?	Yes.
Any holding time violations?	No.



<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 05, 2020</b>	<b>Completed by: Lynne Parker</b>

The following tables are presented at the end of this DUSR and provided summaries of results outside QC criteria:

- Method Blanks Results (Table 2)
- Surrogates Outside Limits (Table 3)
- MS/MSD Outside Limits (Table 4)
- LCS Outside Limits (Table 5)
- Re-analysis Results (Table 6)
- Field Duplicate Results (Table 7)

Go to [Tables](#) List

<b>Volatile Organic Compounds by Method E624.1</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data. Qualification also applies to TICs.	No qualification required.
Are surrogates for method blanks and LCS within limits?	Yes.
Are surrogates for samples and MS/MSD within limits? (See Table 3). If not, were all samples reanalyzed for VOCs? Matrix effects should be established.	Yes.
Is Laboratory QC frequency at least one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Yes.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	Yes.
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Do internal standards areas and retention time meet criteria? If not was sample re-analyzed to establish matrix (see Table 6)?	Unable to be assessed. Category A report provided.
Is initial calibration for target compounds <20 %RSD or curve fit? Is ICV 80-120%? Is LCV 70-130%?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Does each target compound have a minimum response factor of 0.05 for the lowest calibration standard and for the average RF? Qualifications do not apply to ketones, alcohols and dioxanes due to poor purging efficiency.	Unable to be assessed. Category A report provided.
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	Sample MW-5R-OCT20 was diluted to bring target analytes within the calibration range. Elevated reporting limits for non-detect analytes are provided. The dilutions should not impact data usability and should be comparable to historical data.

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 05, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>Volatile Organic Compounds by Method E624.1</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Do field duplicate results show good precision for all compounds (see Table 7)?	Yes.

<b>Alkalinity by Standard Method 2320B</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data.	No qualification required.
Is Laboratory QC frequency at least one blank and LCS with each batch or 20 samples and one set of MS/MSD per 5 samples?	Yes.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	N/A
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Is initial calibration for target compounds <20 %RSD or curve fit?	Unable to be assessed. Category A report provided.
Is initial calibration verification frequency once immediately following calibration?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	No.
Do field duplicate results show good precision for all compounds (see Table 7)?	Yes.

<b>Sulfate by EPA Method 300.0</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data.	N/A.
Is Laboratory QC frequency at least one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Yes.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	Yes.
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Is initial calibration for target compounds <20 %RSD or curve fit?	Unable to be assessed. Category A report provided.
Is initial calibration verification frequency once immediately following calibration?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 05, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>Sulfate by EPA Method 300.0</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	All of the samples were diluted to bring the sulfate concentration within the calibration range. No impact to data usability.
Do field duplicate results show good precision for all compounds (see Table 7)?	Yes.

<b>Summary of Findings</b>
<ul style="list-style-type: none"> <li>• None</li> </ul>



<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 05, 2020</b>	<b>Completed by: Lynne Parker</b>

**Table 2 - List of Positive Results for Blank Samples**

None

**Table 2A - List of Samples Qualified for Method Blank Contamination**

None

**Table 2B - List of Samples Qualified for Field Blank Contamination**

None

**Table 3 - List of Samples with Surrogates outside Control Limits**

None

**Table 4 - List MS/MSD Recoveries and RPDs outside Control Limits**

None

**Table 5 - List LCS Recoveries outside Control Limits**

None

**Table 6 –Samples that were Re-analyzed**

<b>Sample ID</b>	<b>Lab ID</b>	<b>Method</b>	<b>Sample Type</b>	<b>Action</b>
MW-5R-OCT20	480-176469-2	E624.1	N	20X: Diluted to bring target analytes within the calibration range. Elevated reporting limits provided.
MW-5R-OCT20	480-176469-2	E300.0	N	5X: Diluted to bring the target analyte within the calibration range.
MW-14R-OCT20	480-176469-3	E300.0	N	2X: Diluted to bring the target analyte within the calibration range.

**Table 7 – Summary of Field Duplicate Results**

N/A

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 05, 2020</b>	<b>Completed by: Lynne Parker</b>

**Acronym List and Table Key:**

COC	= chain of custody
DUSR	= data usability summary report
FD	= Field duplicate sample
GC/MS	= gas chromatography / mass spectrometry
LCS	= laboratory control sample
LCSD	= laboratory control sample duplicate
MBLK	= method blank
MS	= matrix spike
MSD	= matrix spike duplicate
N	= Normal field sample
NC	= not calculated
ND	= not detected
NYSDEC	= New York State Department of Environmental Conservation
PQL	= practical quantitation limit
QA	= quality assurance
QAPP	= quality assurance project plan
QC	= quality control
RB	= Rinsate blank sample
RPD	= relative percent difference
SDG	= sample delivery group
TB	= Trip blank sample
TRG	= Target analyte
µg/l	= Micrograms per liter
VOC	= volatile organic compound
WG	= Groundwater (matrix)

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 06, 2020</b>	<b>Completed by: Lynne Parker</b>

The analytical data provided by the laboratory were reviewed for precision, accuracy, and completeness based on applicable sections of the following guidance:

- NYSDEC Division of Environmental Remediation Guidance for Data Deliverables and the Development of Data Usability Summary Reports (in DER-10, May 2010);
- EPA Region 2 Data Validation Standard Operating Procedures.

Specific criteria for QC limits were obtained from EEEPC's Master QAPP for NYSDEC projects. Compliance with the project QA program is indicated in the checklist and tables below. Any major or minor concerns affecting data usability are listed below. The checklist and tables also indicate whether data qualification is required and/or the type of qualifier assigned.

**Reference:**

<b>Project ID</b>	<b>Lab Work Order</b>	<b>Laboratory</b>
1705007.0009.01	480-176565-1	Test America; Buffalo

**Table 1 Sample Listing Summary**

<b>Work Order</b>	<b>Matrix</b>	<b>Sample ID</b>	<b>Lab ID</b>	<b>Sample Date</b>	<b>Field QC</b>	<b>Name Corrections</b>
480-176565-1	WQ	TB-20201014	480-176565-1	10/14/2020 09:30		
480-176565-1	WG	MW-10R-OCT20	480-176565-2	10/14/2020 13:20		
480-176565-1	WH	RB-20201014-a	480-176565-3	10/14/2020 13:50		
480-176565-1	WH	RB-20201014-b	480-176565-4	10/14/2020 14:00		
480-176565-1	WG	MW-2R-OCT20	480-176565-5	10/14/2020 09:50		

**Table 1A Sample Test Summary**

<b>Work Order</b>	<b>Matrix</b>	<b>Test Method</b>	<b>Method Name</b>	<b>Number of Samples</b>	<b>Sample Type</b>
480-176565-1	WG	E624.1	Purgeables by GC/MS	2	N
480-176565-1	WG	E624.1	Purgeables by GC/MS	1	TB
480-176565-1	WG	E624.1	Purgeables by GC/MS	2	RB
480-176565-1	WG	E300.0	Anions - Sulfate	2	N
480-176565-1	WG	SM2320B	Alkalinity	2	N

<b>General Sample Information</b>	
Do Samples and Analyses on COC check against Lab Sample Tracking Form?	Yes.
Did coolers arrive at lab between 2 and 6°C and in good condition as indicated on COC and Cooler Receipt Form?	Yes.
Frequency of Field QC Samples Correct? Field Duplicate - 1/20 samples MS/MSD – 1/20 samples Trip Blank - Every cooler with VOCs waters only Equipment Blank - 1/ 20 samples	A MS/MSD was not included in the sample delivery group. A field duplicate was not included in the sample delivery group. A trip blank was included. Two equipment blanks were collected.



<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 06, 2020</b>	<b>Completed by: Lynne Parker</b>

Case narrative present and complete?	Yes.
Any holding time violations?	No.

The following tables are presented at the end of this DUSR and provided summaries of results outside QC criteria:

- Method Blanks Results (Table 2)
- Surrogates Outside Limits (Table 3)
- MS/MSD Outside Limits (Table 4)
- LCS Outside Limits (Table 5)
- Re-analysis Results (Table 6)
- Field Duplicate Results (Table 7)

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<b>Volatile Organic Compounds by Method E624.1</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data. Qualification also applies to TICs.	No qualification required.
Are surrogates for method blanks and LCS within limits?	Yes.
Are surrogates for samples and MS/MSD within limits? (See Table 3). If not, were all samples reanalyzed for VOCs? Matrix effects should be established.	Yes.
Is Laboratory QC frequency at least one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Unable to determine from report if a MS/MSD was analyzed with batches 554226 and 554564.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	Yes.
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Do internal standards areas and retention time meet criteria? If not was sample re-analyzed to establish matrix (see Table 6)?	Unable to be assessed. Category A report provided.
Is initial calibration for target compounds <20 %RSD or curve fit? Is ICV 80-120%? Is LCV 70-130%?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Does each target compound have a minimum response factor of 0.05 for the lowest calibration standard and for the average RF? Qualifications do not apply to ketones, alcohols and dioxanes due to poor purging efficiency.	Unable to be assessed. Category A report provided.

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 06, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>Volatile Organic Compounds by Method E624.1</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	Sample MW-2R-OCT20 was overdiluted and reanalyzed at a lower dilution. The lower diluted sample was marked as reportable. Per the method requirements acrolein should be analyzed within 3 day of sample collection; therefore, acrolein was outside of hold time for the reanalysis. Acrolein is not an analyte of concern for the site and was UJ qualified as estimated non-detect. The dilutions should not impact data usability and should be comparable to historical data.
Do field duplicate results show good precision for all compounds (see Table 7)?	N/A

<b>Alkalinity by Standard Method 2320B</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data.	No qualification required.
Is Laboratory QC frequency at least one blank and LCS with each batch or 20 samples and one set of MS/MSD per 5 samples?	Unable to determine from report if a MS/MSD was analyzed with batch 554659.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	N/A
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Is initial calibration for target compounds <20 %RSD or curve fit?	Unable to be assessed. Category A report provided.
Is initial calibration verification frequency once immediately following calibration?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	No.
Do field duplicate results show good precision for all compounds (see Table 7)?	N/A

<b>Sulfate by EPA Method 300.0</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data.	N/A.
Is Laboratory QC frequency at least one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Unable to determine from report if a MS/MSD was analyzed with batch 554356.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	Yes.

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 06, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>Sulfate by EPA Method 300.0</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Is initial calibration for target compounds <20 %RSD or curve fit?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	All of the samples were diluted to bring the sulfate concentration within the calibration range. No impact to data usability.
Do field duplicate results show good precision for all compounds (see Table 7)?	N/A

<b>Summary of Findings</b>
<ul style="list-style-type: none"> <li>Acrolein was UJ qualified as estimated non-detect in sample MW-2R-OCT20 due to the sample being reanalyzed outside of method hold for the analyte.</li> </ul>



<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 06, 2020</b>	<b>Completed by: Lynne Parker</b>

**Table 2 - List of Positive Results for Blank Samples**

None

**Table 2A - List of Samples Qualified for Method Blank Contamination**

None

**Table 2B - List of Samples Qualified for Field Blank Contamination**

None

**Table 3 - List of Samples with Surrogates outside Control Limits**

None

**Table 4 - List MS/MSD Recoveries and RPDs outside Control Limits**

None

**Table 5 - List LCS Recoveries outside Control Limits**

None

**Table 6 –Samples that were Re-analyzed**

<b>Sample ID</b>	<b>Lab ID</b>	<b>Method</b>	<b>Sample Type</b>	<b>Action</b>
MW-10R-OCT20	480-176565-2	E624.1	N	20X: Diluted to bring target analytes within the calibration range. Elevated reporting limits provided.
MW-10R-OCT20	480-176565-2	E300.0	N	5X: Diluted to bring the target analyte within the calibration range.
MW-2R-OCT20	480-176565-5	E624.1	N	20X: The laboratory initially overdiluted the sample. The sample was reanalyzed at a 8X dilution. The 8X dilution was reported with elevated reporting limits.
MW-2R-OCT20	480-176565-5	E300.0	N	5X: Diluted to bring the target analyte within the calibration range.

**Table 7 – Summary of Field Duplicate Results**

N/A

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 06, 2020</b>	<b>Completed by: Lynne Parker</b>

**Acronym List and Table Key:**

COC	= chain of custody
DUSR	= data usability summary report
FD	= Field duplicate sample
GC/MS	= gas chromatography / mass spectrometry
LCS	= laboratory control sample
LCSD	= laboratory control sample duplicate
MBLK	= method blank
MS	= matrix spike
MSD	= matrix spike duplicate
N	= Normal field sample
NC	= not calculated
ND	= not detected
NYSDEC	= New York State Department of Environmental Conservation
PQL	= practical quantitation limit
QA	= quality assurance
QAPP	= quality assurance project plan
QC	= quality control
RB	= Rinsate blank sample
RPD	= relative percent difference
SDG	= sample delivery group
TB	= trip blank sample
TRG	= target analyte
VOC	= volatile organic compound
WG	= groundwater (matrix)

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 06, 2020</b>	<b>Completed by: Lynne Parker</b>

The analytical data provided by the laboratory were reviewed for precision, accuracy, and completeness based on applicable sections of the following guidance:

- NYSDEC Division of Environmental Remediation Guidance for Data Deliverables and the Development of Data Usability Summary Reports (in DER-10, May 2010);
- EPA Region 2 Data Validation Standard Operating Procedures.

Specific criteria for QC limits were obtained from EEEPC's Master QAPP for NYSDEC projects. Compliance with the project QA program is indicated in the checklist and tables below. Any major or minor concerns affecting data usability are listed below. The checklist and tables also indicate whether data qualification is required and/or the type of qualifier assigned.

**Reference:**

<b>Project ID</b>	<b>Lab Work Order</b>	<b>Laboratory</b>
1705007.0009.01	480-176636-1 480-176636-2	Test America; Buffalo

**Table 1 Sample Listing Summary**

<b>Work Order</b>	<b>Matrix</b>	<b>Sample ID</b>	<b>Lab ID</b>	<b>Sample Date</b>	<b>Field QC</b>	<b>Name Corrections</b>
480-176636-1	WQ	TB-20201015	480-176636-1	10/15/2020 09:00		
480-176636-1	WG	MW-9S-OCT20	480-176636-2	10/15/2020 10:00		
480-176636-1	WG	MW-2S-OCT20	480-176636-3	10/15/2020 10:42		
480-176636-1	WG	PZ-3-OCT20	480-176636-7	10/15/2020 13:05		
480-176636-1	WG	MW-14S-OCT20	480-176636-8	10/15/2020 13:10		
480-176636-1	WG	MW-1S-OCT20	480-176636-9	10/15/2020 13:50		
480-176636-1	IDW	10W-PURGE WATER-OCT20	480-176636-10	10/15/2020 14:10		
480-176636-1	WG	PW-1-OCT20	480-176636-4	10/15/2020 10:40		
480-176636-1	WG	MW-15R-OCT20	480-176636-5	10/15/2020 11:55		
480-176636-1	WG	MW-16R-OCT20	480-176636-6	10/15/2020 12:30		

**Table 1A Sample Test Summary**

<b>Work Order</b>	<b>Matrix</b>	<b>Test Method</b>	<b>Method Name</b>	<b>Number of Samples</b>	<b>Sample Type</b>
480-176565-1	WG	E624.1	Purgeables by GC/MS	5	N
480-176565-2	WG	E624.1	Purgeables by GC/MS	3	N
480-176565-1	WG	E624.1	Purgeables by GC/MS	1	TB
480-176565-1	WG	E624.1	Purgeables by GC/MS	1	WC
480-176565-2	WG	E300.0	Anions - Sulfate	3	N
480-176565-2	WG	SM2320B	Alkalinity	3	N



<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 06, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>General Sample Information</b>	
Do Samples and Analyses on COC check against Lab Sample Tracking Form?	Yes.
Did coolers arrive at lab between 2 and 6°C and in good condition as indicated on COC and Cooler Receipt Form?	Yes.
Frequency of Field QC Samples Correct? Field Duplicate - 1/20 samples MS/MSD – 1/20 samples Trip Blank - Every cooler with VOCs waters only Equipment Blank - 1/ 20 samples	A MS/MSD was not included in the sample delivery group. A field duplicate was not included in the sample delivery group. A trip blank was included. An equipment blank was not included.
Case narrative present and complete?	Yes.
Any holding time violations?	No.

The following tables are presented at the end of this DUSR and provided summaries of results outside QC criteria:

- Method Blanks Results (Table 2)
- Surrogates Outside Limits (Table 3)
- MS/MSD Outside Limits (Table 4)
- LCS Outside Limits (Table 5)
- Re-analysis Results (Table 6)
- Field Duplicate Results (Table 7)

Go to [Tables](#) List

<b>Volatile Organic Compounds by Method E624.1</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data. Qualification also applies to TICs.	No qualification required.
Are surrogates for method blanks and LCS within limits?	Yes.
Are surrogates for samples and MS/MSD within limits? (See Table 3). If not, were all samples reanalyzed for VOCs? Matrix effects should be established.	Yes.
Is Laboratory QC frequency at least one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Unable to determine from report if a MS/MSD was analyzed with batches 554226 and 554564.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	Yes.
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 06, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>Volatile Organic Compounds by Method E624.1</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Do internal standards areas and retention time meet criteria? If not was sample re-analyzed to establish matrix (see Table 6)?	Unable to be assessed. Category A report provided.
Is initial calibration for target compounds <20 %RSD or curve fit? Is ICV 80-120%? Is LCV 70-130%?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Does each target compound have a minimum response factor of 0.05 for the lowest calibration standard and for the average RF? Qualifications do not apply to ketones, alcohols and dioxanes due to poor purging efficiency.	Unable to be assessed. Category A report provided.
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	All of the samples were initially overdiluted and reanalyzed. Samples MW-16R-OCT20 and PW-1-OCT20 were reanalyzed at an 8X dilution and elevated reporting limits were provided. All other samples were reanalyzed with no dilution. The lowest dilution was marked as reportable. Per the method requirements acrolein should be analyzed within 3 day of sample collection; therefore, acrolein was outside of hold time for the reanalysis. Acrolein is not an analyte of concern for the site and was UJ qualified as estimated non-detect. The dilutions should not impact data usability and should be comparable to historical data.
Do field duplicate results show good precision for all compounds (see Table 7)?	N/A

<b>Alkalinity by Standard Method 2320B</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data.	No qualification required.
Is Laboratory QC frequency at least one blank and LCS with each batch or 20 samples and one set of MS/MSD per 5 samples?	Yes.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	N/A
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Is initial calibration for target compounds <20 %RSD or curve fit?	Unable to be assessed. Category A report provided.
Is initial calibration verification frequency once immediately following calibration?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	No.

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 06, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>Alkalinity by Standard Method 2320B</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Do field duplicate results show good precision for all compounds (see Table 7)?	N/A

<b>Sulfate by EPA Method 300.0</b>	
<b>Description</b>	<b>Notes and Qualifiers</b>
Any compounds present in method, trip, or, field blanks (see Table 2)?	No.
For samples, if results are < 5 times the blank or < 10 times the blank for common laboratory contaminants, then "U" flag data.	N/A.
Is Laboratory QC frequency at least one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Unable to determine from report if a MS/MSD was analyzed with batch 554356.
Is MS/MSD within QC criteria (see Table 4)? If out and LCS is compliant, then "J" flag positive data in original sample due to matrix.	Yes.
Is LCS within QC criteria (see Table 5)? If out, and the recovery is high with no positive values, then no data qualification is required.	Yes.
Is initial calibration for target compounds <20 %RSD or curve fit?	Unable to be assessed. Category A report provided.
Is %D in the continuing calibration for target compounds less than method specifications?	Unable to be assessed. Category A report provided.
Were any samples reanalyzed or diluted (see Table 6)? For any sample reanalysis or dilutions, is only one reportable result flagged?	All of the samples were diluted to bring the sulfate concentration within the calibration range. No impact to data usability.
Do field duplicate results show good precision for all compounds (see Table 7)?	N/A

<b>Summary of Findings</b>
<ul style="list-style-type: none"> <li>Acrolein was UJ qualified as estimated non-detect in samples MW-9S-OCT20, MW-2S-OCT20, PZ-3-OCT20, MW-14S-OCT20, MW-1S-OCT20, 10W-PURGE WATER-OCT20, PW-1-OCT20, MW-15R-OCT20, MW-16R-OCT20 due to the sample being reanalyzed outside of method hold for the analyte.</li> </ul>



<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 06, 2020</b>	<b>Completed by: Lynne Parker</b>

**Table 2 - List of Positive Results for Blank Samples**

None

**Table 2A - List of Samples Qualified for Method Blank Contamination**

None

**Table 2B - List of Samples Qualified for Field Blank Contamination**

None

**Table 3 - List of Samples with Surrogates outside Control Limits**

None

**Table 4 - List MS/MSD Recoveries and RPDs outside Control Limits**

None

**Table 5 - List LCS Recoveries outside Control Limits**

None

**Table 6 –Samples that were Re-analyzed**

<b>Sample ID</b>	<b>Lab ID</b>	<b>Method</b>	<b>Sample Type</b>	<b>Action</b>
10W-PURGE WATER-OCT20	480-176636-10	E624.1	N	20X: The laboratory initially overdiluted the sample. The sample was reanalyzed undiluted.
MW-14S-OCT20	480-176636-8	E624.1	N	20X: The laboratory initially overdiluted the sample. The sample was reanalyzed undiluted.
MW-1S-OCT20	480-176636-9	E624.1	N	20X: The laboratory initially overdiluted the sample. The sample was reanalyzed undiluted.
MW-2S-OCT20	480-176636-3	E624.1	N	20X: The laboratory initially overdiluted the sample. The sample was reanalyzed undiluted.
MW-9S-OCT20	480-176636-2	E624.1	N	20X: The laboratory initially overdiluted the sample. The sample was reanalyzed undiluted.
MW-9S-OCT20	480-176636-7	E624.1	N	20X: The laboratory initially overdiluted the sample. The sample was reanalyzed undiluted.
MW-15R-OCT20	480-176636-5	E300.0	N	5X: Diluted to bring the target analyte within the calibration range.
MW-15R-OCT20	480-176636-5	E624.1	N	20X: The laboratory initially overdiluted the sample. The sample was reanalyzed undiluted.
MW-16R-OCT20	480-176636-6	E300.0	N	5X: Diluted to bring the target analyte within the calibration range.
MW-16R-OCT20	480-176636-6	E624.1	N	20X: The laboratory initially overdiluted the sample. The sample was reanalyzed at an 8X dilution. The 8X dilution was reported with elevated reporting limits.

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 06, 2020</b>	<b>Completed by: Lynne Parker</b>

<b>Sample ID</b>	<b>Lab ID</b>	<b>Method</b>	<b>Sample Type</b>	<b>Action</b>
PW-1-OCT20	480-176636-4	E300.0	N	5X: Diluted to bring the target analyte within the calibration range.
PW-1-OCT20	480-176636-4	E624.1	N	20X: The laboratory initially overdiluted the sample. The sample was reanalyzed at an 8X dilution. The 8X dilution was reported with elevated reporting limits.

**Table 7 – Summary of Field Duplicate Results**

N/A

<b>Data Usability Summary Report</b>	<b>Project: Davis Howland Oil Company</b>
<b>Date Completed: November 06, 2020</b>	<b>Completed by: Lynne Parker</b>

**Acronym List and Table Key:**

COC	= chain of custody
DUSR	= data usability summary report
FD	= Field duplicate sample
GC/MS	= gas chromatography / mass spectrometry
LCS	= laboratory control sample
LCSD	= laboratory control sample duplicate
MBLK	= method blank
MS	= matrix spike
MSD	= matrix spike duplicate
N	= Normal field sample
NC	= not calculated
ND	= not detected
NYSDEC	= New York State Department of Environmental Conservation
PQL	= practical quantitation limit
QA	= quality assurance
QAPP	= quality assurance project plan
QC	= quality control
RB	= Rinsate blank sample
RPD	= relative percent difference
SDG	= sample delivery group
TB	= Trip blank sample
TRG	= Target analyte
µg/l	= Micrograms per liter
VOC	= volatile organic compound
WG	= Groundwater (matrix)





# **County of Monroe Discharge Permit**

COUNTY OF MONROE  
SEWER USE PERMIT RENEWAL

Firm Name: NYSDEC Division of Environmental Remediation 200 Anderson (Davis Howland) Avenue	Permit Number: IWC-864 Fee: \$ 75.00 Expires: May 31, 2022
Mailing Addr: 625 Broadway, 12th Floor Albany, NY 12233-7013	W/C Expire: <del>N/A</del> 8/1/2020 District No: 8575
Business Type: Pretreatment	

Has there been any revision to the plant sewer system or any change in industrial wastes discharged to the public sewer in the past twelve months

Yes:    No: X If yes, please explain in a separate letter.

Average monthly consumption for the past twelve (12) months:

Water Account No.(s)   N/A   (cu ft/gal)   N/A  

In consideration of the granting of this renewal permit the undersigned agrees to comply with all the requirements in the Initial Permit as listed under II.

Name of person to be contacted for inspection & sampling purposes:

Jill Gulczewski

Type or Print: Ecology and Environment Phone No: 716-684-8060

YOUR PERMIT MUST BE SIGNED AS FOLLOWS:

1. For a corporation: by a responsible corporate officer. A corporate officer means:
  - (a) A president, secretary, treasurer or vice - president of the corporation in charge of a principal business function, or any other person who performs similar policy - or decision - making functions for the corporation; or
  - (b) The manager of one or more manufacturing, production, or operation facilities employing more than 250 persons or having gross annual sales or expenditures exceeding \$25 million (in second - quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures.
2. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively; or
3. By a duly authorized representative of the individual designated in items (1) or (2) above if:
  - (a) The authorization is made in writing by the individual described in items (1) or (2);
  - (b) The authorization specifies either an individual or a position having responsibility for the overall operation of the facility from which the Industrial Discharge originates such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company; (A duly authorized representative may thus be either a named individual or any individual occupying named position); and
  - (c) The written authorization is submitted to this Department.

Print or Type: Jenelle Gaylord

Phone No: 518-402-9813

Signature: 

Date: 9/27/19

Title: NYSDEC Project Manager

Renewal Approved by: 

Issued this 24 day of Oct 20 19

Michael J. Garland, P.E.  
Director of Environmental Services-PureWaters  
Monroe County

**COUNTY OF MONROE  
SEWER USE PERMIT ENCLOSURE**

**NYSDEC Division of Environmental Remediation**  
625 Broadway, 12<sup>th</sup> Floor  
Albany, NY 12233-7013

**PERMIT NUMBER:** 864  
**DISTRICT NUMBER:** 8575

**TYPE OF BUSINESS:** Groundwater Remediation  
**LOCATION:** Davis Howland Oil Co. Site – 200 Anderson Ave.  
Rochester, NY

**SAMPLE POINT:** IWC-864.2 – Monitoring Well Purge Water

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**REQUIRED MONITORING & EFFLUENT LIMITS**

**SAMPLE POINT:** IWC-864.2 – Monitoring Well Purge Water

**SELF-MONITORING FREQUENCY:** Each and Every Batch Discharge

**SAMPLING PROTOCOL:** Sampling and analysis shall be performed in accordance with the techniques prescribed in 40CFR part 136 and amendments thereto. In the absence of 40 CFR Part 136 testing methodology, a New York State Department of Health, approved method is acceptable. A grab sample, collected from the above noted sample point shall be analyzed for the following:

<u>Parameter</u>	<u>Sewer Use Limit</u>	<u>Action Level</u>
Purgeable Aromatics		2.13 mg/L*
Purgeable Halocarbons		2.13 mg/L*
Acetone	(monitor only)	

**DISCHARGE LIMITATIONS:** The summation of purgeable aromatics and purgeable halocarbons greater than 10 µg/L shall not exceed 2.13 mg/L.

**SPECIAL CONDITION:**

Quarterly flow summaries shall be submitted for billing purposes. It is imperative these summaries are submitted in a timely manner. If there is no discharge for a given quarter, then a letter must be submitted stating so.



## **TERMS AND CONDITIONS**

### **GENERAL REQUIREMENTS:**

- A.** The permittee agrees to accept and abide by all provisions of the Sewer Use Law of Monroe County (MCSUL) and of all pertinent rules or regulations now in force or shall be adopted in the future.
- B.** In addition to the parameters/limits outlined, the total facility discharge shall meet all other concentration values listed within the MCSUL and as described in Article III, Section 3.3(d) of the Law.
- C.** Included in Article II, Section 2.1 of the MCSUL, is the definition of "Normal Sewage". "Normal Sewage" may be discharged to the sewer system in excess of the concentrations outlined in the definition, however, the facility will be subject to the imposition of a sewer surcharge and possible self-monitoring requirements as a result. Surcharging procedures are outlined in Article X of the MCSUL.
- D.** Regulatory sampling for analytes not specified under "required monitoring" shall be conducted by Monroe County at a minimum frequency of once every three (3) years.
- E.** This permit is not assignable or transferable. The permit is issued to a specific user and location.
- F.** Per Article IX, section 9.9 of the MCSUL, a violation by the permittee of the permit conditions may be cause for revocation or suspension of the permit after a Hearing by the Administrative Board, or if the violation is found to be within the emergency powers of the Director under Section 9.6. The revocation is immediate upon receipt of notice to the Industrial User. If the revocation or suspension is issued under Section 9.6, a Hearing shall be held as soon as possible.
- G.** As provided under Article VI, Section 6.1 of the MCSUL, the Director and/or his duly authorized representatives shall gain entry on to private lands by permission or duly issued warrant for the purpose of inspection, observation, measurement sampling and testing in accordance with the provisions of this law and its implementing Rules and Regulations. The Director or his representatives shall not have authority to inquire into any processes used in any industrial operation beyond that information having a direct bearing on the kind and source of discharge to the sewers or the on-site facilities for waste treatment. While performing the necessary work on private lands, referred to above, the Director or his duly authorized representative shall observe all safety rules applicable to the premises as established by the owner and/or occupant.
- H.** All required monitoring shall be analyzed by a New York State Department of Health certified laboratory. All sampling and analysis must be performed in accordance with Title 40 Code of Federal Regulations Part 136.
- I.** The pH range for this permit is 5.0 – 12.0 su. This range is specifically permitted by the Director as allowed under Article III, Section 3.3(b) of the MCSUL. pH must be analyzed within 15 minutes of the time of collection as specified in 40 CFR, part 136.
- J.** Discharges of wax, fats, oil or grease shall not exceed 100 mg/L as imposed by the Director under Article III, Section 3.3 of the MCSUL.

## **SURCHARGE CONCENTRATIONS:**

### **Concentration and/or characteristics of normal sewage:**

“Normal Sewage” shall mean sewage, industrial wastes or other wastes, which when analyzed, show concentration values with the following characteristics based on daily maximum limits:

- |                           |          |
|---------------------------|----------|
| a. B. O. D.               | 300 mg/L |
| b. Total Suspended Solids | 300 mg/L |
| c. Total Phosphorus, as P | 10 mg/L  |

Annual average concentrations above normal sewage are subject to surcharge as defined in Article X, section 10.7 of the MCSUL.

## **DISCHARGE LIMITATIONS (SEWER USE LIMITS)**

### **Permissible concentrations of toxic substances and/or substances the Department wishes to control:**

The concentration in sewage of any of the following toxic substances and/or substances the Department wishes to control shall not exceed the concentration limits specified when discharged into the County Sewer System; metal pollutants are expressed as total metals in mg/L (ppm): the following pollutant limits are based on daily maximum values:

- |                   |           |
|-------------------|-----------|
| a. Antimony (Sb)  | 1.0 mg/L  |
| b. Arsenic (As)   | 0.5 mg/L  |
| c. Barium (Ba)    | 2.0 mg/L  |
| d. Beryllium (Be) | 5.0 mg/L  |
| e. Cadmium (Cd)   | 1.0 mg/L  |
| f. Chromium (Cr)  | 3.0 mg/L  |
| g. Copper (Cu)    | 3.0 mg/L  |
| h. Cyanide (CN)   | 1.0 mg/L  |
| i. Iron (Fe)      | 5.0 mg/L  |
| j. Lead (Pb)      | 1.0 mg/L  |
| k. Manganese (Mn) | 5.0 mg/L  |
| l. Mercury (Hg)   | 0.05 mg/L |
| m. Nickel (Ni)    | 3.0 mg/L  |
| n. Selenium (Se)  | 2.0 mg/L  |
| o. Silver (Ag)    | 2.0 mg/L  |
| p. Thallium (Tl)  | 1.0 mg/L  |
| q. Zinc (Zn)      | 5.0 mg/L  |

## **REPORTING REQUIREMENTS:**

- A. Per the requirements of 40 CFR, Part 403.12, Significant Industrial Users must submit Periodic Reports on Continued Compliance to the Control Authority on a biannual (2/yr) basis. Deadline dates of submission for these reports will be August 15 and February 15, respectively.
- B. Discharge monitoring reports shall be submitted to the Control Authority upon receipt from the permittee's testing laboratory. Reports submitted from industrial users identified as Significant Industrial Users (SIU) must be accompanied by a certification statement as required by 40 CFR part 403 and the MCSUL, Article VI, section 6.12.
- C. Any Industrial User subject to the reporting requirements of the General Pretreatment Regulations shall maintain records of all information resulting from any monitoring activities required by 40 CFR, part 403.12 for a minimum of three (3) years. These records shall be available for inspection and copying by the Control Authority. This period of retention shall be extended during the course

of any unresolved litigation regarding the discharge of pollutants by the Industrial User or the operation of the POTW Pretreatment Program or when requested by the Director or the Regional Administrator.

- D. Pursuant to Article VI, Section 6.10 (4) of the MCSUL and the reporting requirements of the Code of Federal Regulations 40 CFR part 403.12, if a permitted user elects to perform monitoring at compliance monitoring locations more often than required and uses approved laboratory procedures, the results of all such additional monitoring and any additional flow measurements shall be reported to the Director on a timely basis and shall be included in reports as outlined in the MCSUL section 6.10(1)-(4).

#### **NOTIFICATION REQUIREMENTS:**

- A. Pursuant to Article VI, Section 6.10(5), the permittee shall notify the Department within 24 hours of becoming aware that discharge monitoring is in violation of any permit limit. This notification shall be directed to the Industrial Waste Section at 585-753-7600 Option 4. The User shall also repeat sampling and analysis for the analyte in non-compliance and submit the results of the repeat analysis to Monroe County within 30 days after becoming aware of the violation.
- B. Notify the Director in writing when considering a revision to the plant sewer system or any change in industrial waste discharges to the public sewers. The later encompasses either an increase or decrease in average daily volume or strength of waste or new wastes.
- C. Notify the Director immediately of any accident, negligence, breakdown of pretreatment equipment or other occurrence that occasions discharge to the public sewer of any waste or process waters not covered by this permit.

#### **SLUG CONTROL**

An Industrial User shall be required to report any/all slug discharges to the Monroe County sewer system by calling 585-753-7600 option 4. For the purpose of this permit enclosure, a slug discharge shall be identified as any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge. Following a review process, the Control Authority (Monroe County) shall determine the applicability of a facility slug control plan. If the Control Authority decides that a Slug Discharge Control Plan (SDCP) is needed, the plan shall contain, at a minimum, the following elements:

1. Description of discharge practices, including non-routine batch discharges.
2. Description of stored chemicals.
3. Procedures for immediately notifying the Control Authority of slug discharges, including any discharge that would violate a prohibition under 40 CFR 403.5 (b), with procedures for follow up written notification within five (5) days.
4. If necessary, procedures to prevent adverse impact from accidental spills, including, but not limited to, inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents) and/or measures and equipment for emergency purposes.



## **SNC DEFINITION:**

In accordance with 40 CFR 403.8 (f) (vii), an Industrial User is in significant noncompliance (SNC) if its violations meet one or more of the following criteria:

- A.** Chronic violations of wastewater discharge limits – defined as those which 66% or more of all the measurements taken during a six-month period exceed (by any magnitude) the daily maximum limit or the average limit for the same pollutant parameter (ref. Article IX, section 9.19 – MCSUL). This criteria does NOT apply to the following Monroe County surchargeable parameters: Biochemical Oxygen Demand, Total Suspended Solids, Chlorine Demand and Total Phosphorus.
- B.** Technical review criteria (TRC) violations – defined as those in which 33% or more of all the measurements for each pollutant parameter taken during a six month period equal or exceed the product of the daily maximum limit or the average limit times the applicable TRC (ref. Article IX, section 9.19 – MCSUL). This criteria does NOT apply to the following Monroe County surchargeable parameters: Biochemical Oxygen Demand, Total Suspended Solids, Chlorine Demand and Total Phosphorus.
- C.** Any other violation of a pretreatment effluent limit (daily maximum or longer-term average) that the Control Authority determines has caused, alone or in combination with other discharges, interference or pass-through (including endangering the health or POTW personnel or the general public).
- D.** Any discharge of a pollutant that has caused imminent endangerment to human health, welfare or the environment or has resulted in the POTW's exercise of its emergency authority under paragraph (t)(1)(vi)(8) of 40 CFR part 403 to prevent such a discharge.
- E.** Failure to meet, within 90 days after the scheduled date, a compliance schedule milestone contained in a local control mechanism or enforcement order, for starting construction, completing construction or attaining final compliance.
- F.** Failure to provide, within 30 days after the due date, required reports such as BMRs, 90 day compliance reports, periodic reports on continued compliance.
- G.** Failure to accurately report noncompliance.
- H.** Any other violation or group of violations that the Control Authority determines will adversely affect the operation and implementation of the local Pretreatment Program.

## **PENALTIES**

Should the facility be considered in Significant Non-Compliance (SNC), based on the above mentioned criteria, the minimum enforcement response by Monroe County will be the publication of the company name in the Gannett Rochester newspaper. The company will be published as an Industrial User in Significant Non-Compliance (SNC). Fines and criminal penalties may follow this publication (ref. Article IX – MCSUL).

Nothing in this permit shall be construed to relieve the permittees from civil/criminal penalties for noncompliance under Article IX, Section 9.7(a)(5) MCSUL. Article IX provides that any person who violates a permit condition is subject to a civil penalty not to exceed \$25,000 for any one case and an additional penalty not to exceed \$25,000 for each day of continued violation.



# CERTIFICATE OF LIABILITY INSURANCE

Page 1 of 1

DATE (MM/DD/YYYY)  
09/19/2019

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

<b>PRODUCER</b> Willis Towers Watson Northeast, Inc. fka Willis of New York, Inc. c/o 26 Century Blvd P.O. Box 305191 Nashville, TN 372305191 USA	<b>CONTACT NAME:</b>	
	<b>PHONE (A/C No, Ext):</b> 1-877-945-7378	<b>FAX (A/C No):</b> 1-888-467-2378
<b>INSURED</b> Ecology and Environment Engineering and Geology, P.C. 368 Pleasant View Drive Lancaster, NY 14086	<b>E-MAIL ADDRESS:</b> certificates@willis.com	
	<b>INSURER(S) AFFORDING COVERAGE</b>	
	<b>INSURER A:</b> Great Divide Insurance Company	
	<b>INSURER B:</b> Federal Insurance Company	
	<b>INSURER C:</b>	
	<b>INSURER D:</b>	
<b>INSURER E:</b>		
<b>INSURER F:</b>		

**COVERAGES** **CERTIFICATE NUMBER:** WL2738705 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY			GLP2005977-17	08/01/2019	08/01/2020	EACH OCCURRENCE \$ 3,000,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR						DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000
	<input checked="" type="checkbox"/> Blanket Contractual Liability						MED EXP (Any one person) \$ 30,000
	GEN'L AGGREGATE LIMIT APPLIES PER:						PERSONAL & ADV INJURY \$ 3,000,000
	<input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC						GENERAL AGGREGATE \$ 3,000,000
	OTHER:						PRODUCTS - COM/OP AGG \$ 3,000,000
A	AUTOMOBILE LIABILITY			BAP2005983-17	08/01/2019	08/01/2020	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO						BODILY INJURY (Per person) \$
	<input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS NON-OWNED AUTOS ONLY						BODILY INJURY (Per accident) \$
	<input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/>						PROPERTY DAMAGE (Per accident) \$
B	UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR			7987-27-63	08/01/2019	08/01/2020	EACH OCCURRENCE \$ 15,000,000
	<input checked="" type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE						AGGREGATE \$ 15,000,000
	DED <input type="checkbox"/> RETENTION \$ <input type="checkbox"/>						Prod/Compl Ops. \$ 15,000,000
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY			WCA2005979-17	08/01/2019	08/01/2020	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	N/A				E.L. EACH ACCIDENT \$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - EA EMPLOYEE \$ 1,000,000
							E.L. DISEASE - POLICY LIMIT \$ 1,000,000
A	Consultants Poll & Prof Liab (Pollution - Occurrence)			CCP2005976-17	08/01/2019	08/01/2020	Aggregate Limit \$11,000,000
	(Professional - Claims-made)						Each Poll. Condition \$11,000,000
							Each Prof. Claim \$11,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Re: Former Davis Howland Oil Corporation Site, Site 8-28-088, NYSDEC Contract D007617, WA#12

Excess Liability policy is following form and supports all listed coverages except Pollution and Professional Liability.

## CERTIFICATE HOLDER

County of Monroe: Department of Environmental Services  
145 Paul Road, Bldg. 1  
Rochester, NY 14624

## CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE

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**D**

## **E & E Requests to Monroe County for On-site Disposal of IDW Water**





# ecology and environment engineering and geology, p.c.

Environmental Specialists

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**BUFFALO CORPORATE CENTER**

368 Pleasant View Drive  
Lancaster, New York 14086  
Tel: (716) 684-8060, Fax: (716) 684-0844

November 3, 2020

Donald Wolf  
Industrial Waste Engineer  
Monroe County Department of Environmental Services  
Office of Industrial Waste  
145 Paul Road, Bldg. 1  
Rochester, NY 14624

Dear Mr. Wolf,

Ecology and Environment Engineering and Geology, P.C. (E&E) is pleased to provide the attached analytical results for the purge water collected during the groundwater sampling event for the former Davis-Howland Oil Company (DHOC) Site (No. 828088), located in Rochester, New York. The annual groundwater sampling event was performed at the site in October 2020. The groundwater monitoring wells are purged prior to sampling. This purge water was containerized onsite in two 50-gallon drums. The total amount of purge water is approximately 100 gallons.

Samples were collected in accordance with the County of Monroe Sewer Use Permit #IWC-864 for the DHOC site, and analyses performed in accordance with the parameters listed in the permit including purgeable aromatics and purgeable halocarbons. The analytical data report is included as Attachment 1 to this letter. Total VOC concentration in the purge water was 101 µg/L.

E&E is requesting to batch discharge the sampling purge water to the previously agreed upon discharge point, located inside the building at 220 Anderson Avenue, upon approval by Monroe County Division of Pure Waters.

If you have any questions regarding this letter or the attached analytical results, please do not hesitate to contact me.

Sincerely,

**Ecology and Environment Engineering and Geology, P. C.**

Jill Gulczewski  
Project Manager

cc: Jenelle Gaylord – NYSDEC Project Manager

November 3, 2020

**Attachment 1**  
**Analytical Results**

**Eurofins TestAmerica, Buffalo, NY**  
**October 2020**

**Laboratory Submission: 480-176636-1**

**Lab Sample ID: 480-176636-10**

# Detection Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

- 1
- 2
- 3
- 4
- 5
- 6
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- 8
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- 10
- 11
- 12
- 13
- 14
- 15

Client Sample ID: 10W-PURGE WATER-OCT20

Lab Sample ID: 480-176636-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	34	J	100	12	ug/L	20		624.1	Total/NA
1,1,1-Trichloroethane - RA	0.52	J	5.0	0.39	ug/L	1		624.1	Total/NA
1,1-Dichloroethane - RA	3.5	J	5.0	0.59	ug/L	1		624.1	Total/NA
1,2-Dichloroethene, Total - RA	36		10	3.2	ug/L	1		624.1	Total/NA
Tetrachloroethene - RA	1.8	J	5.0	0.34	ug/L	1		624.1	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo



## Detection Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

**Client Sample ID: 10W-PURGE WATER-OCT20 (Continued)**

**Lab Sample ID: 480-176636-10**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene - RA	21		5.0	0.60	ug/L	1		624.1	Total/NA
Vinyl chloride - RA	4.5	J	5.0	0.75	ug/L	1		624.1	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

Client Sample ID: 10W-PURGE WATER-OCT20

Lab Sample ID: 480-176636-10

Date Collected: 10/15/20 14:10

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	7.7	ug/L			10/16/20 19:50	20
1,1,1,2-Tetrachloroethane	ND		100	5.2	ug/L			10/16/20 19:50	20
1,1,2-Trichloroethane	ND		100	9.6	ug/L			10/16/20 19:50	20
1,1-Dichloroethane	ND		100	12	ug/L			10/16/20 19:50	20
1,1-Dichloroethene	ND		100	17	ug/L			10/16/20 19:50	20
1,2-Dichlorobenzene	ND		100	8.9	ug/L			10/16/20 19:50	20
1,2-Dichloroethane	ND		100	12	ug/L			10/16/20 19:50	20
1,2-Dichloroethene, Total	ND		200	64	ug/L			10/16/20 19:50	20
1,2-Dichloropropane	ND		100	12	ug/L			10/16/20 19:50	20
1,3-Dichlorobenzene	ND		100	11	ug/L			10/16/20 19:50	20
1,4-Dichlorobenzene	ND		100	10	ug/L			10/16/20 19:50	20
2-Chloroethyl vinyl ether	ND		500	37	ug/L			10/16/20 19:50	20
Acrolein	ND		2000	350	ug/L			10/16/20 19:50	20
Acrylonitrile	ND		1000	38	ug/L			10/16/20 19:50	20
Benzene	ND		100	12	ug/L			10/16/20 19:50	20
Bromoform	ND		100	9.4	ug/L			10/16/20 19:50	20

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

Client Sample ID: 10W-PURGE WATER-OCT20

Lab Sample ID: 480-176636-10

Date Collected: 10/15/20 14:10

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		100	24	ug/L			10/16/20 19:50	20
Carbon tetrachloride	ND		100	10	ug/L			10/16/20 19:50	20
Chlorobenzene	ND		100	9.5	ug/L			10/16/20 19:50	20
Chlorodibromomethane	ND		100	8.3	ug/L			10/16/20 19:50	20
Chloroethane	ND		100	17	ug/L			10/16/20 19:50	20
Chloroform	ND		100	11	ug/L			10/16/20 19:50	20
Chloromethane	ND		100	13	ug/L			10/16/20 19:50	20
cis-1,3-Dichloropropene	ND		100	6.6	ug/L			10/16/20 19:50	20
Dichlorobromomethane	ND		100	11	ug/L			10/16/20 19:50	20
Ethylbenzene	ND		100	9.3	ug/L			10/16/20 19:50	20
Methylene Chloride	ND		100	16	ug/L			10/16/20 19:50	20
Tetrachloroethene	ND		100	6.8	ug/L			10/16/20 19:50	20
Toluene	ND		100	9.1	ug/L			10/16/20 19:50	20
trans-1,2-Dichloroethene	ND		100	12	ug/L			10/16/20 19:50	20
trans-1,3-Dichloropropene	ND		100	8.8	ug/L			10/16/20 19:50	20
Trichloroethene	34	J	100	12	ug/L			10/16/20 19:50	20
Vinyl chloride	ND		100	15	ug/L			10/16/20 19:50	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		68 - 130		10/16/20 19:50	20
4-Bromofluorobenzene (Surr)	97		76 - 123		10/16/20 19:50	20
Dibromofluoromethane (Surr)	99		75 - 123		10/16/20 19:50	20
Toluene-d8 (Surr)	98		77 - 120		10/16/20 19:50	20

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.52	J	5.0	0.39	ug/L			10/19/20 17:33	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/19/20 17:33	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/19/20 17:33	1
1,1-Dichloroethane	3.5	J	5.0	0.59	ug/L			10/19/20 17:33	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/19/20 17:33	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/19/20 17:33	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/19/20 17:33	1
1,2-Dichloroethene, Total	36		10	3.2	ug/L			10/19/20 17:33	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/19/20 17:33	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/19/20 17:33	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/19/20 17:33	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/19/20 17:33	1
Acrolein	ND	H	100	17	ug/L			10/19/20 17:33	1
Acrylonitrile	ND		50	1.9	ug/L			10/19/20 17:33	1
Benzene	ND		5.0	0.60	ug/L			10/19/20 17:33	1
Bromoform	ND		5.0	0.47	ug/L			10/19/20 17:33	1
Bromomethane	ND		5.0	1.2	ug/L			10/19/20 17:33	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/19/20 17:33	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/19/20 17:33	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/19/20 17:33	1
Chloroethane	ND		5.0	0.87	ug/L			10/19/20 17:33	1
Chloroform	ND		5.0	0.54	ug/L			10/19/20 17:33	1
Chloromethane	ND		5.0	0.64	ug/L			10/19/20 17:33	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/19/20 17:33	1

Eurofins TestAmerica, Buffalo



# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

Client Sample ID: 10W-PURGE WATER-OCT20

Lab Sample ID: 480-176636-10

Date Collected: 10/15/20 14:10

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/19/20 17:33	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/19/20 17:33	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/19/20 17:33	1
<b>Tetrachloroethene</b>	<b>1.8</b>	<b>J</b>	5.0	0.34	ug/L			10/19/20 17:33	1
Toluene	ND		5.0	0.45	ug/L			10/19/20 17:33	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/19/20 17:33	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/19/20 17:33	1
<b>Trichloroethene</b>	<b>21</b>		5.0	0.60	ug/L			10/19/20 17:33	1
<b>Vinyl chloride</b>	<b>4.5</b>	<b>J</b>	5.0	0.75	ug/L			10/19/20 17:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		68 - 130		10/19/20 17:33	1
4-Bromofluorobenzene (Surr)	97		76 - 123		10/19/20 17:33	1
Dibromofluoromethane (Surr)	101		75 - 123		10/19/20 17:33	1
Toluene-d8 (Surr)	95		77 - 120		10/19/20 17:33	1



# ecology and environment engineering and geology, p.c.

Environmental Specialists

---

**BUFFALO CORPORATE CENTER**

368 Pleasant View Drive

Lancaster, New York 14086

Tel: (716) 684-8060, Fax: (716) 684-0844

November 10, 2020

Donald Wolf  
Industrial Waste Engineer  
Monroe County Department of Environmental Services  
Office of Industrial Waste  
145 Paul Road, Bldg. 1  
Rochester, NY 14624

Dear Mr. Wolf,

Ecology and Environment Engineering and Geology, P.C. (E&E) is pleased to provide the attached analytical results for the purge water collected during installation and development of two wells (IW-01 and MW-17R) at the former Davis-Howland Oil Company (DHOC) Site (No. 828088), located in Rochester, New York. These activities were performed at the site in September 2020. This purge water was containerized onsite in a 750-gallon poly tank. The total amount of purge water is approximately 400 gallons.

Samples were collected in accordance with the County of Monroe Sewer Use Permit #IWC-864 for the DHOC site, and analyses performed in accordance with the parameters listed in the permit including purgeable aromatics and purgeable halocarbons. The analytical data report is included as Attachment 1 to this letter. Total VOC concentration in the purge water was 4.1 µg/L.

E&E is requesting to batch discharge the purge water to the previously agreed upon discharge point, located inside the building at 220 Anderson Avenue, upon approval by Monroe County Division of Pure Waters.

If you have any questions regarding this letter or the attached analytical results, please do not hesitate to contact me.

Sincerely,

**Ecology and Environment Engineering and Geology, P. C.**

Jill Gulczewski  
Project Manager

cc: Jenelle Gaylord – NYSDEC Project Manager

November 10, 2020

**Attachment 1**  
**Analytical Results**

**Eurofins TestAmerica, Buffalo, NY**  
**November 2020**

**Laboratory Submission: 480-177337-1**

**Lab Sample ID: 480-177337-2 and 480-177337-3**



## Detection Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-177337-1

**Client Sample ID: TB-20201029**

**Lab Sample ID: 480-177337-1**

No Detections.

**Client Sample ID: IDW-POLYTANK-20201029-A**

**Lab Sample ID: 480-177337-2**

No Detections.

**Client Sample ID: IDW-POLYTANK-20201029-B**

**Lab Sample ID: 480-177337-3**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, Total	4.1	J	10	3.2	ug/L	1		624.1	Total/NA

This Detection Summary does not include radiochemical test results.

Euofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-177337-1

**Client Sample ID: TB-20201029**

**Lab Sample ID: 480-177337-1**

**Date Collected: 10/29/20 10:00**

**Matrix: Water**

**Date Received: 10/29/20 15:35**

## Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.21	ug/L			10/31/20 12:47	1
2-Butanone (MEK)	ND		10	1.3	ug/L			10/31/20 12:47	1
Benzene	ND		1.0	0.41	ug/L			10/31/20 12:47	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			10/31/20 12:47	1
Chlorobenzene	ND		1.0	0.75	ug/L			10/31/20 12:47	1
Chloroform	ND		1.0	0.34	ug/L			10/31/20 12:47	1
Tetrachloroethene	ND		1.0	0.36	ug/L			10/31/20 12:47	1
Trichloroethene	ND		1.0	0.46	ug/L			10/31/20 12:47	1
Vinyl chloride	ND		1.0	0.90	ug/L			10/31/20 12:47	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			10/31/20 12:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		77 - 120		10/31/20 12:47	1
4-Bromofluorobenzene (Surr)	91		73 - 120		10/31/20 12:47	1
Toluene-d8 (Surr)	98		80 - 120		10/31/20 12:47	1
Dibromofluoromethane (Surr)	95		75 - 123		10/31/20 12:47	1

**Client Sample ID: IDW-POLYTANK-20201029-A**

**Lab Sample ID: 480-177337-2**

**Date Collected: 10/29/20 10:10**

**Matrix: Water**

**Date Received: 10/29/20 15:35**

## Method: 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		1.0	0.21	ug/L			11/02/20 11:41	1
2-Butanone (MEK)	ND		10	1.3	ug/L			11/02/20 11:41	1
Benzene	ND		1.0	0.41	ug/L			11/02/20 11:41	1
Carbon tetrachloride	ND		1.0	0.27	ug/L			11/02/20 11:41	1
Chlorobenzene	ND		1.0	0.75	ug/L			11/02/20 11:41	1
Chloroform	ND		1.0	0.34	ug/L			11/02/20 11:41	1
Tetrachloroethene	ND		1.0	0.36	ug/L			11/02/20 11:41	1
Trichloroethene	ND		1.0	0.46	ug/L			11/02/20 11:41	1
Vinyl chloride	ND		1.0	0.90	ug/L			11/02/20 11:41	1
1,1-Dichloroethene	ND		1.0	0.29	ug/L			11/02/20 11:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	107		77 - 120		11/02/20 11:41	1
4-Bromofluorobenzene (Surr)	105		73 - 120		11/02/20 11:41	1
Toluene-d8 (Surr)	104		80 - 120		11/02/20 11:41	1
Dibromofluoromethane (Surr)	111		75 - 123		11/02/20 11:41	1

**Client Sample ID: IDW-POLYTANK-20201029-B**

**Lab Sample ID: 480-177337-3**

**Date Collected: 10/29/20 10:15**

**Matrix: Water**

**Date Received: 10/29/20 15:35**

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/30/20 17:20	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/30/20 17:20	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/30/20 17:20	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/30/20 17:20	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/30/20 17:20	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-177337-1

Client Sample ID: IDW-POLYTANK-20201029-B

Lab Sample ID: 480-177337-3

Date Collected: 10/29/20 10:15

Matrix: Water

Date Received: 10/29/20 15:35

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/30/20 17:20	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/30/20 17:20	1
<b>1,2-Dichloroethene, Total</b>	<b>4.1</b>	<b>J</b>	10	3.2	ug/L			10/30/20 17:20	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/30/20 17:20	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/30/20 17:20	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/30/20 17:20	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/30/20 17:20	1
Acrolein	ND		100	17	ug/L			10/30/20 17:20	1
Acrylonitrile	ND		50	1.9	ug/L			10/30/20 17:20	1
Benzene	ND		5.0	0.60	ug/L			10/30/20 17:20	1
Bromoform	ND		5.0	0.47	ug/L			10/30/20 17:20	1
Bromomethane	ND		5.0	1.2	ug/L			10/30/20 17:20	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/30/20 17:20	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/30/20 17:20	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/30/20 17:20	1
Chloroethane	ND		5.0	0.87	ug/L			10/30/20 17:20	1
Chloroform	ND		5.0	0.54	ug/L			10/30/20 17:20	1
Chloromethane	ND		5.0	0.64	ug/L			10/30/20 17:20	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/30/20 17:20	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/30/20 17:20	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/30/20 17:20	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/30/20 17:20	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/30/20 17:20	1
Toluene	ND		5.0	0.45	ug/L			10/30/20 17:20	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/30/20 17:20	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/30/20 17:20	1
Trichloroethene	ND		5.0	0.60	ug/L			10/30/20 17:20	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/30/20 17:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	81		68 - 130		10/30/20 17:20	1
4-Bromofluorobenzene (Surr)	93		76 - 123		10/30/20 17:20	1
Dibromofluoromethane (Surr)	93		75 - 123		10/30/20 17:20	1
Toluene-d8 (Surr)	94		77 - 120		10/30/20 17:20	1





# ecology and environment engineering and geology, p.c.

Environmental Specialists

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**BUFFALO CORPORATE CENTER**

368 Pleasant View Drive  
Lancaster, New York 14086  
Tel: (716) 684-8060, Fax: (716) 684-0844

January 11, 2021

Donald Wolf  
Industrial Waste Engineer  
Monroe County Department of Environmental Services  
Office of Industrial Waste  
145 Paul Road, Bldg. 1  
Rochester, NY 14624

Dear Mr. Wolf,

Ecology and Environment Engineering and Geology, P.C. (E&E) is pleased to provide the attached analytical results for the purge water collected during the groundwater sampling event for the former Davis-Howland Oil Company (DHOC) Site (No. 828088), located in Rochester, New York. The groundwater sampling event was performed at the site November 30 – December 3, 2020. The groundwater monitoring wells are purged prior to sampling. This purge water was containerized onsite in one 50-gallon drum. The total amount of purge water is approximately 45 gallons.

Samples were collected in accordance with the County of Monroe Sewer Use Permit #IWC-864 for the DHOC site, and analyses performed in accordance with the parameters listed in the permit including purgeable aromatics and purgeable halocarbons. The analytical data report is included as Attachment 1 to this letter. Total VOC concentration in the purge water was 14 µg/L.

E&E is requesting to batch discharge the sampling purge water to the previously agreed upon discharge point, located inside the building at 220 Anderson Avenue, upon approval by Monroe County Division of Pure Waters.

If you have any questions regarding this letter or the attached analytical results, please do not hesitate to contact me.

Sincerely,

**Ecology and Environment Engineering and Geology, P. C.**

Jill Gulczewski  
Project Manager

cc: Jenelle Gaylord – NYSDEC Project Manager

**Attachment 1**  
**Analytical Results**

**Eurofins TestAmerica, Buffalo, NY**  
**December 2020**

**Laboratory Submission: 480-178952-1**

**Lab Sample ID: 480-178952-2**

## Detection Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

Client Sample ID: IDW-PURGEWATER-DEC20

Lab Sample ID: 480-178952-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.34	J	1.0	0.24	ug/L	1		624.1	Total/NA
1,1-Dichloroethane	5.8		1.0	0.26	ug/L	1		624.1	Total/NA
1,2-Dichloroethene, Total	1.9	J	2.0	0.44	ug/L	1		624.1	Total/NA
Chloromethane	2.5		1.0	0.43	ug/L	1		624.1	Total/NA
trans-1,2-Dichloroethene	0.33	J	1.0	0.24	ug/L	1		624.1	Total/NA
Trichloroethene	3.4		1.0	0.31	ug/L	1		624.1	Total/NA



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Job ID: 480-178952-1

[illegible]

**Lab Sample ID: 480-178952-2**

**Matrix: Water**

**Date Received: 12/03/20 13:45**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.34	J	1.0	0.24	ug/L			12/04/20 17:00	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/04/20 17:00	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/04/20 17:00	1
1,1-Dichloroethane	5.8		1.0	0.26	ug/L			12/04/20 17:00	1

12/14/2020

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

Client Sample ID: IDW-PURGEWATER-DEC20

Lab Sample ID: 480-178952-2

Date Collected: 12/03/20 12:00

Matrix: Water

Date Received: 12/03/20 13:45

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/04/20 17:00	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/04/20 17:00	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/04/20 17:00	1
<b>1,2-Dichloroethene, Total</b>	<b>1.9</b>	<b>J</b>	2.0	0.44	ug/L			12/04/20 17:00	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/04/20 17:00	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 17:00	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/04/20 17:00	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/04/20 17:00	1
Acrolein	ND		4.0	1.1	ug/L			12/04/20 17:00	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/04/20 17:00	1
Benzene	ND		1.0	0.43	ug/L			12/04/20 17:00	1
Bromoform	ND		1.0	0.54	ug/L			12/04/20 17:00	1
Bromomethane	ND		1.0	0.45	ug/L			12/04/20 17:00	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/04/20 17:00	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/04/20 17:00	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/04/20 17:00	1
Chloroethane	ND		1.0	0.32	ug/L			12/04/20 17:00	1
Chloroform	ND		1.0	0.33	ug/L			12/04/20 17:00	1
<b>Chloromethane</b>	<b>2.5</b>		1.0	0.43	ug/L			12/04/20 17:00	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/04/20 17:00	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/04/20 17:00	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/04/20 17:00	1
Methylene Chloride	ND		1.0	0.32	ug/L			12/04/20 17:00	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/04/20 17:00	1
Toluene	ND		1.0	0.38	ug/L			12/04/20 17:00	1
<b>trans-1,2-Dichloroethene</b>	<b>0.33</b>	<b>J</b>	1.0	0.24	ug/L			12/04/20 17:00	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/04/20 17:00	1
<b>Trichloroethene</b>	<b>3.4</b>		1.0	0.31	ug/L			12/04/20 17:00	1
Vinyl chloride	ND		1.0	0.34	ug/L			12/04/20 17:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		60 - 140		12/04/20 17:00	1
4-Bromofluorobenzene	86		60 - 140		12/04/20 17:00	1
Toluene-d8 (Surr)	100		60 - 140		12/04/20 17:00	1
Dibromofluoromethane (Surr)	121		60 - 140		12/04/20 17:00	1

# E

## Laboratory Reports



## ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo  
10 Hazelwood Drive  
Amherst, NY 14228-2298  
Tel: (716)691-2600

Laboratory Job ID: 480-178800-1

Client Project/Site: Davis-Howland Oil Corp #828088

**For:**

New York State D.E.C.  
625 Broadway  
Division of Environmental Remediation  
Albany, New York 12233-7014

Attn: Jenelle Gaylord



Authorized for release by:  
12/14/2020 12:43:35 PM

Orlette Johnson, Senior Project Manager  
(484)685-0864  
[Orlette.Johnson@Eurofinset.com](mailto:Orlette.Johnson@Eurofinset.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.



---

Orlette Johnson  
Senior Project Manager  
12/14/2020 12:43:35 PM

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## Definitions/Glossary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178800-1

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Glossary

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



# Case Narrative

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178800-1

## Job ID: 480-178800-1

Laboratory: Eurofins TestAmerica, Buffalo

### Narrative

#### Job Narrative 480-178800-1

#### Receipt

The samples were received on 11/30/2020 3:25 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.2° C.

#### Receipt Exceptions

The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): PW-1-NOV20 (480-178800-1); per client log from container label info and proceed with analysis.

#### GC/MS VOA

Method 624.1: The continuing calibration verification (CCV) associated with batch 460-744142 recovered above the upper control limit for Bromoform. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 624.1: The laboratory control sample (LCS) for analytical batch 460-744142 recovered outside control limits for the following analytes: Bromoform and Carbon tetrachloride. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method 624.1: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-17R-NOV20 (480-178800-2). Elevated reporting limits (RLs) are provided.

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

#### HPLC/IC

Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: PW-1-NOV20 (480-178800-1), MW-17R-NOV20 (480-178800-2) and IW-01-NOV20 (480-178800-3). Elevated reporting limits (RLs) are provided.

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

#### General Chemistry

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

#### VOA Prep

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

# Detection Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178800-1

## Client Sample ID: PW-1-NOV20

## Lab Sample ID: 480-178800-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	1.0		1.0	0.24	ug/L	1		624.1	Total/NA
1,1-Dichloroethane	34		1.0	0.26	ug/L	1		624.1	Total/NA
1,1-Dichloroethene	3.7		1.0	0.12	ug/L	1		624.1	Total/NA
1,2-Dichloroethene, Total	280		2.0	0.44	ug/L	1		624.1	Total/NA
Benzene	1.2		1.0	0.43	ug/L	1		624.1	Total/NA
trans-1,2-Dichloroethene	4.1		1.0	0.24	ug/L	1		624.1	Total/NA
Trichloroethene	20		1.0	0.31	ug/L	1		624.1	Total/NA
Vinyl chloride	65		1.0	0.34	ug/L	1		624.1	Total/NA
Sulfate	642		20.0	3.5	mg/L	10		300.0	Total/NA
Alkalinity, Total	338		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	338		5.0	0.79	mg/L	1		SM 2320B	Total/NA

## Client Sample ID: MW-17R-NOV20

## Lab Sample ID: 480-178800-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	31		2.0	0.53	ug/L	2		624.1	Total/NA
1,1-Dichloroethene	7.6		2.0	0.23	ug/L	2		624.1	Total/NA
1,2-Dichloroethene, Total	570		4.0	0.87	ug/L	2		624.1	Total/NA
Tetrachloroethene	4.2		2.0	0.50	ug/L	2		624.1	Total/NA
trans-1,2-Dichloroethene	6.1		2.0	0.47	ug/L	2		624.1	Total/NA
Trichloroethene	37		2.0	0.63	ug/L	2		624.1	Total/NA
Vinyl chloride	83		2.0	0.68	ug/L	2		624.1	Total/NA
Sulfate	187		10.0	1.7	mg/L	5		300.0	Total/NA
Alkalinity, Total	320		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	319		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Carbonate	0.96	J	5.0	0.79	mg/L	1		SM 2320B	Total/NA

## Client Sample ID: IW-01-NOV20

## Lab Sample ID: 480-178800-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	1.5		1.0	0.24	ug/L	1		624.1	Total/NA
1,1-Dichloroethane	13		1.0	0.26	ug/L	1		624.1	Total/NA
1,1-Dichloroethene	4.3		1.0	0.12	ug/L	1		624.1	Total/NA
1,2-Dichloroethene, Total	180		2.0	0.44	ug/L	1		624.1	Total/NA
Tetrachloroethene	0.34	J	1.0	0.25	ug/L	1		624.1	Total/NA
trans-1,2-Dichloroethene	2.2		1.0	0.24	ug/L	1		624.1	Total/NA
Trichloroethene	2.4		1.0	0.31	ug/L	1		624.1	Total/NA
Vinyl chloride	23		1.0	0.34	ug/L	1		624.1	Total/NA
Sulfate	260		10.0	1.7	mg/L	5		300.0	Total/NA
Alkalinity, Total	359		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	358		5.0	0.79	mg/L	1		SM 2320B	Total/NA

## Client Sample ID: TB-20201130

## Lab Sample ID: 480-178800-4

No Detections.

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178800-1

Client Sample ID: PW-1-NOV20

Lab Sample ID: 480-178800-1

Date Collected: 11/30/20 13:50

Matrix: Water

Date Received: 11/30/20 15:25

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.0		1.0	0.24	ug/L			12/03/20 10:19	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/03/20 10:19	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/03/20 10:19	1
1,1-Dichloroethane	34		1.0	0.26	ug/L			12/03/20 10:19	1
1,1-Dichloroethene	3.7		1.0	0.12	ug/L			12/03/20 10:19	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/03/20 10:19	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/03/20 10:19	1
1,2-Dichloroethene, Total	280		2.0	0.44	ug/L			12/03/20 10:19	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/03/20 10:19	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/03/20 10:19	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/03/20 10:19	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/03/20 10:19	1
Acrolein	ND		4.0	1.1	ug/L			12/03/20 10:19	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/03/20 10:19	1
Benzene	1.2		1.0	0.43	ug/L			12/03/20 10:19	1
Bromoform	ND	*	1.0	0.54	ug/L			12/03/20 10:19	1
Bromomethane	ND		1.0	0.45	ug/L			12/03/20 10:19	1
Carbon tetrachloride	ND	*	1.0	0.21	ug/L			12/03/20 10:19	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/03/20 10:19	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/03/20 10:19	1
Chloroethane	ND		1.0	0.32	ug/L			12/03/20 10:19	1
Chloroform	ND		1.0	0.33	ug/L			12/03/20 10:19	1
Chloromethane	ND		1.0	0.43	ug/L			12/03/20 10:19	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/03/20 10:19	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/03/20 10:19	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/03/20 10:19	1
Methylene Chloride	ND		1.0	0.32	ug/L			12/03/20 10:19	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/03/20 10:19	1
Toluene	ND		1.0	0.38	ug/L			12/03/20 10:19	1
trans-1,2-Dichloroethene	4.1		1.0	0.24	ug/L			12/03/20 10:19	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/03/20 10:19	1
Trichloroethene	20		1.0	0.31	ug/L			12/03/20 10:19	1
Vinyl chloride	65		1.0	0.34	ug/L			12/03/20 10:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		60 - 140		12/03/20 10:19	1
4-Bromofluorobenzene	119		60 - 140		12/03/20 10:19	1
Toluene-d8 (Surr)	100		60 - 140		12/03/20 10:19	1
Dibromofluoromethane (Surr)	112		60 - 140		12/03/20 10:19	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	642		20.0	3.5	mg/L			12/03/20 17:31	10
Alkalinity, Total	338		5.0	0.79	mg/L			12/08/20 19:51	1
Alkalinity, Bicarbonate	338		5.0	0.79	mg/L			12/08/20 19:51	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/08/20 19:51	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/08/20 19:51	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178800-1

Client Sample ID: MW-17R-NOV20

Lab Sample ID: 480-178800-2

Date Collected: 11/30/20 10:50

Matrix: Water

Date Received: 11/30/20 15:25

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		2.0	0.48	ug/L			12/03/20 10:43	2
1,1,2,2-Tetrachloroethane	ND		2.0	0.73	ug/L			12/03/20 10:43	2
1,1,2-Trichloroethane	ND		2.0	0.30	ug/L			12/03/20 10:43	2
1,1-Dichloroethane	31		2.0	0.53	ug/L			12/03/20 10:43	2
1,1-Dichloroethene	7.6		2.0	0.23	ug/L			12/03/20 10:43	2
1,2-Dichlorobenzene	ND		2.0	0.37	ug/L			12/03/20 10:43	2
1,2-Dichloroethane	ND		2.0	1.7	ug/L			12/03/20 10:43	2
1,2-Dichloroethene, Total	570		4.0	0.87	ug/L			12/03/20 10:43	2
1,2-Dichloropropane	ND		2.0	0.71	ug/L			12/03/20 10:43	2
1,3-Dichlorobenzene	ND		2.0	0.26	ug/L			12/03/20 10:43	2
1,4-Dichlorobenzene	ND		2.0	0.35	ug/L			12/03/20 10:43	2
2-Chloroethyl vinyl ether	ND		2.0	1.8	ug/L			12/03/20 10:43	2
Acrolein	ND		8.0	2.2	ug/L			12/03/20 10:43	2
Acrylonitrile	ND		4.0	1.5	ug/L			12/03/20 10:43	2
Benzene	ND		2.0	0.86	ug/L			12/03/20 10:43	2
Bromoform	ND	*	2.0	1.1	ug/L			12/03/20 10:43	2
Bromomethane	ND		2.0	0.90	ug/L			12/03/20 10:43	2
Carbon tetrachloride	ND	*	2.0	0.42	ug/L			12/03/20 10:43	2
Chlorobenzene	ND		2.0	0.75	ug/L			12/03/20 10:43	2
Chlorodibromomethane	ND		2.0	0.26	ug/L			12/03/20 10:43	2
Chloroethane	ND		2.0	0.64	ug/L			12/03/20 10:43	2
Chloroform	ND		2.0	0.65	ug/L			12/03/20 10:43	2
Chloromethane	ND		2.0	0.87	ug/L			12/03/20 10:43	2
cis-1,3-Dichloropropene	ND		2.0	0.91	ug/L			12/03/20 10:43	2
Dichlorobromomethane	ND		2.0	0.69	ug/L			12/03/20 10:43	2
Ethylbenzene	ND		2.0	0.60	ug/L			12/03/20 10:43	2
Methylene Chloride	ND		2.0	0.63	ug/L			12/03/20 10:43	2
Tetrachloroethene	4.2		2.0	0.50	ug/L			12/03/20 10:43	2
Toluene	ND		2.0	0.76	ug/L			12/03/20 10:43	2
trans-1,2-Dichloroethene	6.1		2.0	0.47	ug/L			12/03/20 10:43	2
trans-1,3-Dichloropropene	ND		2.0	0.43	ug/L			12/03/20 10:43	2
Trichloroethene	37		2.0	0.63	ug/L			12/03/20 10:43	2
Vinyl chloride	83		2.0	0.68	ug/L			12/03/20 10:43	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		60 - 140		12/03/20 10:43	2
4-Bromofluorobenzene	116		60 - 140		12/03/20 10:43	2
Toluene-d8 (Surr)	98		60 - 140		12/03/20 10:43	2
Dibromofluoromethane (Surr)	110		60 - 140		12/03/20 10:43	2

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	187		10.0	1.7	mg/L			12/02/20 14:13	5
Alkalinity, Total	320		5.0	0.79	mg/L			12/08/20 19:57	1
Alkalinity, Bicarbonate	319		5.0	0.79	mg/L			12/08/20 19:57	1
Alkalinity, Carbonate	0.96	J	5.0	0.79	mg/L			12/08/20 19:57	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/08/20 19:57	1

Eurofins TestAmerica, Buffalo



# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178800-1

Client Sample ID: IW-01-NOV20

Lab Sample ID: 480-178800-3

Date Collected: 11/30/20 11:05

Matrix: Water

Date Received: 11/30/20 15:25

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.5		1.0	0.24	ug/L			12/03/20 09:54	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/03/20 09:54	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/03/20 09:54	1
1,1-Dichloroethane	13		1.0	0.26	ug/L			12/03/20 09:54	1
1,1-Dichloroethene	4.3		1.0	0.12	ug/L			12/03/20 09:54	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/03/20 09:54	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/03/20 09:54	1
1,2-Dichloroethene, Total	180		2.0	0.44	ug/L			12/03/20 09:54	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/03/20 09:54	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/03/20 09:54	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/03/20 09:54	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/03/20 09:54	1
Acrolein	ND		4.0	1.1	ug/L			12/03/20 09:54	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/03/20 09:54	1
Benzene	ND		1.0	0.43	ug/L			12/03/20 09:54	1
Bromoform	ND	*	1.0	0.54	ug/L			12/03/20 09:54	1
Bromomethane	ND		1.0	0.45	ug/L			12/03/20 09:54	1
Carbon tetrachloride	ND	*	1.0	0.21	ug/L			12/03/20 09:54	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/03/20 09:54	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/03/20 09:54	1
Chloroethane	ND		1.0	0.32	ug/L			12/03/20 09:54	1
Chloroform	ND		1.0	0.33	ug/L			12/03/20 09:54	1
Chloromethane	ND		1.0	0.43	ug/L			12/03/20 09:54	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/03/20 09:54	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/03/20 09:54	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/03/20 09:54	1
Methylene Chloride	ND		1.0	0.32	ug/L			12/03/20 09:54	1
Tetrachloroethene	0.34	J	1.0	0.25	ug/L			12/03/20 09:54	1
Toluene	ND		1.0	0.38	ug/L			12/03/20 09:54	1
trans-1,2-Dichloroethene	2.2		1.0	0.24	ug/L			12/03/20 09:54	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/03/20 09:54	1
Trichloroethene	2.4		1.0	0.31	ug/L			12/03/20 09:54	1
Vinyl chloride	23		1.0	0.34	ug/L			12/03/20 09:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		60 - 140		12/03/20 09:54	1
4-Bromofluorobenzene	117		60 - 140		12/03/20 09:54	1
Toluene-d8 (Surr)	99		60 - 140		12/03/20 09:54	1
Dibromofluoromethane (Surr)	112		60 - 140		12/03/20 09:54	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	260		10.0	1.7	mg/L			12/02/20 14:28	5
Alkalinity, Total	359		5.0	0.79	mg/L			12/08/20 20:04	1
Alkalinity, Bicarbonate	358		5.0	0.79	mg/L			12/08/20 20:04	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/08/20 20:04	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/08/20 20:04	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178800-1

Client Sample ID: TB-20201130

Lab Sample ID: 480-178800-4

Date Collected: 11/30/20 09:00

Matrix: Water

Date Received: 11/30/20 15:25

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/03/20 09:05	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/03/20 09:05	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/03/20 09:05	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			12/03/20 09:05	1
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/03/20 09:05	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/03/20 09:05	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/03/20 09:05	1
1,2-Dichloroethene, Total	ND		2.0	0.44	ug/L			12/03/20 09:05	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/03/20 09:05	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/03/20 09:05	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/03/20 09:05	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/03/20 09:05	1
Acrolein	ND		4.0	1.1	ug/L			12/03/20 09:05	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/03/20 09:05	1
Benzene	ND		1.0	0.43	ug/L			12/03/20 09:05	1
Bromoform	ND	*	1.0	0.54	ug/L			12/03/20 09:05	1
Bromomethane	ND		1.0	0.45	ug/L			12/03/20 09:05	1
Carbon tetrachloride	ND	*	1.0	0.21	ug/L			12/03/20 09:05	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/03/20 09:05	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/03/20 09:05	1
Chloroethane	ND		1.0	0.32	ug/L			12/03/20 09:05	1
Chloroform	ND		1.0	0.33	ug/L			12/03/20 09:05	1
Chloromethane	ND		1.0	0.43	ug/L			12/03/20 09:05	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/03/20 09:05	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/03/20 09:05	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/03/20 09:05	1
Methylene Chloride	ND		1.0	0.32	ug/L			12/03/20 09:05	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/03/20 09:05	1
Toluene	ND		1.0	0.38	ug/L			12/03/20 09:05	1
trans-1,2-Dichloroethene	ND		1.0	0.24	ug/L			12/03/20 09:05	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/03/20 09:05	1
Trichloroethene	ND		1.0	0.31	ug/L			12/03/20 09:05	1
Vinyl chloride	ND		1.0	0.34	ug/L			12/03/20 09:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	82		60 - 140		12/03/20 09:05	1
4-Bromofluorobenzene	112		60 - 140		12/03/20 09:05	1
Toluene-d8 (Surr)	94		60 - 140		12/03/20 09:05	1
Dibromofluoromethane (Surr)	102		60 - 140		12/03/20 09:05	1

# Surrogate Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178800-1

**Method: 624.1 - Volatile Organic Compounds (GC/MS)**

**Matrix: Water**

**Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	DCA	BFB	TOL	DBFM
		(60-140)	(60-140)	(60-140)	(60-140)
480-178800-1	PW-1-NOV20	93	119	100	112
480-178800-2	MW-17R-NOV20	93	116	98	110
480-178800-3	IW-01-NOV20	94	117	99	112
480-178800-4	TB-20201130	82	112	94	102
LCS 460-744142/4	Lab Control Sample	94	113	100	109
MB 460-744142/8	Method Blank	95	116	99	111

## Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178800-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 460-744142/8

Matrix: Water

Analysis Batch: 744142

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/03/20 08:41	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/03/20 08:41	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/03/20 08:41	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			12/03/20 08:41	1
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/03/20 08:41	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/03/20 08:41	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/03/20 08:41	1
1,2-Dichloroethene, Total	ND		2.0	0.44	ug/L			12/03/20 08:41	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/03/20 08:41	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/03/20 08:41	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/03/20 08:41	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/03/20 08:41	1
Acrolein	ND		4.0	1.1	ug/L			12/03/20 08:41	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/03/20 08:41	1
Benzene	ND		1.0	0.43	ug/L			12/03/20 08:41	1
Bromoform	ND		1.0	0.54	ug/L			12/03/20 08:41	1
Bromomethane	ND		1.0	0.45	ug/L			12/03/20 08:41	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/03/20 08:41	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/03/20 08:41	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/03/20 08:41	1
Chloroethane	ND		1.0	0.32	ug/L			12/03/20 08:41	1
Chloroform	ND		1.0	0.33	ug/L			12/03/20 08:41	1
Chloromethane	ND		1.0	0.43	ug/L			12/03/20 08:41	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/03/20 08:41	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/03/20 08:41	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/03/20 08:41	1
Methylene Chloride	ND		1.0	0.32	ug/L			12/03/20 08:41	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/03/20 08:41	1
Toluene	ND		1.0	0.38	ug/L			12/03/20 08:41	1
trans-1,2-Dichloroethene	ND		1.0	0.24	ug/L			12/03/20 08:41	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/03/20 08:41	1
Trichloroethene	ND		1.0	0.31	ug/L			12/03/20 08:41	1
Vinyl chloride	ND		1.0	0.34	ug/L			12/03/20 08:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		60 - 140		12/03/20 08:41	1
4-Bromofluorobenzene	116		60 - 140		12/03/20 08:41	1
Toluene-d8 (Surr)	99		60 - 140		12/03/20 08:41	1
Dibromofluoromethane (Surr)	111		60 - 140		12/03/20 08:41	1

Lab Sample ID: LCS 460-744142/4

Matrix: Water

Analysis Batch: 744142

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	20.4		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	20.0	17.8		ug/L		89	60 - 140
1,1,2-Trichloroethane	20.0	18.7		ug/L		94	70 - 130

Eurofins TestAmerica, Buffalo



# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178800-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 460-744142/4

Matrix: Water

Analysis Batch: 744142

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	20.0	19.9		ug/L		99	70 - 130
1,1-Dichloroethene	20.0	18.2		ug/L		91	50 - 150
1,2-Dichlorobenzene	20.0	19.2		ug/L		96	65 - 135
1,2-Dichloroethane	20.0	18.4		ug/L		92	70 - 130
1,2-Dichloropropane	20.0	19.2		ug/L		96	35 - 165
1,3-Dichlorobenzene	20.0	19.7		ug/L		99	70 - 130
1,4-Dichlorobenzene	20.0	19.4		ug/L		97	65 - 135
2-Chloroethyl vinyl ether	20.0	16.5		ug/L		83	0.1 - 225
Benzene	20.0	20.2		ug/L		101	65 - 135
Bromoform	20.0	31.4	*	ug/L		157	70 - 130
Bromomethane	20.0	16.2		ug/L		81	15 - 185
Carbon tetrachloride	20.0	26.7	*	ug/L		134	70 - 130
Chlorobenzene	20.0	20.1		ug/L		101	65 - 135
Chlorodibromomethane	20.0	25.6		ug/L		128	70 - 135
Chloroethane	20.0	18.2		ug/L		91	40 - 160
Chloroform	20.0	19.8		ug/L		99	70 - 135
Chloromethane	20.0	18.3		ug/L		91	0.1 - 205
cis-1,3-Dichloropropene	20.0	19.2		ug/L		96	25 - 175
Dichlorobromomethane	20.0	21.4		ug/L		107	65 - 135
Ethylbenzene	20.0	19.1		ug/L		96	60 - 140
Methylene Chloride	20.0	17.5		ug/L		87	60 - 140
Tetrachloroethene	20.0	22.9		ug/L		114	70 - 130
Toluene	20.0	19.4		ug/L		97	70 - 130
trans-1,2-Dichloroethene	20.0	18.3		ug/L		92	70 - 130
trans-1,3-Dichloropropene	20.0	19.1		ug/L		95	50 - 150
Trichloroethene	20.0	19.5		ug/L		98	65 - 135
Vinyl chloride	20.0	18.4		ug/L		92	5 - 195

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	94		60 - 140
4-Bromofluorobenzene	113		60 - 140
Toluene-d8 (Surr)	100		60 - 140
Dibromofluoromethane (Surr)	109		60 - 140

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-561644/4

Matrix: Water

Analysis Batch: 561644

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		2.0	0.35	mg/L			12/02/20 13:29	1

Lab Sample ID: LCS 480-561644/3

Matrix: Water

Analysis Batch: 561644

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	50.0	50.19		mg/L		100	90 - 110

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178800-1

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-561871/4  
Matrix: Water  
Analysis Batch: 561871

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		2.0	0.35	mg/L			12/03/20 17:17	1

Lab Sample ID: LCS 480-561871/3  
Matrix: Water  
Analysis Batch: 561871

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	50.0	50.00		mg/L		100	90 - 110

## Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-562567/28  
Matrix: Water  
Analysis Batch: 562567

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0	0.79	mg/L			12/08/20 20:51	1
Alkalinity, Bicarbonate	ND		5.0	0.79	mg/L			12/08/20 20:51	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/08/20 20:51	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/08/20 20:51	1

Lab Sample ID: MB 480-562567/4  
Matrix: Water  
Analysis Batch: 562567

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0	0.79	mg/L			12/08/20 17:16	1
Alkalinity, Bicarbonate	ND		5.0	0.79	mg/L			12/08/20 17:16	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/08/20 17:16	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/08/20 17:16	1

Lab Sample ID: LCS 480-562567/29  
Matrix: Water  
Analysis Batch: 562567

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	100.9		mg/L		101	90 - 110

Lab Sample ID: LCS 480-562567/5  
Matrix: Water  
Analysis Batch: 562567

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	101.8		mg/L		102	90 - 110

# QC Association Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178800-1

## GC/MS VOA

### Analysis Batch: 744142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-178800-1	PW-1-NOV20	Total/NA	Water	624.1	
480-178800-2	MW-17R-NOV20	Total/NA	Water	624.1	
480-178800-3	IW-01-NOV20	Total/NA	Water	624.1	
480-178800-4	TB-20201130	Total/NA	Water	624.1	
MB 460-744142/8	Method Blank	Total/NA	Water	624.1	
LCS 460-744142/4	Lab Control Sample	Total/NA	Water	624.1	

## General Chemistry

### Analysis Batch: 561644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-178800-2	MW-17R-NOV20	Total/NA	Water	300.0	
480-178800-3	IW-01-NOV20	Total/NA	Water	300.0	
MB 480-561644/4	Method Blank	Total/NA	Water	300.0	
LCS 480-561644/3	Lab Control Sample	Total/NA	Water	300.0	

### Analysis Batch: 561871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-178800-1	PW-1-NOV20	Total/NA	Water	300.0	
MB 480-561871/4	Method Blank	Total/NA	Water	300.0	
LCS 480-561871/3	Lab Control Sample	Total/NA	Water	300.0	

### Analysis Batch: 562567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-178800-1	PW-1-NOV20	Total/NA	Water	SM 2320B	
480-178800-2	MW-17R-NOV20	Total/NA	Water	SM 2320B	
480-178800-3	IW-01-NOV20	Total/NA	Water	SM 2320B	
MB 480-562567/28	Method Blank	Total/NA	Water	SM 2320B	
MB 480-562567/4	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-562567/29	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-562567/5	Lab Control Sample	Total/NA	Water	SM 2320B	

# Lab Chronicle

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178800-1

**Client Sample ID: PW-1-NOV20**

**Lab Sample ID: 480-178800-1**

**Date Collected: 11/30/20 13:50**

**Matrix: Water**

**Date Received: 11/30/20 15:25**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	744142	12/03/20 10:19	CJM	TAL EDI
Total/NA	Analysis	300.0		10	561871	12/03/20 17:31	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	562567	12/08/20 19:51	KEB	TAL BUF

**Client Sample ID: MW-17R-NOV20**

**Lab Sample ID: 480-178800-2**

**Date Collected: 11/30/20 10:50**

**Matrix: Water**

**Date Received: 11/30/20 15:25**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		2	744142	12/03/20 10:43	CJM	TAL EDI
Total/NA	Analysis	300.0		5	561644	12/02/20 14:13	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	562567	12/08/20 19:57	KEB	TAL BUF

**Client Sample ID: IW-01-NOV20**

**Lab Sample ID: 480-178800-3**

**Date Collected: 11/30/20 11:05**

**Matrix: Water**

**Date Received: 11/30/20 15:25**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	744142	12/03/20 09:54	CJM	TAL EDI
Total/NA	Analysis	300.0		5	561644	12/02/20 14:28	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	562567	12/08/20 20:04	KEB	TAL BUF

**Client Sample ID: TB-20201130**

**Lab Sample ID: 480-178800-4**

**Date Collected: 11/30/20 09:00**

**Matrix: Water**

**Date Received: 11/30/20 15:25**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	744142	12/03/20 09:05	CJM	TAL EDI

## Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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



## Accreditation/Certification Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178800-1

### Laboratory: Eurofins TestAmerica, Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-01-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
SM 2320B		Water	Alkalinity, Bicarbonate
SM 2320B		Water	Alkalinity, Carbonate
SM 2320B		Water	Hydroxide Alkalinity

### Laboratory: Eurofins TestAmerica, Edison

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	11452	04-01-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
624.1		Water	1,2-Dichloroethene, Total

## Method Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178800-1

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL EDI
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF

### Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

### Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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

## Sample Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

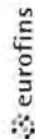
Job ID: 480-178800-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-178800-1	PW-1-NOV20	Water	11/30/20 13:50	11/30/20 15:25	
480-178800-2	MW-17R-NOV20	Water	11/30/20 10:50	11/30/20 15:25	
480-178800-3	IW-01-NOV20	Water	11/30/20 11:05	11/30/20 15:25	
480-178800-4	TB-20201130	Water	11/30/20 09:00	11/30/20 15:25	

Ver: 11/01/2020



# Chain of Custody Record



Environment Testing  
 America



<b>Client Information (Sub Contract Lab)</b>		Lab PM: Johnson, Oriette S		COC No: 480-50649.1						
Client Contact: Shipping/Receiving		E-Mail: Oriette.Johnson@Eurofins.com		Page: Page 1 of 1						
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - New York		Job #: 480-178800-1						
Address: 777 New Durham Road,		Due Date Requested: 12/11/2020		Analysis Requested						
City: Edison		TAT Requested (days):		Preservation Codes:						
State Zip: NJ, 08817		PO #:		A - HCL M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)						
Phone: 732-549-3900(Tel) 732-549-3679(Fax)		WO #:		Other:						
Email:		Project #:								
Project Name: Davis-Howland Oil Corp #828088		SSOW#:								
Site:										
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix (W=water, S=solid, Q=water/jl, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	624.1_PRC/624_Prep_3D (MOD) Priority Pollutant	List - VOA - 62	Total Number of Containers	Special Instructions/Note:
PW-01 (480-178800-1)	11/30/20	Eastern		Water		X			3	
MW-17R (480-178800-2)	11/30/20	10:50 Eastern		Water		X			3	
IW-01 (480-178800-3)	11/30/20	11:05 Eastern		Water		X			3	
TB (480-178800-4)	11/30/20	09:00 Eastern		Water		X			1	
<p>Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte &amp; accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.</p>										
<p><b>Possible Hazard Identification</b></p> <p>Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2</p>										
<p>Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)</p> <p><input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months</p> <p>Special Instructions/OC Requirements:</p>										
<p>Empty Kit Relinquished by: _____ Date: _____</p> <p>Relinquished by: _____ Date/Time: 12/16/20 17:00 Company: FA</p> <p>Relinquished by: _____ Date/Time: _____ Company: _____</p> <p>Relinquished by: _____ Date/Time: _____ Company: _____</p>										
<p>Custody Seal No.: 1427166, 1427179, 910 10 G2</p> <p>Cooler Temperature(s) °C and Other Remarks: 5.1°, 4.4°, 3.0°C IR11</p>										

## Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-178800-1

**Login Number: 178800**

**List Source: Eurofins TestAmerica, Buffalo**

**List Number: 1**

**Creator: Stopa, Erik S**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is 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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	WSP
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

## Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-178800-1

**Login Number: 178800**

**List Number: 2**

**Creator: Armbruster, Chris**

**List Source: Eurofins TestAmerica, Edison**

**List Creation: 12/02/20 02:36 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	1427168, 1427170
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.1, 4.4, 3.0°C IR11
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo  
10 Hazelwood Drive  
Amherst, NY 14228-2298  
Tel: (716)691-2600

Laboratory Job ID: 480-178848-1

Client Project/Site: Davis-Howland Oil Corp #828088  
Revision: 1

**For:**

New York State D.E.C.  
625 Broadway  
Division of Environmental Remediation  
Albany, New York 12233-7014

Attn: Jenelle Gaylord



Authorized for release by:  
1/5/2021 10:16:29 AM

Orlette Johnson, Senior Project Manager  
(484)685-0864  
[Orlette.Johnson@Eurofinset.com](mailto:Orlette.Johnson@Eurofinset.com)

### LINKS

Review your project  
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Have a Question?



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*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



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I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.



---

Orlette Johnson  
Senior Project Manager  
1/5/2021 10:16:29 AM

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## Definitions/Glossary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### General Chemistry

Qualifier	Qualifier Description
E	Result exceeded calibration range.

### Glossary

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

# Case Narrative

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

## Job ID: 480-178848-1

Laboratory: Eurofins TestAmerica, Buffalo

### Narrative

#### Job Narrative 480-178848-1

#### Revision 1

The report being provided is a revision of the original report sent on 12/15/2020. The report (revision 1) is being revised due to: client request to add Bicarbonate, Carbonate and Hydroxide Alkalinity data.

#### Receipt

The samples were received on 12/1/2020 3:20 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.0° C.

#### GC/MS VOA

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

#### HPLC/IC

Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-8-DEC20 (480-178848-2), MW-8-DEC20-Q (480-178848-3) and MW-15R-DEC20 (480-178848-4). Elevated reporting limits (RLs) are provided.

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

#### General Chemistry

Method SM 2320B: The method requirement for no headspace was not met. The following Alkalinity samples were analyzed with headspace in the sample container(s): MW-8-DEC20 (480-178848-2), MW-8-DEC20-Q (480-178848-3), MW-15R-DEC20 (480-178848-4) and MW-2R-DEC20 (480-178848-5).

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

#### VOA Prep

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



# Detection Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

## Client Sample ID: TB-20201201

## Lab Sample ID: 480-178848-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.62	J	1.0	0.32	ug/L	1		624.1	Total/NA

## Client Sample ID: MW-8-DEC20

## Lab Sample ID: 480-178848-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloroethane	0.83	J	1.0	0.15	ug/L	1		624.1	Total/NA
1,1-Dichloroethane	21		1.0	0.26	ug/L	1		624.1	Total/NA
1,2-Dichloroethene, Total	170		2.0	0.44	ug/L	1		624.1	Total/NA
Bromomethane	0.60	J	1.0	0.45	ug/L	1		624.1	Total/NA
Chloroethane	0.91	J	1.0	0.32	ug/L	1		624.1	Total/NA
Chloroform	1.7		1.0	0.33	ug/L	1		624.1	Total/NA
Chloromethane	21		1.0	0.43	ug/L	1		624.1	Total/NA
Methylene Chloride	0.62	J	1.0	0.32	ug/L	1		624.1	Total/NA
trans-1,2-Dichloroethene	5.9		1.0	0.24	ug/L	1		624.1	Total/NA
Trichloroethene	0.97	J	1.0	0.31	ug/L	1		624.1	Total/NA
Vinyl chloride	4.5		1.0	0.34	ug/L	1		624.1	Total/NA
Sulfate	5780		200	34.9	mg/L	100		300.0	Total/NA
Alkalinity, Total	909		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	909		5.0	0.79	mg/L	1		SM 2320B	Total/NA

## Client Sample ID: MW-8-DEC20-Q

## Lab Sample ID: 480-178848-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloroethane	0.67	J	1.0	0.15	ug/L	1		624.1	Total/NA
1,1-Dichloroethane	21		1.0	0.26	ug/L	1		624.1	Total/NA
1,2-Dichloroethene, Total	180		2.0	0.44	ug/L	1		624.1	Total/NA
Bromomethane	0.53	J	1.0	0.45	ug/L	1		624.1	Total/NA
Chloroethane	0.79	J	1.0	0.32	ug/L	1		624.1	Total/NA
Chloroform	1.6		1.0	0.33	ug/L	1		624.1	Total/NA
Chloromethane	21		1.0	0.43	ug/L	1		624.1	Total/NA
Methylene Chloride	0.48	J	1.0	0.32	ug/L	1		624.1	Total/NA
trans-1,2-Dichloroethene	6.0		1.0	0.24	ug/L	1		624.1	Total/NA
Trichloroethene	1.2		1.0	0.31	ug/L	1		624.1	Total/NA
Vinyl chloride	5.4		1.0	0.34	ug/L	1		624.1	Total/NA
Sulfate	5950		200	34.9	mg/L	100		300.0	Total/NA
Alkalinity, Total	918		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	918		5.0	0.79	mg/L	1		SM 2320B	Total/NA

## Client Sample ID: MW-15R-DEC20

## Lab Sample ID: 480-178848-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.55	J	1.0	0.26	ug/L	1		624.1	Total/NA
1,2-Dichloroethene, Total	11		2.0	0.44	ug/L	1		624.1	Total/NA
trans-1,2-Dichloroethene	0.91	J	1.0	0.24	ug/L	1		624.1	Total/NA
Trichloroethene	1.8		1.0	0.31	ug/L	1		624.1	Total/NA
Vinyl chloride	0.85	J	1.0	0.34	ug/L	1		624.1	Total/NA
Sulfate	85.3		10.0	1.7	mg/L	5		300.0	Total/NA
Alkalinity, Total	402		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	402		5.0	0.79	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

## Detection Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

**Client Sample ID: MW-2R-DEC20**

**Lab Sample ID: 480-178848-5**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, Total	2.5		2.0	0.44	ug/L	1		624.1	Total/NA
Vinyl chloride	0.42	J	1.0	0.34	ug/L	1		624.1	Total/NA
Sulfate	10.4		2.0	0.35	mg/L	1		300.0	Total/NA
Alkalinity, Total	41.5		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	41.5		5.0	0.79	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

Client Sample ID: TB-20201201

Lab Sample ID: 480-178848-1

Date Collected: 12/01/20 10:00

Matrix: Water

Date Received: 12/01/20 15:20

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/03/20 23:28	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/03/20 23:28	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/03/20 23:28	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			12/03/20 23:28	1
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/03/20 23:28	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/03/20 23:28	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/03/20 23:28	1
1,2-Dichloroethene, Total	ND		2.0	0.44	ug/L			12/03/20 23:28	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/03/20 23:28	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/03/20 23:28	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/03/20 23:28	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/03/20 23:28	1
Acrolein	ND		4.0	1.1	ug/L			12/03/20 23:28	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/03/20 23:28	1
Benzene	ND		1.0	0.43	ug/L			12/03/20 23:28	1
Bromoform	ND		1.0	0.54	ug/L			12/03/20 23:28	1
Bromomethane	ND		1.0	0.45	ug/L			12/03/20 23:28	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/03/20 23:28	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/03/20 23:28	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/03/20 23:28	1
Chloroethane	ND		1.0	0.32	ug/L			12/03/20 23:28	1
Chloroform	ND		1.0	0.33	ug/L			12/03/20 23:28	1
Chloromethane	ND		1.0	0.43	ug/L			12/03/20 23:28	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/03/20 23:28	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/03/20 23:28	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/03/20 23:28	1
Methylene Chloride	0.62 J		1.0	0.32	ug/L			12/03/20 23:28	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/03/20 23:28	1
Toluene	ND		1.0	0.38	ug/L			12/03/20 23:28	1
trans-1,2-Dichloroethene	ND		1.0	0.24	ug/L			12/03/20 23:28	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/03/20 23:28	1
Trichloroethene	ND		1.0	0.31	ug/L			12/03/20 23:28	1
Vinyl chloride	ND		1.0	0.34	ug/L			12/03/20 23:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	114		60 - 140		12/03/20 23:28	1
4-Bromofluorobenzene	93		60 - 140		12/03/20 23:28	1
Toluene-d8 (Surr)	100		60 - 140		12/03/20 23:28	1
Dibromofluoromethane (Surr)	116		60 - 140		12/03/20 23:28	1

Client Sample ID: MW-8-DEC20

Lab Sample ID: 480-178848-2

Date Collected: 12/01/20 11:03

Matrix: Water

Date Received: 12/01/20 15:20

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/04/20 06:15	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/04/20 06:15	1
1,1,2-Trichloroethane	0.83 J		1.0	0.15	ug/L			12/04/20 06:15	1
1,1-Dichloroethane	21		1.0	0.26	ug/L			12/04/20 06:15	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

Client Sample ID: MW-8-DEC20

Lab Sample ID: 480-178848-2

Date Collected: 12/01/20 11:03

Matrix: Water

Date Received: 12/01/20 15:20

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/04/20 06:15	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/04/20 06:15	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/04/20 06:15	1
<b>1,2-Dichloroethene, Total</b>	<b>170</b>		2.0	0.44	ug/L			12/04/20 06:15	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/04/20 06:15	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 06:15	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/04/20 06:15	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/04/20 06:15	1
Acrolein	ND		4.0	1.1	ug/L			12/04/20 06:15	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/04/20 06:15	1
Benzene	ND		1.0	0.43	ug/L			12/04/20 06:15	1
Bromoform	ND		1.0	0.54	ug/L			12/04/20 06:15	1
<b>Bromomethane</b>	<b>0.60</b>	<b>J</b>	1.0	0.45	ug/L			12/04/20 06:15	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/04/20 06:15	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/04/20 06:15	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/04/20 06:15	1
<b>Chloroethane</b>	<b>0.91</b>	<b>J</b>	1.0	0.32	ug/L			12/04/20 06:15	1
<b>Chloroform</b>	<b>1.7</b>		1.0	0.33	ug/L			12/04/20 06:15	1
<b>Chloromethane</b>	<b>21</b>		1.0	0.43	ug/L			12/04/20 06:15	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/04/20 06:15	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/04/20 06:15	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/04/20 06:15	1
<b>Methylene Chloride</b>	<b>0.62</b>	<b>J</b>	1.0	0.32	ug/L			12/04/20 06:15	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/04/20 06:15	1
Toluene	ND		1.0	0.38	ug/L			12/04/20 06:15	1
<b>trans-1,2-Dichloroethene</b>	<b>5.9</b>		1.0	0.24	ug/L			12/04/20 06:15	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/04/20 06:15	1
<b>Trichloroethene</b>	<b>0.97</b>	<b>J</b>	1.0	0.31	ug/L			12/04/20 06:15	1
<b>Vinyl chloride</b>	<b>4.5</b>		1.0	0.34	ug/L			12/04/20 06:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	123		60 - 140					12/04/20 06:15	1
4-Bromofluorobenzene	91		60 - 140					12/04/20 06:15	1
Toluene-d8 (Surr)	103		60 - 140					12/04/20 06:15	1
Dibromofluoromethane (Surr)	119		60 - 140					12/04/20 06:15	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>5780</b>		200	34.9	mg/L			12/02/20 14:57	100
<b>Alkalinity, Total</b>	<b>909</b>		5.0	0.79	mg/L			12/14/20 09:09	1
<b>Alkalinity, Bicarbonate</b>	<b>909</b>		5.0	0.79	mg/L			12/14/20 09:09	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/14/20 09:09	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/14/20 09:09	1

Eurofins TestAmerica, Buffalo



# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

Client Sample ID: MW-8-DEC20-Q

Lab Sample ID: 480-178848-3

Date Collected: 12/01/20 11:03

Matrix: Water

Date Received: 12/01/20 15:20

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/04/20 05:52	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/04/20 05:52	1
<b>1,1,2-Trichloroethane</b>	<b>0.67</b>	<b>J</b>	1.0	0.15	ug/L			12/04/20 05:52	1
<b>1,1-Dichloroethane</b>	<b>21</b>		1.0	0.26	ug/L			12/04/20 05:52	1
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/04/20 05:52	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/04/20 05:52	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/04/20 05:52	1
<b>1,2-Dichloroethene, Total</b>	<b>180</b>		2.0	0.44	ug/L			12/04/20 05:52	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/04/20 05:52	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 05:52	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/04/20 05:52	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/04/20 05:52	1
Acrolein	ND		4.0	1.1	ug/L			12/04/20 05:52	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/04/20 05:52	1
Benzene	ND		1.0	0.43	ug/L			12/04/20 05:52	1
Bromoform	ND		1.0	0.54	ug/L			12/04/20 05:52	1
<b>Bromomethane</b>	<b>0.53</b>	<b>J</b>	1.0	0.45	ug/L			12/04/20 05:52	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/04/20 05:52	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/04/20 05:52	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/04/20 05:52	1
<b>Chloroethane</b>	<b>0.79</b>	<b>J</b>	1.0	0.32	ug/L			12/04/20 05:52	1
<b>Chloroform</b>	<b>1.6</b>		1.0	0.33	ug/L			12/04/20 05:52	1
<b>Chloromethane</b>	<b>21</b>		1.0	0.43	ug/L			12/04/20 05:52	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/04/20 05:52	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/04/20 05:52	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/04/20 05:52	1
<b>Methylene Chloride</b>	<b>0.48</b>	<b>J</b>	1.0	0.32	ug/L			12/04/20 05:52	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/04/20 05:52	1
Toluene	ND		1.0	0.38	ug/L			12/04/20 05:52	1
<b>trans-1,2-Dichloroethene</b>	<b>6.0</b>		1.0	0.24	ug/L			12/04/20 05:52	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/04/20 05:52	1
<b>Trichloroethene</b>	<b>1.2</b>		1.0	0.31	ug/L			12/04/20 05:52	1
<b>Vinyl chloride</b>	<b>5.4</b>		1.0	0.34	ug/L			12/04/20 05:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	123		60 - 140		12/04/20 05:52	1
4-Bromofluorobenzene	87		60 - 140		12/04/20 05:52	1
Toluene-d8 (Surr)	102		60 - 140		12/04/20 05:52	1
Dibromofluoromethane (Surr)	117		60 - 140		12/04/20 05:52	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>5950</b>		200	34.9	mg/L			12/02/20 16:10	100
<b>Alkalinity, Total</b>	<b>918</b>		5.0	0.79	mg/L			12/14/20 09:21	1
<b>Alkalinity, Bicarbonate</b>	<b>918</b>		5.0	0.79	mg/L			12/14/20 09:21	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/14/20 09:21	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/14/20 09:21	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

Client Sample ID: MW-15R-DEC20

Lab Sample ID: 480-178848-4

Date Collected: 12/01/20 13:15

Matrix: Water

Date Received: 12/01/20 15:20

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/04/20 05:30	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/04/20 05:30	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/04/20 05:30	1
<b>1,1-Dichloroethane</b>	<b>0.55</b>	<b>J</b>	1.0	0.26	ug/L			12/04/20 05:30	1
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/04/20 05:30	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/04/20 05:30	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/04/20 05:30	1
<b>1,2-Dichloroethene, Total</b>	<b>11</b>		2.0	0.44	ug/L			12/04/20 05:30	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/04/20 05:30	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 05:30	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/04/20 05:30	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/04/20 05:30	1
Acrolein	ND		4.0	1.1	ug/L			12/04/20 05:30	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/04/20 05:30	1
Benzene	ND		1.0	0.43	ug/L			12/04/20 05:30	1
Bromoform	ND		1.0	0.54	ug/L			12/04/20 05:30	1
Bromomethane	ND		1.0	0.45	ug/L			12/04/20 05:30	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/04/20 05:30	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/04/20 05:30	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/04/20 05:30	1
Chloroethane	ND		1.0	0.32	ug/L			12/04/20 05:30	1
Chloroform	ND		1.0	0.33	ug/L			12/04/20 05:30	1
Chloromethane	ND		1.0	0.43	ug/L			12/04/20 05:30	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/04/20 05:30	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/04/20 05:30	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/04/20 05:30	1
Methylene Chloride	ND		1.0	0.32	ug/L			12/04/20 05:30	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/04/20 05:30	1
Toluene	ND		1.0	0.38	ug/L			12/04/20 05:30	1
<b>trans-1,2-Dichloroethene</b>	<b>0.91</b>	<b>J</b>	1.0	0.24	ug/L			12/04/20 05:30	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/04/20 05:30	1
<b>Trichloroethene</b>	<b>1.8</b>		1.0	0.31	ug/L			12/04/20 05:30	1
<b>Vinyl chloride</b>	<b>0.85</b>	<b>J</b>	1.0	0.34	ug/L			12/04/20 05:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	121		60 - 140		12/04/20 05:30	1
4-Bromofluorobenzene	93		60 - 140		12/04/20 05:30	1
Toluene-d8 (Surr)	101		60 - 140		12/04/20 05:30	1
Dibromofluoromethane (Surr)	117		60 - 140		12/04/20 05:30	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>85.3</b>		10.0	1.7	mg/L			12/02/20 16:25	5
<b>Alkalinity, Total</b>	<b>402</b>		5.0	0.79	mg/L			12/14/20 09:28	1
<b>Alkalinity, Bicarbonate</b>	<b>402</b>		5.0	0.79	mg/L			12/14/20 09:28	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/14/20 09:28	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/14/20 09:28	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

Client Sample ID: MW-2R-DEC20

Lab Sample ID: 480-178848-5

Date Collected: 12/01/20 13:25

Matrix: Water

Date Received: 12/01/20 15:20

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/04/20 05:07	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/04/20 05:07	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/04/20 05:07	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			12/04/20 05:07	1
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/04/20 05:07	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/04/20 05:07	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/04/20 05:07	1
<b>1,2-Dichloroethene, Total</b>	<b>2.5</b>		2.0	0.44	ug/L			12/04/20 05:07	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/04/20 05:07	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 05:07	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/04/20 05:07	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/04/20 05:07	1
Acrolein	ND		4.0	1.1	ug/L			12/04/20 05:07	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/04/20 05:07	1
Benzene	ND		1.0	0.43	ug/L			12/04/20 05:07	1
Bromoform	ND		1.0	0.54	ug/L			12/04/20 05:07	1
Bromomethane	ND		1.0	0.45	ug/L			12/04/20 05:07	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/04/20 05:07	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/04/20 05:07	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/04/20 05:07	1
Chloroethane	ND		1.0	0.32	ug/L			12/04/20 05:07	1
Chloroform	ND		1.0	0.33	ug/L			12/04/20 05:07	1
Chloromethane	ND		1.0	0.43	ug/L			12/04/20 05:07	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/04/20 05:07	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/04/20 05:07	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/04/20 05:07	1
Methylene Chloride	ND		1.0	0.32	ug/L			12/04/20 05:07	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/04/20 05:07	1
Toluene	ND		1.0	0.38	ug/L			12/04/20 05:07	1
trans-1,2-Dichloroethene	ND		1.0	0.24	ug/L			12/04/20 05:07	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/04/20 05:07	1
Trichloroethene	ND		1.0	0.31	ug/L			12/04/20 05:07	1
<b>Vinyl chloride</b>	<b>0.42 J</b>		1.0	0.34	ug/L			12/04/20 05:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	119		60 - 140		12/04/20 05:07	1
4-Bromofluorobenzene	89		60 - 140		12/04/20 05:07	1
Toluene-d8 (Surr)	100		60 - 140		12/04/20 05:07	1
Dibromofluoromethane (Surr)	116		60 - 140		12/04/20 05:07	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>10.4</b>		2.0	0.35	mg/L			12/02/20 16:39	1
<b>Alkalinity, Total</b>	<b>41.5</b>		5.0	0.79	mg/L			12/14/20 09:34	1
<b>Alkalinity, Bicarbonate</b>	<b>41.5</b>		5.0	0.79	mg/L			12/14/20 09:34	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/14/20 09:34	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/14/20 09:34	1

Eurofins TestAmerica, Buffalo

# Surrogate Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	DCA (60-140)	BFB (60-140)	TOL (60-140)	DBFM (60-140)
480-178848-1	TB-20201201	114	93	100	116
480-178848-2	MW-8-DEC20	123	91	103	119
480-178848-3	MW-8-DEC20-Q	123	87	102	117
480-178848-4	MW-15R-DEC20	121	93	101	117
480-178848-5	MW-2R-DEC20	119	89	100	116
LCS 460-744294/5	Lab Control Sample	115	92	102	115
LCSD 460-744294/6	Lab Control Sample Dup	117	96	101	113
MB 460-744294/9	Method Blank	116	92	102	118

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)



# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 460-744294/9

Matrix: Water

Analysis Batch: 744294

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/03/20 21:33	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/03/20 21:33	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/03/20 21:33	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			12/03/20 21:33	1
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/03/20 21:33	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/03/20 21:33	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/03/20 21:33	1
1,2-Dichloroethene, Total	ND		2.0	0.44	ug/L			12/03/20 21:33	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/03/20 21:33	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/03/20 21:33	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/03/20 21:33	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/03/20 21:33	1
Acrolein	ND		4.0	1.1	ug/L			12/03/20 21:33	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/03/20 21:33	1
Benzene	ND		1.0	0.43	ug/L			12/03/20 21:33	1
Bromoform	ND		1.0	0.54	ug/L			12/03/20 21:33	1
Bromomethane	ND		1.0	0.45	ug/L			12/03/20 21:33	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/03/20 21:33	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/03/20 21:33	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/03/20 21:33	1
Chloroethane	ND		1.0	0.32	ug/L			12/03/20 21:33	1
Chloroform	ND		1.0	0.33	ug/L			12/03/20 21:33	1
Chloromethane	ND		1.0	0.43	ug/L			12/03/20 21:33	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/03/20 21:33	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/03/20 21:33	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/03/20 21:33	1
Methylene Chloride	ND		1.0	0.32	ug/L			12/03/20 21:33	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/03/20 21:33	1
Toluene	ND		1.0	0.38	ug/L			12/03/20 21:33	1
trans-1,2-Dichloroethene	ND		1.0	0.24	ug/L			12/03/20 21:33	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/03/20 21:33	1
Trichloroethene	ND		1.0	0.31	ug/L			12/03/20 21:33	1
Vinyl chloride	ND		1.0	0.34	ug/L			12/03/20 21:33	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		60 - 140		12/03/20 21:33	1
4-Bromofluorobenzene	92		60 - 140		12/03/20 21:33	1
Toluene-d8 (Surr)	102		60 - 140		12/03/20 21:33	1
Dibromofluoromethane (Surr)	118		60 - 140		12/03/20 21:33	1

Lab Sample ID: LCS 460-744294/5

Matrix: Water

Analysis Batch: 744294

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	22.0		ug/L		110	70 - 130
1,1,2,2-Tetrachloroethane	20.0	20.4		ug/L		102	60 - 140
1,1,2-Trichloroethane	20.0	19.8		ug/L		99	70 - 130

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 460-744294/5

Matrix: Water

Analysis Batch: 744294

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	20.0	22.2		ug/L		111	70 - 130
1,1-Dichloroethene	20.0	22.7		ug/L		113	50 - 150
1,2-Dichlorobenzene	20.0	18.5		ug/L		92	65 - 135
1,2-Dichloroethane	20.0	22.2		ug/L		111	70 - 130
1,2-Dichloropropane	20.0	22.6		ug/L		113	35 - 165
1,3-Dichlorobenzene	20.0	17.9		ug/L		89	70 - 130
1,4-Dichlorobenzene	20.0	18.2		ug/L		91	65 - 135
2-Chloroethyl vinyl ether	20.0	22.2		ug/L		111	0.1 - 225
Benzene	20.0	19.9		ug/L		100	65 - 135
Bromoform	20.0	22.3		ug/L		111	70 - 130
Bromomethane	20.0	23.7		ug/L		119	15 - 185
Carbon tetrachloride	20.0	22.4		ug/L		112	70 - 130
Chlorobenzene	20.0	19.7		ug/L		99	65 - 135
Chlorodibromomethane	20.0	19.6		ug/L		98	70 - 135
Chloroethane	20.0	22.1		ug/L		111	40 - 160
Chloroform	20.0	23.4		ug/L		117	70 - 135
Chloromethane	20.0	20.6		ug/L		103	0.1 - 205
cis-1,3-Dichloropropene	20.0	20.4		ug/L		102	25 - 175
Dichlorobromomethane	20.0	21.4		ug/L		107	65 - 135
Ethylbenzene	20.0	19.0		ug/L		95	60 - 140
Methylene Chloride	20.0	21.9		ug/L		109	60 - 140
Tetrachloroethene	20.0	18.1		ug/L		91	70 - 130
Toluene	20.0	19.1		ug/L		95	70 - 130
trans-1,2-Dichloroethene	20.0	23.0		ug/L		115	70 - 130
trans-1,3-Dichloropropene	20.0	20.9		ug/L		104	50 - 150
Trichloroethene	20.0	21.4		ug/L		107	65 - 135
Vinyl chloride	20.0	20.4		ug/L		102	5 - 195

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	115		60 - 140
4-Bromofluorobenzene	92		60 - 140
Toluene-d8 (Surr)	102		60 - 140
Dibromofluoromethane (Surr)	115		60 - 140

Lab Sample ID: LCSD 460-744294/6

Matrix: Water

Analysis Batch: 744294

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	20.0	22.3		ug/L		111	70 - 130	1	36
1,1,2,2-Tetrachloroethane	20.0	20.6		ug/L		103	60 - 140	1	61
1,1,2-Trichloroethane	20.0	19.7		ug/L		98	70 - 130	1	45
1,1-Dichloroethane	20.0	21.1		ug/L		106	70 - 130	5	40
1,1-Dichloroethene	20.0	22.0		ug/L		110	50 - 150	3	32
1,2-Dichlorobenzene	20.0	18.4		ug/L		92	65 - 135	0	57
1,2-Dichloroethane	20.0	22.4		ug/L		112	70 - 130	1	49
1,2-Dichloropropane	20.0	22.4		ug/L		112	35 - 165	1	55
1,3-Dichlorobenzene	20.0	17.4		ug/L		87	70 - 130	3	43

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 460-744294/6

Matrix: Water

Analysis Batch: 744294

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dichlorobenzene	20.0	17.8		ug/L		89	65 - 135	2	57
2-Chloroethyl vinyl ether	20.0	23.7		ug/L		118	0.1 - 225	7	71
Benzene	20.0	19.4		ug/L		97	65 - 135	3	61
Bromoform	20.0	21.9		ug/L		109	70 - 130	2	42
Bromomethane	20.0	23.9		ug/L		119	15 - 185	1	61
Carbon tetrachloride	20.0	21.8		ug/L		109	70 - 130	3	41
Chlorobenzene	20.0	18.9		ug/L		95	65 - 135	4	53
Chlorodibromomethane	20.0	19.4		ug/L		97	70 - 135	1	50
Chloroethane	20.0	22.7		ug/L		114	40 - 160	3	78
Chloroform	20.0	22.3		ug/L		112	70 - 135	5	54
Chloromethane	20.0	20.6		ug/L		103	0.1 - 205	0	60
cis-1,3-Dichloropropene	20.0	20.4		ug/L		102	25 - 175	0	58
Dichlorobromomethane	20.0	21.6		ug/L		108	65 - 135	1	56
Ethylbenzene	20.0	18.7		ug/L		94	60 - 140	1	63
Methylene Chloride	20.0	22.2		ug/L		111	60 - 140	2	28
Tetrachloroethene	20.0	17.8		ug/L		89	70 - 130	2	39
Toluene	20.0	19.2		ug/L		96	70 - 130	1	41
trans-1,2-Dichloroethene	20.0	22.1		ug/L		111	70 - 130	4	45
trans-1,3-Dichloropropene	20.0	20.7		ug/L		104	50 - 150	1	86
Trichloroethene	20.0	20.9		ug/L		104	65 - 135	3	48
Vinyl chloride	20.0	21.0		ug/L		105	5 - 195	3	66

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	117		60 - 140
4-Bromofluorobenzene	96		60 - 140
Toluene-d8 (Surr)	101		60 - 140
Dibromofluoromethane (Surr)	113		60 - 140

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-561644/4

Matrix: Water

Analysis Batch: 561644

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		2.0	0.35	mg/L			12/02/20 13:29	1

Lab Sample ID: LCS 480-561644/3

Matrix: Water

Analysis Batch: 561644

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	50.0	50.19		mg/L		100	90 - 110

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 480-178848-2 MS

Matrix: Water

Analysis Batch: 561644

Client Sample ID: MW-8-DEC20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	5780		5000	10500	E	mg/L		94	80 - 120

Lab Sample ID: 480-178848-2 MSD

Matrix: Water

Analysis Batch: 561644

Client Sample ID: MW-8-DEC20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	5780		5000	10550	E	mg/L		95	80 - 120	0	15

## Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-563199/28

Matrix: Water

Analysis Batch: 563199

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0	0.79	mg/L			12/14/20 11:54	1
Alkalinity, Bicarbonate	ND		5.0	0.79	mg/L			12/14/20 11:54	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/14/20 11:54	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/14/20 11:54	1

Lab Sample ID: MB 480-563199/4

Matrix: Water

Analysis Batch: 563199

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0	0.79	mg/L			12/14/20 08:50	1
Alkalinity, Bicarbonate	ND		5.0	0.79	mg/L			12/14/20 08:50	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/14/20 08:50	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/14/20 08:50	1

Lab Sample ID: MB 480-563199/52

Matrix: Water

Analysis Batch: 563199

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0	0.79	mg/L			12/14/20 15:05	1
Alkalinity, Bicarbonate	ND		5.0	0.79	mg/L			12/14/20 15:05	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/14/20 15:05	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/14/20 15:05	1

Lab Sample ID: LCS 480-563199/29

Matrix: Water

Analysis Batch: 563199

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	96.72		mg/L		97	90 - 110

Eurofins TestAmerica, Buffalo



# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

## Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 480-563199/5

Matrix: Water

Analysis Batch: 563199

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	97.92		mg/L		98	90 - 110

Lab Sample ID: LCS 480-563199/53

Matrix: Water

Analysis Batch: 563199

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	96.16		mg/L		96	90 - 110

# QC Association Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

## GC/MS VOA

### Analysis Batch: 744294

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-178848-1	TB-20201201	Total/NA	Water	624.1	
480-178848-2	MW-8-DEC20	Total/NA	Water	624.1	
480-178848-3	MW-8-DEC20-Q	Total/NA	Water	624.1	
480-178848-4	MW-15R-DEC20	Total/NA	Water	624.1	
480-178848-5	MW-2R-DEC20	Total/NA	Water	624.1	
MB 460-744294/9	Method Blank	Total/NA	Water	624.1	
LCS 460-744294/5	Lab Control Sample	Total/NA	Water	624.1	
LCSD 460-744294/6	Lab Control Sample Dup	Total/NA	Water	624.1	

## General Chemistry

### Analysis Batch: 561644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-178848-2	MW-8-DEC20	Total/NA	Water	300.0	
480-178848-3	MW-8-DEC20-Q	Total/NA	Water	300.0	
480-178848-4	MW-15R-DEC20	Total/NA	Water	300.0	
480-178848-5	MW-2R-DEC20	Total/NA	Water	300.0	
MB 480-561644/4	Method Blank	Total/NA	Water	300.0	
LCS 480-561644/3	Lab Control Sample	Total/NA	Water	300.0	
480-178848-2 MS	MW-8-DEC20	Total/NA	Water	300.0	
480-178848-2 MSD	MW-8-DEC20	Total/NA	Water	300.0	

### Analysis Batch: 563199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-178848-2	MW-8-DEC20	Total/NA	Water	SM 2320B	
480-178848-3	MW-8-DEC20-Q	Total/NA	Water	SM 2320B	
480-178848-4	MW-15R-DEC20	Total/NA	Water	SM 2320B	
480-178848-5	MW-2R-DEC20	Total/NA	Water	SM 2320B	
MB 480-563199/28	Method Blank	Total/NA	Water	SM 2320B	
MB 480-563199/4	Method Blank	Total/NA	Water	SM 2320B	
MB 480-563199/52	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-563199/29	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-563199/5	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-563199/53	Lab Control Sample	Total/NA	Water	SM 2320B	

# Lab Chronicle

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

**Client Sample ID: TB-20201201**

**Lab Sample ID: 480-178848-1**

**Date Collected: 12/01/20 10:00**

**Matrix: Water**

**Date Received: 12/01/20 15:20**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	744294	12/03/20 23:28	GXY	TAL EDI

**Client Sample ID: MW-8-DEC20**

**Lab Sample ID: 480-178848-2**

**Date Collected: 12/01/20 11:03**

**Matrix: Water**

**Date Received: 12/01/20 15:20**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	744294	12/04/20 06:15	GXY	TAL EDI
Total/NA	Analysis	300.0		100	561644	12/02/20 14:57	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	563199	12/14/20 09:09	DLG	TAL BUF

**Client Sample ID: MW-8-DEC20-Q**

**Lab Sample ID: 480-178848-3**

**Date Collected: 12/01/20 11:03**

**Matrix: Water**

**Date Received: 12/01/20 15:20**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	744294	12/04/20 05:52	GXY	TAL EDI
Total/NA	Analysis	300.0		100	561644	12/02/20 16:10	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	563199	12/14/20 09:21	DLG	TAL BUF

**Client Sample ID: MW-15R-DEC20**

**Lab Sample ID: 480-178848-4**

**Date Collected: 12/01/20 13:15**

**Matrix: Water**

**Date Received: 12/01/20 15:20**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	744294	12/04/20 05:30	GXY	TAL EDI
Total/NA	Analysis	300.0		5	561644	12/02/20 16:25	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	563199	12/14/20 09:28	DLG	TAL BUF

**Client Sample ID: MW-2R-DEC20**

**Lab Sample ID: 480-178848-5**

**Date Collected: 12/01/20 13:25**

**Matrix: Water**

**Date Received: 12/01/20 15:20**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	744294	12/04/20 05:07	GXY	TAL EDI
Total/NA	Analysis	300.0		1	561644	12/02/20 16:39	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	563199	12/14/20 09:34	DLG	TAL BUF

## Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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

Eurofins TestAmerica, Buffalo

# Accreditation/Certification Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

## Laboratory: Eurofins TestAmerica, Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-01-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
SM 2320B		Water	Alkalinity, Bicarbonate
SM 2320B		Water	Alkalinity, Carbonate
SM 2320B		Water	Hydroxide Alkalinity

## Laboratory: Eurofins TestAmerica, Edison

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	11452	04-01-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
624.1		Water	1,2-Dichloroethene, Total



## Method Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL EDI
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF

### Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

### Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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

## Sample Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178848-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-178848-1	TB-20201201	Water	12/01/20 10:00	12/01/20 15:20	
480-178848-2	MW-8-DEC20	Water	12/01/20 11:03	12/01/20 15:20	
480-178848-3	MW-8-DEC20-Q	Water	12/01/20 11:03	12/01/20 15:20	
480-178848-4	MW-15R-DEC20	Water	12/01/20 13:15	12/01/20 15:20	
480-178848-5	MW-2R-DEC20	Water	12/01/20 13:25	12/01/20 15:20	

Ver: 11/01/2020



[illegible]



## Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-178848-1

**Login Number: 178848**

**List Source: Eurofins TestAmerica, Buffalo**

**List Number: 1**

**Creator: Sabuda, Brendan D**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is 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	3.0 #1 ICE
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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

## Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-178848-1

**Login Number: 178848**

**List Number: 2**

**Creator: Armbruster, Chris**

**List Source: Eurofins TestAmerica, Edison**

**List Creation: 12/03/20 11:43 AM**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	1427183, 1427182
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.9, 5.2°C IR11
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo  
10 Hazelwood Drive  
Amherst, NY 14228-2298  
Tel: (716)691-2600

Laboratory Job ID: 480-178915-1

Client Project/Site: Davis-Howland Oil Corp #828088

**For:**

New York State D.E.C.  
625 Broadway  
Division of Environmental Remediation  
Albany, New York 12233-7014

Attn: Jenelle Gaylord



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12/16/2020 4:11:35 PM

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*Results relate only to the items tested and the sample(s) as received by the laboratory.*

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.



---

Wyatt Watson  
Project Management Assistant I  
12/16/2020 4:11:35 PM



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# Definitions/Glossary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### General Chemistry

Qualifier	Qualifier Description
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.

## Glossary

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

# Case Narrative

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

## Job ID: 480-178915-1

Laboratory: Eurofins TestAmerica, Buffalo

### Narrative

#### Job Narrative 480-178915-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 12/2/2020 5:15 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.6° C.

#### Receipt Exceptions

One container for the following samples were received broken or leaking: TB-20201202 (480-178915-1), MW-5R-DEC20 (480-178915-2), MW-5R-DEC20 (480-178915-2[MS]), MW-5R-DEC20 (480-178915-2[MSD]), RB-20201202-FA1805 (480-178915-3), MW-14R-DEC20 (480-178915-4), MW-10R-DEC20 (480-178915-5) and MW-16R-DEC20 (480-178915-6).

#### GC/MS VOA

Method 624.1: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-10R-DEC20 (480-178915-5). Elevated reporting limits (RLs) are provided.

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

#### HPLC/IC

Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-5R-DEC20 (480-178915-2), MW-14R-DEC20 (480-178915-4) and MW-16R-DEC20 (480-178915-6). Elevated reporting limits (RLs) are provided.

Method 300.0: The following sample was diluted due to the abundance of non-target analytes: MW-10R-DEC20 (480-178915-5). Elevated reporting limits (RLs) are provided.

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

#### General Chemistry

Method SM 2320B: The method requirement for no headspace was not met. The following Alkalinity samples were analyzed with headspace in the sample container(s): MW-5R-DEC20 (480-178915-2[MS]), MW-5R-DEC20 (480-178915-2[MSD]), MW-14R-DEC20 (480-178915-4), MW-10R-DEC20 (480-178915-5) and MW-16R-DEC20 (480-178915-6).

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

#### VOA Prep

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

# Detection Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

## Client Sample ID: TB-20201202

## Lab Sample ID: 480-178915-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.35	J	1.0	0.32	ug/L	1		624.1	Total/NA

## Client Sample ID: MW-5R-DEC20

## Lab Sample ID: 480-178915-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	13		1.0	0.26	ug/L	1		624.1	Total/NA
1,1-Dichloroethene	2.8		1.0	0.12	ug/L	1		624.1	Total/NA
1,2-Dichloroethene, Total	390		2.0	0.44	ug/L	1		624.1	Total/NA
Benzene	1.0		1.0	0.43	ug/L	1		624.1	Total/NA
trans-1,2-Dichloroethene	6.3		1.0	0.24	ug/L	1		624.1	Total/NA
Trichloroethene	19		1.0	0.31	ug/L	1		624.1	Total/NA
Vinyl chloride	53		1.0	0.34	ug/L	1		624.1	Total/NA
Sulfate	298		10.0	1.7	mg/L	5		300.0	Total/NA
Alkalinity, Total	304	F1	5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	304		5.0	0.79	mg/L	1		SM 2320B	Total/NA

## Client Sample ID: RB-20201202-FA1805

## Lab Sample ID: 480-178915-3

No Detections.

## Client Sample ID: MW-14R-DEC20

## Lab Sample ID: 480-178915-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, Total	10		2.0	0.44	ug/L	1		624.1	Total/NA
trans-1,2-Dichloroethene	0.93	J	1.0	0.24	ug/L	1		624.1	Total/NA
Trichloroethene	1.5		1.0	0.31	ug/L	1		624.1	Total/NA
Vinyl chloride	3.2		1.0	0.34	ug/L	1		624.1	Total/NA
Sulfate	60.2		4.0	0.70	mg/L	2		300.0	Total/NA
Alkalinity, Total	335		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	335		5.0	0.79	mg/L	1		SM 2320B	Total/NA

## Client Sample ID: MW-10R-DEC20

## Lab Sample ID: 480-178915-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	5.8		2.0	0.48	ug/L	2		624.1	Total/NA
1,1-Dichloroethane	2.9		2.0	0.53	ug/L	2		624.1	Total/NA
1,1-Dichloroethene	7.5		2.0	0.23	ug/L	2		624.1	Total/NA
1,2-Dichloroethene, Total	21		4.0	0.87	ug/L	2		624.1	Total/NA
Tetrachloroethene	3.1		2.0	0.50	ug/L	2		624.1	Total/NA
trans-1,2-Dichloroethene	4.3		2.0	0.47	ug/L	2		624.1	Total/NA
Trichloroethene	680		2.0	0.63	ug/L	2		624.1	Total/NA
Sulfate	51.8		10.0	1.7	mg/L	5		300.0	Total/NA
Alkalinity, Total	337		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	337		5.0	0.79	mg/L	1		SM 2320B	Total/NA

## Client Sample ID: MW-16R-DEC20

## Lab Sample ID: 480-178915-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	475		10.0	1.7	mg/L	5		300.0	Total/NA
Alkalinity, Total	430		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	430		5.0	0.79	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo



# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

Client Sample ID: TB-20201202

Lab Sample ID: 480-178915-1

Date Collected: 12/02/20 09:00

Matrix: Water

Date Received: 12/02/20 17:15

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/04/20 14:44	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/04/20 14:44	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/04/20 14:44	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			12/04/20 14:44	1
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/04/20 14:44	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/04/20 14:44	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/04/20 14:44	1
1,2-Dichloroethene, Total	ND		2.0	0.44	ug/L			12/04/20 14:44	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/04/20 14:44	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 14:44	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/04/20 14:44	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/04/20 14:44	1
Acrolein	ND		4.0	1.1	ug/L			12/04/20 14:44	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/04/20 14:44	1
Benzene	ND		1.0	0.43	ug/L			12/04/20 14:44	1
Bromoform	ND		1.0	0.54	ug/L			12/04/20 14:44	1
Bromomethane	ND		1.0	0.45	ug/L			12/04/20 14:44	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/04/20 14:44	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/04/20 14:44	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/04/20 14:44	1
Chloroethane	ND		1.0	0.32	ug/L			12/04/20 14:44	1
Chloroform	ND		1.0	0.33	ug/L			12/04/20 14:44	1
Chloromethane	ND		1.0	0.43	ug/L			12/04/20 14:44	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/04/20 14:44	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/04/20 14:44	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/04/20 14:44	1
Methylene Chloride	0.35	J	1.0	0.32	ug/L			12/04/20 14:44	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/04/20 14:44	1
Toluene	ND		1.0	0.38	ug/L			12/04/20 14:44	1
trans-1,2-Dichloroethene	ND		1.0	0.24	ug/L			12/04/20 14:44	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/04/20 14:44	1
Trichloroethene	ND		1.0	0.31	ug/L			12/04/20 14:44	1
Vinyl chloride	ND		1.0	0.34	ug/L			12/04/20 14:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	121		60 - 140		12/04/20 14:44	1
4-Bromofluorobenzene	89		60 - 140		12/04/20 14:44	1
Toluene-d8 (Surr)	102		60 - 140		12/04/20 14:44	1
Dibromofluoromethane (Surr)	120		60 - 140		12/04/20 14:44	1

Client Sample ID: MW-5R-DEC20

Lab Sample ID: 480-178915-2

Date Collected: 12/02/20 11:05

Matrix: Water

Date Received: 12/02/20 17:15

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/04/20 15:29	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/04/20 15:29	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/04/20 15:29	1
1,1-Dichloroethane	13		1.0	0.26	ug/L			12/04/20 15:29	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

Client Sample ID: MW-5R-DEC20

Lab Sample ID: 480-178915-2

Date Collected: 12/02/20 11:05

Matrix: Water

Date Received: 12/02/20 17:15

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	2.8		1.0	0.12	ug/L			12/04/20 15:29	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/04/20 15:29	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/04/20 15:29	1
1,2-Dichloroethene, Total	390		2.0	0.44	ug/L			12/04/20 15:29	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/04/20 15:29	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 15:29	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/04/20 15:29	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/04/20 15:29	1
Acrolein	ND		4.0	1.1	ug/L			12/04/20 15:29	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/04/20 15:29	1
Benzene	1.0		1.0	0.43	ug/L			12/04/20 15:29	1
Bromoform	ND		1.0	0.54	ug/L			12/04/20 15:29	1
Bromomethane	ND		1.0	0.45	ug/L			12/04/20 15:29	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/04/20 15:29	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/04/20 15:29	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/04/20 15:29	1
Chloroethane	ND		1.0	0.32	ug/L			12/04/20 15:29	1
Chloroform	ND		1.0	0.33	ug/L			12/04/20 15:29	1
Chloromethane	ND		1.0	0.43	ug/L			12/04/20 15:29	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/04/20 15:29	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/04/20 15:29	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/04/20 15:29	1
Methylene Chloride	ND		1.0	0.32	ug/L			12/04/20 15:29	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/04/20 15:29	1
Toluene	ND		1.0	0.38	ug/L			12/04/20 15:29	1
trans-1,2-Dichloroethene	6.3		1.0	0.24	ug/L			12/04/20 15:29	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/04/20 15:29	1
Trichloroethene	19		1.0	0.31	ug/L			12/04/20 15:29	1
Vinyl chloride	53		1.0	0.34	ug/L			12/04/20 15:29	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		60 - 140					12/04/20 15:29	1
4-Bromofluorobenzene	87		60 - 140					12/04/20 15:29	1
Toluene-d8 (Surr)	101		60 - 140					12/04/20 15:29	1
Dibromofluoromethane (Surr)	112		60 - 140					12/04/20 15:29	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	298		10.0	1.7	mg/L			12/04/20 00:34	5
Alkalinity, Total	304	F1	5.0	0.79	mg/L			12/14/20 12:07	1
Alkalinity, Bicarbonate	304		5.0	0.79	mg/L			12/14/20 12:07	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/14/20 12:07	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/14/20 12:07	1

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

Client Sample ID: RB-20201202-FA1805

Lab Sample ID: 480-178915-3

Date Collected: 12/02/20 12:30

Matrix: Water

Date Received: 12/02/20 17:15

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/04/20 15:06	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/04/20 15:06	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/04/20 15:06	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			12/04/20 15:06	1
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/04/20 15:06	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/04/20 15:06	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/04/20 15:06	1
1,2-Dichloroethene, Total	ND		2.0	0.44	ug/L			12/04/20 15:06	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/04/20 15:06	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 15:06	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/04/20 15:06	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/04/20 15:06	1
Acrolein	ND		4.0	1.1	ug/L			12/04/20 15:06	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/04/20 15:06	1
Benzene	ND		1.0	0.43	ug/L			12/04/20 15:06	1
Bromoform	ND		1.0	0.54	ug/L			12/04/20 15:06	1
Bromomethane	ND		1.0	0.45	ug/L			12/04/20 15:06	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/04/20 15:06	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/04/20 15:06	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/04/20 15:06	1
Chloroethane	ND		1.0	0.32	ug/L			12/04/20 15:06	1
Chloroform	ND		1.0	0.33	ug/L			12/04/20 15:06	1
Chloromethane	ND		1.0	0.43	ug/L			12/04/20 15:06	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/04/20 15:06	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/04/20 15:06	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/04/20 15:06	1
Methylene Chloride	ND		1.0	0.32	ug/L			12/04/20 15:06	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/04/20 15:06	1
Toluene	ND		1.0	0.38	ug/L			12/04/20 15:06	1
trans-1,2-Dichloroethene	ND		1.0	0.24	ug/L			12/04/20 15:06	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/04/20 15:06	1
Trichloroethene	ND		1.0	0.31	ug/L			12/04/20 15:06	1
Vinyl chloride	ND		1.0	0.34	ug/L			12/04/20 15:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	121		60 - 140		12/04/20 15:06	1
4-Bromofluorobenzene	89		60 - 140		12/04/20 15:06	1
Toluene-d8 (Surr)	103		60 - 140		12/04/20 15:06	1
Dibromofluoromethane (Surr)	117		60 - 140		12/04/20 15:06	1

Client Sample ID: MW-14R-DEC20

Lab Sample ID: 480-178915-4

Date Collected: 12/02/20 13:25

Matrix: Water

Date Received: 12/02/20 17:15

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/04/20 15:52	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/04/20 15:52	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/04/20 15:52	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			12/04/20 15:52	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

Client Sample ID: MW-14R-DEC20

Lab Sample ID: 480-178915-4

Date Collected: 12/02/20 13:25

Matrix: Water

Date Received: 12/02/20 17:15

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/04/20 15:52	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/04/20 15:52	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/04/20 15:52	1
<b>1,2-Dichloroethene, Total</b>	<b>10</b>		2.0	0.44	ug/L			12/04/20 15:52	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/04/20 15:52	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 15:52	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/04/20 15:52	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/04/20 15:52	1
Acrolein	ND		4.0	1.1	ug/L			12/04/20 15:52	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/04/20 15:52	1
Benzene	ND		1.0	0.43	ug/L			12/04/20 15:52	1
Bromoform	ND		1.0	0.54	ug/L			12/04/20 15:52	1
Bromomethane	ND		1.0	0.45	ug/L			12/04/20 15:52	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/04/20 15:52	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/04/20 15:52	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/04/20 15:52	1
Chloroethane	ND		1.0	0.32	ug/L			12/04/20 15:52	1
Chloroform	ND		1.0	0.33	ug/L			12/04/20 15:52	1
Chloromethane	ND		1.0	0.43	ug/L			12/04/20 15:52	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/04/20 15:52	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/04/20 15:52	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/04/20 15:52	1
Methylene Chloride	ND		1.0	0.32	ug/L			12/04/20 15:52	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/04/20 15:52	1
Toluene	ND		1.0	0.38	ug/L			12/04/20 15:52	1
<b>trans-1,2-Dichloroethene</b>	<b>0.93 J</b>		1.0	0.24	ug/L			12/04/20 15:52	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/04/20 15:52	1
<b>Trichloroethene</b>	<b>1.5</b>		1.0	0.31	ug/L			12/04/20 15:52	1
<b>Vinyl chloride</b>	<b>3.2</b>		1.0	0.34	ug/L			12/04/20 15:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	121		60 - 140					12/04/20 15:52	1
4-Bromofluorobenzene	91		60 - 140					12/04/20 15:52	1
Toluene-d8 (Surr)	102		60 - 140					12/04/20 15:52	1
Dibromofluoromethane (Surr)	118		60 - 140					12/04/20 15:52	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>60.2</b>		4.0	0.70	mg/L			12/03/20 20:55	2
<b>Alkalinity, Total</b>	<b>335</b>		5.0	0.79	mg/L			12/14/20 10:38	1
<b>Alkalinity, Bicarbonate</b>	<b>335</b>		5.0	0.79	mg/L			12/14/20 10:38	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/14/20 10:38	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/14/20 10:38	1

Eurofins TestAmerica, Buffalo



# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

Client Sample ID: MW-10R-DEC20

Lab Sample ID: 480-178915-5

Date Collected: 12/02/20 10:55

Matrix: Water

Date Received: 12/02/20 17:15

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	5.8		2.0	0.48	ug/L			12/04/20 23:00	2
1,1,2,2-Tetrachloroethane	ND		2.0	0.73	ug/L			12/04/20 23:00	2
1,1,2-Trichloroethane	ND		2.0	0.30	ug/L			12/04/20 23:00	2
1,1-Dichloroethane	2.9		2.0	0.53	ug/L			12/04/20 23:00	2
1,1-Dichloroethene	7.5		2.0	0.23	ug/L			12/04/20 23:00	2
1,2-Dichlorobenzene	ND		2.0	0.37	ug/L			12/04/20 23:00	2
1,2-Dichloroethane	ND		2.0	1.7	ug/L			12/04/20 23:00	2
1,2-Dichloroethene, Total	21		4.0	0.87	ug/L			12/04/20 23:00	2
1,2-Dichloropropane	ND		2.0	0.71	ug/L			12/04/20 23:00	2
1,3-Dichlorobenzene	ND		2.0	0.26	ug/L			12/04/20 23:00	2
1,4-Dichlorobenzene	ND		2.0	0.35	ug/L			12/04/20 23:00	2
2-Chloroethyl vinyl ether	ND		2.0	1.8	ug/L			12/04/20 23:00	2
Acrolein	ND		8.0	2.2	ug/L			12/04/20 23:00	2
Acrylonitrile	ND		4.0	1.5	ug/L			12/04/20 23:00	2
Benzene	ND		2.0	0.86	ug/L			12/04/20 23:00	2
Bromoform	ND		2.0	1.1	ug/L			12/04/20 23:00	2
Bromomethane	ND		2.0	0.90	ug/L			12/04/20 23:00	2
Carbon tetrachloride	ND		2.0	0.42	ug/L			12/04/20 23:00	2
Chlorobenzene	ND		2.0	0.75	ug/L			12/04/20 23:00	2
Chlorodibromomethane	ND		2.0	0.26	ug/L			12/04/20 23:00	2
Chloroethane	ND		2.0	0.64	ug/L			12/04/20 23:00	2
Chloroform	ND		2.0	0.65	ug/L			12/04/20 23:00	2
Chloromethane	ND		2.0	0.87	ug/L			12/04/20 23:00	2
cis-1,3-Dichloropropene	ND		2.0	0.91	ug/L			12/04/20 23:00	2
Dichlorobromomethane	ND		2.0	0.69	ug/L			12/04/20 23:00	2
Ethylbenzene	ND		2.0	0.60	ug/L			12/04/20 23:00	2
Methylene Chloride	ND		2.0	0.63	ug/L			12/04/20 23:00	2
Tetrachloroethene	3.1		2.0	0.50	ug/L			12/04/20 23:00	2
Toluene	ND		2.0	0.76	ug/L			12/04/20 23:00	2
trans-1,2-Dichloroethene	4.3		2.0	0.47	ug/L			12/04/20 23:00	2
trans-1,3-Dichloropropene	ND		2.0	0.43	ug/L			12/04/20 23:00	2
Trichloroethene	680		2.0	0.63	ug/L			12/04/20 23:00	2
Vinyl chloride	ND		2.0	0.68	ug/L			12/04/20 23:00	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	121		60 - 140		12/04/20 23:00	2
4-Bromofluorobenzene	93		60 - 140		12/04/20 23:00	2
Toluene-d8 (Surr)	102		60 - 140		12/04/20 23:00	2
Dibromofluoromethane (Surr)	117		60 - 140		12/04/20 23:00	2

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	51.8		10.0	1.7	mg/L			12/03/20 21:10	5
Alkalinity, Total	337		5.0	0.79	mg/L			12/14/20 10:45	1
Alkalinity, Bicarbonate	337		5.0	0.79	mg/L			12/14/20 10:45	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/14/20 10:45	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/14/20 10:45	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

**Client Sample ID: MW-16R-DEC20**

**Lab Sample ID: 480-178915-6**

**Date Collected: 12/02/20 09:20**

**Matrix: Water**

**Date Received: 12/02/20 17:15**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	475		10.0	1.7	mg/L			12/03/20 21:25	5
Alkalinity, Total	430		5.0	0.79	mg/L			12/14/20 10:53	1
Alkalinity, Bicarbonate	430		5.0	0.79	mg/L			12/14/20 10:53	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/14/20 10:53	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/14/20 10:53	1

# Surrogate Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (60-140)	BFB (60-140)	TOL (60-140)	DBFM (60-140)
480-178915-1	TB-20201202	121	89	102	120
480-178915-2	MW-5R-DEC20	118	87	101	112
480-178915-2 MS	MW-5R-DEC20	126	94	103	123
480-178915-2 MSD	MW-5R-DEC20	122	94	103	118
480-178915-3	RB-20201202-FA1805	121	89	103	117
480-178915-4	MW-14R-DEC20	121	91	102	118
480-178915-5	MW-10R-DEC20	121	93	102	117
LCS 460-744421/4	Lab Control Sample	115	90	102	119
LCS 460-744596/5	Lab Control Sample	116	91	100	117
LCSD 460-744596/6	Lab Control Sample Dup	116	91	100	116
MB 460-744421/8	Method Blank	116	88	100	116
MB 460-744596/9	Method Blank	118	90	97	116

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 460-744421/8

Matrix: Water

Analysis Batch: 744421

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/04/20 09:49	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/04/20 09:49	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/04/20 09:49	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			12/04/20 09:49	1
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/04/20 09:49	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/04/20 09:49	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/04/20 09:49	1
1,2-Dichloroethene, Total	ND		2.0	0.44	ug/L			12/04/20 09:49	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/04/20 09:49	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 09:49	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/04/20 09:49	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/04/20 09:49	1
Acrolein	ND		4.0	1.1	ug/L			12/04/20 09:49	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/04/20 09:49	1
Benzene	ND		1.0	0.43	ug/L			12/04/20 09:49	1
Bromoform	ND		1.0	0.54	ug/L			12/04/20 09:49	1
Bromomethane	ND		1.0	0.45	ug/L			12/04/20 09:49	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/04/20 09:49	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/04/20 09:49	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/04/20 09:49	1
Chloroethane	ND		1.0	0.32	ug/L			12/04/20 09:49	1
Chloroform	ND		1.0	0.33	ug/L			12/04/20 09:49	1
Chloromethane	ND		1.0	0.43	ug/L			12/04/20 09:49	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/04/20 09:49	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/04/20 09:49	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/04/20 09:49	1
Methylene Chloride	ND		1.0	0.32	ug/L			12/04/20 09:49	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/04/20 09:49	1
Toluene	ND		1.0	0.38	ug/L			12/04/20 09:49	1
trans-1,2-Dichloroethene	ND		1.0	0.24	ug/L			12/04/20 09:49	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/04/20 09:49	1
Trichloroethene	ND		1.0	0.31	ug/L			12/04/20 09:49	1
Vinyl chloride	ND		1.0	0.34	ug/L			12/04/20 09:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		60 - 140		12/04/20 09:49	1
4-Bromofluorobenzene	88		60 - 140		12/04/20 09:49	1
Toluene-d8 (Surr)	100		60 - 140		12/04/20 09:49	1
Dibromofluoromethane (Surr)	116		60 - 140		12/04/20 09:49	1

Lab Sample ID: LCS 460-744421/4

Matrix: Water

Analysis Batch: 744421

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	21.9		ug/L		109	70 - 130
1,1,2,2-Tetrachloroethane	20.0	20.7		ug/L		104	60 - 140
1,1,2-Trichloroethane	20.0	18.8		ug/L		94	70 - 130

Eurofins TestAmerica, Buffalo



# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 460-744421/4

Matrix: Water

Analysis Batch: 744421

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	20.0	21.6		ug/L		108	70 - 130
1,1-Dichloroethene	20.0	21.2		ug/L		106	50 - 150
1,2-Dichlorobenzene	20.0	17.7		ug/L		89	65 - 135
1,2-Dichloroethane	20.0	22.0		ug/L		110	70 - 130
1,2-Dichloropropane	20.0	21.0		ug/L		105	35 - 165
1,3-Dichlorobenzene	20.0	17.6		ug/L		88	70 - 130
1,4-Dichlorobenzene	20.0	17.7		ug/L		89	65 - 135
2-Chloroethyl vinyl ether	20.0	19.6		ug/L		98	0.1 - 225
Benzene	20.0	18.8		ug/L		94	65 - 135
Bromoform	20.0	20.5		ug/L		102	70 - 130
Bromomethane	20.0	23.0		ug/L		115	15 - 185
Carbon tetrachloride	20.0	21.8		ug/L		109	70 - 130
Chlorobenzene	20.0	17.9		ug/L		90	65 - 135
Chlorodibromomethane	20.0	17.8		ug/L		89	70 - 135
Chloroethane	20.0	22.0		ug/L		110	40 - 160
Chloroform	20.0	21.9		ug/L		109	70 - 135
Chloromethane	20.0	20.8		ug/L		104	0.1 - 205
cis-1,3-Dichloropropene	20.0	19.5		ug/L		97	25 - 175
Dichlorobromomethane	20.0	20.9		ug/L		104	65 - 135
Ethylbenzene	20.0	18.8		ug/L		94	60 - 140
Methylene Chloride	20.0	21.5		ug/L		108	60 - 140
Tetrachloroethene	20.0	17.4		ug/L		87	70 - 130
Toluene	20.0	18.4		ug/L		92	70 - 130
trans-1,2-Dichloroethene	20.0	22.6		ug/L		113	70 - 130
trans-1,3-Dichloropropene	20.0	19.8		ug/L		99	50 - 150
Trichloroethene	20.0	20.1		ug/L		100	65 - 135
Vinyl chloride	20.0	22.1		ug/L		111	5 - 195

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	115		60 - 140
4-Bromofluorobenzene	90		60 - 140
Toluene-d8 (Surr)	102		60 - 140
Dibromofluoromethane (Surr)	119		60 - 140

Lab Sample ID: 480-178915-2 MS

Matrix: Water

Analysis Batch: 744421

Client Sample ID: MW-5R-DEC20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	ND		20.0	22.4		ug/L		112	52 - 162
1,1,1,2-Tetrachloroethane	ND		20.0	20.8		ug/L		104	46 - 157
1,1,2-Trichloroethane	ND		20.0	19.7		ug/L		99	52 - 150
1,1-Dichloroethane	13		20.0	32.7		ug/L		100	59 - 155
1,1-Dichloroethene	2.8		20.0	25.5		ug/L		114	0.1 - 234
1,2-Dichlorobenzene	ND		20.0	16.7		ug/L		83	18 - 190
1,2-Dichloroethane	ND		20.0	24.2		ug/L		121	49 - 155
1,2-Dichloropropane	ND		20.0	23.3		ug/L		116	0.1 - 210
1,3-Dichlorobenzene	ND		20.0	17.3		ug/L		87	59 - 156

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 480-178915-2 MS

Matrix: Water

Analysis Batch: 744421

Client Sample ID: MW-5R-DEC20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	ND		20.0	17.5		ug/L		87	18 - 190
2-Chloroethyl vinyl ether	ND		20.0	22.6		ug/L		112	0.1 - 305
Benzene	1.0		20.0	20.9		ug/L		99	37 - 151
Bromoform	ND		20.0	20.7		ug/L		103	45 - 169
Bromomethane	ND		20.0	24.6		ug/L		123	0.1 - 242
Carbon tetrachloride	ND		20.0	22.7		ug/L		113	70 - 140
Chlorobenzene	ND		20.0	18.7		ug/L		94	37 - 160
Chlorodibromomethane	ND		20.0	19.3		ug/L		97	53 - 149
Chloroethane	ND		20.0	23.4		ug/L		117	14 - 230
Chloroform	ND		20.0	23.2		ug/L		116	51 - 138
Chloromethane	ND		20.0	20.2		ug/L		101	0.1 - 273
cis-1,3-Dichloropropene	ND		20.0	19.9		ug/L		100	0.1 - 227
Dichlorobromomethane	ND		20.0	22.4		ug/L		112	35 - 155
Ethylbenzene	ND		20.0	19.2		ug/L		96	37 - 162
Methylene Chloride	ND		20.0	23.6		ug/L		118	0.1 - 221
Tetrachloroethene	ND		20.0	17.6		ug/L		88	64 - 148
Toluene	ND		20.0	19.1		ug/L		95	47 - 150
trans-1,2-Dichloroethene	6.3		20.0	27.3		ug/L		105	54 - 156
trans-1,3-Dichloropropene	ND		20.0	20.9		ug/L		104	17 - 183
Trichloroethene	19		20.0	36.2		ug/L		88	70 - 157
Vinyl chloride	53		20.0	61.0		ug/L		41	0.1 - 251

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	126		60 - 140
4-Bromofluorobenzene	94		60 - 140
Toluene-d8 (Surr)	103		60 - 140
Dibromofluoromethane (Surr)	123		60 - 140

Lab Sample ID: 480-178915-2 MSD

Matrix: Water

Analysis Batch: 744421

Client Sample ID: MW-5R-DEC20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND		20.0	23.2		ug/L		116	52 - 162	4	36
1,1,2,2-Tetrachloroethane	ND		20.0	21.9		ug/L		110	46 - 157	6	61
1,1,2-Trichloroethane	ND		20.0	19.6		ug/L		98	52 - 150	0	45
1,1-Dichloroethane	13		20.0	32.7		ug/L		100	59 - 155	0	40
1,1-Dichloroethene	2.8		20.0	25.6		ug/L		114	0.1 - 234	0	32
1,2-Dichlorobenzene	ND		20.0	17.9		ug/L		89	18 - 190	7	57
1,2-Dichloroethane	ND		20.0	22.8		ug/L		114	49 - 155	6	49
1,2-Dichloropropane	ND		20.0	23.4		ug/L		117	0.1 - 210	1	55
1,3-Dichlorobenzene	ND		20.0	17.7		ug/L		88	59 - 156	2	43
1,4-Dichlorobenzene	ND		20.0	18.0		ug/L		90	18 - 190	3	57
2-Chloroethyl vinyl ether	ND		20.0	23.1		ug/L		115	0.1 - 305	2	71
Benzene	1.0		20.0	20.8		ug/L		99	37 - 151	1	61
Bromoform	ND		20.0	21.0		ug/L		105	45 - 169	1	42
Bromomethane	ND		20.0	24.8		ug/L		124	0.1 - 242	1	61
Carbon tetrachloride	ND		20.0	22.4		ug/L		112	70 - 140	1	41

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 480-178915-2 MSD

Matrix: Water

Analysis Batch: 744421

Client Sample ID: MW-5R-DEC20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorobenzene	ND		20.0	18.7		ug/L		94	37 - 160	0	53
Chlorodibromomethane	ND		20.0	19.5		ug/L		98	53 - 149	1	50
Chloroethane	ND		20.0	24.5		ug/L		123	14 - 230	5	78
Chloroform	ND		20.0	23.2		ug/L		116	51 - 138	0	54
Chloromethane	ND		20.0	20.5		ug/L		102	0.1 - 273	2	60
cis-1,3-Dichloropropene	ND		20.0	19.6		ug/L		98	0.1 - 227	2	58
Dichlorobromomethane	ND		20.0	22.7		ug/L		113	35 - 155	1	56
Ethylbenzene	ND		20.0	19.0		ug/L		95	37 - 162	1	63
Methylene Chloride	ND		20.0	23.6		ug/L		118	0.1 - 221	0	28
Tetrachloroethene	ND		20.0	18.4		ug/L		92	64 - 148	4	39
Toluene	ND		20.0	19.6		ug/L		98	47 - 150	2	41
trans-1,2-Dichloroethene	6.3		20.0	27.2		ug/L		104	54 - 156	0	45
trans-1,3-Dichloropropene	ND		20.0	20.9		ug/L		104	17 - 183	0	86
Trichloroethene	19		20.0	35.5		ug/L		84	70 - 157	2	48
Vinyl chloride	53		20.0	61.5		ug/L		43	0.1 - 251	1	66

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	122		60 - 140
4-Bromofluorobenzene	94		60 - 140
Toluene-d8 (Surr)	103		60 - 140
Dibromofluoromethane (Surr)	118		60 - 140

Lab Sample ID: MB 460-744596/9

Matrix: Water

Analysis Batch: 744596

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/04/20 21:30	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/04/20 21:30	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/04/20 21:30	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			12/04/20 21:30	1
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/04/20 21:30	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/04/20 21:30	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/04/20 21:30	1
1,2-Dichloroethene, Total	ND		2.0	0.44	ug/L			12/04/20 21:30	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/04/20 21:30	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 21:30	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/04/20 21:30	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/04/20 21:30	1
Acrolein	ND		4.0	1.1	ug/L			12/04/20 21:30	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/04/20 21:30	1
Benzene	ND		1.0	0.43	ug/L			12/04/20 21:30	1
Bromoform	ND		1.0	0.54	ug/L			12/04/20 21:30	1
Bromomethane	ND		1.0	0.45	ug/L			12/04/20 21:30	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/04/20 21:30	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/04/20 21:30	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/04/20 21:30	1
Chloroethane	ND		1.0	0.32	ug/L			12/04/20 21:30	1

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 460-744596/9

Matrix: Water

Analysis Batch: 744596

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		1.0	0.33	ug/L			12/04/20 21:30	1
Chloromethane	ND		1.0	0.43	ug/L			12/04/20 21:30	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/04/20 21:30	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/04/20 21:30	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/04/20 21:30	1
Methylene Chloride	ND		1.0	0.32	ug/L			12/04/20 21:30	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/04/20 21:30	1
Toluene	ND		1.0	0.38	ug/L			12/04/20 21:30	1
trans-1,2-Dichloroethene	ND		1.0	0.24	ug/L			12/04/20 21:30	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/04/20 21:30	1
Trichloroethene	ND		1.0	0.31	ug/L			12/04/20 21:30	1
Vinyl chloride	ND		1.0	0.34	ug/L			12/04/20 21:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		60 - 140		12/04/20 21:30	1
4-Bromofluorobenzene	90		60 - 140		12/04/20 21:30	1
Toluene-d8 (Surr)	97		60 - 140		12/04/20 21:30	1
Dibromofluoromethane (Surr)	116		60 - 140		12/04/20 21:30	1

Lab Sample ID: LCS 460-744596/5

Matrix: Water

Analysis Batch: 744596

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	22.4		ug/L		112	70 - 130
1,1,2,2-Tetrachloroethane	20.0	20.8		ug/L		104	60 - 140
1,1,2-Trichloroethane	20.0	18.7		ug/L		94	70 - 130
1,1-Dichloroethane	20.0	22.2		ug/L		111	70 - 130
1,1-Dichloroethene	20.0	21.2		ug/L		106	50 - 150
1,2-Dichlorobenzene	20.0	17.0		ug/L		85	65 - 135
1,2-Dichloroethane	20.0	23.1		ug/L		116	70 - 130
1,2-Dichloropropane	20.0	22.6		ug/L		113	35 - 165
1,3-Dichlorobenzene	20.0	17.8		ug/L		89	70 - 130
1,4-Dichlorobenzene	20.0	17.7		ug/L		88	65 - 135
2-Chloroethyl vinyl ether	20.0	23.0		ug/L		115	0.1 - 225
Benzene	20.0	19.5		ug/L		98	65 - 135
Bromoform	20.0	19.9		ug/L		100	70 - 130
Bromomethane	20.0	22.8		ug/L		114	15 - 185
Carbon tetrachloride	20.0	21.3		ug/L		107	70 - 130
Chlorobenzene	20.0	18.4		ug/L		92	65 - 135
Chlorodibromomethane	20.0	18.9		ug/L		95	70 - 135
Chloroethane	20.0	20.8		ug/L		104	40 - 160
Chloroform	20.0	22.0		ug/L		110	70 - 135
Chloromethane	20.0	20.5		ug/L		103	0.1 - 205
cis-1,3-Dichloropropene	20.0	19.6		ug/L		98	25 - 175
Dichlorobromomethane	20.0	22.1		ug/L		110	65 - 135
Ethylbenzene	20.0	19.8		ug/L		99	60 - 140
Methylene Chloride	20.0	22.4		ug/L		112	60 - 140

Eurofins TestAmerica, Buffalo



# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 460-744596/5

Matrix: Water

Analysis Batch: 744596

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	20.0	17.0		ug/L		85	70 - 130
Toluene	20.0	19.1		ug/L		95	70 - 130
trans-1,2-Dichloroethene	20.0	22.0		ug/L		110	70 - 130
trans-1,3-Dichloropropene	20.0	20.9		ug/L		105	50 - 150
Trichloroethene	20.0	21.0		ug/L		105	65 - 135
Vinyl chloride	20.0	21.5		ug/L		108	5 - 195

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	116		60 - 140
4-Bromofluorobenzene	91		60 - 140
Toluene-d8 (Surr)	100		60 - 140
Dibromofluoromethane (Surr)	117		60 - 140

Lab Sample ID: LCSD 460-744596/6

Matrix: Water

Analysis Batch: 744596

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	20.0	23.0		ug/L		115	70 - 130	2	36
1,1,2,2-Tetrachloroethane	20.0	22.2		ug/L		111	60 - 140	6	61
1,1,2-Trichloroethane	20.0	20.2		ug/L		101	70 - 130	8	45
1,1-Dichloroethane	20.0	23.7		ug/L		118	70 - 130	6	40
1,1-Dichloroethene	20.0	23.4		ug/L		117	50 - 150	10	32
1,2-Dichlorobenzene	20.0	18.1		ug/L		90	65 - 135	6	57
1,2-Dichloroethane	20.0	23.7		ug/L		119	70 - 130	2	49
1,2-Dichloropropane	20.0	23.3		ug/L		117	35 - 165	3	55
1,3-Dichlorobenzene	20.0	18.4		ug/L		92	70 - 130	4	43
1,4-Dichlorobenzene	20.0	18.2		ug/L		91	65 - 135	3	57
2-Chloroethyl vinyl ether	20.0	22.0		ug/L		110	0.1 - 225	4	71
Benzene	20.0	20.4		ug/L		102	65 - 135	4	61
Bromoform	20.0	20.7		ug/L		103	70 - 130	4	42
Bromomethane	20.0	23.8		ug/L		119	15 - 185	4	61
Carbon tetrachloride	20.0	22.6		ug/L		113	70 - 130	6	41
Chlorobenzene	20.0	19.6		ug/L		98	65 - 135	6	53
Chlorodibromomethane	20.0	19.1		ug/L		96	70 - 135	1	50
Chloroethane	20.0	22.5		ug/L		113	40 - 160	8	78
Chloroform	20.0	23.3		ug/L		116	70 - 135	6	54
Chloromethane	20.0	20.7		ug/L		103	0.1 - 205	1	60
cis-1,3-Dichloropropene	20.0	21.1		ug/L		105	25 - 175	7	58
Dichlorobromomethane	20.0	23.1		ug/L		116	65 - 135	5	56
Ethylbenzene	20.0	19.6		ug/L		98	60 - 140	1	63
Methylene Chloride	20.0	23.1		ug/L		115	60 - 140	3	28
Tetrachloroethene	20.0	17.9		ug/L		90	70 - 130	5	39
Toluene	20.0	20.1		ug/L		100	70 - 130	5	41
trans-1,2-Dichloroethene	20.0	23.3		ug/L		117	70 - 130	6	45
trans-1,3-Dichloropropene	20.0	21.3		ug/L		106	50 - 150	2	86
Trichloroethene	20.0	22.0		ug/L		110	65 - 135	4	48
Vinyl chloride	20.0	22.3		ug/L		112	5 - 195	4	66

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 460-744596/6

Matrix: Water

Analysis Batch: 744596

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

	LCSD	LCSD	
Surrogate	%Recovery	Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	116		60 - 140
4-Bromofluorobenzene	91		60 - 140
Toluene-d8 (Surr)	100		60 - 140
Dibromofluoromethane (Surr)	116		60 - 140

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-561871/28

Matrix: Water

Analysis Batch: 561871

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		2.0	0.35	mg/L			12/03/20 23:07	1

Lab Sample ID: MB 480-561871/4

Matrix: Water

Analysis Batch: 561871

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		2.0	0.35	mg/L			12/03/20 17:17	1

Lab Sample ID: LCS 480-561871/27

Matrix: Water

Analysis Batch: 561871

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	50.0	49.66		mg/L		99	90 - 110

Lab Sample ID: LCS 480-561871/3

Matrix: Water

Analysis Batch: 561871

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	50.0	50.00		mg/L		100	90 - 110

Lab Sample ID: 480-178915-2 MS

Matrix: Water

Analysis Batch: 561871

Client Sample ID: MW-5R-DEC20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	298		250	523.1	E	mg/L		90	80 - 120

Lab Sample ID: 480-178915-2 MSD

Matrix: Water

Analysis Batch: 561871

Client Sample ID: MW-5R-DEC20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	298		250	524.7	E	mg/L		91	80 - 120	0	15

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

## Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-563199/28

Matrix: Water

Analysis Batch: 563199

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0	0.79	mg/L			12/14/20 11:54	1
Alkalinity, Bicarbonate	ND		5.0	0.79	mg/L			12/14/20 11:54	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/14/20 11:54	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/14/20 11:54	1

Lab Sample ID: MB 480-563199/4

Matrix: Water

Analysis Batch: 563199

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0	0.79	mg/L			12/14/20 08:50	1
Alkalinity, Bicarbonate	ND		5.0	0.79	mg/L			12/14/20 08:50	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/14/20 08:50	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/14/20 08:50	1

Lab Sample ID: MB 480-563199/52

Matrix: Water

Analysis Batch: 563199

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0	0.79	mg/L			12/14/20 15:05	1
Alkalinity, Bicarbonate	ND		5.0	0.79	mg/L			12/14/20 15:05	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			12/14/20 15:05	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			12/14/20 15:05	1

Lab Sample ID: LCS 480-563199/29

Matrix: Water

Analysis Batch: 563199

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	96.72		mg/L		97	90 - 110

Lab Sample ID: LCS 480-563199/5

Matrix: Water

Analysis Batch: 563199

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	97.92		mg/L		98	90 - 110

Lab Sample ID: LCS 480-563199/53

Matrix: Water

Analysis Batch: 563199

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	96.16		mg/L		96	90 - 110

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

## Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 480-178915-2 MS

Matrix: Water

Analysis Batch: 563199

Client Sample ID: MW-5R-DEC20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	304	F1	100	356.3	F1	mg/L		53	60 - 140

Lab Sample ID: 480-178915-2 MSD

Matrix: Water

Analysis Batch: 563199

Client Sample ID: MW-5R-DEC20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity, Total	304	F1	100	353.2	F1	mg/L		50	60 - 140	1	20



# QC Association Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

## GC/MS VOA

### Analysis Batch: 744421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-178915-1	TB-20201202	Total/NA	Water	624.1	
480-178915-2	MW-5R-DEC20	Total/NA	Water	624.1	
480-178915-3	RB-20201202-FA1805	Total/NA	Water	624.1	
480-178915-4	MW-14R-DEC20	Total/NA	Water	624.1	
MB 460-744421/8	Method Blank	Total/NA	Water	624.1	
LCS 460-744421/4	Lab Control Sample	Total/NA	Water	624.1	
480-178915-2 MS	MW-5R-DEC20	Total/NA	Water	624.1	
480-178915-2 MSD	MW-5R-DEC20	Total/NA	Water	624.1	

### Analysis Batch: 744596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-178915-5	MW-10R-DEC20	Total/NA	Water	624.1	
MB 460-744596/9	Method Blank	Total/NA	Water	624.1	
LCS 460-744596/5	Lab Control Sample	Total/NA	Water	624.1	
LCSD 460-744596/6	Lab Control Sample Dup	Total/NA	Water	624.1	

## General Chemistry

### Analysis Batch: 561871

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-178915-2	MW-5R-DEC20	Total/NA	Water	300.0	
480-178915-4	MW-14R-DEC20	Total/NA	Water	300.0	
480-178915-5	MW-10R-DEC20	Total/NA	Water	300.0	
480-178915-6	MW-16R-DEC20	Total/NA	Water	300.0	
MB 480-561871/28	Method Blank	Total/NA	Water	300.0	
MB 480-561871/4	Method Blank	Total/NA	Water	300.0	
LCS 480-561871/27	Lab Control Sample	Total/NA	Water	300.0	
LCS 480-561871/3	Lab Control Sample	Total/NA	Water	300.0	
480-178915-2 MS	MW-5R-DEC20	Total/NA	Water	300.0	
480-178915-2 MSD	MW-5R-DEC20	Total/NA	Water	300.0	

### Analysis Batch: 563199

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-178915-2	MW-5R-DEC20	Total/NA	Water	SM 2320B	
480-178915-4	MW-14R-DEC20	Total/NA	Water	SM 2320B	
480-178915-5	MW-10R-DEC20	Total/NA	Water	SM 2320B	
480-178915-6	MW-16R-DEC20	Total/NA	Water	SM 2320B	
MB 480-563199/28	Method Blank	Total/NA	Water	SM 2320B	
MB 480-563199/4	Method Blank	Total/NA	Water	SM 2320B	
MB 480-563199/52	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-563199/29	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-563199/5	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 480-563199/53	Lab Control Sample	Total/NA	Water	SM 2320B	
480-178915-2 MS	MW-5R-DEC20	Total/NA	Water	SM 2320B	
480-178915-2 MSD	MW-5R-DEC20	Total/NA	Water	SM 2320B	

# Lab Chronicle

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

**Client Sample ID: TB-20201202**

**Lab Sample ID: 480-178915-1**

**Date Collected: 12/02/20 09:00**

**Matrix: Water**

**Date Received: 12/02/20 17:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	744421	12/04/20 14:44	CJM	TAL EDI

**Client Sample ID: MW-5R-DEC20**

**Lab Sample ID: 480-178915-2**

**Date Collected: 12/02/20 11:05**

**Matrix: Water**

**Date Received: 12/02/20 17:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	744421	12/04/20 15:29	CJM	TAL EDI
Total/NA	Analysis	300.0		5	561871	12/04/20 00:34	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	563199	12/14/20 12:07	DLG	TAL BUF

**Client Sample ID: RB-20201202-FA1805**

**Lab Sample ID: 480-178915-3**

**Date Collected: 12/02/20 12:30**

**Matrix: Water**

**Date Received: 12/02/20 17:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	744421	12/04/20 15:06	CJM	TAL EDI

**Client Sample ID: MW-14R-DEC20**

**Lab Sample ID: 480-178915-4**

**Date Collected: 12/02/20 13:25**

**Matrix: Water**

**Date Received: 12/02/20 17:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	744421	12/04/20 15:52	CJM	TAL EDI
Total/NA	Analysis	300.0		2	561871	12/03/20 20:55	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	563199	12/14/20 10:38	DLG	TAL BUF

**Client Sample ID: MW-10R-DEC20**

**Lab Sample ID: 480-178915-5**

**Date Collected: 12/02/20 10:55**

**Matrix: Water**

**Date Received: 12/02/20 17:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		2	744596	12/04/20 23:00	MZS	TAL EDI
Total/NA	Analysis	300.0		5	561871	12/03/20 21:10	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	563199	12/14/20 10:45	DLG	TAL BUF

**Client Sample ID: MW-16R-DEC20**

**Lab Sample ID: 480-178915-6**

**Date Collected: 12/02/20 09:20**

**Matrix: Water**

**Date Received: 12/02/20 17:15**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5	561871	12/03/20 21:25	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	563199	12/14/20 10:53	DLG	TAL BUF

# Lab Chronicle

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

**Laboratory References:**

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600  
TAL EDI = Eurofins TestAmerica, Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

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## Accreditation/Certification Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

### Laboratory: Eurofins TestAmerica, Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-01-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
SM 2320B		Water	Alkalinity, Bicarbonate
SM 2320B		Water	Alkalinity, Carbonate
SM 2320B		Water	Hydroxide Alkalinity

### Laboratory: Eurofins TestAmerica, Edison

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	11452	04-01-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
624.1		Water	1,2-Dichloroethene, Total



## Method Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL EDI
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF

### Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

### Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

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

# Sample Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178915-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-178915-1	TB-20201202	Water	12/02/20 09:00	12/02/20 17:15	
480-178915-2	MW-5R-DEC20	Water	12/02/20 11:05	12/02/20 17:15	
480-178915-3	RB-20201202-FA1805	Water	12/02/20 12:30	12/02/20 17:15	
480-178915-4	MW-14R-DEC20	Water	12/02/20 13:25	12/02/20 17:15	
480-178915-5	MW-10R-DEC20	Water	12/02/20 10:55	12/02/20 17:15	
480-178915-6	MW-16R-DEC20	Water	12/02/20 09:20	12/02/20 17:15	

## Chain of Custody Record


 Environment Testing  
America

<b>Client Information</b> Client Contact: Jenelle Gaylord Company: New York State D.E.C. Address: 625 Broadway Division of Environmental Remediation City: Albany State: NY, Zip: 12233-7014 Phone: 518-485-7014 Email: jenelle.gaylord@dec.ny.gov Project Name: Davis-Howland Oil Corp #828088 Site:		Sampler: CW, CP Phone: 716-864-8060 Lab PM: Johnson, Oriette S E-Mail: Oriette.Johnson@Eurofinset.com Carrier Tracking No(s): State of Origin:		COC No: 480-153402-34083.3 Page: Page 3 of 3 Job #: 1 of 1	
Due Date Requested: TAT Requested (days): Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No PO #: 136612 Call/Out ID: 136612 WO #:		<b>Analysis Requested</b> Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - H2SO4 F - HNO3 G - Ascorbic Acid H - DI Water I - EDTA J - EDA K - TSP Dodecahydrate L - U - Acetone M - MCAA N - pH 4-5 O - other (specify)			
Sample Identification TB-20201202 MW-16R-DEC20 MW-5R-DEC20 RB-20201202-FA1805 MW-14R-DEC20 RB-20201202-FA3029 MW-16R-DEC20 ED-FA3029-DEC20		Sample Date 12/2/2020 12/2/20 12/2/20 12/2/20 12/2/20 12/2/20 12/2/20		Sample Time 09:00 07:20 11:05 12:30 13:25 13:45 10:55 13:40	
Sample Type (C=Comp, G=grab) TB C C RB C RB C G		Matrix (W=Water, S=solid, O=Other) Water Water Water Water Water Water Water Water		Preservation Code: N N N N N N N N	
Field Filtered Sample (Yes or No) Perform MS/MSD (Yes or No) 624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 28D - (MOD) Sulfate 2320B - Alkalinity		Total Number of 1 3 14 3 3 3 3 3		Special Instructions/Note: Trip Blank Sulfate bottles - (1) 60ml, (1) 250ml, (1) 125ml Rinse blank Rinse blank Rinse blank Rinse blank	
<b>Possible Hazard Identification</b> <input checked="" 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)					
Empty Kit Relinquished by: CWJ Relinquished by: CWJ Relinquished by: Relinquished by:					
Date/Time: 12/2/2020 1:45 Date/Time: Date/Time:		Date/Time: 12/2/2020 17:15 Date/Time: Date/Time:		Date/Time: 12/2/2020 17:15 Date/Time: Date/Time:	
Company: WSP Company: Company:		Company: WSP Company: Company:		Company: WSP Company: Company:	
Custody Seal No.: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks: 4.6 #1			







# Chain of Custody Record



Environment Testing  
 America



<b>Client Information (Sub Contract Lab)</b>		Lab PM: Johnson, Oriette S		Carrier Tracking No(s): 480-60711.1	
Client Contact: 777 New Durham Road,		E-Mail: Oriette.Johnson@Eurofins.com		Page: Page 1 of 1	
Shipping/Receiving		Accreditations Required (See note): NELAP - New York		Job #: 480-178915-1	
Company: TestAmerica Laboratories, Inc.		Due Date Requested: 12/15/2020		Preservation Codes:	
Address: 777 New Durham Road,		TAT Requested (days):		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
City: Edison		PO #:		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO3 S - H2SO4 T - TSP Dodecalhydrate U - Acetone V - MCAA W - pH 4.5 Z - other (specify)	
State Zip: NJ, 08817		WO #:			
Phone: 732-549-3900(Tel) 732-549-3679(Fax)		Project #:			
Email:		48019422			
Project Name: Davis-Howland Oil Corp #828088		SSOW#:			
Site:					

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solids, O=oil, BT=tissue, A=air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	624.1 PREC/624 Prep_30 (MOD) Priority Pollutant	Analysis Requested	Total Number of Containers	Special Instructions/Note:
TB-20201202 (480-178915-1)	12/2/20	09:00 Eastern		Water	X	X			1	
MW-5R-DEC20 (480-178915-2)	12/2/20	11:05 Eastern		Water	X	X			3	
MW-5R-DEC20 (480-178915-2MS)	12/2/20	11:05 Eastern	MS	Water	X	X			3	
MW-5R-DEC20 (480-178915-2MSD)	12/2/20	11:05 Eastern	MSD	Water	X	X			3	
RB-20201202-FA1805 (480-178915-3)	12/2/20	12:30 Eastern		Water	X	X			3	
MW-14R-DEC20 (480-178915-4)	12/2/20	13:25 Eastern		Water	X	X			3	
MW-10R-DEC20 (480-178915-5)	12/2/20	10:55 Eastern		Water	X	X			3	

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

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

Empty Kit Relinquished by:		Date:		Time:	
Relinquished by: <i>Ullow C. Webb</i>		Date/Time: 12/16/2020 17:00		Company: <i>ETA</i>	
Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: 1427197, 1427198		Cooler Temperature(s) °C and Other Remarks: 5.9, 4-20C <i>ETA</i>	

## Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-178915-1

**Login Number: 178915**

**List Source: Eurofins TestAmerica, Buffalo**

**List Number: 1**

**Creator: Sabuda, Brendan D**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is 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	4.6 #1 ICE
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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

## Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-178915-1

**Login Number: 178915**

**List Number: 2**

**Creator: Armbruster, Chris**

**List Source: Eurofins TestAmerica, Edison**

**List Creation: 12/04/20 12:56 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	1427197, 1427196
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.9, 4.2°C IR11
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.	False	Containers recd broken. Sufficient sample in remaining containers for analysis.
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo  
10 Hazelwood Drive  
Amherst, NY 14228-2298  
Tel: (716)691-2600

Laboratory Job ID: 480-178952-1

Client Project/Site: Davis-Howland Oil Corp #828088

**For:**

New York State D.E.C.  
625 Broadway  
Division of Environmental Remediation  
Albany, New York 12233-7014

Attn: Jenelle Gaylord



Authorized for release by:  
12/14/2020 12:44:16 PM

Orlette Johnson, Senior Project Manager  
(484)685-0864  
[Orlette.Johnson@Eurofinset.com](mailto:Orlette.Johnson@Eurofinset.com)

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.



---

Orlette Johnson  
Senior Project Manager  
12/14/2020 12:44:16 PM



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## Definitions/Glossary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### 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: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

**Job ID: 480-178952-1**

**Laboratory: Eurofins TestAmerica, Buffalo**

## Narrative

### Job Narrative 480-178952-1

#### Receipt

The samples were received on 12/3/2020 1:45 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.4° C.

#### GC/MS VOA

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

#### VOA Prep

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



## Detection Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

### Client Sample ID: MW-16R-DEC20

Lab Sample ID: 480-178952-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	15		1.0	0.26	ug/L	1		624.1	Total/NA
1,1-Dichloroethene	4.4		1.0	0.12	ug/L	1		624.1	Total/NA
1,2-Dichloroethene, Total	350		2.0	0.44	ug/L	1		624.1	Total/NA
trans-1,2-Dichloroethene	2.3		1.0	0.24	ug/L	1		624.1	Total/NA
Vinyl chloride	110		1.0	0.34	ug/L	1		624.1	Total/NA

### Client Sample ID: IDW-PURGEWATER-DEC20

Lab Sample ID: 480-178952-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.34	J	1.0	0.24	ug/L	1		624.1	Total/NA
1,1-Dichloroethane	5.8		1.0	0.26	ug/L	1		624.1	Total/NA
1,2-Dichloroethene, Total	1.9	J	2.0	0.44	ug/L	1		624.1	Total/NA
Chloromethane	2.5		1.0	0.43	ug/L	1		624.1	Total/NA
trans-1,2-Dichloroethene	0.33	J	1.0	0.24	ug/L	1		624.1	Total/NA
Trichloroethene	3.4		1.0	0.31	ug/L	1		624.1	Total/NA

### Client Sample ID: TB-20201203

Lab Sample ID: 480-178952-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.39	J	1.0	0.32	ug/L	1		624.1	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

Client Sample ID: MW-16R-DEC20

Lab Sample ID: 480-178952-1

Date Collected: 12/03/20 11:40

Matrix: Water

Date Received: 12/03/20 13:45

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/04/20 22:38	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/04/20 22:38	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/04/20 22:38	1
1,1-Dichloroethane	15		1.0	0.26	ug/L			12/04/20 22:38	1
1,1-Dichloroethene	4.4		1.0	0.12	ug/L			12/04/20 22:38	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/04/20 22:38	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/04/20 22:38	1
1,2-Dichloroethene, Total	350		2.0	0.44	ug/L			12/04/20 22:38	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/04/20 22:38	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 22:38	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/04/20 22:38	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/04/20 22:38	1
Acrolein	ND		4.0	1.1	ug/L			12/04/20 22:38	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/04/20 22:38	1
Benzene	ND		1.0	0.43	ug/L			12/04/20 22:38	1
Bromoform	ND		1.0	0.54	ug/L			12/04/20 22:38	1
Bromomethane	ND		1.0	0.45	ug/L			12/04/20 22:38	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/04/20 22:38	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/04/20 22:38	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/04/20 22:38	1
Chloroethane	ND		1.0	0.32	ug/L			12/04/20 22:38	1
Chloroform	ND		1.0	0.33	ug/L			12/04/20 22:38	1
Chloromethane	ND		1.0	0.43	ug/L			12/04/20 22:38	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/04/20 22:38	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/04/20 22:38	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/04/20 22:38	1
Methylene Chloride	ND		1.0	0.32	ug/L			12/04/20 22:38	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/04/20 22:38	1
Toluene	ND		1.0	0.38	ug/L			12/04/20 22:38	1
trans-1,2-Dichloroethene	2.3		1.0	0.24	ug/L			12/04/20 22:38	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/04/20 22:38	1
Trichloroethene	ND		1.0	0.31	ug/L			12/04/20 22:38	1
Vinyl chloride	110		1.0	0.34	ug/L			12/04/20 22:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		60 - 140		12/04/20 22:38	1
4-Bromofluorobenzene	84		60 - 140		12/04/20 22:38	1
Toluene-d8 (Surr)	99		60 - 140		12/04/20 22:38	1
Dibromofluoromethane (Surr)	116		60 - 140		12/04/20 22:38	1

Client Sample ID: IDW-PURGEWATER-DEC20

Lab Sample ID: 480-178952-2

Date Collected: 12/03/20 12:00

Matrix: Water

Date Received: 12/03/20 13:45

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.34	J	1.0	0.24	ug/L			12/04/20 17:00	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/04/20 17:00	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/04/20 17:00	1
1,1-Dichloroethane	5.8		1.0	0.26	ug/L			12/04/20 17:00	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

Client Sample ID: IDW-PURGEWATER-DEC20

Lab Sample ID: 480-178952-2

Date Collected: 12/03/20 12:00

Matrix: Water

Date Received: 12/03/20 13:45

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/04/20 17:00	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/04/20 17:00	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/04/20 17:00	1
<b>1,2-Dichloroethene, Total</b>	<b>1.9</b>	<b>J</b>	2.0	0.44	ug/L			12/04/20 17:00	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/04/20 17:00	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 17:00	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/04/20 17:00	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/04/20 17:00	1
Acrolein	ND		4.0	1.1	ug/L			12/04/20 17:00	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/04/20 17:00	1
Benzene	ND		1.0	0.43	ug/L			12/04/20 17:00	1
Bromoform	ND		1.0	0.54	ug/L			12/04/20 17:00	1
Bromomethane	ND		1.0	0.45	ug/L			12/04/20 17:00	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/04/20 17:00	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/04/20 17:00	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/04/20 17:00	1
Chloroethane	ND		1.0	0.32	ug/L			12/04/20 17:00	1
Chloroform	ND		1.0	0.33	ug/L			12/04/20 17:00	1
<b>Chloromethane</b>	<b>2.5</b>		1.0	0.43	ug/L			12/04/20 17:00	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/04/20 17:00	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/04/20 17:00	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/04/20 17:00	1
Methylene Chloride	ND		1.0	0.32	ug/L			12/04/20 17:00	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/04/20 17:00	1
Toluene	ND		1.0	0.38	ug/L			12/04/20 17:00	1
<b>trans-1,2-Dichloroethene</b>	<b>0.33</b>	<b>J</b>	1.0	0.24	ug/L			12/04/20 17:00	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/04/20 17:00	1
<b>Trichloroethene</b>	<b>3.4</b>		1.0	0.31	ug/L			12/04/20 17:00	1
Vinyl chloride	ND		1.0	0.34	ug/L			12/04/20 17:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	120		60 - 140		12/04/20 17:00	1
4-Bromofluorobenzene	86		60 - 140		12/04/20 17:00	1
Toluene-d8 (Surr)	100		60 - 140		12/04/20 17:00	1
Dibromofluoromethane (Surr)	121		60 - 140		12/04/20 17:00	1

Client Sample ID: TB-20201203

Lab Sample ID: 480-178952-3

Date Collected: 12/03/20 00:00

Matrix: Water

Date Received: 12/03/20 13:45

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/04/20 14:21	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/04/20 14:21	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/04/20 14:21	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			12/04/20 14:21	1
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/04/20 14:21	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/04/20 14:21	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/04/20 14:21	1
1,2-Dichloroethene, Total	ND		2.0	0.44	ug/L			12/04/20 14:21	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

Client Sample ID: TB-20201203

Lab Sample ID: 480-178952-3

Date Collected: 12/03/20 00:00

Matrix: Water

Date Received: 12/03/20 13:45

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/04/20 14:21	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 14:21	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/04/20 14:21	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/04/20 14:21	1
Acrolein	ND		4.0	1.1	ug/L			12/04/20 14:21	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/04/20 14:21	1
Benzene	ND		1.0	0.43	ug/L			12/04/20 14:21	1
Bromoform	ND		1.0	0.54	ug/L			12/04/20 14:21	1
Bromomethane	ND		1.0	0.45	ug/L			12/04/20 14:21	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/04/20 14:21	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/04/20 14:21	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/04/20 14:21	1
Chloroethane	ND		1.0	0.32	ug/L			12/04/20 14:21	1
Chloroform	ND		1.0	0.33	ug/L			12/04/20 14:21	1
Chloromethane	ND		1.0	0.43	ug/L			12/04/20 14:21	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/04/20 14:21	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/04/20 14:21	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/04/20 14:21	1
Methylene Chloride	0.39	J	1.0	0.32	ug/L			12/04/20 14:21	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/04/20 14:21	1
Toluene	ND		1.0	0.38	ug/L			12/04/20 14:21	1
trans-1,2-Dichloroethene	ND		1.0	0.24	ug/L			12/04/20 14:21	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/04/20 14:21	1
Trichloroethene	ND		1.0	0.31	ug/L			12/04/20 14:21	1
Vinyl chloride	ND		1.0	0.34	ug/L			12/04/20 14:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	121		60 - 140		12/04/20 14:21	1
4-Bromofluorobenzene	91		60 - 140		12/04/20 14:21	1
Toluene-d8 (Surr)	102		60 - 140		12/04/20 14:21	1
Dibromofluoromethane (Surr)	120		60 - 140		12/04/20 14:21	1



# Surrogate Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	DCA (60-140)	BFB (60-140)	TOL (60-140)	DBFM (60-140)
480-178952-1	MW-16R-DEC20	120	84	99	116
480-178952-2	IDW-PURGEWATER-DEC20	120	86	100	121
480-178952-3	TB-20201203	121	91	102	120
LCS 460-744421/4	Lab Control Sample	115	90	102	119
LCS 460-744596/5	Lab Control Sample	116	91	100	117
LCSD 460-744596/6	Lab Control Sample Dup	116	91	100	116
MB 460-744421/8	Method Blank	116	88	100	116
MB 460-744596/9	Method Blank	118	90	97	116

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene

TOL = Toluene-d8 (Surr)

DBFM = Dibromofluoromethane (Surr)

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 460-744421/8

Matrix: Water

Analysis Batch: 744421

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/04/20 09:49	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/04/20 09:49	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/04/20 09:49	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			12/04/20 09:49	1
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/04/20 09:49	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/04/20 09:49	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/04/20 09:49	1
1,2-Dichloroethene, Total	ND		2.0	0.44	ug/L			12/04/20 09:49	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/04/20 09:49	1
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 09:49	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/04/20 09:49	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/04/20 09:49	1
Acrolein	ND		4.0	1.1	ug/L			12/04/20 09:49	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/04/20 09:49	1
Benzene	ND		1.0	0.43	ug/L			12/04/20 09:49	1
Bromoform	ND		1.0	0.54	ug/L			12/04/20 09:49	1
Bromomethane	ND		1.0	0.45	ug/L			12/04/20 09:49	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/04/20 09:49	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/04/20 09:49	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/04/20 09:49	1
Chloroethane	ND		1.0	0.32	ug/L			12/04/20 09:49	1
Chloroform	ND		1.0	0.33	ug/L			12/04/20 09:49	1
Chloromethane	ND		1.0	0.43	ug/L			12/04/20 09:49	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/04/20 09:49	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/04/20 09:49	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/04/20 09:49	1
Methylene Chloride	ND		1.0	0.32	ug/L			12/04/20 09:49	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/04/20 09:49	1
Toluene	ND		1.0	0.38	ug/L			12/04/20 09:49	1
trans-1,2-Dichloroethene	ND		1.0	0.24	ug/L			12/04/20 09:49	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/04/20 09:49	1
Trichloroethene	ND		1.0	0.31	ug/L			12/04/20 09:49	1
Vinyl chloride	ND		1.0	0.34	ug/L			12/04/20 09:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		60 - 140		12/04/20 09:49	1
4-Bromofluorobenzene	88		60 - 140		12/04/20 09:49	1
Toluene-d8 (Surr)	100		60 - 140		12/04/20 09:49	1
Dibromofluoromethane (Surr)	116		60 - 140		12/04/20 09:49	1

Lab Sample ID: LCS 460-744421/4

Matrix: Water

Analysis Batch: 744421

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	21.9		ug/L		109	70 - 130
1,1,2,2-Tetrachloroethane	20.0	20.7		ug/L		104	60 - 140
1,1,2-Trichloroethane	20.0	18.8		ug/L		94	70 - 130

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 460-744421/4

Matrix: Water

Analysis Batch: 744421

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	20.0	21.6		ug/L		108	70 - 130
1,1-Dichloroethene	20.0	21.2		ug/L		106	50 - 150
1,2-Dichlorobenzene	20.0	17.7		ug/L		89	65 - 135
1,2-Dichloroethane	20.0	22.0		ug/L		110	70 - 130
1,2-Dichloropropane	20.0	21.0		ug/L		105	35 - 165
1,3-Dichlorobenzene	20.0	17.6		ug/L		88	70 - 130
1,4-Dichlorobenzene	20.0	17.7		ug/L		89	65 - 135
2-Chloroethyl vinyl ether	20.0	19.6		ug/L		98	0.1 - 225
Benzene	20.0	18.8		ug/L		94	65 - 135
Bromoform	20.0	20.5		ug/L		102	70 - 130
Bromomethane	20.0	23.0		ug/L		115	15 - 185
Carbon tetrachloride	20.0	21.8		ug/L		109	70 - 130
Chlorobenzene	20.0	17.9		ug/L		90	65 - 135
Chlorodibromomethane	20.0	17.8		ug/L		89	70 - 135
Chloroethane	20.0	22.0		ug/L		110	40 - 160
Chloroform	20.0	21.9		ug/L		109	70 - 135
Chloromethane	20.0	20.8		ug/L		104	0.1 - 205
cis-1,3-Dichloropropene	20.0	19.5		ug/L		97	25 - 175
Dichlorobromomethane	20.0	20.9		ug/L		104	65 - 135
Ethylbenzene	20.0	18.8		ug/L		94	60 - 140
Methylene Chloride	20.0	21.5		ug/L		108	60 - 140
Tetrachloroethene	20.0	17.4		ug/L		87	70 - 130
Toluene	20.0	18.4		ug/L		92	70 - 130
trans-1,2-Dichloroethene	20.0	22.6		ug/L		113	70 - 130
trans-1,3-Dichloropropene	20.0	19.8		ug/L		99	50 - 150
Trichloroethene	20.0	20.1		ug/L		100	65 - 135
Vinyl chloride	20.0	22.1		ug/L		111	5 - 195

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	115		60 - 140
4-Bromofluorobenzene	90		60 - 140
Toluene-d8 (Surr)	102		60 - 140
Dibromofluoromethane (Surr)	119		60 - 140

Lab Sample ID: MB 460-744596/9

Matrix: Water

Analysis Batch: 744596

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		1.0	0.24	ug/L			12/04/20 21:30	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.37	ug/L			12/04/20 21:30	1
1,1,2-Trichloroethane	ND		1.0	0.15	ug/L			12/04/20 21:30	1
1,1-Dichloroethane	ND		1.0	0.26	ug/L			12/04/20 21:30	1
1,1-Dichloroethene	ND		1.0	0.12	ug/L			12/04/20 21:30	1
1,2-Dichlorobenzene	ND		1.0	0.19	ug/L			12/04/20 21:30	1
1,2-Dichloroethane	ND		1.0	0.84	ug/L			12/04/20 21:30	1
1,2-Dichloroethene, Total	ND		2.0	0.44	ug/L			12/04/20 21:30	1
1,2-Dichloropropane	ND		1.0	0.35	ug/L			12/04/20 21:30	1

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 460-744596/9

Matrix: Water

Analysis Batch: 744596

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		1.0	0.13	ug/L			12/04/20 21:30	1
1,4-Dichlorobenzene	ND		1.0	0.18	ug/L			12/04/20 21:30	1
2-Chloroethyl vinyl ether	ND		1.0	0.91	ug/L			12/04/20 21:30	1
Acrolein	ND		4.0	1.1	ug/L			12/04/20 21:30	1
Acrylonitrile	ND		2.0	0.77	ug/L			12/04/20 21:30	1
Benzene	ND		1.0	0.43	ug/L			12/04/20 21:30	1
Bromoform	ND		1.0	0.54	ug/L			12/04/20 21:30	1
Bromomethane	ND		1.0	0.45	ug/L			12/04/20 21:30	1
Carbon tetrachloride	ND		1.0	0.21	ug/L			12/04/20 21:30	1
Chlorobenzene	ND		1.0	0.38	ug/L			12/04/20 21:30	1
Chlorodibromomethane	ND		1.0	0.13	ug/L			12/04/20 21:30	1
Chloroethane	ND		1.0	0.32	ug/L			12/04/20 21:30	1
Chloroform	ND		1.0	0.33	ug/L			12/04/20 21:30	1
Chloromethane	ND		1.0	0.43	ug/L			12/04/20 21:30	1
cis-1,3-Dichloropropene	ND		1.0	0.46	ug/L			12/04/20 21:30	1
Dichlorobromomethane	ND		1.0	0.34	ug/L			12/04/20 21:30	1
Ethylbenzene	ND		1.0	0.30	ug/L			12/04/20 21:30	1
Methylene Chloride	ND		1.0	0.32	ug/L			12/04/20 21:30	1
Tetrachloroethene	ND		1.0	0.25	ug/L			12/04/20 21:30	1
Toluene	ND		1.0	0.38	ug/L			12/04/20 21:30	1
trans-1,2-Dichloroethene	ND		1.0	0.24	ug/L			12/04/20 21:30	1
trans-1,3-Dichloropropene	ND		1.0	0.22	ug/L			12/04/20 21:30	1
Trichloroethene	ND		1.0	0.31	ug/L			12/04/20 21:30	1
Vinyl chloride	ND		1.0	0.34	ug/L			12/04/20 21:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	118		60 - 140		12/04/20 21:30	1
4-Bromofluorobenzene	90		60 - 140		12/04/20 21:30	1
Toluene-d8 (Surr)	97		60 - 140		12/04/20 21:30	1
Dibromofluoromethane (Surr)	116		60 - 140		12/04/20 21:30	1

Lab Sample ID: LCS 460-744596/5

Matrix: Water

Analysis Batch: 744596

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	22.4		ug/L		112	70 - 130
1,1,2,2-Tetrachloroethane	20.0	20.8		ug/L		104	60 - 140
1,1,2-Trichloroethane	20.0	18.7		ug/L		94	70 - 130
1,1-Dichloroethane	20.0	22.2		ug/L		111	70 - 130
1,1-Dichloroethene	20.0	21.2		ug/L		106	50 - 150
1,2-Dichlorobenzene	20.0	17.0		ug/L		85	65 - 135
1,2-Dichloroethane	20.0	23.1		ug/L		116	70 - 130
1,2-Dichloropropane	20.0	22.6		ug/L		113	35 - 165
1,3-Dichlorobenzene	20.0	17.8		ug/L		89	70 - 130
1,4-Dichlorobenzene	20.0	17.7		ug/L		88	65 - 135
2-Chloroethyl vinyl ether	20.0	23.0		ug/L		115	0.1 - 225
Benzene	20.0	19.5		ug/L		98	65 - 135

Eurofins TestAmerica, Buffalo



# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 460-744596/5

Matrix: Water

Analysis Batch: 744596

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromoform	20.0	19.9		ug/L		100	70 - 130
Bromomethane	20.0	22.8		ug/L		114	15 - 185
Carbon tetrachloride	20.0	21.3		ug/L		107	70 - 130
Chlorobenzene	20.0	18.4		ug/L		92	65 - 135
Chlorodibromomethane	20.0	18.9		ug/L		95	70 - 135
Chloroethane	20.0	20.8		ug/L		104	40 - 160
Chloroform	20.0	22.0		ug/L		110	70 - 135
Chloromethane	20.0	20.5		ug/L		103	0.1 - 205
cis-1,3-Dichloropropene	20.0	19.6		ug/L		98	25 - 175
Dichlorobromomethane	20.0	22.1		ug/L		110	65 - 135
Ethylbenzene	20.0	19.8		ug/L		99	60 - 140
Methylene Chloride	20.0	22.4		ug/L		112	60 - 140
Tetrachloroethene	20.0	17.0		ug/L		85	70 - 130
Toluene	20.0	19.1		ug/L		95	70 - 130
trans-1,2-Dichloroethene	20.0	22.0		ug/L		110	70 - 130
trans-1,3-Dichloropropene	20.0	20.9		ug/L		105	50 - 150
Trichloroethene	20.0	21.0		ug/L		105	65 - 135
Vinyl chloride	20.0	21.5		ug/L		108	5 - 195

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	116		60 - 140
4-Bromofluorobenzene	91		60 - 140
Toluene-d8 (Surr)	100		60 - 140
Dibromofluoromethane (Surr)	117		60 - 140

Lab Sample ID: LCSD 460-744596/6

Matrix: Water

Analysis Batch: 744596

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	20.0	23.0		ug/L		115	70 - 130	2	36
1,1,2,2-Tetrachloroethane	20.0	22.2		ug/L		111	60 - 140	6	61
1,1,2-Trichloroethane	20.0	20.2		ug/L		101	70 - 130	8	45
1,1-Dichloroethane	20.0	23.7		ug/L		118	70 - 130	6	40
1,1-Dichloroethene	20.0	23.4		ug/L		117	50 - 150	10	32
1,2-Dichlorobenzene	20.0	18.1		ug/L		90	65 - 135	6	57
1,2-Dichloroethane	20.0	23.7		ug/L		119	70 - 130	2	49
1,2-Dichloropropane	20.0	23.3		ug/L		117	35 - 165	3	55
1,3-Dichlorobenzene	20.0	18.4		ug/L		92	70 - 130	4	43
1,4-Dichlorobenzene	20.0	18.2		ug/L		91	65 - 135	3	57
2-Chloroethyl vinyl ether	20.0	22.0		ug/L		110	0.1 - 225	4	71
Benzene	20.0	20.4		ug/L		102	65 - 135	4	61
Bromoform	20.0	20.7		ug/L		103	70 - 130	4	42
Bromomethane	20.0	23.8		ug/L		119	15 - 185	4	61
Carbon tetrachloride	20.0	22.6		ug/L		113	70 - 130	6	41
Chlorobenzene	20.0	19.6		ug/L		98	65 - 135	6	53
Chlorodibromomethane	20.0	19.1		ug/L		96	70 - 135	1	50
Chloroethane	20.0	22.5		ug/L		113	40 - 160	8	78

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 460-744596/6

Matrix: Water

Analysis Batch: 744596

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloroform	20.0	23.3		ug/L		116	70 - 135	6	54
Chloromethane	20.0	20.7		ug/L		103	0.1 - 205	1	60
cis-1,3-Dichloropropene	20.0	21.1		ug/L		105	25 - 175	7	58
Dichlorobromomethane	20.0	23.1		ug/L		116	65 - 135	5	56
Ethylbenzene	20.0	19.6		ug/L		98	60 - 140	1	63
Methylene Chloride	20.0	23.1		ug/L		115	60 - 140	3	28
Tetrachloroethene	20.0	17.9		ug/L		90	70 - 130	5	39
Toluene	20.0	20.1		ug/L		100	70 - 130	5	41
trans-1,2-Dichloroethene	20.0	23.3		ug/L		117	70 - 130	6	45
trans-1,3-Dichloropropene	20.0	21.3		ug/L		106	50 - 150	2	86
Trichloroethene	20.0	22.0		ug/L		110	65 - 135	4	48
Vinyl chloride	20.0	22.3		ug/L		112	5 - 195	4	66

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
1,2-Dichloroethane-d4 (Surr)	116		60 - 140
4-Bromofluorobenzene	91		60 - 140
Toluene-d8 (Surr)	100		60 - 140
Dibromofluoromethane (Surr)	116		60 - 140

## QC Association Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

### GC/MS VOA

#### Analysis Batch: 744421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-178952-2	IDW-PURGEWATER-DEC20	Total/NA	Water	624.1	
480-178952-3	TB-20201203	Total/NA	Water	624.1	
MB 460-744421/8	Method Blank	Total/NA	Water	624.1	
LCS 460-744421/4	Lab Control Sample	Total/NA	Water	624.1	

#### Analysis Batch: 744596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-178952-1	MW-16R-DEC20	Total/NA	Water	624.1	
MB 460-744596/9	Method Blank	Total/NA	Water	624.1	
LCS 460-744596/5	Lab Control Sample	Total/NA	Water	624.1	
LCSD 460-744596/6	Lab Control Sample Dup	Total/NA	Water	624.1	

# Lab Chronicle

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

**Client Sample ID: MW-16R-DEC20**

**Lab Sample ID: 480-178952-1**

**Date Collected: 12/03/20 11:40**

**Matrix: Water**

**Date Received: 12/03/20 13:45**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	744596	12/04/20 22:38	MZS	TAL EDI

**Client Sample ID: IDW-PURGEWATER-DEC20**

**Lab Sample ID: 480-178952-2**

**Date Collected: 12/03/20 12:00**

**Matrix: Water**

**Date Received: 12/03/20 13:45**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	744421	12/04/20 17:00	CJM	TAL EDI

**Client Sample ID: TB-20201203**

**Lab Sample ID: 480-178952-3**

**Date Collected: 12/03/20 00:00**

**Matrix: Water**

**Date Received: 12/03/20 13:45**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	744421	12/04/20 14:21	CJM	TAL EDI

## Laboratory References:

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



# Accreditation/Certification Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

## Laboratory: Eurofins TestAmerica, Edison

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	11452	04-01-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
624.1		Water	1,2-Dichloroethene, Total

## Method Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL EDI

### Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

### Laboratory References:

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

## Sample Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-178952-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-178952-1	MW-16R-DEC20	Water	12/03/20 11:40	12/03/20 13:45	
480-178952-2	IDW-PURGEWATER-DEC20	Water	12/03/20 12:00	12/03/20 13:45	
480-178952-3	TB-20201203	Water	12/03/20 00:00	12/03/20 13:45	

<b>Client Information</b> Client Contact: Jenelle Gaylord Company: New York State D.E.C. Address: 625 Broadway Division of Environmental Remediation City: Albany State, Zip: NY, 12233-7014 Phone:		Sampler: C. Pomey Phone: 716-684-8060 PWSID:		Lab PM: Johnson, Oriette S E-Mail: Oriette.Johnson@Eurofinset.com State of Origin:		Carrier Tracking No(s): 480-153402-34083.2 Page: 2 of 3 Job #: 1041	
<b>Due Date Requested:</b> TAT Requested (days): Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No PO #: 136612 Callout ID: 48019422 Project #: 48019422 SSOW#:				<b>Analysis Requested</b>			
<b>Sample Identification</b> NW-168-DELZO ISW-PURG-EWATER-DELZO TB-20201203				<b>Field Filtered Sample (Yes or No)</b> 624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0.28D - (MOD) Sulfate 2320B - Alkalinity			
<b>Sample Date</b> 12-3-2020 12-3-2020 12-3-2020				<b>Sample Time</b> 1140 1200 TB			
<b>Sample Type (C=comp, G=grab)</b> G G TB				<b>Preservation Code</b> G G TB			
<b>Matrix (Water, Solid, BT=Tissue, A=Air)</b> Water Water Water Water Water Water Water Water Water Water				<b>Perform MS/MSD (Yes or No)</b> N N N N N N N N N N			
<b>Special Instructions/Note:</b> 480-178952 Chain of Custody				<b>Special Instructions/Note:</b>			
<b>Possible Hazard Identification</b> <input checked="" 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 checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
<b>Empty Kit Relinquished by:</b> Relinquished by: [Signature] Relinquished by: Relinquished by:				<b>Method of Shipment:</b> Received by: Company ENE Date/Time: 12-3-2020 / 1345 Received by: Company Date/Time: Received by: Company Date/Time:			
<b>Custody Seal No.:</b> A Yes A No A Yes A No				Cooler Temperature(s) °C and Other Remarks: 12/3/20 1345 3.94#1			



## Chain of Custody Record



<b>Client Information (Sub Contract Lab)</b>		Lab PM: Johnson, Oriette S		Carrier Tracking No(s): 480-60723.1	
Client Contact Shipping/Receiving		E-Mail: Oriette.Johnson@Eurofinset.com		Page: Page 1 of 1	
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - New York		Job #: 480-178952-1	
Address: 777 New Durham Road,		<b>Analysis Requested</b>			
City: Edison		<div style="display: flex; justify-content: space-between;"> <div> <p>Due Date Requested: 12/16/2020</p> <p>TAT Requested (days):</p> <p>PO #:</p> <p>WO #:</p> <p>Project #: 48019422</p> <p>SSON#:</p> </div> <div> <p>Field Filtered Sample (Yes or No)</p> <p>Perform MS/MSD (Yes or No)</p> <p>624.1 PREC/624 Prep_3D (MOD) Priority Pollutant</p> <p>List - VOA - 62</p> </div> </div>			
State, Zip: NJ, 08817					
Phone: 732-549-3900(Tel) 732-549-3679(Fax)					
Email:					
Project Name: Davis-Howland Oil Corp #828088					
Site:		<div style="display: flex; justify-content: space-between;"> <div> <p>Sample Date</p> <p>Sample Time</p> <p>Sample Type (C=Comp, G=grab)</p> <p>Matrix (W=water, S=solid, O=oil, BT=Tissue, A=air)</p> <p>Preservation Code:</p> </div> <div> <p>Special Instructions/Note:</p> </div> </div>			
Sample Identification - Client ID (Lab ID)					
MW-16R (480-178952-1)					
IDW (480-178952-2)					
TB (480-178952-3)					
Total Number of Containers		<div style="display: flex; justify-content: space-between;"> <div> <p>Special Instructions/Note:</p> </div> <div> <p>Other:</p> </div> </div>			

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

**Possible Hazard Identification**

Unconfirmed

Deliverable Requested: I, II, III, IV, Other (specify) \_\_\_\_\_

Primary Deliverable Rank: 2

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return To Client ☐ Disposal By Lab ☐ Archive For \_\_\_\_\_ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: <i>John Howland</i>		Date: 12/16/2020		Time: 11:40		Company: <i>Edison</i>	
Relinquished by:		Date/Time:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Date/Time:		Company:	

Custody Seal No.: 1427197

Custody Seals Intact: ☒ Yes ☐ No

Cooler Temperature(s) °C and Other Remarks: 5.9° 4.2° 12.1°

# Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-178952-1

**Login Number: 178952**

**List Source: Eurofins TestAmerica, Buffalo**

**List Number: 1**

**Creator: Stopa, Erik S**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is 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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	ENE
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	N/A	
Chlorine Residual checked.	N/A	

## Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-178952-1

**Login Number: 178952**

**List Number: 2**

**Creator: Armbruster, Chris**

**List Source: Eurofins TestAmerica, Edison**

**List Creation: 12/04/20 12:56 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is $\leq$ background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	1427197, 1427196
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	5.9, 4.2°C IR11
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 $<6\text{mm}$ (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

## ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo  
10 Hazelwood Drive  
Amherst, NY 14228-2298  
Tel: (716)691-2600

Laboratory Job ID: 480-176371-1

Client Project/Site: Davis-Howland Oil Corp #828088

**For:**

New York State D.E.C.  
625 Broadway  
Division of Environmental Remediation  
Albany, New York 12233-7014

Attn: Jenelle Gaylord



Authorized for release by:  
10/20/2020 6:08:47 AM

Orlette Johnson, Senior Project Manager  
(484)685-0864  
[Orlette.Johnson@Eurofinset.com](mailto:Orlette.Johnson@Eurofinset.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



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I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.



---

Orlette Johnson  
Senior Project Manager  
10/20/2020 6:08:47 AM

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## Definitions/Glossary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

#### General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

### 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: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

## Job ID: 480-176371-1

Laboratory: Eurofins TestAmerica, Buffalo

### Narrative

#### Job Narrative 480-176371-1

#### Receipt

The samples were received on 10/12/2020 6:10 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.6° C.

#### GC/MS VOA

Method 624.1: The following sample were diluted to bring the concentration of target analytes within the calibration range: MW-17R-OCT20 (480-176371-2), MW-17R-OCT20-Q (480-176371-3) and MW-8-OCT20 (480-176371-4). Elevated reporting limits (RLs) are provided.

Method 624.1: The following samples were diluted to bring the concentration of target analytes within the calibration range: IW-01-OCT20 (480-176371-1), MW-17R-OCT20 (480-176371-2), MW-17R-OCT20-Q (480-176371-3) and MW-8-OCT20 (480-176371-4). Elevated reporting limits (RLs) are provided.

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

#### HPLC/IC

Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: IW-01-OCT20 (480-176371-1), MW-17R-OCT20 (480-176371-2), MW-17R-OCT20-Q (480-176371-3) and MW-8-OCT20 (480-176371-4). Elevated reporting limits (RLs) are provided.

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

#### General Chemistry

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



# Detection Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

## Client Sample ID: IW-01-OCT20

## Lab Sample ID: 480-176371-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	11	J	25	2.9	ug/L	5		624.1	Total/NA
1,2-Dichloroethene, Total	290		50	16	ug/L	5		624.1	Total/NA
trans-1,2-Dichloroethene	3.4	J	25	2.9	ug/L	5		624.1	Total/NA
Trichloroethene	3.8	J	25	3.0	ug/L	5		624.1	Total/NA
Vinyl chloride	56		25	3.7	ug/L	5		624.1	Total/NA
Sulfate	118		10.0	1.7	mg/L	5		300.0	Total/NA
Alkalinity, Total	308		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	308		5.0	0.79	mg/L	1		SM 2320B	Total/NA

## Client Sample ID: MW-17R-OCT20

## Lab Sample ID: 480-176371-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	100		50	5.9	ug/L	10		624.1	Total/NA
1,1-Dichloroethene	23	J	50	8.5	ug/L	10		624.1	Total/NA
Tetrachloroethene	11	J	50	3.4	ug/L	10		624.1	Total/NA
trans-1,2-Dichloroethene	6.2	J	50	5.9	ug/L	10		624.1	Total/NA
Trichloroethene	120		50	6.0	ug/L	10		624.1	Total/NA
Vinyl chloride	280		50	7.5	ug/L	10		624.1	Total/NA
1,2-Dichloroethene, Total - DL	1400		200	64	ug/L	20		624.1	Total/NA
Sulfate	204		10.0	1.7	mg/L	5		300.0	Total/NA
Alkalinity, Total	332	F1	5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	332		5.0	0.79	mg/L	1		SM 2320B	Total/NA

## Client Sample ID: MW-17R-OCT20-Q

## Lab Sample ID: 480-176371-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	98		50	5.9	ug/L	10		624.1	Total/NA
1,1-Dichloroethene	23	J	50	8.5	ug/L	10		624.1	Total/NA
Tetrachloroethene	9.7	J	50	3.4	ug/L	10		624.1	Total/NA
trans-1,2-Dichloroethene	6.4	J	50	5.9	ug/L	10		624.1	Total/NA
Trichloroethene	110		50	6.0	ug/L	10		624.1	Total/NA
Vinyl chloride	260		50	7.5	ug/L	10		624.1	Total/NA
1,2-Dichloroethene, Total - DL	1400		200	64	ug/L	20		624.1	Total/NA
Sulfate	206		10.0	1.7	mg/L	5		300.0	Total/NA
Alkalinity, Total	332		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	332		5.0	0.79	mg/L	1		SM 2320B	Total/NA

## Client Sample ID: MW-8-OCT20

## Lab Sample ID: 480-176371-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	76		50	5.9	ug/L	10		624.1	Total/NA
1,1-Dichloroethene	35	J	50	8.5	ug/L	10		624.1	Total/NA
Vinyl chloride	550		50	7.5	ug/L	10		624.1	Total/NA
1,2-Dichloroethene, Total - DL	4000		500	160	ug/L	50		624.1	Total/NA
Sulfate	152		10.0	1.7	mg/L	5		300.0	Total/NA
Alkalinity, Total	326		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	326		5.0	0.79	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

Client Sample ID: IW-01-OCT20

Lab Sample ID: 480-176371-1

Date Collected: 10/12/20 12:15

Matrix: Water

Date Received: 10/12/20 18:10

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		25	1.9	ug/L			10/14/20 11:56	5
1,1,2,2-Tetrachloroethane	ND		25	1.3	ug/L			10/14/20 11:56	5
1,1,2-Trichloroethane	ND		25	2.4	ug/L			10/14/20 11:56	5
1,1-Dichloroethane	11	J	25	2.9	ug/L			10/14/20 11:56	5
1,1-Dichloroethene	ND		25	4.3	ug/L			10/14/20 11:56	5
1,2-Dichlorobenzene	ND		25	2.2	ug/L			10/14/20 11:56	5
1,2-Dichloroethane	ND		25	3.0	ug/L			10/14/20 11:56	5
1,2-Dichloroethene, Total	290		50	16	ug/L			10/14/20 11:56	5
1,2-Dichloropropane	ND		25	3.1	ug/L			10/14/20 11:56	5
1,3-Dichlorobenzene	ND		25	2.7	ug/L			10/14/20 11:56	5
1,4-Dichlorobenzene	ND		25	2.5	ug/L			10/14/20 11:56	5
2-Chloroethyl vinyl ether	ND		130	9.3	ug/L			10/14/20 11:56	5
Acrolein	ND		500	87	ug/L			10/14/20 11:56	5
Acrylonitrile	ND		250	9.5	ug/L			10/14/20 11:56	5
Benzene	ND		25	3.0	ug/L			10/14/20 11:56	5
Bromoform	ND		25	2.3	ug/L			10/14/20 11:56	5
Bromomethane	ND		25	6.0	ug/L			10/14/20 11:56	5
Carbon tetrachloride	ND		25	2.6	ug/L			10/14/20 11:56	5
Chlorobenzene	ND		25	2.4	ug/L			10/14/20 11:56	5
Chlorodibromomethane	ND		25	2.1	ug/L			10/14/20 11:56	5
Chloroethane	ND		25	4.4	ug/L			10/14/20 11:56	5
Chloroform	ND		25	2.7	ug/L			10/14/20 11:56	5
Chloromethane	ND		25	3.2	ug/L			10/14/20 11:56	5
cis-1,3-Dichloropropene	ND		25	1.7	ug/L			10/14/20 11:56	5
Dichlorobromomethane	ND		25	2.7	ug/L			10/14/20 11:56	5
Ethylbenzene	ND		25	2.3	ug/L			10/14/20 11:56	5
Methylene Chloride	ND		25	4.1	ug/L			10/14/20 11:56	5
Tetrachloroethene	ND		25	1.7	ug/L			10/14/20 11:56	5
Toluene	ND		25	2.3	ug/L			10/14/20 11:56	5
trans-1,2-Dichloroethene	3.4	J	25	2.9	ug/L			10/14/20 11:56	5
trans-1,3-Dichloropropene	ND		25	2.2	ug/L			10/14/20 11:56	5
Trichloroethene	3.8	J	25	3.0	ug/L			10/14/20 11:56	5
Vinyl chloride	56		25	3.7	ug/L			10/14/20 11:56	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		68 - 130		10/14/20 11:56	5
4-Bromofluorobenzene (Surr)	97		76 - 123		10/14/20 11:56	5
Dibromofluoromethane (Surr)	102		75 - 123		10/14/20 11:56	5
Toluene-d8 (Surr)	99		77 - 120		10/14/20 11:56	5

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	118		10.0	1.7	mg/L			10/16/20 01:07	5
Alkalinity, Total	308		5.0	0.79	mg/L			10/13/20 17:35	1
Alkalinity, Bicarbonate	308		5.0	0.79	mg/L			10/13/20 17:35	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			10/13/20 17:35	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			10/13/20 17:35	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

Client Sample ID: MW-17R-OCT20

Lab Sample ID: 480-176371-2

Date Collected: 10/12/20 13:10

Matrix: Water

Date Received: 10/12/20 18:10

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		50	3.9	ug/L			10/13/20 18:29	10
1,1,2,2-Tetrachloroethane	ND		50	2.6	ug/L			10/13/20 18:29	10
1,1,2-Trichloroethane	ND		50	4.8	ug/L			10/13/20 18:29	10
1,1-Dichloroethane	100		50	5.9	ug/L			10/13/20 18:29	10
1,1-Dichloroethene	23	J	50	8.5	ug/L			10/13/20 18:29	10
1,2-Dichlorobenzene	ND		50	4.4	ug/L			10/13/20 18:29	10
1,2-Dichloroethane	ND		50	6.0	ug/L			10/13/20 18:29	10
1,2-Dichloropropane	ND		50	6.1	ug/L			10/13/20 18:29	10
1,3-Dichlorobenzene	ND		50	5.4	ug/L			10/13/20 18:29	10
1,4-Dichlorobenzene	ND		50	5.1	ug/L			10/13/20 18:29	10
2-Chloroethyl vinyl ether	ND		250	19	ug/L			10/13/20 18:29	10
Acrolein	ND		1000	170	ug/L			10/13/20 18:29	10
Acrylonitrile	ND		500	19	ug/L			10/13/20 18:29	10
Benzene	ND		50	6.0	ug/L			10/13/20 18:29	10
Bromoform	ND		50	4.7	ug/L			10/13/20 18:29	10
Bromomethane	ND		50	12	ug/L			10/13/20 18:29	10
Carbon tetrachloride	ND		50	5.1	ug/L			10/13/20 18:29	10
Chlorobenzene	ND		50	4.8	ug/L			10/13/20 18:29	10
Chlorodibromomethane	ND		50	4.1	ug/L			10/13/20 18:29	10
Chloroethane	ND		50	8.7	ug/L			10/13/20 18:29	10
Chloroform	ND		50	5.4	ug/L			10/13/20 18:29	10
Chloromethane	ND		50	6.4	ug/L			10/13/20 18:29	10
cis-1,3-Dichloropropene	ND		50	3.3	ug/L			10/13/20 18:29	10
Dichlorobromomethane	ND		50	5.4	ug/L			10/13/20 18:29	10
Ethylbenzene	ND		50	4.6	ug/L			10/13/20 18:29	10
Methylene Chloride	ND		50	8.1	ug/L			10/13/20 18:29	10
Tetrachloroethene	11	J	50	3.4	ug/L			10/13/20 18:29	10
Toluene	ND		50	4.5	ug/L			10/13/20 18:29	10
trans-1,2-Dichloroethene	6.2	J	50	5.9	ug/L			10/13/20 18:29	10
trans-1,3-Dichloropropene	ND		50	4.4	ug/L			10/13/20 18:29	10
Trichloroethene	120		50	6.0	ug/L			10/13/20 18:29	10
Vinyl chloride	280		50	7.5	ug/L			10/13/20 18:29	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		68 - 130		10/13/20 18:29	10
4-Bromofluorobenzene (Surr)	96		76 - 123		10/13/20 18:29	10
Dibromofluoromethane (Surr)	104		75 - 123		10/13/20 18:29	10
Toluene-d8 (Surr)	99		77 - 120		10/13/20 18:29	10

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, Total	1400		200	64	ug/L			10/14/20 12:20	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		68 - 130		10/14/20 12:20	20
4-Bromofluorobenzene (Surr)	99		76 - 123		10/14/20 12:20	20
Dibromofluoromethane (Surr)	104		75 - 123		10/14/20 12:20	20
Toluene-d8 (Surr)	97		77 - 120		10/14/20 12:20	20

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

**Client Sample ID: MW-17R-OCT20**

**Lab Sample ID: 480-176371-2**

**Date Collected: 10/12/20 13:10**

**Matrix: Water**

**Date Received: 10/12/20 18:10**

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	204		10.0	1.7	mg/L			10/16/20 00:24	5
Alkalinity, Total	332	F1	5.0	0.79	mg/L			10/13/20 18:07	1
Alkalinity, Bicarbonate	332		5.0	0.79	mg/L			10/13/20 18:07	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			10/13/20 18:07	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			10/13/20 18:07	1

**Client Sample ID: MW-17R-OCT20-Q**

**Lab Sample ID: 480-176371-3**

**Date Collected: 10/12/20 13:10**

**Matrix: Water**

**Date Received: 10/12/20 18:10**

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		50	3.9	ug/L			10/13/20 18:53	10
1,1,2,2-Tetrachloroethane	ND		50	2.6	ug/L			10/13/20 18:53	10
1,1,2-Trichloroethane	ND		50	4.8	ug/L			10/13/20 18:53	10
1,1-Dichloroethane	98		50	5.9	ug/L			10/13/20 18:53	10
1,1-Dichloroethene	23	J	50	8.5	ug/L			10/13/20 18:53	10
1,2-Dichlorobenzene	ND		50	4.4	ug/L			10/13/20 18:53	10
1,2-Dichloroethane	ND		50	6.0	ug/L			10/13/20 18:53	10
1,2-Dichloropropane	ND		50	6.1	ug/L			10/13/20 18:53	10
1,3-Dichlorobenzene	ND		50	5.4	ug/L			10/13/20 18:53	10
1,4-Dichlorobenzene	ND		50	5.1	ug/L			10/13/20 18:53	10
2-Chloroethyl vinyl ether	ND		250	19	ug/L			10/13/20 18:53	10
Acrolein	ND		1000	170	ug/L			10/13/20 18:53	10
Acrylonitrile	ND		500	19	ug/L			10/13/20 18:53	10
Benzene	ND		50	6.0	ug/L			10/13/20 18:53	10
Bromoform	ND		50	4.7	ug/L			10/13/20 18:53	10
Bromomethane	ND		50	12	ug/L			10/13/20 18:53	10
Carbon tetrachloride	ND		50	5.1	ug/L			10/13/20 18:53	10
Chlorobenzene	ND		50	4.8	ug/L			10/13/20 18:53	10
Chlorodibromomethane	ND		50	4.1	ug/L			10/13/20 18:53	10
Chloroethane	ND		50	8.7	ug/L			10/13/20 18:53	10
Chloroform	ND		50	5.4	ug/L			10/13/20 18:53	10
Chloromethane	ND		50	6.4	ug/L			10/13/20 18:53	10
cis-1,3-Dichloropropene	ND		50	3.3	ug/L			10/13/20 18:53	10
Dichlorobromomethane	ND		50	5.4	ug/L			10/13/20 18:53	10
Ethylbenzene	ND		50	4.6	ug/L			10/13/20 18:53	10
Methylene Chloride	ND		50	8.1	ug/L			10/13/20 18:53	10
Tetrachloroethene	9.7	J	50	3.4	ug/L			10/13/20 18:53	10
Toluene	ND		50	4.5	ug/L			10/13/20 18:53	10
trans-1,2-Dichloroethene	6.4	J	50	5.9	ug/L			10/13/20 18:53	10
trans-1,3-Dichloropropene	ND		50	4.4	ug/L			10/13/20 18:53	10
Trichloroethene	110		50	6.0	ug/L			10/13/20 18:53	10
Vinyl chloride	260		50	7.5	ug/L			10/13/20 18:53	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		68 - 130		10/13/20 18:53	10
4-Bromofluorobenzene (Surr)	98		76 - 123		10/13/20 18:53	10
Dibromofluoromethane (Surr)	105		75 - 123		10/13/20 18:53	10
Toluene-d8 (Surr)	100		77 - 120		10/13/20 18:53	10

Eurofins TestAmerica, Buffalo



# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

**Client Sample ID: MW-17R-OCT20-Q**

**Lab Sample ID: 480-176371-3**

**Date Collected: 10/12/20 13:10**

**Matrix: Water**

**Date Received: 10/12/20 18:10**

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethene, Total	1400		200	64	ug/L			10/14/20 12:43	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		68 - 130					10/14/20 12:43	20
4-Bromofluorobenzene (Surr)	97		76 - 123					10/14/20 12:43	20
Dibromofluoromethane (Surr)	104		75 - 123					10/14/20 12:43	20
Toluene-d8 (Surr)	98		77 - 120					10/14/20 12:43	20

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	206		10.0	1.7	mg/L			10/16/20 00:38	5
Alkalinity, Total	332		5.0	0.79	mg/L			10/13/20 17:42	1
Alkalinity, Bicarbonate	332		5.0	0.79	mg/L			10/13/20 17:42	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			10/13/20 17:42	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			10/13/20 17:42	1

**Client Sample ID: MW-8-OCT20**

**Lab Sample ID: 480-176371-4**

**Date Collected: 10/12/20 15:10**

**Matrix: Water**

**Date Received: 10/12/20 18:10**

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		50	3.9	ug/L			10/13/20 19:16	10
1,1,1,2-Tetrachloroethane	ND		50	2.6	ug/L			10/13/20 19:16	10
1,1,2-Trichloroethane	ND		50	4.8	ug/L			10/13/20 19:16	10
1,1-Dichloroethane	76		50	5.9	ug/L			10/13/20 19:16	10
1,1-Dichloroethene	35 J		50	8.5	ug/L			10/13/20 19:16	10
1,2-Dichlorobenzene	ND		50	4.4	ug/L			10/13/20 19:16	10
1,2-Dichloroethane	ND		50	6.0	ug/L			10/13/20 19:16	10
1,2-Dichloropropane	ND		50	6.1	ug/L			10/13/20 19:16	10
1,3-Dichlorobenzene	ND		50	5.4	ug/L			10/13/20 19:16	10
1,4-Dichlorobenzene	ND		50	5.1	ug/L			10/13/20 19:16	10
2-Chloroethyl vinyl ether	ND		250	19	ug/L			10/13/20 19:16	10
Acrolein	ND		1000	170	ug/L			10/13/20 19:16	10
Acrylonitrile	ND		500	19	ug/L			10/13/20 19:16	10
Benzene	ND		50	6.0	ug/L			10/13/20 19:16	10
Bromoform	ND		50	4.7	ug/L			10/13/20 19:16	10
Bromomethane	ND		50	12	ug/L			10/13/20 19:16	10
Carbon tetrachloride	ND		50	5.1	ug/L			10/13/20 19:16	10
Chlorobenzene	ND		50	4.8	ug/L			10/13/20 19:16	10
Chlorodibromomethane	ND		50	4.1	ug/L			10/13/20 19:16	10
Chloroethane	ND		50	8.7	ug/L			10/13/20 19:16	10
Chloroform	ND		50	5.4	ug/L			10/13/20 19:16	10
Chloromethane	ND		50	6.4	ug/L			10/13/20 19:16	10
cis-1,3-Dichloropropene	ND		50	3.3	ug/L			10/13/20 19:16	10
Dichlorobromomethane	ND		50	5.4	ug/L			10/13/20 19:16	10
Ethylbenzene	ND		50	4.6	ug/L			10/13/20 19:16	10
Methylene Chloride	ND		50	8.1	ug/L			10/13/20 19:16	10
Tetrachloroethene	ND		50	3.4	ug/L			10/13/20 19:16	10
Toluene	ND		50	4.5	ug/L			10/13/20 19:16	10

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

**Client Sample ID: MW-8-OCT20**

**Lab Sample ID: 480-176371-4**

**Date Collected: 10/12/20 15:10**

**Matrix: Water**

**Date Received: 10/12/20 18:10**

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,2-Dichloroethene	ND		50	5.9	ug/L			10/13/20 19:16	10
trans-1,3-Dichloropropene	ND		50	4.4	ug/L			10/13/20 19:16	10
Trichloroethene	ND		50	6.0	ug/L			10/13/20 19:16	10
<b>Vinyl chloride</b>	<b>550</b>		50	7.5	ug/L			10/13/20 19:16	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		68 - 130		10/13/20 19:16	10
4-Bromofluorobenzene (Surr)	97		76 - 123		10/13/20 19:16	10
Dibromofluoromethane (Surr)	104		75 - 123		10/13/20 19:16	10
Toluene-d8 (Surr)	99		77 - 120		10/13/20 19:16	10

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,2-Dichloroethene, Total</b>	<b>4000</b>		500	160	ug/L			10/14/20 13:06	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		68 - 130		10/14/20 13:06	50
4-Bromofluorobenzene (Surr)	97		76 - 123		10/14/20 13:06	50
Dibromofluoromethane (Surr)	102		75 - 123		10/14/20 13:06	50
Toluene-d8 (Surr)	97		77 - 120		10/14/20 13:06	50

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>152</b>		10.0	1.7	mg/L			10/16/20 00:53	5
<b>Alkalinity, Total</b>	<b>326</b>		5.0	0.79	mg/L			10/13/20 17:49	1
<b>Alkalinity, Bicarbonate</b>	<b>326</b>		5.0	0.79	mg/L			10/13/20 17:49	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			10/13/20 17:49	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			10/13/20 17:49	1

# Surrogate Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (68-130)	BFB (76-123)	DBFM (75-123)	TOL (77-120)
480-176371-1	IW-01-OCT20	92	97	102	99
480-176371-1 MS	IW-01-OCT20	97	98	101	99
480-176371-1 MSD	IW-01-OCT20	98	98	102	99
480-176371-2	MW-17R-OCT20	96	96	104	99
480-176371-2 - DL	MW-17R-OCT20	96	99	104	97
480-176371-3	MW-17R-OCT20-Q	95	98	105	100
480-176371-3 - DL	MW-17R-OCT20-Q	95	97	104	98
480-176371-4	MW-8-OCT20	95	97	104	99
480-176371-4 - DL	MW-8-OCT20	95	97	102	97
LCS 480-553610/6	Lab Control Sample	93	97	103	100
LCS 480-553815/6	Lab Control Sample	98	96	101	99
MB 480-553610/8	Method Blank	98	96	103	99
MB 480-553815/8	Method Blank	93	97	98	99

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-553610/8

Matrix: Water

Analysis Batch: 553610

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/13/20 11:26	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/13/20 11:26	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/13/20 11:26	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/13/20 11:26	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/13/20 11:26	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/13/20 11:26	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/13/20 11:26	1
1,2-Dichloroethene, Total	ND		10	3.2	ug/L			10/13/20 11:26	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/13/20 11:26	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/13/20 11:26	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/13/20 11:26	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/13/20 11:26	1
Acrolein	ND		100	17	ug/L			10/13/20 11:26	1
Acrylonitrile	ND		50	1.9	ug/L			10/13/20 11:26	1
Benzene	ND		5.0	0.60	ug/L			10/13/20 11:26	1
Bromoform	ND		5.0	0.47	ug/L			10/13/20 11:26	1
Bromomethane	ND		5.0	1.2	ug/L			10/13/20 11:26	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/13/20 11:26	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/13/20 11:26	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/13/20 11:26	1
Chloroethane	ND		5.0	0.87	ug/L			10/13/20 11:26	1
Chloroform	ND		5.0	0.54	ug/L			10/13/20 11:26	1
Chloromethane	ND		5.0	0.64	ug/L			10/13/20 11:26	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/13/20 11:26	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/13/20 11:26	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/13/20 11:26	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/13/20 11:26	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/13/20 11:26	1
Toluene	ND		5.0	0.45	ug/L			10/13/20 11:26	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/13/20 11:26	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/13/20 11:26	1
Trichloroethene	ND		5.0	0.60	ug/L			10/13/20 11:26	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/13/20 11:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	98		68 - 130		10/13/20 11:26	1
4-Bromofluorobenzene (Surr)	96		76 - 123		10/13/20 11:26	1
Dibromofluoromethane (Surr)	103		75 - 123		10/13/20 11:26	1
Toluene-d8 (Surr)	99		77 - 120		10/13/20 11:26	1

Lab Sample ID: LCS 480-553610/6

Matrix: Water

Analysis Batch: 553610

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	20.5		ug/L		102	52 - 162
1,1,2,2-Tetrachloroethane	20.0	17.5		ug/L		87	46 - 157
1,1,2-Trichloroethane	20.0	19.2		ug/L		96	52 - 150

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-553610/6

Matrix: Water

Analysis Batch: 553610

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	20.0	20.6		ug/L		103	59 - 155
1,1-Dichloroethene	20.0	21.5		ug/L		107	1 - 234
1,2-Dichlorobenzene	20.0	19.5		ug/L		98	18 - 190
1,2-Dichloroethane	20.0	18.9		ug/L		94	49 - 155
1,2-Dichloropropane	20.0	20.0		ug/L		100	1 - 210
1,3-Dichlorobenzene	20.0	19.7		ug/L		98	59 - 156
1,4-Dichlorobenzene	20.0	19.6		ug/L		98	18 - 190
2-Chloroethyl vinyl ether	20.0	18.7	J	ug/L		94	1 - 305
Benzene	20.0	20.5		ug/L		103	37 - 151
Bromoform	20.0	18.2		ug/L		91	45 - 169
Bromomethane	20.0	24.6		ug/L		123	1 - 242
Carbon tetrachloride	20.0	20.4		ug/L		102	70 - 140
Chlorobenzene	20.0	20.2		ug/L		101	37 - 160
Chlorodibromomethane	20.0	18.6		ug/L		93	53 - 149
Chloroethane	20.0	23.5		ug/L		118	14 - 230
Chloroform	20.0	20.1		ug/L		101	51 - 138
Chloromethane	20.0	24.9		ug/L		125	1 - 273
cis-1,3-Dichloropropene	20.0	19.6		ug/L		98	1 - 227
Dichlorobromomethane	20.0	19.3		ug/L		96	35 - 155
Ethylbenzene	20.0	20.3		ug/L		102	37 - 162
Methylene Chloride	20.0	21.0		ug/L		105	1 - 221
Tetrachloroethene	20.0	21.1		ug/L		106	64 - 148
Toluene	20.0	19.9		ug/L		99	47 - 150
trans-1,2-Dichloroethene	20.0	21.2		ug/L		106	54 - 156
trans-1,3-Dichloropropene	20.0	18.7		ug/L		93	17 - 183
Trichloroethene	20.0	20.0		ug/L		100	71 - 157
Vinyl chloride	20.0	24.5		ug/L		122	1 - 251

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		68 - 130
4-Bromofluorobenzene (Surr)	97		76 - 123
Dibromofluoromethane (Surr)	103		75 - 123
Toluene-d8 (Surr)	100		77 - 120

Lab Sample ID: MB 480-553815/8

Matrix: Water

Analysis Batch: 553815

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/14/20 11:26	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/14/20 11:26	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/14/20 11:26	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/14/20 11:26	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/14/20 11:26	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/14/20 11:26	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/14/20 11:26	1
1,2-Dichloroethene, Total	ND		10	3.2	ug/L			10/14/20 11:26	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/14/20 11:26	1

Eurofins TestAmerica, Buffalo



# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-553815/8

Matrix: Water

Analysis Batch: 553815

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/14/20 11:26	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/14/20 11:26	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/14/20 11:26	1
Acrolein	ND		100	17	ug/L			10/14/20 11:26	1
Acrylonitrile	ND		50	1.9	ug/L			10/14/20 11:26	1
Benzene	ND		5.0	0.60	ug/L			10/14/20 11:26	1
Bromoform	ND		5.0	0.47	ug/L			10/14/20 11:26	1
Bromomethane	ND		5.0	1.2	ug/L			10/14/20 11:26	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/14/20 11:26	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/14/20 11:26	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/14/20 11:26	1
Chloroethane	ND		5.0	0.87	ug/L			10/14/20 11:26	1
Chloroform	ND		5.0	0.54	ug/L			10/14/20 11:26	1
Chloromethane	ND		5.0	0.64	ug/L			10/14/20 11:26	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/14/20 11:26	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/14/20 11:26	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/14/20 11:26	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/14/20 11:26	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/14/20 11:26	1
Toluene	ND		5.0	0.45	ug/L			10/14/20 11:26	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/14/20 11:26	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/14/20 11:26	1
Trichloroethene	ND		5.0	0.60	ug/L			10/14/20 11:26	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/14/20 11:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		68 - 130		10/14/20 11:26	1
4-Bromofluorobenzene (Surr)	97		76 - 123		10/14/20 11:26	1
Dibromofluoromethane (Surr)	98		75 - 123		10/14/20 11:26	1
Toluene-d8 (Surr)	99		77 - 120		10/14/20 11:26	1

Lab Sample ID: LCS 480-553815/6

Matrix: Water

Analysis Batch: 553815

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	19.7		ug/L		98	52 - 162
1,1,2,2-Tetrachloroethane	20.0	17.6		ug/L		88	46 - 157
1,1,2-Trichloroethane	20.0	19.0		ug/L		95	52 - 150
1,1-Dichloroethane	20.0	20.3		ug/L		101	59 - 155
1,1-Dichloroethene	20.0	20.5		ug/L		102	1 - 234
1,2-Dichlorobenzene	20.0	18.9		ug/L		94	18 - 190
1,2-Dichloroethane	20.0	18.0		ug/L		90	49 - 155
1,2-Dichloropropane	20.0	19.2		ug/L		96	1 - 210
1,3-Dichlorobenzene	20.0	18.9		ug/L		95	59 - 156
1,4-Dichlorobenzene	20.0	18.9		ug/L		95	18 - 190
2-Chloroethyl vinyl ether	20.0	18.9	J	ug/L		95	1 - 305
Benzene	20.0	19.9		ug/L		100	37 - 151

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-553815/6

Matrix: Water

Analysis Batch: 553815

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromoform	20.0	18.4		ug/L		92	45 - 169
Bromomethane	20.0	24.1		ug/L		121	1 - 242
Carbon tetrachloride	20.0	19.4		ug/L		97	70 - 140
Chlorobenzene	20.0	19.4		ug/L		97	37 - 160
Chlorodibromomethane	20.0	18.4		ug/L		92	53 - 149
Chloroethane	20.0	22.9		ug/L		115	14 - 230
Chloroform	20.0	19.6		ug/L		98	51 - 138
Chloromethane	20.0	22.4		ug/L		112	1 - 273
cis-1,3-Dichloropropene	20.0	19.3		ug/L		96	1 - 227
Dichlorobromomethane	20.0	18.7		ug/L		93	35 - 155
Ethylbenzene	20.0	19.5		ug/L		98	37 - 162
Methylene Chloride	20.0	20.1		ug/L		101	1 - 221
Tetrachloroethene	20.0	20.2		ug/L		101	64 - 148
Toluene	20.0	19.3		ug/L		96	47 - 150
trans-1,2-Dichloroethene	20.0	20.4		ug/L		102	54 - 156
trans-1,3-Dichloropropene	20.0	18.2		ug/L		91	17 - 183
Trichloroethene	20.0	19.4		ug/L		97	71 - 157
Vinyl chloride	20.0	23.1		ug/L		115	1 - 251

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		68 - 130
4-Bromofluorobenzene (Surr)	96		76 - 123
Dibromofluoromethane (Surr)	101		75 - 123
Toluene-d8 (Surr)	99		77 - 120

Lab Sample ID: 480-176371-1 MS

Matrix: Water

Analysis Batch: 553815

Client Sample ID: IW-01-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	ND		0.100	95.2		ug/L		NC	52 - 162
1,1,2,2-Tetrachloroethane	ND		0.100	86.1		ug/L		NC	46 - 157
1,1,2-Trichloroethane	ND		0.100	92.3		ug/L		NC	52 - 150
1,1-Dichloroethane	11 J		0.100	107	4	ug/L		96526	59 - 155
1,1-Dichloroethene	ND		0.100	105		ug/L		NC	1 - 234
1,2-Dichlorobenzene	ND		0.100	92.5		ug/L		NC	18 - 190
1,2-Dichloroethane	ND		0.100	88.3		ug/L		NC	49 - 155
1,2-Dichloropropane	ND		0.100	96.0		ug/L		NC	1 - 210
1,3-Dichlorobenzene	ND		0.100	92.8		ug/L		NC	59 - 156
1,4-Dichlorobenzene	ND		0.100	93.0		ug/L		NC	18 - 190
2-Chloroethyl vinyl ether	ND		0.100	91.8	J	ug/L		NC	1 - 305
Benzene	ND		0.100	98.6		ug/L		NC	37 - 151
Bromoform	ND		0.100	85.6		ug/L		NC	45 - 169
Bromomethane	ND		0.100	126		ug/L		NC	1 - 242
Carbon tetrachloride	ND		0.100	96.4		ug/L		NC	70 - 140
Chlorobenzene	ND		0.100	95.9		ug/L		NC	37 - 160
Chlorodibromomethane	ND		0.100	85.4		ug/L		NC	53 - 149
Chloroethane	ND		0.100	125		ug/L		NC	14 - 230

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 480-176371-1 MS

Matrix: Water

Analysis Batch: 553815

Client Sample ID: IW-01-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	ND		0.100	95.1		ug/L		NC	51 - 138
Chloromethane	ND		0.100	127		ug/L		NC	1 - 273
cis-1,3-Dichloropropene	ND		0.100	90.8		ug/L		NC	1 - 227
Dichlorobromomethane	ND		0.100	90.6		ug/L		NC	35 - 155
Ethylbenzene	ND		0.100	96.5		ug/L		NC	37 - 162
Methylene Chloride	ND		0.100	99.3		ug/L		NC	1 - 221
Tetrachloroethene	ND		0.100	102		ug/L		NC	64 - 148
Toluene	ND		0.100	95.4		ug/L		NC	47 - 150
trans-1,2-Dichloroethene	3.4	J	0.100	101	4	ug/L		98036	54 - 156
trans-1,3-Dichloropropene	ND		0.100	85.2		ug/L		NC	17 - 183
Trichloroethene	3.8	J	0.100	100	4	ug/L		96429	71 - 157
Vinyl chloride	56		0.100	181	4	ug/L		12521	1 - 251

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		68 - 130
4-Bromofluorobenzene (Surr)	98		76 - 123
Dibromofluoromethane (Surr)	101		75 - 123
Toluene-d8 (Surr)	99		77 - 120

Lab Sample ID: 480-176371-1 MSD

Matrix: Water

Analysis Batch: 553815

Client Sample ID: IW-01-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
1,1,1-Trichloroethane	ND		0.100	88.2		ug/L		NC	52 - 162	8	15
1,1,2,2-Tetrachloroethane	ND		0.100	77.7		ug/L		NC	46 - 157	10	15
1,1,2-Trichloroethane	ND		0.100	85.4		ug/L		NC	52 - 150	8	15
1,1-Dichloroethane	11	J	0.100	99.2	4	ug/L		88642	59 - 155	8	15
1,1-Dichloroethene	ND		0.100	96.6		ug/L		NC	1 - 234	9	15
1,2-Dichlorobenzene	ND		0.100	84.9		ug/L		NC	18 - 190	9	15
1,2-Dichloroethane	ND		0.100	83.6		ug/L		NC	49 - 155	5	15
1,2-Dichloropropane	ND		0.100	87.4		ug/L		NC	1 - 210	9	15
1,3-Dichlorobenzene	ND		0.100	85.3		ug/L		NC	59 - 156	8	15
1,4-Dichlorobenzene	ND		0.100	85.4		ug/L		NC	18 - 190	8	15
2-Chloroethyl vinyl ether	ND		0.100	86.5	J	ug/L		NC	1 - 305	6	15
Benzene	ND		0.100	94.0		ug/L		NC	37 - 151	5	15
Bromoform	ND		0.100	81.5		ug/L		NC	45 - 169	5	15
Bromomethane	ND		0.100	118		ug/L		NC	1 - 242	7	15
Carbon tetrachloride	ND		0.100	86.3		ug/L		NC	70 - 140	11	15
Chlorobenzene	ND		0.100	89.0		ug/L		NC	37 - 160	7	15
Chlorodibromomethane	ND		0.100	81.8		ug/L		NC	53 - 149	4	15
Chloroethane	ND		0.100	117		ug/L		NC	14 - 230	6	15
Chloroform	ND		0.100	89.0		ug/L		NC	51 - 138	7	15
Chloromethane	ND		0.100	119		ug/L		NC	1 - 273	7	15
cis-1,3-Dichloropropene	ND		0.100	85.8		ug/L		NC	1 - 227	6	15
Dichlorobromomethane	ND		0.100	84.0		ug/L		NC	35 - 155	8	15
Ethylbenzene	ND		0.100	89.0		ug/L		NC	37 - 162	8	15
Methylene Chloride	ND		0.100	93.1		ug/L		NC	1 - 221	6	15

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 480-176371-1 MSD

Matrix: Water

Analysis Batch: 553815

Client Sample ID: IW-01-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Tetrachloroethene	ND		0.100	91.2		ug/L		NC	64 - 148	11	15
Toluene	ND		0.100	87.2		ug/L		NC	47 - 150	9	15
trans-1,2-Dichloroethene	3.4	J	0.100	96.3	4	ug/L		92972	54 - 156	5	15
trans-1,3-Dichloropropene	ND		0.100	80.7		ug/L		NC	17 - 183	5	15
Trichloroethene	3.8	J	0.100	91.3	4	ug/L		87423	71 - 157	9	15
Vinyl chloride	56		0.100	160	4	ug/L		10429 3	1 - 251	12	15

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	98		68 - 130
4-Bromofluorobenzene (Surr)	98		76 - 123
Dibromofluoromethane (Surr)	102		75 - 123
Toluene-d8 (Surr)	99		77 - 120

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-554094/4

Matrix: Water

Analysis Batch: 554094

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		2.0	0.35	mg/L			10/15/20 23:42	1

Lab Sample ID: LCS 480-554094/3

Matrix: Water

Analysis Batch: 554094

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	50.0	50.22		mg/L		100	90 - 110

Lab Sample ID: 480-176371-1 MS

Matrix: Water

Analysis Batch: 554094

Client Sample ID: IW-01-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	118		250	341.5		mg/L		90	80 - 120

Lab Sample ID: 480-176371-1 MSD

Matrix: Water

Analysis Batch: 554094

Client Sample ID: IW-01-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfate	118		250	342.5		mg/L		90	80 - 120	0	15

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

## Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-553797/4

Matrix: Water

Analysis Batch: 553797

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0	0.79	mg/L			10/13/20 16:32	1
Alkalinity, Bicarbonate	ND		5.0	0.79	mg/L			10/13/20 16:32	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			10/13/20 16:32	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			10/13/20 16:32	1

Lab Sample ID: LCS 480-553797/5

Matrix: Water

Analysis Batch: 553797

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	98.80		mg/L		99	90 - 110

Lab Sample ID: 480-176371-2 MS

Matrix: Water

Analysis Batch: 553797

Client Sample ID: MW-17R-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	332	F1	100	370.7	F1	mg/L		39	60 - 140

Lab Sample ID: 480-176371-2 MSD

Matrix: Water

Analysis Batch: 553797

Client Sample ID: MW-17R-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity, Total	332	F1	100	371.5	F1	mg/L		39	60 - 140	0	20

Lab Sample ID: MB 480-554162/4

Matrix: Water

Analysis Batch: 554162

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0	0.79	mg/L			10/15/20 13:08	1
Alkalinity, Bicarbonate	ND		5.0	0.79	mg/L			10/15/20 13:08	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			10/15/20 13:08	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			10/15/20 13:08	1

Lab Sample ID: LCS 480-554162/5

Matrix: Water

Analysis Batch: 554162

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	98.88		mg/L		99	90 - 110

Lab Sample ID: 480-176371-1 MS

Matrix: Water

Analysis Batch: 554162

Client Sample ID: IW-01-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	311	F1	100	373.5		mg/L		63	60 - 140

Eurofins TestAmerica, Buffalo



# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

## Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 480-176371-1 MSD

Matrix: Water

Analysis Batch: 554162

Client Sample ID: IW-01-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Alkalinity, Total	311	F1	100	365.0	F1	mg/L		54	60 - 140	2	20

# QC Association Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

## GC/MS VOA

### Analysis Batch: 553610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-176371-2	MW-17R-OCT20	Total/NA	Water	624.1	
480-176371-3	MW-17R-OCT20-Q	Total/NA	Water	624.1	
480-176371-4	MW-8-OCT20	Total/NA	Water	624.1	
MB 480-553610/8	Method Blank	Total/NA	Water	624.1	
LCS 480-553610/6	Lab Control Sample	Total/NA	Water	624.1	

### Analysis Batch: 553815

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-176371-1	IW-01-OCT20	Total/NA	Water	624.1	
480-176371-2 - DL	MW-17R-OCT20	Total/NA	Water	624.1	
480-176371-3 - DL	MW-17R-OCT20-Q	Total/NA	Water	624.1	
480-176371-4 - DL	MW-8-OCT20	Total/NA	Water	624.1	
MB 480-553815/8	Method Blank	Total/NA	Water	624.1	
LCS 480-553815/6	Lab Control Sample	Total/NA	Water	624.1	
480-176371-1 MS	IW-01-OCT20	Total/NA	Water	624.1	
480-176371-1 MSD	IW-01-OCT20	Total/NA	Water	624.1	

## General Chemistry

### Analysis Batch: 553797

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-176371-1	IW-01-OCT20	Total/NA	Water	SM 2320B	
480-176371-2	MW-17R-OCT20	Total/NA	Water	SM 2320B	
480-176371-3	MW-17R-OCT20-Q	Total/NA	Water	SM 2320B	
480-176371-4	MW-8-OCT20	Total/NA	Water	SM 2320B	
MB 480-553797/4	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-553797/5	Lab Control Sample	Total/NA	Water	SM 2320B	
480-176371-2 MS	MW-17R-OCT20	Total/NA	Water	SM 2320B	
480-176371-2 MSD	MW-17R-OCT20	Total/NA	Water	SM 2320B	

### Analysis Batch: 554094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-176371-1	IW-01-OCT20	Total/NA	Water	300.0	
480-176371-2	MW-17R-OCT20	Total/NA	Water	300.0	
480-176371-3	MW-17R-OCT20-Q	Total/NA	Water	300.0	
480-176371-4	MW-8-OCT20	Total/NA	Water	300.0	
MB 480-554094/4	Method Blank	Total/NA	Water	300.0	
LCS 480-554094/3	Lab Control Sample	Total/NA	Water	300.0	
480-176371-1 MS	IW-01-OCT20	Total/NA	Water	300.0	
480-176371-1 MSD	IW-01-OCT20	Total/NA	Water	300.0	

### Analysis Batch: 554162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-554162/4	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-554162/5	Lab Control Sample	Total/NA	Water	SM 2320B	
480-176371-1 MS	IW-01-OCT20	Total/NA	Water	SM 2320B	
480-176371-1 MSD	IW-01-OCT20	Total/NA	Water	SM 2320B	

# Lab Chronicle

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

**Client Sample ID: IW-01-OCT20**

**Lab Sample ID: 480-176371-1**

**Date Collected: 10/12/20 12:15**

**Matrix: Water**

**Date Received: 10/12/20 18:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		5	553815	10/14/20 11:56	WJD	TAL BUF
Total/NA	Analysis	300.0		5	554094	10/16/20 01:07	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	553797	10/13/20 17:35	BEF	TAL BUF

**Client Sample ID: MW-17R-OCT20**

**Lab Sample ID: 480-176371-2**

**Date Collected: 10/12/20 13:10**

**Matrix: Water**

**Date Received: 10/12/20 18:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		10	553610	10/13/20 18:29	WJD	TAL BUF
Total/NA	Analysis	624.1	DL	20	553815	10/14/20 12:20	WJD	TAL BUF
Total/NA	Analysis	300.0		5	554094	10/16/20 00:24	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	553797	10/13/20 18:07	BEF	TAL BUF

**Client Sample ID: MW-17R-OCT20-Q**

**Lab Sample ID: 480-176371-3**

**Date Collected: 10/12/20 13:10**

**Matrix: Water**

**Date Received: 10/12/20 18:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		10	553610	10/13/20 18:53	WJD	TAL BUF
Total/NA	Analysis	624.1	DL	20	553815	10/14/20 12:43	WJD	TAL BUF
Total/NA	Analysis	300.0		5	554094	10/16/20 00:38	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	553797	10/13/20 17:42	BEF	TAL BUF

**Client Sample ID: MW-8-OCT20**

**Lab Sample ID: 480-176371-4**

**Date Collected: 10/12/20 15:10**

**Matrix: Water**

**Date Received: 10/12/20 18:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		10	553610	10/13/20 19:16	WJD	TAL BUF
Total/NA	Analysis	624.1	DL	50	553815	10/14/20 13:06	WJD	TAL BUF
Total/NA	Analysis	300.0		5	554094	10/16/20 00:53	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	553797	10/13/20 17:49	BEF	TAL BUF

## Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# Accreditation/Certification Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

## Laboratory: Eurofins TestAmerica, Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-01-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
624.1		Water	1,2-Dichloroethene, Total
SM 2320B		Water	Alkalinity, Bicarbonate
SM 2320B		Water	Alkalinity, Carbonate
SM 2320B		Water	Hydroxide Alkalinity

## Method Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF

### Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

### Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600



## Sample Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176371-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-176371-1	IW-01-OCT20	Water	10/12/20 12:15	10/12/20 18:10	
480-176371-2	MW-17R-OCT20	Water	10/12/20 13:10	10/12/20 18:10	
480-176371-3	MW-17R-OCT20-Q	Water	10/12/20 13:10	10/12/20 18:10	
480-176371-4	MW-8-OCT20	Water	10/12/20 15:10	10/12/20 18:10	



## Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-176371-1

**Login Number: 176371**

**List Source: Eurofins TestAmerica, Buffalo**

**List Number: 1**

**Creator: Sabuda, Brendan D**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is 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	4.6 #1 ICE
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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	E+E
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

## ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo  
10 Hazelwood Drive  
Amherst, NY 14228-2298  
Tel: (716)691-2600

Laboratory Job ID: 480-176469-1

Client Project/Site: Davis-Howland Oil Corp #828088

**For:**

New York State D.E.C.  
625 Broadway  
Division of Environmental Remediation  
Albany, New York 12233-7014

Attn: Jenelle Gaylord



Authorized for release by:  
10/20/2020 6:19:44 AM

Orlette Johnson, Senior Project Manager  
(484)685-0864

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### LINKS

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.



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Orlette Johnson  
Senior Project Manager  
10/20/2020 6:19:44 AM



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## Definitions/Glossary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### 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: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

**Job ID: 480-176469-1**

**Laboratory: Eurofins TestAmerica, Buffalo**

## Narrative

### Job Narrative 480-176469-1

#### Receipt

The samples were received on 10/13/2020 4:10 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.6° C.

#### GC/MS VOA

Method 624.1: The following samples were diluted to bring the concentration of target analytes within the calibration range: MW-5R-OCT20 (480-176469-2), (480-176469-C-2 MS) and (480-176469-C-2 MSD). Elevated reporting limits (RLs) are provided.

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

#### HPLC/IC

Method 300.0: The following sample was diluted due to the nature of the sample matrix: MW-14R-OCT20 (480-176469-3). Elevated reporting limits (RLs) are provided.

Method 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-5R-OCT20 (480-176469-2). Elevated reporting limits (RLs) are provided.

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

#### General Chemistry

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

## Detection Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

### Client Sample ID: TB-20201013

Lab Sample ID: 480-176469-1

No Detections.

### Client Sample ID: MW-5R-OCT20

Lab Sample ID: 480-176469-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
1,2-Dichloroethene, Total	450		200	64	ug/L	20			624.1	Total/NA
Vinyl chloride	75	J	100	15	ug/L	20			624.1	Total/NA
Sulfate	277		10.0	1.7	mg/L	5			300.0	Total/NA
Alkalinity, Total	302		5.0	0.79	mg/L	1			SM 2320B	Total/NA
Alkalinity, Bicarbonate	302		5.0	0.79	mg/L	1			SM 2320B	Total/NA

### Client Sample ID: MW-14R-OCT20

Lab Sample ID: 480-176469-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
1,2-Dichloroethene, Total	8.4	J	10	3.2	ug/L	1			624.1	Total/NA
trans-1,2-Dichloroethene	1.0	J	5.0	0.59	ug/L	1			624.1	Total/NA
Trichloroethene	1.7	J	5.0	0.60	ug/L	1			624.1	Total/NA
Vinyl chloride	9.3		5.0	0.75	ug/L	1			624.1	Total/NA
Sulfate	73.8		4.0	0.70	mg/L	2			300.0	Total/NA
Alkalinity, Total	295		5.0	0.79	mg/L	1			SM 2320B	Total/NA
Alkalinity, Bicarbonate	295		5.0	0.79	mg/L	1			SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

Client Sample ID: TB-20201013

Lab Sample ID: 480-176469-1

Date Collected: 10/13/20 10:00

Matrix: Water

Date Received: 10/13/20 16:10

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/15/20 11:39	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/15/20 11:39	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/15/20 11:39	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/15/20 11:39	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/15/20 11:39	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/15/20 11:39	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/15/20 11:39	1
1,2-Dichloroethene, Total	ND		10	3.2	ug/L			10/15/20 11:39	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/15/20 11:39	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/15/20 11:39	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/15/20 11:39	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/15/20 11:39	1
Acrolein	ND		100	17	ug/L			10/15/20 11:39	1
Acrylonitrile	ND		50	1.9	ug/L			10/15/20 11:39	1
Benzene	ND		5.0	0.60	ug/L			10/15/20 11:39	1
Bromoform	ND		5.0	0.47	ug/L			10/15/20 11:39	1
Bromomethane	ND		5.0	1.2	ug/L			10/15/20 11:39	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/15/20 11:39	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/15/20 11:39	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/15/20 11:39	1
Chloroethane	ND		5.0	0.87	ug/L			10/15/20 11:39	1
Chloroform	ND		5.0	0.54	ug/L			10/15/20 11:39	1
Chloromethane	ND		5.0	0.64	ug/L			10/15/20 11:39	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/15/20 11:39	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/15/20 11:39	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/15/20 11:39	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/15/20 11:39	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/15/20 11:39	1
Toluene	ND		5.0	0.45	ug/L			10/15/20 11:39	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/15/20 11:39	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/15/20 11:39	1
Trichloroethene	ND		5.0	0.60	ug/L			10/15/20 11:39	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/15/20 11:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		68 - 130		10/15/20 11:39	1
4-Bromofluorobenzene (Surr)	98		76 - 123		10/15/20 11:39	1
Dibromofluoromethane (Surr)	101		75 - 123		10/15/20 11:39	1
Toluene-d8 (Surr)	97		77 - 120		10/15/20 11:39	1

Client Sample ID: MW-5R-OCT20

Lab Sample ID: 480-176469-2

Date Collected: 10/13/20 14:20

Matrix: Water

Date Received: 10/13/20 16:10

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	7.7	ug/L			10/15/20 12:02	20
1,1,2,2-Tetrachloroethane	ND		100	5.2	ug/L			10/15/20 12:02	20
1,1,2-Trichloroethane	ND		100	9.6	ug/L			10/15/20 12:02	20
1,1-Dichloroethane	ND		100	12	ug/L			10/15/20 12:02	20

Eurofins TestAmerica, Buffalo



# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

Client Sample ID: MW-5R-OCT20

Lab Sample ID: 480-176469-2

Date Collected: 10/13/20 14:20

Matrix: Water

Date Received: 10/13/20 16:10

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		100	17	ug/L			10/15/20 12:02	20
1,2-Dichlorobenzene	ND		100	8.9	ug/L			10/15/20 12:02	20
1,2-Dichloroethane	ND		100	12	ug/L			10/15/20 12:02	20
<b>1,2-Dichloroethene, Total</b>	<b>450</b>		200	64	ug/L			10/15/20 12:02	20
1,2-Dichloropropane	ND		100	12	ug/L			10/15/20 12:02	20
1,3-Dichlorobenzene	ND		100	11	ug/L			10/15/20 12:02	20
1,4-Dichlorobenzene	ND		100	10	ug/L			10/15/20 12:02	20
2-Chloroethyl vinyl ether	ND		500	37	ug/L			10/15/20 12:02	20
Acrolein	ND		2000	350	ug/L			10/15/20 12:02	20
Acrylonitrile	ND		1000	38	ug/L			10/15/20 12:02	20
Benzene	ND		100	12	ug/L			10/15/20 12:02	20
Bromoform	ND		100	9.4	ug/L			10/15/20 12:02	20
Bromomethane	ND		100	24	ug/L			10/15/20 12:02	20
Carbon tetrachloride	ND		100	10	ug/L			10/15/20 12:02	20
Chlorobenzene	ND		100	9.5	ug/L			10/15/20 12:02	20
Chlorodibromomethane	ND		100	8.3	ug/L			10/15/20 12:02	20
Chloroethane	ND		100	17	ug/L			10/15/20 12:02	20
Chloroform	ND		100	11	ug/L			10/15/20 12:02	20
Chloromethane	ND		100	13	ug/L			10/15/20 12:02	20
cis-1,3-Dichloropropene	ND		100	6.6	ug/L			10/15/20 12:02	20
Dichlorobromomethane	ND		100	11	ug/L			10/15/20 12:02	20
Ethylbenzene	ND		100	9.3	ug/L			10/15/20 12:02	20
Methylene Chloride	ND		100	16	ug/L			10/15/20 12:02	20
Tetrachloroethene	ND		100	6.8	ug/L			10/15/20 12:02	20
Toluene	ND		100	9.1	ug/L			10/15/20 12:02	20
trans-1,2-Dichloroethene	ND		100	12	ug/L			10/15/20 12:02	20
trans-1,3-Dichloropropene	ND		100	8.8	ug/L			10/15/20 12:02	20
Trichloroethene	ND		100	12	ug/L			10/15/20 12:02	20
<b>Vinyl chloride</b>	<b>75 J</b>		100	15	ug/L			10/15/20 12:02	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		68 - 130		10/15/20 12:02	20
4-Bromofluorobenzene (Surr)	99		76 - 123		10/15/20 12:02	20
Dibromofluoromethane (Surr)	104		75 - 123		10/15/20 12:02	20
Toluene-d8 (Surr)	99		77 - 120		10/15/20 12:02	20

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>277</b>		10.0	1.7	mg/L			10/15/20 11:34	5
<b>Alkalinity, Total</b>	<b>302</b>		5.0	0.79	mg/L			10/15/20 13:50	1
<b>Alkalinity, Bicarbonate</b>	<b>302</b>		5.0	0.79	mg/L			10/15/20 13:50	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			10/15/20 13:50	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			10/15/20 13:50	1

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

Client Sample ID: MW-14R-OCT20

Lab Sample ID: 480-176469-3

Date Collected: 10/13/20 14:00

Matrix: Water

Date Received: 10/13/20 16:10

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/15/20 15:31	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/15/20 15:31	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/15/20 15:31	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/15/20 15:31	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/15/20 15:31	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/15/20 15:31	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/15/20 15:31	1
<b>1,2-Dichloroethene, Total</b>	<b>8.4 J</b>		10	3.2	ug/L			10/15/20 15:31	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/15/20 15:31	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/15/20 15:31	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/15/20 15:31	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/15/20 15:31	1
Acrolein	ND		100	17	ug/L			10/15/20 15:31	1
Acrylonitrile	ND		50	1.9	ug/L			10/15/20 15:31	1
Benzene	ND		5.0	0.60	ug/L			10/15/20 15:31	1
Bromoform	ND		5.0	0.47	ug/L			10/15/20 15:31	1
Bromomethane	ND		5.0	1.2	ug/L			10/15/20 15:31	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/15/20 15:31	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/15/20 15:31	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/15/20 15:31	1
Chloroethane	ND		5.0	0.87	ug/L			10/15/20 15:31	1
Chloroform	ND		5.0	0.54	ug/L			10/15/20 15:31	1
Chloromethane	ND		5.0	0.64	ug/L			10/15/20 15:31	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/15/20 15:31	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/15/20 15:31	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/15/20 15:31	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/15/20 15:31	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/15/20 15:31	1
Toluene	ND		5.0	0.45	ug/L			10/15/20 15:31	1
<b>trans-1,2-Dichloroethene</b>	<b>1.0 J</b>		5.0	0.59	ug/L			10/15/20 15:31	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/15/20 15:31	1
<b>Trichloroethene</b>	<b>1.7 J</b>		5.0	0.60	ug/L			10/15/20 15:31	1
<b>Vinyl chloride</b>	<b>9.3</b>		5.0	0.75	ug/L			10/15/20 15:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		68 - 130		10/15/20 15:31	1
4-Bromofluorobenzene (Surr)	98		76 - 123		10/15/20 15:31	1
Dibromofluoromethane (Surr)	102		75 - 123		10/15/20 15:31	1
Toluene-d8 (Surr)	100		77 - 120		10/15/20 15:31	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>73.8</b>		4.0	0.70	mg/L			10/15/20 11:48	2
<b>Alkalinity, Total</b>	<b>295</b>		5.0	0.79	mg/L			10/15/20 13:57	1
<b>Alkalinity, Bicarbonate</b>	<b>295</b>		5.0	0.79	mg/L			10/15/20 13:57	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			10/15/20 13:57	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			10/15/20 13:57	1

Eurofins TestAmerica, Buffalo

# Surrogate Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	DCA (68-130)	DCA (68-130)	BFB (76-123)	BFB (76-123)	DBFM (75-123)	DBFM (75-123)	TOL (77-120)	TOL (77-120)
480-176469-1	TB-20201013	92	92	98	98	101	101	97	97
480-176469-2	MW-5R-OCT20	95	95	99	99	104	104	99	99
480-176469-2 MS	MW-5R-OCT20	93	93	98	98	98	98	102	102
480-176469-2 MSD	MW-5R-OCT20	97	97	98	98	98	98	100	100
480-176469-3	MW-14R-OCT20	96	96	98	98	102	102	100	100
LCS 480-554001/6	Lab Control Sample	91	91	99	99	99	99	99	99
LCS 480-554003/6	Lab Control Sample	91	91	99	99	99	99	99	99
MB 480-554001/8	Method Blank	97	97	98	98	103	103	98	98
MB 480-554003/8	Method Blank	97	97	98	98	103	103	98	98

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-554001/8

Matrix: Water

Analysis Batch: 554001

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/15/20 11:05	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/15/20 11:05	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/15/20 11:05	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/15/20 11:05	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/15/20 11:05	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/15/20 11:05	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/15/20 11:05	1
1,2-Dichloroethene, Total	ND		10	3.2	ug/L			10/15/20 11:05	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/15/20 11:05	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/15/20 11:05	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/15/20 11:05	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/15/20 11:05	1
Acrolein	ND		100	17	ug/L			10/15/20 11:05	1
Acrylonitrile	ND		50	1.9	ug/L			10/15/20 11:05	1
Benzene	ND		5.0	0.60	ug/L			10/15/20 11:05	1
Bromoform	ND		5.0	0.47	ug/L			10/15/20 11:05	1
Bromomethane	ND		5.0	1.2	ug/L			10/15/20 11:05	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/15/20 11:05	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/15/20 11:05	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/15/20 11:05	1
Chloroethane	ND		5.0	0.87	ug/L			10/15/20 11:05	1
Chloroform	ND		5.0	0.54	ug/L			10/15/20 11:05	1
Chloromethane	ND		5.0	0.64	ug/L			10/15/20 11:05	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/15/20 11:05	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/15/20 11:05	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/15/20 11:05	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/15/20 11:05	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/15/20 11:05	1
Toluene	ND		5.0	0.45	ug/L			10/15/20 11:05	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/15/20 11:05	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/15/20 11:05	1
Trichloroethene	ND		5.0	0.60	ug/L			10/15/20 11:05	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/15/20 11:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		68 - 130		10/15/20 11:05	1
4-Bromofluorobenzene (Surr)	98		76 - 123		10/15/20 11:05	1
Dibromofluoromethane (Surr)	103		75 - 123		10/15/20 11:05	1
Toluene-d8 (Surr)	98		77 - 120		10/15/20 11:05	1

Lab Sample ID: LCS 480-554001/6

Matrix: Water

Analysis Batch: 554001

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	19.7		ug/L		99	52 - 162
1,1,2,2-Tetrachloroethane	20.0	17.1		ug/L		86	46 - 157
1,1,2-Trichloroethane	20.0	19.0		ug/L		95	52 - 150

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-554001/6

Matrix: Water

Analysis Batch: 554001

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	20.0	20.3		ug/L		101	59 - 155
1,1-Dichloroethene	20.0	21.4		ug/L		107	1 - 234
1,2-Dichlorobenzene	20.0	18.7		ug/L		93	18 - 190
1,2-Dichloroethane	20.0	18.2		ug/L		91	49 - 155
1,2-Dichloropropane	20.0	19.6		ug/L		98	1 - 210
1,3-Dichlorobenzene	20.0	19.2		ug/L		96	59 - 156
1,4-Dichlorobenzene	20.0	19.0		ug/L		95	18 - 190
2-Chloroethyl vinyl ether	20.0	19.2	J	ug/L		96	1 - 305
Benzene	20.0	20.3		ug/L		102	37 - 151
Bromoform	20.0	18.2		ug/L		91	45 - 169
Bromomethane	20.0	25.1		ug/L		125	1 - 242
Carbon tetrachloride	20.0	20.1		ug/L		100	70 - 140
Chlorobenzene	20.0	20.0		ug/L		100	37 - 160
Chlorodibromomethane	20.0	18.1		ug/L		91	53 - 149
Chloroethane	20.0	23.3		ug/L		116	14 - 230
Chloroform	20.0	19.6		ug/L		98	51 - 138
Chloromethane	20.0	23.0		ug/L		115	1 - 273
cis-1,3-Dichloropropene	20.0	19.0		ug/L		95	1 - 227
Dichlorobromomethane	20.0	18.7		ug/L		94	35 - 155
Ethylbenzene	20.0	20.3		ug/L		101	37 - 162
Methylene Chloride	20.0	20.2		ug/L		101	1 - 221
Tetrachloroethene	20.0	21.3		ug/L		107	64 - 148
Toluene	20.0	19.7		ug/L		98	47 - 150
trans-1,2-Dichloroethene	20.0	20.8		ug/L		104	54 - 156
trans-1,3-Dichloropropene	20.0	18.3		ug/L		91	17 - 183
Trichloroethene	20.0	19.7		ug/L		99	71 - 157
Vinyl chloride	20.0	24.2		ug/L		121	1 - 251

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		68 - 130
4-Bromofluorobenzene (Surr)	99		76 - 123
Dibromofluoromethane (Surr)	99		75 - 123
Toluene-d8 (Surr)	99		77 - 120

Lab Sample ID: 480-176469-2 MS

Matrix: Water

Analysis Batch: 554001

Client Sample ID: MW-5R-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	ND		400	403		ug/L		101	52 - 162
1,1,2,2-Tetrachloroethane	ND		400	369		ug/L		92	46 - 157
1,1,2-Trichloroethane	ND		400	402		ug/L		100	52 - 150
1,1-Dichloroethane	ND		400	421		ug/L		105	59 - 155
1,1-Dichloroethene	ND		400	435		ug/L		109	1 - 234
1,2-Dichlorobenzene	ND		400	390		ug/L		97	18 - 190
1,2-Dichloroethane	ND		400	375		ug/L		94	49 - 155
1,2-Dichloropropane	ND		400	406		ug/L		102	1 - 210
1,3-Dichlorobenzene	ND		400	396		ug/L		99	59 - 156

Eurofins TestAmerica, Buffalo



# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 480-176469-2 MS

Matrix: Water

Analysis Batch: 554001

Client Sample ID: MW-5R-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	ND		400	397		ug/L		99	18 - 190
2-Chloroethyl vinyl ether	ND		400	386	J	ug/L		97	1 - 305
Benzene	ND		400	425		ug/L		106	37 - 151
Bromoform	ND		400	369		ug/L		92	45 - 169
Bromomethane	ND		400	459		ug/L		115	1 - 242
Carbon tetrachloride	ND		400	404		ug/L		101	70 - 140
Chlorobenzene	ND		400	414		ug/L		103	37 - 160
Chlorodibromomethane	ND		400	374		ug/L		94	53 - 149
Chloroethane	ND		400	454		ug/L		114	14 - 230
Chloroform	ND		400	396		ug/L		99	51 - 138
Chloromethane	ND		400	492		ug/L		123	1 - 273
cis-1,3-Dichloropropene	ND		400	389		ug/L		97	1 - 227
Dichlorobromomethane	ND		400	385		ug/L		96	35 - 155
Ethylbenzene	ND		400	419		ug/L		105	37 - 162
Methylene Chloride	ND		400	401		ug/L		100	1 - 221
Tetrachloroethene	ND		400	456		ug/L		114	64 - 148
Toluene	ND		400	423		ug/L		106	47 - 150
trans-1,2-Dichloroethene	ND		400	430		ug/L		107	54 - 156
trans-1,3-Dichloropropene	ND		400	371		ug/L		93	17 - 183
Trichloroethene	ND		400	426		ug/L		107	71 - 157
Vinyl chloride	75	J	400	487		ug/L		103	1 - 251
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	93		68 - 130						
4-Bromofluorobenzene (Surr)	98		76 - 123						
Dibromofluoromethane (Surr)	98		75 - 123						
Toluene-d8 (Surr)	102		77 - 120						

Lab Sample ID: 480-176469-2 MSD

Matrix: Water

Analysis Batch: 554001

Client Sample ID: MW-5R-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND		400	367		ug/L		92	52 - 162	9	15
1,1,2,2-Tetrachloroethane	ND		400	366		ug/L		92	46 - 157	1	15
1,1,2-Trichloroethane	ND		400	395		ug/L		99	52 - 150	2	15
1,1-Dichloroethane	ND		400	396		ug/L		99	59 - 155	6	15
1,1-Dichloroethene	ND		400	398		ug/L		100	1 - 234	9	15
1,2-Dichlorobenzene	ND		400	378		ug/L		95	18 - 190	3	15
1,2-Dichloroethane	ND		400	362		ug/L		91	49 - 155	3	15
1,2-Dichloropropane	ND		400	391		ug/L		98	1 - 210	4	15
1,3-Dichlorobenzene	ND		400	379		ug/L		95	59 - 156	4	15
1,4-Dichlorobenzene	ND		400	381		ug/L		95	18 - 190	4	15
2-Chloroethyl vinyl ether	ND		400	389	J	ug/L		97	1 - 305	1	15
Benzene	ND		400	410		ug/L		103	37 - 151	4	15
Bromoform	ND		400	364		ug/L		91	45 - 169	1	15
Bromomethane	ND		400	438		ug/L		109	1 - 242	5	15
Carbon tetrachloride	ND		400	373		ug/L		93	70 - 140	8	15

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 480-176469-2 MSD

Matrix: Water

Analysis Batch: 554001

Client Sample ID: MW-5R-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chlorobenzene	ND		400	394		ug/L		98	37 - 160	5	15
Chlorodibromomethane	ND		400	364		ug/L		91	53 - 149	3	15
Chloroethane	ND		400	433		ug/L		108	14 - 230	5	15
Chloroform	ND		400	377		ug/L		94	51 - 138	5	15
Chloromethane	ND		400	427		ug/L		107	1 - 273	14	15
cis-1,3-Dichloropropene	ND		400	380		ug/L		95	1 - 227	2	15
Dichlorobromomethane	ND		400	368		ug/L		92	35 - 155	4	15
Ethylbenzene	ND		400	393		ug/L		98	37 - 162	6	15
Methylene Chloride	ND		400	382		ug/L		96	1 - 221	5	15
Tetrachloroethene	ND		400	412		ug/L		103	64 - 148	10	15
Toluene	ND		400	390		ug/L		98	47 - 150	8	15
trans-1,2-Dichloroethene	ND		400	393		ug/L		98	54 - 156	9	15
trans-1,3-Dichloropropene	ND		400	366		ug/L		91	17 - 183	1	15
Trichloroethene	ND		400	393		ug/L		98	71 - 157	8	15
Vinyl chloride	75	J	400	455		ug/L		95	1 - 251	7	15

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		68 - 130
4-Bromofluorobenzene (Surr)	98		76 - 123
Dibromofluoromethane (Surr)	98		75 - 123
Toluene-d8 (Surr)	100		77 - 120

Lab Sample ID: MB 480-554003/8

Matrix: Water

Analysis Batch: 554003

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/15/20 11:05	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/15/20 11:05	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/15/20 11:05	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/15/20 11:05	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/15/20 11:05	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/15/20 11:05	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/15/20 11:05	1
1,2-Dichloroethene, Total	ND		10	3.2	ug/L			10/15/20 11:05	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/15/20 11:05	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/15/20 11:05	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/15/20 11:05	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/15/20 11:05	1
Acrolein	ND		100	17	ug/L			10/15/20 11:05	1
Acrylonitrile	ND		50	1.9	ug/L			10/15/20 11:05	1
Benzene	ND		5.0	0.60	ug/L			10/15/20 11:05	1
Bromoform	ND		5.0	0.47	ug/L			10/15/20 11:05	1
Bromomethane	ND		5.0	1.2	ug/L			10/15/20 11:05	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/15/20 11:05	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/15/20 11:05	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/15/20 11:05	1
Chloroethane	ND		5.0	0.87	ug/L			10/15/20 11:05	1

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-554003/8

Matrix: Water

Analysis Batch: 554003

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		5.0	0.54	ug/L			10/15/20 11:05	1
Chloromethane	ND		5.0	0.64	ug/L			10/15/20 11:05	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/15/20 11:05	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/15/20 11:05	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/15/20 11:05	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/15/20 11:05	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/15/20 11:05	1
Toluene	ND		5.0	0.45	ug/L			10/15/20 11:05	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/15/20 11:05	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/15/20 11:05	1
Trichloroethene	ND		5.0	0.60	ug/L			10/15/20 11:05	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/15/20 11:05	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	97		68 - 130		10/15/20 11:05	1
4-Bromofluorobenzene (Surr)	98		76 - 123		10/15/20 11:05	1
Dibromofluoromethane (Surr)	103		75 - 123		10/15/20 11:05	1
Toluene-d8 (Surr)	98		77 - 120		10/15/20 11:05	1

Lab Sample ID: LCS 480-554003/6

Matrix: Water

Analysis Batch: 554003

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	19.7		ug/L		99	52 - 162
1,1,2,2-Tetrachloroethane	20.0	17.1		ug/L		86	46 - 157
1,1,2-Trichloroethane	20.0	19.0		ug/L		95	52 - 150
1,1-Dichloroethane	20.0	20.3		ug/L		101	59 - 155
1,1-Dichloroethene	20.0	21.4		ug/L		107	1 - 234
1,2-Dichlorobenzene	20.0	18.7		ug/L		93	18 - 190
1,2-Dichloroethane	20.0	18.2		ug/L		91	49 - 155
1,2-Dichloropropane	20.0	19.6		ug/L		98	1 - 210
1,3-Dichlorobenzene	20.0	19.2		ug/L		96	59 - 156
1,4-Dichlorobenzene	20.0	19.0		ug/L		95	18 - 190
2-Chloroethyl vinyl ether	20.0	19.2	J	ug/L		96	1 - 305
Benzene	20.0	20.3		ug/L		102	37 - 151
Bromoform	20.0	18.2		ug/L		91	45 - 169
Bromomethane	20.0	25.1		ug/L		125	1 - 242
Carbon tetrachloride	20.0	20.1		ug/L		100	70 - 140
Chlorobenzene	20.0	20.0		ug/L		100	37 - 160
Chlorodibromomethane	20.0	18.1		ug/L		91	53 - 149
Chloroethane	20.0	23.3		ug/L		116	14 - 230
Chloroform	20.0	19.6		ug/L		98	51 - 138
Chloromethane	20.0	23.0		ug/L		115	1 - 273
cis-1,3-Dichloropropene	20.0	19.0		ug/L		95	1 - 227
Dichlorobromomethane	20.0	18.7		ug/L		94	35 - 155
Ethylbenzene	20.0	20.3		ug/L		101	37 - 162
Methylene Chloride	20.0	20.2		ug/L		101	1 - 221

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-554003/6

Matrix: Water

Analysis Batch: 554003

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	20.0	21.3		ug/L		107	64 - 148
Toluene	20.0	19.7		ug/L		98	47 - 150
trans-1,2-Dichloroethene	20.0	20.8		ug/L		104	54 - 156
trans-1,3-Dichloropropene	20.0	18.3		ug/L		91	17 - 183
Trichloroethene	20.0	19.7		ug/L		99	71 - 157
Vinyl chloride	20.0	24.2		ug/L		121	1 - 251

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	91		68 - 130
4-Bromofluorobenzene (Surr)	99		76 - 123
Dibromofluoromethane (Surr)	99		75 - 123
Toluene-d8 (Surr)	99		77 - 120

Lab Sample ID: 480-176469-2 MS

Matrix: Water

Analysis Batch: 554003

Client Sample ID: MW-5R-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	ND		400	403		ug/L		101	52 - 162
1,1,2,2-Tetrachloroethane	ND		400	369		ug/L		92	46 - 157
1,1,2-Trichloroethane	ND		400	402		ug/L		100	52 - 150
1,1-Dichloroethane	ND		400	421		ug/L		105	59 - 155
1,1-Dichloroethene	ND		400	435		ug/L		109	1 - 234
1,2-Dichlorobenzene	ND		400	390		ug/L		97	18 - 190
1,2-Dichloroethane	ND		400	375		ug/L		94	49 - 155
1,2-Dichloropropane	ND		400	406		ug/L		102	1 - 210
1,3-Dichlorobenzene	ND		400	396		ug/L		99	59 - 156
1,4-Dichlorobenzene	ND		400	397		ug/L		99	18 - 190
2-Chloroethyl vinyl ether	ND		400	386	J	ug/L		97	1 - 305
Benzene	ND		400	425		ug/L		106	37 - 151
Bromoform	ND		400	369		ug/L		92	45 - 169
Bromomethane	ND		400	459		ug/L		115	1 - 242
Carbon tetrachloride	ND		400	404		ug/L		101	70 - 140
Chlorobenzene	ND		400	414		ug/L		103	37 - 160
Chlorodibromomethane	ND		400	374		ug/L		94	53 - 149
Chloroethane	ND		400	454		ug/L		114	14 - 230
Chloroform	ND		400	396		ug/L		99	51 - 138
Chloromethane	ND		400	492		ug/L		123	1 - 273
cis-1,3-Dichloropropene	ND		400	389		ug/L		97	1 - 227
Dichlorobromomethane	ND		400	385		ug/L		96	35 - 155
Ethylbenzene	ND		400	419		ug/L		105	37 - 162
Methylene Chloride	ND		400	401		ug/L		100	1 - 221
Tetrachloroethene	ND		400	456		ug/L		114	64 - 148
Toluene	ND		400	423		ug/L		106	47 - 150
trans-1,2-Dichloroethene	ND		400	430		ug/L		107	54 - 156
trans-1,3-Dichloropropene	ND		400	371		ug/L		93	17 - 183
Trichloroethene	ND		400	426		ug/L		107	71 - 157
Vinyl chloride	75	J	400	487		ug/L		103	1 - 251

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 480-176469-2 MS

Matrix: Water

Analysis Batch: 554003

Client Sample ID: MW-5R-OCT20

Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	93		68 - 130
4-Bromofluorobenzene (Surr)	98		76 - 123
Dibromofluoromethane (Surr)	98		75 - 123
Toluene-d8 (Surr)	102		77 - 120

Lab Sample ID: 480-176469-2 MSD

Matrix: Water

Analysis Batch: 554003

Client Sample ID: MW-5R-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND		400	367		ug/L		92	52 - 162	9	15
1,1,2,2-Tetrachloroethane	ND		400	366		ug/L		92	46 - 157	1	15
1,1,2-Trichloroethane	ND		400	395		ug/L		99	52 - 150	2	15
1,1-Dichloroethane	ND		400	396		ug/L		99	59 - 155	6	15
1,1-Dichloroethene	ND		400	398		ug/L		100	1 - 234	9	15
1,2-Dichlorobenzene	ND		400	378		ug/L		95	18 - 190	3	15
1,2-Dichloroethane	ND		400	362		ug/L		91	49 - 155	3	15
1,2-Dichloropropane	ND		400	391		ug/L		98	1 - 210	4	15
1,3-Dichlorobenzene	ND		400	379		ug/L		95	59 - 156	4	15
1,4-Dichlorobenzene	ND		400	381		ug/L		95	18 - 190	4	15
2-Chloroethyl vinyl ether	ND		400	389	J	ug/L		97	1 - 305	1	15
Benzene	ND		400	410		ug/L		103	37 - 151	4	15
Bromoform	ND		400	364		ug/L		91	45 - 169	1	15
Bromomethane	ND		400	438		ug/L		109	1 - 242	5	15
Carbon tetrachloride	ND		400	373		ug/L		93	70 - 140	8	15
Chlorobenzene	ND		400	394		ug/L		98	37 - 160	5	15
Chlorodibromomethane	ND		400	364		ug/L		91	53 - 149	3	15
Chloroethane	ND		400	433		ug/L		108	14 - 230	5	15
Chloroform	ND		400	377		ug/L		94	51 - 138	5	15
Chloromethane	ND		400	427		ug/L		107	1 - 273	14	15
cis-1,3-Dichloropropene	ND		400	380		ug/L		95	1 - 227	2	15
Dichlorobromomethane	ND		400	368		ug/L		92	35 - 155	4	15
Ethylbenzene	ND		400	393		ug/L		98	37 - 162	6	15
Methylene Chloride	ND		400	382		ug/L		96	1 - 221	5	15
Tetrachloroethene	ND		400	412		ug/L		103	64 - 148	10	15
Toluene	ND		400	390		ug/L		98	47 - 150	8	15
trans-1,2-Dichloroethene	ND		400	393		ug/L		98	54 - 156	9	15
trans-1,3-Dichloropropene	ND		400	366		ug/L		91	17 - 183	1	15
Trichloroethene	ND		400	393		ug/L		98	71 - 157	8	15
Vinyl chloride	75	J	400	455		ug/L		95	1 - 251	7	15

Surrogate	MSD %Recovery	MSD Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	97		68 - 130
4-Bromofluorobenzene (Surr)	98		76 - 123
Dibromofluoromethane (Surr)	98		75 - 123
Toluene-d8 (Surr)	100		77 - 120



# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-554048/4

Matrix: Water

Analysis Batch: 554048

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		2.0	0.35	mg/L			10/15/20 11:19	1

Lab Sample ID: LCS 480-554048/3

Matrix: Water

Analysis Batch: 554048

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	50.0	48.63		mg/L		97	90 - 110

## Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-554162/4

Matrix: Water

Analysis Batch: 554162

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0	0.79	mg/L			10/15/20 13:08	1
Alkalinity, Bicarbonate	ND		5.0	0.79	mg/L			10/15/20 13:08	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			10/15/20 13:08	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			10/15/20 13:08	1

Lab Sample ID: LCS 480-554162/5

Matrix: Water

Analysis Batch: 554162

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	98.88		mg/L		99	90 - 110

# QC Association Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

## GC/MS VOA

### Analysis Batch: 554001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 480-554001/8	Method Blank	Total/NA	Water	624.1	
LCS 480-554001/6	Lab Control Sample	Total/NA	Water	624.1	
480-176469-2 MS	MW-5R-OCT20	Total/NA	Water	624.1	
480-176469-2 MSD	MW-5R-OCT20	Total/NA	Water	624.1	

### Analysis Batch: 554003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-176469-1	TB-20201013	Total/NA	Water	624.1	
480-176469-2	MW-5R-OCT20	Total/NA	Water	624.1	
480-176469-3	MW-14R-OCT20	Total/NA	Water	624.1	
MB 480-554003/8	Method Blank	Total/NA	Water	624.1	
LCS 480-554003/6	Lab Control Sample	Total/NA	Water	624.1	
480-176469-2 MS	MW-5R-OCT20	Total/NA	Water	624.1	
480-176469-2 MSD	MW-5R-OCT20	Total/NA	Water	624.1	

## General Chemistry

### Analysis Batch: 554048

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-176469-2	MW-5R-OCT20	Total/NA	Water	300.0	
480-176469-3	MW-14R-OCT20	Total/NA	Water	300.0	
MB 480-554048/4	Method Blank	Total/NA	Water	300.0	
LCS 480-554048/3	Lab Control Sample	Total/NA	Water	300.0	

### Analysis Batch: 554162

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-176469-2	MW-5R-OCT20	Total/NA	Water	SM 2320B	
480-176469-3	MW-14R-OCT20	Total/NA	Water	SM 2320B	
MB 480-554162/4	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-554162/5	Lab Control Sample	Total/NA	Water	SM 2320B	

# Lab Chronicle

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

**Client Sample ID: TB-20201013**

**Lab Sample ID: 480-176469-1**

**Date Collected: 10/13/20 10:00**

**Matrix: Water**

**Date Received: 10/13/20 16:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	554003	10/15/20 11:39	WJD	TAL BUF

**Client Sample ID: MW-5R-OCT20**

**Lab Sample ID: 480-176469-2**

**Date Collected: 10/13/20 14:20**

**Matrix: Water**

**Date Received: 10/13/20 16:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		20	554003	10/15/20 12:02	WJD	TAL BUF
Total/NA	Analysis	300.0		5	554048	10/15/20 11:34	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	554162	10/15/20 13:50	BEF	TAL BUF

**Client Sample ID: MW-14R-OCT20**

**Lab Sample ID: 480-176469-3**

**Date Collected: 10/13/20 14:00**

**Matrix: Water**

**Date Received: 10/13/20 16:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	554003	10/15/20 15:31	WJD	TAL BUF
Total/NA	Analysis	300.0		2	554048	10/15/20 11:48	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	554162	10/15/20 13:57	BEF	TAL BUF

## Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# Accreditation/Certification Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

## Laboratory: Eurofins TestAmerica, Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-01-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
624.1		Water	1,2-Dichloroethene, Total
SM 2320B		Water	Alkalinity, Bicarbonate
SM 2320B		Water	Alkalinity, Carbonate
SM 2320B		Water	Hydroxide Alkalinity

## Method Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF

### Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

### Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600



## Sample Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176469-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-176469-1	TB-20201013	Water	10/13/20 10:00	10/13/20 16:10	
480-176469-2	MW-5R-OCT20	Water	10/13/20 14:20	10/13/20 16:10	
480-176469-3	MW-14R-OCT20	Water	10/13/20 14:00	10/13/20 16:10	

<b>Client Information</b> Client Contact: Jenelle Gaylord Company: New York State D.E.C. Address: 625 Broadway Division of Environmental Remediation City: Albany State: NY Zip: 12233-7014 Phone: _____ Email: jenelle.gaylord@dec.ny.gov Project Name: Davis-Howland Oil Corp #828088 Site: _____		<b>Lab PM:</b> Johnson, Orlette S <b>E-Mail:</b> Orlette.Johnson@Eurofinset.com <b>Phone:</b> (716) 684-8060 <b>Due Date Requested:</b> 3 day <b>TAT Requested (days):</b> 3 day <b>PO #:</b> _____ <b>CallOut ID:</b> 136612 <b>WO #:</b> _____ <b>Project #:</b> 48019422 <b>SSOW#:</b> _____		<b>Carrier Tracking No(s):</b> _____ <b>COC No:</b> 480-151692-33705.4 <b>Page:</b> 1 of 1 <b>Job #:</b> _____	
<b>Analysis Requested</b>		<b>Preservation Codes:</b> A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: _____ M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)			
<b>Sample Identification</b>		<b>Special Instructions/Note:</b>			
TB-20201013 MW-5R-0CT20 MW-14R-0CT20		1 Trip Blank 15 5			
Sample Date: 10/13/2020 Sample Time: 10:00 Sample Type: TB Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:20 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 2SD - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
Sample Date: 10/13/2020 Sample Time: 14:00 Sample Type: C Matrix: Water		624.1 PREC - Priority Pollutant List -			

## Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-176469-1

Login Number: 176469

List Source: Eurofins TestAmerica, Buffalo

List Number: 1

Creator: Sabuda, Brendan D

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is 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	3.6 #1 ICE
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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

## ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo  
10 Hazelwood Drive  
Amherst, NY 14228-2298  
Tel: (716)691-2600

Laboratory Job ID: 480-176565-1

Client Project/Site: Davis-Howland Oil Corp #828088

**For:**

New York State D.E.C.  
625 Broadway  
Division of Environmental Remediation  
Albany, New York 12233-7014

Attn: Jenelle Gaylord



Authorized for release by:

10/21/2020 11:05:06 AM

Wyatt Watson, Project Management Assistant I

[Wyatt.Watson@Eurofinset.com](mailto:Wyatt.Watson@Eurofinset.com)

Designee for

Orlette Johnson, Senior Project Manager

(484)685-0864

[Orlette.Johnson@Eurofinset.com](mailto:Orlette.Johnson@Eurofinset.com)

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.



---

Wyatt Watson  
Project Management Assistant I  
10/21/2020 11:05:06 AM



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## Definitions/Glossary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### 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: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

## Job ID: 480-176565-1

Laboratory: Eurofins TestAmerica, Buffalo

### Narrative

#### Job Narrative 480-176565-1

### Comments

No additional comments.

### Receipt

The samples were received on 10/14/2020 4:10 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.3° C.

### GC/MS VOA

Method 624.1: The following sample(s) were over-diluted. The sample will be reanalyzed outside of hold time: MW-2R-OCT20 (480-176565-5). Elevated reporting limits (RLs) are provided. Both sets of data will be provided.

Method 624.1: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-10R-OCT20 (480-176565-2). Elevated reporting limits (RLs) are provided.

Method 624.1: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-2R-OCT20 (480-176565-5). Elevated reporting limits (RLs) are provided.

Method 624.1: Reanalysis of the following sample was performed outside of the analytical holding time for Acrolein due to lack of history: MW-2R-OCT20 (480-176565-5).

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

### HPLC/IC

Method 300.0: The following sample was diluted to bring the concentration of target analytes within the calibration range: MW-2R-OCT20 (480-176565-5). Elevated reporting limits (RLs) are provided.

Method 300.0: The following sample was reported with elevated reporting limits for all analytes: MW-10R-OCT20 (480-176565-2). The sample was analyzed at a dilution based on screening results.

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

### General Chemistry

Method SM 2320B: The method requirement for no headspace was not met. The following sample was analyzed with significant headspace in the sample container(s): (480-176439-A-1). Significant headspace is defined as a bubble greater than 6 mm in diameter.

Method SM 2320B: The method requirement for no headspace was not met. The following sample was analyzed with significant headspace in the sample container(s): (480-176595-A-8). Significant headspace is defined as a bubble greater than 6 mm in diameter.

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

## Detection Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

### Client Sample ID: TB-20201014

Lab Sample ID: 480-176565-1

No Detections.

### Client Sample ID: MW-10R-OCT20

Lab Sample ID: 480-176565-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	1100		100	12	ug/L	20		624.1	Total/NA
Sulfate	57.0		10.0	1.7	mg/L	5		300.0	Total/NA
Alkalinity, Total	344		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	344		5.0	0.79	mg/L	1		SM 2320B	Total/NA

### Client Sample ID: RB-20201014-a

Lab Sample ID: 480-176565-3

No Detections.

### Client Sample ID: RB-20201014-b

Lab Sample ID: 480-176565-4

No Detections.

### Client Sample ID: MW-2R-OCT20

Lab Sample ID: 480-176565-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, Total	290		200	64	ug/L	20		624.1	Total/NA
Vinyl chloride	160		100	15	ug/L	20		624.1	Total/NA
1,1-Dichloroethane - RA	11	J	40	4.7	ug/L	8		624.1	Total/NA
1,2-Dichloroethene, Total - RA	270		80	26	ug/L	8		624.1	Total/NA
Vinyl chloride - RA	140		40	6.0	ug/L	8		624.1	Total/NA
Sulfate	152		10.0	1.7	mg/L	5		300.0	Total/NA
Alkalinity, Total	319		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	319		5.0	0.79	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

Client Sample ID: TB-20201014

Lab Sample ID: 480-176565-1

Date Collected: 10/14/20 09:30

Matrix: Water

Date Received: 10/14/20 16:10

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/16/20 14:06	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/16/20 14:06	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/16/20 14:06	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/16/20 14:06	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/16/20 14:06	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/16/20 14:06	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/16/20 14:06	1
1,2-Dichloroethene, Total	ND		10	3.2	ug/L			10/16/20 14:06	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/16/20 14:06	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/16/20 14:06	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/16/20 14:06	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/16/20 14:06	1
Acrolein	ND		100	17	ug/L			10/16/20 14:06	1
Acrylonitrile	ND		50	1.9	ug/L			10/16/20 14:06	1
Benzene	ND		5.0	0.60	ug/L			10/16/20 14:06	1
Bromoform	ND		5.0	0.47	ug/L			10/16/20 14:06	1
Bromomethane	ND		5.0	1.2	ug/L			10/16/20 14:06	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/16/20 14:06	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/16/20 14:06	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/16/20 14:06	1
Chloroethane	ND		5.0	0.87	ug/L			10/16/20 14:06	1
Chloroform	ND		5.0	0.54	ug/L			10/16/20 14:06	1
Chloromethane	ND		5.0	0.64	ug/L			10/16/20 14:06	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/16/20 14:06	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/16/20 14:06	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/16/20 14:06	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/16/20 14:06	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/16/20 14:06	1
Toluene	ND		5.0	0.45	ug/L			10/16/20 14:06	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/16/20 14:06	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/16/20 14:06	1
Trichloroethene	ND		5.0	0.60	ug/L			10/16/20 14:06	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/16/20 14:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		68 - 130		10/16/20 14:06	1
4-Bromofluorobenzene (Surr)	99		76 - 123		10/16/20 14:06	1
Dibromofluoromethane (Surr)	99		75 - 123		10/16/20 14:06	1
Toluene-d8 (Surr)	98		77 - 120		10/16/20 14:06	1

Client Sample ID: MW-10R-OCT20

Lab Sample ID: 480-176565-2

Date Collected: 10/14/20 13:20

Matrix: Water

Date Received: 10/14/20 16:10

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	7.7	ug/L			10/16/20 14:29	20
1,1,2,2-Tetrachloroethane	ND		100	5.2	ug/L			10/16/20 14:29	20
1,1,2-Trichloroethane	ND		100	9.6	ug/L			10/16/20 14:29	20
1,1-Dichloroethane	ND		100	12	ug/L			10/16/20 14:29	20

Eurofins TestAmerica, Buffalo



# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

Client Sample ID: MW-10R-OCT20

Lab Sample ID: 480-176565-2

Date Collected: 10/14/20 13:20

Matrix: Water

Date Received: 10/14/20 16:10

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		100	17	ug/L			10/16/20 14:29	20
1,2-Dichlorobenzene	ND		100	8.9	ug/L			10/16/20 14:29	20
1,2-Dichloroethane	ND		100	12	ug/L			10/16/20 14:29	20
1,2-Dichloroethene, Total	ND		200	64	ug/L			10/16/20 14:29	20
1,2-Dichloropropane	ND		100	12	ug/L			10/16/20 14:29	20
1,3-Dichlorobenzene	ND		100	11	ug/L			10/16/20 14:29	20
1,4-Dichlorobenzene	ND		100	10	ug/L			10/16/20 14:29	20
2-Chloroethyl vinyl ether	ND		500	37	ug/L			10/16/20 14:29	20
Acrolein	ND		2000	350	ug/L			10/16/20 14:29	20
Acrylonitrile	ND		1000	38	ug/L			10/16/20 14:29	20
Benzene	ND		100	12	ug/L			10/16/20 14:29	20
Bromoform	ND		100	9.4	ug/L			10/16/20 14:29	20
Bromomethane	ND		100	24	ug/L			10/16/20 14:29	20
Carbon tetrachloride	ND		100	10	ug/L			10/16/20 14:29	20
Chlorobenzene	ND		100	9.5	ug/L			10/16/20 14:29	20
Chlorodibromomethane	ND		100	8.3	ug/L			10/16/20 14:29	20
Chloroethane	ND		100	17	ug/L			10/16/20 14:29	20
Chloroform	ND		100	11	ug/L			10/16/20 14:29	20
Chloromethane	ND		100	13	ug/L			10/16/20 14:29	20
cis-1,3-Dichloropropene	ND		100	6.6	ug/L			10/16/20 14:29	20
Dichlorobromomethane	ND		100	11	ug/L			10/16/20 14:29	20
Ethylbenzene	ND		100	9.3	ug/L			10/16/20 14:29	20
Methylene Chloride	ND		100	16	ug/L			10/16/20 14:29	20
Tetrachloroethene	ND		100	6.8	ug/L			10/16/20 14:29	20
Toluene	ND		100	9.1	ug/L			10/16/20 14:29	20
trans-1,2-Dichloroethene	ND		100	12	ug/L			10/16/20 14:29	20
trans-1,3-Dichloropropene	ND		100	8.8	ug/L			10/16/20 14:29	20
<b>Trichloroethene</b>	<b>1100</b>		100	12	ug/L			10/16/20 14:29	20
Vinyl chloride	ND		100	15	ug/L			10/16/20 14:29	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		68 - 130		10/16/20 14:29	20
4-Bromofluorobenzene (Surr)	97		76 - 123		10/16/20 14:29	20
Dibromofluoromethane (Surr)	100		75 - 123		10/16/20 14:29	20
Toluene-d8 (Surr)	98		77 - 120		10/16/20 14:29	20

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Sulfate</b>	<b>57.0</b>		10.0	1.7	mg/L			10/17/20 00:09	5
<b>Alkalinity, Total</b>	<b>344</b>		5.0	0.79	mg/L			10/19/20 14:31	1
<b>Alkalinity, Bicarbonate</b>	<b>344</b>		5.0	0.79	mg/L			10/19/20 14:31	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			10/19/20 14:31	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			10/19/20 14:31	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

Client Sample ID: RB-20201014-a

Lab Sample ID: 480-176565-3

Date Collected: 10/14/20 13:50

Matrix: Water

Date Received: 10/14/20 16:10

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/16/20 14:52	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/16/20 14:52	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/16/20 14:52	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/16/20 14:52	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/16/20 14:52	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/16/20 14:52	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/16/20 14:52	1
1,2-Dichloroethene, Total	ND		10	3.2	ug/L			10/16/20 14:52	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/16/20 14:52	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/16/20 14:52	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/16/20 14:52	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/16/20 14:52	1
Acrolein	ND		100	17	ug/L			10/16/20 14:52	1
Acrylonitrile	ND		50	1.9	ug/L			10/16/20 14:52	1
Benzene	ND		5.0	0.60	ug/L			10/16/20 14:52	1
Bromoform	ND		5.0	0.47	ug/L			10/16/20 14:52	1
Bromomethane	ND		5.0	1.2	ug/L			10/16/20 14:52	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/16/20 14:52	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/16/20 14:52	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/16/20 14:52	1
Chloroethane	ND		5.0	0.87	ug/L			10/16/20 14:52	1
Chloroform	ND		5.0	0.54	ug/L			10/16/20 14:52	1
Chloromethane	ND		5.0	0.64	ug/L			10/16/20 14:52	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/16/20 14:52	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/16/20 14:52	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/16/20 14:52	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/16/20 14:52	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/16/20 14:52	1
Toluene	ND		5.0	0.45	ug/L			10/16/20 14:52	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/16/20 14:52	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/16/20 14:52	1
Trichloroethene	ND		5.0	0.60	ug/L			10/16/20 14:52	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/16/20 14:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		68 - 130		10/16/20 14:52	1
4-Bromofluorobenzene (Surr)	97		76 - 123		10/16/20 14:52	1
Dibromofluoromethane (Surr)	99		75 - 123		10/16/20 14:52	1
Toluene-d8 (Surr)	98		77 - 120		10/16/20 14:52	1

Client Sample ID: RB-20201014-b

Lab Sample ID: 480-176565-4

Date Collected: 10/14/20 14:00

Matrix: Water

Date Received: 10/14/20 16:10

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/16/20 15:15	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/16/20 15:15	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/16/20 15:15	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/16/20 15:15	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

Client Sample ID: RB-20201014-b

Lab Sample ID: 480-176565-4

Date Collected: 10/14/20 14:00

Matrix: Water

Date Received: 10/14/20 16:10

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/16/20 15:15	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/16/20 15:15	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/16/20 15:15	1
1,2-Dichloroethene, Total	ND		10	3.2	ug/L			10/16/20 15:15	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/16/20 15:15	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/16/20 15:15	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/16/20 15:15	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/16/20 15:15	1
Acrolein	ND		100	17	ug/L			10/16/20 15:15	1
Acrylonitrile	ND		50	1.9	ug/L			10/16/20 15:15	1
Benzene	ND		5.0	0.60	ug/L			10/16/20 15:15	1
Bromoform	ND		5.0	0.47	ug/L			10/16/20 15:15	1
Bromomethane	ND		5.0	1.2	ug/L			10/16/20 15:15	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/16/20 15:15	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/16/20 15:15	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/16/20 15:15	1
Chloroethane	ND		5.0	0.87	ug/L			10/16/20 15:15	1
Chloroform	ND		5.0	0.54	ug/L			10/16/20 15:15	1
Chloromethane	ND		5.0	0.64	ug/L			10/16/20 15:15	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/16/20 15:15	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/16/20 15:15	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/16/20 15:15	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/16/20 15:15	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/16/20 15:15	1
Toluene	ND		5.0	0.45	ug/L			10/16/20 15:15	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/16/20 15:15	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/16/20 15:15	1
Trichloroethene	ND		5.0	0.60	ug/L			10/16/20 15:15	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/16/20 15:15	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		68 - 130					10/16/20 15:15	1
4-Bromofluorobenzene (Surr)	96		76 - 123					10/16/20 15:15	1
Dibromofluoromethane (Surr)	101		75 - 123					10/16/20 15:15	1
Toluene-d8 (Surr)	98		77 - 120					10/16/20 15:15	1

Client Sample ID: MW-2R-OCT20

Lab Sample ID: 480-176565-5

Date Collected: 10/14/20 09:50

Matrix: Water

Date Received: 10/14/20 16:10

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	7.7	ug/L			10/16/20 15:37	20
1,1,2,2-Tetrachloroethane	ND		100	5.2	ug/L			10/16/20 15:37	20
1,1,2-Trichloroethane	ND		100	9.6	ug/L			10/16/20 15:37	20
1,1-Dichloroethane	ND		100	12	ug/L			10/16/20 15:37	20
1,1-Dichloroethene	ND		100	17	ug/L			10/16/20 15:37	20
1,2-Dichlorobenzene	ND		100	8.9	ug/L			10/16/20 15:37	20
1,2-Dichloroethane	ND		100	12	ug/L			10/16/20 15:37	20
1,2-Dichloroethene, Total	290		200	64	ug/L			10/16/20 15:37	20

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

Client Sample ID: MW-2R-OCT20

Lab Sample ID: 480-176565-5

Date Collected: 10/14/20 09:50

Matrix: Water

Date Received: 10/14/20 16:10

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		100	12	ug/L			10/16/20 15:37	20
1,3-Dichlorobenzene	ND		100	11	ug/L			10/16/20 15:37	20
1,4-Dichlorobenzene	ND		100	10	ug/L			10/16/20 15:37	20
2-Chloroethyl vinyl ether	ND		500	37	ug/L			10/16/20 15:37	20
Acrolein	ND		2000	350	ug/L			10/16/20 15:37	20
Acrylonitrile	ND		1000	38	ug/L			10/16/20 15:37	20
Benzene	ND		100	12	ug/L			10/16/20 15:37	20
Bromoform	ND		100	9.4	ug/L			10/16/20 15:37	20
Bromomethane	ND		100	24	ug/L			10/16/20 15:37	20
Carbon tetrachloride	ND		100	10	ug/L			10/16/20 15:37	20
Chlorobenzene	ND		100	9.5	ug/L			10/16/20 15:37	20
Chlorodibromomethane	ND		100	8.3	ug/L			10/16/20 15:37	20
Chloroethane	ND		100	17	ug/L			10/16/20 15:37	20
Chloroform	ND		100	11	ug/L			10/16/20 15:37	20
Chloromethane	ND		100	13	ug/L			10/16/20 15:37	20
cis-1,3-Dichloropropene	ND		100	6.6	ug/L			10/16/20 15:37	20
Dichlorobromomethane	ND		100	11	ug/L			10/16/20 15:37	20
Ethylbenzene	ND		100	9.3	ug/L			10/16/20 15:37	20
Methylene Chloride	ND		100	16	ug/L			10/16/20 15:37	20
Tetrachloroethene	ND		100	6.8	ug/L			10/16/20 15:37	20
Toluene	ND		100	9.1	ug/L			10/16/20 15:37	20
trans-1,2-Dichloroethene	ND		100	12	ug/L			10/16/20 15:37	20
trans-1,3-Dichloropropene	ND		100	8.8	ug/L			10/16/20 15:37	20
Trichloroethene	ND		100	12	ug/L			10/16/20 15:37	20
Vinyl chloride	160		100	15	ug/L			10/16/20 15:37	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		68 - 130		10/16/20 15:37	20
4-Bromofluorobenzene (Surr)	97		76 - 123		10/16/20 15:37	20
Dibromofluoromethane (Surr)	101		75 - 123		10/16/20 15:37	20
Toluene-d8 (Surr)	96		77 - 120		10/16/20 15:37	20

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		40	3.1	ug/L			10/19/20 14:05	8
1,1,2,2-Tetrachloroethane	ND		40	2.1	ug/L			10/19/20 14:05	8
1,1,2-Trichloroethane	ND		40	3.9	ug/L			10/19/20 14:05	8
1,1-Dichloroethane	11	J	40	4.7	ug/L			10/19/20 14:05	8
1,1-Dichloroethene	ND		40	6.8	ug/L			10/19/20 14:05	8
1,2-Dichlorobenzene	ND		40	3.6	ug/L			10/19/20 14:05	8
1,2-Dichloroethane	ND		40	4.8	ug/L			10/19/20 14:05	8
1,2-Dichloroethene, Total	270		80	26	ug/L			10/19/20 14:05	8
1,2-Dichloropropane	ND		40	4.9	ug/L			10/19/20 14:05	8
1,3-Dichlorobenzene	ND		40	4.3	ug/L			10/19/20 14:05	8
1,4-Dichlorobenzene	ND		40	4.1	ug/L			10/19/20 14:05	8
2-Chloroethyl vinyl ether	ND		200	15	ug/L			10/19/20 14:05	8
Acrolein	ND	H	800	140	ug/L			10/19/20 14:05	8
Acrylonitrile	ND		400	15	ug/L			10/19/20 14:05	8
Benzene	ND		40	4.8	ug/L			10/19/20 14:05	8
Bromoform	ND		40	3.7	ug/L			10/19/20 14:05	8

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

Client Sample ID: MW-2R-OCT20

Lab Sample ID: 480-176565-5

Date Collected: 10/14/20 09:50

Matrix: Water

Date Received: 10/14/20 16:10

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		40	9.5	ug/L			10/19/20 14:05	8
Carbon tetrachloride	ND		40	4.1	ug/L			10/19/20 14:05	8
Chlorobenzene	ND		40	3.8	ug/L			10/19/20 14:05	8
Chlorodibromomethane	ND		40	3.3	ug/L			10/19/20 14:05	8
Chloroethane	ND		40	7.0	ug/L			10/19/20 14:05	8
Chloroform	ND		40	4.3	ug/L			10/19/20 14:05	8
Chloromethane	ND		40	5.1	ug/L			10/19/20 14:05	8
cis-1,3-Dichloropropene	ND		40	2.6	ug/L			10/19/20 14:05	8
Dichlorobromomethane	ND		40	4.3	ug/L			10/19/20 14:05	8
Ethylbenzene	ND		40	3.7	ug/L			10/19/20 14:05	8
Methylene Chloride	ND		40	6.5	ug/L			10/19/20 14:05	8
Tetrachloroethene	ND		40	2.7	ug/L			10/19/20 14:05	8
Toluene	ND		40	3.6	ug/L			10/19/20 14:05	8
trans-1,2-Dichloroethene	ND		40	4.7	ug/L			10/19/20 14:05	8
trans-1,3-Dichloropropene	ND		40	3.5	ug/L			10/19/20 14:05	8
Trichloroethene	ND		40	4.8	ug/L			10/19/20 14:05	8
Vinyl chloride	140		40	6.0	ug/L			10/19/20 14:05	8

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		68 - 130		10/19/20 14:05	8
4-Bromofluorobenzene (Surr)	95		76 - 123		10/19/20 14:05	8
Dibromofluoromethane (Surr)	96		75 - 123		10/19/20 14:05	8
Toluene-d8 (Surr)	96		77 - 120		10/19/20 14:05	8

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	152		10.0	1.7	mg/L			10/17/20 00:23	5
Alkalinity, Total	319		5.0	0.79	mg/L			10/19/20 14:38	1
Alkalinity, Bicarbonate	319		5.0	0.79	mg/L			10/19/20 14:38	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			10/19/20 14:38	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			10/19/20 14:38	1



# Surrogate Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

**Method: 624.1 - Volatile Organic Compounds (GC/MS)**

**Matrix: Water**

**Prep Type: Total/NA**

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (68-130)	BFB (76-123)	DBFM (75-123)	TOL (77-120)
480-176565-1	TB-20201014	95	99	99	98
480-176565-2	MW-10R-OCT20	94	97	100	98
480-176565-3	RB-20201014-a	93	97	99	98
480-176565-4	RB-20201014-b	94	96	101	98
480-176565-5	MW-2R-OCT20	94	97	101	96
480-176565-5 - RA	MW-2R-OCT20	89	95	96	96
LCS 480-554226/6	Lab Control Sample	95	96	100	97
LCS 480-554564/6	Lab Control Sample	87	98	98	99
MB 480-554226/8	Method Blank	95	96	101	99
MB 480-554564/8	Method Blank	93	98	98	96

## Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-554226/8

Matrix: Water

Analysis Batch: 554226

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/16/20 11:38	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/16/20 11:38	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/16/20 11:38	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/16/20 11:38	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/16/20 11:38	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/16/20 11:38	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/16/20 11:38	1
1,2-Dichloroethene, Total	ND		10	3.2	ug/L			10/16/20 11:38	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/16/20 11:38	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/16/20 11:38	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/16/20 11:38	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/16/20 11:38	1
Acrolein	ND		100	17	ug/L			10/16/20 11:38	1
Acrylonitrile	ND		50	1.9	ug/L			10/16/20 11:38	1
Benzene	ND		5.0	0.60	ug/L			10/16/20 11:38	1
Bromoform	ND		5.0	0.47	ug/L			10/16/20 11:38	1
Bromomethane	ND		5.0	1.2	ug/L			10/16/20 11:38	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/16/20 11:38	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/16/20 11:38	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/16/20 11:38	1
Chloroethane	ND		5.0	0.87	ug/L			10/16/20 11:38	1
Chloroform	ND		5.0	0.54	ug/L			10/16/20 11:38	1
Chloromethane	ND		5.0	0.64	ug/L			10/16/20 11:38	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/16/20 11:38	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/16/20 11:38	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/16/20 11:38	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/16/20 11:38	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/16/20 11:38	1
Toluene	ND		5.0	0.45	ug/L			10/16/20 11:38	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/16/20 11:38	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/16/20 11:38	1
Trichloroethene	ND		5.0	0.60	ug/L			10/16/20 11:38	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/16/20 11:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		68 - 130		10/16/20 11:38	1
4-Bromofluorobenzene (Surr)	96		76 - 123		10/16/20 11:38	1
Dibromofluoromethane (Surr)	101		75 - 123		10/16/20 11:38	1
Toluene-d8 (Surr)	99		77 - 120		10/16/20 11:38	1

Lab Sample ID: LCS 480-554226/6

Matrix: Water

Analysis Batch: 554226

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	18.3		ug/L		91	52 - 162
1,1,2,2-Tetrachloroethane	20.0	17.5		ug/L		87	46 - 157
1,1,2-Trichloroethane	20.0	18.4		ug/L		92	52 - 150

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-554226/6

Matrix: Water

Analysis Batch: 554226

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	20.0	19.3		ug/L		97	59 - 155
1,1-Dichloroethene	20.0	19.8		ug/L		99	1 - 234
1,2-Dichlorobenzene	20.0	18.5		ug/L		93	18 - 190
1,2-Dichloroethane	20.0	17.6		ug/L		88	49 - 155
1,2-Dichloropropane	20.0	19.2		ug/L		96	1 - 210
1,3-Dichlorobenzene	20.0	18.7		ug/L		93	59 - 156
1,4-Dichlorobenzene	20.0	18.7		ug/L		94	18 - 190
2-Chloroethyl vinyl ether	20.0	19.0	J	ug/L		95	1 - 305
Benzene	20.0	19.6		ug/L		98	37 - 151
Bromoform	20.0	17.6		ug/L		88	45 - 169
Bromomethane	20.0	23.8		ug/L		119	1 - 242
Carbon tetrachloride	20.0	18.4		ug/L		92	70 - 140
Chlorobenzene	20.0	18.9		ug/L		94	37 - 160
Chlorodibromomethane	20.0	17.5		ug/L		87	53 - 149
Chloroethane	20.0	22.7		ug/L		114	14 - 230
Chloroform	20.0	19.1		ug/L		95	51 - 138
Chloromethane	20.0	23.3		ug/L		116	1 - 273
cis-1,3-Dichloropropene	20.0	18.4		ug/L		92	1 - 227
Dichlorobromomethane	20.0	18.1		ug/L		91	35 - 155
Ethylbenzene	20.0	19.0		ug/L		95	37 - 162
Methylene Chloride	20.0	19.8		ug/L		99	1 - 221
Tetrachloroethene	20.0	19.3		ug/L		97	64 - 148
Toluene	20.0	18.6		ug/L		93	47 - 150
trans-1,2-Dichloroethene	20.0	20.0		ug/L		100	54 - 156
trans-1,3-Dichloropropene	20.0	17.6		ug/L		88	17 - 183
Trichloroethene	20.0	19.0		ug/L		95	71 - 157
Vinyl chloride	20.0	23.3		ug/L		117	1 - 251

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		68 - 130
4-Bromofluorobenzene (Surr)	96		76 - 123
Dibromofluoromethane (Surr)	100		75 - 123
Toluene-d8 (Surr)	97		77 - 120

Lab Sample ID: MB 480-554564/8

Matrix: Water

Analysis Batch: 554564

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/19/20 11:40	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/19/20 11:40	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/19/20 11:40	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/19/20 11:40	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/19/20 11:40	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/19/20 11:40	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/19/20 11:40	1
1,2-Dichloroethene, Total	ND		10	3.2	ug/L			10/19/20 11:40	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/19/20 11:40	1

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-554564/8

Matrix: Water

Analysis Batch: 554564

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/19/20 11:40	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/19/20 11:40	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/19/20 11:40	1
Acrolein	ND		100	17	ug/L			10/19/20 11:40	1
Acrylonitrile	ND		50	1.9	ug/L			10/19/20 11:40	1
Benzene	ND		5.0	0.60	ug/L			10/19/20 11:40	1
Bromoform	ND		5.0	0.47	ug/L			10/19/20 11:40	1
Bromomethane	ND		5.0	1.2	ug/L			10/19/20 11:40	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/19/20 11:40	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/19/20 11:40	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/19/20 11:40	1
Chloroethane	ND		5.0	0.87	ug/L			10/19/20 11:40	1
Chloroform	ND		5.0	0.54	ug/L			10/19/20 11:40	1
Chloromethane	ND		5.0	0.64	ug/L			10/19/20 11:40	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/19/20 11:40	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/19/20 11:40	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/19/20 11:40	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/19/20 11:40	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/19/20 11:40	1
Toluene	ND		5.0	0.45	ug/L			10/19/20 11:40	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/19/20 11:40	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/19/20 11:40	1
Trichloroethene	ND		5.0	0.60	ug/L			10/19/20 11:40	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/19/20 11:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		68 - 130		10/19/20 11:40	1
4-Bromofluorobenzene (Surr)	98		76 - 123		10/19/20 11:40	1
Dibromofluoromethane (Surr)	98		75 - 123		10/19/20 11:40	1
Toluene-d8 (Surr)	96		77 - 120		10/19/20 11:40	1

Lab Sample ID: LCS 480-554564/6

Matrix: Water

Analysis Batch: 554564

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	18.4		ug/L		92	52 - 162
1,1,2,2-Tetrachloroethane	20.0	16.3		ug/L		81	46 - 157
1,1,2-Trichloroethane	20.0	18.0		ug/L		90	52 - 150
1,1-Dichloroethane	20.0	19.5		ug/L		98	59 - 155
1,1-Dichloroethene	20.0	20.4		ug/L		102	1 - 234
1,2-Dichlorobenzene	20.0	18.5		ug/L		92	18 - 190
1,2-Dichloroethane	20.0	17.4		ug/L		87	49 - 155
1,2-Dichloropropane	20.0	19.2		ug/L		96	1 - 210
1,3-Dichlorobenzene	20.0	18.9		ug/L		94	59 - 156
1,4-Dichlorobenzene	20.0	18.9		ug/L		95	18 - 190
2-Chloroethyl vinyl ether	20.0	17.8	J	ug/L		89	1 - 305
Benzene	20.0	20.0		ug/L		100	37 - 151

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-554564/6

Matrix: Water

Analysis Batch: 554564

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromoform	20.0	16.7		ug/L		84	45 - 169
Bromomethane	20.0	22.9		ug/L		115	1 - 242
Carbon tetrachloride	20.0	18.5		ug/L		93	70 - 140
Chlorobenzene	20.0	19.3		ug/L		97	37 - 160
Chlorodibromomethane	20.0	17.2		ug/L		86	53 - 149
Chloroethane	20.0	22.2		ug/L		111	14 - 230
Chloroform	20.0	18.8		ug/L		94	51 - 138
Chloromethane	20.0	21.6		ug/L		108	1 - 273
cis-1,3-Dichloropropene	20.0	18.3		ug/L		91	1 - 227
Dichlorobromomethane	20.0	18.3		ug/L		91	35 - 155
Ethylbenzene	20.0	19.7		ug/L		99	37 - 162
Methylene Chloride	20.0	18.9		ug/L		95	1 - 221
Tetrachloroethene	20.0	20.7		ug/L		104	64 - 148
Toluene	20.0	19.5		ug/L		97	47 - 150
trans-1,2-Dichloroethene	20.0	19.6		ug/L		98	54 - 156
trans-1,3-Dichloropropene	20.0	17.2		ug/L		86	17 - 183
Trichloroethene	20.0	19.2		ug/L		96	71 - 157
Vinyl chloride	20.0	22.3		ug/L		112	1 - 251

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	87		68 - 130
4-Bromofluorobenzene (Surr)	98		76 - 123
Dibromofluoromethane (Surr)	98		75 - 123
Toluene-d8 (Surr)	99		77 - 120

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-554356/4

Matrix: Water

Analysis Batch: 554356

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		2.0	0.35	mg/L			10/16/20 23:55	1

Lab Sample ID: LCS 480-554356/3

Matrix: Water

Analysis Batch: 554356

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	50.0	50.41		mg/L		101	90 - 110

## Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-554659/4

Matrix: Water

Analysis Batch: 554659

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0	0.79	mg/L			10/19/20 12:59	1

Eurofins TestAmerica, Buffalo



# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

## Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: MB 480-554659/4

Matrix: Water

Analysis Batch: 554659

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Bicarbonate	ND		5.0	0.79	mg/L			10/19/20 12:59	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			10/19/20 12:59	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			10/19/20 12:59	1

Lab Sample ID: LCS 480-554659/5

Matrix: Water

Analysis Batch: 554659

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	98.00		mg/L		98	90 - 110

# QC Association Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

## GC/MS VOA

### Analysis Batch: 554226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-176565-1	TB-20201014	Total/NA	Water	624.1	
480-176565-2	MW-10R-OCT20	Total/NA	Water	624.1	
480-176565-3	RB-20201014-a	Total/NA	Water	624.1	
480-176565-4	RB-20201014-b	Total/NA	Water	624.1	
480-176565-5	MW-2R-OCT20	Total/NA	Water	624.1	
MB 480-554226/8	Method Blank	Total/NA	Water	624.1	
LCS 480-554226/6	Lab Control Sample	Total/NA	Water	624.1	

### Analysis Batch: 554564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-176565-5 - RA	MW-2R-OCT20	Total/NA	Water	624.1	
MB 480-554564/8	Method Blank	Total/NA	Water	624.1	
LCS 480-554564/6	Lab Control Sample	Total/NA	Water	624.1	

## General Chemistry

### Analysis Batch: 554356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-176565-2	MW-10R-OCT20	Total/NA	Water	300.0	
480-176565-5	MW-2R-OCT20	Total/NA	Water	300.0	
MB 480-554356/4	Method Blank	Total/NA	Water	300.0	
LCS 480-554356/3	Lab Control Sample	Total/NA	Water	300.0	

### Analysis Batch: 554659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-176565-2	MW-10R-OCT20	Total/NA	Water	SM 2320B	
480-176565-5	MW-2R-OCT20	Total/NA	Water	SM 2320B	
MB 480-554659/4	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-554659/5	Lab Control Sample	Total/NA	Water	SM 2320B	

# Lab Chronicle

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

**Client Sample ID: TB-20201014**

**Lab Sample ID: 480-176565-1**

**Date Collected: 10/14/20 09:30**

**Matrix: Water**

**Date Received: 10/14/20 16:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	554226	10/16/20 14:06	WJD	TAL BUF

**Client Sample ID: MW-10R-OCT20**

**Lab Sample ID: 480-176565-2**

**Date Collected: 10/14/20 13:20**

**Matrix: Water**

**Date Received: 10/14/20 16:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		20	554226	10/16/20 14:29	WJD	TAL BUF
Total/NA	Analysis	300.0		5	554356	10/17/20 00:09	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	554659	10/19/20 14:31	BEF	TAL BUF

**Client Sample ID: RB-20201014-a**

**Lab Sample ID: 480-176565-3**

**Date Collected: 10/14/20 13:50**

**Matrix: Water**

**Date Received: 10/14/20 16:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	554226	10/16/20 14:52	WJD	TAL BUF

**Client Sample ID: RB-20201014-b**

**Lab Sample ID: 480-176565-4**

**Date Collected: 10/14/20 14:00**

**Matrix: Water**

**Date Received: 10/14/20 16:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	554226	10/16/20 15:15	WJD	TAL BUF

**Client Sample ID: MW-2R-OCT20**

**Lab Sample ID: 480-176565-5**

**Date Collected: 10/14/20 09:50**

**Matrix: Water**

**Date Received: 10/14/20 16:10**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		20	554226	10/16/20 15:37	WJD	TAL BUF
Total/NA	Analysis	624.1	RA	8	554564	10/19/20 14:05	WJD	TAL BUF
Total/NA	Analysis	300.0		5	554356	10/17/20 00:23	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	554659	10/19/20 14:38	BEF	TAL BUF

## Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

# Accreditation/Certification Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

## Laboratory: Eurofins TestAmerica, Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-01-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
624.1		Water	1,2-Dichloroethene, Total
SM 2320B		Water	Alkalinity, Bicarbonate
SM 2320B		Water	Alkalinity, Carbonate
SM 2320B		Water	Hydroxide Alkalinity

## Method Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF

### Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

### Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600



## Sample Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176565-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-176565-1	TB-20201014	Water	10/14/20 09:30	10/14/20 16:10	
480-176565-2	MW-10R-OCT20	Water	10/14/20 13:20	10/14/20 16:10	
480-176565-3	RB-20201014-a	Water	10/14/20 13:50	10/14/20 16:10	
480-176565-4	RB-20201014-b	Water	10/14/20 14:00	10/14/20 16:10	
480-176565-5	MW-2R-OCT20	Water	10/14/20 09:50	10/14/20 16:10	



## Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-176565-1

**Login Number: 176565**

**List Source: Eurofins TestAmerica, Buffalo**

**List Number: 1**

**Creator: Sabuda, Brendan D**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is 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	3.3 #1 ICE
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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

## ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo  
10 Hazelwood Drive  
Amherst, NY 14228-2298  
Tel: (716)691-2600

Laboratory Job ID: 480-176636-1

Client Project/Site: Davis-Howland Oil Corp #828088

**For:**

New York State D.E.C.  
625 Broadway  
Division of Environmental Remediation  
Albany, New York 12233-7014

Attn: Jenelle Gaylord



Authorized for release by:  
10/21/2020 8:24:51 AM

Orlette Johnson, Senior Project Manager  
(484)685-0864

[Orlette.Johnson@Eurofinset.com](mailto:Orlette.Johnson@Eurofinset.com)

### LINKS

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.



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Orlette Johnson  
Senior Project Manager  
10/21/2020 8:24:51 AM



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## Definitions/Glossary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### 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: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

**Job ID: 480-176636-1**

**Laboratory: Eurofins TestAmerica, Buffalo**

## Narrative

### Job Narrative 480-176636-1

#### Receipt

The samples were received on 10/15/2020 4:00 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.8° C.

#### GC/MS VOA

Method 624.1: The following sample(s) were over-diluted. The sample will be reanalyzed outside of hold time: MW-9S-OCT20 (480-176636-2), MW-2S-OCT20 (480-176636-3), PZ-3-OCT20 (480-176636-7), MW-14S-OCT20 (480-176636-8), MW-1S-OCT20 (480-176636-9) and 10W-PURGE WATER-OCT20 (480-176636-10). Elevated reporting limits (RLs) are provided. Both sets of data will be provided.

Method 624.1: Reanalysis of the following samples were performed outside of the analytical holding time for Acrolein due to lack of history: MW-9S-OCT20 (480-176636-2), MW-2S-OCT20 (480-176636-3), PZ-3-OCT20 (480-176636-7), MW-14S-OCT20 (480-176636-8), MW-1S-OCT20 (480-176636-9) and 10W-PURGE WATER-OCT20 (480-176636-10).

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

# Detection Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

## Client Sample ID: TB-20201015

Lab Sample ID: 480-176636-1

No Detections.

## Client Sample ID: MW-9S-OCT20

Lab Sample ID: 480-176636-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	7.7	J	100	7.7	ug/L	20		624.1	Total/NA
1,1-Dichloroethane	46	J	100	12	ug/L	20		624.1	Total/NA
Tetrachloroethene	43	J	100	6.8	ug/L	20		624.1	Total/NA
Trichloroethene	38	J	100	12	ug/L	20		624.1	Total/NA
1,1,1-Trichloroethane - RA	7.6		5.0	0.39	ug/L	1		624.1	Total/NA
1,1-Dichloroethane - RA	42		5.0	0.59	ug/L	1		624.1	Total/NA
1,2-Dichlorobenzene - RA	0.67	J	5.0	0.44	ug/L	1		624.1	Total/NA
1,2-Dichloroethene, Total - RA	48		10	3.2	ug/L	1		624.1	Total/NA
Chloroform - RA	0.65	J	5.0	0.54	ug/L	1		624.1	Total/NA
Tetrachloroethene - RA	41		5.0	0.34	ug/L	1		624.1	Total/NA
trans-1,2-Dichloroethene - RA	5.2		5.0	0.59	ug/L	1		624.1	Total/NA
Trichloroethene - RA	34		5.0	0.60	ug/L	1		624.1	Total/NA

## Client Sample ID: MW-2S-OCT20

Lab Sample ID: 480-176636-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane - RA	1.1	J	5.0	0.59	ug/L	1		624.1	Total/NA

## Client Sample ID: PZ-3-OCT20

Lab Sample ID: 480-176636-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane - RA	5.7		5.0	0.39	ug/L	1		624.1	Total/NA
1,1-Dichloroethane - RA	19		5.0	0.59	ug/L	1		624.1	Total/NA
1,1-Dichloroethene - RA	1.1	J	5.0	0.85	ug/L	1		624.1	Total/NA
1,2-Dichloroethene, Total - RA	7.8	J	10	3.2	ug/L	1		624.1	Total/NA
Tetrachloroethene - RA	0.48	J	5.0	0.34	ug/L	1		624.1	Total/NA
Trichloroethene - RA	1.8	J	5.0	0.60	ug/L	1		624.1	Total/NA

## Client Sample ID: MW-14S-OCT20

Lab Sample ID: 480-176636-8

No Detections.

## Client Sample ID: MW-1S-OCT20

Lab Sample ID: 480-176636-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	21	J	100	12	ug/L	20		624.1	Total/NA
1,1,1-Trichloroethane - RA	1.5	J	5.0	0.39	ug/L	1		624.1	Total/NA
1,1-Dichloroethane - RA	0.86	J	5.0	0.59	ug/L	1		624.1	Total/NA
1,2-Dichloroethene, Total - RA	24		10	3.2	ug/L	1		624.1	Total/NA
Tetrachloroethene - RA	3.3	J	5.0	0.34	ug/L	1		624.1	Total/NA
Trichloroethene - RA	19		5.0	0.60	ug/L	1		624.1	Total/NA

## Client Sample ID: 10W-PURGE WATER-OCT20

Lab Sample ID: 480-176636-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	34	J	100	12	ug/L	20		624.1	Total/NA
1,1,1-Trichloroethane - RA	0.52	J	5.0	0.39	ug/L	1		624.1	Total/NA
1,1-Dichloroethane - RA	3.5	J	5.0	0.59	ug/L	1		624.1	Total/NA
1,2-Dichloroethene, Total - RA	36		10	3.2	ug/L	1		624.1	Total/NA
Tetrachloroethene - RA	1.8	J	5.0	0.34	ug/L	1		624.1	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

## Detection Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

**Client Sample ID: 10W-PURGE WATER-OCT20 (Continued)**

**Lab Sample ID: 480-176636-10**

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene - RA	21		5.0	0.60	ug/L	1		624.1	Total/NA
Vinyl chloride - RA	4.5	J	5.0	0.75	ug/L	1		624.1	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo



# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

Client Sample ID: TB-20201015

Lab Sample ID: 480-176636-1

Date Collected: 10/15/20 09:00

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/16/20 16:24	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/16/20 16:24	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/16/20 16:24	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/16/20 16:24	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/16/20 16:24	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/16/20 16:24	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/16/20 16:24	1
1,2-Dichloroethene, Total	ND		10	3.2	ug/L			10/16/20 16:24	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/16/20 16:24	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/16/20 16:24	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/16/20 16:24	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/16/20 16:24	1
Acrolein	ND		100	17	ug/L			10/16/20 16:24	1
Acrylonitrile	ND		50	1.9	ug/L			10/16/20 16:24	1
Benzene	ND		5.0	0.60	ug/L			10/16/20 16:24	1
Bromoform	ND		5.0	0.47	ug/L			10/16/20 16:24	1
Bromomethane	ND		5.0	1.2	ug/L			10/16/20 16:24	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/16/20 16:24	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/16/20 16:24	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/16/20 16:24	1
Chloroethane	ND		5.0	0.87	ug/L			10/16/20 16:24	1
Chloroform	ND		5.0	0.54	ug/L			10/16/20 16:24	1
Chloromethane	ND		5.0	0.64	ug/L			10/16/20 16:24	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/16/20 16:24	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/16/20 16:24	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/16/20 16:24	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/16/20 16:24	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/16/20 16:24	1
Toluene	ND		5.0	0.45	ug/L			10/16/20 16:24	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/16/20 16:24	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/16/20 16:24	1
Trichloroethene	ND		5.0	0.60	ug/L			10/16/20 16:24	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/16/20 16:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		68 - 130		10/16/20 16:24	1
4-Bromofluorobenzene (Surr)	97		76 - 123		10/16/20 16:24	1
Dibromofluoromethane (Surr)	102		75 - 123		10/16/20 16:24	1
Toluene-d8 (Surr)	97		77 - 120		10/16/20 16:24	1

Client Sample ID: MW-9S-OCT20

Lab Sample ID: 480-176636-2

Date Collected: 10/15/20 10:00

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	7.7	J	100	7.7	ug/L			10/16/20 16:46	20
1,1,2,2-Tetrachloroethane	ND		100	5.2	ug/L			10/16/20 16:46	20
1,1,2-Trichloroethane	ND		100	9.6	ug/L			10/16/20 16:46	20
1,1-Dichloroethane	46	J	100	12	ug/L			10/16/20 16:46	20

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

Client Sample ID: MW-9S-OCT20

Lab Sample ID: 480-176636-2

Date Collected: 10/15/20 10:00

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		100	17	ug/L			10/16/20 16:46	20
1,2-Dichlorobenzene	ND		100	8.9	ug/L			10/16/20 16:46	20
1,2-Dichloroethane	ND		100	12	ug/L			10/16/20 16:46	20
1,2-Dichloroethene, Total	ND		200	64	ug/L			10/16/20 16:46	20
1,2-Dichloropropane	ND		100	12	ug/L			10/16/20 16:46	20
1,3-Dichlorobenzene	ND		100	11	ug/L			10/16/20 16:46	20
1,4-Dichlorobenzene	ND		100	10	ug/L			10/16/20 16:46	20
2-Chloroethyl vinyl ether	ND		500	37	ug/L			10/16/20 16:46	20
Acrolein	ND		2000	350	ug/L			10/16/20 16:46	20
Acrylonitrile	ND		1000	38	ug/L			10/16/20 16:46	20
Benzene	ND		100	12	ug/L			10/16/20 16:46	20
Bromoform	ND		100	9.4	ug/L			10/16/20 16:46	20
Bromomethane	ND		100	24	ug/L			10/16/20 16:46	20
Carbon tetrachloride	ND		100	10	ug/L			10/16/20 16:46	20
Chlorobenzene	ND		100	9.5	ug/L			10/16/20 16:46	20
Chlorodibromomethane	ND		100	8.3	ug/L			10/16/20 16:46	20
Chloroethane	ND		100	17	ug/L			10/16/20 16:46	20
Chloroform	ND		100	11	ug/L			10/16/20 16:46	20
Chloromethane	ND		100	13	ug/L			10/16/20 16:46	20
cis-1,3-Dichloropropene	ND		100	6.6	ug/L			10/16/20 16:46	20
Dichlorobromomethane	ND		100	11	ug/L			10/16/20 16:46	20
Ethylbenzene	ND		100	9.3	ug/L			10/16/20 16:46	20
Methylene Chloride	ND		100	16	ug/L			10/16/20 16:46	20
<b>Tetrachloroethene</b>	<b>43 J</b>		100	6.8	ug/L			10/16/20 16:46	20
Toluene	ND		100	9.1	ug/L			10/16/20 16:46	20
trans-1,2-Dichloroethene	ND		100	12	ug/L			10/16/20 16:46	20
trans-1,3-Dichloropropene	ND		100	8.8	ug/L			10/16/20 16:46	20
<b>Trichloroethene</b>	<b>38 J</b>		100	12	ug/L			10/16/20 16:46	20
Vinyl chloride	ND		100	15	ug/L			10/16/20 16:46	20
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		68 - 130					10/16/20 16:46	20
4-Bromofluorobenzene (Surr)	97		76 - 123					10/16/20 16:46	20
Dibromofluoromethane (Surr)	100		75 - 123					10/16/20 16:46	20
Toluene-d8 (Surr)	98		77 - 120					10/16/20 16:46	20

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,1,1-Trichloroethane</b>	<b>7.6</b>		5.0	0.39	ug/L			10/19/20 14:29	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/19/20 14:29	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/19/20 14:29	1
<b>1,1-Dichloroethane</b>	<b>42</b>		5.0	0.59	ug/L			10/19/20 14:29	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/19/20 14:29	1
<b>1,2-Dichlorobenzene</b>	<b>0.67 J</b>		5.0	0.44	ug/L			10/19/20 14:29	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/19/20 14:29	1
<b>1,2-Dichloroethene, Total</b>	<b>48</b>		10	3.2	ug/L			10/19/20 14:29	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/19/20 14:29	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/19/20 14:29	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/19/20 14:29	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/19/20 14:29	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

Client Sample ID: MW-9S-OCT20

Lab Sample ID: 480-176636-2

Date Collected: 10/15/20 10:00

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND	H	100	17	ug/L			10/19/20 14:29	1
Acrylonitrile	ND		50	1.9	ug/L			10/19/20 14:29	1
Benzene	ND		5.0	0.60	ug/L			10/19/20 14:29	1
Bromoform	ND		5.0	0.47	ug/L			10/19/20 14:29	1
Bromomethane	ND		5.0	1.2	ug/L			10/19/20 14:29	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/19/20 14:29	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/19/20 14:29	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/19/20 14:29	1
Chloroethane	ND		5.0	0.87	ug/L			10/19/20 14:29	1
Chloroform	0.65	J	5.0	0.54	ug/L			10/19/20 14:29	1
Chloromethane	ND		5.0	0.64	ug/L			10/19/20 14:29	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/19/20 14:29	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/19/20 14:29	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/19/20 14:29	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/19/20 14:29	1
Tetrachloroethene	41		5.0	0.34	ug/L			10/19/20 14:29	1
Toluene	ND		5.0	0.45	ug/L			10/19/20 14:29	1
trans-1,2-Dichloroethene	5.2		5.0	0.59	ug/L			10/19/20 14:29	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/19/20 14:29	1
Trichloroethene	34		5.0	0.60	ug/L			10/19/20 14:29	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/19/20 14:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		68 - 130		10/19/20 14:29	1
4-Bromofluorobenzene (Surr)	96		76 - 123		10/19/20 14:29	1
Dibromofluoromethane (Surr)	99		75 - 123		10/19/20 14:29	1
Toluene-d8 (Surr)	98		77 - 120		10/19/20 14:29	1

Client Sample ID: MW-2S-OCT20

Lab Sample ID: 480-176636-3

Date Collected: 10/15/20 10:42

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	7.7	ug/L			10/16/20 17:09	20
1,1,1,2-Tetrachloroethane	ND		100	5.2	ug/L			10/16/20 17:09	20
1,1,2-Trichloroethane	ND		100	9.6	ug/L			10/16/20 17:09	20
1,1-Dichloroethane	ND		100	12	ug/L			10/16/20 17:09	20
1,1-Dichloroethene	ND		100	17	ug/L			10/16/20 17:09	20
1,2-Dichlorobenzene	ND		100	8.9	ug/L			10/16/20 17:09	20
1,2-Dichloroethane	ND		100	12	ug/L			10/16/20 17:09	20
1,2-Dichloroethene, Total	ND		200	64	ug/L			10/16/20 17:09	20
1,2-Dichloropropane	ND		100	12	ug/L			10/16/20 17:09	20
1,3-Dichlorobenzene	ND		100	11	ug/L			10/16/20 17:09	20
1,4-Dichlorobenzene	ND		100	10	ug/L			10/16/20 17:09	20
2-Chloroethyl vinyl ether	ND		500	37	ug/L			10/16/20 17:09	20
Acrolein	ND		2000	350	ug/L			10/16/20 17:09	20
Acrylonitrile	ND		1000	38	ug/L			10/16/20 17:09	20
Benzene	ND		100	12	ug/L			10/16/20 17:09	20
Bromoform	ND		100	9.4	ug/L			10/16/20 17:09	20

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

Client Sample ID: MW-2S-OCT20

Lab Sample ID: 480-176636-3

Date Collected: 10/15/20 10:42

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		100	24	ug/L			10/16/20 17:09	20
Carbon tetrachloride	ND		100	10	ug/L			10/16/20 17:09	20
Chlorobenzene	ND		100	9.5	ug/L			10/16/20 17:09	20
Chlorodibromomethane	ND		100	8.3	ug/L			10/16/20 17:09	20
Chloroethane	ND		100	17	ug/L			10/16/20 17:09	20
Chloroform	ND		100	11	ug/L			10/16/20 17:09	20
Chloromethane	ND		100	13	ug/L			10/16/20 17:09	20
cis-1,3-Dichloropropene	ND		100	6.6	ug/L			10/16/20 17:09	20
Dichlorobromomethane	ND		100	11	ug/L			10/16/20 17:09	20
Ethylbenzene	ND		100	9.3	ug/L			10/16/20 17:09	20
Methylene Chloride	ND		100	16	ug/L			10/16/20 17:09	20
Tetrachloroethene	ND		100	6.8	ug/L			10/16/20 17:09	20
Toluene	ND		100	9.1	ug/L			10/16/20 17:09	20
trans-1,2-Dichloroethene	ND		100	12	ug/L			10/16/20 17:09	20
trans-1,3-Dichloropropene	ND		100	8.8	ug/L			10/16/20 17:09	20
Trichloroethene	ND		100	12	ug/L			10/16/20 17:09	20
Vinyl chloride	ND		100	15	ug/L			10/16/20 17:09	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		68 - 130		10/16/20 17:09	20
4-Bromofluorobenzene (Surr)	97		76 - 123		10/16/20 17:09	20
Dibromofluoromethane (Surr)	99		75 - 123		10/16/20 17:09	20
Toluene-d8 (Surr)	96		77 - 120		10/16/20 17:09	20

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/19/20 14:52	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/19/20 14:52	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/19/20 14:52	1
1,1-Dichloroethane	1.1	J	5.0	0.59	ug/L			10/19/20 14:52	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/19/20 14:52	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/19/20 14:52	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/19/20 14:52	1
1,2-Dichloroethene, Total	ND		10	3.2	ug/L			10/19/20 14:52	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/19/20 14:52	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/19/20 14:52	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/19/20 14:52	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/19/20 14:52	1
Acrolein	ND	H	100	17	ug/L			10/19/20 14:52	1
Acrylonitrile	ND		50	1.9	ug/L			10/19/20 14:52	1
Benzene	ND		5.0	0.60	ug/L			10/19/20 14:52	1
Bromoform	ND		5.0	0.47	ug/L			10/19/20 14:52	1
Bromomethane	ND		5.0	1.2	ug/L			10/19/20 14:52	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/19/20 14:52	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/19/20 14:52	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/19/20 14:52	1
Chloroethane	ND		5.0	0.87	ug/L			10/19/20 14:52	1
Chloroform	ND		5.0	0.54	ug/L			10/19/20 14:52	1
Chloromethane	ND		5.0	0.64	ug/L			10/19/20 14:52	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/19/20 14:52	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

**Client Sample ID: MW-2S-OCT20**

**Lab Sample ID: 480-176636-3**

**Date Collected: 10/15/20 10:42**

**Matrix: Water**

**Date Received: 10/15/20 16:00**

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/19/20 14:52	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/19/20 14:52	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/19/20 14:52	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/19/20 14:52	1
Toluene	ND		5.0	0.45	ug/L			10/19/20 14:52	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/19/20 14:52	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/19/20 14:52	1
Trichloroethene	ND		5.0	0.60	ug/L			10/19/20 14:52	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/19/20 14:52	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		68 - 130					10/19/20 14:52	1
4-Bromofluorobenzene (Surr)	97		76 - 123					10/19/20 14:52	1
Dibromofluoromethane (Surr)	102		75 - 123					10/19/20 14:52	1
Toluene-d8 (Surr)	96		77 - 120					10/19/20 14:52	1

**Client Sample ID: PZ-3-OCT20**

**Lab Sample ID: 480-176636-7**

**Date Collected: 10/15/20 13:05**

**Matrix: Water**

**Date Received: 10/15/20 16:00**

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	7.7	ug/L			10/16/20 18:41	20
1,1,2,2-Tetrachloroethane	ND		100	5.2	ug/L			10/16/20 18:41	20
1,1,2-Trichloroethane	ND		100	9.6	ug/L			10/16/20 18:41	20
1,1-Dichloroethane	ND		100	12	ug/L			10/16/20 18:41	20
1,1-Dichloroethene	ND		100	17	ug/L			10/16/20 18:41	20
1,2-Dichlorobenzene	ND		100	8.9	ug/L			10/16/20 18:41	20
1,2-Dichloroethane	ND		100	12	ug/L			10/16/20 18:41	20
1,2-Dichloroethene, Total	ND		200	64	ug/L			10/16/20 18:41	20
1,2-Dichloropropane	ND		100	12	ug/L			10/16/20 18:41	20
1,3-Dichlorobenzene	ND		100	11	ug/L			10/16/20 18:41	20
1,4-Dichlorobenzene	ND		100	10	ug/L			10/16/20 18:41	20
2-Chloroethyl vinyl ether	ND		500	37	ug/L			10/16/20 18:41	20
Acrolein	ND		2000	350	ug/L			10/16/20 18:41	20
Acrylonitrile	ND		1000	38	ug/L			10/16/20 18:41	20
Benzene	ND		100	12	ug/L			10/16/20 18:41	20
Bromoform	ND		100	9.4	ug/L			10/16/20 18:41	20
Bromomethane	ND		100	24	ug/L			10/16/20 18:41	20
Carbon tetrachloride	ND		100	10	ug/L			10/16/20 18:41	20
Chlorobenzene	ND		100	9.5	ug/L			10/16/20 18:41	20
Chlorodibromomethane	ND		100	8.3	ug/L			10/16/20 18:41	20
Chloroethane	ND		100	17	ug/L			10/16/20 18:41	20
Chloroform	ND		100	11	ug/L			10/16/20 18:41	20
Chloromethane	ND		100	13	ug/L			10/16/20 18:41	20
cis-1,3-Dichloropropene	ND		100	6.6	ug/L			10/16/20 18:41	20
Dichlorobromomethane	ND		100	11	ug/L			10/16/20 18:41	20
Ethylbenzene	ND		100	9.3	ug/L			10/16/20 18:41	20
Methylene Chloride	ND		100	16	ug/L			10/16/20 18:41	20
Tetrachloroethene	ND		100	6.8	ug/L			10/16/20 18:41	20

Eurofins TestAmerica, Buffalo



# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

Client Sample ID: PZ-3-OCT20

Lab Sample ID: 480-176636-7

Date Collected: 10/15/20 13:05

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		100	9.1	ug/L			10/16/20 18:41	20
trans-1,2-Dichloroethene	ND		100	12	ug/L			10/16/20 18:41	20
trans-1,3-Dichloropropene	ND		100	8.8	ug/L			10/16/20 18:41	20
Trichloroethene	ND		100	12	ug/L			10/16/20 18:41	20
Vinyl chloride	ND		100	15	ug/L			10/16/20 18:41	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		68 - 130		10/16/20 18:41	20
4-Bromofluorobenzene (Surr)	97		76 - 123		10/16/20 18:41	20
Dibromofluoromethane (Surr)	100		75 - 123		10/16/20 18:41	20
Toluene-d8 (Surr)	98		77 - 120		10/16/20 18:41	20

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	5.7		5.0	0.39	ug/L			10/19/20 16:24	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/19/20 16:24	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/19/20 16:24	1
1,1-Dichloroethane	19		5.0	0.59	ug/L			10/19/20 16:24	1
1,1-Dichloroethene	1.1	J	5.0	0.85	ug/L			10/19/20 16:24	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/19/20 16:24	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/19/20 16:24	1
1,2-Dichloroethene, Total	7.8	J	10	3.2	ug/L			10/19/20 16:24	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/19/20 16:24	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/19/20 16:24	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/19/20 16:24	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/19/20 16:24	1
Acrolein	ND	H	100	17	ug/L			10/19/20 16:24	1
Acrylonitrile	ND		50	1.9	ug/L			10/19/20 16:24	1
Benzene	ND		5.0	0.60	ug/L			10/19/20 16:24	1
Bromoform	ND		5.0	0.47	ug/L			10/19/20 16:24	1
Bromomethane	ND		5.0	1.2	ug/L			10/19/20 16:24	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/19/20 16:24	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/19/20 16:24	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/19/20 16:24	1
Chloroethane	ND		5.0	0.87	ug/L			10/19/20 16:24	1
Chloroform	ND		5.0	0.54	ug/L			10/19/20 16:24	1
Chloromethane	ND		5.0	0.64	ug/L			10/19/20 16:24	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/19/20 16:24	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/19/20 16:24	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/19/20 16:24	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/19/20 16:24	1
Tetrachloroethene	0.48	J	5.0	0.34	ug/L			10/19/20 16:24	1
Toluene	ND		5.0	0.45	ug/L			10/19/20 16:24	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/19/20 16:24	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/19/20 16:24	1
Trichloroethene	1.8	J	5.0	0.60	ug/L			10/19/20 16:24	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/19/20 16:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		68 - 130		10/19/20 16:24	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

**Client Sample ID: PZ-3-OCT20**

**Lab Sample ID: 480-176636-7**

**Date Collected: 10/15/20 13:05**

**Matrix: Water**

**Date Received: 10/15/20 16:00**

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		76 - 123		10/19/20 16:24	1
Dibromofluoromethane (Surr)	97		75 - 123		10/19/20 16:24	1
Toluene-d8 (Surr)	98		77 - 120		10/19/20 16:24	1

**Client Sample ID: MW-14S-OCT20**

**Lab Sample ID: 480-176636-8**

**Date Collected: 10/15/20 13:10**

**Matrix: Water**

**Date Received: 10/15/20 16:00**

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	7.7	ug/L			10/16/20 19:04	20
1,1,2,2-Tetrachloroethane	ND		100	5.2	ug/L			10/16/20 19:04	20
1,1,2-Trichloroethane	ND		100	9.6	ug/L			10/16/20 19:04	20
1,1-Dichloroethane	ND		100	12	ug/L			10/16/20 19:04	20
1,1-Dichloroethene	ND		100	17	ug/L			10/16/20 19:04	20
1,2-Dichlorobenzene	ND		100	8.9	ug/L			10/16/20 19:04	20
1,2-Dichloroethane	ND		100	12	ug/L			10/16/20 19:04	20
1,2-Dichloroethene, Total	ND		200	64	ug/L			10/16/20 19:04	20
1,2-Dichloropropane	ND		100	12	ug/L			10/16/20 19:04	20
1,3-Dichlorobenzene	ND		100	11	ug/L			10/16/20 19:04	20
1,4-Dichlorobenzene	ND		100	10	ug/L			10/16/20 19:04	20
2-Chloroethyl vinyl ether	ND		500	37	ug/L			10/16/20 19:04	20
Acrolein	ND		2000	350	ug/L			10/16/20 19:04	20
Acrylonitrile	ND		1000	38	ug/L			10/16/20 19:04	20
Benzene	ND		100	12	ug/L			10/16/20 19:04	20
Bromoform	ND		100	9.4	ug/L			10/16/20 19:04	20
Bromomethane	ND		100	24	ug/L			10/16/20 19:04	20
Carbon tetrachloride	ND		100	10	ug/L			10/16/20 19:04	20
Chlorobenzene	ND		100	9.5	ug/L			10/16/20 19:04	20
Chlorodibromomethane	ND		100	8.3	ug/L			10/16/20 19:04	20
Chloroethane	ND		100	17	ug/L			10/16/20 19:04	20
Chloroform	ND		100	11	ug/L			10/16/20 19:04	20
Chloromethane	ND		100	13	ug/L			10/16/20 19:04	20
cis-1,3-Dichloropropene	ND		100	6.6	ug/L			10/16/20 19:04	20
Dichlorobromomethane	ND		100	11	ug/L			10/16/20 19:04	20
Ethylbenzene	ND		100	9.3	ug/L			10/16/20 19:04	20
Methylene Chloride	ND		100	16	ug/L			10/16/20 19:04	20
Tetrachloroethene	ND		100	6.8	ug/L			10/16/20 19:04	20
Toluene	ND		100	9.1	ug/L			10/16/20 19:04	20
trans-1,2-Dichloroethene	ND		100	12	ug/L			10/16/20 19:04	20
trans-1,3-Dichloropropene	ND		100	8.8	ug/L			10/16/20 19:04	20
Trichloroethene	ND		100	12	ug/L			10/16/20 19:04	20
Vinyl chloride	ND		100	15	ug/L			10/16/20 19:04	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	96		68 - 130		10/16/20 19:04	20
4-Bromofluorobenzene (Surr)	97		76 - 123		10/16/20 19:04	20
Dibromofluoromethane (Surr)	101		75 - 123		10/16/20 19:04	20
Toluene-d8 (Surr)	97		77 - 120		10/16/20 19:04	20

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

**Client Sample ID: MW-14S-OCT20**

**Lab Sample ID: 480-176636-8**

**Date Collected: 10/15/20 13:10**

**Matrix: Water**

**Date Received: 10/15/20 16:00**

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/19/20 16:47	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/19/20 16:47	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/19/20 16:47	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/19/20 16:47	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/19/20 16:47	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/19/20 16:47	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/19/20 16:47	1
1,2-Dichloroethene, Total	ND		10	3.2	ug/L			10/19/20 16:47	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/19/20 16:47	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/19/20 16:47	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/19/20 16:47	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/19/20 16:47	1
Acrolein	ND	H	100	17	ug/L			10/19/20 16:47	1
Acrylonitrile	ND		50	1.9	ug/L			10/19/20 16:47	1
Benzene	ND		5.0	0.60	ug/L			10/19/20 16:47	1
Bromoform	ND		5.0	0.47	ug/L			10/19/20 16:47	1
Bromomethane	ND		5.0	1.2	ug/L			10/19/20 16:47	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/19/20 16:47	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/19/20 16:47	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/19/20 16:47	1
Chloroethane	ND		5.0	0.87	ug/L			10/19/20 16:47	1
Chloroform	ND		5.0	0.54	ug/L			10/19/20 16:47	1
Chloromethane	ND		5.0	0.64	ug/L			10/19/20 16:47	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/19/20 16:47	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/19/20 16:47	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/19/20 16:47	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/19/20 16:47	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/19/20 16:47	1
Toluene	ND		5.0	0.45	ug/L			10/19/20 16:47	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/19/20 16:47	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/19/20 16:47	1
Trichloroethene	ND		5.0	0.60	ug/L			10/19/20 16:47	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/19/20 16:47	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	89		68 - 130		10/19/20 16:47	1
4-Bromofluorobenzene (Surr)	96		76 - 123		10/19/20 16:47	1
Dibromofluoromethane (Surr)	100		75 - 123		10/19/20 16:47	1
Toluene-d8 (Surr)	96		77 - 120		10/19/20 16:47	1

**Client Sample ID: MW-1S-OCT20**

**Lab Sample ID: 480-176636-9**

**Date Collected: 10/15/20 13:50**

**Matrix: Water**

**Date Received: 10/15/20 16:00**

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	7.7	ug/L			10/16/20 19:27	20
1,1,2,2-Tetrachloroethane	ND		100	5.2	ug/L			10/16/20 19:27	20
1,1,2-Trichloroethane	ND		100	9.6	ug/L			10/16/20 19:27	20
1,1-Dichloroethane	ND		100	12	ug/L			10/16/20 19:27	20

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

Client Sample ID: MW-1S-OCT20

Lab Sample ID: 480-176636-9

Date Collected: 10/15/20 13:50

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		100	17	ug/L			10/16/20 19:27	20
1,2-Dichlorobenzene	ND		100	8.9	ug/L			10/16/20 19:27	20
1,2-Dichloroethane	ND		100	12	ug/L			10/16/20 19:27	20
1,2-Dichloroethene, Total	ND		200	64	ug/L			10/16/20 19:27	20
1,2-Dichloropropane	ND		100	12	ug/L			10/16/20 19:27	20
1,3-Dichlorobenzene	ND		100	11	ug/L			10/16/20 19:27	20
1,4-Dichlorobenzene	ND		100	10	ug/L			10/16/20 19:27	20
2-Chloroethyl vinyl ether	ND		500	37	ug/L			10/16/20 19:27	20
Acrolein	ND		2000	350	ug/L			10/16/20 19:27	20
Acrylonitrile	ND		1000	38	ug/L			10/16/20 19:27	20
Benzene	ND		100	12	ug/L			10/16/20 19:27	20
Bromoform	ND		100	9.4	ug/L			10/16/20 19:27	20
Bromomethane	ND		100	24	ug/L			10/16/20 19:27	20
Carbon tetrachloride	ND		100	10	ug/L			10/16/20 19:27	20
Chlorobenzene	ND		100	9.5	ug/L			10/16/20 19:27	20
Chlorodibromomethane	ND		100	8.3	ug/L			10/16/20 19:27	20
Chloroethane	ND		100	17	ug/L			10/16/20 19:27	20
Chloroform	ND		100	11	ug/L			10/16/20 19:27	20
Chloromethane	ND		100	13	ug/L			10/16/20 19:27	20
cis-1,3-Dichloropropene	ND		100	6.6	ug/L			10/16/20 19:27	20
Dichlorobromomethane	ND		100	11	ug/L			10/16/20 19:27	20
Ethylbenzene	ND		100	9.3	ug/L			10/16/20 19:27	20
Methylene Chloride	ND		100	16	ug/L			10/16/20 19:27	20
Tetrachloroethene	ND		100	6.8	ug/L			10/16/20 19:27	20
Toluene	ND		100	9.1	ug/L			10/16/20 19:27	20
trans-1,2-Dichloroethene	ND		100	12	ug/L			10/16/20 19:27	20
trans-1,3-Dichloropropene	ND		100	8.8	ug/L			10/16/20 19:27	20
Trichloroethene	21	J	100	12	ug/L			10/16/20 19:27	20
Vinyl chloride	ND		100	15	ug/L			10/16/20 19:27	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	94		68 - 130		10/16/20 19:27	20
4-Bromofluorobenzene (Surr)	98		76 - 123		10/16/20 19:27	20
Dibromofluoromethane (Surr)	101		75 - 123		10/16/20 19:27	20
Toluene-d8 (Surr)	99		77 - 120		10/16/20 19:27	20

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	1.5	J	5.0	0.39	ug/L			10/19/20 17:10	1
1,1,1,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/19/20 17:10	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/19/20 17:10	1
1,1-Dichloroethane	0.86	J	5.0	0.59	ug/L			10/19/20 17:10	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/19/20 17:10	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/19/20 17:10	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/19/20 17:10	1
1,2-Dichloroethene, Total	24		10	3.2	ug/L			10/19/20 17:10	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/19/20 17:10	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/19/20 17:10	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/19/20 17:10	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/19/20 17:10	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

**Client Sample ID: MW-1S-OCT20**

**Lab Sample ID: 480-176636-9**

**Date Collected: 10/15/20 13:50**

**Matrix: Water**

**Date Received: 10/15/20 16:00**

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND	H	100	17	ug/L			10/19/20 17:10	1
Acrylonitrile	ND		50	1.9	ug/L			10/19/20 17:10	1
Benzene	ND		5.0	0.60	ug/L			10/19/20 17:10	1
Bromoform	ND		5.0	0.47	ug/L			10/19/20 17:10	1
Bromomethane	ND		5.0	1.2	ug/L			10/19/20 17:10	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/19/20 17:10	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/19/20 17:10	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/19/20 17:10	1
Chloroethane	ND		5.0	0.87	ug/L			10/19/20 17:10	1
Chloroform	ND		5.0	0.54	ug/L			10/19/20 17:10	1
Chloromethane	ND		5.0	0.64	ug/L			10/19/20 17:10	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/19/20 17:10	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/19/20 17:10	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/19/20 17:10	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/19/20 17:10	1
<b>Tetrachloroethene</b>	<b>3.3</b>	<b>J</b>	5.0	0.34	ug/L			10/19/20 17:10	1
Toluene	ND		5.0	0.45	ug/L			10/19/20 17:10	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/19/20 17:10	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/19/20 17:10	1
<b>Trichloroethene</b>	<b>19</b>		5.0	0.60	ug/L			10/19/20 17:10	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/19/20 17:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	87		68 - 130		10/19/20 17:10	1
4-Bromofluorobenzene (Surr)	96		76 - 123		10/19/20 17:10	1
Dibromofluoromethane (Surr)	98		75 - 123		10/19/20 17:10	1
Toluene-d8 (Surr)	95		77 - 120		10/19/20 17:10	1

**Client Sample ID: 10W-PURGE WATER-OCT20**

**Lab Sample ID: 480-176636-10**

**Date Collected: 10/15/20 14:10**

**Matrix: Water**

**Date Received: 10/15/20 16:00**

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	7.7	ug/L			10/16/20 19:50	20
1,1,1,2-Tetrachloroethane	ND		100	5.2	ug/L			10/16/20 19:50	20
1,1,2-Trichloroethane	ND		100	9.6	ug/L			10/16/20 19:50	20
1,1-Dichloroethane	ND		100	12	ug/L			10/16/20 19:50	20
1,1-Dichloroethene	ND		100	17	ug/L			10/16/20 19:50	20
1,2-Dichlorobenzene	ND		100	8.9	ug/L			10/16/20 19:50	20
1,2-Dichloroethane	ND		100	12	ug/L			10/16/20 19:50	20
1,2-Dichloroethene, Total	ND		200	64	ug/L			10/16/20 19:50	20
1,2-Dichloropropane	ND		100	12	ug/L			10/16/20 19:50	20
1,3-Dichlorobenzene	ND		100	11	ug/L			10/16/20 19:50	20
1,4-Dichlorobenzene	ND		100	10	ug/L			10/16/20 19:50	20
2-Chloroethyl vinyl ether	ND		500	37	ug/L			10/16/20 19:50	20
Acrolein	ND		2000	350	ug/L			10/16/20 19:50	20
Acrylonitrile	ND		1000	38	ug/L			10/16/20 19:50	20
Benzene	ND		100	12	ug/L			10/16/20 19:50	20
Bromoform	ND		100	9.4	ug/L			10/16/20 19:50	20

Eurofins TestAmerica, Buffalo



# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

Client Sample ID: 10W-PURGE WATER-OCT20

Lab Sample ID: 480-176636-10

Date Collected: 10/15/20 14:10

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		100	24	ug/L			10/16/20 19:50	20
Carbon tetrachloride	ND		100	10	ug/L			10/16/20 19:50	20
Chlorobenzene	ND		100	9.5	ug/L			10/16/20 19:50	20
Chlorodibromomethane	ND		100	8.3	ug/L			10/16/20 19:50	20
Chloroethane	ND		100	17	ug/L			10/16/20 19:50	20
Chloroform	ND		100	11	ug/L			10/16/20 19:50	20
Chloromethane	ND		100	13	ug/L			10/16/20 19:50	20
cis-1,3-Dichloropropene	ND		100	6.6	ug/L			10/16/20 19:50	20
Dichlorobromomethane	ND		100	11	ug/L			10/16/20 19:50	20
Ethylbenzene	ND		100	9.3	ug/L			10/16/20 19:50	20
Methylene Chloride	ND		100	16	ug/L			10/16/20 19:50	20
Tetrachloroethene	ND		100	6.8	ug/L			10/16/20 19:50	20
Toluene	ND		100	9.1	ug/L			10/16/20 19:50	20
trans-1,2-Dichloroethene	ND		100	12	ug/L			10/16/20 19:50	20
trans-1,3-Dichloropropene	ND		100	8.8	ug/L			10/16/20 19:50	20
Trichloroethene	34	J	100	12	ug/L			10/16/20 19:50	20
Vinyl chloride	ND		100	15	ug/L			10/16/20 19:50	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	90		68 - 130		10/16/20 19:50	20
4-Bromofluorobenzene (Surr)	97		76 - 123		10/16/20 19:50	20
Dibromofluoromethane (Surr)	99		75 - 123		10/16/20 19:50	20
Toluene-d8 (Surr)	98		77 - 120		10/16/20 19:50	20

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	0.52	J	5.0	0.39	ug/L			10/19/20 17:33	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/19/20 17:33	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/19/20 17:33	1
1,1-Dichloroethane	3.5	J	5.0	0.59	ug/L			10/19/20 17:33	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/19/20 17:33	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/19/20 17:33	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/19/20 17:33	1
1,2-Dichloroethene, Total	36		10	3.2	ug/L			10/19/20 17:33	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/19/20 17:33	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/19/20 17:33	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/19/20 17:33	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/19/20 17:33	1
Acrolein	ND	H	100	17	ug/L			10/19/20 17:33	1
Acrylonitrile	ND		50	1.9	ug/L			10/19/20 17:33	1
Benzene	ND		5.0	0.60	ug/L			10/19/20 17:33	1
Bromoform	ND		5.0	0.47	ug/L			10/19/20 17:33	1
Bromomethane	ND		5.0	1.2	ug/L			10/19/20 17:33	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/19/20 17:33	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/19/20 17:33	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/19/20 17:33	1
Chloroethane	ND		5.0	0.87	ug/L			10/19/20 17:33	1
Chloroform	ND		5.0	0.54	ug/L			10/19/20 17:33	1
Chloromethane	ND		5.0	0.64	ug/L			10/19/20 17:33	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/19/20 17:33	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

Client Sample ID: 10W-PURGE WATER-OCT20

Lab Sample ID: 480-176636-10

Date Collected: 10/15/20 14:10

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/19/20 17:33	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/19/20 17:33	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/19/20 17:33	1
<b>Tetrachloroethene</b>	<b>1.8</b>	<b>J</b>	5.0	0.34	ug/L			10/19/20 17:33	1
Toluene	ND		5.0	0.45	ug/L			10/19/20 17:33	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/19/20 17:33	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/19/20 17:33	1
<b>Trichloroethene</b>	<b>21</b>		5.0	0.60	ug/L			10/19/20 17:33	1
<b>Vinyl chloride</b>	<b>4.5</b>	<b>J</b>	5.0	0.75	ug/L			10/19/20 17:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		68 - 130		10/19/20 17:33	1
4-Bromofluorobenzene (Surr)	97		76 - 123		10/19/20 17:33	1
Dibromofluoromethane (Surr)	101		75 - 123		10/19/20 17:33	1
Toluene-d8 (Surr)	95		77 - 120		10/19/20 17:33	1

# Surrogate Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		DCA (68-130)	BFB (76-123)	DBFM (75-123)	TOL (77-120)
480-176636-1	TB-20201015	94	97	102	97
480-176636-2	MW-9S-OCT20	93	97	100	98
480-176636-2 - RA	MW-9S-OCT20	91	96	99	98
480-176636-3	MW-2S-OCT20	93	97	99	96
480-176636-3 - RA	MW-2S-OCT20	90	97	102	96
480-176636-7	PZ-3-OCT20	95	97	100	98
480-176636-7 - RA	PZ-3-OCT20	93	98	97	98
480-176636-8	MW-14S-OCT20	96	97	101	97
480-176636-8 - RA	MW-14S-OCT20	89	96	100	96
480-176636-9	MW-1S-OCT20	94	98	101	99
480-176636-9 - RA	MW-1S-OCT20	87	96	98	95
480-176636-10	10W-PURGE WATER-OCT20	90	97	99	98
480-176636-10 - RA	10W-PURGE WATER-OCT20	92	97	101	95
LCS 480-554226/6	Lab Control Sample	95	96	100	97
LCS 480-554564/6	Lab Control Sample	87	98	98	99
MB 480-554226/8	Method Blank	95	96	101	99
MB 480-554564/8	Method Blank	93	98	98	96

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-554226/8

Matrix: Water

Analysis Batch: 554226

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/16/20 11:38	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/16/20 11:38	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/16/20 11:38	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/16/20 11:38	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/16/20 11:38	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/16/20 11:38	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/16/20 11:38	1
1,2-Dichloroethene, Total	ND		10	3.2	ug/L			10/16/20 11:38	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/16/20 11:38	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/16/20 11:38	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/16/20 11:38	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/16/20 11:38	1
Acrolein	ND		100	17	ug/L			10/16/20 11:38	1
Acrylonitrile	ND		50	1.9	ug/L			10/16/20 11:38	1
Benzene	ND		5.0	0.60	ug/L			10/16/20 11:38	1
Bromoform	ND		5.0	0.47	ug/L			10/16/20 11:38	1
Bromomethane	ND		5.0	1.2	ug/L			10/16/20 11:38	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/16/20 11:38	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/16/20 11:38	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/16/20 11:38	1
Chloroethane	ND		5.0	0.87	ug/L			10/16/20 11:38	1
Chloroform	ND		5.0	0.54	ug/L			10/16/20 11:38	1
Chloromethane	ND		5.0	0.64	ug/L			10/16/20 11:38	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/16/20 11:38	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/16/20 11:38	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/16/20 11:38	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/16/20 11:38	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/16/20 11:38	1
Toluene	ND		5.0	0.45	ug/L			10/16/20 11:38	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/16/20 11:38	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/16/20 11:38	1
Trichloroethene	ND		5.0	0.60	ug/L			10/16/20 11:38	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/16/20 11:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		68 - 130		10/16/20 11:38	1
4-Bromofluorobenzene (Surr)	96		76 - 123		10/16/20 11:38	1
Dibromofluoromethane (Surr)	101		75 - 123		10/16/20 11:38	1
Toluene-d8 (Surr)	99		77 - 120		10/16/20 11:38	1

Lab Sample ID: LCS 480-554226/6

Matrix: Water

Analysis Batch: 554226

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	18.3		ug/L		91	52 - 162
1,1,2,2-Tetrachloroethane	20.0	17.5		ug/L		87	46 - 157
1,1,2-Trichloroethane	20.0	18.4		ug/L		92	52 - 150

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-554226/6

Matrix: Water

Analysis Batch: 554226

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	20.0	19.3		ug/L		97	59 - 155
1,1-Dichloroethene	20.0	19.8		ug/L		99	1 - 234
1,2-Dichlorobenzene	20.0	18.5		ug/L		93	18 - 190
1,2-Dichloroethane	20.0	17.6		ug/L		88	49 - 155
1,2-Dichloropropane	20.0	19.2		ug/L		96	1 - 210
1,3-Dichlorobenzene	20.0	18.7		ug/L		93	59 - 156
1,4-Dichlorobenzene	20.0	18.7		ug/L		94	18 - 190
2-Chloroethyl vinyl ether	20.0	19.0	J	ug/L		95	1 - 305
Benzene	20.0	19.6		ug/L		98	37 - 151
Bromoform	20.0	17.6		ug/L		88	45 - 169
Bromomethane	20.0	23.8		ug/L		119	1 - 242
Carbon tetrachloride	20.0	18.4		ug/L		92	70 - 140
Chlorobenzene	20.0	18.9		ug/L		94	37 - 160
Chlorodibromomethane	20.0	17.5		ug/L		87	53 - 149
Chloroethane	20.0	22.7		ug/L		114	14 - 230
Chloroform	20.0	19.1		ug/L		95	51 - 138
Chloromethane	20.0	23.3		ug/L		116	1 - 273
cis-1,3-Dichloropropene	20.0	18.4		ug/L		92	1 - 227
Dichlorobromomethane	20.0	18.1		ug/L		91	35 - 155
Ethylbenzene	20.0	19.0		ug/L		95	37 - 162
Methylene Chloride	20.0	19.8		ug/L		99	1 - 221
Tetrachloroethene	20.0	19.3		ug/L		97	64 - 148
Toluene	20.0	18.6		ug/L		93	47 - 150
trans-1,2-Dichloroethene	20.0	20.0		ug/L		100	54 - 156
trans-1,3-Dichloropropene	20.0	17.6		ug/L		88	17 - 183
Trichloroethene	20.0	19.0		ug/L		95	71 - 157
Vinyl chloride	20.0	23.3		ug/L		117	1 - 251

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		68 - 130
4-Bromofluorobenzene (Surr)	96		76 - 123
Dibromofluoromethane (Surr)	100		75 - 123
Toluene-d8 (Surr)	97		77 - 120

Lab Sample ID: MB 480-554564/8

Matrix: Water

Analysis Batch: 554564

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/19/20 11:40	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/19/20 11:40	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/19/20 11:40	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/19/20 11:40	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/19/20 11:40	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/19/20 11:40	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/19/20 11:40	1
1,2-Dichloroethene, Total	ND		10	3.2	ug/L			10/19/20 11:40	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/19/20 11:40	1

Eurofins TestAmerica, Buffalo



# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-554564/8

Matrix: Water

Analysis Batch: 554564

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/19/20 11:40	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/19/20 11:40	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/19/20 11:40	1
Acrolein	ND		100	17	ug/L			10/19/20 11:40	1
Acrylonitrile	ND		50	1.9	ug/L			10/19/20 11:40	1
Benzene	ND		5.0	0.60	ug/L			10/19/20 11:40	1
Bromoform	ND		5.0	0.47	ug/L			10/19/20 11:40	1
Bromomethane	ND		5.0	1.2	ug/L			10/19/20 11:40	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/19/20 11:40	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/19/20 11:40	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/19/20 11:40	1
Chloroethane	ND		5.0	0.87	ug/L			10/19/20 11:40	1
Chloroform	ND		5.0	0.54	ug/L			10/19/20 11:40	1
Chloromethane	ND		5.0	0.64	ug/L			10/19/20 11:40	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/19/20 11:40	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/19/20 11:40	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/19/20 11:40	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/19/20 11:40	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/19/20 11:40	1
Toluene	ND		5.0	0.45	ug/L			10/19/20 11:40	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/19/20 11:40	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/19/20 11:40	1
Trichloroethene	ND		5.0	0.60	ug/L			10/19/20 11:40	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/19/20 11:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		68 - 130		10/19/20 11:40	1
4-Bromofluorobenzene (Surr)	98		76 - 123		10/19/20 11:40	1
Dibromofluoromethane (Surr)	98		75 - 123		10/19/20 11:40	1
Toluene-d8 (Surr)	96		77 - 120		10/19/20 11:40	1

Lab Sample ID: LCS 480-554564/6

Matrix: Water

Analysis Batch: 554564

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	18.4		ug/L		92	52 - 162
1,1,2,2-Tetrachloroethane	20.0	16.3		ug/L		81	46 - 157
1,1,2-Trichloroethane	20.0	18.0		ug/L		90	52 - 150
1,1-Dichloroethane	20.0	19.5		ug/L		98	59 - 155
1,1-Dichloroethene	20.0	20.4		ug/L		102	1 - 234
1,2-Dichlorobenzene	20.0	18.5		ug/L		92	18 - 190
1,2-Dichloroethane	20.0	17.4		ug/L		87	49 - 155
1,2-Dichloropropane	20.0	19.2		ug/L		96	1 - 210
1,3-Dichlorobenzene	20.0	18.9		ug/L		94	59 - 156
1,4-Dichlorobenzene	20.0	18.9		ug/L		95	18 - 190
2-Chloroethyl vinyl ether	20.0	17.8	J	ug/L		89	1 - 305
Benzene	20.0	20.0		ug/L		100	37 - 151

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-554564/6

Matrix: Water

Analysis Batch: 554564

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromoform	20.0	16.7		ug/L		84	45 - 169
Bromomethane	20.0	22.9		ug/L		115	1 - 242
Carbon tetrachloride	20.0	18.5		ug/L		93	70 - 140
Chlorobenzene	20.0	19.3		ug/L		97	37 - 160
Chlorodibromomethane	20.0	17.2		ug/L		86	53 - 149
Chloroethane	20.0	22.2		ug/L		111	14 - 230
Chloroform	20.0	18.8		ug/L		94	51 - 138
Chloromethane	20.0	21.6		ug/L		108	1 - 273
cis-1,3-Dichloropropene	20.0	18.3		ug/L		91	1 - 227
Dichlorobromomethane	20.0	18.3		ug/L		91	35 - 155
Ethylbenzene	20.0	19.7		ug/L		99	37 - 162
Methylene Chloride	20.0	18.9		ug/L		95	1 - 221
Tetrachloroethene	20.0	20.7		ug/L		104	64 - 148
Toluene	20.0	19.5		ug/L		97	47 - 150
trans-1,2-Dichloroethene	20.0	19.6		ug/L		98	54 - 156
trans-1,3-Dichloropropene	20.0	17.2		ug/L		86	17 - 183
Trichloroethene	20.0	19.2		ug/L		96	71 - 157
Vinyl chloride	20.0	22.3		ug/L		112	1 - 251

Surrogate	LCS		Limits
	%Recovery	Qualifier	
1,2-Dichloroethane-d4 (Surr)	87		68 - 130
4-Bromofluorobenzene (Surr)	98		76 - 123
Dibromofluoromethane (Surr)	98		75 - 123
Toluene-d8 (Surr)	99		77 - 120

## QC Association Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

### GC/MS VOA

#### Analysis Batch: 554226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-176636-1	TB-20201015	Total/NA	Water	624.1	
480-176636-2	MW-9S-OCT20	Total/NA	Water	624.1	
480-176636-3	MW-2S-OCT20	Total/NA	Water	624.1	
480-176636-7	PZ-3-OCT20	Total/NA	Water	624.1	
480-176636-8	MW-14S-OCT20	Total/NA	Water	624.1	
480-176636-9	MW-1S-OCT20	Total/NA	Water	624.1	
480-176636-10	10W-PURGE WATER-OCT20	Total/NA	Water	624.1	
MB 480-554226/8	Method Blank	Total/NA	Water	624.1	
LCS 480-554226/6	Lab Control Sample	Total/NA	Water	624.1	

#### Analysis Batch: 554564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-176636-2 - RA	MW-9S-OCT20	Total/NA	Water	624.1	
480-176636-3 - RA	MW-2S-OCT20	Total/NA	Water	624.1	
480-176636-7 - RA	PZ-3-OCT20	Total/NA	Water	624.1	
480-176636-8 - RA	MW-14S-OCT20	Total/NA	Water	624.1	
480-176636-9 - RA	MW-1S-OCT20	Total/NA	Water	624.1	
480-176636-10 - RA	10W-PURGE WATER-OCT20	Total/NA	Water	624.1	
MB 480-554564/8	Method Blank	Total/NA	Water	624.1	
LCS 480-554564/6	Lab Control Sample	Total/NA	Water	624.1	

# Lab Chronicle

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

**Client Sample ID: TB-20201015**

**Lab Sample ID: 480-176636-1**

**Date Collected: 10/15/20 09:00**

**Matrix: Water**

**Date Received: 10/15/20 16:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	554226	10/16/20 16:24	WJD	TAL BUF

**Client Sample ID: MW-9S-OCT20**

**Lab Sample ID: 480-176636-2**

**Date Collected: 10/15/20 10:00**

**Matrix: Water**

**Date Received: 10/15/20 16:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		20	554226	10/16/20 16:46	WJD	TAL BUF
Total/NA	Analysis	624.1	RA	1	554564	10/19/20 14:29	WJD	TAL BUF

**Client Sample ID: MW-2S-OCT20**

**Lab Sample ID: 480-176636-3**

**Date Collected: 10/15/20 10:42**

**Matrix: Water**

**Date Received: 10/15/20 16:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		20	554226	10/16/20 17:09	WJD	TAL BUF
Total/NA	Analysis	624.1	RA	1	554564	10/19/20 14:52	WJD	TAL BUF

**Client Sample ID: PZ-3-OCT20**

**Lab Sample ID: 480-176636-7**

**Date Collected: 10/15/20 13:05**

**Matrix: Water**

**Date Received: 10/15/20 16:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		20	554226	10/16/20 18:41	WJD	TAL BUF
Total/NA	Analysis	624.1	RA	1	554564	10/19/20 16:24	WJD	TAL BUF

**Client Sample ID: MW-14S-OCT20**

**Lab Sample ID: 480-176636-8**

**Date Collected: 10/15/20 13:10**

**Matrix: Water**

**Date Received: 10/15/20 16:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		20	554226	10/16/20 19:04	WJD	TAL BUF
Total/NA	Analysis	624.1	RA	1	554564	10/19/20 16:47	WJD	TAL BUF

**Client Sample ID: MW-1S-OCT20**

**Lab Sample ID: 480-176636-9**

**Date Collected: 10/15/20 13:50**

**Matrix: Water**

**Date Received: 10/15/20 16:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		20	554226	10/16/20 19:27	WJD	TAL BUF
Total/NA	Analysis	624.1	RA	1	554564	10/19/20 17:10	WJD	TAL BUF

# Lab Chronicle

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

**Client Sample ID: 10W-PURGE WATER-OCT20**

**Lab Sample ID: 480-176636-10**

**Date Collected: 10/15/20 14:10**

**Matrix: Water**

**Date Received: 10/15/20 16:00**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		20	554226	10/16/20 19:50	WJD	TAL BUF
Total/NA	Analysis	624.1	RA	1	554564	10/19/20 17:33	WJD	TAL BUF

## Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600



# Accreditation/Certification Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

## Laboratory: Eurofins TestAmerica, Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-01-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
624.1		Water	1,2-Dichloroethene, Total

## Method Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL BUF

### Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

### Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

## Sample Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-176636-1	TB-20201015	Water	10/15/20 09:00	10/15/20 16:00	
480-176636-2	MW-9S-OCT20	Water	10/15/20 10:00	10/15/20 16:00	
480-176636-3	MW-2S-OCT20	Water	10/15/20 10:42	10/15/20 16:00	
480-176636-7	PZ-3-OCT20	Water	10/15/20 13:05	10/15/20 16:00	
480-176636-8	MW-14S-OCT20	Water	10/15/20 13:10	10/15/20 16:00	
480-176636-9	MW-1S-OCT20	Water	10/15/20 13:50	10/15/20 16:00	
480-176636-10	10W-PURGE WATER-OCT20	Water	10/15/20 14:10	10/15/20 16:00	

## Chain of Custody Record



<b>Client Information</b> Client Contact: Jenelle Gaylord Company: New York State D.E.C. Address: 625 Broadway Division of Environmental Remediation City: Albany State, Zip: NY, 12233-7014 Phone: _____ Email: jenelle.gaylord@dec.ny.gov Project Name: Davis-Howland Oil Corp #828088 Site: _____		Sampler: CP, CW Lab PM: Johnson, Orlette S Phone: (716) 684-8060 E-Mail: Orlette.Johnson@Eurofins.com		Carrier Tracking No(s): _____ COC No: 480-151692-33705.2 Page: 1 of 5 Job #: 10f1	
<b>Due Date Requested:</b> TAT Requested (days): 3 day for MW-15R-0CT20, MW-16R-0CT20, PW-1-0CT20, standard for others PO #: _____ CallOut ID: 136612 WO #: _____ Project #: 48019422 SSOW#: _____		<b>Analysis Requested</b> 624.1 PREC - Priority Pollutant List - VOA - 624.1 300.0 28D - (MOD) Sulfate 2320B - Alkalinity 8260C - Volatiles, TCLP list			
<b>Sample Identification</b> TB-20201015 MW-9R-0CT20 MW-2S-0CT20 PW-1-0CT20 MW-15R-0CT20 MW-16R-0CT20 MW-14S-0CT20 MW-15-0CT20 10P-PURGEWATER-0CT20		<b>Sample Date</b> 10/15/2020 10/10/20 10/10/20 10/10/20 10/10/20 10/10/20 10/10/20 10/10/20		<b>Sample Time</b> 09:00 TB 10:00 C 10:42 C 10:40 C 11:55 G 12:30 G 13:05 C 13:10 G 13:50 C 14:10 G	
<b>Sample Type</b> (C=Comp, G=grab) TB C C C G G C G G		<b>Matrix</b> (W=water, S=solid, O=oil, G=grab) Water Water Water Water Water Water Water Water Water		<b>Field Filtered Sample (Yes or No)</b> Yes Yes Yes Yes Yes Yes Yes Yes Yes	
<b>Preservation Code:</b> TB C C C G G C G G		<b>Perform MS/MSD (Yes or No)</b> Yes Yes Yes Yes Yes Yes Yes Yes Yes		<b>Special Instructions/Note:</b> Trip Blank Pump dry on 10/14. Pump dry on 10/14.	
<b>Sample Disposal</b> <input checked="" type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab Special Instructions/QC Requirements: Standard TAT except 3-day TAT for PW-1-0CT20		<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 Special Instructions/QC Requirements: Standard TAT except 3-day TAT for PW-1-0CT20			
<b>Empty Kit Relinquished by:</b> Relinquished by: _____ Relinquished by: _____ Relinquished by: _____		<b>Relinquished by:</b> Relinquished by: _____ Relinquished by: _____ Relinquished by: _____			
<b>Custody Seals Intact:</b> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		<b>Custody Seal No.:</b> 3.8 # ICE			

## Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-176636-1

**Login Number: 176636**

**List Source: Eurofins TestAmerica, Buffalo**

**List Number: 1**

**Creator: Kolb, Chris M**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is 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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	ENE
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	



## ANALYTICAL REPORT

Eurofins TestAmerica, Buffalo  
10 Hazelwood Drive  
Amherst, NY 14228-2298  
Tel: (716)691-2600

Laboratory Job ID: 480-176636-2

Client Project/Site: Davis-Howland Oil Corp #828088

**For:**

New York State D.E.C.  
625 Broadway  
Division of Environmental Remediation  
Albany, New York 12233-7014

Attn: Jenelle Gaylord



Authorized for release by:

10/21/2020 11:43:22 AM

Wyatt Watson, Project Management Assistant I

[Wyatt.Watson@Eurofinset.com](mailto:Wyatt.Watson@Eurofinset.com)

Designee for

Orlette Johnson, Senior Project Manager

(484)685-0864

[Orlette.Johnson@Eurofinset.com](mailto:Orlette.Johnson@Eurofinset.com)

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*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed within the body of this report. Release of the data contained in this sample data package and in the electronic data deliverable has been authorized by the Laboratory Manager or his/her designee, as verified by the following signature.



---

Wyatt Watson  
Project Management Assistant I  
10/21/2020 11:43:22 AM

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## Definitions/Glossary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

### Qualifiers

#### GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### 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: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

## Job ID: 480-176636-2

Laboratory: Eurofins TestAmerica, Buffalo

### Narrative

#### Job Narrative 480-176636-2

### Comments

No additional comments.

### Receipt

The samples were received on 10/15/2020 4:00 PM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.8° C.

### GC/MS VOA

Method 624.1: The following sample(s) were over-diluted. The sample will be reanalyzed outside of hold time: PW-1-OCT20 (480-176636-4), MW-15R-OCT20 (480-176636-5) and MW-16R-OCT20 (480-176636-6). Elevated reporting limits (RLs) are provided. Both sets of data will be provided.

Method 624.1: The following samples were diluted to bring the concentration of target analytes within the calibration range: PW-1-OCT20 (480-176636-4) and MW-16R-OCT20 (480-176636-6). Elevated reporting limits (RLs) are provided.

Method 624.1: Reanalysis of the following samples were performed outside of the analytical holding time for Acrolein due to lack of history: PW-1-OCT20 (480-176636-4), MW-15R-OCT20 (480-176636-5) and MW-16R-OCT20 (480-176636-6).

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

### HPLC/IC

Method 300.0: The following samples were diluted to bring the concentration of target analytes within the calibration range: PW-1-OCT20 (480-176636-4) and MW-16R-OCT20 (480-176636-6). Elevated reporting limits (RLs) are provided.

Method 300.0: The following sample was reported with elevated reporting limits for all analytes: MW-15R-OCT20 (480-176636-5). The sample was analyzed at a dilution based on screening results.

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

### General Chemistry

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



# Detection Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

## Client Sample ID: PW-1-OCT20

## Lab Sample ID: 480-176636-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	34	J	100	12	ug/L	20		624.1	Total/NA
1,2-Dichloroethene, Total	290		200	64	ug/L	20		624.1	Total/NA
Vinyl chloride	73	J	100	15	ug/L	20		624.1	Total/NA
1,1-Dichloroethane - RA	30	J	40	4.7	ug/L	8		624.1	Total/NA
1,2-Dichloroethene, Total - RA	250		80	26	ug/L	8		624.1	Total/NA
Trichloroethene - RA	17	J	40	4.8	ug/L	8		624.1	Total/NA
Vinyl chloride - RA	72		40	6.0	ug/L	8		624.1	Total/NA
Sulfate	498		10.0	1.7	mg/L	5		300.0	Total/NA
Alkalinity, Total	322		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	322		5.0	0.79	mg/L	1		SM 2320B	Total/NA

## Client Sample ID: MW-15R-OCT20

## Lab Sample ID: 480-176636-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, Total - RA	9.7	J	10	3.2	ug/L	1		624.1	Total/NA
trans-1,2-Dichloroethene - RA	0.66	J	5.0	0.59	ug/L	1		624.1	Total/NA
Trichloroethene - RA	2.4	J	5.0	0.60	ug/L	1		624.1	Total/NA
Vinyl chloride - RA	1.0	J	5.0	0.75	ug/L	1		624.1	Total/NA
Sulfate	69.4		10.0	1.7	mg/L	5		300.0	Total/NA
Alkalinity, Total	406		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	406		5.0	0.79	mg/L	1		SM 2320B	Total/NA

## Client Sample ID: MW-16R-OCT20

## Lab Sample ID: 480-176636-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2-Dichloroethene, Total	390		200	64	ug/L	20		624.1	Total/NA
Vinyl chloride	140		100	15	ug/L	20		624.1	Total/NA
1,1-Dichloroethane - RA	15	J	40	4.7	ug/L	8		624.1	Total/NA
1,2-Dichloroethene, Total - RA	380		80	26	ug/L	8		624.1	Total/NA
Vinyl chloride - RA	140		40	6.0	ug/L	8		624.1	Total/NA
Sulfate	122		10.0	1.7	mg/L	5		300.0	Total/NA
Alkalinity, Total	326		5.0	0.79	mg/L	1		SM 2320B	Total/NA
Alkalinity, Bicarbonate	326		5.0	0.79	mg/L	1		SM 2320B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

Client Sample ID: PW-1-OCT20

Lab Sample ID: 480-176636-4

Date Collected: 10/15/20 10:40

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	7.7	ug/L			10/16/20 17:32	20
1,1,2,2-Tetrachloroethane	ND		100	5.2	ug/L			10/16/20 17:32	20
1,1,2-Trichloroethane	ND		100	9.6	ug/L			10/16/20 17:32	20
<b>1,1-Dichloroethane</b>	<b>34</b>	<b>J</b>	100	12	ug/L			10/16/20 17:32	20
1,1-Dichloroethene	ND		100	17	ug/L			10/16/20 17:32	20
1,2-Dichlorobenzene	ND		100	8.9	ug/L			10/16/20 17:32	20
1,2-Dichloroethane	ND		100	12	ug/L			10/16/20 17:32	20
<b>1,2-Dichloroethene, Total</b>	<b>290</b>		200	64	ug/L			10/16/20 17:32	20
1,2-Dichloropropane	ND		100	12	ug/L			10/16/20 17:32	20
1,3-Dichlorobenzene	ND		100	11	ug/L			10/16/20 17:32	20
1,4-Dichlorobenzene	ND		100	10	ug/L			10/16/20 17:32	20
2-Chloroethyl vinyl ether	ND		500	37	ug/L			10/16/20 17:32	20
Acrolein	ND		2000	350	ug/L			10/16/20 17:32	20
Acrylonitrile	ND		1000	38	ug/L			10/16/20 17:32	20
Benzene	ND		100	12	ug/L			10/16/20 17:32	20
Bromoform	ND		100	9.4	ug/L			10/16/20 17:32	20
Bromomethane	ND		100	24	ug/L			10/16/20 17:32	20
Carbon tetrachloride	ND		100	10	ug/L			10/16/20 17:32	20
Chlorobenzene	ND		100	9.5	ug/L			10/16/20 17:32	20
Chlorodibromomethane	ND		100	8.3	ug/L			10/16/20 17:32	20
Chloroethane	ND		100	17	ug/L			10/16/20 17:32	20
Chloroform	ND		100	11	ug/L			10/16/20 17:32	20
Chloromethane	ND		100	13	ug/L			10/16/20 17:32	20
cis-1,3-Dichloropropene	ND		100	6.6	ug/L			10/16/20 17:32	20
Dichlorobromomethane	ND		100	11	ug/L			10/16/20 17:32	20
Ethylbenzene	ND		100	9.3	ug/L			10/16/20 17:32	20
Methylene Chloride	ND		100	16	ug/L			10/16/20 17:32	20
Tetrachloroethene	ND		100	6.8	ug/L			10/16/20 17:32	20
Toluene	ND		100	9.1	ug/L			10/16/20 17:32	20
trans-1,2-Dichloroethene	ND		100	12	ug/L			10/16/20 17:32	20
trans-1,3-Dichloropropene	ND		100	8.8	ug/L			10/16/20 17:32	20
Trichloroethene	ND		100	12	ug/L			10/16/20 17:32	20
<b>Vinyl chloride</b>	<b>73</b>	<b>J</b>	100	15	ug/L			10/16/20 17:32	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		68 - 130		10/16/20 17:32	20
4-Bromofluorobenzene (Surr)	99		76 - 123		10/16/20 17:32	20
Dibromofluoromethane (Surr)	104		75 - 123		10/16/20 17:32	20
Toluene-d8 (Surr)	98		77 - 120		10/16/20 17:32	20

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		40	3.1	ug/L			10/19/20 15:15	8
1,1,2,2-Tetrachloroethane	ND		40	2.1	ug/L			10/19/20 15:15	8
1,1,2-Trichloroethane	ND		40	3.9	ug/L			10/19/20 15:15	8
<b>1,1-Dichloroethane</b>	<b>30</b>	<b>J</b>	40	4.7	ug/L			10/19/20 15:15	8
1,1-Dichloroethene	ND		40	6.8	ug/L			10/19/20 15:15	8
1,2-Dichlorobenzene	ND		40	3.6	ug/L			10/19/20 15:15	8
1,2-Dichloroethane	ND		40	4.8	ug/L			10/19/20 15:15	8
<b>1,2-Dichloroethene, Total</b>	<b>250</b>		80	26	ug/L			10/19/20 15:15	8

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

Client Sample ID: PW-1-OCT20

Lab Sample ID: 480-176636-4

Date Collected: 10/15/20 10:40

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		40	4.9	ug/L			10/19/20 15:15	8
1,3-Dichlorobenzene	ND		40	4.3	ug/L			10/19/20 15:15	8
1,4-Dichlorobenzene	ND		40	4.1	ug/L			10/19/20 15:15	8
2-Chloroethyl vinyl ether	ND		200	15	ug/L			10/19/20 15:15	8
Acrolein	ND	H	800	140	ug/L			10/19/20 15:15	8
Acrylonitrile	ND		400	15	ug/L			10/19/20 15:15	8
Benzene	ND		40	4.8	ug/L			10/19/20 15:15	8
Bromoform	ND		40	3.7	ug/L			10/19/20 15:15	8
Bromomethane	ND		40	9.5	ug/L			10/19/20 15:15	8
Carbon tetrachloride	ND		40	4.1	ug/L			10/19/20 15:15	8
Chlorobenzene	ND		40	3.8	ug/L			10/19/20 15:15	8
Chlorodibromomethane	ND		40	3.3	ug/L			10/19/20 15:15	8
Chloroethane	ND		40	7.0	ug/L			10/19/20 15:15	8
Chloroform	ND		40	4.3	ug/L			10/19/20 15:15	8
Chloromethane	ND		40	5.1	ug/L			10/19/20 15:15	8
cis-1,3-Dichloropropene	ND		40	2.6	ug/L			10/19/20 15:15	8
Dichlorobromomethane	ND		40	4.3	ug/L			10/19/20 15:15	8
Ethylbenzene	ND		40	3.7	ug/L			10/19/20 15:15	8
Methylene Chloride	ND		40	6.5	ug/L			10/19/20 15:15	8
Tetrachloroethene	ND		40	2.7	ug/L			10/19/20 15:15	8
Toluene	ND		40	3.6	ug/L			10/19/20 15:15	8
trans-1,2-Dichloroethene	ND		40	4.7	ug/L			10/19/20 15:15	8
trans-1,3-Dichloropropene	ND		40	3.5	ug/L			10/19/20 15:15	8
Trichloroethene	17	J	40	4.8	ug/L			10/19/20 15:15	8
Vinyl chloride	72		40	6.0	ug/L			10/19/20 15:15	8

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		68 - 130		10/19/20 15:15	8
4-Bromofluorobenzene (Surr)	99		76 - 123		10/19/20 15:15	8
Dibromofluoromethane (Surr)	100		75 - 123		10/19/20 15:15	8
Toluene-d8 (Surr)	99		77 - 120		10/19/20 15:15	8

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	498		10.0	1.7	mg/L			10/17/20 02:59	5
Alkalinity, Total	322		5.0	0.79	mg/L			10/20/20 16:29	1
Alkalinity, Bicarbonate	322		5.0	0.79	mg/L			10/20/20 16:29	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			10/20/20 16:29	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			10/20/20 16:29	1

Client Sample ID: MW-15R-OCT20

Lab Sample ID: 480-176636-5

Date Collected: 10/15/20 11:55

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	7.7	ug/L			10/16/20 17:55	20
1,1,1,2-Tetrachloroethane	ND		100	5.2	ug/L			10/16/20 17:55	20
1,1,2-Trichloroethane	ND		100	9.6	ug/L			10/16/20 17:55	20
1,1-Dichloroethane	ND		100	12	ug/L			10/16/20 17:55	20

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

Client Sample ID: MW-15R-OCT20

Lab Sample ID: 480-176636-5

Date Collected: 10/15/20 11:55

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		100	17	ug/L			10/16/20 17:55	20
1,2-Dichlorobenzene	ND		100	8.9	ug/L			10/16/20 17:55	20
1,2-Dichloroethane	ND		100	12	ug/L			10/16/20 17:55	20
1,2-Dichloroethene, Total	ND		200	64	ug/L			10/16/20 17:55	20
1,2-Dichloropropane	ND		100	12	ug/L			10/16/20 17:55	20
1,3-Dichlorobenzene	ND		100	11	ug/L			10/16/20 17:55	20
1,4-Dichlorobenzene	ND		100	10	ug/L			10/16/20 17:55	20
2-Chloroethyl vinyl ether	ND		500	37	ug/L			10/16/20 17:55	20
Acrolein	ND		2000	350	ug/L			10/16/20 17:55	20
Acrylonitrile	ND		1000	38	ug/L			10/16/20 17:55	20
Benzene	ND		100	12	ug/L			10/16/20 17:55	20
Bromoform	ND		100	9.4	ug/L			10/16/20 17:55	20
Bromomethane	ND		100	24	ug/L			10/16/20 17:55	20
Carbon tetrachloride	ND		100	10	ug/L			10/16/20 17:55	20
Chlorobenzene	ND		100	9.5	ug/L			10/16/20 17:55	20
Chlorodibromomethane	ND		100	8.3	ug/L			10/16/20 17:55	20
Chloroethane	ND		100	17	ug/L			10/16/20 17:55	20
Chloroform	ND		100	11	ug/L			10/16/20 17:55	20
Chloromethane	ND		100	13	ug/L			10/16/20 17:55	20
cis-1,3-Dichloropropene	ND		100	6.6	ug/L			10/16/20 17:55	20
Dichlorobromomethane	ND		100	11	ug/L			10/16/20 17:55	20
Ethylbenzene	ND		100	9.3	ug/L			10/16/20 17:55	20
Methylene Chloride	ND		100	16	ug/L			10/16/20 17:55	20
Tetrachloroethene	ND		100	6.8	ug/L			10/16/20 17:55	20
Toluene	ND		100	9.1	ug/L			10/16/20 17:55	20
trans-1,2-Dichloroethene	ND		100	12	ug/L			10/16/20 17:55	20
trans-1,3-Dichloropropene	ND		100	8.8	ug/L			10/16/20 17:55	20
Trichloroethene	ND		100	12	ug/L			10/16/20 17:55	20
Vinyl chloride	ND		100	15	ug/L			10/16/20 17:55	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		68 - 130		10/16/20 17:55	20
4-Bromofluorobenzene (Surr)	97		76 - 123		10/16/20 17:55	20
Dibromofluoromethane (Surr)	96		75 - 123		10/16/20 17:55	20
Toluene-d8 (Surr)	98		77 - 120		10/16/20 17:55	20

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/19/20 15:38	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/19/20 15:38	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/19/20 15:38	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/19/20 15:38	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/19/20 15:38	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/19/20 15:38	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/19/20 15:38	1
1,2-Dichloroethene, Total	9.7 J		10	3.2	ug/L			10/19/20 15:38	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/19/20 15:38	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/19/20 15:38	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/19/20 15:38	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/19/20 15:38	1

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

Client Sample ID: MW-15R-OCT20

Lab Sample ID: 480-176636-5

Date Collected: 10/15/20 11:55

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND	H	100	17	ug/L			10/19/20 15:38	1
Acrylonitrile	ND		50	1.9	ug/L			10/19/20 15:38	1
Benzene	ND		5.0	0.60	ug/L			10/19/20 15:38	1
Bromoform	ND		5.0	0.47	ug/L			10/19/20 15:38	1
Bromomethane	ND		5.0	1.2	ug/L			10/19/20 15:38	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/19/20 15:38	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/19/20 15:38	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/19/20 15:38	1
Chloroethane	ND		5.0	0.87	ug/L			10/19/20 15:38	1
Chloroform	ND		5.0	0.54	ug/L			10/19/20 15:38	1
Chloromethane	ND		5.0	0.64	ug/L			10/19/20 15:38	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/19/20 15:38	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/19/20 15:38	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/19/20 15:38	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/19/20 15:38	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/19/20 15:38	1
Toluene	ND		5.0	0.45	ug/L			10/19/20 15:38	1
trans-1,2-Dichloroethene	0.66	J	5.0	0.59	ug/L			10/19/20 15:38	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/19/20 15:38	1
Trichloroethene	2.4	J	5.0	0.60	ug/L			10/19/20 15:38	1
Vinyl chloride	1.0	J	5.0	0.75	ug/L			10/19/20 15:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		68 - 130		10/19/20 15:38	1
4-Bromofluorobenzene (Surr)	99		76 - 123		10/19/20 15:38	1
Dibromofluoromethane (Surr)	101		75 - 123		10/19/20 15:38	1
Toluene-d8 (Surr)	99		77 - 120		10/19/20 15:38	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	69.4		10.0	1.7	mg/L			10/17/20 03:13	5
Alkalinity, Total	406		5.0	0.79	mg/L			10/20/20 16:37	1
Alkalinity, Bicarbonate	406		5.0	0.79	mg/L			10/20/20 16:37	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			10/20/20 16:37	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			10/20/20 16:37	1

Client Sample ID: MW-16R-OCT20

Lab Sample ID: 480-176636-6

Date Collected: 10/15/20 12:30

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		100	7.7	ug/L			10/16/20 18:18	20
1,1,2,2-Tetrachloroethane	ND		100	5.2	ug/L			10/16/20 18:18	20
1,1,2-Trichloroethane	ND		100	9.6	ug/L			10/16/20 18:18	20
1,1-Dichloroethane	ND		100	12	ug/L			10/16/20 18:18	20
1,1-Dichloroethene	ND		100	17	ug/L			10/16/20 18:18	20
1,2-Dichlorobenzene	ND		100	8.9	ug/L			10/16/20 18:18	20
1,2-Dichloroethane	ND		100	12	ug/L			10/16/20 18:18	20
1,2-Dichloroethene, Total	390		200	64	ug/L			10/16/20 18:18	20

Eurofins TestAmerica, Buffalo



# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

Client Sample ID: MW-16R-OCT20

Lab Sample ID: 480-176636-6

Date Collected: 10/15/20 12:30

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		100	12	ug/L			10/16/20 18:18	20
1,3-Dichlorobenzene	ND		100	11	ug/L			10/16/20 18:18	20
1,4-Dichlorobenzene	ND		100	10	ug/L			10/16/20 18:18	20
2-Chloroethyl vinyl ether	ND		500	37	ug/L			10/16/20 18:18	20
Acrolein	ND		2000	350	ug/L			10/16/20 18:18	20
Acrylonitrile	ND		1000	38	ug/L			10/16/20 18:18	20
Benzene	ND		100	12	ug/L			10/16/20 18:18	20
Bromoform	ND		100	9.4	ug/L			10/16/20 18:18	20
Bromomethane	ND		100	24	ug/L			10/16/20 18:18	20
Carbon tetrachloride	ND		100	10	ug/L			10/16/20 18:18	20
Chlorobenzene	ND		100	9.5	ug/L			10/16/20 18:18	20
Chlorodibromomethane	ND		100	8.3	ug/L			10/16/20 18:18	20
Chloroethane	ND		100	17	ug/L			10/16/20 18:18	20
Chloroform	ND		100	11	ug/L			10/16/20 18:18	20
Chloromethane	ND		100	13	ug/L			10/16/20 18:18	20
cis-1,3-Dichloropropene	ND		100	6.6	ug/L			10/16/20 18:18	20
Dichlorobromomethane	ND		100	11	ug/L			10/16/20 18:18	20
Ethylbenzene	ND		100	9.3	ug/L			10/16/20 18:18	20
Methylene Chloride	ND		100	16	ug/L			10/16/20 18:18	20
Tetrachloroethene	ND		100	6.8	ug/L			10/16/20 18:18	20
Toluene	ND		100	9.1	ug/L			10/16/20 18:18	20
trans-1,2-Dichloroethene	ND		100	12	ug/L			10/16/20 18:18	20
trans-1,3-Dichloropropene	ND		100	8.8	ug/L			10/16/20 18:18	20
Trichloroethene	ND		100	12	ug/L			10/16/20 18:18	20
Vinyl chloride	140		100	15	ug/L			10/16/20 18:18	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	91		68 - 130		10/16/20 18:18	20
4-Bromofluorobenzene (Surr)	98		76 - 123		10/16/20 18:18	20
Dibromofluoromethane (Surr)	101		75 - 123		10/16/20 18:18	20
Toluene-d8 (Surr)	98		77 - 120		10/16/20 18:18	20

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		40	3.1	ug/L			10/19/20 16:01	8
1,1,2,2-Tetrachloroethane	ND		40	2.1	ug/L			10/19/20 16:01	8
1,1,2-Trichloroethane	ND		40	3.9	ug/L			10/19/20 16:01	8
1,1-Dichloroethane	15	J	40	4.7	ug/L			10/19/20 16:01	8
1,1-Dichloroethene	ND		40	6.8	ug/L			10/19/20 16:01	8
1,2-Dichlorobenzene	ND		40	3.6	ug/L			10/19/20 16:01	8
1,2-Dichloroethane	ND		40	4.8	ug/L			10/19/20 16:01	8
1,2-Dichloroethene, Total	380		80	26	ug/L			10/19/20 16:01	8
1,2-Dichloropropane	ND		40	4.9	ug/L			10/19/20 16:01	8
1,3-Dichlorobenzene	ND		40	4.3	ug/L			10/19/20 16:01	8
1,4-Dichlorobenzene	ND		40	4.1	ug/L			10/19/20 16:01	8
2-Chloroethyl vinyl ether	ND		200	15	ug/L			10/19/20 16:01	8
Acrolein	ND	H	800	140	ug/L			10/19/20 16:01	8
Acrylonitrile	ND		400	15	ug/L			10/19/20 16:01	8
Benzene	ND		40	4.8	ug/L			10/19/20 16:01	8
Bromoform	ND		40	3.7	ug/L			10/19/20 16:01	8

Eurofins TestAmerica, Buffalo

# Client Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

Client Sample ID: MW-16R-OCT20

Lab Sample ID: 480-176636-6

Date Collected: 10/15/20 12:30

Matrix: Water

Date Received: 10/15/20 16:00

## Method: 624.1 - Volatile Organic Compounds (GC/MS) - RA (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		40	9.5	ug/L			10/19/20 16:01	8
Carbon tetrachloride	ND		40	4.1	ug/L			10/19/20 16:01	8
Chlorobenzene	ND		40	3.8	ug/L			10/19/20 16:01	8
Chlorodibromomethane	ND		40	3.3	ug/L			10/19/20 16:01	8
Chloroethane	ND		40	7.0	ug/L			10/19/20 16:01	8
Chloroform	ND		40	4.3	ug/L			10/19/20 16:01	8
Chloromethane	ND		40	5.1	ug/L			10/19/20 16:01	8
cis-1,3-Dichloropropene	ND		40	2.6	ug/L			10/19/20 16:01	8
Dichlorobromomethane	ND		40	4.3	ug/L			10/19/20 16:01	8
Ethylbenzene	ND		40	3.7	ug/L			10/19/20 16:01	8
Methylene Chloride	ND		40	6.5	ug/L			10/19/20 16:01	8
Tetrachloroethene	ND		40	2.7	ug/L			10/19/20 16:01	8
Toluene	ND		40	3.6	ug/L			10/19/20 16:01	8
trans-1,2-Dichloroethene	ND		40	4.7	ug/L			10/19/20 16:01	8
trans-1,3-Dichloropropene	ND		40	3.5	ug/L			10/19/20 16:01	8
Trichloroethene	ND		40	4.8	ug/L			10/19/20 16:01	8
Vinyl chloride	140		40	6.0	ug/L			10/19/20 16:01	8

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	92		68 - 130		10/19/20 16:01	8
4-Bromofluorobenzene (Surr)	97		76 - 123		10/19/20 16:01	8
Dibromofluoromethane (Surr)	99		75 - 123		10/19/20 16:01	8
Toluene-d8 (Surr)	97		77 - 120		10/19/20 16:01	8

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	122		10.0	1.7	mg/L			10/17/20 03:27	5
Alkalinity, Total	326		5.0	0.79	mg/L			10/20/20 16:44	1
Alkalinity, Bicarbonate	326		5.0	0.79	mg/L			10/20/20 16:44	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			10/20/20 16:44	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			10/20/20 16:44	1

# Surrogate Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
Lab Sample ID	Client Sample ID	DCA (68-130)	BFB (76-123)	DBFM (75-123)	TOL (77-120)
480-176636-4	PW-1-OCT20	95	99	104	98
480-176636-4 - RA	PW-1-OCT20	91	99	100	99
480-176636-5	MW-15R-OCT20	91	97	96	98
480-176636-5 - RA	MW-15R-OCT20	92	99	101	99
480-176636-6	MW-16R-OCT20	91	98	101	98
480-176636-6 - RA	MW-16R-OCT20	92	97	99	97
LCS 480-554226/6	Lab Control Sample	95	96	100	97
LCS 480-554564/6	Lab Control Sample	87	98	98	99
MB 480-554226/8	Method Blank	95	96	101	99
MB 480-554564/8	Method Blank	93	98	98	96

### Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

TOL = Toluene-d8 (Surr)

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

## Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 480-554226/8

Matrix: Water

Analysis Batch: 554226

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/16/20 11:38	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/16/20 11:38	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/16/20 11:38	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/16/20 11:38	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/16/20 11:38	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/16/20 11:38	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/16/20 11:38	1
1,2-Dichloroethene, Total	ND		10	3.2	ug/L			10/16/20 11:38	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/16/20 11:38	1
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/16/20 11:38	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/16/20 11:38	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/16/20 11:38	1
Acrolein	ND		100	17	ug/L			10/16/20 11:38	1
Acrylonitrile	ND		50	1.9	ug/L			10/16/20 11:38	1
Benzene	ND		5.0	0.60	ug/L			10/16/20 11:38	1
Bromoform	ND		5.0	0.47	ug/L			10/16/20 11:38	1
Bromomethane	ND		5.0	1.2	ug/L			10/16/20 11:38	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/16/20 11:38	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/16/20 11:38	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/16/20 11:38	1
Chloroethane	ND		5.0	0.87	ug/L			10/16/20 11:38	1
Chloroform	ND		5.0	0.54	ug/L			10/16/20 11:38	1
Chloromethane	ND		5.0	0.64	ug/L			10/16/20 11:38	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/16/20 11:38	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/16/20 11:38	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/16/20 11:38	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/16/20 11:38	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/16/20 11:38	1
Toluene	ND		5.0	0.45	ug/L			10/16/20 11:38	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/16/20 11:38	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/16/20 11:38	1
Trichloroethene	ND		5.0	0.60	ug/L			10/16/20 11:38	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/16/20 11:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	95		68 - 130		10/16/20 11:38	1
4-Bromofluorobenzene (Surr)	96		76 - 123		10/16/20 11:38	1
Dibromofluoromethane (Surr)	101		75 - 123		10/16/20 11:38	1
Toluene-d8 (Surr)	99		77 - 120		10/16/20 11:38	1

Lab Sample ID: LCS 480-554226/6

Matrix: Water

Analysis Batch: 554226

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	18.3		ug/L		91	52 - 162
1,1,2,2-Tetrachloroethane	20.0	17.5		ug/L		87	46 - 157
1,1,2-Trichloroethane	20.0	18.4		ug/L		92	52 - 150

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-554226/6

Matrix: Water

Analysis Batch: 554226

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	20.0	19.3		ug/L		97	59 - 155
1,1-Dichloroethene	20.0	19.8		ug/L		99	1 - 234
1,2-Dichlorobenzene	20.0	18.5		ug/L		93	18 - 190
1,2-Dichloroethane	20.0	17.6		ug/L		88	49 - 155
1,2-Dichloropropane	20.0	19.2		ug/L		96	1 - 210
1,3-Dichlorobenzene	20.0	18.7		ug/L		93	59 - 156
1,4-Dichlorobenzene	20.0	18.7		ug/L		94	18 - 190
2-Chloroethyl vinyl ether	20.0	19.0	J	ug/L		95	1 - 305
Benzene	20.0	19.6		ug/L		98	37 - 151
Bromoform	20.0	17.6		ug/L		88	45 - 169
Bromomethane	20.0	23.8		ug/L		119	1 - 242
Carbon tetrachloride	20.0	18.4		ug/L		92	70 - 140
Chlorobenzene	20.0	18.9		ug/L		94	37 - 160
Chlorodibromomethane	20.0	17.5		ug/L		87	53 - 149
Chloroethane	20.0	22.7		ug/L		114	14 - 230
Chloroform	20.0	19.1		ug/L		95	51 - 138
Chloromethane	20.0	23.3		ug/L		116	1 - 273
cis-1,3-Dichloropropene	20.0	18.4		ug/L		92	1 - 227
Dichlorobromomethane	20.0	18.1		ug/L		91	35 - 155
Ethylbenzene	20.0	19.0		ug/L		95	37 - 162
Methylene Chloride	20.0	19.8		ug/L		99	1 - 221
Tetrachloroethene	20.0	19.3		ug/L		97	64 - 148
Toluene	20.0	18.6		ug/L		93	47 - 150
trans-1,2-Dichloroethene	20.0	20.0		ug/L		100	54 - 156
trans-1,3-Dichloropropene	20.0	17.6		ug/L		88	17 - 183
Trichloroethene	20.0	19.0		ug/L		95	71 - 157
Vinyl chloride	20.0	23.3		ug/L		117	1 - 251

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	95		68 - 130
4-Bromofluorobenzene (Surr)	96		76 - 123
Dibromofluoromethane (Surr)	100		75 - 123
Toluene-d8 (Surr)	97		77 - 120

Lab Sample ID: MB 480-554564/8

Matrix: Water

Analysis Batch: 554564

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		5.0	0.39	ug/L			10/19/20 11:40	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.26	ug/L			10/19/20 11:40	1
1,1,2-Trichloroethane	ND		5.0	0.48	ug/L			10/19/20 11:40	1
1,1-Dichloroethane	ND		5.0	0.59	ug/L			10/19/20 11:40	1
1,1-Dichloroethene	ND		5.0	0.85	ug/L			10/19/20 11:40	1
1,2-Dichlorobenzene	ND		5.0	0.44	ug/L			10/19/20 11:40	1
1,2-Dichloroethane	ND		5.0	0.60	ug/L			10/19/20 11:40	1
1,2-Dichloroethene, Total	ND		10	3.2	ug/L			10/19/20 11:40	1
1,2-Dichloropropane	ND		5.0	0.61	ug/L			10/19/20 11:40	1

Eurofins TestAmerica, Buffalo



# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 480-554564/8

Matrix: Water

Analysis Batch: 554564

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		5.0	0.54	ug/L			10/19/20 11:40	1
1,4-Dichlorobenzene	ND		5.0	0.51	ug/L			10/19/20 11:40	1
2-Chloroethyl vinyl ether	ND		25	1.9	ug/L			10/19/20 11:40	1
Acrolein	ND		100	17	ug/L			10/19/20 11:40	1
Acrylonitrile	ND		50	1.9	ug/L			10/19/20 11:40	1
Benzene	ND		5.0	0.60	ug/L			10/19/20 11:40	1
Bromoform	ND		5.0	0.47	ug/L			10/19/20 11:40	1
Bromomethane	ND		5.0	1.2	ug/L			10/19/20 11:40	1
Carbon tetrachloride	ND		5.0	0.51	ug/L			10/19/20 11:40	1
Chlorobenzene	ND		5.0	0.48	ug/L			10/19/20 11:40	1
Chlorodibromomethane	ND		5.0	0.41	ug/L			10/19/20 11:40	1
Chloroethane	ND		5.0	0.87	ug/L			10/19/20 11:40	1
Chloroform	ND		5.0	0.54	ug/L			10/19/20 11:40	1
Chloromethane	ND		5.0	0.64	ug/L			10/19/20 11:40	1
cis-1,3-Dichloropropene	ND		5.0	0.33	ug/L			10/19/20 11:40	1
Dichlorobromomethane	ND		5.0	0.54	ug/L			10/19/20 11:40	1
Ethylbenzene	ND		5.0	0.46	ug/L			10/19/20 11:40	1
Methylene Chloride	ND		5.0	0.81	ug/L			10/19/20 11:40	1
Tetrachloroethene	ND		5.0	0.34	ug/L			10/19/20 11:40	1
Toluene	ND		5.0	0.45	ug/L			10/19/20 11:40	1
trans-1,2-Dichloroethene	ND		5.0	0.59	ug/L			10/19/20 11:40	1
trans-1,3-Dichloropropene	ND		5.0	0.44	ug/L			10/19/20 11:40	1
Trichloroethene	ND		5.0	0.60	ug/L			10/19/20 11:40	1
Vinyl chloride	ND		5.0	0.75	ug/L			10/19/20 11:40	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	93		68 - 130		10/19/20 11:40	1
4-Bromofluorobenzene (Surr)	98		76 - 123		10/19/20 11:40	1
Dibromofluoromethane (Surr)	98		75 - 123		10/19/20 11:40	1
Toluene-d8 (Surr)	96		77 - 120		10/19/20 11:40	1

Lab Sample ID: LCS 480-554564/6

Matrix: Water

Analysis Batch: 554564

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	20.0	18.4		ug/L		92	52 - 162
1,1,2,2-Tetrachloroethane	20.0	16.3		ug/L		81	46 - 157
1,1,2-Trichloroethane	20.0	18.0		ug/L		90	52 - 150
1,1-Dichloroethane	20.0	19.5		ug/L		98	59 - 155
1,1-Dichloroethene	20.0	20.4		ug/L		102	1 - 234
1,2-Dichlorobenzene	20.0	18.5		ug/L		92	18 - 190
1,2-Dichloroethane	20.0	17.4		ug/L		87	49 - 155
1,2-Dichloropropane	20.0	19.2		ug/L		96	1 - 210
1,3-Dichlorobenzene	20.0	18.9		ug/L		94	59 - 156
1,4-Dichlorobenzene	20.0	18.9		ug/L		95	18 - 190
2-Chloroethyl vinyl ether	20.0	17.8	J	ug/L		89	1 - 305
Benzene	20.0	20.0		ug/L		100	37 - 151

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

## Method: 624.1 - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 480-554564/6

Matrix: Water

Analysis Batch: 554564

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromoform	20.0	16.7		ug/L		84	45 - 169
Bromomethane	20.0	22.9		ug/L		115	1 - 242
Carbon tetrachloride	20.0	18.5		ug/L		93	70 - 140
Chlorobenzene	20.0	19.3		ug/L		97	37 - 160
Chlorodibromomethane	20.0	17.2		ug/L		86	53 - 149
Chloroethane	20.0	22.2		ug/L		111	14 - 230
Chloroform	20.0	18.8		ug/L		94	51 - 138
Chloromethane	20.0	21.6		ug/L		108	1 - 273
cis-1,3-Dichloropropene	20.0	18.3		ug/L		91	1 - 227
Dichlorobromomethane	20.0	18.3		ug/L		91	35 - 155
Ethylbenzene	20.0	19.7		ug/L		99	37 - 162
Methylene Chloride	20.0	18.9		ug/L		95	1 - 221
Tetrachloroethene	20.0	20.7		ug/L		104	64 - 148
Toluene	20.0	19.5		ug/L		97	47 - 150
trans-1,2-Dichloroethene	20.0	19.6		ug/L		98	54 - 156
trans-1,3-Dichloropropene	20.0	17.2		ug/L		86	17 - 183
Trichloroethene	20.0	19.2		ug/L		96	71 - 157
Vinyl chloride	20.0	22.3		ug/L		112	1 - 251

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,2-Dichloroethane-d4 (Surr)	87		68 - 130
4-Bromofluorobenzene (Surr)	98		76 - 123
Dibromofluoromethane (Surr)	98		75 - 123
Toluene-d8 (Surr)	99		77 - 120

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-554356/4

Matrix: Water

Analysis Batch: 554356

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	ND		2.0	0.35	mg/L			10/16/20 23:55	1

Lab Sample ID: LCS 480-554356/3

Matrix: Water

Analysis Batch: 554356

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfate	50.0	50.41		mg/L		101	90 - 110

## Method: SM 2320B - Alkalinity

Lab Sample ID: MB 480-554865/4

Matrix: Water

Analysis Batch: 554865

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Total	ND		5.0	0.79	mg/L			10/20/20 16:16	1

Eurofins TestAmerica, Buffalo

# QC Sample Results

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

## Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: MB 480-554865/4

Matrix: Water

Analysis Batch: 554865

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity, Bicarbonate	ND		5.0	0.79	mg/L			10/20/20 16:16	1
Alkalinity, Carbonate	ND		5.0	0.79	mg/L			10/20/20 16:16	1
Hydroxide Alkalinity	ND		5.0	0.79	mg/L			10/20/20 16:16	1

Lab Sample ID: LCS 480-554865/5

Matrix: Water

Analysis Batch: 554865

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	100	97.60		mg/L		98	90 - 110

Lab Sample ID: 480-176636-6 MS

Matrix: Water

Analysis Batch: 554865

Client Sample ID: MW-16R-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity, Total	326		100	385.6		mg/L		60	60 - 140

Lab Sample ID: 480-176636-6 DU

Matrix: Water

Analysis Batch: 554865

Client Sample ID: MW-16R-OCT20

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity, Total	326		327.9		mg/L		0.7	20
Alkalinity, Bicarbonate	326		327.9		mg/L		0.7	20
Alkalinity, Carbonate	ND		ND		mg/L		NC	20
Hydroxide Alkalinity	ND		ND		mg/L		NC	20

# QC Association Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

## GC/MS VOA

### Analysis Batch: 554226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-176636-4	PW-1-OCT20	Total/NA	Water	624.1	
480-176636-5	MW-15R-OCT20	Total/NA	Water	624.1	
480-176636-6	MW-16R-OCT20	Total/NA	Water	624.1	
MB 480-554226/8	Method Blank	Total/NA	Water	624.1	
LCS 480-554226/6	Lab Control Sample	Total/NA	Water	624.1	

### Analysis Batch: 554564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-176636-4 - RA	PW-1-OCT20	Total/NA	Water	624.1	
480-176636-5 - RA	MW-15R-OCT20	Total/NA	Water	624.1	
480-176636-6 - RA	MW-16R-OCT20	Total/NA	Water	624.1	
MB 480-554564/8	Method Blank	Total/NA	Water	624.1	
LCS 480-554564/6	Lab Control Sample	Total/NA	Water	624.1	

## General Chemistry

### Analysis Batch: 554356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-176636-4	PW-1-OCT20	Total/NA	Water	300.0	
480-176636-5	MW-15R-OCT20	Total/NA	Water	300.0	
480-176636-6	MW-16R-OCT20	Total/NA	Water	300.0	
MB 480-554356/4	Method Blank	Total/NA	Water	300.0	
LCS 480-554356/3	Lab Control Sample	Total/NA	Water	300.0	

### Analysis Batch: 554865

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
480-176636-4	PW-1-OCT20	Total/NA	Water	SM 2320B	
480-176636-5	MW-15R-OCT20	Total/NA	Water	SM 2320B	
480-176636-6	MW-16R-OCT20	Total/NA	Water	SM 2320B	
MB 480-554865/4	Method Blank	Total/NA	Water	SM 2320B	
LCS 480-554865/5	Lab Control Sample	Total/NA	Water	SM 2320B	
480-176636-6 MS	MW-16R-OCT20	Total/NA	Water	SM 2320B	
480-176636-6 DU	MW-16R-OCT20	Total/NA	Water	SM 2320B	

# Lab Chronicle

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

## Client Sample ID: PW-1-OCT20

## Lab Sample ID: 480-176636-4

Date Collected: 10/15/20 10:40

Matrix: Water

Date Received: 10/15/20 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		20	554226	10/16/20 17:32	WJD	TAL BUF
Total/NA	Analysis	624.1	RA	8	554564	10/19/20 15:15	WJD	TAL BUF
Total/NA	Analysis	300.0		5	554356	10/17/20 02:59	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	554865	10/20/20 16:29	BEF	TAL BUF

## Client Sample ID: MW-15R-OCT20

## Lab Sample ID: 480-176636-5

Date Collected: 10/15/20 11:55

Matrix: Water

Date Received: 10/15/20 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		20	554226	10/16/20 17:55	WJD	TAL BUF
Total/NA	Analysis	624.1	RA	1	554564	10/19/20 15:38	WJD	TAL BUF
Total/NA	Analysis	300.0		5	554356	10/17/20 03:13	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	554865	10/20/20 16:37	BEF	TAL BUF

## Client Sample ID: MW-16R-OCT20

## Lab Sample ID: 480-176636-6

Date Collected: 10/15/20 12:30

Matrix: Water

Date Received: 10/15/20 16:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		20	554226	10/16/20 18:18	WJD	TAL BUF
Total/NA	Analysis	624.1	RA	8	554564	10/19/20 16:01	WJD	TAL BUF
Total/NA	Analysis	300.0		5	554356	10/17/20 03:27	IMZ	TAL BUF
Total/NA	Analysis	SM 2320B		1	554865	10/20/20 16:44	BEF	TAL BUF

### Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600



# Accreditation/Certification Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

## Laboratory: Eurofins TestAmerica, Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
New York	NELAP	10026	04-01-21

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
624.1		Water	1,2-Dichloroethene, Total
SM 2320B		Water	Alkalinity, Bicarbonate
SM 2320B		Water	Alkalinity, Carbonate
SM 2320B		Water	Hydroxide Alkalinity

## Method Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
SM 2320B	Alkalinity	SM	TAL BUF

### Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.  
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.  
SM = "Standard Methods For The Examination Of Water And Wastewater"

### Laboratory References:

TAL BUF = Eurofins TestAmerica, Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

## Sample Summary

Client: New York State D.E.C.  
Project/Site: Davis-Howland Oil Corp #828088

Job ID: 480-176636-2

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
480-176636-4	PW-1-OCT20	Water	10/15/20 10:40	10/15/20 16:00	
480-176636-5	MW-15R-OCT20	Water	10/15/20 11:55	10/15/20 16:00	
480-176636-6	MW-16R-OCT20	Water	10/15/20 12:30	10/15/20 16:00	

## Chain of Custody Record

Environment Testing  
America

<b>Client Information</b> Client Contact: Jenelle Gaylord Company: New York State D.E.C. Address: 625 Broadway Division of Environmental Remediation City: Albany State, Zip: NY, 12233-7014 Phone: _____ Email: jenelle.gaylord@dec.ny.gov Project Name: Davis-Howland Oil Corp #828088 Site: _____		Sampler: CP, CW Lab PM: Johnson, Orlette S Phone: (716) 684-8060 E-Mail: Orlette.Johnson@Eurofins.com		Carrier Tracking No(s): _____ COC No: 480-151692-33705.2 Page: 1 of 5 Job #: 101	
<b>Due Date Requested:</b> TAT Requested (days): 3 day for MW-15R-0CT20, MW-16R-0CT20, PW-1-0CT20, Standard for others PO #: _____ CallOut ID: 136612 WO #: _____ Project #: 48019422 SSOW#: _____		<b>Analysis Requested</b> Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsHBO2 D - Nitro Arid P - Na2O4S X3 decahydrate pecdy)			
<b>Sample Identification</b> TB-20201015 MW-9R-0CT20 MW-2S-0CT20 PW-1-0CT20 MW-15R-0CT20 MW-16R-0CT20 MW-14S-0CT20 MW-15-0CT20 10P-PURGEWATER-0CT20		Sample Date 10/15/2020 10/10/20 10/14/20 10/14/20 12/30/20 13/05/20 13/10/20 13/50/20 14/10/20		Sample Type (C=Comp, G=grab) TB C C C G G C C G	
Matrix (W=water, S=solid, O=soil, G=grab) Water Water Water Water Water Water Water Water Water		Field Filtered Sample (Yes or No) N N N N N N N N N		Perform MS/MSD (Yes or No) N N N N N N N N N	
8260C - Volatiles, TCLP list 2320B - Alkalinity 300.0, 28D - (MOD) Sulfate 624.1, PREC - Priority Pollutant List - VOA - 624.1		Total Number of 1 3 3 5 5 3 3 3 3		Special Instructions/Note: Trip Blank Pump dry on 10/14. Pump dry on 10/14.	
<b>Possible Hazard Identification</b> <input checked="" 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 checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
<b>Special Instructions/QC Requirements:</b> Standard TAT except 3-day TAT for PW-1-0CT20, MW-15R-0CT20, MW-16R-0CT20					
Empty Kit Relinquished by: _____ Relinquished by: _____ Relinquished by: _____ Relinquished by: _____		Date: 10-15-20 / 16:00 Date: _____ Date: _____ Date: _____		Company: ENE Company: _____ Company: _____ Company: _____	
Custody Seals Intact: _____ Yes No		Cooler Temperature(s) °C and Other Remarks: 3.8 # ICE		Ver: 01/16/2019	

## Login Sample Receipt Checklist

Client: New York State D.E.C.

Job Number: 480-176636-2

**Login Number: 176636**

**List Source: Eurofins TestAmerica, Buffalo**

**List Number: 1**

**Creator: Kolb, Chris M**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is 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 sample IDs on the containers 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	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	ENE
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	