2014
Periodic Review Report
Former Davis-Howland Oil Corporation Site
NYSDEC Site No. 8-28-088
City of Rochester
Monroe County, New York

January 2015
Revised April 2015

Prepared for:

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DEPARTMENT OF ENVIRONMENTAL REMEDIATION
625 Broadway, 12th FLOOR
Albany, New York 12233-7013

Prepared by:

ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.
368 Pleasant View Drive
Lancaster, New York 14086

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List of Abbreviations and Acronyms

ALTA	American Land Title Association
AS	air sparge
BGS	below ground surface
BTEX	benzene, toluene, ethyl benzene, and xylene
CATOX	catalytic oxidizer
cVOC	chlorinated volatile organic compound
DHOC	Former Davis-Howland Oil Corporation Site
DCA	1,1-dichloroethane
DCB	dichlorobenzene
DCE	dichloroethene
DUSR	Data Usability Summary Report
EEEPC	Ecology and Environment Engineering, P.C.
EPA	(United States) Environmental Protection Agency
FS	feasibility study
ft/ft	feet per foot
IC	institutional control
IDW	investigation-derived waste
µg/L	micrograms per liter
MCDES	Monroe County Department of Environmental Services – Industrial Waste Section
MS/MSD	matrix spike/matrix spike duplicate
NYSDEC	New York State Department of Environmental Conservation
OM&M	operations, maintenance, and monitoring
PAH	polycyclic aromatic hydrocarbon
PCE	perchloroethylene or tetrachloroethene
PPE	personal protective equipment
PRR	Periodic Review Report

List of Abbreviations and Acronyms (cont.)

Popli	Popli Design Group
QA/QC	quality assurance/quality control
RI	remedial investigation
ROD	record of decision
RSO	Remedial Site Optimization
SMP	Site Management Plan
SOW	scope of work
SVE	soil vapor extraction
SVOC	semivolatile organic compound
TCA	trichloroethane
TCE	trichloroethene
TPH	total petroleum hydrocarbon
VOC	volatile organic compound

Enclosure 1

Engineering Controls – Engineering Standby Contractor Certification Form

Former Davis-Howland Oil Corporation Site
NYSDEC Site No. 8-28-088

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: 1.0

Reporting Period: December 31, 2013 to December 31, 2014

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

IF THE ANSWER TO EITHER QUESTION 6 OR 7 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

SITE NO. 828088

Box 3

Description of Institutional Controls

Parcel	Owner	Institutional Control
106.84-1-6	Aime Bush (Samille, Inc.)	Monitoring Plan Site Management Plan O&M Plan Ground Water Use Restriction Soil Management Plan Landuse Restriction IC/EC Plan

An Environmental Notice was filed with Monroe County clerk on 8/15/2013 in Book 11290, pages 171-176 as miscellaneous record. 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.

Box 4

Description of Engineering Controls

Parcel	Engineering Control
106.84-1-6	Groundwater Treatment System Air Sparging/Soil Vapor Extraction

The engineering control on this site parcel is a dual-phase groundwater system with air sparge below the watertable, shallow groundwater pumping, and soil-vapor extraction.

The sparge points AS-29, AS-30, AS-39, AS-40, AS-41, AS-42, and AS-43 inject air into saturated soil below the watertable.

Working in conjunction with the sparge points, SVEP-3, SVEP-4, SVEP-5, SVEP-6, and SVEP-7 are shallow vacuum points which remove the injected air which has passed through the water and soil.

P-3 overburden well belongs to a network of shallow groundwater pumping wells which lower the water table to enhance organic vapor stripping through the soil.

Box 5

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 compete.

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.

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

Box 6

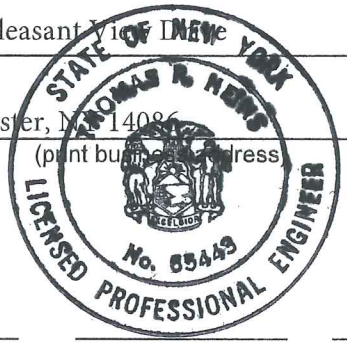
Professional Engineer Signature

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 Thomas Heins at Ecology and Environment Engineering, P.C.
print name

368 Pleasant View Drive

Lancaster, NY 14086,
(print business address)



am certifying as a Professional Engineer.

Signature of Professional Engineer | Stamp (Required for PE) | 4/13/2015 Date

1 Introduction and Background

1.1 Introduction

This Periodic Review Report (PRR) provides information on the operations, maintenance, monitoring, compliance, and operating costs at the former Davis-Howland Oil Corporation (DHOC) Remediation Site (hereinafter referred to as the "Site") during calendar year 2014. This PRR also provides information concerning the institutional and engineering controls facilitating the remedial cleanup of the Site.

This PRR was prepared by Ecology and Environment Engineering, P.C. (EEEPC) in accordance with the requirements in the *Site Management Plan, Former Davis-Howland Oil Corporation Site, NYSDEC Site No. 8-28-088* (EEEPC 2014a).

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 all manufacturing and product-processing operations ceased.

Between 1974 and the early 1990s, the New York State Department of Environmental Conservation (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 now 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 also were found.

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.

Remedial actions have been performed and remedial systems have been 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 176 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. A survey of the properties associated with the Site was performed in 2012 and is presented in Appendix A.

The approximately 1.5-acre Site is located in an area that includes residences and commercial and industrial facilities. No significant surface water is located in the immediate vicinity of the Site. Figure 1-2 presents the general Site layout. Groundwater and soil vapor at the Site are treated via multiple systems. A detailed description of each process and treatment system is provided below.

1.3 Air Sparge/Soil Vapor Extraction (AS/SVE) System

The remaining volatile organic compound (VOC) contamination in soils is currently being treated by stripping the VOCs adhered to soils to a vapor phase (augmented by an air sparge [AS] system), and then removing the VOC-laden soil vapor via a soil vapor extraction (SVE) system. The AS/SVE system was installed in shallow soils under an asphalt cap in the area to the north of the Site buildings and also under the Site building slabs. The AS components of the system utilize a low-pressure compressor designed to operate on a continuous basis to inject air into the soil via sparge points located around the Site. Forty-seven air sparging points were installed approximately 12 feet below ground surface (BGS) inside and outside the buildings located at 200 Anderson Avenue. The SVE system extracts soil vapor under negative pressure from the air-sparging treatment zone via a network of outdoor and indoor underground collection piping. The collection piping consists of lateral collection slot-drains (primarily outdoor) or collection points (indoor). The soil vapors are collected at a central location (treatment trailer) and discharged to the atmosphere.

1.4 Groundwater Remediation System

The groundwater treatment system consists of five pumping wells, which are capable of processing a combined flow of up to 30 gallons of water per minute on a continuous basis. Groundwater wells PW-1 and PW-2 were installed as deep bedrock groundwater pumping wells to extract groundwater from the bedrock aquifer. Overburden pumping wells P-1, P-2, and P-3 were installed to keep the shallow aquifer groundwater levels below the elevation of the SVE lines. All five pumping wells pump groundwater to the treatment trailer for processing. All of the groundwater pumping wells cycle on and off at preset water levels within each well.

The groundwater VOC treatment system in the treatment trailer consists of influent meters; a 500-gallon holding tank; a sequestering agent feed tank; a feed pump; a five-tray, low-profile air stripper with air blower; an effluent pump; an

effluent meter; and an effluent discharge line to the main trunk sewer under Anderson Avenue.

Groundwater is pumped from the shallow and bedrock-level extraction wells to the equalization tank, where it is then pumped to the air stripper on a batch basis. Contaminated water from the top of the air stripper tower drains down over a series of five stacked orifice trays in the column. A fan forces air countercurrent to the water flow and volatizes the VOCs in the groundwater. The air discharged from the air stripper is vented to the atmosphere. A sump at the bottom of the tower collects the decontaminated water, which is discharged in batches to the Monroe County combined storm and sanitary sewer system under Monroe County Sewer Use Permit No. 864.

Six piezometers (PZ-1 through PZ-6) associated with the shallow overburden groundwater pumping wells (P-1, P-2, and P-3) are used to monitor the depth to groundwater under the paved AS/SVE area on a weekly basis.

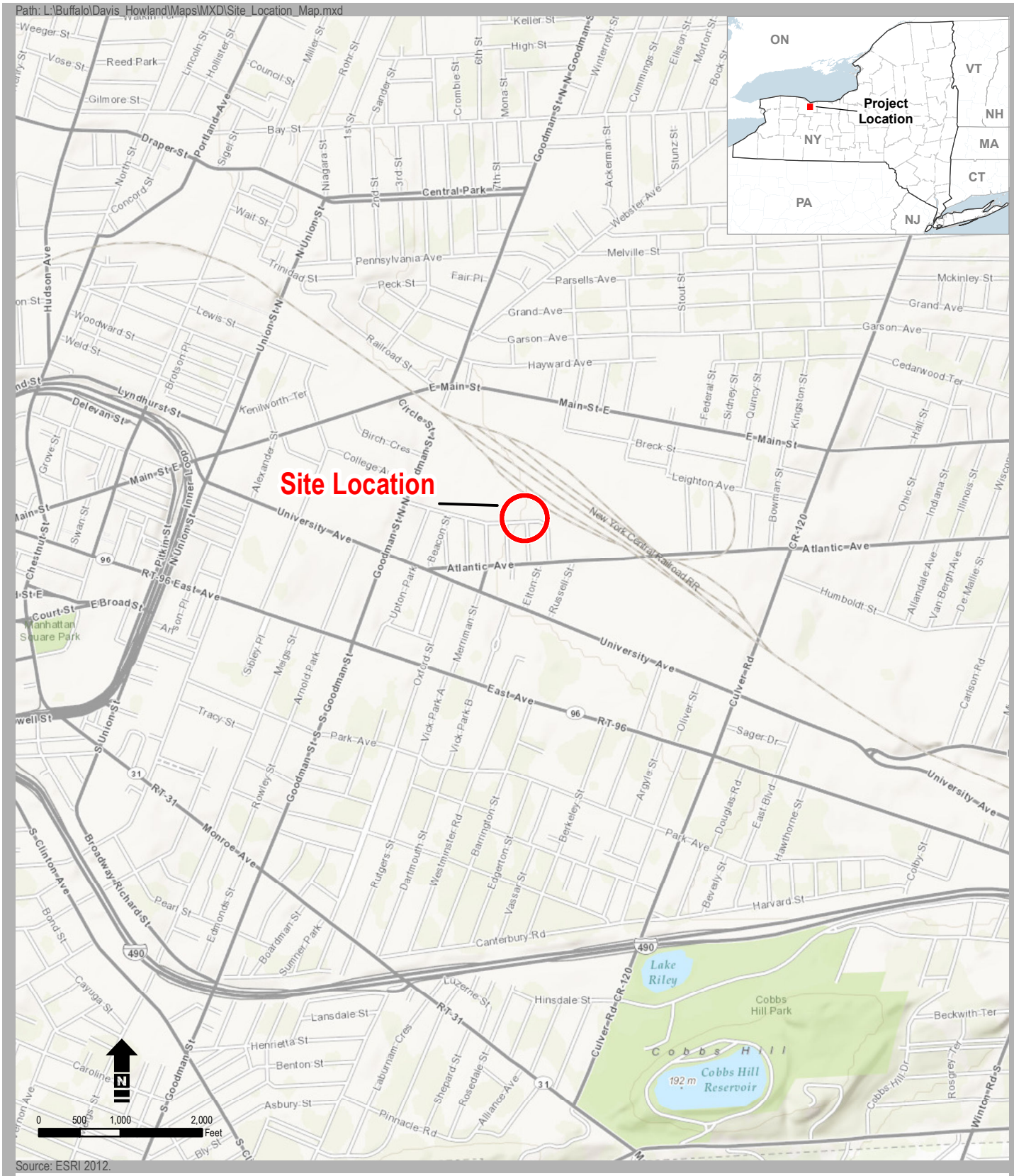


Figure 1-1
Site Location Map
Former Davis-Howland Oil Corporation
Rochester, NY

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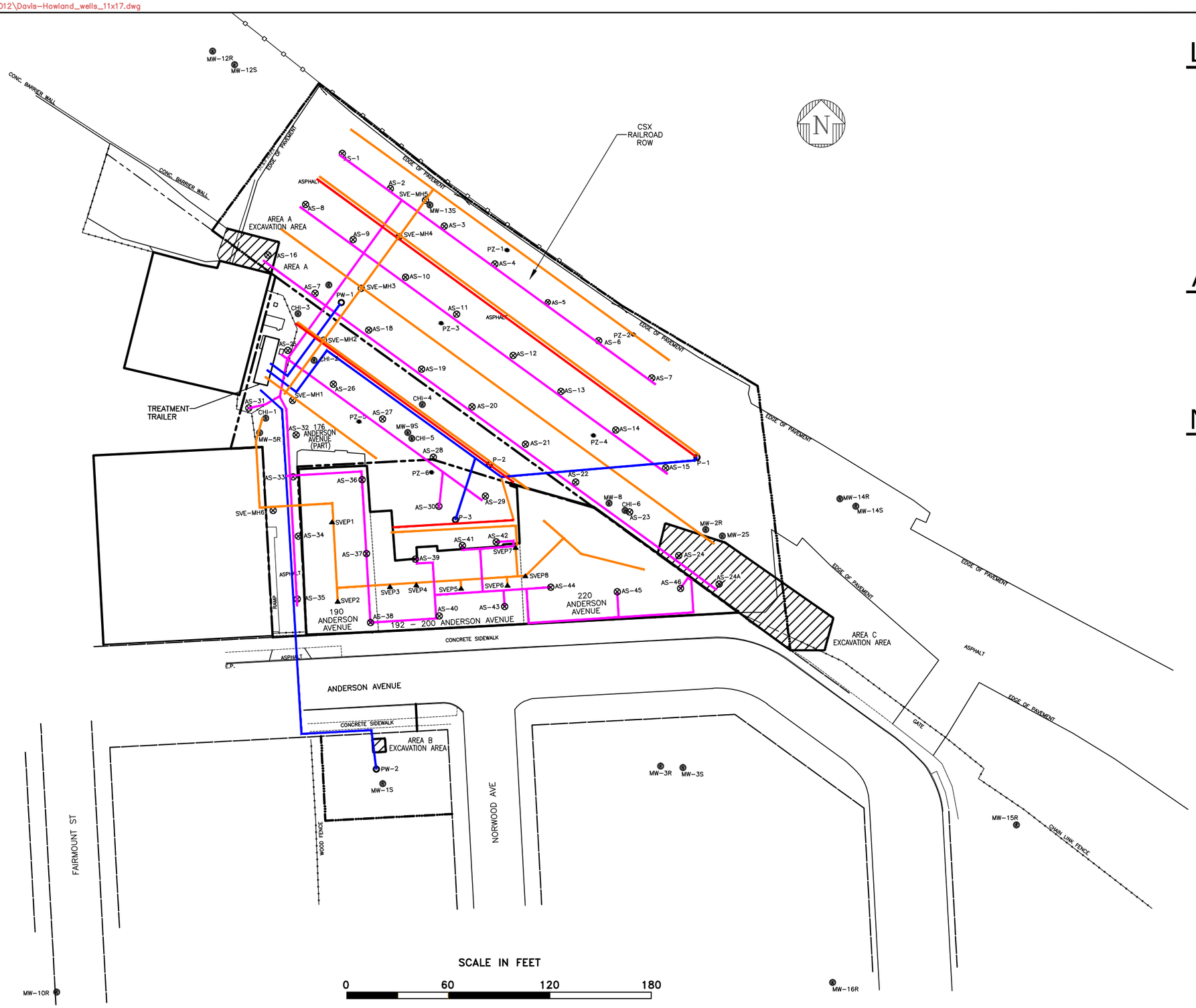


LEGEND

- MONITORING WELL
- PIEZOMETER
- PUMPING WELL
- AIR SPARGE POINT
- SOIL VAPOR EXTRACTION POINT
- SHALLOW GW PUMPING WELL COLLECTION TRENCH
- SOIL VAPOR EXTRACTION COLLECTION TRENCH/LINE
- PUMPING WELL LINES
- AIR SPARGE LINES

ABBREVIATIONS

AS	AIR SPARGE
CH	CLEAN HARBOR
MH	MANHOLE
MW	MONITORING WELL
PART	PARTIAL
PZ	PIEZOMETER
SVE	SOIL VAPOR EXTRACTION

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.

ecology and environment engineering p.c.

FIGURE 1-2 SITE PLAN
FORMER DAVIS HOWLAND OIL CORPORATION SITE
MONROE COUNTY, ROCHESTER, NY

2 Remedial Systems Compliance

2.1 Groundwater Treatment

Treated groundwater is discharged from the Site to the Monroe County combined storm and sanitary sewer system under Monroe County Sewer Use Permit No. 864, effective from May 29, 2013 through May 29, 2016. Table 2-1 presents the permit criteria currently in place.

Table 2-1 Effluent Discharge Criteria, Former Davis-Howland Oil Corporation Site

Parameter	Analytical Method	Permit Criterion
Effluent flow (average discharge); based on effluent meter	–	Not to exceed 28 gpm
Acetone	40 CFR 136-625	Monitor only
pH (s.u.)	MCAWW 150.1	5.0 to 12.0
Purgeable halocarbons	40 CFR 136-625	The analytical summation of this group of contaminants shall not exceed 2.13 ppm in the effluent discharge.
Purgeable aromatics		

Key:
CFR = Code of Federal Regulations
gpm = gallons per minute
MCAWW = (U.S. Environmental Protection Agency) Methods for Chemical Analysis of Water and Wastes
ppm = parts per million
s.u. = standard units

In 2014, the analytical results for effluent discharges from the groundwater treatment system were in compliance with the permit criteria. Analytical data for the treated groundwater is provided in Sections 4.3 and 4.4.

2.2 Air Sparge/Soil Vapor Extraction

In 2002, an application was submitted to NYSDEC for a permit to discharge the soil vapors following treatment by the catalytic oxidizer (CATOX) unit. From 2002 to 2008, the soil vapors were treated by an on-site CATOX unit prior to being discharged to the atmosphere. In 2006, an air quality analysis was performed

to evaluate the fate and transport of soil vapor constituents (EEEPC 2006). Based on the results of this analysis and subsequent recommendations, the CATOX unit was removed from service in 2008 at NYSDEC's direction. Soil vapors are evaluated under NYSDEC's *Guidelines for the Control of Toxic Ambient Air Contaminants (Air Guide 1)* (NYSDEC 1997). Soil vapors are currently discharged to the atmosphere without treatment.

3 Evaluation of Site Institutional and Engineering Controls

Institutional controls (ICs) and engineering controls (ECs) are employed on the Site to support remedial operations.

3.1 Institutional Controls

No ICs were required by the two records of decision (RODs) issued for the 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 deed restrictions/environmental notices. 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
- O&M Plan
- Ground Water Use Restriction
- Land Use Restriction
- IC/EC Plan

The current SMP (EEEPC 2014a) 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 miscellaneous record to provide that future owners of the Site will be informed of development restrictions on the property due to environmental concerns. The ICs require that there be no disturbance that threatens the integrity of the EC, 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 water 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.

The ICs at the Site are necessary to verify that residual contaminated material remains undisturbed. 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 and/or excavated.

3.2 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 ECs are present at the Site:

- A groundwater treatment system consisting of monitoring wells, bedrock groundwater pumping wells, and an air stripper;
- An AS/SVE system consisting of piezometers, shallow overburden groundwater pumping wells, AS points, SVE points, lines and trenches, and air-handling components of the on-site treatment plant; and
- Fencing/access control.

The water treatment component of the on-site treatment plant is a component of both the groundwater treatment system and the AS/SVE system.

The ECs for the outdoor portion of the on-site parcel consist of shallow overburden groundwater pumping well P-3 and two sets of AS/SVE points. The ECs for the indoor portion of the on-site parcel consists of 14 AS points and eight SVE points. The rest of the controls, which include the remaining wells, the water treatment system, and the additional AS/SVE points, are located on off-site parcels. The AS/SVE points beneath the asphalt cover on the off-site parcels have been shut down since 2004 to focus the VOC extraction process on soils beneath and near the buildings located at 190 through 220 Anderson Avenue.

Operational changes were implemented in November 2013 as a result of recommendations made in the 2012 PRR. These changes included turning off overburden pumping well P-1. There have been no other changes to ECs at the Site.

4 Evaluation of Remedial Treatment Operations

4.1 System Operational Uptime in 2014

The operational uptime percentages are calculated based on actual monthly hours of treatment system operations in the reporting period divided by the potential hours of operation in the reporting period.

Local power outages or equipment failure do affect operation of the remedial treatment system. To limit downtime, the system has an auto-dialer that sends an alarm to the OM&M subcontractor and EEEPC if an equipment failure occurs. In addition, the treatment facility can be called at any time at (585) 241-3431, unless phone service is down, to check on the status of the various operating equipment in the building.

Based on information from the weekly OM&M reports from the subcontractor, in 2014 the groundwater treatment system operated 8,352 hours out of a possible 8,808 hours, for an uptime operation of approximately 95%. Major downtime incidents for various components of the treatment system included the following:

- Effluent piping from the equalization tank was found to be leaking on May 2, 2014; repairs were finalized on May 7, 2014.
- An electrical contractor for the air stripper blower malfunctioned on November 17, 2014; repairs were completed on December 2, 2014.

Table 4-1 provides details on the monthly operation of the groundwater treatment system.

Table 4-1 Former Davis-Howland Oil Corporation Site Groundwater Treatment System Uptime in 2014

Reporting Period	Reporting Hours/ Maximum Hours	Operational Uptime (%)
December 27, 2013 to January 31, 2014	840/840	100%
January 31, 2014 to February 28, 2014	672/672	100%
February 28, 2014 to March 28, 2014	672/672	100%
March 28, 2014 to April 25, 2014	672/672	100%
April 25, 2014 to May 30, 2014	720/840	86%
May 30, 2014 to June 27, 2014	672/672	100%
June 27, 2014 to July 25, 2014	672/672	100%
July 25, 2014 to August 28, 2014	816/816	100%
August 28, 2014 to September 25, 2014	672/672	100%
September 25, 2014 to October 31, 2014	864/864	100%
October 31, 2014 to November 25, 2014	264/600	44%
November 25, 2014 to December 29, 2014	816/816	100%
Total Hours of Operation in 2014	**8,352/8,808**	**95%**

Additional details are presented in the monthly OM&M reports (EEEPC 2014b through 2014m).

4.2 Groundwater Processed and Discharged through the Remedial Treatment System in 2014

The amount of groundwater processed and discharged is read directly from the effluent discharge meter located after the air-stripper unit. Readings are taken weekly at the master discharge meter and then calculated for each monthly reporting period.

Based on information obtained from the weekly monitoring reports from the OM&M subcontractor, the remedial treatment system processed and discharged 921,800 gallons of treated groundwater to the Monroe County sanitary sewer system from December 27, 2013, to December 29, 2014 (see Table 4-2). The variability in the number of gallons of groundwater treated on a monthly basis is due to several factors, including the number of weeks reported for that month (four or five), seasonal changes in groundwater elevations, and equipment efficiency and maintenance requirements.

Table 4-2 Groundwater Processed and Discharged by the Groundwater Treatment System in 2014

Month	Actual Period	Gallons Treated
January 2014	December 27, 2013 to January 31, 2014	80,600
February 2014	January 31, 2014 to February 28, 2014	55,900
March 2014	February 28, 2014 to March 28, 2014	111,600
April 2014	March 28, 2014 to April 25, 2014	143,900
May 2014	April 25, 2014 to May 30, 2014	134,000
June 2014	May 30, 2014 to June 27, 2014	76,600
July 2014	June 27, 2014 to July 25, 2014	68,800
August 2014	July 25, 2014 to August 28, 2014	41,000
September 2014	August 28, 2014 to September 25, 2014	41,300
October 2014	September 25, 2014 to October 31, 2014	49,500
November 2014	October 31, 2014 to November 25, 2014	38,100
December 2014	November 25, 2014 to December 29, 2014	80,500
	Total Gallons Treated in 2014	**921,800**

The average flow rate while the system was in operation was approximately 1.84 gallons per minute.

4.3 Volatile Organic Compounds Removed from Groundwater in 2014 (Air Stripping Operations)

The amount of VOCs removed from the groundwater is estimated based on the influent and effluent analytical results and the amount of groundwater processed through the treatment system. Based on calculations prepared by EEEPC on the operation of the remedial treatment unit from December 27, 2013, to December 29, 2014, approximately 6.77 pounds of VOCs were removed from the groundwater by the air stripper system in 2014 (see Table 4-3). Total VOCs removed from the Site also include 1.61 pounds of VOCs not removed from the groundwater by the air stripper that were discharged to the Monroe County sanitary sewer system. Thus, a total of approximately 8.38 pounds of VOCs were removed from the Site by the groundwater pumping and treatment system during 2014. Additional VOC results are presented in the monthly OM&M reports (EEEPC 2014b through 2014m).

Table 4-3 VOCs Removed by the Former Davis-Howland Oil Corporation Site Groundwater Treatment System in 2014

Month	Actual Period	Influent VOCs (µg/L)	Effluent VOCs (µg/L)	Removal Efficiency	VOCs Removed by Air Stripper (pounds)	VOCs Removed from Site (pounds)
January 2014	12/27/13 to 1/31/14	385	126	67%	0.17	0.26
February 2014	1/31/14 to 2/28/14	1,295	100	92%	0.56	0.60
March 2014	2/28/14 to 3/28/14	1,428	747	48%	0.64	1.33
April 2014	3/28/14 to 4/25/14	466	148	69%	0.38	0.56
May 2014	4/25/14 to 5/30/14	2,900	356	88%	2.88	3.24
June 2014	5/30/14 to 6/27/14	508	67	87%	0.28	0.32
July 2014	6/27/14 to 7/25/14	1,614	27	98%	0.91	0.93
August 2014	7/25/14 to 8/28/14	251	58	77%	0.07	0.09
September 2014	8/28/14 to 9/25/14	555	36	94%	0.18	0.19
October 2014	9/25/14 to 10/31/14	473	108	77%	0.15	0.20
November 2014	10/31/14 to 11/25/14	639	197	68%	0.14	0.20
December 2014	11/25/14 to 12/29/14	680	76	89%	0.41	0.46
				Total	**6.77**	**8.38**

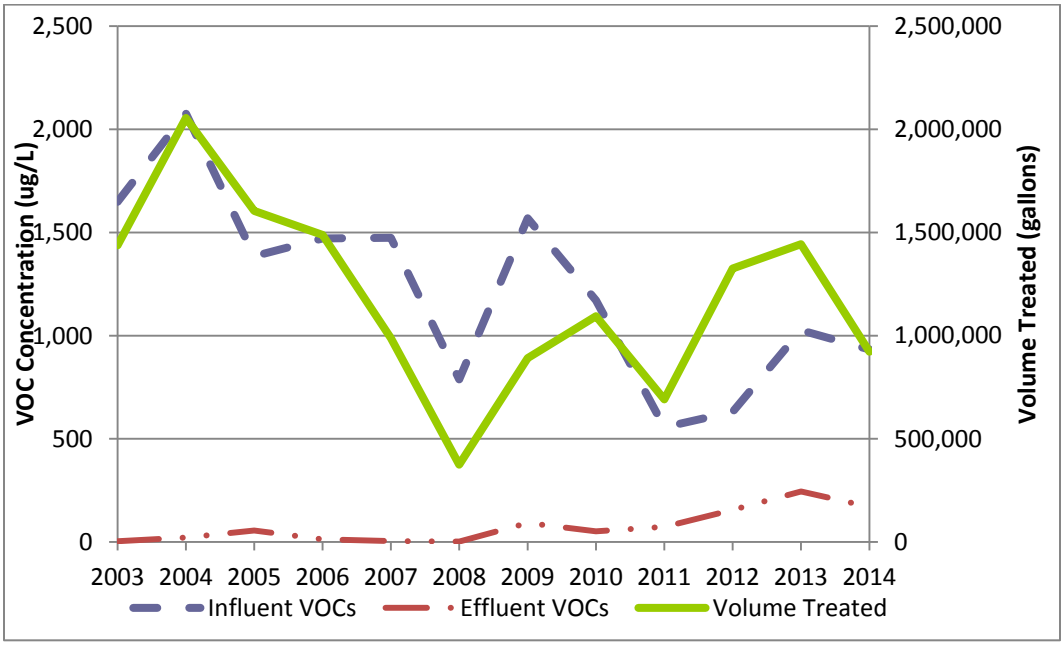
Key:
µg/L = Micrograms per liter.
VOC = Volatile organic compound.

Figure 4-1 shows the historical treatment trend for the DHOC Site from 2003 through 2014. Since 2003, the average total VOC concentration in the influent of the system has generally decreased, indicating the contaminant concentration in the extracted groundwater is decreasing.

The increase in flow between 2009 and 2010 was due to the pump rehabilitation/replacement effort in August 2009, which resulted in an increase in the volume of groundwater that was being processed. The decrease in flow between 2010 and 2011 was due to the decrease in production from pumping well PW-1, which developed an obstruction in the transfer line from the wellhead to the treatment system trailer. This obstruction was cleared in spring 2012 and a regular cleaning/maintenance program for this line has been implemented. The line was cleaned again in November 2013 and August 2014. Pump P-1 was shut down indefinitely in November 2013 as was recommended in the 2012 PRR for the Site (EEEPC 2013).

4.4 Groundwater Treatment - 2014

The effluent from the remedial treatment system met the discharge permit requirements (see Appendix B) for each month of 2014. Table 4-4 presents a summary of the monthly analytical results for the treated effluent and compares them to the Monroe County discharge permit criteria.



Notes:
1. Deactivation of the CATOX unit occurred in March 2008, requiring the treatment system to be shut down for five months.
2. Pump rehabilitation/replacement occurred in August 2009.
3. The system was shut down in March 2011 due to damage caused by overflow of the system.

Figure 4-1 Historical Treatment Trends, 2003-2014

Table 4-4 2014 Monthly Compliance Results for Treated Groundwater Effluent, Former Davis-Howland Oil Corporation Site

Month	Average Effluent (gpm)	pH (s.u.)	Purgeable Halocarbons and Purgeable Aromatics (ppm)	Permit Compliance
Discharge Permit Limits	**28**	**5.0-12.0**	**2.13**	
January	1.60	8.03	0.13	Yes
February	1.39	8.18	0.1	Yes
March	2.77	7.69	0.75	Yes
April	3.57	8.20	0.15	Yes
May	3.10	7.81	0.36	Yes
June	1.90	8.24	0.07	Yes
July	1.71	8.41	0.03	Yes
August	0.84	8.21	0.06	Yes
September	1.02	7.81	0.04	Yes
October	0.95	7.93	0.11	Yes
November	2.41	7.79	0.20	Yes
December	1.64	8.30	0.08	Yes

Key:
gpm = gallons per minute
s.u. = standard units
ppm = parts per million

5 General Status of Remedial Treatment Equipment Oversight Activities

In 2014, OM&M of the DHOC Site remedial treatment system was performed on a weekly basis by EEEPC's OM&M subcontractor, Popli Design Group (Popli). In the event of a major component malfunction (resulting in a component shut-down) or trailer intrusion detection at the Site, an auto-dialer primary contact alarm alerts the OM&M subcontractor of the problem and a secondary alarm alerts EEEPC.

EEEPC provides NYSDEC with a monthly compliance report on the OM&M work performed on the remedial treatment system. When equipment repairs are required, the OM&M subcontractor reports the needed repairs to EEEPC, and EEEPC reports them to NYSDEC. Information regarding repairs performed on the remedial treatment system components is provided in the weekly OM&M reports submitted to EEEPC and in the monthly compliance reports provided to NYSDEC by EEEPC.

Equipment issues are handled on a case-by-case basis. Minor equipment issues such as electronic maintenance, repair, and replacement costs are funded through the contingency task established when the project was initiated. Major equipment issues that are not identified as a component of the contingency task budget are discussed with the NYSDEC project manager, and a corrective action approach is subsequently developed. Upon acceptance by NYSDEC, the corrective action is initiated.

Analytical services for the Site are provided by ALS Environmental. The analytical testing frequency matrix is provided in Table 5-1.

Table 5-1 Analytical Frequency Matrix, Former Davis-Howland Oil Corporation Site

	Groundwater	Air	Schedule
Treatment system (influent and effluent)	X	NA	Monthly
Groundwater monitoring wells network	X	NA	Yearly

Key:
NA = Not applicable.

5.1 Remedial Treatment System Condition, Replacement, and Repairs in 2014

The main components of the remedial treatment system, including the chemical sequestering system, equalization tank, blowers, air-stripping unit, and groundwater pumping system, continue to operate at a high rate of efficiency as a result of the weekly monitoring and maintenance program.

The groundwater pumping well network remains in working condition, with the exception of P-1, which was shut down in November 2013 following recommendations in the 2012 PRR. Following shut down of P-1, all associated pumping equipment was removed from the well.

Items that have had significant maintenance requirements over the last few years have been the pumps and the flow meters/flow sensors for the groundwater pumping system, the air sparge compressor, the AS/SVE flow sensor/pressure gauge/control valve assemblies, and electronic control components. These components have been in operation for over 10 years and are subject to harsh conditions. The following non-regular maintenance activities were performed in 2014:

- The tubing from the air sparge compressor to the compressor pressure gauge was found to be broken during the March 7, 2014, O&M visit. The tubing was replaced, and the pressure gauge was placed back in service.
- On March 14, 2014, the AS point AS46 inspection indicated that the flow controller and pressure gauge needed replacement. The new parts for this AS point have been received but not installed. The system is currently operable without these parts, which will be installed during the next planned maintenance activities on-site.
- The totalizer for PW-1 was cleaned on April 4, 2014.
- The relief valve on the air sparge compressor was found to be broken during the April 25, 2014, O&M visit. A new relief valve was ordered, and the new valve was installed on May 23, 2014.
- Effluent piping from the equalizer tank was found to be leaking during the May 2, 2014, O&M visit. Replacement pipe and fittings were ordered and installed on May 5 and 7, 2014. During this time, the groundwater pumps remained offline. On August 7, 2014, the groundwater pump for PW-1 was running but not pumping any water, indicating that the pump and pipelines need to be cleaned. Popli and EEEPC were on-site on August 21, 2014, to pull PW-1 and clean the lines and pump. The pipelines to the system were cleaned by cycling a cleaning solution through the lines. The pump was taken apart and manually cleaned. After cleaning, the pump was installed back in the well and all lines were reconnected. The system was turned back on and PW-1 achieved a flow rate of 6.8 gpm.
- The SVE blower and auto-dialer were found to be not operational on August 7, 2014. At the time of the previous inspection on August 1, 2014, all systems

were operational. Due to the auto-dialer being down, it is uncertain when the SVE blower stopped functioning. Because the SVE blower was not functioning, the air sparge system was also nonfunctional. An electrician was on-site on August 14, 2014, to address the issues with the SVE blower. It was found that an electrical contractor was no longer working. The part was replaced and the SVE blower and air sparge system were restarted.

Other issues regarding the operations included obtaining access to certain AS points. Access to AS point AS46 (220 Anderson Avenue) could not be obtained (tenant was not available to allow access) by EEEPC's subcontractor through March 2014. In 2010, NYSDEC contacted Amie Bush (building owner) to arrange a meeting on site on November 4, 2010. The building owner failed to appear at the agreed upon time. No calls were returned to Popli, EEEPC, or NYSDEC through January 2014. Will Welling (NYSDEC) spoke with James Mahoney (NYSDEC legal) on January 28, 2014, to request Mr. Mahoney's assistance in contacting the building owner and/or Wade Smythe (building tenant) in order to obtain access. Access to AS point AS46 was obtained starting March 14, 2014. Access to AS points AS44 and AS45 and SVE point SVE-P8 (204 Anderson Avenue, paving contractor) could not be obtained by EEEPC's subcontractor until March 21, 2014. The door's lock had been changed and a new key had not yet been provided. Since that time, a key has been provided to access 204 Anderson Avenue, and all AS points are now accessible.

5.2 Groundwater Monitoring Well Network Inspection

Long-term groundwater sampling was performed in October 2014. On October 21, 2014, EEEPC conducted inspections of shallow and bedrock groundwater monitoring wells. 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. Based on the inspection, it was determined that the groundwater monitoring wells were in good condition. A summary of the monitoring well inspection findings is presented in Table 5-2.

Table 5-2 Summary of October 2014 Well Inspection, Former Davis-Howland Oil Corporation Site

Well Identification	Date Inspected	Well Casing ID (inches)	Inspection Observations
CHI-1	10/21/2014	2	
CHI-6	10/21/2014	2	
MW-1S	10/21/2014	2	
MW-2S	10/21/2014	2	
MW-3S	10/21/2014	2	
MW-9S	10/21/2014	2	
MW-12S	10/21/2014	2	Needs new bolts for curb box
MW-13S	10/21/2014	2	
MW-14S	10/21/2014	2	
MW-2R	10/21/2014	4	

Table 5-2 Summary of October 2014 Well Inspection, Former Davis-Howland Oil Corporation Site

Well Identification	Date Inspected	Well Casing ID (inches)	Inspection Observations
MW-3R	10/21/2014	2	
MW-5R	10/21/2014	4	
MW-8R	10/21/2014	4	
MW-10R	10/21/2014	4	
MW-12R	10/21/2014	4	
MW-14R	10/21/2014	4	
MW-15R	10/21/2014	4	
MW-16R	10/21/2014	4	

Key:
ID = inner diameter

6 2014 Groundwater Sampling Event Summary

This section discusses the groundwater monitoring activities performed at the Site in October 2014 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 (EEEPC 2014a). Sampling locations are identified on Figure 1-2. An addendum to the existing EEEPC Site-Specific Health and Safety Plan was prepared and is included as Appendix K of the SMP.

6.1 Field Activities

6.1.1 Monitoring Well Sampling

Groundwater samples were collected from 16 monitoring wells and four extraction wells at the Site from October 27 through 30, 2014. Samples could not be collected from monitoring wells CHI-1 and CHI-6, which were dry. Pumping well P-1 was shutdown indefinitely in November 2013, and all pumping components were removed from the well. This well was not sampled as part of the annual sampling event. Water levels were not measured in pumping wells P-2, P-3, PW-1, and PW-2; the average groundwater elevation in these wells is determined based on pumping levels. 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. Purge and decontamination water were handled according to procedures outlined in Section 6.1.3.

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 Table 6-1). Note that the suffix "R" in a monitoring well designation (for example, MW-12R) denotes a bedrock well, and the suffix "S" denotes a monitoring well that is screened in the shallow overburden groundwater zone. Water levels in piezometers PZ-1 through PZ-6 were collected on October 31, 2014, by Popli during the weekly system inspection.

Table 6-1 October 2014 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)
Shallow Overburden Wells						
CHI-1	10/27/2014	5.61	498.54	498.19	Dry	< 493.6
CHI-6	10/27/2014	8.08	496.61	497.77	Dry	< 489.8
MW-1S	10/28/2014	17.90	500.23	499.72	13.50	486.22
MW-2S	10/28/2014	14.00	496.03	497.48	6.15	491.33
MW-3S	10/29/2014	17.40	497.97	497.46	7.93	489.53
MW-9S	10/27/2014	15.80	497.94	498.01	6.95	491.06
MW-12S	10/27/2014	14.71	495.78	495.33	4.76	490.57
MW-13S	10/27/2014	13.71	496.24	496.95	4.00	492.95
MW-14S	10/28/2014	12.93	495.48	495.16	3.54	491.62
PZ-1[1]	10/31/2014	12.21	497.21	496.92	4.30	492.62
PZ-2[1]	10/31/2014	12.52	497.13	496.87	4.20	492.67
PZ-3[1]	10/31/2014	13.49	497.87	497.56	6.10	491.46
PZ-4[1]	10/31/2014	11.50	497.76	497.22	5.40	491.82
PZ-5[1]	10/31/2014	12.07	498.41	497.80	7.00	490.8
PZ-6[1]	10/31/2014	11.52	499.21	498.72	8.10	490.62
P-1	10/30/2014	--	--	495.26	--	--
P-2	10/30/2014	--	--	495.93	--	486.78[2]
P-3	10/30/2014	--	--	496.80	--	488.83[2]
Deep Bedrock Wells						
MW-2R	10/28/2014	26.00	496.14	497.54	15.79	481.75
MW-3R	10/29/2014	38.01	498.16	497.74	16.21	481.53
MW-5R	10/27/2014	34.70	501.32	498.23	12.39	485.84
MW-8R	10/27/2014	35.14	499.63	497.64	16.70	480.94
MW-10R	10/29/2014	35.70	497.89	497.44	18.93	478.51
MW-12R	10/27/2014	32.00	496.86	495.42	20.99	474.43
MW-14R	10/28/2014	23.79	495.6	495.18	6.75	488.43
MW-15R	10/29/2014	30.30	494.68	494.14	15.68	478.46
MW-16R	10/29/2014	31.25	493.48	493.04	18.75	474.29
PW-1	10/30/2014	--	--	494.41	--	472.38[2]
PW-2	10/30/2014	--	--	496.92	--	470.54[2]

[1] Piezometer water levels were collected by Popli during weekly inspection.
[2] Represents average groundwater elevation in pumping well.

Key:
amsl = Above mean sea level.
MW = Monitoring well.
TOIC = Top of inner casing.
-- = Data not applicable or not obtained for these wells.

Monitoring well purging was completed using a submersible pump with new polyethylene tubing or disposable polyethylene bailers on new polypropylene line. For the four pumping wells that were sampled, the pumps were active at the time of sampling, and grab samples were collected directly from sample ports before treatment. Measurements of temperature, pH, conductivity, turbidity, and oxidation-reduction potential (ORP) were recorded throughout the well-purging process and immediately prior to sampling. The final water quality measurements are presented in Table 6-2. Except as noted, purging was continued at each well until the groundwater quality parameters were stable and a minimum of three well volumes of water had been purged from the well. Exceptions included MW-2R and MW-16R, which were purged dry and sampled after sufficient recharge had occurred. Appendix C presents copies of the monitoring well purge and sample records for the October 2014 sampling event.

Table 6-2 Summary of Groundwater Quality Field Measurements, Former Davis-Howland Oil Corporation Site

Well ID	Sample Date	pH (s.u.)	Temperature (°C)	ORP (mV)	Conductivity (µS/cm)	Unfiltered Turbidity (NTU)
Overburden Wells						
MW-1S	10/28/2014	7.06	16.6	74	1033	2.04
MW-2S	10/28/2014	6.64	18.2	-34	1748	3.10
MW-3S	10/29/2014	6.89	16.9	30	515.7	0.36
MW-9S	10/27/2014	7.28	15.2	136	735.4	11.66
MW-12S	10/27/2014	7.01	13.9	137	1072	1.39
MW-13S	10/27/2014	7.24	16.4	117	671.9	0.74
MW-14S	10/28/2014	7.16	16.1	25	663.2	0.51
Bedrock Wells						
MW-2R	10/28/2014	7.25	16.4	-73	681.5	3.78
MW-3R	10/29/2014	7.38	11.9	-69	1,301	2.00
MW-5R	10/27/2014	7.17	14.9	26	1,160	0.49
MW-8R	10/27/2014	7.25	12.0	-77	1,836	1.26
MW-10R	10/29/2014	7.26	13.1	61	1,019	0.50
MW-12R	10/27/2014	7.42	11.8	47	839.4	1.00
MW-14R	10/28/2014	7.72	13.9	-17	1,170	2.95
MW-15R	10/29/2014	7.31	10.6	-24	1,017	0.69
MW-16R	10/29/2014	7.41	12.0	-209	1,110	>1,000

Key:
°C = Degrees Celsius.
µS/cm = Microsiemens per centimeter.
NTU = Nephelometric turbidity unit.
s.u. = Standard units.

Upon collection, samples were labeled and immediately placed in a cooler maintained with ice at approximately 4°C. The samples were delivered directly to the laboratory by the EEEPC field team with chain-of-custody documents. Groundwater samples were submitted to the ALS Environmental laboratory in Rochester, New York, for VOC analysis by United States Environmental Protection Agency (EPA) Method 624, SVOCs by EPA Method 625, and petroleum products by Method NY310-13.

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 accompanied each shipment for VOC analysis to check for the possible introduction of VOCs from the time the samples were collected to the time they were analyzed. Sample portions for VOCs collected on a single day were transported in the same cooler. To check consistency in both sample collection and sample analysis, duplicate samples were collected at a rate of approximately one per 20 monitoring well samples. One field duplicate sample, MW-2S-OCT14-Q, was collected from monitoring well MW-2S and 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) analysis was collected from monitoring well MW-15R 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 total analytical method. MS/MSD samples were also collected at a rate of one per 20 field samples.

QA/QC data were reviewed by an EEEPC chemist, and a Data Usability Summary Report (DUSR) was prepared (see Appendix C). Data qualifiers were applied as described in the DUSR and incorporated into the data summary tables. Concerns identified during the data review include the following:

- Low level results for methylene chloride and bromomethane were qualified as non-detect due to detections of these analytes in the method blanks;
- Poor precision between analytes in the field duplicate resulted in J qualification of data; and
- Benzidine recoveries in the laboratory control sample duplicate and MS/MSD pairs were below QA/QC criteria specified in EEEPC's Master Quality Assurance Project Plan (QAPP) for NYSDEC Projects (EEEPC 2011), and non-detect results were flagged as estimated reporting limits.

6.1.3 Investigation-Derived Waste Management

Investigation-derived waste (IDW) generated during this investigation was handled according to procedures outlined in EEEPC's Groundwater Sampling Procedures. Three types of IDW were generated: purged groundwater, decontamination water, and expendable materials, including personal protective equipment (PPE). Purged and decontamination water was placed into the equalization tank of the on-site groundwater treatment system.

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

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 August 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). In 2012 and 2013, the flow was primarily to the southwest, with localized groundwater sinks in the middle of the Site, near P-2 and PZ-3 (EEEPC 2014n).

As shown on Figure 6-1, overburden groundwater flow in October 2014 was once again primarily towards the southwest, with a localized groundwater sink in the middle of the Site in the vicinity of pumping wells P-2 and P-3. An estimated limit of groundwater capture was developed based on the flow vectors calculated from the groundwater elevations and is depicted on Figure 6-1. Groundwater within this curve, including that in the vicinity of MW-13S, PZ-1, PZ-2, PZ-3, and PZ-4, is captured by pumping wells P-2 and P-3. Water outside to the east and west of this line flows off-site to the southwest. The average horizontal gradient at the Site outside of the capture zone (between MW-14S and MW-1S) is approximately 0.019 feet per foot (ft/ft) and is higher (0.034 ft/ft) within the capture zone (between P-2 and PZ-4).

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 flow was observed to be radially outward from a 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). In 2012 and 2013, similar outward radial flow from MW-5R and MW-14R were observed, but enhanced capture was also evident at pumping wells PW-1 and PW-2, which is thought to be related to well maintenance producing higher flow rates (EEEPC 2014n).

The primary bedrock groundwater flow direction in October 2014 (see Figure 6-1) was very similar to that observed in 2012 and 2013. The flow direction is variable across the site, with radial capture by pumping wells PW-1 and PW-2. Groundwater mounds were observed in the vicinity of MW-5R on the west side of the site and at MW-14R on the east side of the site. An estimated limit of groundwater capture was developed based on the flow vectors calculated from the groundwater elevations and is depicted on Figure 6-1. Groundwater on the northwest side of the line is captured by either PW-1 or PW-2. Radial flow outward from MW-5R is also captured by theses pumping wells except possibly for the area due west of MW-5R. East of the limit of capture, groundwater eventually flows off-site to the south, past MW-15R and MW-16R. On the western portion of the Site, the magnitude of the horizontal gradient is variable (approximately 0.063 ft/ft between MW-5R and PW-2 to 0.12 ft/ft between MW-5R and PW-1). East of the limit of capture, the horizontal gradient is approximately 0.050 ft/ft (near MW-16R).

6.3 Analytical Results

This section presents the analytical results for the October 2014 groundwater samples collected at the DHOC Site and compares them to historical results. The October 2014 laboratory results of detected contaminants for overburden monitoring wells are presented in Table 6-3; the detected contaminants for bedrock monitoring wells are presented in Table 6-4; and the detected contaminants for pumping wells are presented in Table 6-5. Groundwater sample results discussed below were compared to the NYSDEC Class GA groundwater standards and guidance values (NYSDEC 1998). The complete laboratory report for the October 2014 sampling event is provided in Appendix C.

6.3.1 Overburden Groundwater Results

Volatile Organic Compounds

Eleven different VOCs were detected in one or more groundwater samples collected from overburden wells. Nine of these compounds are chlorinated VOCs (cVOCs), including tetrachloroethene (PCE), trichloroethene (TCE), 1,1,1-trichloroethane (1,1,1-TCA), and their degradation by-products, as well as one dichlorobenzene (DCB) isomer. Only the sample from well MW-9S contained any benzene, toluene, ethylbenzene, or xylenes (BTEX). Benzene was detected in this well at an estimated total concentration of 0.12 micrograms per liter (µg/L).

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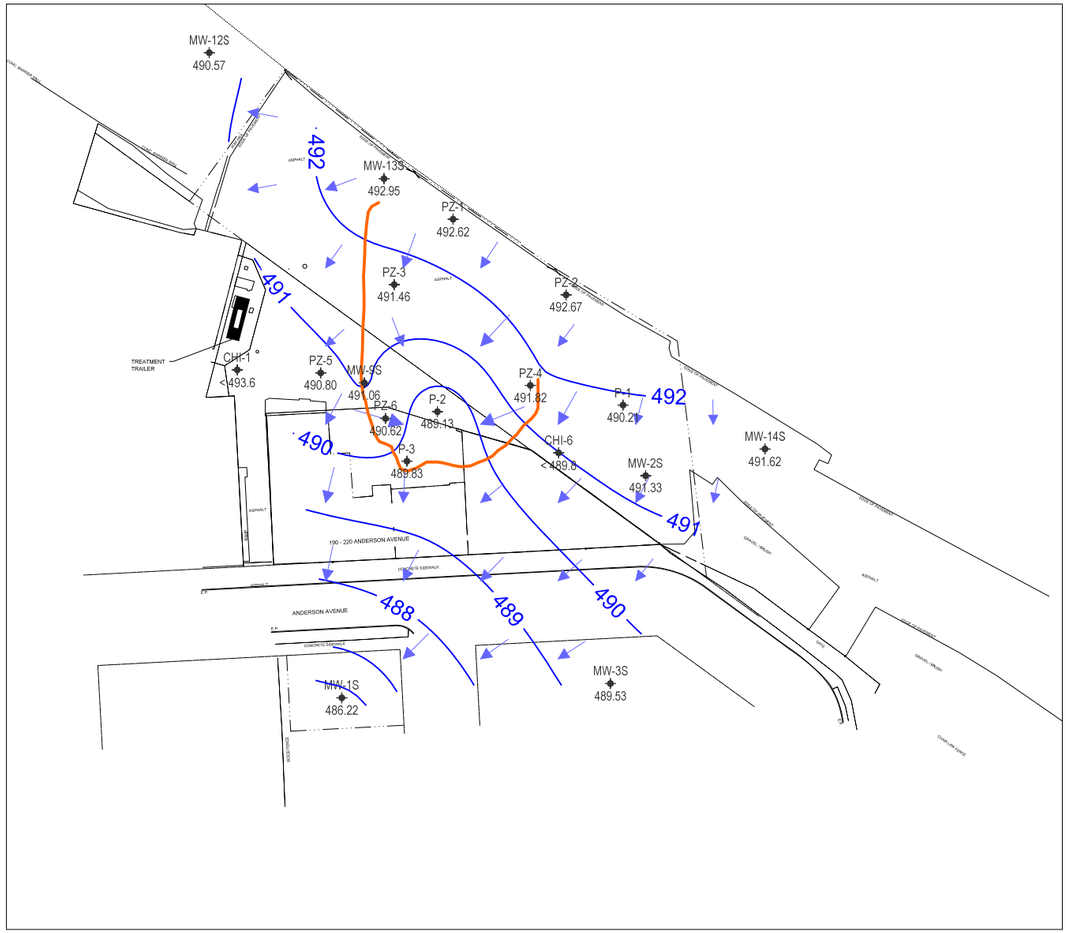
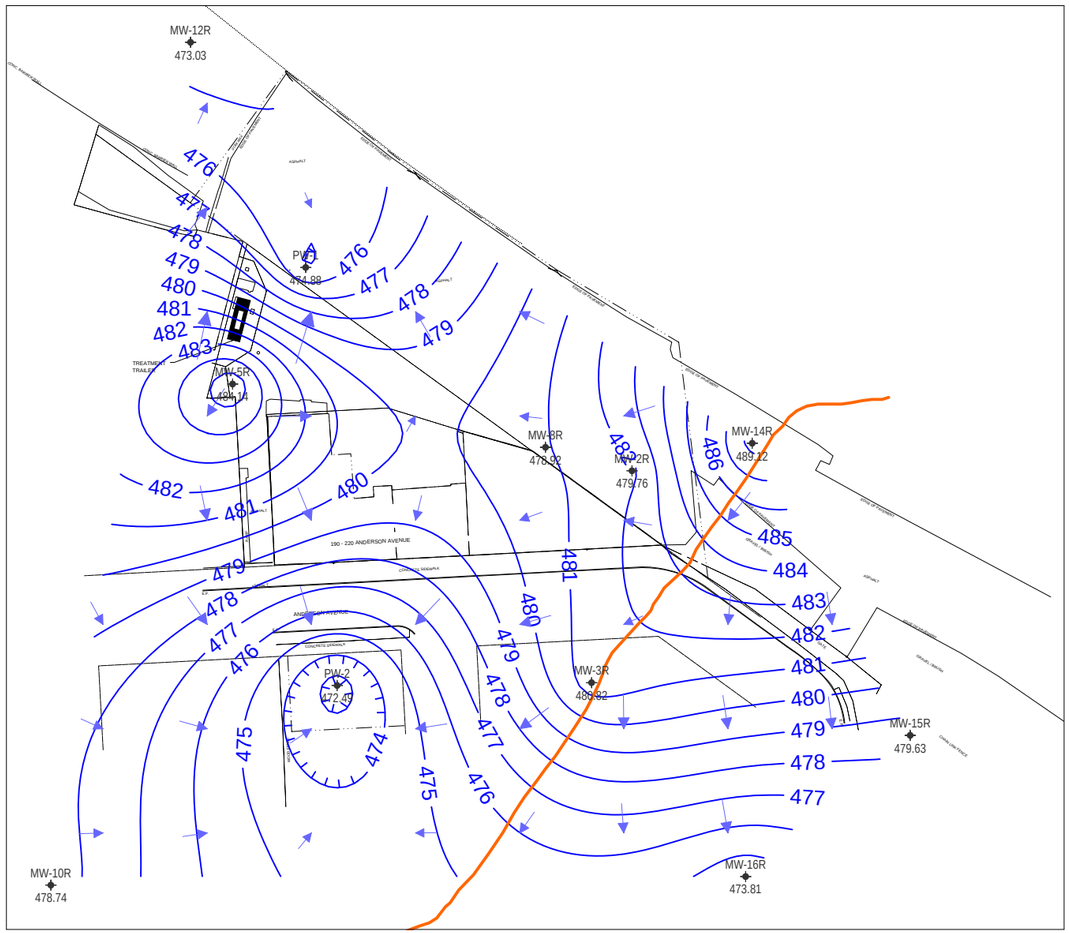
DavisHowland_GW_Elev_2014.srf - 01/15/2015

N

Groundwater Elevation Isopleths
Overburden Monitoring Wells



Groundwater Elevation Isopleths
Bedrock Monitoring Wells



Notes:
1) Groundwater elevations measured October 27 - 31, 2014.
2) Overburden pumping wells, P-1, P-2, and P-3 and bedrock pumping wells PW-1 and PW-2 were left in automatic mode during the measurement period. Elevations for these wells represents the high switch level when the pumps turn on.

Legend

- Approximate Limit of Capture of Pumping Wells
- Groundwater Flow Direction and Relative Magnitude of Gradient

0 100 200 300
SCALE IN FEET

ecology and environment engineering, p.c.
Global Environmental Specialists

FIGURE 6-1
Groundwater Elevation Isopleths
Overburden and Bedrock Monitoring Wells
October 2014
Former Davis-Howland Oil Corporation Site
Rochester, NY

Table 6-3 Summary of Positive Analytical Results for Groundwater Samples from Overburden Monitoring Wells
Former Davis Howland Oil Company, Rochester, NY

Analyte	Screening Criteria [1]	Sample ID and Date							
		MW-12S 10/27/14	MW-13S 10/27/14	MW-14S 10/28/14	MW-1S 10/28/14	MW-2S 10/28/14	MW-2S-Q 10/28/14	MW-3S 10/29/14	MW-9S 10/27/14
Volatile Organics by Method E624 (µg/L)									
1,1,1-TRICHLOROETHANE	5	0.13 U	**0.51 J**	0.13 U	**1.9**	0.13 U	0.13 U	0.13 U	**1.2**
1,1-DICHLOROETHANE	5	0.10 U	**0.73 J**	0.10 U	**0.50 J**	**1.7**	**1.8**	0.10 U	**9.1**
1,1-DICHLOROETHENE	5	0.22 U	0.22 U	0.22 U	**0.35 J**	0.22 U	0.22 U	0.22 U	**0.22 J**
1,2-DICHLOROBENZENE	3	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	**0.56 J**
BENZENE	1	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	0.10 U	**0.12 J**
CHLOROFORM	7	0.13 U	0.13 U	0.13 U	**0.13 J**	0.13 U	0.13 U	0.13 U	**0.47 J**
CIS-1,2-DICHLOROETHYLENE	5	0.18 U	**6.7**	0.18 U	**12**	**3.2 J**	**1.3 J**	**0.30 J**	**49**
TETRACHLOROETHYLENE(PCE)	5	0.20 U	**0.31 J**	0.20 U	**3.0**	0.20 U	0.20 U	0.20 U	**62**
TRANS-1,2-DICHLOROETHENE	5	0.15 U	**0.22 J**	0.15 U	0.15 U	0.15 U	0.15 U	0.15 U	**2.9**
TRICHLOROETHYLENE (TCE)	5	**0.30 J**	**1.2**	0.15 U	**20**	**0.26 J**	**0.19 J**	0.15 U	**54**
VINYL CHLORIDE	2	0.14 U	**0.21 J**	0.14 U	0.14 U	**1.1 J**	**0.28 J**	0.14 U	**1.1**
Semi-volatile Organics by Method E625 (µg/L)		**SVOCs were non-detect in all samples**							
Fuels by Method NY310-13 (µg/L)									
FUEL OIL #2	NA	380 U	380 U	380 U	380 U	380 U	380 U	380 U	380 U
FUEL OIL #4	NA	940 U	940 U	940 U	940 U	940 U	940 U	940 U	940 U
FUEL OIL #6	NA	940 U	940 U	940 U	940 U	940 U	940 U	940 U	940 U
GASOLINE RANGE ORGANICS	NA	940 U	940 U	940 U	940 U	940 U	940 U	940 U	940 U
KEROSENE	NA	940 U	940 U	940 U	940 U	940 U	940 U	940 U	940 U
LUBE OIL	NA	940 U	940 U	940 U	940 U	940 U	940 U	940 U	940 U
N-DODECANE	NA	940 U	940 U	940 U	940 U	**1100**	**1300**	940 U	940 U

Key:

Qualifiers

J = Estimated value

U = Not detected (method detection limit shown)

Other

NA = Not regulated/no available criteria

µg/L = Micrograms per liter

"-Q" denotes field duplicate sample

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.

2. Shaded cells exceed the screening value.

3. Bold values denote positive hits.

Source: Ecology and Environment Engineering, P.C. 2015

Table 6-4 Summary of Positive Analytical Results for Groundwater Samples from Bedrock Monitoring Wells
Former Davis Howland Oil Company, Rochester, NY

Analyte	Screening Criteria [1]	Sample ID and Date								
		MW-10R 10/29/14	MW-12R 10/27/14	MW-14R 10/28/14	MW-15R 10/29/14	MW-16R 10/29/14	MW-2R 10/28/14	MW-3R 10/29/14	MW-5R 10/27/14	MW-8R 10/27/14
Volatile Organics by Method E624 (µg/L)										
1,1,1-TRICHLOROETHANE	5	**6.3 J**	**0.14 J**	0.13 U	**0.14 J**	0.13 U	**0.33 J**	1.3 U	**0.52 J**	3.3 U
1,1-DICHLOROETHANE	5	**4.9 J**	**0.17 J**	**0.79 J**	**0.58 J**	**7.1**	**16**	**49**	**23**	**140**
1,1-DICHLOROETHENE	5	**14**	**0.39 J**	**0.59 J**	**0.23 J**	**2.1**	**3.1**	**17**	**4.2**	**50**
BENZENE	1	1.0 U	**0.14 J**	0.10 U	0.10 U	**0.11 J**	0.10 U	1.0 U	**2.3**	2.5 U
CIS-1,2-DICHLOROETHYLENE	5	**38**	**17**	**9.5**	**7.8**	**170**	**230**	**1300**	**430**	**4500**
ETHYLBENZENE	5	1.9 U	0.19 U	0.19 U	0.19 U	0.19 U	0.19 U	1.9 U	0.38 U	**12 J**
METHYLENE CHLORIDE	5	**2.2 J**	0.18 U	0.18 U	0.18 U	0.18 U	0.18 U	1.8 U	0.36 U	**5.0 J**
TETRACHLOROETHYLENE(PCE)	5	**3.8 J**	0.20 U	0.20 U	**0.25 J**	0.20 U	**0.64 J**	2.0 U	0.40 U	5.0 U
TRANS-1,2-DICHLOROETHENE	5	**9.5 J**	**0.37 J**	**3.6**	**0.31 J**	**1.9**	**1.4**	**3.1 J**	**3.9**	**6.5 J**
TRICHLOROETHYLENE (TCE)	5	**1100**	**22**	**44**	**1.6**	**2.0**	**1.4**	**7.2 J**	**36**	**11 J**
VINYL CHLORIDE	2	1.5 U	**0.71 J**	**0.73 J**	**1.2**	**43**	**100**	**310**	**150**	**670**
Semi-volatile Organics by Method E625 (µg/L)		**SVOCs were non-detect in all samples**								
Fuels by Method NY310-13 (µg/L)										
FUEL OIL #2	NA	380 U	380 U	380 U	380 U	380 U	380 U	380 U	380 U	380 U
FUEL OIL #4	NA	940 U	940 U	940 U	940 U	940 U	940 U	940 U	940 U	940 U
FUEL OIL #6	NA	940 U	940 U	940 U	940 U	940 U	940 U	940 U	940 U	940 U
GASOLINE RANGE ORGANICS	NA	940 U	940 U	940 U	940 U	940 U	940 U	940 U	940 U	940 U
KEROSENE	NA	940 U	940 U	940 U	940 U	940 U	940 U	940 U	940 U	940 U
LUBE OIL	NA	940 U	940 U	940 U	940 U	940 U	940 U	940 U	940 U	940 U
N-DODECANE	NA	940 U	940 U	940 U	940 U	940 U	940 U	940 U	940 U	940 U

Key:

Qualifiers

J = Estimated value

U = Not detected (method detection limit shown)

Other

NA = Not regulated/no available criteria

µg/L = Micrograms per liter

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.

2. Shaded cells exceed the screening value.

3. Bold values denote positive hits.

Source: Ecology and Environment Engineering, P.C. 2015

Table 6-5 Summary of Positive Analytical Results for Groundwater Samples from Pumping Wells
Former Davis Howland Oil Company, Rochester, NY

Analyte	Screening Criteria [1]	Sample ID and Date			
		P-2 10/30/14	P-3 10/30/14	PW-1 10/30/14	PW-2 10/30/14
Volatile Organics by Method E624 (µg/L)					
1,1,1-TRICHLOROETHANE	5	**34**	**110**	**1.3 J**	**2.5**
1,1-DICHLOROETHANE	5	**270**	**35**	**40**	**40**
1,1-DICHLOROETHENE	5	**9.0**	**15 J**	**5.0**	**8.1**
1,2-DICHLOROBENZENE	3	0.50 U	**3.0 J**	0.50 U	0.20 U
BENZENE	1	**1.3 J**	2.5 U	**1.3 J**	**0.22 J**
CHLOROETHANE	5	**4.7 J**	3.8 U	0.75 U	**0.34 J**
CIS-1,2-DICHLOROETHYLENE	5	**830**	**2100**	**650**	**670**
METHYLENE CHLORIDE	5	0.90 U	**5.0 J**	0.90 U	0.36 U
TETRACHLOROETHYLENE(PCE)	5	**11**	**2600**	**5.0 J**	**61**
TRANS-1,2-DICHLOROETHENE	5	**13**	**5.0 J**	**3.7 J**	**3.1**
TRICHLOROETHYLENE (TCE)	5	**54**	**760**	**29**	**27**
VINYL CHLORIDE	2	**480**	**3.8 J**	**180**	**60**

Key:

Qualifiers

J = Estimated value

U = Not detected (method detection limit shown)

Other

µg/L = Micrograms per liter

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.

2. Shaded cells exceed the screening value.

3. Bold values denote positive hits.

Source: Ecology and Environment Engineering, P.C. 2015

Four VOCs were detected in one or more wells at concentrations exceeding NYSDEC Class GA groundwater standards. These chemicals (and their maximum concentrations in overburden groundwater samples) included the following:

- 1,1-Dichloroethane (1,1-DCA) at 9.1 µg/L in MW-9S;
- cis-1,2-Dichloroethene (DCE) in three wells (MW-1S, MW-9S, and MW-13S) at a maximum of 49 µg/L in MW-9S;
- PCE in MW-9S at 62 µg/L; and
- TCE in two wells (20 µg/L in MW-1S and 54 µg/L in MW-9S).

Concentrations of VOCs in overburden groundwater were highest in MW-9S. The concentration of chlorinated aliphatic (straight-chained) hydrocarbons in MW-9S was 180 µg/L in 2014, compared to 240 µg/L in 2013. In addition, 1,2-DCB was detected only in this well in 2014, at an approximate concentration of 0.56 µg/L, compared to 110 µg/L in 2013.

Semivolatile Organic Compounds

No SVOCs were detected in the overburden groundwater samples.

Petroleum Products

One petroleum product was detected in the overburden groundwater samples collected at MW-2S in 2014 (n-dodecane at 1,300 µg/L). Otherwise, all petroleum products have been non-detect since 2009, when n-dodecane was detected at 1,000 µg/L in MW-2S during the annual groundwater sampling.

6.3.2 Bedrock Groundwater Results

Volatile Organic Compounds

Eleven different VOCs were detected in one or more of the groundwater samples collected from bedrock monitoring wells, including cVOCs (PCE, TCE, 1,1,1-TCA, and their degradation by-products) and BTEX. The concentrations of 10 of these VOCs (all except PCE) exceeded NYSDEC Class GA groundwater standards in at least one well. These chemicals (and their maximum concentrations in bedrock groundwater samples) included the following:

- 1,1,1-TCA at an estimated 6.3 µg/L in MW-10R;
- 1,1-DCA in five wells, with a maximum of 140 µg/L at MW-8R;
- 1,1-DCE in three wells, with a maximum of 50 µg/L at MW-8R;
- Benzene in three wells, with a maximum of 2.3 µg/L at MW-5R;
- cis-1,2-DCE in all nine wells, with a maximum of 4,500 µg/L at MW-8R;
- Ethylbenzene in MW-8R only, at an estimated 12 µg/L;
- Methylene chloride in MW-8R only, at an estimated 5.0 µg/L;

- trans-1,2-DCE in two wells (an estimated 9.5 µg/L in MW-10R and an estimated 6.5 µg/L in MW-8R);
- TCE in six wells, with a maximum of 1,100 µg/L in MW-10R; and
- Vinyl chloride in five wells, with a maximum of 670 µg/L in MW-8R.

The maximum total cVOC concentration detected in bedrock groundwater samples was approximately 5,400 µg/L in MW-8R, primarily due to 4,500 µg/L of cis-1,2-DCE. The total cVOC concentrations increased significantly (from 31 µg/L to 350 µg/L) from 2013 to 2014 in MW-2R; however, the 2014 concentration is still below 2012 and historical results. Concentrations of total cVOCs in other bedrock monitoring wells were mostly slightly up from or similar to 2013 concentrations but are generally lower than or similar to previous concentrations in 2012 and 2011 (see Table 6-6). The maximum total cVOC concentration has consistently been detected in MW-8R. The concentrations in this well have increased since 1998, achieving a maximum of approximately 14,000 µg/L in 2010. Since 2011, concentrations in MW-8R have remained relatively stable between 4,600 and 5,700 µg/L. BTEX was detected in four wells (MW-5R, MW-8R, MW-12R, and MW-16R) at concentrations ranging from approximately 0.11 to 12 µg/L. The highest benzene concentration was 2.3 µg/L in MW-5R, and the only ethylbenzene detection was approximately 12 µg/L in MW-8R (see Table 6-7).

Semivolatile Organic Compounds

No SVOCs were detected in the bedrock groundwater samples in 2013 or 2014. This differs from 2012, when six different SVOCs (all polycyclic aromatic hydrocarbons [PAHs]) were detected in MW-2R at a total concentration of 39 µg/L.

Petroleum Products

No petroleum products were detected in any of the bedrock groundwater samples.

6.3.3 Pumping Well Groundwater Results

Volatile Organic Compounds

Twelve different VOCs were detected in one or more groundwater samples from the four pumping wells that were sampled, including cVOCs (PCE, TCE, 1,1,1-TCA, and their degradation by-products), 1,2-DCB, and benzene. The nine VOCs detected at levels that exceeded NYSDEC Class GA groundwater standards include the following:

- 1,1,1-TCA in two wells, with a maximum of 110 µg/L at P-3;
- 1,1-DCA in four wells, with a maximum of 270 µg/L at P-2;
- 1,1-DCE in three wells, with an estimated maximum of 15 µg/L at P-3;
- Benzene in two wells, with an estimated maximum of 1.3 µg/L at both P-2 and PW-1;
- cis-1,2-DCE in four wells, with a maximum of 2,100 µg/L at P-3;

- PCE in three wells, with a maximum of 2,600 µg/L at P-3;
- trans-1,2-DCE at one well (13 µg/L at P-2);
- TCE in four wells, with a maximum of 760 µg/L in P-3; and
- Vinyl chloride in four wells, with a maximum of 480 µg/L in P-2.

The highest total cVOC concentration, approximately 5,600 µg/L, was detected at P-3, followed by approximately 1,700 µg/L at P-2. Total cVOC concentrations in bedrock pumping wells (PW-1 and PW-2) were lower than the concentrations in the overburden pumping wells and were similar to one another (870 and 910 µg/L). The highest single contaminant concentration detected in a bedrock pumping well sample was 670 µg/L of cis-1,2-DCE at PW-2. The highest single contaminant concentration detected in an overburden pumping well sample was 2,600 µg/L of PCE in P-3, followed closely by 2,100 µg/L of cis-1,2-DCE, also in P-3.

6.3.4 Comparison with Historical Analytical Data

The October 2014 concentration isopleths of BTEX and cVOCs in the overburden and bedrock groundwater samples are presented on Figures 6-2 and 6-3, respectively. Tables 6-6 and 6-7 present historical cVOC and BTEX results, respectively. The following is a summary of the findings:

- Overall, total BTEX concentrations in the overburden groundwater have decreased significantly since 1998. BTEX was not detected in the seven overburden monitoring wells from 2009 to 2012, and in 2013 and 2014, only very low estimated concentrations (0.88 µg/L and 0.12 µg/L, respectively) were detected in MW-9S. In 1997 and 1998, significant concentrations of BTEX were detected in overburden wells MW-9S (1,420 µg/L and 4,700 µg/L) and MW-13S (10,600 µg/L and 9,440 µg/L).
- BTEX concentrations in the bedrock groundwater have also generally decreased since 1997. Total BTEX has been detected in five of the nine bedrock wells at the Site, with the highest concentrations occurring in 1997 at MW-5R (200 µg/L) and MW-8R (126 µg/L). Since 1997, BTEX concentrations have decreased to the point where only one or two wells have contained relatively low concentrations of BTEX from 2007 to 2013. In 2014, four wells had detections of BTEX at relatively low concentrations. MW-5R has consistently contained some BTEX since 1997, but the concentration had decreased to 2 µg/L by 2014.
- 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. The number of wells with detectable levels of cVOCs has ranged from three to six wells since 2007, and concentrations remained relatively stable from 2010 to 2012. In 2013, the total cVOC concentrations dropped or remained essentially the same as in 2012 in the wells with the exception of MW-9S, where it in-

creased from 140 to 240 µg/L. In 2014, total cVOC concentrations were similar to those in 2013 but mostly showed slight decreases.

- 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 stable (all less than 2,000 µg/L except MW-8R) since 2010. 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 concentration (5,400 µg/L in 2014) of the wells at the Site, primarily due to cis-1,2-DCE.

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

Well ID	Sample Date									
	2014	2013	2012	2011	2010	2009	2007	2004	1998	1997
Overburden Monitoring Wells										
MW-1S	**38**	**41**	**68**	**67**	NA	**45**	**98**	**410**	**120**	**19**
MW-2S	**6.3**	**2.5**	**1.7**	**1.9**	**1.3**	ND	**1.4**	ND	NA	**3.0**
MW-3S	**0.30**	**0.68**	ND	ND	ND	ND	**4.6**	ND	ND	ND
MW-9S	**180**	**240**	**140**	**140**	**140**	**92**	**48**	**32**	**15,000**	**6,300**
MW-12S	**0.30**	**0.36**	**13**	ND	ND	ND	**4.4**	ND	**6.0**	**29**
MW-13S	**9.9**	**12**	**33**	ND	**19**	**3.7**	**69**	**41**	**40,000**	**36,000**
MW-14S	ND	ND	**4.2**	ND	ND	ND	**0.36**	ND	**2.0**	**4.0**
Bedrock Monitoring Wells										
MW-2R	**350**	**31**	**940**	**1,200**	**240**	NA	NA	**940**	NA	**2,100**
MW-3R	**1,700**	**1,400**	**530**	**960**	**410**	**1,600**	**3,300**	**1,200**	**4,300**	**3,200**
MW-5R	**650**	**340**	**1,200**	**160**	**1,400**	**210**	**2,700**	**1,100**	**4,200**	**5,200**
MW-8R	**5,400**	**4,600**	**5,600**	**5,700**	**14,000**	**5,800**	**4,300**	**3,800**	NA	**2,600**
MW-10R	**1,200**	**1,400**	**1,500**	**1,400**	**160**	**1,200**	**1,600**	**1,200**	**3,000**	**2,300**
MW-12R	**41**	**34**	ND	**45**	**35**	**66**	**75**	**22**	NA	**270**
MW-14R	**59**	**72**	**59**	**61**	**54**	**45**	**67**	**17**	**50**	**22**
MW-15R	**12**	**11**	**11**	**11**	**6.4**	**4.7**	**7.4**	**7.7**	NA	**35**
MW-16R	**230**	**180**	**210**	**220**	**48**	**320**	**250**	**260**	**2,400**	**1,100**

Notes:

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

Key:

ND = Not detected

NA = Not analyzed

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

Table 6-7 Historical Total BTEX Results for Monitoring Wells

Well ID	Sample Date									
	2014	2013	2012	2011	2010	2009	2007	2004	1998	1997
Overburden Monitoring Wells										
MW-1S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-2S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-3S	ND	ND	ND	ND	ND	ND	ND	ND	ND	**2.0**
MW-9S	**0.12 J**	**0.88 J**	ND	ND	ND	ND	**2.5**	**1.5**	**4,700**	**1,420**
MW-12S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-13S	ND	ND	ND	ND	ND	ND	ND	**0.34**	**9,440**	**10,600**
MW-14S	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bedrock Monitoring Wells										
MW-2R	ND	ND	ND	**4.7**	ND	ND	NA	**1.2**	NA	ND
MW-3R	ND	ND	ND	ND	ND	ND	ND	**20**	ND	ND
MW-5R	**2.3**	**4.6**	**32**	**45**	**45**	**3.1**	**15**	**71**	**42**	**200**
MW-8R	**12 J**	**16**	ND	ND	ND	ND	**21**	**18**	NA	**126**
MW-10R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-12R	**0.14 J**	ND	ND	ND	ND	ND	ND	ND	NA	**4.0**
MW-14R	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-15R	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND
MW-16R	**0.11 J**	ND	ND	ND	ND	ND	ND	ND	ND	ND

Notes:

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

Key:

BTEX = sum of benzene, toluene, ethylbenzene, and xylene concentrations

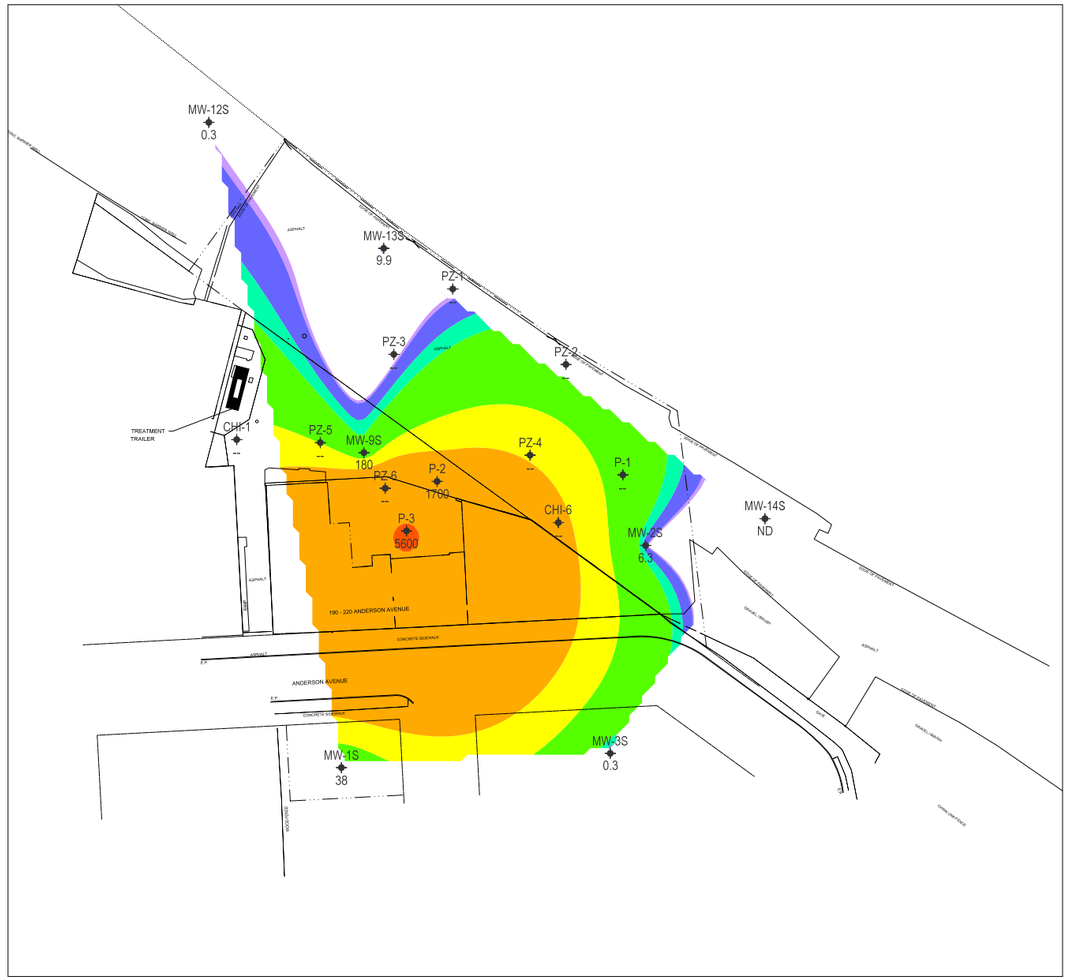
J = value is estimated

ND = Not detected

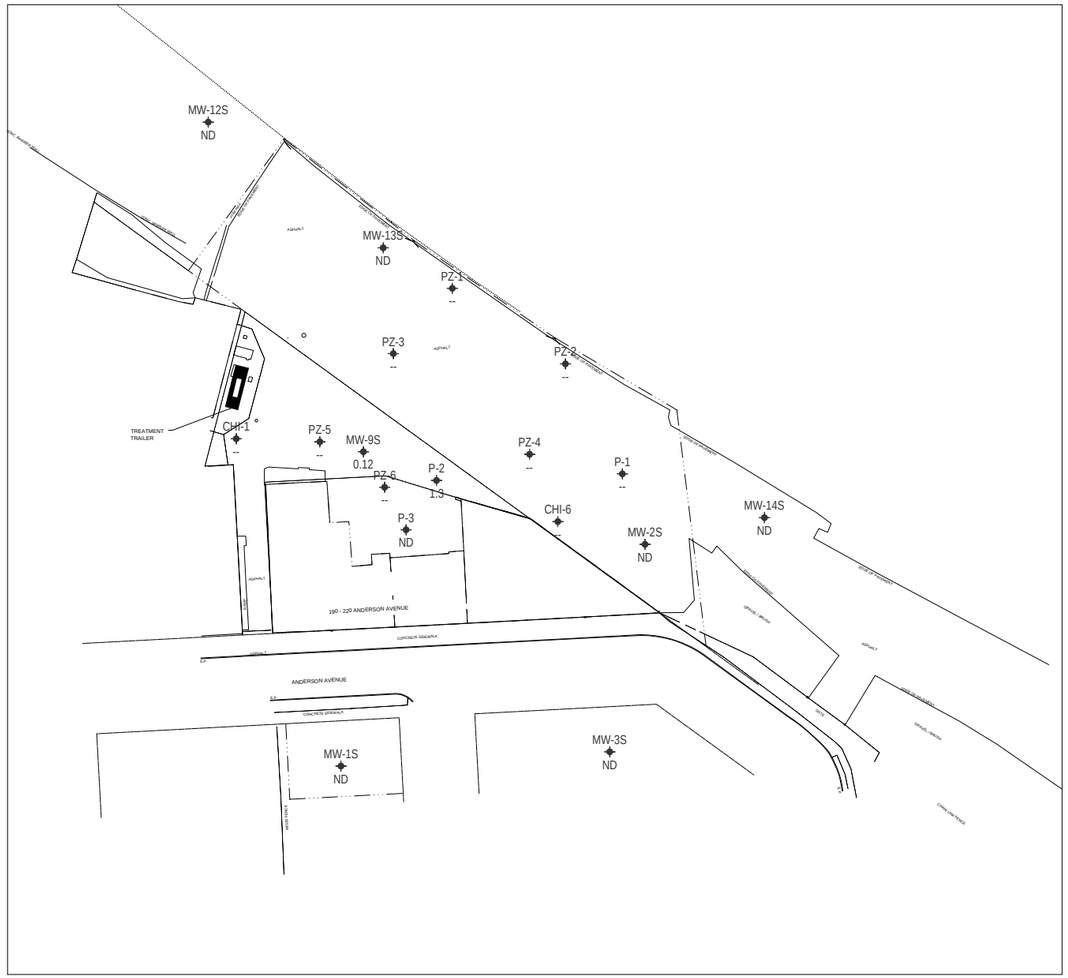
1703074.0012.03
DavisHowland_VOC_GW-OB_2014.srf - 01/16/2015

N

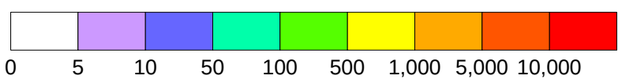
Total Chlorinated VOC Concentrations (µg/L)



Total BTEX Concentrations (µg/L)



Notes:
1) BTEX = sum of benzene, toluene, ethylbenzene, and xylene isomers (only benzene was detected in MW-9S and P-2 in October 2014).
2) VOC = volatile organic compound.
3) Chlorinated VOCs include all chlorinated aliphatic hydrocarbons detected. Other VOCs detected but not presented on this figure include chlorinated aromatics (i.e., 1,2-dichlorobenzene) in P-3 (3 µg/L) and MW-9S (0.56 µg/L).
4) ND = not detected.
5) -- = not sampled.



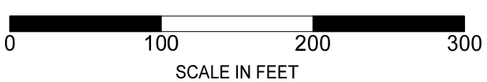


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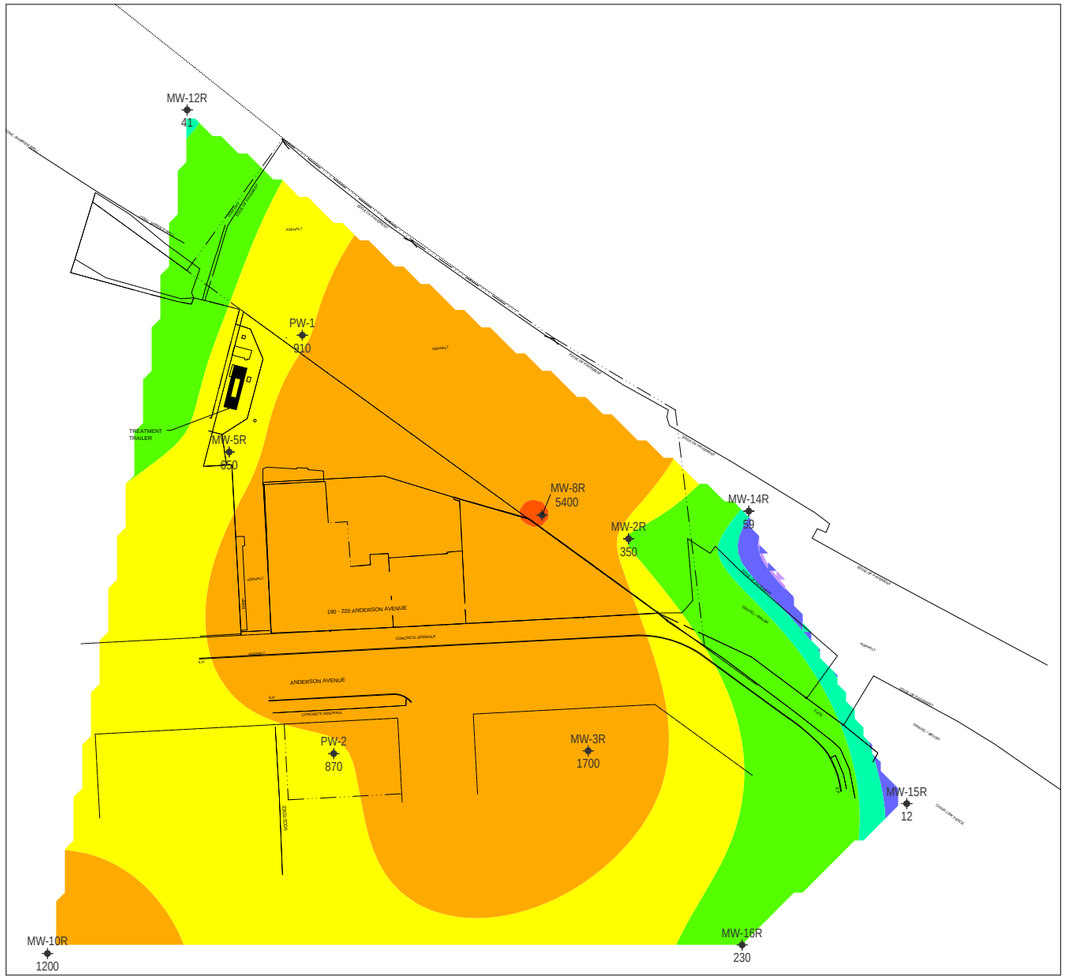
FIGURE 6-2
Total BTEX and Chlorinated VOCs
in Overburden Groundwater, October 2014
Former Davis-Howland Oil Corporation Site
Rochester, New York

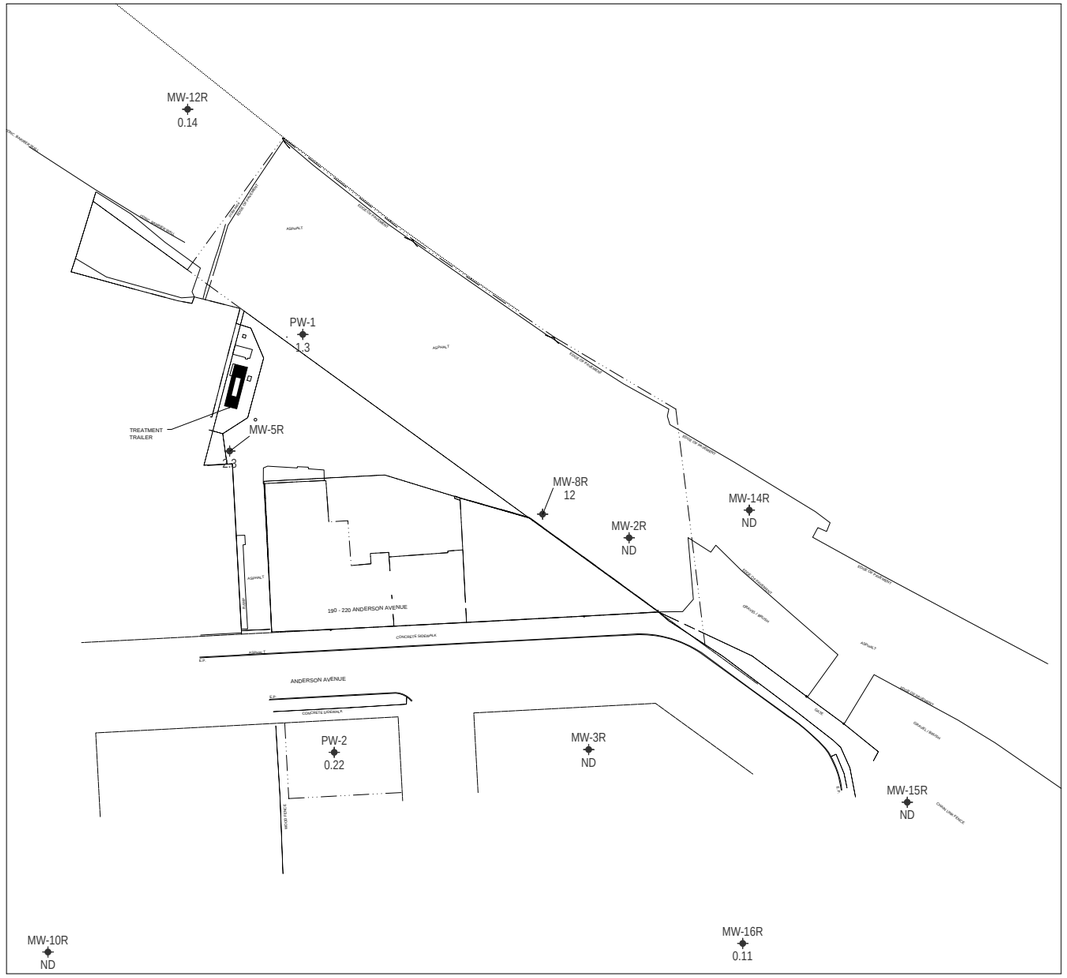
1703074.0012.03
DavisHowland_VOC_GW-Bdrk_2013.srf - 01/16/2015

N

Total Chlorinated VOC Concentrations (µg/L)



Total BTEX Concentrations (µg/L)



Notes:
1) BTEX = sum of benzene, toluene, ethylbenzene, and xylene isomers (benzene is the primary contributor; ethylbenzed was detected only in MW-8R).
2) VOC = volatile organic compound.
3) Chlorinated VOCs include all chlorinated aliphatic hydrocarbons detected. No other VOCs, including dichlorobenzenes, were detected.
4) ND = not detected
5) -- = not sampled

0 5 10 50 100 500 1,000 5,000 10,000
CONCENTRATION IN MICROGRAMS PER LITER

0 100 200 300
SCALE IN FEET

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FIGURE 6-3
Total BTEX and Total Chlorinated VOCs in Bedrock Groundwater, October 2014
Former Davis-Howland Oil Corporation Site
Rochester, New York

7 Actions to Support Eventual Site Closure

The overall project goals are to (1) reduce the concentrations of VOCs in the soils beneath the capped or paved area north of the DHOC buildings on Anderson Avenue and (2) reduce the concentrations of VOCs in the contaminated groundwater plume to below the groundwater standards established by NYSDEC. Attaining these goals will allow for the eventual closure of the groundwater recovery system and overall remedial treatment system. Suggested future actions or modifications that would improve individual operations and shorten the time required to attain the target VOC concentrations were presented in the 2013 PRR. In 2014, EEEPC prepared a Draft Scope of Work (SOW) for Remedial Site Optimization (RSO) detailing actions to be taken towards eventual site closure. The Draft SOW was submitted to NYSDEC on December 22, 2014. This SOW will be finalized and the RSO activities implemented in 2015. A summary of the proposed actions are described below.

7.1 System Optimization

The following actions are proposed in the RSO SOW in order to evaluate the operation of the existing remedial treatment systems, evaluate the current condition of groundwater remediation at the site, and improve delineation of the remaining contamination at the site..

- Sample wells/piezometers P-1, PZ-1, PZ-2, PZ-3, and PZ-4 once to aid in delineation of cVOC concentrations on the upgradient side of the extraction wells. Based on the results, evaluate inclusion of one or more of these locations in the annual sampling event;
- Decommission CHI-6;
- Decommission CHI-1 and replace it with a new, deeper overburden monitoring well;
- Add two new overburden monitoring wells along Anderson Avenue on the downgradient side of the extraction wells and one new overburden well along Fairmount Avenue southwest of MW-1S to better evaluate off-site contaminated groundwater flow;
- Add a new bedrock well north-northeast of MW-8R to assess possible off-site source contribution. Add a second new bedrock well near the southwest cor-

ner of the site building along Anderson Avenue for better delineation of the capture zone between PW-2 and the mound at MW-5R. Add a third new bedrock well south of the site, along Norwood Street, to evaluate hydraulic capture and concentrations near the estimated limit of capture. Consider the addition of a fourth new bedrock well south-southwest of MW-10R to evaluate off-site contaminant transport if the new well along Norwood Street does not satisfactorily delineate the capture zone south of the site.

- Evaluate the existing SVE system to determine whether operation of a less costly sub-slab depressurization system would achieve the remediation goals.
- Evaluate the groundwater VOC concentrations, including pulsing the bed rock pumping wells (PW-1 and PW-2) and reviewing historic groundwater data in comparison with ROD cleanup goals and sewer discharge effluent limits.
- Install soil borings and subsequent soil sampling and evaluation of remaining soil contamination on the north side of the site building.
- Evaluate the potential for enhanced bioremediation at the site to increase the rate of VOC destruction in groundwater. This may be accomplished through sampling and evaluation of geochemical and microbiological parameters and/or implementation of a pilot project to test the effectiveness of electron-donor amendment for dechlorination of cVOCs, especially recalcitrant degradation by-products such as cis-1,2-DCE and vinyl chloride.

7.2 Efforts to Support Site Closure

When in operation in 2014, the groundwater treatment system operated efficiently. Based on a review of the reported analytical data for the long-term groundwater monitoring program from January 1997 to October 2014, VOC concentrations have decreased over time.

BTEX concentrations have declined significantly in the bedrock groundwater and are no longer detectable in many wells where they were previously present. In 2014, only two bedrock monitoring wells contained concentrations of BTEX compounds above NYSDEC remedial goals, and the concentrations were relatively low compared to historic maxima.

PAH concentrations have generally been non-detect since 2009. In 2014, n-dodecane, a component found in fuel, was detected in MW-2S at a concentration of 1,300 µg/L. In 2009, n-dodecane was detected in MW-2S at 1,000 µg/L.

Based on the observed changes in the distribution of the BTEX and VOC concentrations beneath the Site, the groundwater treatment system, in conjunction with natural processes, appears to be effective at reducing overall contaminant concentrations.

The results of the long-term groundwater monitoring program indicate that the contaminant plume extends to the northeast and southwest of the Site. It remains unclear whether there is an additional source of bedrock groundwater contamina-

tion to the northeast, in the vicinity of the CSX Transportation property. The extent of off-site contaminant transport via groundwater to the south remains unclear, although PW-2 appears to capture the contaminated groundwater in the bedrock aquifer from the south and southwest. Continued monitoring of the bedrock groundwater well network, maintenance of the associated groundwater and/or pumping wells on a regular basis to maintain a high pumping rate for treatment, and potential expansion of the monitoring well network is recommended. The additional data provided by expansion of the monitoring well network in both the overburden and bedrock would help in evaluating the full extent of off-site contaminant transport and pumping well capture limits.

As described in Section 1.2, remedial systems are located within off-site properties associated with the DHOC site. With the exception of bedrock pumping well PW-1, the treatment systems installed on the off-site CSX right-of-way have been shut down and are not anticipated to be placed back in service. Therefore, NYSDEC could consider removing the portion of the site considered to be located on the CSX right-of-way from the site description.

8 Annual Remedial Action Costs

The 2014 costs of OM&M of the remedial treatment system at the Site, including equipment in the treatment trailer, the groundwater pumping system, long-term groundwater monitoring network, EEEPC oversight, subcontracted services, replacement equipment, and utilities, are presented in Table 8-1.

The total 2014 cost for operating the remedial treatment system at the Site was $113,544.

Description	WA D007617-12
Sub – OM&M Services	$16,275
Sub – Analytical Services	$6,882
Utilities – Electric	$10,558
Utilities – Telephone	$431
Replacement Equipment	$264
Long-term Monitoring Program	$18,992
EEEPC Administration, Management, and Reporting	$60,142
2014 Total	**$113,544**

Key:

OM&M = operations, maintenance, and monitoring

9 Department or Local Public Reporting

9.1 NYSDEC Fact Sheet

The most recent NYSDEC fact sheet was issued in December 2009 and is provided in Appendix D.

9.2 Local Public Reporting

No local public reporting of the Site or remedial Site operations were brought to EEEPC's attention in 2014. The local reporting newspaper in Rochester, New York, is the *Democrat and Chronicle*.

10 Property Transfers

In September 2014, Goodman Yard, LLC, located at 274 North Goodman Street, Rochester, New York 14607, purchased a section of property from CSX Transportation, Inc., that spans from North Goodman Street southeast to Anderson Avenue. This transaction includes property known as 'Parcel E' as identified on the 2012 ALTA survey included in Appendix A.

The property purchased is located at 406 Atlantic Avenue, Rochester, New York 14607 and includes a portion of Tax Account Number 107.77-1-28.001. The Deed was filed on September 19, 2014, with the Monroe County Clerk's Office. A copy of the filing is included in Appendix E.

11 References

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_____. 2014d. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, March 2014 Operations, Maintenance, and Monitoring Report.*

_____. 2014e. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, April 2014 Operations, Maintenance, and Monitoring Report.*

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_____. 2014i. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, August 2014 Operations, Maintenance, and Monitoring Report.*

_____. 2014j. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, September 2014 Operations, Maintenance, and Monitoring Report.*

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_____. 2014m. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, December 2014 Operations, Maintenance, and Monitoring Report.*

_____. 2014n. *Periodic Review Report, Former Davis-Howland Oil Corporation Site, NYSDEC Site No. 8-28-088, City of Rochester, Monroe County, New York.* March 2014.

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A ALTA Survey

TABLES OF ENGINEERING CONTROLS

POINT ID	NORTHING	EASTING
AS-1	1152375.3	1415877.3
AS-2	1152354.5	1415905.7
AS-3	1152332.3	1415937.6
AS-4	1152309.9	1415967.5
AS-5	1152287.3	1415998.8
AS-6	1152264.5	1416028.9
AS-7	1152242.5	1416060.3
AS-8	1152345.1	1415855.6
AS-9	1152324.3	1415883.7
AS-10	1152302.2	1415914.7
AS-11	1152280.3	1415944.9
AS-12	1152255.8	1415978.3
AS-13	1152234.6	1416006.6
AS-14	1152211.7	1416039.0
AS-15	1152189.3	1416068.6
AS-16	1152315.3	1415833.4
AS-17	1152292.6	1415861.3
AS-18	1152270.8	1415892.9
AS-19	1152247.7	1415924.2
AS-20	1152225.4	1415954.0
AS-21	1152203.4	1415985.6
AS-22	1152180.9	1416015.3

POINT ID	NORTHING	EASTING
AS-23	1152163.2	1416047.2
AS-24	1152137.4	1416076.2
AS-24A	1152120.7	1416100.1
AS-25	1152258.8	1415845.1
AS-26	1152238.8	1415872.0
AS-27	1152218.3	1415901.2
AS-28	1152195.6	1415931.1
AS-29	1152172.6	1415961.9
AS-30	1152166.7	1415934.4
AS-31	1152224.6	1415822.0
AS-32	1152208.9	1415850.0
AS-33	1152184.0	1415848.3
AS-34	1152148.9	1415851.3
AS-35	1152111.7	1415850.7
AS-BV1	1152350.4	1415903.8
AS-BV2	1152347.6	1415908.1
AS-BV3	1152319.9	1415882.8
AS-BV4	1152316.8	1415886.8
AS-BV5	1152289.5	1415860.3
AS-BV6	1152286.6	1415864.3
AS-BV7	1152259.2	1415859.9
AS-BV8	1152229.2	1415847.9
AS-BV9	1152219.9	1415852.9
AS-BV10	1152255.6	1415856.4
AS-BV11	1152297.6	1415899.3
SVE-MH1	1152232.9	1415843.0
SVE-MH2	1152264.8	1415866.2
SVE-MH3	1152295.5	1415888.5
SVE-MH4	1152326.0	1415910.8
SVE-MH5	1152347.6	1415926.5
SVE-MH6	1152164.1	1415836.4

POINT ID	NORTHING	EASTING	GROUND ELEV.	CASING ELEV.	RISER ELEV.
CHI-1	1152218.7	1415832.1	498.54	498.54	498.19
CHI-6	1152164.1	1416044.5	498.08	498.08	497.77
MW-1S	1152002.6	1415901.2	499.95	499.95	499.72
MW-2S	1152149.0	1416182.0	497.71	497.71	497.48
MW-3S	1152012.0	1416078.7	497.82	497.82	497.46
MW-9S	1152210.2	1415916.0	498.41	498.41	498.01
MW-12S	1152427.8	1415813.6	495.74	495.74	495.33
MW-13S	1152344.8	1415929.1	497.25	497.25	496.95
MW-14S	1152166.6	1416180.9	495.43	495.43	495.16
MW-2R	1152152.8	1416092.2	497.72	497.72	497.54
MW-3R	1152012.9	1416065.5	498.02	498.02	497.74
MW-5R	1152210.1	1415828.4	498.63	498.63	498.23
MW-8R	1152168.4	1416035.0	498.09	498.09	497.64
MW-10R	1151879.3	1415708.4	497.81	497.81	497.44
MW-12R	1152435.8	1415800.6	495.75	495.75	495.42
MW-14R	1152171.0	1416171.5	495.44	495.44	495.18
MW-15R	1151978.1	1416275.9	494.50	494.50	494.14
MW-16R	1151884.9	1416167.2	493.43	493.43	493.04
PW-1	1152287.1	1415876.7	498.02	498.02	**494.41***
PW-2	1152011.1	1415897.4	500.02	500.02	**496.92***
P-1	1152195.5	1416087.0	497.61	497.61	**495.26***
P-2	1152191.2	1415964.4	498.56	498.56	**495.93***
P-3	1152158.6	1415944.2	499.91	499.91	**496.80***
PZ-1	1152318.1	1415974.7	497.21	497.21	496.92
PZ-2	1152268.2	1416049.4	497.13	497.13	496.87
PZ-3	1152275.0	1415935.8	497.87	497.87	497.56
PZ-4	1152208.5	1416025.8	497.76	497.76	497.22
PZ-5	1152216.8	1415887.2	498.41	498.41	497.80
PZ-6	1152186.7	1415930.1	499.21	499.21	498.72

*** ELEVATION AT TOP OF BOLTED RISER COVER**

DECLARATION OF COVENANTS AND RESTRICTIONS
NYSDEC SITE NO. 8-28-088

PARCEL 'A' DESCRIPTION

All that piece or parcel of property hereinafter designated as Parcel A to which a declaration of covenants and restrictions apply, being in the City of Rochester, County of Monroe and State of New York and more particularly described as follows:

BEGINNING at a point on the northerly boundary of Anderson Avenue, an existing city street, at its intersection with the westerly line of Lot 187 of the Perry, Bly and Holmes Tract according to a map thereof filed in Book 3 of Maps, page 18 in the Monroe County Clerk's Office, thence; N 3°01'33" W a distance of 81.70 feet to a point on the division line between the property of Samille, Inc. (reputed owner) on the south and the property of Gary and Marcia Stern Family Limited Partnership (reputed owner) on the north, thence; S 73°57'14" E along the last mentioned division line a distance of 46.32 feet to a point on the division line between the property of Samille, Inc. (reputed owner) on the southwest and the property of New York Central Lines, LLC (reputed owner) on the northeast, thence; S 54°00'38" E a distance of 105.74 feet to a point on the first mentioned street boundary, thence; S 86°58'27" W along said street boundary a distance of 125.93 feet to the point of beginning, being 5,980± square feet or 0.137 acres, more or less.

PARCEL 'B' DESCRIPTION

All that piece or parcel of property hereinafter designated as Parcel B to which a declaration of covenants and restrictions apply, being in the City of Rochester, County of Monroe and State of New York and more particularly described as follows:

BEGINNING at a point on the northerly boundary of Anderson Avenue, an existing city street, at its intersection with the westerly line of Lot 185 of the Perry, Bly and Holmes Tract according to a map thereof filed in Book 3 of Maps, page 18 in the Monroe County Clerk's Office, thence; N 3°01'33" W a distance of 100.00 feet to a point on the division line between the property of Samille, Inc. (reputed owner) on the south and the property of Gary and Marcia Stern Family Limited Partnership (reputed owner) on the north, thence; along the last mentioned division line the following two (2) courses and distances: (1) N 86°58'27" E a distance of 39.98 feet to a point, thence; (2) S 72°55'49" E a distance of 53.26 feet to a point, thence; S 3°01'33" E along the easterly line of Lot 186 of the Perry, Bly and Holmes Tract a distance of 81.70 feet to a point on the first mentioned street boundary, thence; S 86°58'27" W a distance of 90.00 feet to the point of beginning, being 8,542± square feet or 0.196 acres, more or less.

PARCEL 'C' DESCRIPTION

All that piece or parcel of property hereinafter designated as Parcel C to which a declaration of covenants and restrictions apply, being in the City of Rochester, County of Monroe and State of New York and more particularly described as follows:

BEGINNING at a point on the northerly boundary of Anderson Avenue, an existing city street, at its intersection with the division line between the property of Samille, Inc. (reputed owner) on the east and the property of Gary and Marcia Stern Family Limited Partnership (reputed owner) on the west, said point also being the southwest corner of Lot 184 of the Perry, Bly and Holmes Tract according to a map thereof filed in Book 3 of Maps, page 18 in the Monroe County Clerk's Office, thence; along the last mentioned division line the following two (2) courses and distances: (1) N 3°05'03" W a distance of 100.00 feet to a point, thence; (2) N 86°58'27" E a distance of 40.02 feet to a point, thence; S 3°01'33" E along the easterly line of Lot 184 a distance of 100.00 feet to a point on the first mentioned street boundary, thence; S 86°58'27" W along said street boundary a distance of 39.92 feet to the point of beginning, being 3,997± square feet or 0.092 acres, more or less.

PARCEL 'D' DESCRIPTION

All that piece or parcel of property hereinafter designated as Parcel D to which a declaration of covenants and restrictions apply, being in the City of Rochester, County of Monroe and State of New York and more particularly described as follows:

COMMENCING at a point on the northerly boundary of Anderson Avenue, an existing city street, at its intersection with the westerly line of Lot 183 of the Perry, Bly and Holmes Tract according to a map thereof filed in Book 3 of Maps, page 18 in the Monroe County Clerk's Office, thence; N 86°58'27" E along said street boundary a distance of 19.97 feet to the point of BEGINNING, being the intersection of said street boundary and a deed division line between the property of Gary and Marcia Stern Family Limited Partnership (reputed owner) on the east and west, thence; along the last mentioned division line the following three (3) courses and distances: (1) N 03°05'51" W a distance of 112.71 feet to a point, thence; (2) S 86°56'50" W a distance of 18.77 feet to a point, thence; (3) N 14°34'23" E a distance of 105.29 feet to a point on the division line between the property of Gary and Marcia Stern Family Limited Partnership (reputed owner) on the south and the property of New York Central Lines, LLC (reputed owner) on the north, thence; S 54°00'38" E along the last mentioned division line a distance of 232.70 feet to a point on the division line between the property of Gary and Marcia Stern Family Limited Partnership (reputed owner) on the north and the property of Samille, Inc. (reputed owner) on the south, thence; along the last mentioned division line the following four (4) courses and distances: (1) N 73°57'14" W a distance of 46.32 feet to a point, thence; (2) N 72°55'49" W a distance of 53.26 feet to a point, thence; (3) S 86°58'27" W a distance of 80.00 feet to a point, thence; (4) S 3°05'03" E a distance of 100.00 feet to a point on the first mentioned street boundary, thence; S 86°58'27" W along said street boundary a distance of 20.03 feet to the point of beginning, being 12,556± square feet, or 0.288 acres, more or less.

PARCEL 'E' DESCRIPTION

All that piece or parcel of property hereinafter designated as Parcel E to which a declaration of covenants and restrictions apply, being in the City of Rochester, County of Monroe and State of New York and more particularly described as follows:

BEGINNING at a point on the northerly boundary of Anderson Avenue, an existing city street, at its intersection with the division line between the property of New York Central Lines, LLC (reputed owner) on the northeast and the property of Samille, Inc. (reputed owner) on the southwest, said point also being the southeast corner of Lot 187 of the Perry, Bly and Holmes Tract according to a map thereof filed in Book 3 of Maps, page 18 in the Monroe County Clerk's Office, thence; N 54°00'38" W along the last mentioned division line and along the property of Gary and Marcia Stern Family Limited Partnership (reputed owner) a total distance of 384.76 feet to a point, thence; through the property of New York Central Lines, LLC (reputed owner) the following five (5) courses and distances: (1) N 35°59'22" E a distance of 107.53 feet to a point, thence; (2) S 51°58'28" E a distance of 109.04 feet to a point, thence; (3) S 55°22'31" E a distance of 113.23 feet to a point, thence; (4) S 59°22'51" E a distance of 93.33 feet to a point, thence; (5) S 7°03'26" E a distance of 157.49 feet to a point on the first mentioned street boundary, thence; N 54°00'38" W along said street boundary a distance of 37.83 feet to the point of beginning, being 39,868± square feet or 0.915 acres, more or less

PARCEL 'F' DESCRIPTION

All that piece or parcel of property hereinafter designated as Parcel F to which a declaration of covenants and restrictions apply, being in the City of Rochester, County of Monroe and State of New York and more particularly described as follows:

BEGINNING at point on the southerly boundary of Anderson Avenue, an existing city street, at its intersection with the westerly boundary of Norwood Street, an existing city street, thence; S 3°05'03" E along the westerly boundary of Norwood Street a distance of 50.00 feet to a point, thence; through the property of 186 Atlantic Avenue, LLC (reputed owner) the following two (2) courses and distances: (1) S 86°58'27" W a distance of 75.05 feet to a point, thence; (2) N 3°01'33" W a distance of 50.00 feet to a point on the southerly boundary of Anderson Avenue, thence; N 86°58'27" E a distance of 75.00 feet to the point of beginning, being 3,751± square feet or 0.086 acres, more or less.

DEED REFERENCES

1.) DEED FILED IN LIBER 8582, PAGE 177.
2.) DEED FILED IN LIBER 8778, PAGE 78.
3.) DEED FILED IN LIBER 8691, PAGE 380.
4.) DEED FILED IN LIBER 9214, PAGE 520.
5.) DEED FILED IN LIBER 8730, PAGE 220.
6.) DEED FILED IN LIBER 10481, PAGE 79.

MAP REFERENCES

1.) MAP ENTITLED "RIGHT OF WAY AND TRACK MAP NEW YROK CENTRAL RAILROAD - V76/3", DATED JUNE 30, 1917, PREPARED BY OFFICE OF THE VALUATION ENGINEER (NYCRR).

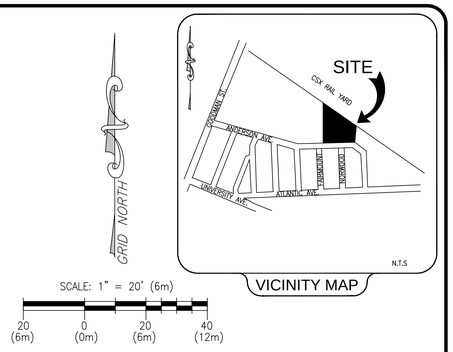
2.) MAP ENTITLED "PERRY, BLY & HOLMES TRACT" DATED AUGUST 1, 1871, PREPARED BY CHARLES R. BABBITT, CITY CIVIL ENGINEER, FILED IN LIBER 3 OF MAPS, PAGE 18.

3.) MAP ENTITLED "ROCHESTER CITY SURVEY DISTRICT 26 MAP 16.

ABSTRACTS OF TITLE

(1) ABSTRACT OT TITLE NO. 174327, PREPARED BY STEWART TITLE INSURANCE COMPANY, DATED OCTOBER 23, 2012.

(2) ABSTRACT OT TITLE NO. 174328, PREPARED BY STEWART TITLE INSURANCE COMPANY, DATED OCTOBER 23, 2012.



SCALE: 1" = 20' (6m)

20 (6m) 0 (0m) 20 (6m) 40 (12m)

This property is subject to a Declaration of Covenants and Restrictions (DC&R) held by the New York State Department of Environmental Conservation pursuant to Title 36 of Article 71 of the New York Environmental Conservation Law.

THE ENGINEERING AND INSTITUTIONAL CONTROLS for the DC&R are set forth in more detail in the Site Management Plan ("SMP"). A copy of the SMP must be obtained by any party with an interest in the property. The SMP may be obtained from the New York State Department of Environmental Conservation, Division of Environmental Remediation, Site Control Section, 625 Broadway, Albany, NY 12233 or at derweb@gw.dec.state.ny.us.

Restrictions to Parcels A, B and C

- Compliance with the Declaration of Covenants & Restrictions and the SMP by the Grantor and the Grantor's Successors and assigns;
- All Engineering Controls must be operated and maintained as specified in the SMP;
- All Engineering Controls on the Controlled Property must be inspected at a frequency and in a manner defined in the SMP;
- Groundwater, soil vapor and other environmental or public health monitoring must be performed as defined in the SMP;
- Data and information pertinent to Site Management of the Controlled Property must be reported at the frequency and in a manner defined in the SMP;
- The use and development of the site is limited to industrial uses only as described in 6 NYCRR Part 375-1.8(g)(2)(iv).
- The property may not be used for higher level of use, such as unrestricted or restricted residential or commercial use without additional remediation and amendment of the DC&R , as approved by the NYSDEC;
- All future activities on the property that will disturb remaining contaminated material must be conducted in accordance with this SMP;
- The use of groundwater underlying the property is prohibited without treatment rendering it safe for intended use;
- The potential for vapor intrusion must be evaluated for any buildings developed on Parcels A, B, C, D, E and F and any potential impacts that are identified must be monitored or mitigated;
- Vegetable gardens and farming on the property are prohibited;
- Land Use Restriction- The use and development of the site is limited to industrial uses only as defined in 6 NYCRR Part 375 1.8(g)(2)(iv).

DC&R AREA ACCESS

THE DEC OR THEIR AGENT MAY ACCESS THE RESTRICTED AREA AS SHOWN HEREON THROUGH ANY EXISTING STREET ACCESS OR BUILDING INGRESS/EGRESS ACCESS POINT

SURVEY NOTES

1. COORDINATES ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983 (CORS) - NEW YORK STATE PLANE COORDINATE SYSTEM, WEST ZONE.
2. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
3. MAPPING UNITS ARE U.S. SURVEY FEET.
4. THE CONTOUR INTERVAL IS 1 FOOT.
5. UTILITIES SHOWN HEREON ARE BASED ON VISIBLE EVIDENCE. THE UNDERGROUND POSITION OF ALL UTILITIES SHOWN SHOULD BE CONSIDERED APPROXIMATE.

SURVEYOR'S CERTIFICATION

TO: (1) The People of the State of New York acting through their Commissioner of the Department of Environmental Conservation;
(2) Samille, Inc.
(3) Gary and Marcia Stern Family Limited Partnership
(4) - Title Insurance Company -

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2011 Minimum Standard Detail Requirements for ALTA/ACSM Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 4, 7a, 8, 11a and 13 of Table A thereof. The field work was completed on November 14, 2012.

Date of Plat or Map: December 7, 2012

D R A F T

JEFFREY F. PHILLIPS, LS 50773
FOR: POPLI DESIGN GROUP
555 Penbrooke Drive
Penfield, NY 14526
Phone: 585-388-2060

LEGEND

- MONITORING WELL
- PIEZOMETER
- PUMPING WELL
- AIR SPARGE
- SOIL VAPOR EXTRACTION
- GAS VALVE
- WATER VALVE
- CLEAN OUT
- SANITARY SEWER MANHOLE
- STORM DRAIN MANHOLE
- CATCH BASIN
- ELECTRIC MANHOLE
- BOL. BOLLARD / POST
- CITY MONUMENT
- 48.0 BUILDING DIMENSION
- U.G. UNDER GROUND

SURVEY BY:

PREPARED FOR:

T:\Proposals\Survey\1_company logos_Ecology\ogo.jpg

SURVEYOR JOB NUMBER:	EN4024.04
SURVEY CREW	W. STRATTON, N. DUNN
DRAWN BY:	W. STRATTON
CHECKED BY:	J. PHILLIPS
REVISIONS	

ALTA/ACSM Land Title Survey

FOR THE PROPERTIES OF

SAMILLE, INC.
(#190, #192-200 & #220 ANDERSON AVENUE
T.M. 106.84-1-5,6,7)
AND
GARY AND MARCIA STERN FAMILY LIMITED PARTNERSHIP
(#188 ANDERSON AVENUE
T.M. 106.84-1-4.2)

City of Rochester, County of Monroe, State of New York

SCALE: 1" = 20' DATE: DECEMBER 19, 2012

B

County of Monroe Discharge Permit

Department of **Environmental Services**
Monroe County, New York

Maggie Brooks
County Executive

Michael J. Garland, P.E.
Director

September 10, 2012

Mr. Michael A. Aloi, P.E.
Ecology & Environment Engineering, p.c.
Buffalo Corporate Center
368 Pleasant View Drive
Lancaster, NY 14086

Re: Petition for Reduction in Sampling and Analytical Parameters at the Davis Howland Oil Co. site, 200 Anderson Avenue, Rochester, NY. Monroe County Sewer Use Permit # 864.

Dear Mr. Aloi:

This office has received your letter dated September 6, 2012 in which you have petitioned this office for reduction in monitoring at the above referenced site. With your letter you have submitted historical data compiled for the period 2006 to 2012.

After a review of the data, this office finds that a reduction in monitoring will be granted. The permit required testing for Total Petroleum Hydrocarbons (TPH) and Semi Volatile Organic Compounds (SVOC) on a monthly basis have been eliminated. The requirement for pesticides testing on a semi-annual basis has also been removed. The decision to remove these testing and reporting requirements was based on the analytical data package and historical analytical testing results from 2006 to 2012 showing non detection of compounds in the above mentioned testing methods for at least the last three years.

Attached you will find a modified permit enclosure which has been modified to reflect these changes. Please replace the current enclosure with this modified copy as it will supersede your current enclosure and become effective October 1, 2012.

If you have any questions or concerns, please call me at 585-753-7658.

Sincerely,

Sean Keenan
Industrial Waste Engineer

xc: file, Harry Reiter(Pretreatment Coordinator)

COUNTY OF MONROE
SEWER USE PERMIT ENCLOSURE

NYSDEC Division of Environmental Remediation
625 Broadway, 12th 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-864.1 - Sample Port – Air Stripper

REQUIRED MONITORING & EFFLUENT LIMITS

SAMPLE POINT: IWC-864.1 - Sample Port – Air Stripper

SELF-MONITORING FREQUENCY: **Monthly**

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:

Purgeable Halocarbons
Purgeable Aromatics
pH
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. The pH shall be within 5.0-12.0 su.

SPECIAL CONDITIONS:

1. All groundwater must be treated regardless of the influent concentrations.

2. Monthly 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 month, 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.1 In addition to the parameters/limits outlined, the total facility discharge shall meet all other concentration values as described in Article II, Section 10e of the Monroe County Pure Waters Districts, Rules and Regulations-Sewer Use Law of the County of Monroe.

B.2 Included in Article II, Section 10e, is the definition of "Normal Sewage". "Normal Sewage" may be discharged to the sewer system in excess of the concentrations outlined in the Joint Rules and Regulations, 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.

B.3 Regulatory sampling for analytes not specified under "required monitoring" shall be conducted by the Industrial Waste Section at a minimum frequency of once every three (3) years.

C. This permit is not assignable or transferable. The permit is issued to a specific user and location.

D. Per Article VIII, Section 8.11 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 Sections 4.5 or 5.5. The revocation is immediate upon receipt of notice to the Industrial User, however a Hearing shall be held as soon as possible.

E. As provided under Article VIII, Section 8.1, the Director and 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.

SPECIAL CONDITION:

A. 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.

B. The pH range for this permit is 5.0 – 12.0 su. This range is specifically permitted by the Director as allowed under Article IV, Section 4.2 of the Monroe County Sewer Use Law. PH must be analyzed immediately.

C. The summation of all Total Toxic Organics(TTO) Compounds as defined in the Code of Federal Regulations (40 CFR part 433.11(e)) with detection levels above 10 ug/l shall not exceed 2.13 mg/l as imposed by the Director under Article IV, Section 4.3 of the Monroe County Sewer Use Law unless Federal limits are more stringent under which the Federal limits will apply.

D. Petroleum Oil and Grease shall not exceed 100 mg/l as imposed by the Director under Article IV, Section 4.3 of the Monroe County Sewer Use Law.

E. Discharges containing Phenolic compounds shall not exceed 2.13 mg/l as imposed by the Director under Article IV, Section 4.3 of the Monroe County Sewer Use Law unless otherwise specified in the permit. These limits are applicable unless Federal limits are more stringent under which Federal limits will apply.

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 of the sewer use law.

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 <u>total</u> 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 403.5, 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.

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 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.

NOTIFICATION REQUIREMENTS:

A. Pursuant to Article VIII, Section 8.4K, 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 control plan 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. This criteria does NOT apply to the following Monroe County surchargeable parameters: Biochemical Oxygen Demand, Total Suspended Solids, Chlorine Demand and Total Phosphorus (ref. Article X – Monroe County Sewer Use Law).

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. This criteria does NOT apply to the following Monroe County surchargeable parameters: Biochemical Oxygen Demand, Total Suspended Solids, Chlorine Demand and Total Phosphorus (ref. Article X – Monroe County Sewer Use Law).

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, period 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 XII – Monroe County Sewer Use Law).

Nothing in this permit shall be construed to relieve the permittees from civil/criminal penalties for noncompliance under Article XII, Section 12.1(D) of the Sewer Use Law of the County of Monroe. Article XII, Section 12.1(D) provides that any person who violates a permit condition is subject to a civil penalty not to exceed $10,000 for any one case and an additional penalty not to exceed $10,000 for each day of continued violation.

C

October 2014 Groundwater Monitoring Event Field Notes and Analytical Data

ecology and environment engineering, p.c.
International Specialists in the Environment
BUFFALO CORPORATE CENTER 368 Pleasant View Drive, Lancaster, New York 14086
Tel: 716/684-8060, Fax: 716/684-0844

WELL PURGE & SAMPLE RECORD

Site Name/Location: DAVIS-HOLLAND
Well ID: MW-1S
EEEPC Project No.: 10C3074.0012.03
Date: 10/28/2019

Initial Depth to Water: _____ feet TOIC
Total Well Depth: 13.90 feet TOIC
Depth to Pump: 13.90 feet TOIC
Initial Pump Rate: _____ Lpm / gpm
adjusted to: 200 at 1.0 minutes
adjusted to: _____ at _____ minutes

Start Time: 1355
End Time: 1430
☐ Bailer ☑ Pump
Pump Type: Typhoon
Well Diameter: 2.0 inches
1x Well Volume: 0.79 gallons 2.39

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)
1355	0	6.73	17.4	89	1041	–	54.6	13.50
1400	1,000	6.99	16.7	76	1022	–	11.8	13.50
1405	2,000	7.00	16.2	74	1025	–	5.37	13.63
1410	3,000	7.07	16.6	73	1029	–	3.58	13.63
1415	4,000	7.10	16.7	77	1034	–	2.40	13.63
1420	5,000	7.06	16.6	82	1031	–	2.58	13.63
1425	6,000	7.07	16.5	74	1031	–	2.19	13.63
1430	7,000	7.07	16.6	74	1034	–	2.06	13.63
Final Sample Data:		7.06	16.6	74	1033	–	2.04	13.63

Sample ID: MW-1S-OCT14
Sample Time: 1435
Duplicate? ☐ Dupe Samp ID: _____
MS/MSD? ☐

Analyses: Methods:
☑ VOCs ☐ CLP
☐ SVOCs ☑ SW846
☐ PCBs ☐ Drink. Wtr.
☐ Metals ☐ _____
☐ _____ ☐ _____

Comments: _____
Sampler(s): _____

ecology and environment engineering, p.c.
International Specialists in the Environment
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Tel: 716/684-8060, Fax: 716/684-0844

WELL PURGE & SAMPLE RECORD

Site Name/Location: DAVIS - HOLLAND
Well ID: MW-2R
EEEPC Project No.: 10C3074.0012.03
Date: 10/28/2014

Initial Depth to Water: 15.79 feet TOIC
Total Well Depth: 26.0 feet TOIC
Depth to Pump: 27.0 feet TOIC
Initial Pump Rate: 675 Lpm / gpm
adjusted to: 300 at 1.0 minutes
adjusted to: _____ at _____ minutes

Start Time: 0910
End Time: 0953
☐ Bailer ☑ Pump
Pump Type: Typhoon
Well Diameter: 4.0 inches
1x Well Volume: 6.66 gallons 20.00 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)
0910	0	7.67	16.7	120	323.6	—	6.21	15.80
0915	1.5	7.39	16.1	14	414.5	—	5.40	16.68
0920	3.0	7.37	15.8	-23	395.0	—	4.21	17.43
0925	4.5	7.38	16.2	22	404.7	—	4.08	18.90
0930	6.0	7.36	16.2	-18	424.0	—	3.69	19.24
0935	7.5	7.36	16.2	-14	381.0	—	2.97	20.85
0940	9.0	7.26	16.4	-71	793.6	—	3.91	22.01
0945	10.5	7.25	16.3	-87	772.0	—	3.85	22.79
0950	12.0	7.25	16.4	-73	681.5	—	3.72	23.80
0955	13.5							
1000	15.0							
Final Sample Data:								

Sample ID: MW-2R-OCT14
Sample Time: 1010
Duplicate? ☐
MS/MSD? ☐
Dupe Samp ID: _____

Analyses:	Methods:
☑ VOCs	☐ CLP
☐ SVOCs	☑ SW846
☐ PCBs	☐ Drink. Wtr.
☐ Metals	☐ _____
☐ _____	☐ _____

Comments: MW-2R Purge Dry @ 0953

Sampler(s): _____

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WELL PURGE & SAMPLE RECORD

Site Name/Location: DAVIS-HOLLAND
Well ID: MW-2S
EEEPC Project No.: 10C3074.0012.03
Date: 10/28/2014

Initial Depth to Water: 6.15 feet TOIC
Total Well Depth: 14.0 feet TOIC
Depth to Pump: 13.0 feet TOIC
Initial Pump Rate: 700 Lpm / gpm
adjusted to: 200 at 1.0 minutes
adjusted to: _____ at _____ minutes

Start Time: 1110
End Time: 1140
☐ Bailer ☑ Pump
Pump Type: Typhoon
Well Diameter: 2.0 inches
1x Well Volume: 1.27 gallons 3.83

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)
1110	0	6.70	18.5	-39	1758	-	12.4	6.15
1115	1.0	6.63	18.1	-38	1751	-	15.1	6.75
1120	2.0	6.64	18.2	-38	1748	-	10.64	7.23
1125	3.0	6.63	18.3	-36	1748	-	5.84	7.26
1130	4.0	6.65	18.3	-32	1749	-	3.38	9.03
1135	5.0	6.63	18.2	-36	1748	-	3.09	9.22
1140	60	6.64	18.2	-35	1749	-	3.09	9.20
Final Sample Data:		6.64	18.2	-34	1748	-	3.10	9.20

Sample ID: MW-2S-OCT14
Sample Time: 1156
Duplicate? ☑
MS/MSD? ☐
Dupe Samp ID: MW-2S-OCT14Q

Analyses: Methods:
☑ VOCs ☐ CLP
☐ SVOCs ☑ SW846
☐ PCBs ☐ Drink. Wtr.
☐ Metals ☐ _____
☐ _____ ☐ _____

Comments: _____
Sampler(s): _____

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WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland
Well ID: MW 3R
EEEPC Project No.: 10C3074.0012.03
Date: 10/29/14

Initial Depth to Water: 16.21 feet TOIC
Start Time: 8:53
Total Well Depth: 38.01 feet TOIC
End Time: 11:45
Depth to Pump: 36.01 feet TOIC
☐ Bailer ☒ Pump
Initial Pump Rate: 1 Lpm / gpm
Pump Type: Typhoon
adjusted to: _____ at _____ minutes
Well Diameter: 4" inches
adjusted to: _____ at _____ minutes
1x Well Volume: 14.2 gallons x3 = 42.7 16.2L

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)
8:53	200ml	6.63	12.9	-58	1244	-	24.4	16.94
9:03	10.2	7.27	12.5	-62	1278	-	14.2	16.75
9:13	20.2	7.26	12.7	-62	1290	-	8.49	17.91
9:23	30.2	7.27	12.1	-62	1299	-	6.27	17.81
9:33	40.2	7.26	12.5	-62	1292	-	3.88	17.74
9:43	50.2	7.25	11.6	-62	1285	-	1.58	17.74
9:53	60.2	7.28	11.7	-62	1290	-	12.6	17.94
10:03	70.2	7.43	11.9	-65	1297	-	9.55	18.19
10:13	80.2	7.34	11.9	-68	1307	-	7.83	18.19
10:23	90.2	7.33	12.0	-67	1307	-	6.41	18.19
10:33	100.2	7.38	11.9	-69	1308	-	9.63	18.19
10:43	110.2	7.39	11.9	-75	1303	-	6.60	18.19
10:53	120.2	7.40	11.9	-70	1300	-	3.91	18.19
11:03	130.2	7.40	11.9	-69	1299	-	2.89	18.19
11:13	140.2	7.39	11.8	-70	1300	-	2.75	18.19
Final Sample Data:								

Sample ID: MW 3R-oct14
Duplicate? ☐
Dupe Samp ID: _____
Sample Time: 11:45
MS/MSD? ☐

Analyses:	Methods:
☑ VOCs	☐ CLP
☐ SVOCs	☑ SW846
☐ PCBs	☐ Drink. Wtr.
☐ Metals	☐ _____
_____	☐ _____

Comments: _____
Sampler(s): L Rand

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International Specialists in the Environment
BUFFALO CORPORATE CENTER 368 Pleasant View Drive, Lancaster, New York 14086
Tel: 716/684-8060, Fax: 716/684-0844

2 of 2

WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Road Well ID: MW3R

EEEPC Project No.: 60C3074.0012.03 Date: 10/29/14

Initial Depth to Water: N/A feet TOIC Start Time: _____

Total Well Depth: N/A feet TOIC End Time: _____

Depth to Pump: _____ feet TOIC ☐ Bailer ☑ Pump

Initial Pump Rate: 1 (Lpm / gpm) Pump Type: Typhoon

adjusted to: _____ at _____ minutes Well Diameter: 4" inches

adjusted to: _____ at _____ minutes 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)
11:23	150.2	7.38	11.9	-70	1301	—	2.26	18.19
11:33	160.2	7.37	11.9	-70	1302	—	2.03	18.19
11:43	170.2	7.38	11.9	-69	1301	—	2.00	18.19
Final Sample Data:		7.38	11.9	-69	1301	—	2.00	18.19

Sample ID: MW3R-Oct14 Duplicate? ☐ Dupe Samp ID: _____

Sample Time: 11:45 MS/MSD? ☐

Analyses:	Methods:
☑ VOCs	☐ CLP
☐ SVOCs	☑ SW846
PCBs	☐ Drink. Wtr.
etals	☐ _____
___	☐ _____

Comments: _____

Sampler(s): Y Rose

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Tel: 716/684-8060, Fax: 716/684-0844

WELL PURGE & SAMPLE RECORD

Site Name/Location: DAVIS-HOLLAND
Well ID: MW-3S
EEEPC Project No.: 10C3074.0012.03
Date: 10/29/2014

Initial Depth to Water: 7.93 feet TOIC
Total Well Depth: 17.40 feet TOIC
Depth to Pump: _____ feet TOIC
Initial Pump Rate: 650 Lpm / gpm
adjusted to: 250 at 1.0 minutes
adjusted to: _____ at _____ minutes

Start Time: 1150
End Time: 1245
☐ Bailer ☑ Pump
Pump Type: Typhoon
Well Diameter: 2.0 inches
1x Well Volume: 1.54 gallons 4.63

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)
1150	0	7.04	15.5	-14	654.2	-	11.1	8.15
1155	1.25	6.93	16.3	-12	616.1	-	10.86	8.18
1200	2.50	6.94	16.4	-4	472.5	-	9.52	8.39
1205	3.75	6.91	16.5	-1	439.1	-	5.04	8.45
1210	5.0	6.89	16.7	0	420.7	-	2.61	8.50
1215	6.25	6.88	16.9	8	413.0	-	1.48	8.62
1220	7.50	6.87	16.9	17	425.5	-	0.90	8.79
1225	8.75	6.85	17.1	19	441.8	-	0.65	8.90
1230	10.0	6.90	16.8	25	474.8	-	0.63	8.95
1235	11.25	6.88	16.9	30	514.8	-	0.48	9.01
1240	12.5	6.89	16.8	31	516.2	-	0.38	9.99
1245	13.75	6.89	16.9	30	515.7	-	0.36	10.01
Final Sample Data:								

Sample ID: MW-3S-OCT14
Sample Time: 1252
Duplicate? ☐ MS/MSD? ☐
Dupe Samp ID: _____

Analyses:
☑ VOCs
☐ SVOCs
☐ PCBs
☐ Metals
☐ _____

Methods:
☐ CLP
☑ SW846
☐ Drink. Wtr.
☐ _____
☐ _____

Comments: _____

Sampler(s): _____

ecology and environment engineering, p.c.
International Specialists in the Environment
BUFFALO CORPORATE CENTER 368 Pleasant View Drive, Lancaster, New York 14086
Tel: 716/684-8060, Fax: 716/684-0844

WELL PURGE & SAMPLE RECORD

Site Name/Location: DAVIS - HOLLAND
Well ID: MW-5R
EEEPC Project No.: 10C3074.0012.03
Date: 10/27/2014

Initial Depth to Water: 12.39 feet TOIC
Total Well Depth: 34.70 feet TOIC
Depth to Pump: _____ feet TOIC
Initial Pump Rate: 1,000 (Lpm) / gpm
adjusted to: 1,000 at 1.0 minutes
adjusted to: _____ at _____ minutes

Start Time: 1000
End Time: 1130
☐ Bailer ☑ Pump
Pump Type: Typhoon
Well Diameter: 4.0 inches
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)
1000	0	~~6.48~~	13.4	-32	1785	–	16.4	12.39
1010	10	7.01	13.4	-6	1309	–	4.31	12.82
1020	20	7.23	12.5	41	1223	–	1.38	12.85
1030	30	7.18	13.0	40	1219	–	1.07	12.85
1040	40	7.15	~~14.5~~ 13.5	21	1184	–	0.60	12.85
1050	50	7.16	15.0	25	1170	–	0.52	12.85
1100	60	7.17	15.5	25	1160	–	0.49	12.85
1110	70	7.16	15.0	24	1156	–	0.65	12.85
1120	80	7.16	15.0	26	1160	–	0.49	12.85
1130	90	7.16	15.0	25	1160	–	0.48	12.85
Final Sample Data:		7.17	14.9	26	1160	–	0.49	12.85

Sample ID: MW-5R-1027
Sample Time: 1136
Duplicate? ☐ MS/MSD? ☐ Dupe Samp ID: _____

Analyses:	Methods:
☑ VOCs	☐ CLP
☐ SVOCs	☑ SW846
☐ PCBs	☐ Drink. Wtr.
☐ Metals	☐ _____
☐ _____	☐ _____

Comments: _____
Sampler(s): _____

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WELL PURGE & SAMPLE RECORD

Site Name/Location: ~~Davis~~ Rowlands
EEEPC Project No.: 10C3024.0012.02
Well ID: MW8R
Date: 10/22/14

Initial Depth to Water: 16.70 feet TOIC
Total Well Depth: 35.14 feet TOIC
Depth to Pump: 33.14 feet TOIC
Initial Pump Rate: ~~400 mL per min~~ Lpm / gpm
adjusted to: _____ at _____ minutes
adjusted to: _____ at _____ minutes

Start Time: 2:20
End Time: 5:00
☐ Bailer ☒ Pump
Pump Type: Typhoon
Well Diameter: 4" inches
1x Well Volume: 10.7 gallons (3 = 31.1 gallons 120L)

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)
2:20	1L	7.46	12.2	-109	1806	—	2.15	16.93
2:30	9L	7.28	12.0	-98	1804	—	4.55	18.09
2:40	17L	7.28	12.1	-87	1807	—	5.55	18.39
2:50	20 L	7.26	11.7	-85	1808	—	6.51	19.90
3:00	28 L	7.26	11.6	-81	1810	—	6.59	20.40
3:10	36 L	7.27	11.6	-75	1779	—	4.01	21.15
3:20	44 L	7.27	11.6	-72	1736	—	3.53	21.11
3:30	52 L	7.23	11.6	-72	1705	—	2.96	21.11
3:40	60 L	7.24	11.8	-75	1717	—	2.50	21.11
3:50	68 L	7.25	11.7	-71	1720	—	2.44	21.11
4:00	76 L	7.23	11.9	-75	1778	—	2.08	21.11
4:10	84 L	7.23	12.0	-77	1782	—	1.90	21.11
4:20	92 L	7.23	11.9	-77	1830	—	1.48	21.11
4:30	100 L	7.29	12.0	-76	1835	—	1.29	21.11
4:40	108 L	7.25	12.0	-77	1836	—	1.28	21.11
Final Sample Data:				-				

Sample ID: MW8R-Oct14
Sample Time: 5:05
Duplicate? ☐ Dupe Samp ID: _____
MS/MSD? ☐

Analyses:	Methods:
☑ VOCs	☐ CLP
☐ SVOCs	☑ SW846
☐ PCBs	☐ Drink. Wtr.
☐ Metals	☐ _____
☐ _____	☐ _____

Comments: _____
Sampler(s): L. Rome

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WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Haviland
EEEPC Project No.: 10C3074.0012.02
Well ID: mw 8R
Date: 10/27/14

Initial Depth to Water: ~~N/A~~ feet TOIC
Total Well Depth: N/A feet TOIC
Depth to Pump: N/A feet TOIC
Initial Pump Rate: ~~N/A~~ Lpm / gpm
adjusted to: _____ at _____ minutes
adjusted to: _____ at _____ minutes

Start Time: _____
End Time: _____
☐ Bailer ☒ Pump
Pump Type: Typhon
Well Diameter: 4" inches
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)
4:50	116 L	7.24	12.0	-76	1839	—	1.27	21.11
5:00	125 L	7.25	12.0	-77	1836	—	1.26	21.11
Final Sample Data:		7.25	12.0	-77	1836	—	1.26	21.11

Sample ID: _____
Sample Time: _____
Duplicate? ☐
MS/MSD? ☐
Dupe Samp ID: _____

Analyses: / Methods:
☑ VOCs ☐ CLP
☐ SVOCs ☑ SW846
☐ PCBs ☐ Drink. Wtr.
☐ Metals ☐ _____
☐ _____ ☐ _____

Comments: _____

Sampler(s): L. Rivell

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WELL PURGE & SAMPLE RECORD

Site Name/Location: DAVIS - Holland
Well ID: MW-9S
EEEPC Project No.: 10C3074.0012.03
Date: 10/27/14

Initial Depth to Water: 6.95 feet TOIC
Start Time: 1110
Total Well Depth: 15.8 feet TOIC
End Time: 1300
Depth to Pump: 14.0 feet TOIC
☐ Bailer ☑ Pump
Initial Pump Rate: 500 Lpm / gpm
Pump Type: Typhoon
adjusted to: 250 at 1.0 minutes
Well Diameter: 2.0 inches
adjusted to: _____ at _____ minutes
1x Well Volume: 1.44 gallons 4.32 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	7.33	15.7	141	796.7	–	48.0	6.95
1215	1.25	7.32	15.9	128	764.8	–	66.6	6.95
1220	2.5	7.28	15.7	124	736.0	–	65.6	8.33
1225	3.75	7.27	15.6	121	726.3	–	63.3	8.50
1230	5.0	7.28	15.5	121	721.6	–	63.0	8.80
1235	6.25	7.33	15.4	164	723.6	–	37.5	8.90
1240	7.5	7.30	15.3	146	731.0	–	31.8	8.90
1245	8.75	7.29	15.3	139	736.1	–	18.9	8.90
1250	10.0	7.30	15.3	137	735.0	–	11.67	8.90
1255	11.25	7.27	15.3	135	735.7	–	11.67	8.90
Final Sample Data:		7.28	15.2	136	735.4	–	11.66	8.90

Sample ID: MW-9S-1027
Duplicate? ☐
Dupe Samp ID: _____
Sample Time: 1300
MS/MSD? ☐

Analyses:	Methods:
☑ VOCs	☐ CLP
☐ SVOCs	☑ SW846
☐ PCBs	☐ Drink. Wtr.
☐ Metals	☐ _____
☐ _____	☐ _____

Comments: _____

Sampler(s): _____

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WELL PURGE & SAMPLE RECORD

Site Name/Location: DAVIS - HOLLAND
Well ID: MW-10R
EEEPC Project No.: 10C3074.0012.03
Date: 10/29/2014

Initial Depth to Water: 18.93 feet TOIC
Total Well Depth: 35.70 feet TOIC
Depth to Pump: _____ feet TOIC
Initial Pump Rate: 800 Lpm / gpm
adjusted to: _____ at _____ minutes
adjusted to: _____ at _____ minutes

Start Time: 1400
End Time: 1540
☐ Bailer ☑ Pump
Pump Type: Typhoon
Well Diameter: 4.0 inches
1x Well Volume: 10.95 gallons 32.85

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	0	7.41	12.9	11	913.8	-	4.91	18.99
1410	80,000	7.28	13.1	25	9290	-	2.92	19.31
1420	16,000	7.29	13.0	40	916.0	-	1.94	19.95
1430	24,000	7.31	13.1	45	925.1	-	1.92	20.20
1440	32,000	7.28	13.0	48	934.0	-	0.75	20.35
1450	40,000	7.26	13.3	48	961.9	-	0.62	20.50
1500	48,000	7.27	13.4	48	980.4	-	0.59	20.75
1510	56,000	7.26	13.2	53	989.8	-	0.68	20.80
1520	64,000	7.28	13.1	60	1020	-	0.53	20.80
1530	72,000	7.28	13.1	62	1021	-	0.51	20.80
1540	80,000	7.26	13.1	61	1019	-	0.50	20.80
Final Sample Data:								

Sample ID: MW-10R OCT14
Sample Time: 1540
Duplicate? ☐ Dupe Samp ID: _____
MS/MSD? ☐

Analyses: Methods:
☑ VOCs ☐ CLP
☐ SVOCs ☑ SW846
☐ PCBs ☐ Drink. Wtr.
☐ Metals ☐ _____
☐ _____ ☐ _____

Comments: _____
Sampler(s): _____

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WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland
Well ID: MW125
EEEPC Project No.: 10C3074.0012.03
Date: 10/27/14

Initial Depth to Water: 4.76 feet TOIC
Total Well Depth: 14.71 feet TOIC
Depth to Pump: 12.71 feet TOIC
Initial Pump Rate: 500 Lpm / gpm
adjusted to: _____ at _____ minutes
adjusted to: _____ at _____ minutes

Start Time: 11:36
End Time: 12:30
☐ Bailer ☒ Pump
Pump Type: Typhoon
Well Diameter: 2" inches
1x Well Volume: 1.6 gallons x3 = 4.8 gallons 18.4 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)
11:36	500 mls	7.17	13.4	120	1043	—	14.3	5.08
11:41	3	7.04	13.9	129	1066	—	10.23	5.24
11:46	5.5	7.00	13.7	129	1067	—	10.23	5.29
11:51	8.0	7.01	13.7	133	1073	—	2.88	5.53
11:56	10.5	7.00	13.7	133	1072	—	2.42	5.54
12:01	13.0	7.00	13.9	136	1073	—	1.64	5.53
12:06	15.5	7.01	13.9	137	1072	—	1.43	5.53
12:11	18.0	7.01	13.9	138	1072	—	1.40	5.53
12:16	20.5 L	7.01	13.9	137	1072	—	1.39	5.53
Final Sample Data:		7.01	13.5	137	1072	—	1.39	5.53

Sample ID: MW-125-oct14
Sample Time: 12:30
Duplicate? ☐ Dupe Samp ID: _____
MS/MSD? ☐

Analyses:	Methods:
☑ VOCs	☐ CLP
☐ SVOCs	☑ SW846
☐ PCBs	☐ Drink. Wtr.
☐ Metals	☐ _____
☐ _____	☐ _____

Comments: _____
Sampler(s): L. Rowe

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WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Wetland
Well ID: MW 12R
EEEPC Project No.: 10C3074.0012.03
Date: 10/27/14

Initial Depth to Water: 20.99 feet TOIC
Total Well Depth: 32.0 feet TOIC
Depth to Pump: 29.0 feet TOIC
Initial Pump Rate: 1 (lpm) gpm
adjusted to: _____ at _____ minutes
adjusted to: _____ at _____ minutes

Start Time: 10:20
End Time: 11:00
☐ Bailer ☒ Pump
Pump Type: Typhoon
Well Diameter: 4" inches
1x Well Volume: 7.1 gallons x3 = 21.3 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)
10:20	2	7.35	12.3	90	847.8	—	10.32	22.65
10:25	~~4~~ 7	7.40	11.8	45	840.2	—	4.98	22.75
10:30	12	7.42	11.9	42	839.1	—	2.92	22.59
10:35	17	7.41	11.9	46	839.6	—	1.47	22.59
10:40	22	7.41	11.7	48	839.9	—	0.93	22.59
10:45	27	7.42	11.8	47	839.4	—	1.0	22.59
Final Sample Data:		7.42	11.8	47	839.4	—	1.0	22.59

Sample ID: MW12R - ~~10237~~ Oct14
Sample Time: 11:00
Duplicate? ☐ Dupe Samp ID: _____
MS/MSD? ☐

Analyses:	Methods:
☑ VOCs	☐ CLP
☐ SVOCs	☑ SW846
☐ PCBs	☐ Drink. Wtr.
☐ Metals	☐ _____
☐ _____	☐ _____

Comments: _____
Sampler(s): L. Rose

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WELL PURGE & SAMPLE RECORD

Site Name/Location: DAVIS - HOLLAND
Well ID: MW-13S
EEEPC Project No.: 10C3074-0012.03
Date: 10/27/2014

Initial Depth to Water: 4.0 feet TOIC
Total Well Depth: 13.71 feet TOIC
Depth to Pump: 12.71 feet TOIC
Initial Pump Rate: 550 Lpm / gpm
adjusted to: 300 at 1.0 minutes
adjusted to: _____ at _____ minutes

Start Time: 1420
End Time: 1510
☐ Bailer ☑ Pump
Pump Type: Typhoon
Well Diameter: 2.0 inches
1x Well Volume: 1.58 gallons 4.74

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)
1420	0	7.21	15.8	-27	717.8	-	21.0	4.0
1425	1.5	7.21	16.2	21	653.0	-	16.0	4.13
1430	3.0	7.25	16.1	51	645.1	-	14.0	4.13
1435	4.5	7.22	16.4	76	647.4	-	9.69	4.24
1440	6.0	7.22	16.4	96	655.2	-	4.28	4.24
1445	7.5	7.23	16.6	104	661.2	-	2.62	4.24
1450	9.0	7.23	16.3	115	664.1	-	1.56	4.24
1455	10.5	7.24	16.3	113	670.6	-	1.21	4.24
1500	12.0	7.24	16.4	118	672.0	-	0.86	4.24
1505	13.5	7.23	16.4	117	673.2	-	0.88	4.24
1510	15.0	7.24	16.4	116	672.6	-	0.78	4.24
Final Sample Data:		7.24	16.4	117	671.9	-	0.74	4.24

Sample ID: MW-13S-10272014
Sample Time: 1516
Duplicate? ☐ Dupe Samp ID: _____
MS/MSD? ☐

Analyses: Methods:
☑ VOCs ☐ CLP
☐ SVOCs ☑ SW846
☐ PCBs ☐ Drink. Wtr.
☐ Metals ☐ _____
☐ _____ ☐ _____

Comments: _____
Sampler(s): _____

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WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland | Well ID: MW145
EEEPC Project No.: 10C3074.0012.04 | Date: 10/28/14

Initial Depth to Water: 3.54 feet TOIC | Start Time: 12:00
Total Well Depth: 12.93 feet TOIC | End Time: 13:30
Depth to Pump: _____ feet TOIC | ☐ Bailer ☑ Pump
Initial Pump Rate: 200mls Lpm / gpm | Pump Type: Typhoon
adjusted to: _____ at _____ minutes | Well Diameter: 2" inches
adjusted to: _____ at _____ minutes | 1x Well Volume: 1.5 gallons x 3: 4.5 17L

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)
12:00	500mls	7.22	16.3	113	657.6	—	4.83	3.56
12:05	1.5	7.20	17.5	104	671.5	—	3.93	3.95
12:15	3.5	7.12	16.5	91	687.3	—	2.26	4.12
12:25	5.5	7.11	16.5	68	684.9	—	1.14	4.48
12:35	7.5	7.11	16.8	52	686.4	—	0.96	4.59
12:45	9.5	7.11	16.1	48	683.6	—	0.82	4.78
12:55	10.5	7.11	16.1	34	668.4	—	0.73	5.06
13:05	13.5	7.14	16.0	27	665.2	—	0.78	5.06
13:15	15.5	7.15	16.1	26	664.3	—	0.65	5.06
13:25	17.5	7.16	16.1	25	663.2	—	0.51	5.06
Final Sample Data:		7.16	16.1	25	663.2	—	0.51	5.06

Sample ID: MW145-oct14 | Duplicate? ☐ | Dupe Samp ID: _____
Sample Time: 13:30 | MS/MSD? ☐

Analyses:	Methods:
☑ VOCs	☐ CLP
☐ SVOCs	☑ SW846
☐ PCBs	☐ Drink. Wtr.
☐ Metals	☐ _____
☐ _____	☐ _____

Comments: _____
Sampler(s): L. Brad

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WELL PURGE & SAMPLE RECORD

Site Name/Location: Dawn Howland
Well ID: MW14R
EEEPC Project No.: 10C 3074.0012.04
Date: 10/28/14

Initial Depth to Water: 6.75 feet TOIC
Start Time: 9:07
Total Well Depth: 23.79 feet TOIC
End Time:
Depth to Pump: 21.79 feet TOIC
☐ Bailer ☒ Pump
Initial Pump Rate: 800 ml/min Lpm / gpm
Pump Type: Typhoon
adjusted to: _____ at _____ minutes
Well Diameter: 4" inches
adjusted to: _____ at _____ minutes
1x Well Volume: 11.1 gallons x3 33.3 gallons 126 Liters

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)
9:07	100 ml/s	5.88	15.1	212	205.4	—	11.6	7.15
9:17	8.1	6.83	13.9	29	669.4	—	8.89	7.81
9:27	16.2	7.47	13.9	25	880.4	—	4.39	8.31
9:37	24.3	7.61	13.9	0	1061	—	1.87	8.75
9:47	32.4	7.70	13.9	-4	1099	—	1.14	8.81
9:57	40.5	7.69	13.9	-14	1100	—	1.36	8.91
10:07	48.6	7.61	13.9	-18	1116	—	1.43	8.99
10:17	56.7	7.74	14.0	-17	1118	—	1.15	9.10
10:27	64.8	7.73	15.1	-32	1135	—	0.88	9.14
10:37	72.9	7.66	13.9	-31	1122	—	0.94	9.14
10:47	81.0	7.80	13.9	-13	1064	—	2.77	9.14
10:57	89.0	7.73	13.6	-17	1145	—	2.19	9.14
11:07	97.0	7.73	13.9	-15	1166	—	2.49	9.14
11:17	105.0	7.72	13.6	-16	1169	—	2.51	9.14
11:27	113.0	7.72	13.9	-17	1170	—	2.99	9.14
Final Sample Data:								

Sample ID: MW14R-oct14
Duplicate? ☐
Dupe Samp ID: _____
Sample Time: 11:50
MS/MSD? ☐

Analyses:	Methods:
☑ VOCs	☐ CLP
☐ SVOCs	☑ SW846
☐ PCBs	☐ Drink. Wtr.
☐ Metals	☐ _____
☐ _____	☐ _____

Comments: _____
Sampler(s): L. Rocco

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WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland
Well ID: MW14R
EEEPC Project No.: 10C 3024.0012.04
Date: 10/28/14

Initial Depth to Water: _____ feet TOIC
Total Well Depth: N/A feet TOIC
Depth to Pump: N/A feet TOIC
Initial Pump Rate: _____ Lpm / gpm
adjusted to: _____ at _____ minutes
adjusted to: _____ at _____ minutes

Start Time: _____
End Time: _____
☐ Bailer ☒ Pump
Pump Type: Typhon
Well Diameter: 4 inches
1x Well Volume: 11.1 gallons x3 33.3 126 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)
11:37	121.0	7.72	13.9	-16	1171	—	2.96	9.14
11:47	129.0	7.72	13.9	-17	1170	—	2.85	9.14
Final Sample Data:		7.72	13.9	-17	1170	—	2.95	9.14

Sample ID: _____
Sample Time: _____
Duplicate? ☐
MS/MSD? ☐
Dupe Samp ID: _____

Analyses:	Methods:
☑ VOCs	☐ CLP
☐ SVOCs	☑ SW846
☐ PCBs	☐ Drink. Wtr.
☐ Metals	☐ _____
☐ _____	☐ _____

Comments: _____
Sampler(s): LeBoeuf

ecology and environment engineering, p.c.
International Specialists in the Environment
BUFFALO CORPORATE CENTER 368 Pleasant View Drive, Lancaster, New York 14086
Tel: 716/684-8060, Fax: 716/684-0844

WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howland
Well ID: MW15R
EEEPC Project No.: 10C3074.0012.03
Date: 10/29/14

Initial Depth to Water: 15.68 feet TOIC
Total Well Depth: 30.30 feet TOIC
Depth to Pump: 25.30 feet TOIC
Initial Pump Rate: 1 Lpm / gpm
adjusted to: _____ at _____ minutes
adjusted to: _____ at _____ minutes

Start Time: 12:10
End Time: 14:10
☐ Bailer ☒ Pump
Pump Type: Typhoon
Well Diameter: 4" inches
1x Well Volume: 9.5 gallons x3 = 28.46 10.8

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)
12:10	10 Oml's	6.98	10.7	+79	1084	—	1.88	16.51
12:20	10.1	7.26	10.4	-68	1043	—	2.72	17.52
12:30	20.1	7.31	10.2	-52	955.0	—	2.92	17.63
12:40	30.	7.32	10.6	-46	921.8	—	2.19	17.81
12:50	40	7.26	10.4	-17	933.4	—	1.72	18.05
13:00	50	7.20	10.8	-26	957.1	—	1.64	18.31
13:10	60	7.35	10.7	-21	960.0	—	1.51	18.31
13:20	70	7.32	10.8	-23	975.6	—	1.24	18.31
13:30	80	7.34	10.8	-23	989.4	—	0.96	18.31
13:40	90.	7.33	10.7	-26	1012	—	0.73	18.31
13:50	100	7.32	10.6	-25	1018	—	0.70	18.31
14:00	110	7.31	10.6	-24	1017	—	0.69	18.31
Final Sample Data:								

Sample ID: MW15R-Oct14
Sample Time: 14:10
Duplicate? ☐
MS/MSD? ☒
Dupe Samp ID: _____

Analyses: / Methods:
☑ VOCs ☐ CLP
☐ SVOCs ☑ SW846
☐ PCBs ☐ Drink. Wtr.
☐ Metals ☐ _____
☐ _____ ☐ _____

Comments: _____
Sampler(s): L Rivell

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Tel: 716/684-8060, Fax: 716/684-0844

WELL PURGE & SAMPLE RECORD

Site Name/Location: DAVIS - 1101 ALLD
Well ID: MW-16R
EEEPC Project No.: 10C3074.0012.03
Date: 10/29/2014

Initial Depth to Water: 18.75 feet TOIC
Total Well Depth: 31.25 feet TOIC
Depth to Pump: 30.00 feet TOIC
Initial Pump Rate: 720 Lpm / gpm
adjusted to: 400 at 1.0 minutes
adjusted to: _____ at _____ minutes

Start Time: 0900
End Time: 1038
☐ Bailer ☑ Pump
Pump Type: Typhoon
Well Diameter: 4.0 inches
1x Well Volume: 8.16 gallons = 24.48

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)
0900	0	7.09	13.5	-197	2328	-	78.2	18.57
0905	2,000	7.03	13.8	-261	2243	-	61.1	20.32
0910	4,000	7.01	14.2	-262	2008	-	53.5	22.20
0920	8,000	7.13	14.1	-246	1751	-	25.0	22.20
0930	14,000	7.14	14.2	-239	1614	-	18.1	23.20
0940	24,000	7.23	13.9	-229	1479	-	13.6	24.21
0950	32,000	7.23	13.9	-223	1371	-	12.9	24.72
1000	40,000	7.25	14.2	-224	1126	-	20.9	25.33
1010	48,000	7.25	14.6	-214	960.5	-	82.5	26.20
1020	56,000	7.26	141.1	-213	1087	-	>1000	29.79
1036	64,000	7.41	12.0	-209	1110	-	>1000	31.06
Final Sample Data:								

Sample ID: MW-16R-OCT14
Sample Time: 1115
Duplicate? ☐
MS/MSD? ☐
Dupe Samp ID: _____

Analyses: ☑ VOCs ☐ SVOCs ☐ PCBs ☐ Metals ☐ _____
Methods: ☐ CLP ☑ SW846 ☐ Drink. Wtr. ☐ _____ ☐ _____

Comments: Purge Water Has Sulfur Odor
Well Purge Dry With 14 gallons Removed

Sampler(s): _____

ALS Environmental
ALS Group USA, Corp
1565 Jefferson Rd, Building 300, Suite 360
Rochester, NY 14623
T: 585-288-5380
F: 585-288-8475
www.alsglobal.com

November 13, 2014

Analytical Report for Service Request No: R1408538

Ms. Ashlee Patnode
Ecology And Environment, Incorporated
368 Pleasantview Drive
Lancaster, NY 14086

Laboratory Results for: Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03

Dear Ms. Patnode:

Enclosed are the results of the sample(s) submitted to our laboratory between October 27, 2014 and October 28, 2014. For your reference, these analyses have been assigned our service request number **R1408538.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7471. You may also contact me via email at Karen.Bunker@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Karen Bunker
Project Manager

ALS Environmental

Client:	Ecology & Environment	**Service Request No.:**	R1408538
Project:	Davis Howland Oil Co	**Date Received:**	10/27,28/2014
Sample Matrix:	Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD).

Sample Receipt

Fourteen water samples were collected and received for analysis at ALS on the same day as sampled on 10/27/14 and 10/28/14. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator between 1°C and 6°C upon receipt at the laboratory. The samples arrived at a cooler temperature range of 1.1-7.6°C, on ice.

Volatile Organic Compounds

The samples were analyzed by GC/MS Method 624.

The Initial and Continuing Calibration Verifications met QC criteria.

Laboratory Control Samples (LCS) had acceptable recoveries for these compounds.

Hits above the calibration range of the standards are flagged as "E", estimated. The sample is then repeated at the appropriate dilution for the hit. Both sets of data are included in the report. The hits on the subsequent dilution are flagged as "D".

Hits between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) are flagged as "J", estimated.

All Laboratory Method Blanks were free from contamination except for Bromomethane and Methylene Chloride on the 10/30/14 run and Methylene Chloride on the 11/4/14 run. Affected data has been flagged as "B" appropriately.

All sample vials were unpreserved and analyzed within the required 7 day holding time.

No analytical or quality control problems were encountered during analysis.

Semivolatile Organic Compounds

The samples were analyzed by GC/MS Method 625.

The Initial and Continuing Calibration Verifications met QC criteria.

Laboratory Control Sample (LCS) and LCS Duplicates (LCSD) had acceptable recoveries for these compounds except for Benzidine (LCSD only), Diethyl Phthalate (LCSD only), and Pyrene (LCSD only) on the 10/30/14 run and Benzidine and Hexachlorocyclopentadiene (LCS only) on the 11/5/14 run. These recoveries have been flagged as "*". Sample data for Benzidine from the 11/5/14 run may be bias low based on these recoveries. All RPD's were acceptable except for Benzidine on the 10/30/14 run.

Approved by _____ **Date** 11/13/14

Laboratory Method Blanks were free from contamination.

Hits between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) are flagged as "J", estimated.

All samples were analyzed within the proper holding time for the method.

No analytical or quality control problems were encountered during analysis.

310-13 Analysis

The samples were analyzed by GC Method 310-13.

The Initial and Continuing Calibration Verifications met QC criteria.

Laboratory Control Samples (LCS) and LCS Duplicates (LCSD) had acceptable recoveries for these compounds. The RPD's were acceptable.

The Laboratory Method Blank was free from contamination.

All samples were analyzed within the proper holding time.

No analytical or quality control problems were encountered during analysis.

Approved by _____ **Date** 11/13/14

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1408538

Lab ID	Client ID
R1408538-001	TB-1027-01
R1408538-002	MW12R-OCT14
R1408538-003	MW12S-OCT14
R1408538-004	MW5R-1027
R1408538-005	MW9S-1027
R1408538-006	MW13S-1027
R1408538-007	MW8R-OCT14
R1408538-008	TB1028-02
R1408538-009	MW-2R-OCT 14
R1408538-010	MW-2S-OCT 14
R1408538-011	MW-2S-OCT 14Q
R1408538-012	MW-14R-OCT 14
R1408538-013	MW-14S-OCT 14
R1408538-014	MW-1S-OCT 14

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

NELAP Accredited	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Connecticut ID # PH0556	Nebraska Accredited	
Delaware Accredited	Nevada ID # NY-00032	North Carolina #676
DoD ELAP #65817	New Jersey ID # NY004	Pennsylvania ID# 68-786
Florida ID # E87674	New York ID # 10145	Rhode Island ID # 158
Illinois ID #200047		Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 0900
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Analyzed:	10/30/14 12:23
Sample Name:	TB-1027-01	**Units:**	µg/L
Lab Code:	R1408538-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8450.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	**0.37**	BJ	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	**0.25**	BJ	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 0900
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Analyzed:	10/30/14 12:23
Sample Name:	TB-1027-01	**Units:**	µg/L
Lab Code:	R1408538-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8450.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	87	81-127	10/30/14 12:23	
4-Bromofluorobenzene	99	79-123	10/30/14 12:23	
Toluene-d8	102	83-120	10/30/14 12:23	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1100
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Analyzed:	10/30/14 13:55
Sample Name:	MW12R-OCT14	**Units:**	µg/L
Lab Code:	R1408538-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8453.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**0.14**	J	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**0.17**	J	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**0.39**	J	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	**0.14**	J	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	**0.26**	BJ	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	1.0	U	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	**22**		1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	**0.71**	J	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	**17**		1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	**0.37**	J	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1100
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Analyzed:	10/30/14 13:55
Sample Name:	MW12R-OCT14	**Units:**	µg/L
Lab Code:	R1408538-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8453.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	92	81-127	10/30/14 13:55	
4-Bromofluorobenzene	99	79-123	10/30/14 13:55	
Toluene-d8	102	83-120	10/30/14 13:55	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1100
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/29/14
		Date Analyzed:	10/30/14 16:17
Sample Name:	MW12R-OCT14	**Units:**	µg/L
Lab Code:	R1408538-002	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	419093
Prep Method:	EPA 3510C	**Extraction Lot:**	221957
Data File Name:	I:\ACQUDATA\5973D\Data\103014\AY733.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	4.7	U	4.7	1.0	
122-66-7	1,2-Diphenylhydrazine	4.7	U	4.7	1.0	
88-06-2	2,4,6-Trichlorophenol	4.7	U	4.7	1.4	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.3	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	1.5	
51-28-5	2,4-Dinitrophenol	47	U	47	20	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.6	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.8	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.0	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.4	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	4.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	11	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	2.2	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.2	
100-02-7	4-Nitrophenol	47	U	47	5.9	
83-32-9	Acenaphthene	4.7	U	4.7	1.0	
208-96-8	Acenaphthylene	4.7	U	4.7	1.0	
120-12-7	Anthracene	4.7	U	4.7	1.0	
56-55-3	Benz(a)anthracene	4.7	U	4.7	1.0	
92-87-5	Benzidine	94	U	94	90	
50-32-8	Benzo(a)pyrene	4.7	U	4.7	1.0	
205-99-2	3,4-Benzofluoranthene	4.7	U	4.7	1.0	
191-24-2	Benzo(g,h,i)perylene	4.7	U	4.7	1.0	
207-08-9	Benzo(k)fluoranthene	4.7	U	4.7	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.0	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	2.2	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	4.7	U	4.7	1.2	
85-68-7	Butyl Benzyl Phthalate	4.7	U	4.7	2.4	
218-01-9	Chrysene	4.7	U	4.7	1.0	
84-74-2	Di-n-butyl Phthalate	4.7	U	4.7	1.0	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1100
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/29/14
		Date Analyzed:	10/30/14 16:17
Sample Name:	MW12R-OCT14	**Units:**	µg/L
Lab Code:	R1408538-002	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	419093
Prep Method:	EPA 3510C	**Extraction Lot:**	221957
Data File Name:	I:\ACQUDATA\5973D\Data\103014\AY733.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	4.7	U	4.7	1.2	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.3	
84-66-2	Diethyl Phthalate	4.7	U	4.7	1.0	
131-11-3	Dimethyl Phthalate	4.7	U	4.7	1.0	
206-44-0	Fluoranthene	4.7	U	4.7	1.0	
86-73-7	Fluorene	4.7	U	4.7	1.0	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.0	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	1.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.2	
78-59-1	Isophorone	4.7	U	4.7	1.0	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.3	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.0	
91-20-3	Naphthalene	4.7	U	4.7	1.0	
98-95-3	Nitrobenzene	4.7	U	4.7	1.6	
87-86-5	Pentachlorophenol (PCP)	47	U	47	6.9	
85-01-8	Phenanthrene	4.7	U	4.7	1.0	
108-95-2	Phenol	4.7	U	4.7	1.0	
129-00-0	Pyrene	4.7	U	4.7	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	109	28-157	10/30/14 16:17	
2-Fluorobiphenyl	90	39-119	10/30/14 16:17	
2-Fluorophenol	44	10-105	10/30/14 16:17	
Nitrobenzene-d5	83	37-117	10/30/14 16:17	
Phenol-d6	29	10-107	10/30/14 16:17	
p-Terphenyl-d14	114	40-133	10/30/14 16:17	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1100
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/31/14
		Date Analyzed:	11/10/14 23:43
Sample Name:	MW12R-OCT14	**Units:**	µg/L
Lab Code:	R1408538-002	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222243
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW068.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	940	U	940	
68476-31-3	Fuel Oil No. 4	940	U	940	
68476-33-5	Fuel Oil No. 6	940	U	940	
8006-61-9	Gasoline	940	U	940	
8008-20-6	Kerosene	940	U	940	
	Lube Oil	940	U	940	
112-40-3	n-Dodecane	940	U	940	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1230
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Analyzed:	10/30/14 14:26
Sample Name:	MW12S-OCT14	**Units:**	µg/L
Lab Code:	R1408538-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8454.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	**0.34**	BJ	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	1.0	U	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	**0.30**	J	1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1230
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Analyzed:	10/30/14 14:26
Sample Name:	MW12S-OCT14	**Units:**	µg/L
Lab Code:	R1408538-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8454.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	91	81-127	10/30/14 14:26	
4-Bromofluorobenzene	100	79-123	10/30/14 14:26	
Toluene-d8	106	83-120	10/30/14 14:26	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1230
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/29/14
		Date Analyzed:	10/30/14 16:43
Sample Name:	MW12S-OCT14	**Units:**	µg/L
Lab Code:	R1408538-003	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	419093
Prep Method:	EPA 3510C	**Extraction Lot:**	221957
Data File Name:	I:\ACQUDATA\5973D\Data\103014\AY734.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	4.7	U	4.7	1.0	
122-66-7	1,2-Diphenylhydrazine	4.7	U	4.7	1.0	
88-06-2	2,4,6-Trichlorophenol	4.7	U	4.7	1.4	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.3	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	1.5	
51-28-5	2,4-Dinitrophenol	47	U	47	20	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.6	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.8	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.0	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.4	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	4.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	11	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	2.2	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.2	
100-02-7	4-Nitrophenol	47	U	47	5.9	
83-32-9	Acenaphthene	4.7	U	4.7	1.0	
208-96-8	Acenaphthylene	4.7	U	4.7	1.0	
120-12-7	Anthracene	4.7	U	4.7	1.0	
56-55-3	Benz(a)anthracene	4.7	U	4.7	1.0	
92-87-5	Benzidine	94	U	94	90	
50-32-8	Benzo(a)pyrene	4.7	U	4.7	1.0	
205-99-2	3,4-Benzofluoranthene	4.7	U	4.7	1.0	
191-24-2	Benzo(g,h,i)perylene	4.7	U	4.7	1.0	
207-08-9	Benzo(k)fluoranthene	4.7	U	4.7	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.0	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	2.2	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	4.7	U	4.7	1.2	
85-68-7	Butyl Benzyl Phthalate	4.7	U	4.7	2.4	
218-01-9	Chrysene	4.7	U	4.7	1.0	
84-74-2	Di-n-butyl Phthalate	4.7	U	4.7	1.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1230
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/29/14
		Date Analyzed:	10/30/14 16:43
Sample Name:	MW12S-OCT14	**Units:**	µg/L
Lab Code:	R1408538-003	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	419093
Prep Method:	EPA 3510C	**Extraction Lot:**	221957
Data File Name:	I:\ACQUDATA\5973D\Data\103014\AY734.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	4.7	U	4.7	1.2	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.3	
84-66-2	Diethyl Phthalate	4.7	U	4.7	1.0	
131-11-3	Dimethyl Phthalate	4.7	U	4.7	1.0	
206-44-0	Fluoranthene	4.7	U	4.7	1.0	
86-73-7	Fluorene	4.7	U	4.7	1.0	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.0	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	1.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.2	
78-59-1	Isophorone	4.7	U	4.7	1.0	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.3	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.0	
91-20-3	Naphthalene	4.7	U	4.7	1.0	
98-95-3	Nitrobenzene	4.7	U	4.7	1.6	
87-86-5	Pentachlorophenol (PCP)	47	U	47	6.9	
85-01-8	Phenanthrene	4.7	U	4.7	1.0	
108-95-2	Phenol	4.7	U	4.7	1.0	
129-00-0	Pyrene	4.7	U	4.7	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	110	28-157	10/30/14 16:43	
2-Fluorobiphenyl	89	39-119	10/30/14 16:43	
2-Fluorophenol	44	10-105	10/30/14 16:43	
Nitrobenzene-d5	84	37-117	10/30/14 16:43	
Phenol-d6	28	10-107	10/30/14 16:43	
p-Terphenyl-d14	106	40-133	10/30/14 16:43	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1230
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/31/14
		Date Analyzed:	11/10/14 10:03
Sample Name:	MW12S-OCT14	**Units:**	µg/L
Lab Code:	R1408538-003	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222243
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW035.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	940	U	940	
68476-31-3	Fuel Oil No. 4	940	U	940	
68476-33-5	Fuel Oil No. 6	940	U	940	
8006-61-9	Gasoline	940	U	940	
8008-20-6	Kerosene	940	U	940	
	Lube Oil	940	U	940	
112-40-3	n-Dodecane	940	U	940	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1136
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Analyzed:	10/30/14 15:30
Sample Name:	MW5R-1027	**Units:**	µg/L
Lab Code:	R1408538-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8456.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**0.52**	J	2.0	0.26	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.46	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	0.24	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**23**		2.0	0.20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**4.2**		2.0	0.44	
95-50-1	1,2-Dichlorobenzene	2.0	U	2.0	0.20	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	0.36	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	0.30	
541-73-1	1,3-Dichlorobenzene	2.0	U	2.0	0.20	
106-46-7	1,4-Dichlorobenzene	2.0	U	2.0	0.30	
110-75-8	2-Chloroethyl Vinyl Ether	20	U	20	1.3	
67-64-1	Acetone	10	U	10	4.7	
71-43-2	Benzene	**2.3**		2.0	0.20	
75-27-4	Bromodichloromethane	2.0	U	2.0	0.30	
75-25-2	Bromoform	2.0	U	2.0	0.32	
74-83-9	Bromomethane	**0.50**	BJ	2.0	0.24	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	0.20	
108-90-7	Chlorobenzene	2.0	U	2.0	0.26	
75-00-3	Chloroethane	2.0	U	2.0	0.30	
67-66-3	Chloroform	2.0	U	2.0	0.26	
74-87-3	Chloromethane	2.0	U	2.0	0.32	
124-48-1	Dibromochloromethane	2.0	U	2.0	0.30	
75-09-2	Methylene Chloride	2.0	U	2.0	0.36	
100-41-4	Ethylbenzene	2.0	U	2.0	0.38	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	0.40	
108-88-3	Toluene	2.0	U	2.0	0.20	
79-01-6	Trichloroethene (TCE)	**36**		2.0	0.30	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	0.26	
75-01-4	Vinyl Chloride	**150**		2.0	0.28	
156-59-2	cis-1,2-Dichloroethene	**410**	E	2.0	0.36	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	0.28	
179601-23-1	m,p-Xylenes	4.0	U	4.0	0.34	
95-47-6	o-Xylene	2.0	U	2.0	0.38	
156-60-5	trans-1,2-Dichloroethene	**3.9**		2.0	0.30	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	0.20	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1136
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Analyzed:	10/30/14 15:30
Sample Name:	MW5R-1027	**Units:**	µg/L
Lab Code:	R1408538-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8456.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	2

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	88	81-127	10/30/14 15:30	
4-Bromofluorobenzene	100	79-123	10/30/14 15:30	
Toluene-d8	105	83-120	10/30/14 15:30	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1136
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Analyzed:	10/30/14 16:34
Sample Name:	MW5R-1027	**Units:**	µg/L
Lab Code:	R1408538-004	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8458.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	2.5

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**0.60**	DJ	2.5	0.33	
79-34-5	1,1,2,2-Tetrachloroethane	2.5	U	2.5	0.58	
79-00-5	1,1,2-Trichloroethane	2.5	U	2.5	0.30	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**23**	D	2.5	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**4.8**	D	2.5	0.55	
95-50-1	1,2-Dichlorobenzene	2.5	U	2.5	0.25	
107-06-2	1,2-Dichloroethane	2.5	U	2.5	0.45	
78-87-5	1,2-Dichloropropane	2.5	U	2.5	0.38	
541-73-1	1,3-Dichlorobenzene	2.5	U	2.5	0.25	
106-46-7	1,4-Dichlorobenzene	2.5	U	2.5	0.38	
110-75-8	2-Chloroethyl Vinyl Ether	25	U	25	1.6	
67-64-1	Acetone	13	U	13	5.8	
71-43-2	Benzene	**2.2**	DJ	2.5	0.25	
75-27-4	Bromodichloromethane	2.5	U	2.5	0.38	
75-25-2	Bromoform	2.5	U	2.5	0.40	
74-83-9	Bromomethane	**0.63**	BDJ	2.5	0.30	
56-23-5	Carbon Tetrachloride	2.5	U	2.5	0.25	
108-90-7	Chlorobenzene	2.5	U	2.5	0.33	
75-00-3	Chloroethane	2.5	U	2.5	0.38	
67-66-3	Chloroform	2.5	U	2.5	0.33	
74-87-3	Chloromethane	2.5	U	2.5	0.40	
124-48-1	Dibromochloromethane	2.5	U	2.5	0.38	
75-09-2	Methylene Chloride	2.5	U	2.5	0.45	
100-41-4	Ethylbenzene	2.5	U	2.5	0.48	
127-18-4	Tetrachloroethene (PCE)	2.5	U	2.5	0.50	
108-88-3	Toluene	2.5	U	2.5	0.25	
79-01-6	Trichloroethene (TCE)	**36**	D	2.5	0.38	
75-69-4	Trichlorofluoromethane (CFC 11)	2.5	U	2.5	0.33	
75-01-4	Vinyl Chloride	**150**	D	2.5	0.36	
156-59-2	cis-1,2-Dichloroethene	**430**	D	2.5	0.45	
10061-01-5	cis-1,3-Dichloropropene	2.5	U	2.5	0.36	
179601-23-1	m,p-Xylenes	5.0	U	5.0	0.43	
95-47-6	o-Xylene	2.5	U	2.5	0.48	
156-60-5	trans-1,2-Dichloroethene	**4.4**	D	2.5	0.38	
10061-02-6	trans-1,3-Dichloropropene	2.5	U	2.5	0.25	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1136
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Analyzed:	10/30/14 16:34
Sample Name:	MW5R-1027	**Units:**	µg/L
Lab Code:	R1408538-004	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8458.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	2.5

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	91	81-127	10/30/14 16:34	
4-Bromofluorobenzene	101	79-123	10/30/14 16:34	
Toluene-d8	108	83-120	10/30/14 16:34	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1136
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/29/14
		Date Analyzed:	10/30/14 17:09
Sample Name:	MW5R-1027	**Units:**	µg/L
Lab Code:	R1408538-004	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	419093
Prep Method:	EPA 3510C	**Extraction Lot:**	221957
Data File Name:	I:\ACQUDATA\5973D\Data\103014\AY735.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	4.7	U	4.7	1.0	
122-66-7	1,2-Diphenylhydrazine	4.7	U	4.7	1.0	
88-06-2	2,4,6-Trichlorophenol	4.7	U	4.7	1.4	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.3	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	1.5	
51-28-5	2,4-Dinitrophenol	47	U	47	20	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.6	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.8	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.0	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.4	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	4.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	11	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	2.2	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.2	
100-02-7	4-Nitrophenol	47	U	47	5.9	
83-32-9	Acenaphthene	4.7	U	4.7	1.0	
208-96-8	Acenaphthylene	4.7	U	4.7	1.0	
120-12-7	Anthracene	4.7	U	4.7	1.0	
56-55-3	Benz(a)anthracene	4.7	U	4.7	1.0	
92-87-5	Benzidine	94	U	94	90	
50-32-8	Benzo(a)pyrene	4.7	U	4.7	1.0	
205-99-2	3,4-Benzofluoranthene	4.7	U	4.7	1.0	
191-24-2	Benzo(g,h,i)perylene	4.7	U	4.7	1.0	
207-08-9	Benzo(k)fluoranthene	4.7	U	4.7	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.0	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	2.2	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	4.7	U	4.7	1.2	
85-68-7	Butyl Benzyl Phthalate	4.7	U	4.7	2.4	
218-01-9	Chrysene	4.7	U	4.7	1.0	
84-74-2	Di-n-butyl Phthalate	4.7	U	4.7	1.0	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1136
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/29/14
		Date Analyzed:	10/30/14 17:09
Sample Name:	MW5R-1027	**Units:**	µg/L
Lab Code:	R1408538-004	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	419093
Prep Method:	EPA 3510C	**Extraction Lot:**	221957
Data File Name:	I:\ACQUDATA\5973D\Data\103014\AY735.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	4.7	U	4.7	1.2	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.3	
84-66-2	Diethyl Phthalate	4.7	U	4.7	1.0	
131-11-3	Dimethyl Phthalate	4.7	U	4.7	1.0	
206-44-0	Fluoranthene	4.7	U	4.7	1.0	
86-73-7	Fluorene	4.7	U	4.7	1.0	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.0	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	1.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.2	
78-59-1	Isophorone	4.7	U	4.7	1.0	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.3	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.0	
91-20-3	Naphthalene	4.7	U	4.7	1.0	
98-95-3	Nitrobenzene	4.7	U	4.7	1.6	
87-86-5	Pentachlorophenol (PCP)	47	U	47	6.9	
85-01-8	Phenanthrene	4.7	U	4.7	1.0	
108-95-2	Phenol	4.7	U	4.7	1.0	
129-00-0	Pyrene	4.7	U	4.7	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	116	28-157	10/30/14 17:09	
2-Fluorobiphenyl	93	39-119	10/30/14 17:09	
2-Fluorophenol	51	10-105	10/30/14 17:09	
Nitrobenzene-d5	88	37-117	10/30/14 17:09	
Phenol-d6	34	10-107	10/30/14 17:09	
p-Terphenyl-d14	111	40-133	10/30/14 17:09	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1136
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/31/14
		Date Analyzed:	11/10/14 10:28
Sample Name:	MW5R-1027	**Units:**	µg/L
Lab Code:	R1408538-004	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222243
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW036.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	940	U	940	
68476-31-3	Fuel Oil No. 4	940	U	940	
68476-33-5	Fuel Oil No. 6	940	U	940	
8006-61-9	Gasoline	940	U	940	
8008-20-6	Kerosene	940	U	940	
	Lube Oil	940	U	940	
112-40-3	n-Dodecane	940	U	940	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1300
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Analyzed:	10/30/14 17:06
Sample Name:	MW9S-1027	**Units:**	µg/L
Lab Code:	R1408538-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8459.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**1.2**		1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**9.1**		1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**0.22**	J	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	**0.56**	J	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	**0.12**	J	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	1.0	U	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	**0.47**	J	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	1.0	U	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	**62**		1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	**54**		1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	**1.1**		1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	**49**		1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	**2.9**		1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1300
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Analyzed:	10/30/14 17:06
Sample Name:	MW9S-1027	**Units:**	µg/L
Lab Code:	R1408538-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8459.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	90	81-127	10/30/14 17:06	
4-Bromofluorobenzene	97	79-123	10/30/14 17:06	
Toluene-d8	102	83-120	10/30/14 17:06	

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1300
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/29/14
		Date Analyzed:	10/30/14 17:35
Sample Name:	MW9S-1027	**Units:**	µg/L
Lab Code:	R1408538-005	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	419093
Prep Method:	EPA 3510C	**Extraction Lot:**	221957
Data File Name:	I:\ACQUDATA\5973D\Data\103014\AY736.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	4.7	U	4.7	1.0	
122-66-7	1,2-Diphenylhydrazine	4.7	U	4.7	1.0	
88-06-2	2,4,6-Trichlorophenol	4.7	U	4.7	1.4	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.3	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	1.5	
51-28-5	2,4-Dinitrophenol	47	U	47	20	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.6	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.8	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.0	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.4	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	4.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	11	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	2.2	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.2	
100-02-7	4-Nitrophenol	47	U	47	5.9	
83-32-9	Acenaphthene	4.7	U	4.7	1.0	
208-96-8	Acenaphthylene	4.7	U	4.7	1.0	
120-12-7	Anthracene	4.7	U	4.7	1.0	
56-55-3	Benz(a)anthracene	4.7	U	4.7	1.0	
92-87-5	Benzidine	94	U	94	90	
50-32-8	Benzo(a)pyrene	4.7	U	4.7	1.0	
205-99-2	3,4-Benzofluoranthene	4.7	U	4.7	1.0	
191-24-2	Benzo(g,h,i)perylene	4.7	U	4.7	1.0	
207-08-9	Benzo(k)fluoranthene	4.7	U	4.7	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.0	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	2.2	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	4.7	U	4.7	1.2	
85-68-7	Butyl Benzyl Phthalate	4.7	U	4.7	2.4	
218-01-9	Chrysene	4.7	U	4.7	1.0	
84-74-2	Di-n-butyl Phthalate	4.7	U	4.7	1.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1300
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/29/14
		Date Analyzed:	10/30/14 17:35
Sample Name:	MW9S-1027	**Units:**	µg/L
Lab Code:	R1408538-005	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	419093
Prep Method:	EPA 3510C	**Extraction Lot:**	221957
Data File Name:	I:\ACQUDATA\5973D\Data\103014\AY736.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	4.7	U	4.7	1.2	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.3	
84-66-2	Diethyl Phthalate	4.7	U	4.7	1.0	
131-11-3	Dimethyl Phthalate	4.7	U	4.7	1.0	
206-44-0	Fluoranthene	4.7	U	4.7	1.0	
86-73-7	Fluorene	4.7	U	4.7	1.0	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.0	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	1.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.2	
78-59-1	Isophorone	4.7	U	4.7	1.0	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.3	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.0	
91-20-3	Naphthalene	4.7	U	4.7	1.0	
98-95-3	Nitrobenzene	4.7	U	4.7	1.6	
87-86-5	Pentachlorophenol (PCP)	47	U	47	6.9	
85-01-8	Phenanthrene	4.7	U	4.7	1.0	
108-95-2	Phenol	4.7	U	4.7	1.0	
129-00-0	Pyrene	4.7	U	4.7	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	111	28-157	10/30/14 17:35	
2-Fluorobiphenyl	89	39-119	10/30/14 17:35	
2-Fluorophenol	50	10-105	10/30/14 17:35	
Nitrobenzene-d5	87	37-117	10/30/14 17:35	
Phenol-d6	33	10-107	10/30/14 17:35	
p-Terphenyl-d14	113	40-133	10/30/14 17:35	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1300
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/31/14
		Date Analyzed:	11/10/14 10:53
Sample Name:	MW9S-1027	**Units:**	µg/L
Lab Code:	R1408538-005	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222243
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW037.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	940	U	940	
68476-31-3	Fuel Oil No. 4	940	U	940	
68476-33-5	Fuel Oil No. 6	940	U	940	
8006-61-9	Gasoline	940	U	940	
8008-20-6	Kerosene	940	U	940	
	Lube Oil	940	U	940	
112-40-3	n-Dodecane	940	U	940	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1516
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Analyzed:	10/30/14 14:59
Sample Name:	MW13S-1027	**Units:**	µg/L
Lab Code:	R1408538-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8455.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**0.51**	J	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**0.73**	J	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	**0.22**	BJ	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	1.0	U	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	**0.31**	J	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	**1.2**		1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	**0.21**	J	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	**6.7**		1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	**0.22**	J	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1516
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Analyzed:	10/30/14 14:59
Sample Name:	MW13S-1027	**Units:**	µg/L
Lab Code:	R1408538-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8455.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	90	81-127	10/30/14 14:59	
4-Bromofluorobenzene	99	79-123	10/30/14 14:59	
Toluene-d8	104	83-120	10/30/14 14:59	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1516
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/29/14
		Date Analyzed:	10/30/14 18:02
Sample Name:	MW13S-1027	**Units:**	µg/L
Lab Code:	R1408538-006	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	419093
Prep Method:	EPA 3510C	**Extraction Lot:**	221957
Data File Name:	I:\ACQUDATA\5973D\Data\103014\AY737.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	4.7	U	4.7	1.0	
122-66-7	1,2-Diphenylhydrazine	4.7	U	4.7	1.0	
88-06-2	2,4,6-Trichlorophenol	4.7	U	4.7	1.4	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.3	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	1.5	
51-28-5	2,4-Dinitrophenol	47	U	47	20	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.6	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.8	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.0	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.4	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	4.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	11	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	2.2	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.2	
100-02-7	4-Nitrophenol	47	U	47	5.9	
83-32-9	Acenaphthene	4.7	U	4.7	1.0	
208-96-8	Acenaphthylene	4.7	U	4.7	1.0	
120-12-7	Anthracene	4.7	U	4.7	1.0	
56-55-3	Benz(a)anthracene	4.7	U	4.7	1.0	
92-87-5	Benzidine	94	U	94	90	
50-32-8	Benzo(a)pyrene	4.7	U	4.7	1.0	
205-99-2	3,4-Benzofluoranthene	4.7	U	4.7	1.0	
191-24-2	Benzo(g,h,i)perylene	4.7	U	4.7	1.0	
207-08-9	Benzo(k)fluoranthene	4.7	U	4.7	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.0	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	2.2	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	4.7	U	4.7	1.2	
85-68-7	Butyl Benzyl Phthalate	4.7	U	4.7	2.4	
218-01-9	Chrysene	4.7	U	4.7	1.0	
84-74-2	Di-n-butyl Phthalate	4.7	U	4.7	1.0	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1516
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/29/14
		Date Analyzed:	10/30/14 18:02
Sample Name:	MW13S-1027	**Units:**	µg/L
Lab Code:	R1408538-006	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	419093
Prep Method:	EPA 3510C	**Extraction Lot:**	221957
Data File Name:	I:\ACQUDATA\5973D\Data\103014\AY737.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	4.7	U	4.7	1.2	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.3	
84-66-2	Diethyl Phthalate	4.7	U	4.7	1.0	
131-11-3	Dimethyl Phthalate	4.7	U	4.7	1.0	
206-44-0	Fluoranthene	4.7	U	4.7	1.0	
86-73-7	Fluorene	4.7	U	4.7	1.0	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.0	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	1.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.2	
78-59-1	Isophorone	4.7	U	4.7	1.0	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.3	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.0	
91-20-3	Naphthalene	4.7	U	4.7	1.0	
98-95-3	Nitrobenzene	4.7	U	4.7	1.6	
87-86-5	Pentachlorophenol (PCP)	47	U	47	6.9	
85-01-8	Phenanthrene	4.7	U	4.7	1.0	
108-95-2	Phenol	4.7	U	4.7	1.0	
129-00-0	Pyrene	4.7	U	4.7	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	108	28-157	10/30/14 18:02	
2-Fluorobiphenyl	86	39-119	10/30/14 18:02	
2-Fluorophenol	46	10-105	10/30/14 18:02	
Nitrobenzene-d5	83	37-117	10/30/14 18:02	
Phenol-d6	31	10-107	10/30/14 18:02	
p-Terphenyl-d14	106	40-133	10/30/14 18:02	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1516
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/31/14
		Date Analyzed:	11/10/14 11:18
Sample Name:	MW13S-1027	**Units:**	µg/L
Lab Code:	R1408538-006	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222243
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW038.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	940	U	940	
68476-31-3	Fuel Oil No. 4	940	U	940	
68476-33-5	Fuel Oil No. 6	940	U	940	
8006-61-9	Gasoline	940	U	940	
8008-20-6	Kerosene	940	U	940	
	Lube Oil	940	U	940	
112-40-3	n-Dodecane	940	U	940	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1705
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Analyzed:	10/30/14 16:01
Sample Name:	MW8R-OCT14	**Units:**	µg/L
Lab Code:	R1408538-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8457.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	25

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	25	U	25	3.3	
79-34-5	1,1,2,2-Tetrachloroethane	25	U	25	5.8	
79-00-5	1,1,2-Trichloroethane	25	U	25	3.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**140**		25	2.5	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**50**		25	5.5	
95-50-1	1,2-Dichlorobenzene	25	U	25	2.5	
107-06-2	1,2-Dichloroethane	25	U	25	4.5	
78-87-5	1,2-Dichloropropane	25	U	25	3.8	
541-73-1	1,3-Dichlorobenzene	25	U	25	2.5	
106-46-7	1,4-Dichlorobenzene	25	U	25	3.8	
110-75-8	2-Chloroethyl Vinyl Ether	250	U	250	16	
67-64-1	Acetone	130	U	130	58	
71-43-2	Benzene	25	U	25	2.5	
75-27-4	Bromodichloromethane	25	U	25	3.8	
75-25-2	Bromoform	25	U	25	4.0	
74-83-9	Bromomethane	25	U	25	3.0	
56-23-5	Carbon Tetrachloride	25	U	25	2.5	
108-90-7	Chlorobenzene	25	U	25	3.3	
75-00-3	Chloroethane	25	U	25	3.8	
67-66-3	Chloroform	25	U	25	3.3	
74-87-3	Chloromethane	25	U	25	4.0	
124-48-1	Dibromochloromethane	25	U	25	3.8	
75-09-2	Methylene Chloride	**5.0**	J	25	4.5	
100-41-4	Ethylbenzene	**12**	J	25	4.8	
127-18-4	Tetrachloroethene (PCE)	25	U	25	5.0	
108-88-3	Toluene	25	U	25	2.5	
79-01-6	Trichloroethene (TCE)	**11**	J	25	3.8	
75-69-4	Trichlorofluoromethane (CFC 11)	25	U	25	3.3	
75-01-4	Vinyl Chloride	**670**		25	3.6	
156-59-2	cis-1,2-Dichloroethene	**4500**		25	4.5	
10061-01-5	cis-1,3-Dichloropropene	25	U	25	3.6	
179601-23-1	m,p-Xylenes	50	U	50	4.3	
95-47-6	o-Xylene	25	U	25	4.8	
156-60-5	trans-1,2-Dichloroethene	**6.5**	J	25	3.8	
10061-02-6	trans-1,3-Dichloropropene	25	U	25	2.5	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1705
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Analyzed:	10/30/14 16:01
Sample Name:	MW8R-OCT14	**Units:**	µg/L
Lab Code:	R1408538-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8457.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	25

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	90	81-127	10/30/14 16:01	
4-Bromofluorobenzene	102	79-123	10/30/14 16:01	
Toluene-d8	100	83-120	10/30/14 16:01	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1705
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/29/14
		Date Analyzed:	10/30/14 18:28
Sample Name:	MW8R-OCT14	**Units:**	µg/L
Lab Code:	R1408538-007	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	419093
Prep Method:	EPA 3510C	**Extraction Lot:**	221957
Data File Name:	I:\ACQUDATA\5973D\Data\103014\AY738.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	4.7	U	4.7	1.0	
122-66-7	1,2-Diphenylhydrazine	4.7	U	4.7	1.0	
88-06-2	2,4,6-Trichlorophenol	4.7	U	4.7	1.4	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.3	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	1.5	
51-28-5	2,4-Dinitrophenol	47	U	47	20	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.6	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.8	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.0	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.4	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	4.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	11	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	2.2	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.2	
100-02-7	4-Nitrophenol	47	U	47	5.9	
83-32-9	Acenaphthene	4.7	U	4.7	1.0	
208-96-8	Acenaphthylene	4.7	U	4.7	1.0	
120-12-7	Anthracene	4.7	U	4.7	1.0	
56-55-3	Benz(a)anthracene	4.7	U	4.7	1.0	
92-87-5	Benzidine	94	U	94	90	
50-32-8	Benzo(a)pyrene	4.7	U	4.7	1.0	
205-99-2	3,4-Benzofluoranthene	4.7	U	4.7	1.0	
191-24-2	Benzo(g,h,i)perylene	4.7	U	4.7	1.0	
207-08-9	Benzo(k)fluoranthene	4.7	U	4.7	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.0	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	2.2	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	4.7	U	4.7	1.2	
85-68-7	Butyl Benzyl Phthalate	4.7	U	4.7	2.4	
218-01-9	Chrysene	4.7	U	4.7	1.0	
84-74-2	Di-n-butyl Phthalate	4.7	U	4.7	1.0	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1705
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/29/14
		Date Analyzed:	10/30/14 18:28
Sample Name:	MW8R-OCT14	**Units:**	µg/L
Lab Code:	R1408538-007	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	419093
Prep Method:	EPA 3510C	**Extraction Lot:**	221957
Data File Name:	I:\ACQUDATA\5973D\Data\103014\AY738.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	4.7	U	4.7	1.2	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.3	
84-66-2	Diethyl Phthalate	4.7	U	4.7	1.0	
131-11-3	Dimethyl Phthalate	4.7	U	4.7	1.0	
206-44-0	Fluoranthene	4.7	U	4.7	1.0	
86-73-7	Fluorene	4.7	U	4.7	1.0	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.0	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	1.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.2	
78-59-1	Isophorone	4.7	U	4.7	1.0	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.3	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.0	
91-20-3	Naphthalene	4.7	U	4.7	1.0	
98-95-3	Nitrobenzene	4.7	U	4.7	1.6	
87-86-5	Pentachlorophenol (PCP)	47	U	47	6.9	
85-01-8	Phenanthrene	4.7	U	4.7	1.0	
108-95-2	Phenol	4.7	U	4.7	1.0	
129-00-0	Pyrene	4.7	U	4.7	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	116	28-157	10/30/14 18:28	
2-Fluorobiphenyl	90	39-119	10/30/14 18:28	
2-Fluorophenol	52	10-105	10/30/14 18:28	
Nitrobenzene-d5	87	37-117	10/30/14 18:28	
Phenol-d6	33	10-107	10/30/14 18:28	
p-Terphenyl-d14	109	40-133	10/30/14 18:28	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/27/14 1705
Sample Matrix:	Water	**Date Received:**	10/27/14
		Date Extracted:	10/31/14
		Date Analyzed:	11/10/14 11:43
Sample Name:	MW8R-OCT14	**Units:**	µg/L
Lab Code:	R1408538-007	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222243
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW039.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	940	U	940	
68476-31-3	Fuel Oil No. 4	940	U	940	
68476-33-5	Fuel Oil No. 6	940	U	940	
8006-61-9	Gasoline	940	U	940	
8008-20-6	Kerosene	940	U	940	
	Lube Oil	940	U	940	
112-40-3	n-Dodecane	940	U	940	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 0815
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Analyzed:	11/4/14 12:56
Sample Name:	TB1028-02	**Units:**	µg/L
Lab Code:	R1408538-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8553.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	1.0	U	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	**0.20**	BJ	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 0815
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Analyzed:	11/4/14 12:56
Sample Name:	TB1028-02	**Units:**	µg/L
Lab Code:	R1408538-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8553.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	90	81-127	11/4/14 12:56	
4-Bromofluorobenzene	100	79-123	11/4/14 12:56	
Toluene-d8	99	83-120	11/4/14 12:56	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1010
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Analyzed:	11/4/14 13:28
Sample Name:	MW-2R-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8554.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**0.33**	J	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**16**		1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**3.1**		1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	1.0	U	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	1.0	U	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	**0.64**	J	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	**1.4**		1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	**120**	E	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	**250**	E	1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	**1.4**		1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1010
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Analyzed:	11/4/14 13:28
Sample Name:	MW-2R-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8554.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	94	81-127	11/4/14 13:28	
4-Bromofluorobenzene	99	79-123	11/4/14 13:28	
Toluene-d8	99	83-120	11/4/14 13:28	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1010
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Analyzed:	11/4/14 18:11
Sample Name:	MW-2R-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-009	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8563.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**0.32**	DJ	2.0	0.26	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.46	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	0.24	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**13**	D	2.0	0.20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**2.4**	D	2.0	0.44	
95-50-1	1,2-Dichlorobenzene	2.0	U	2.0	0.20	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	0.36	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	0.30	
541-73-1	1,3-Dichlorobenzene	2.0	U	2.0	0.20	
106-46-7	1,4-Dichlorobenzene	2.0	U	2.0	0.30	
110-75-8	2-Chloroethyl Vinyl Ether	20	U	20	1.3	
67-64-1	Acetone	10	U	10	4.7	
71-43-2	Benzene	2.0	U	2.0	0.20	
75-27-4	Bromodichloromethane	2.0	U	2.0	0.30	
75-25-2	Bromoform	2.0	U	2.0	0.32	
74-83-9	Bromomethane	2.0	U	2.0	0.24	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	0.20	
108-90-7	Chlorobenzene	2.0	U	2.0	0.26	
75-00-3	Chloroethane	2.0	U	2.0	0.30	
67-66-3	Chloroform	2.0	U	2.0	0.26	
74-87-3	Chloromethane	2.0	U	2.0	0.32	
124-48-1	Dibromochloromethane	2.0	U	2.0	0.30	
75-09-2	Methylene Chloride	2.0	U	2.0	0.36	
100-41-4	Ethylbenzene	2.0	U	2.0	0.38	
127-18-4	Tetrachloroethene (PCE)	**0.54**	DJ	2.0	0.40	
108-88-3	Toluene	2.0	U	2.0	0.20	
79-01-6	Trichloroethene (TCE)	**1.2**	DJ	2.0	0.30	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	0.26	
75-01-4	Vinyl Chloride	**100**	D	2.0	0.28	
156-59-2	cis-1,2-Dichloroethene	**230**	D	2.0	0.36	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	0.28	
179601-23-1	m,p-Xylenes	4.0	U	4.0	0.34	
95-47-6	o-Xylene	2.0	U	2.0	0.38	
156-60-5	trans-1,2-Dichloroethene	**1.3**	DJ	2.0	0.30	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	0.20	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1010
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Analyzed:	11/4/14 18:11
Sample Name:	MW-2R-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-009	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8563.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	2

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	81-127	11/4/14 18:11	
4-Bromofluorobenzene	98	79-123	11/4/14 18:11	
Toluene-d8	96	83-120	11/4/14 18:11	

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1010
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 18:26
Sample Name:	MW-2R-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-009	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY806.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	4.7	U	4.7	1.0	
122-66-7	1,2-Diphenylhydrazine	4.7	U	4.7	1.0	
88-06-2	2,4,6-Trichlorophenol	4.7	U	4.7	1.4	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.3	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	1.5	
51-28-5	2,4-Dinitrophenol	47	U	47	20	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.6	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.8	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.0	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.4	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	4.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	11	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	2.2	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.2	
100-02-7	4-Nitrophenol	47	U	47	5.9	
83-32-9	Acenaphthene	4.7	U	4.7	1.0	
208-96-8	Acenaphthylene	4.7	U	4.7	1.0	
120-12-7	Anthracene	4.7	U	4.7	1.0	
56-55-3	Benz(a)anthracene	4.7	U	4.7	1.0	
92-87-5	Benzidine	94	U	94	90	
50-32-8	Benzo(a)pyrene	4.7	U	4.7	1.0	
205-99-2	3,4-Benzofluoranthene	4.7	U	4.7	1.0	
191-24-2	Benzo(g,h,i)perylene	4.7	U	4.7	1.0	
207-08-9	Benzo(k)fluoranthene	4.7	U	4.7	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.0	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	2.2	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	4.7	U	4.7	1.2	
85-68-7	Butyl Benzyl Phthalate	4.7	U	4.7	2.4	
218-01-9	Chrysene	4.7	U	4.7	1.0	
84-74-2	Di-n-butyl Phthalate	4.7	U	4.7	1.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1010
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 18:26
Sample Name:	MW-2R-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-009	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY806.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	4.7	U	4.7	1.2	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.3	
84-66-2	Diethyl Phthalate	4.7	U	4.7	1.0	
131-11-3	Dimethyl Phthalate	4.7	U	4.7	1.0	
206-44-0	Fluoranthene	4.7	U	4.7	1.0	
86-73-7	Fluorene	4.7	U	4.7	1.0	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.0	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	1.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.2	
78-59-1	Isophorone	4.7	U	4.7	1.0	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.3	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.0	
91-20-3	Naphthalene	4.7	U	4.7	1.0	
98-95-3	Nitrobenzene	4.7	U	4.7	1.6	
87-86-5	Pentachlorophenol (PCP)	47	U	47	6.9	
85-01-8	Phenanthrene	4.7	U	4.7	1.0	
108-95-2	Phenol	4.7	U	4.7	1.0	
129-00-0	Pyrene	4.7	U	4.7	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	113	28-157	11/5/14 18:26	
2-Fluorobiphenyl	91	39-119	11/5/14 18:26	
2-Fluorophenol	48	10-105	11/5/14 18:26	
Nitrobenzene-d5	87	37-117	11/5/14 18:26	
Phenol-d6	30	10-107	11/5/14 18:26	
p-Terphenyl-d14	109	40-133	11/5/14 18:26	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1010
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/10/14 14:12
Sample Name:	MW-2R-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-009	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222473
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW045.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	940	U	940	
68476-31-3	Fuel Oil No. 4	940	U	940	
68476-33-5	Fuel Oil No. 6	940	U	940	
8006-61-9	Gasoline	940	U	940	
8008-20-6	Kerosene	940	U	940	
	Lube Oil	940	U	940	
112-40-3	n-Dodecane	940	U	940	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1156
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Analyzed:	11/4/14 13:59
Sample Name:	MW-2S-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8555.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**1.7**		1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	1.0	U	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	1.0	U	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	**0.26**	J	1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	**1.1**		1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	**3.2**		1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1156
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Analyzed:	11/4/14 13:59
Sample Name:	MW-2S-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8555.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	88	81-127	11/4/14 13:59	
4-Bromofluorobenzene	108	79-123	11/4/14 13:59	
Toluene-d8	101	83-120	11/4/14 13:59	

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1156
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 18:52
Sample Name:	MW-2S-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-010	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY807.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	4.7	U	4.7	1.0	
122-66-7	1,2-Diphenylhydrazine	4.7	U	4.7	1.0	
88-06-2	2,4,6-Trichlorophenol	4.7	U	4.7	1.4	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.3	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	1.5	
51-28-5	2,4-Dinitrophenol	47	U	47	20	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.6	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.8	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.0	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.4	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	4.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	11	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	2.2	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.2	
100-02-7	4-Nitrophenol	47	U	47	5.9	
83-32-9	Acenaphthene	4.7	U	4.7	1.0	
208-96-8	Acenaphthylene	4.7	U	4.7	1.0	
120-12-7	Anthracene	4.7	U	4.7	1.0	
56-55-3	Benz(a)anthracene	4.7	U	4.7	1.0	
92-87-5	Benzidine	94	U	94	90	
50-32-8	Benzo(a)pyrene	4.7	U	4.7	1.0	
205-99-2	3,4-Benzofluoranthene	4.7	U	4.7	1.0	
191-24-2	Benzo(g,h,i)perylene	4.7	U	4.7	1.0	
207-08-9	Benzo(k)fluoranthene	4.7	U	4.7	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.0	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	2.2	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	4.7	U	4.7	1.2	
85-68-7	Butyl Benzyl Phthalate	4.7	U	4.7	2.4	
218-01-9	Chrysene	4.7	U	4.7	1.0	
84-74-2	Di-n-butyl Phthalate	4.7	U	4.7	1.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1156
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 18:52
Sample Name:	MW-2S-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-010	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY807.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	4.7	U	4.7	1.2	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.3	
84-66-2	Diethyl Phthalate	4.7	U	4.7	1.0	
131-11-3	Dimethyl Phthalate	4.7	U	4.7	1.0	
206-44-0	Fluoranthene	4.7	U	4.7	1.0	
86-73-7	Fluorene	4.7	U	4.7	1.0	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.0	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	1.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.2	
78-59-1	Isophorone	4.7	U	4.7	1.0	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.3	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.0	
91-20-3	Naphthalene	4.7	U	4.7	1.0	
98-95-3	Nitrobenzene	4.7	U	4.7	1.6	
87-86-5	Pentachlorophenol (PCP)	47	U	47	6.9	
85-01-8	Phenanthrene	4.7	U	4.7	1.0	
108-95-2	Phenol	4.7	U	4.7	1.0	
129-00-0	Pyrene	4.7	U	4.7	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	112	28-157	11/5/14 18:52	
2-Fluorobiphenyl	89	39-119	11/5/14 18:52	
2-Fluorophenol	48	10-105	11/5/14 18:52	
Nitrobenzene-d5	84	37-117	11/5/14 18:52	
Phenol-d6	30	10-107	11/5/14 18:52	
p-Terphenyl-d14	107	40-133	11/5/14 18:52	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1156
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/10/14 14:37
Sample Name:	MW-2S-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-010	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222473
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW046.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	940	U	940	
68476-31-3	Fuel Oil No. 4	940	U	940	
68476-33-5	Fuel Oil No. 6	940	U	940	
8006-61-9	Gasoline	940	U	940	
8008-20-6	Kerosene	940	U	940	
	Lube Oil	940	U	940	
112-40-3	n-Dodecane	**1100**		940	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1156
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Analyzed:	11/4/14 14:30
Sample Name:	MW-2S-OCT 14Q	**Units:**	µg/L
Lab Code:	R1408538-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8556.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**1.8**		1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	1.0	U	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	1.0	U	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	**0.19**	J	1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	**0.28**	J	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	**1.3**		1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1156
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Analyzed:	11/4/14 14:30
Sample Name:	MW-2S-OCT 14Q	**Units:**	µg/L
Lab Code:	R1408538-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8556.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	90	81-127	11/4/14 14:30	
4-Bromofluorobenzene	95	79-123	11/4/14 14:30	
Toluene-d8	98	83-120	11/4/14 14:30	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1156
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 19:18
Sample Name:	MW-2S-OCT 14Q	**Units:**	µg/L
Lab Code:	R1408538-011	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY808.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	4.7	U	4.7	1.0	
122-66-7	1,2-Diphenylhydrazine	4.7	U	4.7	1.0	
88-06-2	2,4,6-Trichlorophenol	4.7	U	4.7	1.4	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.3	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	1.5	
51-28-5	2,4-Dinitrophenol	47	U	47	20	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.6	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.8	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.0	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.4	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	4.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	11	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	2.2	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.2	
100-02-7	4-Nitrophenol	47	U	47	5.9	
83-32-9	Acenaphthene	4.7	U	4.7	1.0	
208-96-8	Acenaphthylene	4.7	U	4.7	1.0	
120-12-7	Anthracene	4.7	U	4.7	1.0	
56-55-3	Benz(a)anthracene	4.7	U	4.7	1.0	
92-87-5	Benzidine	94	U	94	90	
50-32-8	Benzo(a)pyrene	4.7	U	4.7	1.0	
205-99-2	3,4-Benzofluoranthene	4.7	U	4.7	1.0	
191-24-2	Benzo(g,h,i)perylene	4.7	U	4.7	1.0	
207-08-9	Benzo(k)fluoranthene	4.7	U	4.7	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.0	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	2.2	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	4.7	U	4.7	1.2	
85-68-7	Butyl Benzyl Phthalate	4.7	U	4.7	2.4	
218-01-9	Chrysene	4.7	U	4.7	1.0	
84-74-2	Di-n-butyl Phthalate	4.7	U	4.7	1.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1156
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 19:18
Sample Name:	MW-2S-OCT 14Q	**Units:**	µg/L
Lab Code:	R1408538-011	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY808.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	4.7	U	4.7	1.2	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.3	
84-66-2	Diethyl Phthalate	4.7	U	4.7	1.0	
131-11-3	Dimethyl Phthalate	4.7	U	4.7	1.0	
206-44-0	Fluoranthene	4.7	U	4.7	1.0	
86-73-7	Fluorene	4.7	U	4.7	1.0	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.0	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	1.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.2	
78-59-1	Isophorone	4.7	U	4.7	1.0	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.3	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.0	
91-20-3	Naphthalene	4.7	U	4.7	1.0	
98-95-3	Nitrobenzene	4.7	U	4.7	1.6	
87-86-5	Pentachlorophenol (PCP)	47	U	47	6.9	
85-01-8	Phenanthrene	4.7	U	4.7	1.0	
108-95-2	Phenol	4.7	U	4.7	1.0	
129-00-0	Pyrene	4.7	U	4.7	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	103	28-157	11/5/14 19:18	
2-Fluorobiphenyl	84	39-119	11/5/14 19:18	
2-Fluorophenol	46	10-105	11/5/14 19:18	
Nitrobenzene-d5	82	37-117	11/5/14 19:18	
Phenol-d6	28	10-107	11/5/14 19:18	
p-Terphenyl-d14	101	40-133	11/5/14 19:18	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1156
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/10/14 15:02
Sample Name:	MW-2S-OCT 14Q	**Units:**	µg/L
Lab Code:	R1408538-011	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222473
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW047.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	940	U	940	
68476-31-3	Fuel Oil No. 4	940	U	940	
68476-33-5	Fuel Oil No. 6	940	U	940	
8006-61-9	Gasoline	940	U	940	
8008-20-6	Kerosene	940	U	940	
	Lube Oil	940	U	940	
112-40-3	n-Dodecane	**1300**		940	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1150
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Analyzed:	11/4/14 15:02
Sample Name:	MW-14R-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8557.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**0.79**	J	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**0.59**	J	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	1.0	U	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	1.0	U	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	**44**		1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	**0.73**	J	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	**9.5**		1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	**3.6**		1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1150
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Analyzed:	11/4/14 15:02
Sample Name:	MW-14R-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8557.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	93	81-127	11/4/14 15:02	
4-Bromofluorobenzene	97	79-123	11/4/14 15:02	
Toluene-d8	99	83-120	11/4/14 15:02	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1150
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 19:44
Sample Name:	MW-14R-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-012	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY809.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	4.7	U	4.7	1.0	
122-66-7	1,2-Diphenylhydrazine	4.7	U	4.7	1.0	
88-06-2	2,4,6-Trichlorophenol	4.7	U	4.7	1.4	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.3	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	1.5	
51-28-5	2,4-Dinitrophenol	47	U	47	20	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.6	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.8	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.0	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.4	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	4.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	11	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	2.2	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.2	
100-02-7	4-Nitrophenol	47	U	47	5.9	
83-32-9	Acenaphthene	4.7	U	4.7	1.0	
208-96-8	Acenaphthylene	4.7	U	4.7	1.0	
120-12-7	Anthracene	4.7	U	4.7	1.0	
56-55-3	Benz(a)anthracene	4.7	U	4.7	1.0	
92-87-5	Benzidine	94	U	94	90	
50-32-8	Benzo(a)pyrene	4.7	U	4.7	1.0	
205-99-2	3,4-Benzofluoranthene	4.7	U	4.7	1.0	
191-24-2	Benzo(g,h,i)perylene	4.7	U	4.7	1.0	
207-08-9	Benzo(k)fluoranthene	4.7	U	4.7	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.0	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	2.2	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	4.7	U	4.7	1.2	
85-68-7	Butyl Benzyl Phthalate	4.7	U	4.7	2.4	
218-01-9	Chrysene	4.7	U	4.7	1.0	
84-74-2	Di-n-butyl Phthalate	4.7	U	4.7	1.0	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1150
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 19:44
Sample Name:	MW-14R-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-012	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY809.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	4.7	U	4.7	1.2	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.3	
84-66-2	Diethyl Phthalate	4.7	U	4.7	1.0	
131-11-3	Dimethyl Phthalate	4.7	U	4.7	1.0	
206-44-0	Fluoranthene	4.7	U	4.7	1.0	
86-73-7	Fluorene	4.7	U	4.7	1.0	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.0	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	1.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.2	
78-59-1	Isophorone	4.7	U	4.7	1.0	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.3	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.0	
91-20-3	Naphthalene	4.7	U	4.7	1.0	
98-95-3	Nitrobenzene	4.7	U	4.7	1.6	
87-86-5	Pentachlorophenol (PCP)	47	U	47	6.9	
85-01-8	Phenanthrene	4.7	U	4.7	1.0	
108-95-2	Phenol	4.7	U	4.7	1.0	
129-00-0	Pyrene	4.7	U	4.7	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	109	28-157	11/5/14 19:44	
2-Fluorobiphenyl	88	39-119	11/5/14 19:44	
2-Fluorophenol	46	10-105	11/5/14 19:44	
Nitrobenzene-d5	83	37-117	11/5/14 19:44	
Phenol-d6	30	10-107	11/5/14 19:44	
p-Terphenyl-d14	111	40-133	11/5/14 19:44	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1150
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/10/14 15:27
Sample Name:	MW-14R-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-012	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222473
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW048.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	940	U	940	
68476-31-3	Fuel Oil No. 4	940	U	940	
68476-33-5	Fuel Oil No. 6	940	U	940	
8006-61-9	Gasoline	940	U	940	
8008-20-6	Kerosene	940	U	940	
	Lube Oil	940	U	940	
112-40-3	n-Dodecane	940	U	940	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1330
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Analyzed:	11/4/14 15:33
Sample Name:	MW-14S-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8558.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	1.0	U	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	1.0	U	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1330
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Analyzed:	11/4/14 15:33
Sample Name:	MW-14S-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8558.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	92	81-127	11/4/14 15:33	
4-Bromofluorobenzene	97	79-123	11/4/14 15:33	
Toluene-d8	100	83-120	11/4/14 15:33	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1330
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 20:10
Sample Name:	MW-14S-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-013	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY810.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	4.7	U	4.7	1.0	
122-66-7	1,2-Diphenylhydrazine	4.7	U	4.7	1.0	
88-06-2	2,4,6-Trichlorophenol	4.7	U	4.7	1.4	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.3	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	1.5	
51-28-5	2,4-Dinitrophenol	47	U	47	20	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.6	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.8	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.0	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.4	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	4.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	11	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	2.2	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.2	
100-02-7	4-Nitrophenol	47	U	47	5.9	
83-32-9	Acenaphthene	4.7	U	4.7	1.0	
208-96-8	Acenaphthylene	4.7	U	4.7	1.0	
120-12-7	Anthracene	4.7	U	4.7	1.0	
56-55-3	Benz(a)anthracene	4.7	U	4.7	1.0	
92-87-5	Benzidine	94	U	94	90	
50-32-8	Benzo(a)pyrene	4.7	U	4.7	1.0	
205-99-2	3,4-Benzofluoranthene	4.7	U	4.7	1.0	
191-24-2	Benzo(g,h,i)perylene	4.7	U	4.7	1.0	
207-08-9	Benzo(k)fluoranthene	4.7	U	4.7	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.0	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	2.2	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	4.7	U	4.7	1.2	
85-68-7	Butyl Benzyl Phthalate	4.7	U	4.7	2.4	
218-01-9	Chrysene	4.7	U	4.7	1.0	
84-74-2	Di-n-butyl Phthalate	4.7	U	4.7	1.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1330
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 20:10
Sample Name:	MW-14S-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-013	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY810.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	4.7	U	4.7	1.2	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.3	
84-66-2	Diethyl Phthalate	4.7	U	4.7	1.0	
131-11-3	Dimethyl Phthalate	4.7	U	4.7	1.0	
206-44-0	Fluoranthene	4.7	U	4.7	1.0	
86-73-7	Fluorene	4.7	U	4.7	1.0	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.0	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	1.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.2	
78-59-1	Isophorone	4.7	U	4.7	1.0	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.3	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.0	
91-20-3	Naphthalene	4.7	U	4.7	1.0	
98-95-3	Nitrobenzene	4.7	U	4.7	1.6	
87-86-5	Pentachlorophenol (PCP)	47	U	47	6.9	
85-01-8	Phenanthrene	4.7	U	4.7	1.0	
108-95-2	Phenol	4.7	U	4.7	1.0	
129-00-0	Pyrene	4.7	U	4.7	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	114	28-157	11/5/14 20:10	
2-Fluorobiphenyl	87	39-119	11/5/14 20:10	
2-Fluorophenol	45	10-105	11/5/14 20:10	
Nitrobenzene-d5	81	37-117	11/5/14 20:10	
Phenol-d6	29	10-107	11/5/14 20:10	
p-Terphenyl-d14	111	40-133	11/5/14 20:10	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1330
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/10/14 15:51
Sample Name:	MW-14S-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-013	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222473
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW049.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	940	U	940	
68476-31-3	Fuel Oil No. 4	940	U	940	
68476-33-5	Fuel Oil No. 6	940	U	940	
8006-61-9	Gasoline	940	U	940	
8008-20-6	Kerosene	940	U	940	
	Lube Oil	940	U	940	
112-40-3	n-Dodecane	940	U	940	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1435
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Analyzed:	11/4/14 16:04
Sample Name:	MW-1S-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8559.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**1.9**		1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**0.50**	J	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**0.35**	J	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	1.0	U	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	**0.13**	J	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	1.0	U	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	**3.0**		1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	**20**		1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	**12**		1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1435
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Analyzed:	11/4/14 16:04
Sample Name:	MW-1S-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8559.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	89	81-127	11/4/14 16:04	
4-Bromofluorobenzene	97	79-123	11/4/14 16:04	
Toluene-d8	102	83-120	11/4/14 16:04	

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1435
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 20:36
Sample Name:	MW-1S-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-014	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY811.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	4.7	U	4.7	1.0	
122-66-7	1,2-Diphenylhydrazine	4.7	U	4.7	1.0	
88-06-2	2,4,6-Trichlorophenol	4.7	U	4.7	1.4	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.3	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	1.5	
51-28-5	2,4-Dinitrophenol	47	U	47	20	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.6	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.8	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.0	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.4	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	4.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	11	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	2.2	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.2	
100-02-7	4-Nitrophenol	47	U	47	5.9	
83-32-9	Acenaphthene	4.7	U	4.7	1.0	
208-96-8	Acenaphthylene	4.7	U	4.7	1.0	
120-12-7	Anthracene	4.7	U	4.7	1.0	
56-55-3	Benz(a)anthracene	4.7	U	4.7	1.0	
92-87-5	Benzidine	94	U	94	90	
50-32-8	Benzo(a)pyrene	4.7	U	4.7	1.0	
205-99-2	3,4-Benzofluoranthene	4.7	U	4.7	1.0	
191-24-2	Benzo(g,h,i)perylene	4.7	U	4.7	1.0	
207-08-9	Benzo(k)fluoranthene	4.7	U	4.7	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.0	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	2.2	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	4.7	U	4.7	1.2	
85-68-7	Butyl Benzyl Phthalate	4.7	U	4.7	2.4	
218-01-9	Chrysene	4.7	U	4.7	1.0	
84-74-2	Di-n-butyl Phthalate	4.7	U	4.7	1.0	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1435
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 20:36
Sample Name:	MW-1S-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-014	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY811.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	4.7	U	4.7	1.2	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.3	
84-66-2	Diethyl Phthalate	4.7	U	4.7	1.0	
131-11-3	Dimethyl Phthalate	4.7	U	4.7	1.0	
206-44-0	Fluoranthene	4.7	U	4.7	1.0	
86-73-7	Fluorene	4.7	U	4.7	1.0	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.0	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	1.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.2	
78-59-1	Isophorone	4.7	U	4.7	1.0	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.3	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.0	
91-20-3	Naphthalene	4.7	U	4.7	1.0	
98-95-3	Nitrobenzene	4.7	U	4.7	1.6	
87-86-5	Pentachlorophenol (PCP)	47	U	47	6.9	
85-01-8	Phenanthrene	4.7	U	4.7	1.0	
108-95-2	Phenol	4.7	U	4.7	1.0	
129-00-0	Pyrene	4.7	U	4.7	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	110	28-157	11/5/14 20:36	
2-Fluorobiphenyl	86	39-119	11/5/14 20:36	
2-Fluorophenol	46	10-105	11/5/14 20:36	
Nitrobenzene-d5	83	37-117	11/5/14 20:36	
Phenol-d6	28	10-107	11/5/14 20:36	
p-Terphenyl-d14	109	40-133	11/5/14 20:36	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	10/28/14 1435
Sample Matrix:	Water	**Date Received:**	10/28/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/10/14 16:16
Sample Name:	MW-1S-OCT 14	**Units:**	µg/L
Lab Code:	R1408538-014	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222473
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW050.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	940	U	940	
68476-31-3	Fuel Oil No. 4	940	U	940	
68476-33-5	Fuel Oil No. 6	940	U	940	
8006-61-9	Gasoline	940	U	940	
8008-20-6	Kerosene	940	U	940	
	Lube Oil	940	U	940	
112-40-3	n-Dodecane	940	U	940	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	10/30/14 11:20
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413413-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8448.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	**0.39**	J	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	**0.23**	J	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	10/30/14 11:20
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413413-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	418826
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\103014\L8448.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	89	81-127	10/30/14 11:20	
4-Bromofluorobenzene	99	79-123	10/30/14 11:20	
Toluene-d8	101	83-120	10/30/14 11:20	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/4/14 11:50
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413585-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8551.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	1.0	U	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	**0.20**	J	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/4/14 11:50
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413585-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8551.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	92	81-127	11/4/14 11:50	
4-Bromofluorobenzene	100	79-123	11/4/14 11:50	
Toluene-d8	99	83-120	11/4/14 11:50	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/29/14
		Date Analyzed:	10/30/14 14:06
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413225-01	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	419093
Prep Method:	EPA 3510C	**Extraction Lot:**	221957
Data File Name:	I:\ACQUDATA\5973D\Data\103014\AY728.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	5.0	U	5.0	1.0	
122-66-7	1,2-Diphenylhydrazine	5.0	U	5.0	1.0	
88-06-2	2,4,6-Trichlorophenol	5.0	U	5.0	1.4	
120-83-2	2,4-Dichlorophenol	5.0	U	5.0	1.3	
105-67-9	2,4-Dimethylphenol	5.0	U	5.0	1.5	
51-28-5	2,4-Dinitrophenol	50	U	50	20	
121-14-2	2,4-Dinitrotoluene	5.0	U	5.0	1.6	
606-20-2	2,6-Dinitrotoluene	5.0	U	5.0	1.8	
91-58-7	2-Chloronaphthalene	5.0	U	5.0	1.0	
95-57-8	2-Chlorophenol	5.0	U	5.0	1.0	
88-75-5	2-Nitrophenol	5.0	U	5.0	1.4	
91-94-1	3,3'-Dichlorobenzidine	5.0	U	5.0	4.5	
534-52-1	4,6-Dinitro-o-cresol	50	U	50	11	
101-55-3	4-Bromophenyl Phenyl Ether	5.0	U	5.0	2.2	
59-50-7	4-Chloro-m-cresol	5.0	U	5.0	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	5.0	U	5.0	1.2	
100-02-7	4-Nitrophenol	50	U	50	5.9	
83-32-9	Acenaphthene	5.0	U	5.0	1.0	
208-96-8	Acenaphthylene	5.0	U	5.0	1.0	
120-12-7	Anthracene	5.0	U	5.0	1.0	
56-55-3	Benz(a)anthracene	5.0	U	5.0	1.0	
92-87-5	Benzidine	100	U	100	90	
50-32-8	Benzo(a)pyrene	5.0	U	5.0	1.0	
205-99-2	3,4-Benzofluoranthene	5.0	U	5.0	1.0	
191-24-2	Benzo(g,h,i)perylene	5.0	U	5.0	1.0	
207-08-9	Benzo(k)fluoranthene	5.0	U	5.0	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	5.0	U	5.0	1.0	
111-91-1	Bis(2-chloroethoxy)methane	5.0	U	5.0	2.2	
111-44-4	Bis(2-chloroethyl) Ether	5.0	U	5.0	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	5.0	U	5.0	1.2	
85-68-7	Butyl Benzyl Phthalate	5.0	U	5.0	2.4	
218-01-9	Chrysene	5.0	U	5.0	1.0	
84-74-2	Di-n-butyl Phthalate	5.0	U	5.0	1.0	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/29/14
		Date Analyzed:	10/30/14 14:06
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413225-01	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	419093
Prep Method:	EPA 3510C	**Extraction Lot:**	221957
Data File Name:	I:\ACQUDATA\5973D\Data\103014\AY728.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	5.0	U	5.0	1.2	
53-70-3	Dibenz(a,h)anthracene	5.0	U	5.0	1.3	
84-66-2	Diethyl Phthalate	5.0	U	5.0	1.0	
131-11-3	Dimethyl Phthalate	5.0	U	5.0	1.0	
206-44-0	Fluoranthene	5.0	U	5.0	1.0	
86-73-7	Fluorene	5.0	U	5.0	1.0	
118-74-1	Hexachlorobenzene	5.0	U	5.0	1.0	
87-68-3	Hexachlorobutadiene	5.0	U	5.0	1.3	
77-47-4	Hexachlorocyclopentadiene	5.0	U	5.0	1.0	
67-72-1	Hexachloroethane	5.0	U	5.0	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U	5.0	1.2	
78-59-1	Isophorone	5.0	U	5.0	1.0	
621-64-7	N-Nitrosodi-n-propylamine	5.0	U	5.0	1.3	
62-75-9	N-Nitrosodimethylamine	5.0	U	5.0	1.0	
86-30-6	N-Nitrosodiphenylamine	5.0	U	5.0	1.0	
91-20-3	Naphthalene	5.0	U	5.0	1.0	
98-95-3	Nitrobenzene	5.0	U	5.0	1.6	
87-86-5	Pentachlorophenol (PCP)	50	U	50	6.9	
85-01-8	Phenanthrene	5.0	U	5.0	1.0	
108-95-2	Phenol	5.0	U	5.0	1.0	
129-00-0	Pyrene	5.0	U	5.0	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	101	28-157	10/30/14 14:06	
2-Fluorobiphenyl	87	39-119	10/30/14 14:06	
2-Fluorophenol	50	10-105	10/30/14 14:06	
Nitrobenzene-d5	84	37-117	10/30/14 14:06	
Phenol-d6	33	10-107	10/30/14 14:06	
p-Terphenyl-d14	115	40-133	10/30/14 14:06	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 17:09
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413524-01	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY803.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	5.0	U	5.0	1.0	
122-66-7	1,2-Diphenylhydrazine	5.0	U	5.0	1.0	
88-06-2	2,4,6-Trichlorophenol	5.0	U	5.0	1.4	
120-83-2	2,4-Dichlorophenol	5.0	U	5.0	1.3	
105-67-9	2,4-Dimethylphenol	5.0	U	5.0	1.5	
51-28-5	2,4-Dinitrophenol	50	U	50	20	
121-14-2	2,4-Dinitrotoluene	5.0	U	5.0	1.6	
606-20-2	2,6-Dinitrotoluene	5.0	U	5.0	1.8	
91-58-7	2-Chloronaphthalene	5.0	U	5.0	1.0	
95-57-8	2-Chlorophenol	5.0	U	5.0	1.0	
88-75-5	2-Nitrophenol	5.0	U	5.0	1.4	
91-94-1	3,3'-Dichlorobenzidine	5.0	U	5.0	4.5	
534-52-1	4,6-Dinitro-o-cresol	50	U	50	11	
101-55-3	4-Bromophenyl Phenyl Ether	5.0	U	5.0	2.2	
59-50-7	4-Chloro-m-cresol	5.0	U	5.0	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	5.0	U	5.0	1.2	
100-02-7	4-Nitrophenol	50	U	50	5.9	
83-32-9	Acenaphthene	5.0	U	5.0	1.0	
208-96-8	Acenaphthylene	5.0	U	5.0	1.0	
120-12-7	Anthracene	5.0	U	5.0	1.0	
56-55-3	Benz(a)anthracene	5.0	U	5.0	1.0	
92-87-5	Benzidine	100	U	100	90	
50-32-8	Benzo(a)pyrene	5.0	U	5.0	1.0	
205-99-2	3,4-Benzofluoranthene	5.0	U	5.0	1.0	
191-24-2	Benzo(g,h,i)perylene	5.0	U	5.0	1.0	
207-08-9	Benzo(k)fluoranthene	5.0	U	5.0	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	5.0	U	5.0	1.0	
111-91-1	Bis(2-chloroethoxy)methane	5.0	U	5.0	2.2	
111-44-4	Bis(2-chloroethyl) Ether	5.0	U	5.0	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	5.0	U	5.0	1.2	
85-68-7	Butyl Benzyl Phthalate	5.0	U	5.0	2.4	
218-01-9	Chrysene	5.0	U	5.0	1.0	
84-74-2	Di-n-butyl Phthalate	5.0	U	5.0	1.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 17:09
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413524-01	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY803.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	5.0	U	5.0	1.2	
53-70-3	Dibenz(a,h)anthracene	5.0	U	5.0	1.3	
84-66-2	Diethyl Phthalate	5.0	U	5.0	1.0	
131-11-3	Dimethyl Phthalate	5.0	U	5.0	1.0	
206-44-0	Fluoranthene	5.0	U	5.0	1.0	
86-73-7	Fluorene	5.0	U	5.0	1.0	
118-74-1	Hexachlorobenzene	5.0	U	5.0	1.0	
87-68-3	Hexachlorobutadiene	5.0	U	5.0	1.3	
77-47-4	Hexachlorocyclopentadiene	5.0	U	5.0	1.0	
67-72-1	Hexachloroethane	5.0	U	5.0	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U	5.0	1.2	
78-59-1	Isophorone	5.0	U	5.0	1.0	
621-64-7	N-Nitrosodi-n-propylamine	5.0	U	5.0	1.3	
62-75-9	N-Nitrosodimethylamine	5.0	U	5.0	1.0	
86-30-6	N-Nitrosodiphenylamine	5.0	U	5.0	1.0	
91-20-3	Naphthalene	5.0	U	5.0	1.0	
98-95-3	Nitrobenzene	5.0	U	5.0	1.6	
87-86-5	Pentachlorophenol (PCP)	50	U	50	6.9	
85-01-8	Phenanthrene	5.0	U	5.0	1.0	
108-95-2	Phenol	5.0	U	5.0	1.0	
129-00-0	Pyrene	5.0	U	5.0	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	114	28-157	11/5/14 17:09	
2-Fluorobiphenyl	94	39-119	11/5/14 17:09	
2-Fluorophenol	52	10-105	11/5/14 17:09	
Nitrobenzene-d5	91	37-117	11/5/14 17:09	
Phenol-d6	33	10-107	11/5/14 17:09	
p-Terphenyl-d14	118	40-133	11/5/14 17:09	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	10/31/14
		Date Analyzed:	11/10/14 08:13
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413402-01	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222243
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW031.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	1000	U	1000	
68476-31-3	Fuel Oil No. 4	1000	U	1000	
68476-33-5	Fuel Oil No. 6	1000	U	1000	
8006-61-9	Gasoline	1000	U	1000	
8008-20-6	Kerosene	1000	U	1000	
	Lube Oil	1000	U	1000	
112-40-3	n-Dodecane	1000	U	1000	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408538
Project:	Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	11/4/14
		Date Analyzed:	11/10/14 12:57
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413523-01	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222473
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW042.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	1000	U	1000	
68476-31-3	Fuel Oil No. 4	1000	U	1000	
68476-33-5	Fuel Oil No. 6	1000	U	1000	
8006-61-9	Gasoline	1000	U	1000	
8008-20-6	Kerosene	1000	U	1000	
	Lube Oil	1000	U	1000	
112-40-3	n-Dodecane	1000	U	1000	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03
Sample Matrix: Water

Service Request: R1408538
Date Analyzed: 10/30/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method: 624

Units: µg/L
Basis: NA

Analysis Lot: 418826

Analyte Name	Lab Control Sample RQ1413413-03 Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	17.9	20.0	90	52 - 162
1,1,2,2-Tetrachloroethane	19.8	20.0	99	46 - 157
1,1,2-Trichloroethane	21.1	20.0	105	52 - 150
1,1-Dichloroethane (1,1-DCA)	18.4	20.0	92	59 - 155
1,1-Dichloroethene (1,1-DCE)	18.4	20.0	92	10 - 234
1,2-Dichlorobenzene	19.0	20.0	95	18 - 190
1,2-Dichloroethane	17.5	20.0	88	49 - 155
1,2-Dichloropropane	20.9	20.0	104	10 - 210
1,3-Dichlorobenzene	18.6	20.0	93	59 - 156
1,4-Dichlorobenzene	19.2	20.0	96	18 - 190
2-Chloroethyl Vinyl Ether	21.8	20.0	109	10 - 305
Acetone	16.8	20.0	84	55 - 130
Benzene	20.9	20.0	105	37 - 151
Bromodichloromethane	19.7	20.0	98	35 - 155
Bromoform	18.9	20.0	95	45 - 169
Bromomethane	18.5	20.0	92	10 - 242
Carbon Tetrachloride	19.4	20.0	97	70 - 140
Chlorobenzene	19.5	20.0	97	37 - 160
Chloroethane	17.7	20.0	88	14 - 230
Chloroform	19.1	20.0	96	51 - 138
Chloromethane	20.7	20.0	103	10 - 273
Dibromochloromethane	19.7	20.0	99	53 - 149
Methylene Chloride	24.4	20.0	122	10 - 221
Ethylbenzene	19.2	20.0	96	37 - 162
Tetrachloroethene (PCE)	17.3	20.0	86	64 - 148
Toluene	20.1	20.0	100	47 - 150
Trichloroethene (TCE)	19.1	20.0	95	71 - 157
Trichlorofluoromethane (CFC 11)	15.8	20.0	79	17 - 181
Vinyl Chloride	19.8	20.0	99	10 - 251
cis-1,2-Dichloroethene	21.2	20.0	106	72 - 125
cis-1,3-Dichloropropene	21.2	20.0	106	10 - 227
m,p-Xylenes	37.7	40.0	94	76 - 131
o-Xylene	19.9	20.0	99	78 - 127

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03
Sample Matrix: Water

Service Request: R1408538
Date Analyzed: 10/30/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method: 624

Units: µg/L
Basis: NA

Analysis Lot: 418826

Analyte Name	Lab Control Sample RQ1413413-03 Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	19.5	20.0	97	54 - 156
trans-1,3-Dichloropropene	20.5	20.0	102	17 - 183

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03
Sample Matrix: Water

Service Request: R1408538
Date Analyzed: 11/ 4/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method: 624

Units: µg/L
Basis: NA

Analysis Lot: 419509

Analyte Name	Lab Control Sample RQ1413585-03 Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	20.4	20.0	102	52 - 162
1,1,2,2-Tetrachloroethane	19.9	20.0	99	46 - 157
1,1,2-Trichloroethane	21.4	20.0	107	52 - 150
1,1-Dichloroethane (1,1-DCA)	20.9	20.0	104	59 - 155
1,1-Dichloroethene (1,1-DCE)	21.9	20.0	110	10 - 234
1,2-Dichlorobenzene	19.6	20.0	98	18 - 190
1,2-Dichloroethane	19.0	20.0	95	49 - 155
1,2-Dichloropropane	22.1	20.0	110	10 - 210
1,3-Dichlorobenzene	20.0	20.0	100	59 - 156
1,4-Dichlorobenzene	19.3	20.0	97	18 - 190
2-Chloroethyl Vinyl Ether	19.9	20.0	100	10 - 305
Acetone	13.2	20.0	66	55 - 130
Benzene	22.7	20.0	113	37 - 151
Bromodichloromethane	20.5	20.0	102	35 - 155
Bromoform	18.4	20.0	92	45 - 169
Bromomethane	13.4	20.0	67	10 - 242
Carbon Tetrachloride	21.5	20.0	108	70 - 140
Chlorobenzene	21.3	20.0	106	37 - 160
Chloroethane	19.8	20.0	99	14 - 230
Chloroform	22.0	20.0	110	51 - 138
Chloromethane	21.9	20.0	109	10 - 273
Dibromochloromethane	20.5	20.0	103	53 - 149
Methylene Chloride	26.0	20.0	130	10 - 221
Ethylbenzene	21.3	20.0	107	37 - 162
Tetrachloroethene (PCE)	19.9	20.0	100	64 - 148
Toluene	20.9	20.0	105	47 - 150
Trichloroethene (TCE)	21.4	20.0	107	71 - 157
Trichlorofluoromethane (CFC 11)	15.9	20.0	80	17 - 181
Vinyl Chloride	21.5	20.0	108	10 - 251
cis-1,2-Dichloroethene	23.3	20.0	116	72 - 125
cis-1,3-Dichloropropene	21.8	20.0	109	10 - 227
m,p-Xylenes	40.7	40.0	102	76 - 131
o-Xylene	20.8	20.0	104	78 - 127

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03
Sample Matrix: Water

Service Request: R1408538
Date Analyzed: 11/ 4/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method: 624

Units: µg/L
Basis: NA

Analysis Lot: 419509

Analyte Name	Lab Control Sample RQ1413585-03 Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	23.5	20.0	118	54 - 156
trans-1,3-Dichloropropene	21.0	20.0	105	17 - 183

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03
Sample Matrix: Water

Service Request: R1408538
Date Analyzed: 10/30/14

Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 221957

	Lab Control Sample RQ1413225-02			Duplicate Lab Control Sample RQ1413225-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,2,4-Trichlorobenzene	71.3	100	71	72.1	100	72	29 - 85	1	30
1,2-Diphenylhydrazine	99.2	100	99	99.5	100	100	57 - 117	<1	30
2,4,6-Trichlorophenol	103	100	103	107	100	107	37 - 144	4	30
2,4-Dichlorophenol	96.8	100	97	99.9	100	100	39 - 135	3	30
2,4-Dimethylphenol	94.1	100	94	98.4	100	98	32 - 119	4	30
2,4-Dinitrophenol	99.9	100	100	105	100	105	10 - 191	5	30
2,4-Dinitrotoluene	108	100	108	113	100	113	39 - 139	4	30
2,6-Dinitrotoluene	110	100	110	112	100	112	50 - 158	2	30
2-Chloronaphthalene	90.2	100	90	94.2	100	94	60 - 118	4	30
2-Chlorophenol	92.9	100	93	88.0	100	88	23 - 134	5	30
2-Nitrophenol	96.9	100	97	99.0	100	99	29 - 182	2	30
3,3'-Dichlorobenzidine	90.0	100	90	91.6	100	92	10 - 262	2	30
4,6-Dinitro-o-cresol	104	100	104	105	100	105	10 - 181	1	30
4-Bromophenyl Phenyl Ether	98.8	100	99	103	100	103	53 - 127	4	30
4-Chloro-m-cresol	98.5	100	99	101	100	101	22 - 147	3	30
4-Chlorophenyl Phenyl Ether	101	100	101	103	100	103	25 - 158	2	30
4-Nitrophenol	54.1	100	54	52.9	100	53	10 - 132	2	30
Acenaphthene	95.7	100	96	96.2	100	96	47 - 145	<1	30
Acenaphthylene	99.7	100	100	105	100	105	33 - 145	5	30
Anthracene	99.3	100	99	104	100	104	27 - 133	5	30
Benz(a)anthracene	102	100	102	105	100	104	33 - 143	2	30
Benzidine	127	100	127	200	100	200 *	10 - 169	45 *	30
Benzo(a)pyrene	103	100	103	108	100	108	17 - 163	4	30
3,4-Benzofluoranthene	106	100	106	109	100	109	24 - 159	3	30
Benzo(g,h,i)perylene	102	100	102	104	100	104	10 - 219	3	30
Benzo(k)fluoranthene	99.4	100	99	103	100	103	11 - 162	4	30
Bis(1-chloroisopropyl) Ether	107	100	107	100	100	100	36 - 166	7	30
Bis(2-chloroethoxy)methane	98.6	100	99	101	100	101	33 - 184	2	30
Bis(2-chloroethyl) Ether	94.0	100	94	90.0	100	90	12 - 158	4	30
Bis(2-ethylhexyl) Phthalate	111	100	111	116	100	116	10 - 158	4	30
Butyl Benzyl Phthalate	104	100	104	110	100	110	10 - 152	6	30
Chrysene	103	100	103	104	100	104	17 - 168	<1	30
Di-n-butyl Phthalate	107	100	107	113	100	113	10 - 118	5	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03
Sample Matrix: Water

Service Request: R1408538
Date Analyzed: 10/30/14

Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 221957

	Lab Control Sample RQ1413225-02			Duplicate Lab Control Sample RQ1413225-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Di-n-octyl Phthalate	103	100	103	110	100	110	10 - 146	6	30
Dibenz(a,h)anthracene	104	100	104	107	100	107	10 - 227	3	30
Diethyl Phthalate	109	100	109	116	100	116 *	10 - 114	6	30
Dimethyl Phthalate	102	100	102	107	100	107	10 - 112	5	30
Fluoranthene	105	100	105	107	100	107	26 - 137	1	30
Fluorene	95.8	100	96	97.5	100	97	59 - 121	2	30
Hexachlorobenzene	98.2	100	98	102	100	102	10 - 152	4	30
Hexachlorobutadiene	66.8	100	67	66.3	100	66	24 - 116	<1	30
Hexachlorocyclopentadiene	82.0	100	82	85.1	100	85	28 - 98	4	30
Hexachloroethane	65.5	100	65	61.6	100	62	40 - 113	6	30
Indeno(1,2,3-cd)pyrene	102	100	102	103	100	103	10 - 171	2	30
Isophorone	101	100	101	106	100	106	21 - 196	4	30
N-Nitrosodi-n-propylamine	99.0	100	99	94.8	100	95	10 - 230	4	30
N-Nitrosodimethylamine	62.6	100	63	59.9	100	60	33 - 70	4	30
N-Nitrosodiphenylamine	102	100	102	105	100	105	50 - 117	3	30
Naphthalene	77.5	100	77	76.9	100	77	21 - 133	<1	30
Nitrobenzene	92.2	100	92	92.9	100	93	35 - 180	<1	30
Pentachlorophenol (PCP)	115	100	115	127	100	127	14 - 176	10	30
Phenanthrene	104	100	104	107	100	107	54 - 120	2	30
Phenol	46.0	100	46	43.4	100	43	10 - 112	6	30
Pyrene	113	100	113	116	100	116 *	52 - 115	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03
Sample Matrix: Water

Service Request: R1408538
Date Analyzed: 11/ 5/14

Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 222474

Analyte Name	Lab Control Sample RQ1413524-02 Result	Spike Amount	% Rec		Duplicate Lab Control Sample RQ1413524-03 Result	Spike Amount	% Rec		% Rec Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	82.9	100	83		80.9	100	81		29 - 85	2	30
1,2-Diphenylhydrazine	106	100	106		101	100	101		57 - 117	5	30
2,4,6-Trichlorophenol	101	100	101		99.8	100	100		37 - 144	1	30
2,4-Dichlorophenol	101	100	101		95.2	100	95		39 - 135	5	30
2,4-Dimethylphenol	96.2	100	96		89.7	100	90		32 - 119	7	30
2,4-Dinitrophenol	84.4	100	84		95.6	100	96		10 - 191	12	30
2,4-Dinitrotoluene	104	100	104		101	100	101		39 - 139	3	30
2,6-Dinitrotoluene	104	100	104		103	100	103		50 - 158	1	30
2-Chloronaphthalene	99.9	100	100		96.6	100	97		60 - 118	3	30
2-Chlorophenol	89.8	100	90		86.2	100	86		23 - 134	4	30
2-Nitrophenol	97.6	100	98		93.4	100	93		29 - 182	4	30
3,3'-Dichlorobenzidine	71.7	100	72		76.1	100	76		10 - 262	6	30
4,6-Dinitro-o-cresol	99.9	100	100		99.1	100	99		10 - 181	<1	30
4-Bromophenyl Phenyl Ether	107	100	107		99.7	100	100		53 - 127	7	30
4-Chloro-m-cresol	99.5	100	99		94.7	100	95		22 - 147	5	30
4-Chlorophenyl Phenyl Ether	102	100	102		99.6	100	100		25 - 158	3	30
4-Nitrophenol	47.5	100	48		47.6	100	48		10 - 132	<1	30
Acenaphthene	98.7	100	99		96.5	100	96		47 - 145	2	30
Acenaphthylene	104	100	104		102	100	102		33 - 145	1	30
Anthracene	102	100	102		98.1	100	98		27 - 133	4	30
Benz(a)anthracene	99.0	100	99		95.1	100	95		33 - 143	4	30
Benzidine	100 U	100	0	*	100 U	100	0	*	10 - 169	NC	30
Benzo(a)pyrene	101	100	101		99.6	100	100		17 - 163	2	30
3,4-Benzofluoranthene	101	100	101		99.3	100	99		24 - 159	2	30
Benzo(g,h,i)perylene	98.0	100	98		96.3	100	96		10 - 219	2	30
Benzo(k)fluoranthene	98.4	100	98		95.9	100	96		11 - 162	3	30
Bis(1-chloroisopropyl) Ether	113	100	113		106	100	106		36 - 166	6	30
Bis(2-chloroethoxy)methane	105	100	105		98.8	100	99		33 - 184	6	30
Bis(2-chloroethyl) Ether	92.0	100	92		88.3	100	88		12 - 158	4	30
Bis(2-ethylhexyl) Phthalate	105	100	105		103	100	103		10 - 158	2	30
Butyl Benzyl Phthalate	103	100	103		100	100	100		10 - 152	2	30
Chrysene	99.8	100	100		96.1	100	96		17 - 168	4	30
Di-n-butyl Phthalate	111	100	111		107	100	107		10 - 118	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03
Sample Matrix: Water

Service Request: R1408538
Date Analyzed: 11/ 5/14

Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 222474

Analyte Name	Lab Control Sample RQ1413524-02 Result	Spike Amount	% Rec		Duplicate Lab Control Sample RQ1413524-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Di-n-octyl Phthalate	104	100	104		103	100	103	10 - 146	1	30
Dibenz(a,h)anthracene	98.2	100	98		97.9	100	98	10 - 227	<1	30
Diethyl Phthalate	108	100	108		105	100	105	10 - 114	3	30
Dimethyl Phthalate	101	100	101		99.3	100	99	10 - 112	2	30
Fluoranthene	103	100	103		102	100	102	26 - 137	2	30
Fluorene	97.6	100	98		95.1	100	95	59 - 121	3	30
Hexachlorobenzene	104	100	104		98.6	100	99	10 - 152	6	30
Hexachlorobutadiene	76.4	100	76		76.8	100	77	24 - 116	<1	30
Hexachlorocyclopentadiene	98.7	100	99	*	98.5	100	98	28 - 98	<1	30
Hexachloroethane	68.1	100	68		68.5	100	69	40 - 113	<1	30
Indeno(1,2,3-cd)pyrene	98.8	100	99		92.8	100	93	10 - 171	6	30
Isophorone	105	100	105		98.6	100	99	21 - 196	6	30
N-Nitrosodi-n-propylamine	102	100	102		94.0	100	94	10 - 230	8	30
N-Nitrosodimethylamine	66.9	100	67		63.2	100	63	33 - 70	6	30
N-Nitrosodiphenylamine	106	100	106		99.2	100	99	50 - 117	7	30
Naphthalene	86.4	100	86		84.7	100	85	21 - 133	2	30
Nitrobenzene	96.3	100	96		91.8	100	92	35 - 180	5	30
Pentachlorophenol (PCP)	115	100	115		114	100	114	14 - 176	<1	30
Phenanthrene	107	100	107		102	100	102	54 - 120	4	30
Phenol	44.1	100	44		42.2	100	42	10 - 112	4	30
Pyrene	113	100	112		106	100	106	52 - 115	6	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03
Sample Matrix: Water

Service Request: R1408538
Date Analyzed: 11/10/14

Lab Control Sample Summary
Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method: NY 310-13
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 222243

	Lab Control Sample RQ1413402-02			Duplicate Lab Control Sample RQ1413402-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Fuel Oil No. 2	4790	5080	94	4880	5080	96	79 - 135	2	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/2014/ 10C3074-0012.03
Sample Matrix: Water

Service Request: R1408538
Date Analyzed: 11/10/14

Lab Control Sample Summary
Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method: NY 310-13
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 222473

	Lab Control Sample RQ1413523-02			Duplicate Lab Control Sample RQ1413523-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Fuel Oil No. 2	4350	5080	86	4510	5080	89	79 - 135	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

20346

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF _____

Project Name: Davis Howland	Project Number: 10C3074.0012.03
Project Manager: Ashlee Patnode	Report CC:
Company/Address: Ecology & Environment Inc 368 Pleasantview Dr Lancaster NY 14086	
Phone #: 716 684-8060	Email:
Sampler's Signature:	Sampler's Printed Name: Larry Rozell, G. Jones

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 0 0 0 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs • 8260 (624) • CLP	GC/MS SVOAs • 8270 • 625	GC VOAs • 8021 • 601/602	PESTICIDES • 8081 • 608	PCBs • 8082 • 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	TAL 3/0.2	Extra Volume	REMARKS/ ALTERNATE DESCRIPTION
~~TB 1029-01~~		~~10/24/14~~	~~9:00~~	~~GW~~	~~6~~	~~3~~	~~1~~						~~1~~	~~1~~	~~LR 10/27/14~~
TB 1029-01	-001	10/27/14	9:00	GW	3	3									
MW12R-~~1029~~oct14	-002	10/27/14	11:00	GW	6	3	1						1	1	
MW12S-oct14	-003	10/27/14	12:30	GW	6	3	1						1	1	
MW-5R-1027	-004	10/27/14	11:36	GW	6	3	1						1	1	
MW9S-1027	-005	10/27/14	13:00	GW	6	3	1						1	1	
MW13S-1027	-006	10/27/14	1516	GW	6	3	1						1	1	
MW8R-oct14	-007	10/27/14	17:05	GW	6	3	1						1	1	

Preservative Key: 0. NONE; 1. HCL; 2. HNO_3; 3. H_2SO_4; 4. NaOH; 5. Zn. Acetate; 6. MeOH; 7. $NaHSO_4$; 8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 1 day _____ 2 day _____ 3 day
_____ 4 day _____ 5 day

REQUESTED REPORT DATE
As per contract

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
Edata _____ Yes _____ No

INVOICE INFORMATION
PO #
BILL TO:

R1408538

STATE WHERE SAMPLES WERE COLLECTED NY

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	
Printed Name: Lawrence Rozell	Printed Name: ALS	Printed Name	Printed Name	Printed Name	
Firm: E+E	Firm: 10/27/14 / 1750	Firm	Firm	Firm	
Date/Time: 10/27/14 17:50	Date/Time	Date/Time	Date/Time	Date/Time	

R1408538 5
Ecology And Environment, Incorporated
Davis Howland Oil Company Site - SA 10/2014

Distribution: White - Lab Copy; Yellow - Return to Originator

R1408538 5
Ecology And Environment, Incorporated
Davis Howland Oil Company Site - SA 10/2014

Cooler Receipt and Preservation Check Form

Project/Client E+E Folder Number R1408538

Cooler received on 10/27/14 by: DW

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y (N)	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y (N) NA
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	ALS/ROC CLIENT
4	Circle: ~~Wet Ice~~ **Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as: Bulk Encore 5035set	(NA)

8. Temperature Readings Date: 10/27/14 Time: 1823 ID: ~~IR3~~ IR#4 From: Temp Blank Sample Bottle

Observed Temp (°C)	2.0°	0.5°					
Correction Factor (°C)	-0.5°	+0.6°					
Corrected Temp (°C)	1.5°	1.1°					
Within 0-6°C?	(Y) N	(Y) N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by DW on 10/27/14 at 1823
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: KB 10/28/14

Cooler Breakdown: Date: 10/28/14 Time: 1808 by: DW

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? ~~YES~~ NO
2. Did all bottle labels and tags agree with custody papers? ~~YES~~ NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated N/A

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**						

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 080414-1BLT, 4-162-002

Other Comments: * No bottle was labeled MW-13S-1027; there was another set of bottles labeled MW9S-1027 w/ the same sample date/time as MW-13S-1027. labeled bottles as per CoC.

PC Secondary Review: KB 11/13/14

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

20347

ALS Environmental

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 1

Project Name: Davis Howland	Project Number: 10C3074.0012.03
Project Manager: Ashlee Patnode	Report CC:
Company/Address: Ecology & Environment Inc 368 Pleasantview Dr Lancaster NY 14086	
Phone #: 716 684-8060	Email: APatnode@EEE.com
Sampler's Signature: Lawrence Roell	Sampler's Printed Name: L Roell Gregory Jones

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 0 0 0 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GCMS VOAs ◦ 8260 ◦ 624 ◦ CLP	GCMS SVOAs ◦ 8270 ◦ 625	GC VOAs ◦ 8021 ◦ 601/602	PESTICIDES ◦ 8081 ◦ 608	PCBs ◦ 8082 ◦ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	TPH 310.13	Extra Volume						REMARKS/ ALTERNATE DESCRIPTION
TB-1028-02	-008	10/28/14	8:15	GW	3	3														
MW2R-Oct14	-009	10/28/14	10:10	GW		3	1						1	1						
MW2S-Oct14	-010	10/28/14	11:56	GW		3	1						1	1						
MW2S-Oct14D	-011	10/28/14	11:56	GW		3	1						1	1						
MW14R-Oct14	-012	10/28/14	11:50	GW		3	1						1	1						
MW14S-Oct14	-013	10/28/14	13:30	GW		3	1						1	1						
MW1S-Oct14	-014	10/28/14	14:35	GW		3	1						1	1						

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED: NY

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day

REQUESTED REPORT DATE: As per contract

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata X Yes ____ No

INVOICE INFORMATION
PO #
BILL TO:

R1408538X

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Lawrence Roell	Signature: Daniel Mac	Signature	Signature	Signature	Signature
Printed Name: Lawrence Roell	Printed Name: ALS	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Ecology & Environment	Firm: 10/28/14 1620	Firm	Firm	Firm	Firm
Date/Time: 10/28/14 1620	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return to Originator

R1408538 5
Ecology And Environment, Incorporated
Davis Howland Oil Company Site - SA 10/2014

Cooler Receipt and Preservation Check Form

Project/Client E+E Folder Number R1408538

Cooler received on 10/28/14 by: DH COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y (NA)	5a	**Perchlorate** samples have required headspace?	Y N (NA)
2	**Custody papers** properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y (N) NA
3	Did all bottles arrive in good **condition** (unbroken)?	(Y) N	6	Where did the bottles originate?	ALS/ROC CLIENT
4	Circle: **Wet Ice Dry Ice Gel packs** present?	(Y) N	7	Soil VOA received as:	Bulk Encore 5035set (NA)

8. Temperature Readings Date: 10/28/14 Time: 1630 ID: IR#3 IR#4 From: Temp Blank Sample Bottle

Observed Temp (°C)	1.3°	7.0°					
Correction Factor (°C)	+0.6°	+0.6°					
Corrected Temp (°C)	1.9°	7.6°					
Within 0-6°C?	(Y) N	(Y) N 10:00	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by DH on 10/28/14 at 1630
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: KB 11/13/14

Cooler Breakdown: Date: 11/3/14 Time: 1100 by: (illegible)

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
2. Did all bottle labels and tags agree with custody papers? (YES) NO
3. Were correct containers used for the tests indicated? (YES) NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated (N/A)

Explain any discrepancies: -

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID *	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**						

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Bottle lot numbers: 4-162-002, 072114-1BLT
Other Comments:

PC Secondary Review: KB 11/13/14

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

ALS Environmental
ALS Group USA, Corp
1565 Jefferson Rd, Building 300, Suite 360
Rochester, NY 14623
T: 585-288-5380
F: 585-288-8475
www.alsglobal.com

November 13, 2014

Analytical Report for Service Request No: R1408633

Ms. Ashlee Patnode
Ecology And Environment, Incorporated
368 Pleasantview Drive
Lancaster, NY 14086

Laboratory Results for: Davis Howland Oil Company Site - SA 10/29/14

Dear Ms. Patnode:

Enclosed are the results of the sample(s) submitted to our laboratory on October 29, 2014. For your reference, these analyses have been assigned our service request number **R1408633**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7471. You may also contact me via email at Karen.Bunker@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Karen Bunker
Project Manager

ALS Environmental

Client:	Ecology & Environment	**Service Request No.:**	R1408633
Project:	Davis Howland Oil Co	**Date Received:**	10/29/2014
Sample Matrix:	Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD).

Sample Receipt

Six water samples were collected and received for analysis at ALS on 10/29/14. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator between 1°C and 6°C upon receipt at the laboratory. The samples arrived at a cooler temperature range of 0.5-2.4°C, within the guidelines of 0-6°C.

Volatile Organic Compounds

The samples were analyzed by GC/MS Method 624.

The Initial and Continuing Calibration Verifications met QC criteria.

Site specific QC was performed on location MW-15R-Oct 14 (ALS # R148633-005). All Matrix Spike (MS) and MS Duplicate (MSD) recoveries were within QC limits except for Acetone (MS only). Several Relative Percent Difference (RPD) calculations were outside limits. All exceedences have been flagged as "*".

Laboratory Control Sample (LCS) and LCS Duplicates (LCSD) had acceptable recoveries for these compounds.

All Laboratory Method Blanks were free from contamination except for Methylene Chloride on the 11/4/14 run. Data has been flagged as "B" appropriately.

Hits between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) are flagged as "J", estimated.

All sample vials were unpreserved and analyzed within the required 7 day holding time.

No analytical or quality control problems were encountered during analysis.

Semivolatile Organic Compounds

The samples were analyzed by GC/MS Method 625.

The Initial and Continuing Calibration Verifications met QC criteria.

Site QC was performed on location MW-15R-Oct14 (ALS # R1408633-005). All MS and MSD recoveries were within limits except for Benzidine. These recoveries have been flagged as "*". The RPD's were acceptable.

Laboratory Control Sample (LCS) and LCS Duplicates (LCSD) had acceptable recoveries for these compounds except for Benzidine and Hexachloroclyclopentadiene (LCS only) on the 11/5/14 run. These recoveries have been flagged as "*". Sample data for Benzidine may be bias low based on these recoveries. All RPD's were acceptable.

Hits between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) are flagged as "J", estimated.

All samples were analyzed within the proper holding time for the method.

No analytical or quality control problems were encountered during analysis.

Approved by Karen Burke **Date** 11/18/14

310-13 Analysis

The samples were analyzed by GC Method 310-13.

The Initial and Continuing Calibration Verifications met QC criteria.

The MS, MDS and RPD were all within QC limits.

Laboratory Control Sample (LCS) and LCS Duplicates (LCSD) had acceptable recoveries for these compounds. The RPD was acceptable.

All samples were analyzed within the proper holding time.

No analytical or quality control problems were encountered during analysis.

Approved by Karen Burke **Date** 11/13/14

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1408633

Lab ID	Client ID
R1408633-001	TB1029-03
R1408633-002	MW3S-Oct14
R1408633-003	MW16R-Oct14
R1408633-004	MW3R-Oct14
R1408633-005	MW15R-Oct14
R1408633-006	MW10R-Oct14

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

NELAP Accredited	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Connecticut ID # PH0556	Nebraska Accredited	
Delaware Accredited	Nevada ID # NY-00032	North Carolina #676
DoD ELAP #65817	New Jersey ID # NY004	Pennsylvania ID# 68-786
Florida ID # E87674	New York ID # 10145	Rhode Island ID # 158
Illinois ID #200047		Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 0900
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Analyzed:	11/4/14 19:45
Sample Name:	TB1029-03	**Units:**	µg/L
Lab Code:	R1408633-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8566.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	1.0	U	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	**0.26**	BJ	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 0900
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Analyzed:	11/4/14 19:45
Sample Name:	TB1029-03	**Units:**	µg/L
Lab Code:	R1408633-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8566.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	81-127	11/4/14 19:45	
4-Bromofluorobenzene	98	79-123	11/4/14 19:45	
Toluene-d8	101	83-120	11/4/14 19:45	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1252
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Analyzed:	11/4/14 20:16
Sample Name:	MW3S-Oct14	**Units:**	µg/L
Lab Code:	R1408633-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8567.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	1.0	U	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	1.0	U	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	**0.30**	J	1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1252
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Analyzed:	11/4/14 20:16
Sample Name:	MW3S-Oct14	**Units:**	µg/L
Lab Code:	R1408633-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8567.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	90	81-127	11/4/14 20:16	
4-Bromofluorobenzene	98	79-123	11/4/14 20:16	
Toluene-d8	99	83-120	11/4/14 20:16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1252
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 21:02
Sample Name:	MW3S-Oct14	**Units:**	µg/L
Lab Code:	R1408633-002	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY812.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	4.7	U	4.7	1.0	
122-66-7	1,2-Diphenylhydrazine	4.7	U	4.7	1.0	
88-06-2	2,4,6-Trichlorophenol	4.7	U	4.7	1.4	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.3	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	1.5	
51-28-5	2,4-Dinitrophenol	47	U	47	20	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.6	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.8	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.0	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.4	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	4.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	11	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	2.2	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.2	
100-02-7	4-Nitrophenol	47	U	47	5.9	
83-32-9	Acenaphthene	4.7	U	4.7	1.0	
208-96-8	Acenaphthylene	4.7	U	4.7	1.0	
120-12-7	Anthracene	4.7	U	4.7	1.0	
56-55-3	Benz(a)anthracene	4.7	U	4.7	1.0	
92-87-5	Benzidine	94	U	94	90	
50-32-8	Benzo(a)pyrene	4.7	U	4.7	1.0	
205-99-2	3,4-Benzofluoranthene	4.7	U	4.7	1.0	
191-24-2	Benzo(g,h,i)perylene	4.7	U	4.7	1.0	
207-08-9	Benzo(k)fluoranthene	4.7	U	4.7	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.0	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	2.2	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	4.7	U	4.7	1.2	
85-68-7	Butyl Benzyl Phthalate	4.7	U	4.7	2.4	
218-01-9	Chrysene	4.7	U	4.7	1.0	
84-74-2	Di-n-butyl Phthalate	4.7	U	4.7	1.0	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1252
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 21:02
Sample Name:	MW3S-Oct14	**Units:**	µg/L
Lab Code:	R1408633-002	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY812.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	4.7	U	4.7	1.2	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.3	
84-66-2	Diethyl Phthalate	4.7	U	4.7	1.0	
131-11-3	Dimethyl Phthalate	4.7	U	4.7	1.0	
206-44-0	Fluoranthene	4.7	U	4.7	1.0	
86-73-7	Fluorene	4.7	U	4.7	1.0	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.0	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	1.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.2	
78-59-1	Isophorone	4.7	U	4.7	1.0	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.3	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.0	
91-20-3	Naphthalene	4.7	U	4.7	1.0	
98-95-3	Nitrobenzene	4.7	U	4.7	1.6	
87-86-5	Pentachlorophenol (PCP)	47	U	47	6.9	
85-01-8	Phenanthrene	4.7	U	4.7	1.0	
108-95-2	Phenol	4.7	U	4.7	1.0	
129-00-0	Pyrene	4.7	U	4.7	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	107	28-157	11/5/14 21:02	
2-Fluorobiphenyl	85	39-119	11/5/14 21:02	
2-Fluorophenol	46	10-105	11/5/14 21:02	
Nitrobenzene-d5	82	37-117	11/5/14 21:02	
Phenol-d6	29	10-107	11/5/14 21:02	
p-Terphenyl-d14	107	40-133	11/5/14 21:02	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1252
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/10/14 16:41
Sample Name:	MW3S-Oct14	**Units:**	µg/L
Lab Code:	R1408633-002	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222473
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW051.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	940	U	940	
68476-31-3	Fuel Oil No. 4	940	U	940	
68476-33-5	Fuel Oil No. 6	940	U	940	
8006-61-9	Gasoline	940	U	940	
8008-20-6	Kerosene	940	U	940	
	Lube Oil	940	U	940	
112-40-3	n-Dodecane	940	U	940	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1115
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Analyzed:	11/4/14 20:47
Sample Name:	MW16R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8568.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**7.1**		1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**2.1**		1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	**0.11**	J	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	1.0	U	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	1.0	U	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	**2.0**		1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	**43**		1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	**170**		1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	**1.9**		1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1115
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Analyzed:	11/4/14 20:47
Sample Name:	MW16R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8568.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	90	81-127	11/4/14 20:47	
4-Bromofluorobenzene	99	79-123	11/4/14 20:47	
Toluene-d8	103	83-120	11/4/14 20:47	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1115
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 21:28
Sample Name:	MW16R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-003	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY813.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	4.7	U	4.7	1.0	
122-66-7	1,2-Diphenylhydrazine	4.7	U	4.7	1.0	
88-06-2	2,4,6-Trichlorophenol	4.7	U	4.7	1.4	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.3	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	1.5	
51-28-5	2,4-Dinitrophenol	47	U	47	20	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.6	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.8	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.0	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.4	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	4.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	11	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	2.2	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.2	
100-02-7	4-Nitrophenol	47	U	47	5.9	
83-32-9	Acenaphthene	4.7	U	4.7	1.0	
208-96-8	Acenaphthylene	4.7	U	4.7	1.0	
120-12-7	Anthracene	4.7	U	4.7	1.0	
56-55-3	Benz(a)anthracene	4.7	U	4.7	1.0	
92-87-5	Benzidine	94	U	94	90	
50-32-8	Benzo(a)pyrene	4.7	U	4.7	1.0	
205-99-2	3,4-Benzofluoranthene	4.7	U	4.7	1.0	
191-24-2	Benzo(g,h,i)perylene	4.7	U	4.7	1.0	
207-08-9	Benzo(k)fluoranthene	4.7	U	4.7	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.0	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	2.2	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	4.7	U	4.7	1.2	
85-68-7	Butyl Benzyl Phthalate	4.7	U	4.7	2.4	
218-01-9	Chrysene	4.7	U	4.7	1.0	
84-74-2	Di-n-butyl Phthalate	4.7	U	4.7	1.0	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1115
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 21:28
Sample Name:	MW16R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-003	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY813.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	4.7	U	4.7	1.2	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.3	
84-66-2	Diethyl Phthalate	4.7	U	4.7	1.0	
131-11-3	Dimethyl Phthalate	4.7	U	4.7	1.0	
206-44-0	Fluoranthene	4.7	U	4.7	1.0	
86-73-7	Fluorene	4.7	U	4.7	1.0	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.0	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	1.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.2	
78-59-1	Isophorone	4.7	U	4.7	1.0	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.3	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.0	
91-20-3	Naphthalene	4.7	U	4.7	1.0	
98-95-3	Nitrobenzene	4.7	U	4.7	1.6	
87-86-5	Pentachlorophenol (PCP)	47	U	47	6.9	
85-01-8	Phenanthrene	4.7	U	4.7	1.0	
108-95-2	Phenol	4.7	U	4.7	1.0	
129-00-0	Pyrene	4.7	U	4.7	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	110	28-157	11/5/14 21:28	
2-Fluorobiphenyl	90	39-119	11/5/14 21:28	
2-Fluorophenol	46	10-105	11/5/14 21:28	
Nitrobenzene-d5	84	37-117	11/5/14 21:28	
Phenol-d6	29	10-107	11/5/14 21:28	
p-Terphenyl-d14	102	40-133	11/5/14 21:28	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1115
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/10/14 17:30
Sample Name:	MW16R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-003	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222473
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW053.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	940	U	940	
68476-31-3	Fuel Oil No. 4	940	U	940	
68476-33-5	Fuel Oil No. 6	940	U	940	
8006-61-9	Gasoline	940	U	940	
8008-20-6	Kerosene	940	U	940	
	Lube Oil	940	U	940	
112-40-3	n-Dodecane	940	U	940	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1145
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Analyzed:	11/4/14 21:18
Sample Name:	MW3R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8569.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	10	U	10	1.3	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	2.4	
79-00-5	1,1,2-Trichloroethane	10	U	10	1.2	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**49**		10	1.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**17**		10	2.2	
95-50-1	1,2-Dichlorobenzene	10	U	10	1.0	
107-06-2	1,2-Dichloroethane	10	U	10	1.8	
78-87-5	1,2-Dichloropropane	10	U	10	1.5	
541-73-1	1,3-Dichlorobenzene	10	U	10	1.0	
106-46-7	1,4-Dichlorobenzene	10	U	10	1.5	
110-75-8	2-Chloroethyl Vinyl Ether	100	U	100	6.4	
67-64-1	Acetone	50	U	50	24	
71-43-2	Benzene	10	U	10	1.0	
75-27-4	Bromodichloromethane	10	U	10	1.5	
75-25-2	Bromoform	10	U	10	1.6	
74-83-9	Bromomethane	10	U	10	1.2	
56-23-5	Carbon Tetrachloride	10	U	10	1.0	
108-90-7	Chlorobenzene	10	U	10	1.3	
75-00-3	Chloroethane	10	U	10	1.5	
67-66-3	Chloroform	10	U	10	1.3	
74-87-3	Chloromethane	10	U	10	1.6	
124-48-1	Dibromochloromethane	10	U	10	1.5	
75-09-2	Methylene Chloride	**1.8**	BJ	10	1.8	
100-41-4	Ethylbenzene	10	U	10	1.9	
127-18-4	Tetrachloroethene (PCE)	10	U	10	2.0	
108-88-3	Toluene	10	U	10	1.0	
79-01-6	Trichloroethene (TCE)	**7.2**	J	10	1.5	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	1.3	
75-01-4	Vinyl Chloride	**310**		10	1.5	
156-59-2	cis-1,2-Dichloroethene	**1300**		10	1.8	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	1.5	
179601-23-1	m,p-Xylenes	20	U	20	1.8	
95-47-6	o-Xylene	10	U	10	1.9	
156-60-5	trans-1,2-Dichloroethene	**3.1**	J	10	1.5	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	1.0	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1145
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Analyzed:	11/4/14 21:18
Sample Name:	MW3R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8569.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	10

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	88	81-127	11/4/14 21:18	
4-Bromofluorobenzene	100	79-123	11/4/14 21:18	
Toluene-d8	97	83-120	11/4/14 21:18	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1145
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 21:53
Sample Name:	MW3R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-004	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY814.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	4.7	U	4.7	1.0	
122-66-7	1,2-Diphenylhydrazine	4.7	U	4.7	1.0	
88-06-2	2,4,6-Trichlorophenol	4.7	U	4.7	1.4	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.3	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	1.5	
51-28-5	2,4-Dinitrophenol	47	U	47	20	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.6	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.8	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.0	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.4	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	4.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	11	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	2.2	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.2	
100-02-7	4-Nitrophenol	47	U	47	5.9	
83-32-9	Acenaphthene	4.7	U	4.7	1.0	
208-96-8	Acenaphthylene	4.7	U	4.7	1.0	
120-12-7	Anthracene	4.7	U	4.7	1.0	
56-55-3	Benz(a)anthracene	4.7	U	4.7	1.0	
92-87-5	Benzidine	94	U	94	90	
50-32-8	Benzo(a)pyrene	4.7	U	4.7	1.0	
205-99-2	3,4-Benzofluoranthene	4.7	U	4.7	1.0	
191-24-2	Benzo(g,h,i)perylene	4.7	U	4.7	1.0	
207-08-9	Benzo(k)fluoranthene	4.7	U	4.7	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.0	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	2.2	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	4.7	U	4.7	1.2	
85-68-7	Butyl Benzyl Phthalate	4.7	U	4.7	2.4	
218-01-9	Chrysene	4.7	U	4.7	1.0	
84-74-2	Di-n-butyl Phthalate	4.7	U	4.7	1.0	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1145
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 21:53
Sample Name:	MW3R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-004	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY814.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	4.7	U	4.7	1.2	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.3	
84-66-2	Diethyl Phthalate	4.7	U	4.7	1.0	
131-11-3	Dimethyl Phthalate	4.7	U	4.7	1.0	
206-44-0	Fluoranthene	4.7	U	4.7	1.0	
86-73-7	Fluorene	4.7	U	4.7	1.0	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.0	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	1.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.2	
78-59-1	Isophorone	4.7	U	4.7	1.0	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.3	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.0	
91-20-3	Naphthalene	4.7	U	4.7	1.0	
98-95-3	Nitrobenzene	4.7	U	4.7	1.6	
87-86-5	Pentachlorophenol (PCP)	47	U	47	6.9	
85-01-8	Phenanthrene	4.7	U	4.7	1.0	
108-95-2	Phenol	4.7	U	4.7	1.0	
129-00-0	Pyrene	4.7	U	4.7	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	103	28-157	11/5/14 21:53	
2-Fluorobiphenyl	84	39-119	11/5/14 21:53	
2-Fluorophenol	44	10-105	11/5/14 21:53	
Nitrobenzene-d5	81	37-117	11/5/14 21:53	
Phenol-d6	27	10-107	11/5/14 21:53	
p-Terphenyl-d14	105	40-133	11/5/14 21:53	

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1145
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/10/14 17:55
Sample Name:	MW3R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-004	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222473
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW054.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	940	U	940	
68476-31-3	Fuel Oil No. 4	940	U	940	
68476-33-5	Fuel Oil No. 6	940	U	940	
8006-61-9	Gasoline	940	U	940	
8008-20-6	Kerosene	940	U	940	
	Lube Oil	940	U	940	
112-40-3	n-Dodecane	940	U	940	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1410
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Analyzed:	11/4/14 16:37
Sample Name:	MW15R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8560.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**0.14**	J	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**0.58**	J	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**0.23**	J	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	1.0	U	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	1.0	U	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	**0.25**	J	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	**1.6**		1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	**1.2**		1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	**7.8**		1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	**0.31**	J	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1410
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Analyzed:	11/4/14 16:37
Sample Name:	MW15R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8560.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	91	81-127	11/4/14 16:37	
4-Bromofluorobenzene	99	79-123	11/4/14 16:37	
Toluene-d8	103	83-120	11/4/14 16:37	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1410
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 22:19
Sample Name:	MW15R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-005	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY815.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	4.7	U	4.7	1.0	
122-66-7	1,2-Diphenylhydrazine	4.7	U	4.7	1.0	
88-06-2	2,4,6-Trichlorophenol	4.7	U	4.7	1.4	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.3	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	1.5	
51-28-5	2,4-Dinitrophenol	47	U	47	20	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.6	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.8	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.0	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.4	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	4.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	11	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	2.2	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.2	
100-02-7	4-Nitrophenol	47	U	47	5.9	
83-32-9	Acenaphthene	4.7	U	4.7	1.0	
208-96-8	Acenaphthylene	4.7	U	4.7	1.0	
120-12-7	Anthracene	4.7	U	4.7	1.0	
56-55-3	Benz(a)anthracene	4.7	U	4.7	1.0	
92-87-5	Benzidine	94	U	94	90	
50-32-8	Benzo(a)pyrene	4.7	U	4.7	1.0	
205-99-2	3,4-Benzofluoranthene	4.7	U	4.7	1.0	
191-24-2	Benzo(g,h,i)perylene	4.7	U	4.7	1.0	
207-08-9	Benzo(k)fluoranthene	4.7	U	4.7	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.0	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	2.2	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	4.7	U	4.7	1.2	
85-68-7	Butyl Benzyl Phthalate	4.7	U	4.7	2.4	
218-01-9	Chrysene	4.7	U	4.7	1.0	
84-74-2	Di-n-butyl Phthalate	4.7	U	4.7	1.0	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1410
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 22:19
Sample Name:	MW15R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-005	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY815.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	4.7	U	4.7	1.2	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.3	
84-66-2	Diethyl Phthalate	4.7	U	4.7	1.0	
131-11-3	Dimethyl Phthalate	4.7	U	4.7	1.0	
206-44-0	Fluoranthene	4.7	U	4.7	1.0	
86-73-7	Fluorene	4.7	U	4.7	1.0	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.0	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	1.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.2	
78-59-1	Isophorone	4.7	U	4.7	1.0	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.3	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.0	
91-20-3	Naphthalene	4.7	U	4.7	1.0	
98-95-3	Nitrobenzene	4.7	U	4.7	1.6	
87-86-5	Pentachlorophenol (PCP)	47	U	47	6.9	
85-01-8	Phenanthrene	4.7	U	4.7	1.0	
108-95-2	Phenol	4.7	U	4.7	1.0	
129-00-0	Pyrene	4.7	U	4.7	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	108	28-157	11/5/14 22:19	
2-Fluorobiphenyl	86	39-119	11/5/14 22:19	
2-Fluorophenol	46	10-105	11/5/14 22:19	
Nitrobenzene-d5	82	37-117	11/5/14 22:19	
Phenol-d6	28	10-107	11/5/14 22:19	
p-Terphenyl-d14	112	40-133	11/5/14 22:19	

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1410
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/10/14 18:20
Sample Name:	MW15R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-005	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222473
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW055.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	940	U	940	
68476-31-3	Fuel Oil No. 4	940	U	940	
68476-33-5	Fuel Oil No. 6	940	U	940	
8006-61-9	Gasoline	940	U	940	
8008-20-6	Kerosene	940	U	940	
	Lube Oil	940	U	940	
112-40-3	n-Dodecane	940	U	940	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1540
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Analyzed:	11/4/14 21:49
Sample Name:	MW10R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8570.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	10

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**6.3**	J	10	1.3	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	2.4	
79-00-5	1,1,2-Trichloroethane	10	U	10	1.2	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**4.9**	J	10	1.0	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**14**		10	2.2	
95-50-1	1,2-Dichlorobenzene	10	U	10	1.0	
107-06-2	1,2-Dichloroethane	10	U	10	1.8	
78-87-5	1,2-Dichloropropane	10	U	10	1.5	
541-73-1	1,3-Dichlorobenzene	10	U	10	1.0	
106-46-7	1,4-Dichlorobenzene	10	U	10	1.5	
110-75-8	2-Chloroethyl Vinyl Ether	100	U	100	6.4	
67-64-1	Acetone	50	U	50	24	
71-43-2	Benzene	10	U	10	1.0	
75-27-4	Bromodichloromethane	10	U	10	1.5	
75-25-2	Bromoform	10	U	10	1.6	
74-83-9	Bromomethane	10	U	10	1.2	
56-23-5	Carbon Tetrachloride	10	U	10	1.0	
108-90-7	Chlorobenzene	10	U	10	1.3	
75-00-3	Chloroethane	10	U	10	1.5	
67-66-3	Chloroform	10	U	10	1.3	
74-87-3	Chloromethane	10	U	10	1.6	
124-48-1	Dibromochloromethane	10	U	10	1.5	
75-09-2	Methylene Chloride	**2.2**	J	10	1.8	
100-41-4	Ethylbenzene	10	U	10	1.9	
127-18-4	Tetrachloroethene (PCE)	**3.8**	J	10	2.0	
108-88-3	Toluene	10	U	10	1.0	
79-01-6	Trichloroethene (TCE)	**1100**		10	1.5	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	1.3	
75-01-4	Vinyl Chloride	10	U	10	1.5	
156-59-2	cis-1,2-Dichloroethene	**38**		10	1.8	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	1.5	
179601-23-1	m,p-Xylenes	20	U	20	1.8	
95-47-6	o-Xylene	10	U	10	1.9	
156-60-5	trans-1,2-Dichloroethene	**9.5**	J	10	1.5	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	1.0	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1540
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Analyzed:	11/4/14 21:49
Sample Name:	MW10R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8570.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	10

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	90	81-127	11/4/14 21:49	
4-Bromofluorobenzene	99	79-123	11/4/14 21:49	
Toluene-d8	99	83-120	11/4/14 21:49	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1540
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 23:37
Sample Name:	MW10R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-006	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY818.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	4.7	U	4.7	1.0	
122-66-7	1,2-Diphenylhydrazine	4.7	U	4.7	1.0	
88-06-2	2,4,6-Trichlorophenol	4.7	U	4.7	1.4	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.3	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	1.5	
51-28-5	2,4-Dinitrophenol	47	U	47	20	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.6	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.8	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.0	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.4	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	4.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	11	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	2.2	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.2	
100-02-7	4-Nitrophenol	47	U	47	5.9	
83-32-9	Acenaphthene	4.7	U	4.7	1.0	
208-96-8	Acenaphthylene	4.7	U	4.7	1.0	
120-12-7	Anthracene	4.7	U	4.7	1.0	
56-55-3	Benz(a)anthracene	4.7	U	4.7	1.0	
92-87-5	Benzidine	94	U	94	90	
50-32-8	Benzo(a)pyrene	4.7	U	4.7	1.0	
205-99-2	3,4-Benzofluoranthene	4.7	U	4.7	1.0	
191-24-2	Benzo(g,h,i)perylene	4.7	U	4.7	1.0	
207-08-9	Benzo(k)fluoranthene	4.7	U	4.7	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.0	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	2.2	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	4.7	U	4.7	1.2	
85-68-7	Butyl Benzyl Phthalate	4.7	U	4.7	2.4	
218-01-9	Chrysene	4.7	U	4.7	1.0	
84-74-2	Di-n-butyl Phthalate	4.7	U	4.7	1.0	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1540
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 23:37
Sample Name:	MW10R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-006	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY818.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	4.7	U	4.7	1.2	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.3	
84-66-2	Diethyl Phthalate	4.7	U	4.7	1.0	
131-11-3	Dimethyl Phthalate	4.7	U	4.7	1.0	
206-44-0	Fluoranthene	4.7	U	4.7	1.0	
86-73-7	Fluorene	4.7	U	4.7	1.0	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.0	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	1.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.2	
78-59-1	Isophorone	4.7	U	4.7	1.0	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.3	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.0	
91-20-3	Naphthalene	4.7	U	4.7	1.0	
98-95-3	Nitrobenzene	4.7	U	4.7	1.6	
87-86-5	Pentachlorophenol (PCP)	47	U	47	6.9	
85-01-8	Phenanthrene	4.7	U	4.7	1.0	
108-95-2	Phenol	4.7	U	4.7	1.0	
129-00-0	Pyrene	4.7	U	4.7	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	107	28-157	11/5/14 23:37	
2-Fluorobiphenyl	89	39-119	11/5/14 23:37	
2-Fluorophenol	47	10-105	11/5/14 23:37	
Nitrobenzene-d5	85	37-117	11/5/14 23:37	
Phenol-d6	30	10-107	11/5/14 23:37	
p-Terphenyl-d14	115	40-133	11/5/14 23:37	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14 1540
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Extracted:	11/4/14
		Date Analyzed:	11/10/14 19:35
Sample Name:	MW10R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-006	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222473
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW058.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	940	U	940	
68476-31-3	Fuel Oil No. 4	940	U	940	
68476-33-5	Fuel Oil No. 6	940	U	940	
8006-61-9	Gasoline	940	U	940	
8008-20-6	Kerosene	940	U	940	
	Lube Oil	940	U	940	
112-40-3	n-Dodecane	940	U	940	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/4/14 11:50
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413585-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8551.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	1.0	U	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	**0.20**	J	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/4/14 11:50
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413585-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method:	624	**Analysis Lot:**	419509
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8551.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	92	81-127	11/4/14 11:50	
4-Bromofluorobenzene	100	79-123	11/4/14 11:50	
Toluene-d8	99	83-120	11/4/14 11:50	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 17:09
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413524-01	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY803.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
120-82-1	1,2,4-Trichlorobenzene	5.0	U	5.0	1.0	
122-66-7	1,2-Diphenylhydrazine	5.0	U	5.0	1.0	
88-06-2	2,4,6-Trichlorophenol	5.0	U	5.0	1.4	
120-83-2	2,4-Dichlorophenol	5.0	U	5.0	1.3	
105-67-9	2,4-Dimethylphenol	5.0	U	5.0	1.5	
51-28-5	2,4-Dinitrophenol	50	U	50	20	
121-14-2	2,4-Dinitrotoluene	5.0	U	5.0	1.6	
606-20-2	2,6-Dinitrotoluene	5.0	U	5.0	1.8	
91-58-7	2-Chloronaphthalene	5.0	U	5.0	1.0	
95-57-8	2-Chlorophenol	5.0	U	5.0	1.0	
88-75-5	2-Nitrophenol	5.0	U	5.0	1.4	
91-94-1	3,3'-Dichlorobenzidine	5.0	U	5.0	4.5	
534-52-1	4,6-Dinitro-o-cresol	50	U	50	11	
101-55-3	4-Bromophenyl Phenyl Ether	5.0	U	5.0	2.2	
59-50-7	4-Chloro-m-cresol	5.0	U	5.0	1.2	
7005-72-3	4-Chlorophenyl Phenyl Ether	5.0	U	5.0	1.2	
100-02-7	4-Nitrophenol	50	U	50	5.9	
83-32-9	Acenaphthene	5.0	U	5.0	1.0	
208-96-8	Acenaphthylene	5.0	U	5.0	1.0	
120-12-7	Anthracene	5.0	U	5.0	1.0	
56-55-3	Benz(a)anthracene	5.0	U	5.0	1.0	
92-87-5	Benzidine	100	U	100	90	
50-32-8	Benzo(a)pyrene	5.0	U	5.0	1.0	
205-99-2	3,4-Benzofluoranthene	5.0	U	5.0	1.0	
191-24-2	Benzo(g,h,i)perylene	5.0	U	5.0	1.0	
207-08-9	Benzo(k)fluoranthene	5.0	U	5.0	1.0	
108-60-1	Bis(1-chloroisopropyl) Ether	5.0	U	5.0	1.0	
111-91-1	Bis(2-chloroethoxy)methane	5.0	U	5.0	2.2	
111-44-4	Bis(2-chloroethyl) Ether	5.0	U	5.0	1.3	
117-81-7	Bis(2-ethylhexyl) Phthalate	5.0	U	5.0	1.2	
85-68-7	Butyl Benzyl Phthalate	5.0	U	5.0	2.4	
218-01-9	Chrysene	5.0	U	5.0	1.0	
84-74-2	Di-n-butyl Phthalate	5.0	U	5.0	1.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	11/4/14
		Date Analyzed:	11/5/14 17:09
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413524-01	**Basis:**	NA

Semivolatile Organic Compounds by GC/MS

Analytical Method:	625	**Analysis Lot:**	420111
Prep Method:	EPA 3510C	**Extraction Lot:**	222474
Data File Name:	I:\ACQUDATA\5973D\Data\110514\AY803.D\	**Instrument Name:**	R-MS-54
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
117-84-0	Di-n-octyl Phthalate	5.0	U	5.0	1.2	
53-70-3	Dibenz(a,h)anthracene	5.0	U	5.0	1.3	
84-66-2	Diethyl Phthalate	5.0	U	5.0	1.0	
131-11-3	Dimethyl Phthalate	5.0	U	5.0	1.0	
206-44-0	Fluoranthene	5.0	U	5.0	1.0	
86-73-7	Fluorene	5.0	U	5.0	1.0	
118-74-1	Hexachlorobenzene	5.0	U	5.0	1.0	
87-68-3	Hexachlorobutadiene	5.0	U	5.0	1.3	
77-47-4	Hexachlorocyclopentadiene	5.0	U	5.0	1.0	
67-72-1	Hexachloroethane	5.0	U	5.0	1.2	
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U	5.0	1.2	
78-59-1	Isophorone	5.0	U	5.0	1.0	
621-64-7	N-Nitrosodi-n-propylamine	5.0	U	5.0	1.3	
62-75-9	N-Nitrosodimethylamine	5.0	U	5.0	1.0	
86-30-6	N-Nitrosodiphenylamine	5.0	U	5.0	1.0	
91-20-3	Naphthalene	5.0	U	5.0	1.0	
98-95-3	Nitrobenzene	5.0	U	5.0	1.6	
87-86-5	Pentachlorophenol (PCP)	50	U	50	6.9	
85-01-8	Phenanthrene	5.0	U	5.0	1.0	
108-95-2	Phenol	5.0	U	5.0	1.0	
129-00-0	Pyrene	5.0	U	5.0	1.0	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	114	28-157	11/5/14 17:09	
2-Fluorobiphenyl	94	39-119	11/5/14 17:09	
2-Fluorophenol	52	10-105	11/5/14 17:09	
Nitrobenzene-d5	91	37-117	11/5/14 17:09	
Phenol-d6	33	10-107	11/5/14 17:09	
p-Terphenyl-d14	118	40-133	11/5/14 17:09	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	11/4/14
		Date Analyzed:	11/10/14 12:57
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413523-01	**Basis:**	NA

Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method:	NY 310-13	**Analysis Lot:**	420565
Prep Method:	Method	**Extraction Lot:**	222473
Data File Name:	I:\ACQUDATA\6890I\DATA\111014\AW042.D\	**Instrument Name:**	R-GC-59
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	Note
68476-30-2	Fuel Oil No. 2	1000	U	1000	
68476-31-3	Fuel Oil No. 4	1000	U	1000	
68476-33-5	Fuel Oil No. 6	1000	U	1000	
8006-61-9	Gasoline	1000	U	1000	
8008-20-6	Kerosene	1000	U	1000	
	Lube Oil	1000	U	1000	
112-40-3	n-Dodecane	1000	U	1000	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/29/14
Sample Matrix: Water

Service Request: R1408633
Date Collected: 10/29/14
Date Received: 10/29/14
Date Analyzed: 11/ 4/14

Matrix Spike Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Sample Name: MW15R-Oct14
Lab Code: R1408633-005

Units: µg/L
Basis: NA

Analytical Method: 624

Analyte Name	Sample Result	MW15R-Oct14MS Matrix Spike RQ1413585-05 Result	Spike Amount	% Rec	MW15R-Oct14DMS Duplicate Matrix Spike RQ1413585-06 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
1,1,1-Trichloroethane (TCA)	0.14	18.5	20.0	92	19.9	20.0	99	52 - 162	7	30
1,1,2,2-Tetrachloroethane	ND	20.0	20.0	100	20.0	20.0	100	46 - 157	<1	30
1,1,2-Trichloroethane	ND	20.2	20.0	101	27.7	20.0	139	52 - 150	32 *	30
1,1-Dichloroethane (1,1-DCA)	0.58	19.2	20.0	93	21.2	20.0	103	59 - 155	10	30
1,1-Dichloroethene (1,1-DCE)	0.23	20.6	20.0	102	21.6	20.0	107	10 - 234	5	30
1,2-Dichlorobenzene	ND	19.2	20.0	96	20.5	20.0	102	18 - 190	6	30
1,2-Dichloroethane	ND	17.5	20.0	87	18.5	20.0	93	49 - 155	6	30
1,2-Dichloropropane	ND	20.6	20.0	103	23.1	20.0	115	10 - 210	11	30
1,3-Dichlorobenzene	ND	19.5	20.0	98	20.3	20.0	101	59 - 156	4	30
1,4-Dichlorobenzene	ND	19.3	20.0	96	19.8	20.0	99	18 - 190	3	30
2-Chloroethyl Vinyl Ether	ND	14.5	20.0	72	24.4	20.0	122	10 - 305	51 *	30
Acetone	ND	10.7	20.0	54 *	11.2	20.0	56	55 - 130	5	30
Benzene	ND	21.2	20.0	106	27.7	20.0	139	37 - 151	26	30
Bromodichloromethane	ND	19.1	20.0	96	22.5	20.0	112	35 - 155	16	30
Bromoform	ND	19.2	20.0	96	19.7	20.0	99	45 - 169	3	30
Bromomethane	ND	13.8	20.0	69	16.0	20.0	80	10 - 242	15	30
Carbon Tetrachloride	ND	20.4	20.0	102	27.2	20.0	136	70 - 140	28	30
Chlorobenzene	ND	20.3	20.0	102	21.1	20.0	105	37 - 160	4	30
Chloroethane	ND	17.2	20.0	86	17.8	20.0	89	14 - 230	3	30
Chloroform	ND	19.8	20.0	99	21.4	20.0	107	51 - 138	8	30
Chloromethane	ND	19.4	20.0	97	21.2	20.0	106	10 - 273	9	30
Dibromochloromethane	ND	20.5	20.0	103	17.9	20.0	89	53 - 149	14	30
Methylene Chloride	ND	23.8	20.0	119	25.3	20.0	127	10 - 221	6	30
Ethylbenzene	ND	20.1	20.0	101	21.0	20.0	105	37 - 162	4	30
Tetrachloroethene (PCE)	0.25	19.4	20.0	96	15.8	20.0	78	64 - 148	20	30
Toluene	ND	20.2	20.0	101	26.5	20.0	132	47 - 150	27	30
Trichloroethene (TCE)	1.6	22.1	20.0	102	26.2	20.0	123	71 - 157	17	30
Trichlorofluoromethane (CFC 11)	ND	13.9	20.0	69	14.9	20.0	75	17 - 181	7	30

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Analyzed:	11/ 4/14

Matrix Spike Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Sample Name:	MW15R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-005	**Basis:**	NA

Analytical Method: 624

		MW15R-Oct14MS Matrix Spike RQ1413585-05			MW15R-Oct14DMS Duplicate Matrix Spike RQ1413585-06					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Vinyl Chloride	1.2	21.1	20.0	100	22.5	20.0	106	10 - 251	6	30
cis-1,2-Dichloroethene	7.8	28.9	20.0	106	30.4	20.0	113	72 - 125	5	30
cis-1,3-Dichloropropene	ND	15.8	20.0	79	26.5	20.0	133	10 - 227	51 *	30
m,p-Xylenes	ND	39.6	40.0	99	40.4	40.0	101	76 - 131	2	30
o-Xylene	ND	20.2	20.0	101	20.9	20.0	105	78 - 127	4	30
trans-1,2-Dichloroethene	0.31	20.9	20.0	103	22.6	20.0	112	54 - 156	8	30
trans-1,3-Dichloropropene	ND	18.6	20.0	93	25.1	20.0	126	17 - 183	30	30

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/29/14
Sample Matrix: Water

Service Request: R1408633
Date Collected: 10/29/14
Date Received: 10/29/14
Date Analyzed: 11/ 5/14

Matrix Spike Summary
Semivolatile Organic Compounds by GC/MS

Sample Name: MW15R-Oct14
Lab Code: R1408633-005

Units: µg/L
Basis: NA

Analytical Method: 625
Prep Method: EPA 3510C

		MW15R-Oct14MS Matrix Spike RQ1413524-04				MW15R-Oct14DMS Duplicate Matrix Spike RQ1413524-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**		**Result**	**Spike Amount**	**% Rec**		**% Rec Limits**	**RPD**	**RPD Limit**
1,2,4-Trichlorobenzene	ND	72.5	94.3	77		77.5	94.3	82		29 - 85	7	30
1,2-Diphenylhydrazine	ND	95.5	94.3	101		99.0	94.3	105		57 - 117	4	30
2,4,6-Trichlorophenol	ND	92.8	94.3	98		96.5	94.3	102		37 - 144	4	30
2,4-Dichlorophenol	ND	87.3	94.3	93		94.0	94.3	100		39 - 135	7	30
2,4-Dimethylphenol	ND	83.1	94.3	88		91.1	94.3	97		32 - 119	9	30
2,4-Dinitrophenol	ND	98.1	94.3	104		101	94.3	107		10 - 191	2	30
2,4-Dinitrotoluene	ND	96.1	94.3	102		101	94.3	107		39 - 139	5	30
2,6-Dinitrotoluene	ND	95.0	94.3	101		101	94.3	107		50 - 158	6	30
2-Chloronaphthalene	ND	87.5	94.3	93		93.0	94.3	99		60 - 118	6	30
2-Chlorophenol	ND	77.9	94.3	83		83.2	94.3	88		23 - 134	7	30
2-Nitrophenol	ND	84.8	94.3	90		90.3	94.3	96		29 - 182	6	30
3,3'-Dichlorobenzidine	ND	75.7	94.3	80		75.4	94.3	80		10 - 262	<1	30
4,6-Dinitro-o-cresol	ND	95.4	94.3	101		98.1	94.3	104		10 - 181	3	30
4-Bromophenyl Phenyl Ether	ND	93.5	94.3	99		98.7	94.3	105		53 - 127	5	30
4-Chloro-m-cresol	ND	89.8	94.3	95		96.8	94.3	103		22 - 147	7	30
4-Chlorophenyl Phenyl Ether	ND	92.6	94.3	98		98.4	94.3	104		25 - 158	6	30
4-Nitrophenol	ND	41.5	94.3	44		52.0	94.3	55		10 - 132	23	30
Acenaphthene	ND	88.4	94.3	94		92.8	94.3	98		47 - 145	5	30
Acenaphthylene	ND	93.0	94.3	99		97.3	94.3	103		33 - 145	5	30
Anthracene	ND	92.9	94.3	98		96.5	94.3	102		27 - 133	4	30
Benz(a)anthracene	ND	90.7	94.3	96		97.1	94.3	103		33 - 143	7	30
Benzidine	ND	ND	94.3	0	*	ND	94.3	0	*	10 - 169	NC	30
Benzo(a)pyrene	ND	92.7	94.3	98		97.7	94.3	104		17 - 163	5	30
3,4-Benzofluoranthene	ND	95.7	94.3	101		100	94.3	106		24 - 159	4	30
Benzo(g,h,i)perylene	ND	90.2	94.3	96		96.0	94.3	102		10 - 219	6	30
Benzo(k)fluoranthene	ND	89.9	94.3	95		94.9	94.3	101		11 - 162	5	30
Bis(1-chloroisopropyl) Ether	ND	97.2	94.3	103		98.7	94.3	105		36 - 166	2	30
Bis(2-chloroethoxy)methane	ND	88.7	94.3	94		97.5	94.3	103		33 - 184	9	30

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/29/14
Sample Matrix: Water

Service Request: R1408633
Date Collected: 10/29/14
Date Received: 10/29/14
Date Analyzed: 11/ 5/14

Matrix Spike Summary
Semivolatile Organic Compounds by GC/MS

Sample Name: MW15R-Oct14
Lab Code: R1408633-005

Units: µg/L
Basis: NA

Analytical Method: 625
Prep Method: EPA 3510C

Analyte Name	Sample Result	MW15R-Oct14MS Matrix Spike RQ1413524-04 Result	Spike Amount	% Rec	MW15R-Oct14DMS Duplicate Matrix Spike RQ1413524-05 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Bis(2-chloroethyl) Ether	ND	78.5	94.3	83	83.9	94.3	89	12 - 158	7	30
Bis(2-ethylhexyl) Phthalate	ND	99.1	94.3	105	104	94.3	110	10 - 158	5	30
Butyl Benzyl Phthalate	ND	96.5	94.3	102	101	94.3	107	10 - 152	4	30
Chrysene	ND	91.3	94.3	97	96.2	94.3	102	17 - 168	5	30
Di-n-butyl Phthalate	ND	103	94.3	109	107	94.3	114	10 - 118	4	30
Di-n-octyl Phthalate	ND	101	94.3	107	106	94.3	112	10 - 146	5	30
Dibenz(a,h)anthracene	ND	91.5	94.3	97	96.3	94.3	102	10 - 227	5	30
Diethyl Phthalate	ND	97.7	94.3	104	104	94.3	110	10 - 114	6	30
Dimethyl Phthalate	ND	90.7	94.3	96	96.3	94.3	102	10 - 112	6	30
Fluoranthene	ND	97.5	94.3	103	101	94.3	107	26 - 137	3	30
Fluorene	ND	87.4	94.3	93	91.8	94.3	97	59 - 121	5	30
Hexachlorobenzene	ND	91.0	94.3	96	94.9	94.3	101	10 - 152	4	30
Hexachlorobutadiene	ND	65.8	94.3	70	73.4	94.3	78	24 - 116	11	30
Hexachlorocyclopentadiene	ND	83.2	94.3	88	89.5	94.3	95	28 - 98	7	30
Hexachloroethane	ND	61.1	94.3	65	62.2	94.3	66	40 - 113	2	30
Indeno(1,2,3-cd)pyrene	ND	89.5	94.3	95	93.4	94.3	99	10 - 171	4	30
Isophorone	ND	91.6	94.3	97	98.1	94.3	104	21 - 196	7	30
N-Nitrosodi-n-propylamine	ND	89.3	94.3	95	88.1	94.3	93	10 - 230	1	30
N-Nitrosodimethylamine	ND	56.2	94.3	60	63.7	94.3	68	33 - 70	13	30
N-Nitrosodiphenylamine	ND	96.6	94.3	102	99.7	94.3	106	50 - 117	3	30
Naphthalene	ND	74.8	94.3	79	80.0	94.3	85	21 - 133	7	30
Nitrobenzene	ND	82.7	94.3	88	87.9	94.3	93	35 - 180	6	30
Pentachlorophenol (PCP)	ND	119	94.3	126	125	94.3	133	14 - 176	5	30
Phenanthrene	ND	96.8	94.3	103	100	94.3	106	54 - 120	4	30
Phenol	ND	35.3	94.3	37	43.7	94.3	46	10 - 112	21	30
Pyrene	ND	100	94.3	106	108	94.3	114	52 - 115	7	30

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ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408633
Project:	Davis Howland Oil Company Site - SA 10/29/14	**Date Collected:**	10/29/14
Sample Matrix:	Water	**Date Received:**	10/29/14
		Date Analyzed:	11/10/14

Matrix Spike Summary
Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Sample Name:	MW15R-Oct14	**Units:**	µg/L
Lab Code:	R1408633-005	**Basis:**	NA

Analytical Method: NY 310-13
Prep Method: Method

		MW15R-Oct14MS Matrix Spike RQ1413523-04			MW15R-Oct14DMS Duplicate Matrix Spike RQ1413523-05					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Fuel Oil No. 2	ND	4740	4800	99	4430	4800	92	70 - 136	7	30

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Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/29/14
Sample Matrix: Water

Service Request: R1408633
Date Analyzed: 11/ 4/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method: 624

Units: µg/L
Basis: NA

Analysis Lot: 419509

Analyte Name	Lab Control Sample RQ1413585-03 Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	20.4	20.0	102	52 - 162
1,1,2,2-Tetrachloroethane	19.9	20.0	99	46 - 157
1,1,2-Trichloroethane	21.4	20.0	107	52 - 150
1,1-Dichloroethane (1,1-DCA)	20.9	20.0	104	59 - 155
1,1-Dichloroethene (1,1-DCE)	21.9	20.0	110	10 - 234
1,2-Dichlorobenzene	19.6	20.0	98	18 - 190
1,2-Dichloroethane	19.0	20.0	95	49 - 155
1,2-Dichloropropane	22.1	20.0	110	10 - 210
1,3-Dichlorobenzene	20.0	20.0	100	59 - 156
1,4-Dichlorobenzene	19.3	20.0	97	18 - 190
2-Chloroethyl Vinyl Ether	19.9	20.0	100	10 - 305
Acetone	13.2	20.0	66	55 - 130
Benzene	22.7	20.0	113	37 - 151
Bromodichloromethane	20.5	20.0	102	35 - 155
Bromoform	18.4	20.0	92	45 - 169
Bromomethane	13.4	20.0	67	10 - 242
Carbon Tetrachloride	21.5	20.0	108	70 - 140
Chlorobenzene	21.3	20.0	106	37 - 160
Chloroethane	19.8	20.0	99	14 - 230
Chloroform	22.0	20.0	110	51 - 138
Chloromethane	21.9	20.0	109	10 - 273
Dibromochloromethane	20.5	20.0	103	53 - 149
Methylene Chloride	26.0	20.0	130	10 - 221
Ethylbenzene	21.3	20.0	107	37 - 162
Tetrachloroethene (PCE)	19.9	20.0	100	64 - 148
Toluene	20.9	20.0	105	47 - 150
Trichloroethene (TCE)	21.4	20.0	107	71 - 157
Trichlorofluoromethane (CFC 11)	15.9	20.0	80	17 - 181
Vinyl Chloride	21.5	20.0	108	10 - 251
cis-1,2-Dichloroethene	23.3	20.0	116	72 - 125
cis-1,3-Dichloropropene	21.8	20.0	109	10 - 227
m,p-Xylenes	40.7	40.0	102	76 - 131
o-Xylene	20.8	20.0	104	78 - 127

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/29/14
Sample Matrix: Water

Service Request: R1408633
Date Analyzed: 11/ 4/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS, Unpreserved

Analytical Method: 624

Units: µg/L
Basis: NA

Analysis Lot: 419509

Analyte Name	Lab Control Sample RQ1413585-03 Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	23.5	20.0	118	54 - 156
trans-1,3-Dichloropropene	21.0	20.0	105	17 - 183

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/29/14
Sample Matrix: Water

Service Request: R1408633
Date Analyzed: 11/ 5/14

Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 222474

	Lab Control Sample RQ1413524-02				Duplicate Lab Control Sample RQ1413524-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**		**Result**	**Spike Amount**	**% Rec**		**% Rec Limits**	**RPD**	**RPD Limit**
1,2,4-Trichlorobenzene	82.9	100	83		80.9	100	81		29 - 85	2	30
1,2-Diphenylhydrazine	106	100	106		101	100	101		57 - 117	5	30
2,4,6-Trichlorophenol	101	100	101		99.8	100	100		37 - 144	1	30
2,4-Dichlorophenol	101	100	101		95.2	100	95		39 - 135	5	30
2,4-Dimethylphenol	96.2	100	96		89.7	100	90		32 - 119	7	30
2,4-Dinitrophenol	84.4	100	84		95.6	100	96		10 - 191	12	30
2,4-Dinitrotoluene	104	100	104		101	100	101		39 - 139	3	30
2,6-Dinitrotoluene	104	100	104		103	100	103		50 - 158	1	30
2-Chloronaphthalene	99.9	100	100		96.6	100	97		60 - 118	3	30
2-Chlorophenol	89.8	100	90		86.2	100	86		23 - 134	4	30
2-Nitrophenol	97.6	100	98		93.4	100	93		29 - 182	4	30
3,3'-Dichlorobenzidine	71.7	100	72		76.1	100	76		10 - 262	6	30
4,6-Dinitro-o-cresol	99.9	100	100		99.1	100	99		10 - 181	<1	30
4-Bromophenyl Phenyl Ether	107	100	107		99.7	100	100		53 - 127	7	30
4-Chloro-m-cresol	99.5	100	99		94.7	100	95		22 - 147	5	30
4-Chlorophenyl Phenyl Ether	102	100	102		99.6	100	100		25 - 158	3	30
4-Nitrophenol	47.5	100	48		47.6	100	48		10 - 132	<1	30
Acenaphthene	98.7	100	99		96.5	100	96		47 - 145	2	30
Acenaphthylene	104	100	104		102	100	102		33 - 145	1	30
Anthracene	102	100	102		98.1	100	98		27 - 133	4	30
Benz(a)anthracene	99.0	100	99		95.1	100	95		33 - 143	4	30
Benzidine	100 U	100	0	*	100 U	100	0	*	10 - 169	NC	30
Benzo(a)pyrene	101	100	101		99.6	100	100		17 - 163	2	30
3,4-Benzofluoranthene	101	100	101		99.3	100	99		24 - 159	2	30
Benzo(g,h,i)perylene	98.0	100	98		96.3	100	96		10 - 219	2	30
Benzo(k)fluoranthene	98.4	100	98		95.9	100	96		11 - 162	3	30
Bis(1-chloroisopropyl) Ether	113	100	113		106	100	106		36 - 166	6	30
Bis(2-chloroethoxy)methane	105	100	105		98.8	100	99		33 - 184	6	30
Bis(2-chloroethyl) Ether	92.0	100	92		88.3	100	88		12 - 158	4	30
Bis(2-ethylhexyl) Phthalate	105	100	105		103	100	103		10 - 158	2	30
Butyl Benzyl Phthalate	103	100	103		100	100	100		10 - 152	2	30
Chrysene	99.8	100	100		96.1	100	96		17 - 168	4	30
Di-n-butyl Phthalate	111	100	111		107	100	107		10 - 118	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/29/14
Sample Matrix: Water

Service Request: R1408633
Date Analyzed: 11/ 5/14

Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 222474

Analyte Name	Lab Control Sample RQ1413524-02 Result	Spike Amount	% Rec		Duplicate Lab Control Sample RQ1413524-03 Result	Spike Amount	% Rec	% Rec Limits	RPD	RPD Limit
Di-n-octyl Phthalate	104	100	104		103	100	103	10 - 146	1	30
Dibenz(a,h)anthracene	98.2	100	98		97.9	100	98	10 - 227	<1	30
Diethyl Phthalate	108	100	108		105	100	105	10 - 114	3	30
Dimethyl Phthalate	101	100	101		99.3	100	99	10 - 112	2	30
Fluoranthene	103	100	103		102	100	102	26 - 137	2	30
Fluorene	97.6	100	98		95.1	100	95	59 - 121	3	30
Hexachlorobenzene	104	100	104		98.6	100	99	10 - 152	6	30
Hexachlorobutadiene	76.4	100	76		76.8	100	77	24 - 116	<1	30
Hexachlorocyclopentadiene	98.7	100	99	*	98.5	100	98	28 - 98	<1	30
Hexachloroethane	68.1	100	68		68.5	100	69	40 - 113	<1	30
Indeno(1,2,3-cd)pyrene	98.8	100	99		92.8	100	93	10 - 171	6	30
Isophorone	105	100	105		98.6	100	99	21 - 196	6	30
N-Nitrosodi-n-propylamine	102	100	102		94.0	100	94	10 - 230	8	30
N-Nitrosodimethylamine	66.9	100	67		63.2	100	63	33 - 70	6	30
N-Nitrosodiphenylamine	106	100	106		99.2	100	99	50 - 117	7	30
Naphthalene	86.4	100	86		84.7	100	85	21 - 133	2	30
Nitrobenzene	96.3	100	96		91.8	100	92	35 - 180	5	30
Pentachlorophenol (PCP)	115	100	115		114	100	114	14 - 176	<1	30
Phenanthrene	107	100	107		102	100	102	54 - 120	4	30
Phenol	44.1	100	44		42.2	100	42	10 - 112	4	30
Pyrene	113	100	112		106	100	106	52 - 115	6	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/29/14
Sample Matrix: Water

Service Request: R1408633
Date Analyzed: 11/10/14

Lab Control Sample Summary
Petroleum Products in Water (Hydrocarbon Scan) for State of New York

Analytical Method: NY 310-13
Prep Method: Method

Units: µg/L
Basis: NA

Extraction Lot: 222473

	Lab Control Sample RQ1413523-02			Duplicate Lab Control Sample RQ1413523-03					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Fuel Oil No. 2	4350	5080	86	4510	5080	89	79 - 135	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

20345

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 1

Project Name: Davis Howland	Project Number:
Project Manager: Ashlee Patnode	Report CC:
Company/Address: Ecology & Environment Inc 368 Pleasant View Dr Lancaster NY 14086	
Phone #: 716 684-8060	Email: APatnode@EENG.com
Sampler's Signature: Lawrence Roell	Sampler's Printed Name: Lawrence Roell / Gregory Jones

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 0 0 0 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs ○ 8260 ○ 624 ○ CLP	GC/MS SVOAs ○ 8270 ○ 625	GC VOAs ○ 8021 ○ 601/602	PESTICIDES ○ 8081 ○ 608	PCBs ○ 8082 ○ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	TPH 310.1	Extra Volume					
TB1029-03	001	10/29/14	9:00	GW	3	3													
MW3S-Oct14	002	10/29/14	12:52	GW	6	3	1						1	1					
MW16R-Oct14	003	10/29/14	11:15	GW	6	3	1						1	1					
MW3R-Oct14	004	10/29/14	11:45	GW	6	3	1						1	1					
MW15R-Oct14	005	10/29/14	14:10	GW	6	3	1						1	1					
MW15R-Oct14-MS	QC	10/29/14	14:10	GW	6	3	1						1	1					
MW15R-Oct14-MSD	QC	10/29/14	14:10	GW	6	3	1						1	1					
MW10R-Oct14	006	10/29/14	15:40	GW	6	3	1						1	1					

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED: NY

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 1 day _____ 2 day _____ 3 day
_____ 4 day _____ 5 day
REQUESTED REPORT DATE: As per Contract

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
Edata X Yes _____ No

INVOICE INFORMATION
PO #
BILL TO: Ecology & Environment
368 Pleasant View Dr
Lancaster NY 14086
R1408633

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Lawrence Roell	Signature: Daniel Mac	Signature	Signature	Signature	Signature
Printed Name: Lawrence Roell	Printed Name: ALS	Printed Name	Printed Name	Printed Name	Printed Name
Firm: E & E	Firm: 10/29/14 / 1705	Firm	Firm	Firm	Firm
Date/Time: 10/29/14 17:05	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

R1408633 5
Ecology And Environment, Incorporated
Davis Howland Oil Company Site - SA 10/29/14

Distribution: White - Lab Copy; Yellow - Return to Originator

Cooler Receipt and Preservation Check Form

Project/Client E+E Folder Number R1408633

Cooler received on 10/29/14 by: DHW COURIER: ~~ALS~~ UPS FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y ~~N~~	5a	**Perchlorate** samples have required headspace?	Y N ~~NA~~
2	**Custody papers** properly completed (ink, signed)?	Y N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N NA
3	Did all bottles arrive in good **condition** (unbroken)?	Y N	6	Where did the bottles originate?	~~ALS~~/ROC CLIENT
4	Circle: ~~Wet Ice~~ **Dry Ice Gel packs** present?	Y N	7	Soil VOA received as:	Bulk Encore 5035set ~~NA~~

8. Temperature Readings DHW 10/29/14 Date: 10/29/14 Time: 1714 ID: IR#3 IR#4 From: ~~Temp Blank~~ Sample Bottle

Observed Temp (°C)	+6 11.8°	1.1°	1.4°				
Correction Factor (°C)	+0.6°	−0.5°	−0.5°				
Corrected Temp (°C)	2.4°	0.5°	0.9°				
Within 0-6°C?	Y N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-002 by DHW on 10/29/14 at 1714
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: KB 10/30/14

Cooler Breakdown: Date: 11/3/14 Time: 1045 by: [signature]

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? YES NO
2. Did all bottle labels and tags agree with custody papers? YES NO
3. Were correct containers used for the tests indicated? YES NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated ~~N/A~~

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**						

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 4-162-002, 073114-1BLT

Other Comments:

PC Secondary Review: KB 11/13/14 *significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

ALS Environmental
ALS Group USA, Corp
1565 Jefferson Rd, Building 300, Suite 360
Rochester, NY 14623
T: 585-288-5380
F: 585-288-8475
www.alsglobal.com

November 14, 2014

Analytical Report for Service Request No: R1408692

Ms. Ashlee Patnode
Ecology And Environment, Incorporated
368 Pleasantview Drive
Lancaster, NY 14086

Laboratory Results for: Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03

Dear Ms. Patnode:

Enclosed are the results of the sample(s) submitted to our laboratory on October 30, 2014. For your reference, these analyses have been assigned our service request number **R1408692**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7471. You may also contact me via email at Karen.Bunker@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Karen Bunker
Project Manager

ALS Environmental

Client:	Ecology & Environment	**Service Request No.:**	R1408692
Project:	Davis Howland Oil Co 10C3074.0012.03	**Date Received:**	10/30/2014
Sample Matrix:	Water		

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS. This report contains analytical results for samples designated for Tier II data deliverables. When appropriate to the method, method blank results have been reported with each analytical test. Surrogate recoveries have been reported for all applicable organic analyses. Additional quality control analyses reported herein include: Laboratory Control Sample (LCS)/Laboratory Control Sample Duplicate (LCSD).

Sample Receipt

Five water samples were collected and received for analysis at ALS on 10/30/14. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator between 1°C and 6°C upon receipt at the laboratory. The samples arrived at a cooler temperature of 3.7°C, within the guidelines of 0-6°C.

Volatile Organic Compounds

The samples were analyzed by GC/MS Method 624.

The Initial and Continuing Calibration Verifications met QC criteria.

Laboratory Control Sample (LCS) and LCS Duplicates (LCSD) had acceptable recoveries for these compounds. All Relative Percent Difference (RPD) calculations were acceptable.

All Laboratory Method Blanks were free from contamination except for 1,2-Dichlorobenzene, 1,3-Dichlorobenzene and 1,4-Dichlorobenzene on the 11/5/14 run and Bromomethane and Methylene Chloride on the 11/7/14 run. Data has been flagged as "B" appropriately.

Hits between the Method Reporting Limit (MRL) and Method Detection Limit (MDL) are flagged as "J", estimated.

All sample vials were unpreserved and analyzed within the required 7 day holding time.

No other analytical or quality control problems were encountered during analysis.

Approved by Karen P Burke **Date** 11/14/14

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1408692

Lab ID	Client ID
R1408692-001	TB1030-04
R1408692-002	P2-OCT14
R1408692-003	P3-OCT14
R1408692-004	PW2-OCT14
R1408692-005	PW1-OCT14

ALS Environmental

REPORT QUALIFIERS AND DEFINITIONS

U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.

J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Arclors).

B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.

E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.

E Organics- Concentration has exceeded the calibration range for that specific analysis.

D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.

* Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.

H Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.

Spike was diluted out.

\+ Correlation coefficient for MSA is <0.995.

N Inorganics- Matrix spike recovery was outside laboratory limits.

N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.

S Concentration has been determined using Method of Standard Additions (MSA).

W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.

P Concentration >40% (25% for CLP) difference between the two GC columns.

C Confirmed by GC/MS

Q DoD reports: indicates a pesticide/Aroclor is not confirmed (≥100% Difference between two GC columns).

X See Case Narrative for discussion.

MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.

MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).

LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.

ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.

ACCREDITED IN ACCORDANCE WITH nelac

Rochester Lab ID # for State Certifications[1]

NELAP Accredited	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Connecticut ID # PH0556	Nebraska Accredited	
Delaware Accredited	Nevada ID # NY-00032	North Carolina #676
DoD ELAP #65817	New Jersey ID # NY004	Pennsylvania ID# 68-786
Florida ID # E87674	New York ID # 10145	Rhode Island ID # 158
Illinois ID #200047		Virginia #460167

[1] Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the laboratory case narrative provided. For a specific list of accredited analytes, refer to http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads/North-America-Downloads

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408692
Project:	Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03	**Date Collected:**	10/30/14 0900
Sample Matrix:	Water	**Date Received:**	10/30/14
		Date Analyzed:	11/5/14 01:59
Sample Name:	TB1030-04	**Units:**	µg/L
Lab Code:	R1408692-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	624	**Analysis Lot:**	419615
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8578.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	**0.17**	J	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	**0.24**	J	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408692
Project:	Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03	**Date Collected:**	10/30/14 0900
Sample Matrix:	Water	**Date Received:**	10/30/14
		Date Analyzed:	11/5/14 01:59
Sample Name:	TB1030-04	**Units:**	µg/L
Lab Code:	R1408692-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	624	**Analysis Lot:**	419615
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8578.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	86	81-127	11/5/14 01:59	
4-Bromofluorobenzene	101	79-123	11/5/14 01:59	
Toluene-d8	95	83-120	11/5/14 01:59	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408692
Project:	Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03	**Date Collected:**	10/30/14 1030
Sample Matrix:	Water	**Date Received:**	10/30/14
		Date Analyzed:	11/7/14 20:01
Sample Name:	P2-OCT14	**Units:**	µg/L
Lab Code:	R1408692-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	624	**Analysis Lot:**	420135
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110714\L8660.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**34**		5.0	0.65	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.2	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	0.60	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**270**		5.0	0.50	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**9.0**		5.0	1.1	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	0.50	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	0.90	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	0.75	
541-73-1	1,3-Dichlorobenzene	5.0	U	5.0	0.50	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	0.75	
110-75-8	2-Chloroethyl Vinyl Ether	50	U	50	3.2	
67-64-1	Acetone	25	U	25	12	
71-43-2	Benzene	**1.3**	J	5.0	0.50	
75-27-4	Bromodichloromethane	5.0	U	5.0	0.75	
75-25-2	Bromoform	5.0	U	5.0	0.80	
74-83-9	Bromomethane	5.0	U	5.0	0.60	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	0.50	
108-90-7	Chlorobenzene	5.0	U	5.0	0.65	
75-00-3	Chloroethane	**4.7**	J	5.0	0.75	
67-66-3	Chloroform	5.0	U	5.0	0.65	
74-87-3	Chloromethane	5.0	U	5.0	0.80	
124-48-1	Dibromochloromethane	5.0	U	5.0	0.75	
75-09-2	Methylene Chloride	**1.6**	BJ	5.0	0.90	
100-41-4	Ethylbenzene	5.0	U	5.0	0.95	
127-18-4	Tetrachloroethene (PCE)	**11**		5.0	1.0	
108-88-3	Toluene	5.0	U	5.0	0.50	
79-01-6	Trichloroethene (TCE)	**54**		5.0	0.75	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	0.65	
75-01-4	Vinyl Chloride	**480**		5.0	0.71	
156-59-2	cis-1,2-Dichloroethene	**830**		5.0	0.90	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	0.71	
179601-23-1	m,p-Xylenes	10	U	10	0.86	
95-47-6	o-Xylene	5.0	U	5.0	0.95	
156-60-5	trans-1,2-Dichloroethene	**13**		5.0	0.75	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	0.50	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408692
Project:	Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03	**Date Collected:**	10/30/14 1030
Sample Matrix:	Water	**Date Received:**	10/30/14
		Date Analyzed:	11/7/14 20:01
Sample Name:	P2-OCT14	**Units:**	µg/L
Lab Code:	R1408692-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	624	**Analysis Lot:**	420135
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110714\L8660.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	5

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	92	81-127	11/7/14 20:01	
4-Bromofluorobenzene	99	79-123	11/7/14 20:01	
Toluene-d8	109	83-120	11/7/14 20:01	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408692
Project:	Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03	**Date Collected:**	10/30/14 1120
Sample Matrix:	Water	**Date Received:**	10/30/14
		Date Analyzed:	11/7/14 21:32
Sample Name:	P3-OCT14	**Units:**	µg/L
Lab Code:	R1408692-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	624	**Analysis Lot:**	420135
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110714\L8663.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	25

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**110**		25	3.3	
79-34-5	1,1,2,2-Tetrachloroethane	25	U	25	5.8	
79-00-5	1,1,2-Trichloroethane	25	U	25	3.0	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**35**		25	2.5	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**15**	J	25	5.5	
95-50-1	1,2-Dichlorobenzene	**3.0**	J	25	2.5	
107-06-2	1,2-Dichloroethane	25	U	25	4.5	
78-87-5	1,2-Dichloropropane	25	U	25	3.8	
541-73-1	1,3-Dichlorobenzene	25	U	25	2.5	
106-46-7	1,4-Dichlorobenzene	25	U	25	3.8	
110-75-8	2-Chloroethyl Vinyl Ether	250	U	250	16	
67-64-1	Acetone	130	U	130	58	
71-43-2	Benzene	25	U	25	2.5	
75-27-4	Bromodichloromethane	25	U	25	3.8	
75-25-2	Bromoform	25	U	25	4.0	
74-83-9	Bromomethane	25	U	25	3.0	
56-23-5	Carbon Tetrachloride	25	U	25	2.5	
108-90-7	Chlorobenzene	25	U	25	3.3	
75-00-3	Chloroethane	25	U	25	3.8	
67-66-3	Chloroform	25	U	25	3.3	
74-87-3	Chloromethane	25	U	25	4.0	
124-48-1	Dibromochloromethane	25	U	25	3.8	
75-09-2	Methylene Chloride	**5.0**	J	25	4.5	
100-41-4	Ethylbenzene	25	U	25	4.8	
127-18-4	Tetrachloroethene (PCE)	**2600**		25	5.0	
108-88-3	Toluene	25	U	25	2.5	
79-01-6	Trichloroethene (TCE)	**760**		25	3.8	
75-69-4	Trichlorofluoromethane (CFC 11)	25	U	25	3.3	
75-01-4	Vinyl Chloride	**3.8**	J	25	3.6	
156-59-2	cis-1,2-Dichloroethene	**2100**		25	4.5	
10061-01-5	cis-1,3-Dichloropropene	25	U	25	3.6	
179601-23-1	m,p-Xylenes	50	U	50	4.3	
95-47-6	o-Xylene	25	U	25	4.8	
156-60-5	trans-1,2-Dichloroethene	**5.0**	J	25	3.8	
10061-02-6	trans-1,3-Dichloropropene	25	U	25	2.5	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408692
Project:	Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03	**Date Collected:**	10/30/14 1120
Sample Matrix:	Water	**Date Received:**	10/30/14
		Date Analyzed:	11/7/14 21:32
Sample Name:	P3-OCT14	**Units:**	µg/L
Lab Code:	R1408692-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	624	**Analysis Lot:**	420135
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110714\L8663.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	25

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	87	81-127	11/7/14 21:32	
4-Bromofluorobenzene	97	79-123	11/7/14 21:32	
Toluene-d8	108	83-120	11/7/14 21:32	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408692
Project:	Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03	**Date Collected:**	10/30/14 1200
Sample Matrix:	Water	**Date Received:**	10/30/14
		Date Analyzed:	11/5/14 03:33
Sample Name:	PW2-OCT14	**Units:**	µg/L
Lab Code:	R1408692-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	624	**Analysis Lot:**	419615
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8581.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	2

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**2.5**		2.0	0.26	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.46	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	0.24	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**40**		2.0	0.20	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**8.1**		2.0	0.44	
95-50-1	1,2-Dichlorobenzene	2.0	U	2.0	0.20	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	0.36	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	0.30	
541-73-1	1,3-Dichlorobenzene	2.0	U	2.0	0.20	
106-46-7	1,4-Dichlorobenzene	2.0	U	2.0	0.30	
110-75-8	2-Chloroethyl Vinyl Ether	20	U	20	1.3	
67-64-1	Acetone	10	U	10	4.7	
71-43-2	Benzene	**0.22**	J	2.0	0.20	
75-27-4	Bromodichloromethane	2.0	U	2.0	0.30	
75-25-2	Bromoform	2.0	U	2.0	0.32	
74-83-9	Bromomethane	2.0	U	2.0	0.24	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	0.20	
108-90-7	Chlorobenzene	2.0	U	2.0	0.26	
75-00-3	Chloroethane	**0.34**	J	2.0	0.30	
67-66-3	Chloroform	2.0	U	2.0	0.26	
74-87-3	Chloromethane	2.0	U	2.0	0.32	
124-48-1	Dibromochloromethane	2.0	U	2.0	0.30	
75-09-2	Methylene Chloride	2.0	U	2.0	0.36	
100-41-4	Ethylbenzene	2.0	U	2.0	0.38	
127-18-4	Tetrachloroethene (PCE)	**61**		2.0	0.40	
108-88-3	Toluene	2.0	U	2.0	0.20	
79-01-6	Trichloroethene (TCE)	**27**		2.0	0.30	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	0.26	
75-01-4	Vinyl Chloride	**60**		2.0	0.28	
156-59-2	cis-1,2-Dichloroethene	**570**	E	2.0	0.36	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	0.28	
179601-23-1	m,p-Xylenes	4.0	U	4.0	0.34	
95-47-6	o-Xylene	2.0	U	2.0	0.38	
156-60-5	trans-1,2-Dichloroethene	**3.1**		2.0	0.30	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	0.20	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408692
Project:	Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03	**Date Collected:**	10/30/14 1200
Sample Matrix:	Water	**Date Received:**	10/30/14
		Date Analyzed:	11/5/14 03:33
Sample Name:	PW2-OCT14	**Units:**	µg/L
Lab Code:	R1408692-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	624	**Analysis Lot:**	419615
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8581.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	2

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	91	81-127	11/5/14 03:33	
4-Bromofluorobenzene	99	79-123	11/5/14 03:33	
Toluene-d8	115	83-120	11/5/14 03:33	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408692
Project:	Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03	**Date Collected:**	10/30/14 1200
Sample Matrix:	Water	**Date Received:**	10/30/14
		Date Analyzed:	11/7/14 20:32
Sample Name:	PW2-OCT14	**Units:**	µg/L
Lab Code:	R1408692-004	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	624	**Analysis Lot:**	420135
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110714\L8661.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**3.4**	DJ	5.0	0.65	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.2	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	0.60	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**43**	D	5.0	0.50	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**7.7**	D	5.0	1.1	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	0.50	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	0.90	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	0.75	
541-73-1	1,3-Dichlorobenzene	5.0	U	5.0	0.50	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	0.75	
110-75-8	2-Chloroethyl Vinyl Ether	50	U	50	3.2	
67-64-1	Acetone	25	U	25	12	
71-43-2	Benzene	5.0	U	5.0	0.50	
75-27-4	Bromodichloromethane	5.0	U	5.0	0.75	
75-25-2	Bromoform	5.0	U	5.0	0.80	
74-83-9	Bromomethane	**0.75**	BJ	5.0	0.60	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	0.50	
108-90-7	Chlorobenzene	5.0	U	5.0	0.65	
75-00-3	Chloroethane	5.0	U	5.0	0.75	
67-66-3	Chloroform	5.0	U	5.0	0.65	
74-87-3	Chloromethane	5.0	U	5.0	0.80	
124-48-1	Dibromochloromethane	5.0	U	5.0	0.75	
75-09-2	Methylene Chloride	5.0	U	5.0	0.90	
100-41-4	Ethylbenzene	5.0	U	5.0	0.95	
127-18-4	Tetrachloroethene (PCE)	**80**	D	5.0	1.0	
108-88-3	Toluene	5.0	U	5.0	0.50	
79-01-6	Trichloroethene (TCE)	**27**	D	5.0	0.75	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	0.65	
75-01-4	Vinyl Chloride	**78**	D	5.0	0.71	
156-59-2	cis-1,2-Dichloroethene	**670**	D	5.0	0.90	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	0.71	
179601-23-1	m,p-Xylenes	10	U	10	0.86	
95-47-6	o-Xylene	5.0	U	5.0	0.95	
156-60-5	trans-1,2-Dichloroethene	**3.3**	DJ	5.0	0.75	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	0.50	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408692
Project:	Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03	**Date Collected:**	10/30/14 1200
Sample Matrix:	Water	**Date Received:**	10/30/14
		Date Analyzed:	11/7/14 20:32
Sample Name:	PW2-OCT14	**Units:**	µg/L
Lab Code:	R1408692-004	**Basis:**	NA
Run Type:	Dilution		

Volatile Organic Compounds by GC/MS

Analytical Method:	624	**Analysis Lot:**	420135
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110714\L8661.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	5

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	90	81-127	11/7/14 20:32	
4-Bromofluorobenzene	98	79-123	11/7/14 20:32	
Toluene-d8	110	83-120	11/7/14 20:32	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408692
Project:	Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03	**Date Collected:**	10/30/14 1401
Sample Matrix:	Water	**Date Received:**	10/30/14
		Date Analyzed:	11/7/14 21:02
Sample Name:	PW1-OCT14	**Units:**	µg/L
Lab Code:	R1408692-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	624	**Analysis Lot:**	420135
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\I10714\L8662.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	5

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	**1.3**	J	5.0	0.65	
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	1.2	
79-00-5	1,1,2-Trichloroethane	5.0	U	5.0	0.60	
75-34-3	1,1-Dichloroethane (1,1-DCA)	**40**		5.0	0.50	
75-35-4	1,1-Dichloroethene (1,1-DCE)	**5.0**		5.0	1.1	
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	0.50	
107-06-2	1,2-Dichloroethane	5.0	U	5.0	0.90	
78-87-5	1,2-Dichloropropane	5.0	U	5.0	0.75	
541-73-1	1,3-Dichlorobenzene	5.0	U	5.0	0.50	
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	0.75	
110-75-8	2-Chloroethyl Vinyl Ether	50	U	50	3.2	
67-64-1	Acetone	25	U	25	12	
71-43-2	Benzene	**1.3**	J	5.0	0.50	
75-27-4	Bromodichloromethane	5.0	U	5.0	0.75	
75-25-2	Bromoform	5.0	U	5.0	0.80	
74-83-9	Bromomethane	5.0	U	5.0	0.60	
56-23-5	Carbon Tetrachloride	5.0	U	5.0	0.50	
108-90-7	Chlorobenzene	5.0	U	5.0	0.65	
75-00-3	Chloroethane	5.0	U	5.0	0.75	
67-66-3	Chloroform	5.0	U	5.0	0.65	
74-87-3	Chloromethane	5.0	U	5.0	0.80	
124-48-1	Dibromochloromethane	5.0	U	5.0	0.75	
75-09-2	Methylene Chloride	5.0	U	5.0	0.90	
100-41-4	Ethylbenzene	5.0	U	5.0	0.95	
127-18-4	Tetrachloroethene (PCE)	**5.0**	J	5.0	1.0	
108-88-3	Toluene	5.0	U	5.0	0.50	
79-01-6	Trichloroethene (TCE)	**29**		5.0	0.75	
75-69-4	Trichlorofluoromethane (CFC 11)	5.0	U	5.0	0.65	
75-01-4	Vinyl Chloride	**180**		5.0	0.71	
156-59-2	cis-1,2-Dichloroethene	**650**		5.0	0.90	
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	0.71	
179601-23-1	m,p-Xylenes	10	U	10	0.86	
95-47-6	o-Xylene	5.0	U	5.0	0.95	
156-60-5	trans-1,2-Dichloroethene	**3.7**	J	5.0	0.75	
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	0.50	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408692
Project:	Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03	**Date Collected:**	10/30/14 1401
Sample Matrix:	Water	**Date Received:**	10/30/14
		Date Analyzed:	11/7/14 21:02
Sample Name:	PW1-OCT14	**Units:**	µg/L
Lab Code:	R1408692-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	624	**Analysis Lot:**	420135
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110714\L8662.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	5

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	92	81-127	11/7/14 21:02	
4-Bromofluorobenzene	99	79-123	11/7/14 21:02	
Toluene-d8	108	83-120	11/7/14 21:02	

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Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408692
Project:	Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/5/14 00:56
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413876-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	624	**Analysis Lot:**	419615
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8576.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	**0.23**	J	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	**0.15**	J	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	**0.19**	J	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	1.0	U	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	1.0	U	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408692
Project:	Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/5/14 00:56
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413876-05	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	624	**Analysis Lot:**	419615
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110414\L8576.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	92	81-127	11/5/14 00:56	
4-Bromofluorobenzene	97	79-123	11/5/14 00:56	
Toluene-d8	88	83-120	11/5/14 00:56	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408692
Project:	Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/7/14 11:46
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413893-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	624	**Analysis Lot:**	420135
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110714\L8644.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

CAS No.	Analyte Name	Result	Q	MRL	MDL	Note
71-55-6	1,1,1-Trichloroethane (TCA)	1.0	U	1.0	0.13	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.23	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.12	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	0.10	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.22	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.10	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.18	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.15	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.10	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.15	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.64	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.10	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15	
75-25-2	Bromoform	1.0	U	1.0	0.16	
74-83-9	Bromomethane	**0.35**	J	1.0	0.12	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.10	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.15	
67-66-3	Chloroform	1.0	U	1.0	0.13	
74-87-3	Chloromethane	1.0	U	1.0	0.16	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.15	
75-09-2	Methylene Chloride	**0.20**	J	1.0	0.18	
100-41-4	Ethylbenzene	1.0	U	1.0	0.19	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.20	
108-88-3	Toluene	1.0	U	1.0	0.10	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.15	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.13	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.14	
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.18	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.17	
95-47-6	o-Xylene	1.0	U	1.0	0.19	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.15	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.10	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client:	Ecology And Environment, Incorporated	**Service Request:**	R1408692
Project:	Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	11/7/14 11:46
Sample Name:	Method Blank	**Units:**	µg/L
Lab Code:	RQ1413893-04	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analytical Method:	624	**Analysis Lot:**	420135
Data File Name:	I:\ACQUDATA\MSVOA6\DATA\110714\L8644.D\	**Instrument Name:**	R-MS-06
		Dilution Factor:	1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	92	81-127	11/7/14 11:46	
4-Bromofluorobenzene	97	79-123	11/7/14 11:46	
Toluene-d8	107	83-120	11/7/14 11:46	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03
Sample Matrix: Water

Service Request: R1408692
Date Analyzed: 11/ 4/14 - 11/ 5/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 624

Units: µg/L
Basis: NA

Analysis Lot: 419615

	Lab Control Sample RQ1413876-03			Duplicate Lab Control Sample RQ1413876-04					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1-Trichloroethane (TCA)	19.0	20.0	95	19.1	20.0	96	52 - 162	<1	30
1,1,2,2-Tetrachloroethane	20.4	20.0	102	15.8	20.0	79	46 - 157	26	30
1,1,2-Trichloroethane	26.9	20.0	135	21.1	20.0	106	52 - 150	24	30
1,1-Dichloroethane (1,1-DCA)	19.4	20.0	97	19.6	20.0	98	59 - 155	<1	30
1,1-Dichloroethene (1,1-DCE)	20.4	20.0	102	20.7	20.0	103	10 - 234	1	30
1,2-Dichlorobenzene	21.2	20.0	106	21.2	20.0	106	18 - 190	<1	30
1,2-Dichloroethane	18.6	20.0	93	18.4	20.0	92	49 - 155	1	30
1,2-Dichloropropane	24.7	20.0	124	23.6	20.0	118	10 - 210	5	30
1,3-Dichlorobenzene	21.2	20.0	106	21.0	20.0	105	59 - 156	<1	30
1,4-Dichlorobenzene	21.6	20.0	108	20.9	20.0	105	18 - 190	3	30
2-Chloroethyl Vinyl Ether	26.6	20.0	133	21.1	20.0	105	10 - 305	23	30
Acetone	11.9	20.0	59	11.0	20.0	55	55 - 130	8	30
Benzene	20.3	20.0	101	20.0	20.0	100	37 - 151	1	30
Bromodichloromethane	24.8	20.0	124	20.8	20.0	104	35 - 155	18	30
Bromoform	21.9	20.0	110	21.0	20.0	105	45 - 169	4	30
Bromomethane	15.4	20.0	77	15.7	20.0	79	10 - 242	2	30
Carbon Tetrachloride	21.7	20.0	108	20.5	20.0	103	70 - 140	5	30
Chlorobenzene	21.0	20.0	105	21.8	20.0	109	37 - 160	3	30
Chloroethane	14.2	20.0	71	14.3	20.0	72	14 - 230	<1	30
Chloroform	20.5	20.0	102	20.2	20.0	101	51 - 138	1	30
Chloromethane	19.8	20.0	99	20.3	20.0	102	10 - 273	3	30
Dibromochloromethane	23.0	20.0	115	20.4	20.0	102	53 - 149	12	30
Methylene Chloride	25.1	20.0	125	25.2	20.0	126	10 - 221	<1	30
Ethylbenzene	22.1	20.0	110	21.6	20.0	108	37 - 162	2	30
Tetrachloroethene (PCE)	21.0	20.0	105	19.9	20.0	99	64 - 148	6	30
Toluene	25.0	20.0	125	21.5	20.0	107	47 - 150	15	30
Trichloroethene (TCE)	26.8	20.0	134	22.7	20.0	114	71 - 157	16	30
Trichlorofluoromethane (CFC 11)	13.6	20.0	68	13.6	20.0	68	17 - 181	<1	30
Vinyl Chloride	20.1	20.0	100	20.5	20.0	102	10 - 251	2	30
cis-1,2-Dichloroethene	22.6	20.0	113	21.9	20.0	110	72 - 125	3	30
cis-1,3-Dichloropropene	27.3	20.0	137	22.5	20.0	113	10 - 227	19	30
m,p-Xylenes	41.7	40.0	104	41.6	40.0	104	76 - 131	<1	30
o-Xylene	22.2	20.0	111	18.1	20.0	91	78 - 127	20	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03
Sample Matrix: Water

Service Request: R1408692
Date Analyzed: 11/ 4/14 - 11/ 5/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 624

Units: µg/L
Basis: NA

Analysis Lot: 419615

	Lab Control Sample RQ1413876-03			Duplicate Lab Control Sample RQ1413876-04					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
trans-1,2-Dichloroethene	21.5	20.0	108	21.4	20.0	107	54 - 156	<1	30
trans-1,3-Dichloropropene	26.4	20.0	132	21.4	20.0	107	17 - 183	21	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03
Sample Matrix: Water

Service Request: R1408692
Date Analyzed: 11/ 7/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 624

Units: µg/L
Basis: NA

Analysis Lot: 420135

Lab Control Sample
RQ1413893-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	19.5	20.0	97	52 - 162
1,1,2,2-Tetrachloroethane	20.8	20.0	104	46 - 157
1,1,2-Trichloroethane	23.3	20.0	116	52 - 150
1,1-Dichloroethane (1,1-DCA)	20.4	20.0	102	59 - 155
1,1-Dichloroethene (1,1-DCE)	20.2	20.0	101	10 - 234
1,2-Dichlorobenzene	20.1	20.0	100	18 - 190
1,2-Dichloroethane	18.8	20.0	94	49 - 155
1,2-Dichloropropane	22.1	20.0	110	10 - 210
1,3-Dichlorobenzene	19.7	20.0	98	59 - 156
1,4-Dichlorobenzene	20.4	20.0	102	18 - 190
2-Chloroethyl Vinyl Ether	21.5	20.0	108	10 - 305
Acetone	16.5	20.0	82	55 - 130
Benzene	22.3	20.0	112	37 - 151
Bromodichloromethane	19.9	20.0	100	35 - 155
Bromoform	20.0	20.0	100	45 - 169
Bromomethane	20.3	20.0	101	10 - 242
Carbon Tetrachloride	20.2	20.0	101	70 - 140
Chlorobenzene	21.1	20.0	106	37 - 160
Chloroethane	20.4	20.0	102	14 - 230
Chloroform	20.3	20.0	102	51 - 138
Chloromethane	25.6	20.0	128	10 - 273
Dibromochloromethane	20.5	20.0	102	53 - 149
Methylene Chloride	27.0	20.0	135	10 - 221
Ethylbenzene	20.9	20.0	104	37 - 162
Tetrachloroethene (PCE)	18.9	20.0	94	64 - 148
Toluene	22.4	20.0	112	47 - 150
Trichloroethene (TCE)	20.9	20.0	104	71 - 157
Trichlorofluoromethane (CFC 11)	16.2	20.0	81	17 - 181
Vinyl Chloride	26.4	20.0	132	10 - 251
cis-1,2-Dichloroethene	23.2	20.0	116	72 - 125
cis-1,3-Dichloropropene	22.1	20.0	110	10 - 227
m,p-Xylenes	41.5	40.0	104	76 - 131
o-Xylene	21.5	20.0	107	78 - 127

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - SA 10/30/14/ 10C3074.0012.03
Sample Matrix: Water

Service Request: R1408692
Date Analyzed: 11/ 7/14

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 624

Units: µg/L
Basis: NA

Analysis Lot: 420135

Lab Control Sample
RQ1413893-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	21.8	20.0	109	54 - 156
trans-1,3-Dichloropropene	21.8	20.0	109	17 - 183

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

20344

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 1

Project Name: Davis Howland	Project Number: 10C3074.0012.03
Project Manager: Ashlee Patnode	Report CC:
Company/Address: Ecology & Environment INC 368 Plaza Drive Lancaster NY 14086	
Phone #: 716 684-8060	Email: APatnode@EENE.com
Sampler's Signature: Lawrence Roell	Sampler's Printed Name: Lawrence Roell

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: O

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs ◦ 8260 ◦ 624 ◦ CLP	GC/MS SVOAs ◦ 8270 ◦ 625	GC VOAs ◦ 8021 ◦ 601/602	PESTICIDES ◦ 8081 ◦ 608	PCBs ◦ 8082 ◦ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	REMARKS/ ALTERNATE DESCRIPTION
TB1030-04	-001	10/30/14	9:00	GW	2	2							
P2-oct 14	-002	10/30/14	10:30	GW	3	3							
P3-oct 14	-003	10/30/14	11:20	GW	3	3							
PW2-oct14	-004	10/30/14	12:00	GW	3	3							
PW1-oct14	-005	10/30/14	14:01	GW	3	3							

Lawrence Roell 10/30/14

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ 1 day _____ 2 day _____ 3 day
_____ 4 day _____ 5 day

REQUESTED REPORT DATE
As per Contract

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
X III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data

Edata X Yes _____ No

INVOICE INFORMATION
PO #
BILL TO: Ecology & Environment
368 Plaza Drive
Lancaster NY 14086
R1408692

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Lawrence Roell	Signature: Daniel Ward	Signature	Signature	Signature	
Printed Name: Lawrence Roell	Printed Name: ALS	Printed Name	Printed Name	Printed Name	
Firm: Ecology & Environment Inc	Firm: 10/30/14 / 1355	Firm	Firm	Firm	
Date/Time: 10/31/14 1355	Date/Time	Date/Time	Date/Time	Date/Time	

R1408692 5
Ecology And Environment, Incorporated
Davis Howland Oil Company Site - SA 10/30/14

Distribution: White - Lab Copy; Yellow - Return to Originator

Cooler Receipt and Preservation Check Form

Project/Client E+E Folder Number R1408692

Cooler received on 10/30/14 by: DH

COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	Y (N)	5a	Perchlorate samples have required headspace?	Y N NA
2	Custody papers properly completed (ink, signed)?	(Y) N	5b	Did VOA vials, Alk,or Sulfide have sig* bubbles?	Y (N) NA
3	Did all bottles arrive in good condition (unbroken)?	(Y) N	6	Where did the bottles originate?	ALS/ROC CLIENT
4	Circle: Wet Ice Dry Ice Gel packs present?	(Y) N	7	Soil VOA received as:	Bulk Encore 5035set (NA)

8. Temperature Readings Date: 10/30/14 Time: 1356 ID: IR#3 IR#4 From: Temp Blank Sample Bottle

Observed Temp (°C)	2.9C						
Correction Factor (°C)	+0.4C						
Corrected Temp (°C)	3.3C						
Within 0-6°C?	(Y) N	Y N	Y N	Y N	Y N	Y N	Y N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed Same Day Rule

&Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: R-07 by DH on 10/30/14 at 1356
5035 samples placed in storage location: _____ by _____ on _____ at _____

PC Secondary Review: KB 10/30/14

Cooler Breakdown: Date: 11/3/14 Time: 1245 by: JS

1. Were all bottle labels complete (*i.e.* analysis, preservation, etc.)? (YES) NO
2. Did all bottle labels and tags agree with custody papers? (YES) NO
3. Were correct containers used for the tests indicated? (YES) NO
4. Air Samples: Cassettes / Tubes Intact Canisters Pressurized Tedlar® Bags Inflated (N/A)

Explain any discrepancies:

pH	Reagent	Yes	No	Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH
≥12	NaOH								
≤2	HNO_3								
≤2	H_2SO_4								
<4	$NaHSO_4$								
Residual Chlorine (-)	For CN Phenol and 522			If +, contact PM to add $Na_2S_2O_3$ (CN), ascorbic (phenol).					
	$Na_2S_2O_3$	-	-						
	ZnAcetate	-	-						
	HCl	**	**						

**Not to be tested before analysis – pH tested and recorded by VOAs on a separate worksheet

Yes=All samples OK

No=Samples were preserved at The lab as listed

PM OK to Adjust: _____

Bottle lot numbers: 4-162-052

Other Comments:

PC Secondary Review: 11/4/14

*significant air bubbles: VOA > 5-6 mm : WC >1 in. diameter

Data Usability Summary Report	Project: Davis Howland Oil Company
Date Completed: January 14, 2015	Completed by: Lynne Kalmbach and Marcia Meredith Galloway

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:

Project ID	Lab Work Order	Laboratory
10C3074.0012.03	R1408692 R1408633 R1408538	ALS, Rochester, NY

Work Orders, Tests and Number of Samples included in this DUSR

Work Orders	Matrix	Test Method	Method Name	Number of Samples	Sample Type
R1408538	WG	E624	Volatile Organic Compound by GC/MS	12	N/FD
R1408538	WQ	E624	Volatile Organic Compound by GC/MS	2	TB
R1408633	WG	E624	Volatile Organic Compound by GC/MS	5	N
R1408633	WQ	E624	Volatile Organic Compound by GC/MS	1	TB
R1408692	WG	E624	Volatile Organic Compound by GC/MS	4	N
R1408692	WQ	E624	Volatile Organic Compound by GC/MS	1	TB
R1408538	WG	E625	Semi-volatile Organic Compounds by GC/MS	12	N/FD
R1408633	WG	E625	Semi-volatile Organic Compounds by GC/MS	5	N
R1408538	WG	NY 310-13	Petroleum Products in Water (Hydrocarbon Scan)	12	N/FD
R1408633	WG	NY 310-13	Petroleum Products in Water (Hydrocarbon Scan)	5	N

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Table 1 Sample Summary Tables from Electronic Data Deliverable

Work Order	Matrix	Sample ID	Lab ID	Sample Date	Lab QC	MS/ MSD	ID Corrections
R1408538	WQ	TB-1027-01	R1408538-001	10/27/14			TB1027-01
R1408538	WG	MW12R-OCT14	R1408538-002	10/27/14			MW-12R-OCT14
R1408538	WG	MW5R-1027	R1408538-003	10/27/14			MW-5R-OCT14
R1408538	WG	MW12S-OCT14	R1408538-004	10/27/14			MW-12S-OCT14
R1408538	WG	MW9S-1027	R1408538-005	10/27/14			MW-9S-OCT14
R1408538	WG	MW13S-1027	R1408538-006	10/27/14			MW-13S-OCT14
R1408538	WG	MW8R-OCT14	R1408538-007	10/27/14			MW-8R-OCT14
R1408538	WQ	TB1028-02	R1408538-008	10/28/14			
R1408538	WG	MW-2R-OCT 14	R1408538-009	10/28/14			MW-2R-OCT14
R1408538	WG	MW-14R-OCT 14	R1408538-010	10/28/14			MW-14R-OCT14
R1408538	WG	MW-2S-OCT 14	R1408538-011	10/28/14			MW-2S-OCT14
R1408538	WG	MW-2S-OCT 14Q	R1408538-012	10/28/14			MW-2S-OCT14Q
R1408538	WG	MW-14S-OCT 14	R1408538-013	10/28/14			MW-14S-OCT14
R1408538	WG	MW-1S-OCT 14	R1408538-014	10/28/14			MW-1S-OCT14
R1408633	WQ	TB1029-03	R1408633-001	10/29/14			
R1408633	WG	MW3S-Oct14	R1408633-002	10/29/14			MW-3S-OCT14
R1408633	WG	MW16R-Oct14	R1408633-003	10/29/14			MW-16R-OCT14
R1408633	WG	MW3R-Oct14	R1408633-004	10/29/14			MW-3R-OCT14
R1408633	WG	MW15R-Oct14	R1408633-005	10/29/14	MS/MSD		MW-15R-OCT14
R1408633	WG	MW10R-Oct14	R1408633-006	10/29/14			MW-10R-OCT14
R1408692	WQ	TB1030-04	R1408692-001	10/30/14			
R1408692	WG	P2-OCT14	R1408692-002	10/30/14			P-2-OCT14
R1408692	WG	P3-OCT14	R1408692-003	10/30/14			P-3-OCT14
R1408692	WG	PW2-OCT14	R1408692-004	10/30/14			PW-2-OCT14
R1408692	WG	PW1-OCT14	R1408692-005	10/30/14			PW-1-OCT14

General Sample Information	
Do Samples and Analyses on COC check against Lab Sample Tracking Form?	Yes. Many of the sample names were corrected as noted in the ID Correction column to maintain consistency in nomenclature between sampling events.
Did coolers arrive at lab between 2 and 6°C and in good condition as indicated on COC and Cooler Receipt Form?	No. One of the coolers associated with SDG R1408538 was received at a temperature of 7.6°C as recorded from a temperature blank. The samples were received on ice by the laboratory at the end of the field day. There are no usability issues with the data. Custody seals were not present on the coolers; however, the coolers were directly transferred from the field technician to the laboratory.
Frequency of Field QC Samples Correct? Field Duplicate - 1/20 samples Trip Blank - Every cooler with VOCs waters only Equipment Blank - 1/ set of samples per day?	No Field Duplicate collected 1/20. MS/MSD collected 1/20 Trip Blanks – 1 per each cooler with VOCs. Equipment blank not collected – dedicated equipment used.
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

Volatile Organics and Semi-volatile Organics by GC/MS	
Description	**Notes and Qualifiers**
Any compounds present in method, trip, and field blanks (see Table 2)?	Yes. E624: Methylene chloride and bromomethane were detected in trip blanks; however, due to laboratory contamination, the results were qualified as non-detects. Methylene chloride, bromomethane, 1,2-dichlorobenzene, 1,3-dichlorobenzene, and 1,4-dichlorobenzene were detected in method blanks.
For samples, if results are < 5 times the blank or < 10 times blank for common laboratory contaminants then "U" flag data. Qualification also applies to TICs.	Methylene chloride is a common laboratory contaminant; therefore, sample results less than 10X the blank detection were U qualified as non-detect. The method detection limit was elevated to the sample result. Sample results less than 5X the blank detection for bromomethane were U qualified as non-detect. The method detection limit was elevated to the sample result. 1,2-dichlorobenzene, 1,3-dichlorobenzene, and 1,4-dichlorobenzene were not detected in the samples associated with the blank detections.
Surrogate for method blanks and LCS within limits?	No. One surrogate was outside of acceptance criteria for LCS RQ1413876-03. No qualification of the data was made
Surrogate for samples and MS/MSD within limits? (See Table 3). All samples should be re-analyzed for VOCs? Samples should re-analyzed if >1 BN and/or > AP for BNAs is out. Matrix effects should be established.	No. One surrogate was outside of acceptance criteria for MW-15R-OCT14DMS. No qualification of the data was made.
Laboratory QC frequency one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Yes.

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Volatile Organics and Semi-volatile Organics by GC/MS	
Description	**Notes and Qualifiers**
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. E624: Acetone failed recovery in the MS of sample MW-15R-OCT14. The compound is a poor performing analyte; therefore, no qualification of the data was made. Three analytes exhibited poor precision between the MS and MSD. The individual recoveries were acceptable; therefore, no qualification of the data was made. E625: Benzidine was recovered at 0% in the MS and MSD of sample MW-15R-OCT14. The LCS associated with the spike was non-compliant; therefore, the results were qualified UR as rejected non-detect.
LCS within QC criteria (see Table 5)? If out, and the recovery high with no positive values, then no data qualification is required.	No. E625: Benzidine, diethylphthalate and pyrene were recovered high in the LCS RQ143225-03. Benzidine exhibited poor precision between the LCS and LCSD. There were no sample detections in the associated samples; therefore, no qualification of the data was made. Hexachlorocyclopentadiene was recovered high in the LCS/LCSD RQ1413524-02/03. There were no sample detections in the associated samples; therefore, no qualification of the data was made. Benzidine was recovered at 0% in the LCS/LCSD RQ1413524-02/03. Benzidine is a poor performing analyte in a multi-parameter spike. The associated sample results were UR qualified as rejected non-detects. E625: Acetone was recovered below the acceptance criteria in LCS RQ1413876-04. Acetone is a poor performing analyte; therefore, no qualification of the data was made.
Do internal standards areas and retention time meet criteria? If not was sample re-analyzed to establish matrix (see Table 6)?	Unable to assess. Category A reporting. No exceptions noted in narrative.
Is initial calibration for target compounds <10 %RSD or curve fit?	Unable to assess. Category A reporting. No exceptions noted in narrative.
Is continuing calibration for target compounds < 20.5%D.	Unable to assess. Category A reporting. No exceptions noted in narrative.
Were any samples re-analyzed or diluted (see Table 6)? For any sample re-analysis and dilutions is only one reportable result by flagged?	Yes. Samples were dilute to bring target analytes within calibration range. Only one result is reported.
For TICs are there any system related compounds that should not be reported?	N/A
Do field duplicate results show good precision for all compounds except TICs (see Table 7)?	No. Cis-1,2-dichloroethene and vinyl chloride exceeded 40% RPD in the field duplicate of MW-2S-OCT14. The results were qualified J as estimated.

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General Analytical Methods (Total Petroleum Hydrocarbons)	
Description	**Notes and Qualifiers**
Any compounds present in method and field blanks as noted on Table 2?	No.
For samples, if results are <5 times the blank then "U" flag data.	Not required.
Laboratory QC frequency one blank and LCS with each batch and one set of MS/MSD per 20 samples?	Yes.
MS/MSD within QC criteria (see Table 4)? QC limits are not applicable to sample results greater than 4 times spike amount.	Yes.
LCS within QC criteria (see Table 5)? If out, and the recovery high with no positive values, then no data qualification is required.	Yes.
Do field duplicate results show good precision for all compounds (see Table 7)?	Yes.

Summary of Findings

- Low level results for methylene chloride and bromomethane were qualified as non-detect due to detections of the analytes in the method blanks.
- Poor precision between analytes in the field duplicate resulted in J qualification of data.
- Benzidine results were rejected due to the analyte being recovered in the LCS/LCSD at 0%. Benzidine is a poor performing analyte in a multi-parameter spike. The analyte was not detected in the samples and is not a contaminant of concern.

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Table 2 - List of Positive Results for Blank Samples

Method	Sample ID	Sample Type	Analyte	Result	Qualifier	Units	MDL	PQL
E624	TB1027-01	TB	Bromomethane	0.37	BJ	ug/l	0.12	1
E624	TB1027-01	TB	Methylene chloride	0.25	BJ	ug/l	0.18	1
E624	TB1028-02	TB	Methylene chloride	0.2	BJ	ug/l	0.18	1
E624	TB1029-03	TB	Methylene chloride	0.26	BJ	ug/l	0.18	1
E624	TB1030-04	TB	Bromomethane	0.17	J	ug/l	0.12	1
E624	TB1030-04	TB	Methylene chloride	0.24	J	ug/l	0.18	1
E624	RQ1413413-04	MB	Bromomethane	0.39	J	ug/l	0.12	1
E624	RQ1413413-04	MB	Methylene chloride	0.23	J	ug/l	0.18	1
E624	RQ1413585-04	MB	Methylene chloride	0.2	J	ug/l	0.18	1
E624	RQ1413876-05	MB	1,2-Dichlorobenzene	0.23	J	ug/l	0.1	1
E624	RQ1413876-05	MB	1,3-Dichlorobenzene	0.15	J	ug/l	0.1	1
E624	RQ1413876-05	MB	1,4-Dichlorobenzene	0.19	J	ug/l	0.15	1
E624	RQ1413893-04	MB	Bromomethane	0.35	J	ug/l	0.12	1
E624	RQ1413893-04	MB	Methylene chloride	0.2	J	ug/l	0.18	1

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

Method	Method Blank	Matrix	Analyte	Blank Result	Sample Result	Lab Qualifier	PQL	Affected Samples	Sample Flag
E624	RQ1413413-04	WQ	Methylene chloride	0.23	0.25	BJ	1	TB1027-01	U Flag
E624	RQ1413585-04	WQ	Methylene chloride	0.2	0.2	BJ	1	TB1028-02	U Flag
E624	RQ1413585-04	WQ	Methylene chloride	0.2	0.26	BJ	1	TB1029-03	U Flag
E624	RQ1413585-04	WQ	Methylene chloride	0.2	1.8	BJ	10	MW-3R-OCT14	U Flag
E624	RQ1413893-04	WQ	Methylene chloride	0.2	1.6	BJ	5	P-2-OCT14	U Flag
E624	RQ1413413-04	WQ	Bromomethane	0.39	0.37	BJ	1	TB1027-01	U Flag
E624	RQ1413413-04	WQ	Bromomethane	0.39	0.26	BJ	1	MW-12R-OCT14	U Flag
E624	RQ1413413-04	WQ	Bromomethane	0.39	0.34	BJ	1	MW-12S-OCT14	U Flag
E624	RQ1413413-04	WQ	Bromomethane	0.39	0.22	BJ	1	MW-13S-OCT14	U Flag
E624	RQ1413413-04	WQ	Bromomethane	0.39	0.5	BJ	2	MW-5R-OCT14	U Flag
E624	RQ1413413-04	WQ	Bromomethane	0.39	0.63	BDJ	2.5	MW-5R-OCT14DL	U Flag
E624	RQ1413893-04	WQ	Bromomethane	0.35	0.75	BJ	5	PW-2-OCT14DL	U Flag

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

None

Table 3 - List of Samples with Surrogates outside Control Limits

Method	Sample ID	Sample Type	Analyte	Rec. %	Low Limit	High Limit	Dilution Factor	Sample Qualifier
E624	RQ1413876-03	LCS	TOLUENE-D8	122	83	120	1	None
E624	MW-15R-OCT14DMS	MSD	TOLUENE-D8	126	83	120	1	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
E624	MW-15R-OCT14MS	MS	Acetone	10.7	20	54	1	55	130	UJ Flag
E625	MW-15R-OCT14MS	MS	BENZIDINE	ND	94.3	0	1	10	169	UR Flag
E625	MW-15R-OCT14DMS	MS	BENZIDINE	ND	94.3	0	1	10	169	UR Flag

Method	Parent Sample	Analyte	Dil Fac	Unit	RPD	RPD Limit	Qualifier	Sample Type
E624	MW-15R-OCT14DMS	1,1,2-Trichloroethane	1	ug/l	32	30	None	MS/MSD
E624	MW-15R-OCT14DMS	2-CHLOROETHYL VINYL ETHER	1	ug/l	51	30	None	MS/MSD
E624	MW-15R-OCT14DMS	cis-1,3-Dichloropropene	1	ug/l	51	30	None	MS/MSD

Table 5 - List LCS Recoveries outside Control Limits

Method	Sample ID	Analyte	Rec.	Low Limit	High Limit	Sample Qualifier
E625	RQ1413225-03	BENZIDINE	200	10	169	None: High and ND
E625	RQ1413225-03	Diethylphthalate	116	10	114	None: High and ND
E625	RQ1413225-03	Pyrene	116	52	115	None: High and ND
E625	RQ1413524-02	BENZIDINE	0	10	169	UR Flag
E625	RQ1413524-02	Hexachlorocyclopentadiene	98.7	28	98	None: High and ND
E625	RQ1413524-03	Hexachlorocyclopentadiene	98.5	28	98	None: High and ND

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Method	Sample ID	Analyte	Rec.	Low Limit	High Limit	Sample Qualifier
E624	RQ1413876-04	Acetone	11	55	130	None: ND and Poor Performer
E625	RQ1413524-03	BENZIDINE	0	10	169	UR Flag

Method	Parent Sample	Analyte	Dil Fac	Unit	RPD	RPD Limit	Qualifier	Sample Type
E625	RQ1413225-02/03	BENZIDINE	1	ug/L	45	30	UR Flag	LCS/LCSD

Table 6 –Samples that were Reanalyzed

Sample ID	Lab ID	Method	Sample Type	Action
MW-5R-OCT14	R1408538-004	E624	SAMP	2X: Dilute to bring target analytes within calibration curve. Elevated detection limits provided.
MW-5R-OCT14DL	R1408538-004	E624	SAMP	2.5X: Only cis-1,2-dichloroethene reported at 2.5X.
MW-8R-OCT14	R1408538-007	E624	SAMP	25X: Dilute to bring target analytes within calibration curve. Elevated detection limits provided.
MW-2R-OCT14DL	R1408538-009	E624	SAMP	2X: Only cis-1,2-dichloroethene and vinyl chloride reported at 2X.
MW-10R-OCT14	R1408633-006	E624	SAMP	10X: Dilute to bring target analytes within calibration curve. Elevated detection limits provided.
MW-3R-OCT14	R1408633-004	E624	SAMP	10X: Dilute to bring target analytes within calibration curve. Elevated detection limits provided.
P-2-OCT14	R1408692-002	E624	SAMP	5X: Dilute to bring target analytes within calibration curve. Elevated detection limits provided.
P-3-OCT14	R1408692-003	E624	SAMP	25X: Dilute to bring target analytes within calibration curve. Elevated detection limits provided.
PW-1-OCT14	R1408692-005	E624	SAMP	5X: Dilute to bring target analytes within calibration curve. Elevated detection limits provided.
PW-2-OCT14	R1408692-004	E624	SAMP	2X: Dilute to bring target analytes within calibration curve. Elevated detection limits provided.
PW-2-OCT14DL	R1408692-004	E624	SAMP	5X: Only cis-1,2-dichloroethene reported at 5X.

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Table 7 – Summary of Field Duplicate Results

Method	Analyte	Unit	Matrix	PQL	MW-2S-OCT14	MW-2S-OCT14Q	RPD	RPD Rating	Sample Qual
E624	1,1-Dichloroethane	ug/l	WG	1	1.7	1.8	5.7%	Good	None
E624	cis-1,2-Dichloroethene	ug/l	WG	1	3.2	1.3	84.4%	Poor	J Flag
E624	Trichloroethene	ug/l	WG	1	0.26	0.19	31.1%	Good	None
E624	Vinyl chloride	ug/l	WG	1	1.1	0.28	118.8%	Poor	J Flag
NY310-13	N-DODECANE	ug/l	WG	940	1100	1300	16.7%	Good	None

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
RPD = relative percent difference
SDG = sample delivery group
TB = Trip blank sample
VOC = volatile organic compound

D 2009 Fact Sheet

NEW YORK STATE DEPARTMENT OF

ENVIRONMENTAL CONSERVATION

Dear Interested Citizen:

This Fact Sheet is to inform you about the ongoing activities at the Davis Howland site. If you have any questions or would like more information, please do not hesitate to contact:

Mr. William Welling
NYSDEC Project Manager
625 Broadway, 12th Floor
Albany, N.Y. 12233-7013
(518) 402-9638

or

Lisa Silvestri
Citizen Participation Specialist
NYSDEC - Region 8 Avon
6274 East Avon-Lima Road
Avon, NY 14414-9519
(585) 226-5326

For site related health questions, please contact the following New York State Department of Health (NYSDOH) representative:

Mr. Joseph Crua
Public Health Specialist
NYSDOH
Flanigan Square, 547 River Street
Troy, NY 12180
(518) 402-7860 or
(800) 458-1158, ext. 27860

FACT SHEET

DAVIS HOWLAND OIL CORPORATION

Update of Cleanup Activities at the Davis Howland Oil Corporation Site 200 Anderson Avenue, Rochester, NY

December 2009

Introduction:

The New York State Department of Environmental Conservation (NYSDEC) and the New York State Department of Health (NYSDOH) want to update you on the cleanup at the Davis Howland Oil Corporation (Davis Howland) inactive hazardous waste disposal site. The NYSDEC is cleaning up this site as part of its State Superfund Program to investigate and remediate inactive hazardous waste disposal sites throughout New York State. The State implemented the cleanup plan using money from the 1986 Environmental Quality Bond Act.

The Davis Howland Site (site) is located at 200 Anderson Avenue in the City of Rochester (see map below). The cleanup was necessary to address groundwater and soils beneath the site that has been contaminated with chemicals known as volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). VOCs are chemicals that can evaporate easily and contain carbon, such as ingredients in paint thinners and some solvents. SVOCs are less volatile than VOCs, and include some of the chemicals found in petroleum fuels, coal products, and tar. The highest contaminant concentrations in soil and groundwater were in the immediate vicinity of the building. Although residents in the area are served with municipal water, cleanup is proceeding to prevent the potential exposure to chemicals in the soil and groundwater.

N ⇑

Davis Howland Site Location Map
200 Anderson Avenue, City of Rochester, County of Monroe

Operation and Maintenance:

As part of current activities at the site, NYSDEC representatives continue to operate and maintain a combined groundwater and soil treatment system that collects and treats contaminated groundwater and soil vapors (air trapped in soil and rock fractures) below the former spill area. The treatment system consists of 47 air injection points (to inject clean air into the ground), 6 soil vapor extraction points (to collect/remove contaminated air from underground), 3 groundwater extraction wells (to collect/remove contaminated groundwater), and 2 bedrock groundwater trench recovery wells (to collect/remove contaminated groundwater).

The remedial treatment system became operational in August 2002 and was monitored and maintained through February 2003 by a remedial construction contractor, the Tyree Organization (Tyree), under NYSDEC supervision. During this time, the treatment system was determined to be satisfactorily removing contamination from the groundwater and soil. In April 2003, the construction contract between the NYSDEC and Tyree was determined to be substantially complete. NYSDEC then contracted the engineering services of Ecology & Environment Engineers (E&E) from Buffalo to restart and operate the treatment system. E&E subsequently subcontracted Niagara Environmental Dynamics, Inc. (NEDI), to restart the treatment system in May 2003 and perform future operation, monitoring, and maintenance responsibilities. Currently, treated water is being sampled, monitored and discharged under permit to the existing Monroe County Department of Environmental Services sewer line along Anderson Avenue. Treated air is being sampled, monitored and discharged in accordance with NYS guidelines. Operation, monitoring, and maintenance will be performed on the system until such time it is determined that continued operation would not result in further significant groundwater and soil contaminant removal.

What Happens Next:

E&E and NEDI are currently under contract to operate and maintain the treatment system until April 2004. Groundwater contaminant levels will continue to be monitored and reported to the NYSDEC and NYSDOH during that time frame. Groundwater samples will be collected periodically to determine contaminant level trends, which are anticipated to decrease over time. Once all of the data have been collected and reviewed, the NYSDEC will evaluate the feasibility to continue operating the treatment system.

For More Information:

The Rochester Public Library (Rundell Branch) has been designated as the local document repository in order to provide you with access to project information. Documents regarding past site investigations, construction, and O&M activities at the Davis Howland site are available for review at:

Rochester Public Library
Rundell Branch
115 South Avenue
Rochester, NY 14604-1896
Hours: Monday 9am-9pm
Tuesday & Wednesday 9am-6pm
Thursday 9am-9pm
Friday 9am-6pm
(585) 428-7300

and at:

NYSDEC's Region 8 Avon Office
6274 East Avon-Lima Road
Avon, NY 14414
Hours: Monday - Friday 8:30am - 4:45pm
For an appointment, contact Lisa Silvestri at
(585) 226-5326.

The NYSDEC and the NYSDOH will keep you informed throughout the remedial program. Your understanding and involvement in this project will help to ensure an effective remedial program. You are encouraged to contact the people listed on the front of this fact sheet at any time with questions, comments or concerns. Because our mailing list includes property owners of businesses and apartments, we encourage you and the building owners to share this fact sheet with your neighbors and tenants, and/or post this fact sheet in a prominent area of your building for tenants, employees, or visitors to view.

E

September 2014 Property Transfer

MONROE COUNTY CLERK'S OFFICE

ROCHESTER,NY

THIS IS NOT A BILL. THIS IS YOUR RECEIPT

Receipt # 1136008

Index DEEDS

Book 11444 Page 444

No. Pages : 10

Instrument DEED OTHER

Date : 09/19/2014

Time : 02:59:44PM

Control # 201409190625

TT # TT0000002797

Ref 1 #

Employee : RoseM

Return To:
HARRIS BEACH PLLC
99 GARNSEY ROAD
PITTSFORD,NY 14534-

CSX TRANSPORTATION INC

GOODMAN YARD LLC

COUNTY FEE TP584	$	5.00
MISCELLANEOUS COUNTY FEE	$	0.00
COUNTY FEE NUMBER PAGES	$	45.00
RECORDING FEE	$	45.00
RP5217 COUNTY FEE	$	9.00
RP5217 STATE EQUAL ADDIT FEE	$	241.00
STATE FEE TRANSFER TAX	$	1,518.00

Total $ 1,863.00

State of New York

MONROE COUNTY CLERK'S OFFICE

WARNING - THIS SHEET CONSTITUTES THE CLERKS ENDORSEMENT, REQUIRED BY SECTION 317-a(5) & SECTION 319 OF THE REAL PROPERTY LAW OF THE STATE OF NEW YORK. DO NOT DETACH OR REMOVE.

TRANSFER AMT

TRANSFER AMT	$379,300.00
TRANSFER TAX	$1,518.00

CHERYL DINOLFO

MONROE COUNTY CLERK

PI182-201409190625-10

RECORDED

2014 SEP 19 PM 2:58

MONROE COUNTY CLERK

RR: FL Gorman Harris Beach PLLC

QUITCLAIM DEED

THIS QUITCLAIM DEED, made this 18th day of September, 2014, between CSX TRANSPORTATION, INC., a Virginia corporation, whose mailing address is 500 Water Street, Jacksonville, Florida 32202, hereinafter called "Grantor", and GOODMAN YARD LLC, whose mailing address is whose address is 274 N. Goodman Street, Rochester, New York 14607, hereinafter called "Grantee", WITNESSETH:

(Wherever used herein, the terms "Grantor" and "Grantee" may be construed in the singular or plural as the context may require or admit, and for purposes of exceptions, reservations and/or covenants, shall include the heirs, legal representatives and assigns of individuals or the successors and assigns of corporations.)

THAT Grantor, for and in consideration of the sum of THREE HUNDRED SEVENTY NINE THOUSAND THREE HUNDRED AND NO/100 DOLLARS ($379,300.00), to it in hand paid by Grantee, the receipt of which is hereby acknowledged, does hereby RELEASE, REMISE and forever QUITCLAIM unto Grantee, its successors and assigns, all right, title and interest of Grantor, if any, in and to that certain tract or parcel of land situate, lying and being at Rochester, County of Monroe, State of New York, hereinafter designated "the Premises," more particularly described in Exhibit A, attached hereto and incorporated herein, and containing 139,115 square feet or 3.194 acres, more or less.

AND FURTHER FOR THE CONSIDERATION AFORESAID, Grantor does hereby GRANT and CONVEY, WITHOUT WARRANTY, unto Grantee, Grantee's heirs, personal representatives, successors and/or assigns, a non-exclusive access easement over Seller's property in its current "AS IS" physical condition, hereinafter referred to as "the Access Easement", as more particularly described in Exhibit "B", attached hereto and incorporated herein, and containing 4,004 square feet or 0.092 acres, more or less, for use and maintenance at its sole cost and expense of Grantor's road adjacent to the Premises. Grantee shall upgrade the roadway with pavement and maintain the roadway at its sole cost and expense.

TO HAVE AND TO HOLD the Access Easement and rights herein granted, solely for the purposes herein contained; SUBJECT, however, to any public utilities and other facilities located in, on, over, under or across the Access Easement, and all agreements, easements and rights granted or reserved therefore, whether the instruments granting or reserving the same be recorded or unrecorded; ALSO SUBJECT to the terms, conditions, exceptions and reservations as follows:

CHICAGO TITLE INSURANCE CO.

Order # 1416-1384

1. Grantee, Grantee's heirs, personal representatives, successors and/or assigns, shall not at any time impair or interfere with the lateral or subjacent support of Grantor's properties, structures [tracks] or improvements adjacent to the Access Easement, or otherwise damage the same in any way.

2. Excluded from the Access Easement are any other rights-of-way for access, ingress, or egress, whether by way of necessity, implication or otherwise, across or over other adjoining properties of Grantor.

3. Grantee shall indemnify and hold harmless Grantor from the rights granted and the obligations contemplated by this Access Easement.

EXCEPTING unto Grantor all oil and gas, and the constituents of each, underlying the Premises; and RESERVING the right for Grantor, its successors and assigns, to remove the same; HOWEVER, Grantor will not drill or permit drilling on the surface of the Premises without the prior written consent of Grantee, which consent shall not be unreasonably withheld.

TO HAVE AND TO HOLD the Premises, and all the estate, right, title, lien, interest and claim whatsoever of Grantor therein, either in law or equity, and all improvements thereon and appurtenances thereto, unto the proper use, benefit and enjoyment of Grantee, Grantee's heirs and assigns or successors and assigns, forever; SUBJECT to reservations, easements, covenants, restrictions and limitations of record or platted, all existing public utilities and roadways, and all existing encroachments, ways and servitudes, howsoever created.

Grantee acknowledges that the Premises conveyed hereunder has been historically used for railroad industrial operations and is being conveyed for use only as industrial or commercial property. Grantee, by acceptance of this deed, hereby covenants that it, its successors, heirs, legal representatives or assigns shall not use the Premises for any purpose other than industrial or commercial purposes and that the Premises will not be used for (a) any residential purpose of any kind or nature (residential use shall be defined broadly to include, without limitation, any use of the Premises by individuals or families for purposes of personal living, dwelling, or overnight accommodations, whether such uses are in single family residences, apartments, duplexes, or other multiple residential dwellings, trailers, trailer parks, camping sites, motels, hotels, or any other dwelling use of any kind), (b) any public or private school, day care, or any organized long term or short term child care of any kind, or (c) any recreational purpose (recreational use shall be defined broadly to include, without limitation, use as a public park, hiking or biking trail, athletic fields or courts, or public gathering place), or (d) any agricultural purpose that results in, or could potentially result in, the human consumption of crops or livestock raised on the property (agricultural purpose shall be defined broadly to include, without limitation, activities such as food crop production, dairy farming, livestock breeding and keeping, and cultivation of grazing land that would ultimately produce, or lead to the production of, a product that could be consumed by a human). By acceptance of this deed, Grantee further covenants that it, its

successors, heirs, legal representatives or assigns shall not use the groundwater underneath the Premises for human consumption, irrigation, or other purposes.

Grantee, by the acceptance hereof, hereby covenants and agrees with Grantor that Grantor shall not be required to erect or maintain any fences, railings or guard rails along any boundary lines between the Premises and the adjacent land(s) of Grantor or of any other company affiliated with Grantor; or be liable for or required to pay any part of the cost or expense of erecting or maintaining such fences, railings or guard rails or any part thereof; or be liable for any damage, loss or injury that may result by reason of the non-existence or the condition of any fences, railings or guard rails. Grantee assumes all liability and responsibility respecting fences, railings or guardrails, or the absence thereof.

Prior to commencement of any development or construction on the Premises, Grantee shall construct and maintain, at Grantee's sole cost and expense, an adequate and suitable fence along the northern line of the Premises which adjoins Grantor's railroad track for so long as a railroad track exists on the adjoining railroad operating property. The fence shall be of a type satisfactory to Grantor and reasonably sufficient to keep persons and vehicles from trespassing on Grantor's adjoining operating property.

Grantee, by acceptance of this deed, hereby covenants that it, its successors, heirs, legal representatives or assigns shall maintain the existing drainage on the Premises in such a manner as not to impair adjacent railroad operating property drainage and not to redirect or increase the quantity or velocity of surface water runoff or any streams into Grantor's drainage system or upon the railroad operating property or other lands and facilities of Grantor. If the Premises or existing drainage are modified or improved, Grantee agrees to construct and maintain, in accordance with all applicable statutes, ordinances, building and subdivision codes, covenants and restrictions, an adequate drainage system from the Premises to the nearest public or non-Grantor owned drainage or storm sewer system, in order to prevent the discharge of roof, surface, stream and other drainage waters upon railroad operating property or other adjacent lands and facilities of Grantor.

Grantee and Grantor agree and acknowledge the covenants and easements contained in this Deed shall be covenants "in gross" and easements "in gross" which shall remain binding on Grantee, its successors, heirs, legal representatives and assigns regardless of whether Grantor continues to own property adjacent to the Premises. Grantee acknowledges Grantor will continue to have a substantial interest in enforcement of the said covenants whether or not Grantor retains title to property adjacent to the Premises.

Said covenants shall run with title to the Premises conveyed, and bind upon Grantee, Grantee's heirs, legal representatives and assigns, or corporate successors and assigns, and anyone claiming title to or holding Premises through Grantee.

IN WITNESS WHEREOF, CSX TRANSPORTATION, INC., pursuant to due corporate authority, has caused its name to be signed hereto by its officers hereunto duly authorized and its corporate seal, duly attested, to be hereunto affixed.

Signed, sealed and delivered
in the presence of:

CSX TRANSPORTATION, INC.:

By: _____

Name: Stephen A. Crosby
Title: President - CSX Real Property, Inc., signing on behalf of CSX Transportation, Inc.

Attest _____ (SEAL)

Print Name: PAUL R. HITCHCOCK
CORPORATE SECRETARY

This instrument prepared by
or under the direction of:

Kim R. Bongiovanni
Assistant General Counsel
Law Department
500 Water Street
Jacksonville, Florida 32202

Tax Acct.
107.77-1-28.001 (Part of)

Property 406 Atlantic Ave
Rochester, N.Y 14609

Mailing: 274 N. Goodman St
Roch., N.Y. 14607

STATE OF FLORIDA)
) SS.
COUNTY OF DUVAL)

I, Jennifer Bryan, a Notary Public of the State of Florida and the County of Duval, do certify that, on the date below, before me in said County came Stephen A. Crosby (X) to me known, and/or ( ) proven by satisfactory current evidence to be the person whose name is subscribed to the above instrument, who, being by me first duly sworn, did make oath, acknowledge and say that: he resides in Jacksonville, Duval County, Florida; he is President-CSX Real Property, Inc., signing on behalf of CSX Transportation, Inc., the corporation described in and which executed said instrument; he is fully informed of the contents of the instrument; he knows the seal of said corporation; the seal affixed to said instrument is such seal; it was so affixed by authority of the Board of Directors of said corporation; he signed his name thereto for said corporation pursuant to Board authority; and instrument is the free act and deed of said corporation; and the conveyance herein is not part of a transaction, sale, lease, exchange or other transfer or conveyance of all or substantially all of the property and/or assets of the Grantor.

IN WITNESS WHEREOF, I hereunto set my hand and official seal, this 18th day of September, 2014.

My commission expires on:

Jennifer Bryan (SEAL)
Notary Public
Print Name: Jennifer Bryan

JENNIFER BRYAN
Notary Public - State of Florida
My Comm. Expires Dec 10, 2017
Commission # FF 046804

EXHIBIT A

Description of property at: Rochester, County of Monroe, State of New York
CSXT Deed File No.: 2014-1141/JLB

BEGINNING at a point in the easterly highway boundary of North Goodman Street, said point being 792.80 feet northerly of the north highway boundary of Anderson Avenue, said point being the northwesterly corner of lands now or formerly owned by Gary & Marcia Stern Family Ltd. Partnership as filed in the Monroe County Clerk's office as liber 9814 of deeds page 559; thence,

1. North 20°46'02" East, along the easterly highway boundary of North Goodman Street, a distance of 193.82 feet to a point; thence,
2. Southeasterly, along an curve to the left, being 90 feet southerly of centerline of the nearest railroad track, having a radius of 238,791.12 feet (Chord: S45°56'13"E, 850.26'), an arc distance of 850.26 feet to a point of curvature; thence
3. Southeasterly, along an curve to the left, being 90 feet southerly of centerline of the nearest railroad track, having a radius of 7051.55 feet (Chord: S46°52'14"E, 288.15'), an arc distance of 288.17 feet to a point of curvature; thence
4. Easterly, along an curve to the left, being 90 feet southerly of centerline of the nearest railroad track, having a radius of 2838.92 feet(Chord: S54°26'41"E, 575.24), an arc distance of 576.23 feet to a point of curvature; thence
5. South 35°53'42" West, a distance of 48.95 feet to the north highway boundary of Anderson Avenue; thence,
6. North 54°00'51" West, along the northerly boundary of now or formerly Samille, Inc., as filed in the Monroe County Clerk's office as liber 8582 of deeds page 177 and the northerly line of Gary I. & Marcia Stern as filed in the Monroe County Clerk's office as liber 8691 of deeds page 380, a distance of 372.19 feet to a point; thence,
7. North 55°10'31" West, along the northerly line of Gary I. & Marcia Stern as filed in the Monroe County Clerk's office as liber 8691 of deeds page 380, a distance of 269.81 feet to a point; thence,
8. North 36°07'30" East, along the easterly line of Gary I. & Marcia Stern as filed in the Monroe County Clerk's office as liber 8778 of deeds page 78, a distance of 19.00 feet to a point; thence,
9. North 54°02'59" West, along the northerly line of Gary I. & Marcia Stern as filed in the Monroe County Clerk's office as liber 8778 of deeds page 78 and the northerly line of lands now or formerly owned by Gary & Marcia Stern Family Ltd. Partnership as filed in the Monroe County Clerk's office as liber 9814 of deeds page 559 a distance of 1010.28 feet to a **PLACE AND POINT OF BEGINNING.**

Containing 139,115 square feet, or 3.194 acres.

BEING more particularly shown on plat of survey dated September 16, 2014 prepared by Douglas W. Magde, Licensed Land Surveyor Number 049957, Magde Land Surveying, P.C., 4460 Culver Road, Rochester, New York 14622 and attached hereto.

EXHIBIT B

ACCESS EASEMENT DESCRIPTION

Commencing at a point in the easterly highway boundary of North Goodman Street, said point being 792.80 feet northerly of the north highway boundary of Anderson Avenue, said point being the northwesterly corner of lands now or formerly owned by Gary & Marcia Stern Family Ltd. Partnership as filed in the Monroe County Clerk's office as liber 9814 of deeds page 559; thence,

A North 20°46'02" East, along the easterly highway boundary of North Goodman Street, a distance of
193.82 feet to a point; thence,

B Southeasterly, along an curve to the left, being 90 feet southerly of centerline of the nearest railroad
track, having a radius of 238,791.12 feet (Chord: S45°56'13"E, 850.26'), an arc distance of 850.26
feet to a point of curvature; thence

C Southeasterly, along an curve to the left, being 90 feet southerly of centerline of the nearest railroad
track, having a radius of 7051.55 feet (Chord: S46°52'14"E, 288.15'), an arc distance of 288.17 feet
to a point of curvature; thence

D Easterly, along an curve to the left, being 90 feet southerly of centerline of the nearest railroad track,
having a radius of 2838.92 feet(Chord: S54°26'41"E, 575.24), an arc distance of 576.23 feet to the
true point of beginning; thence

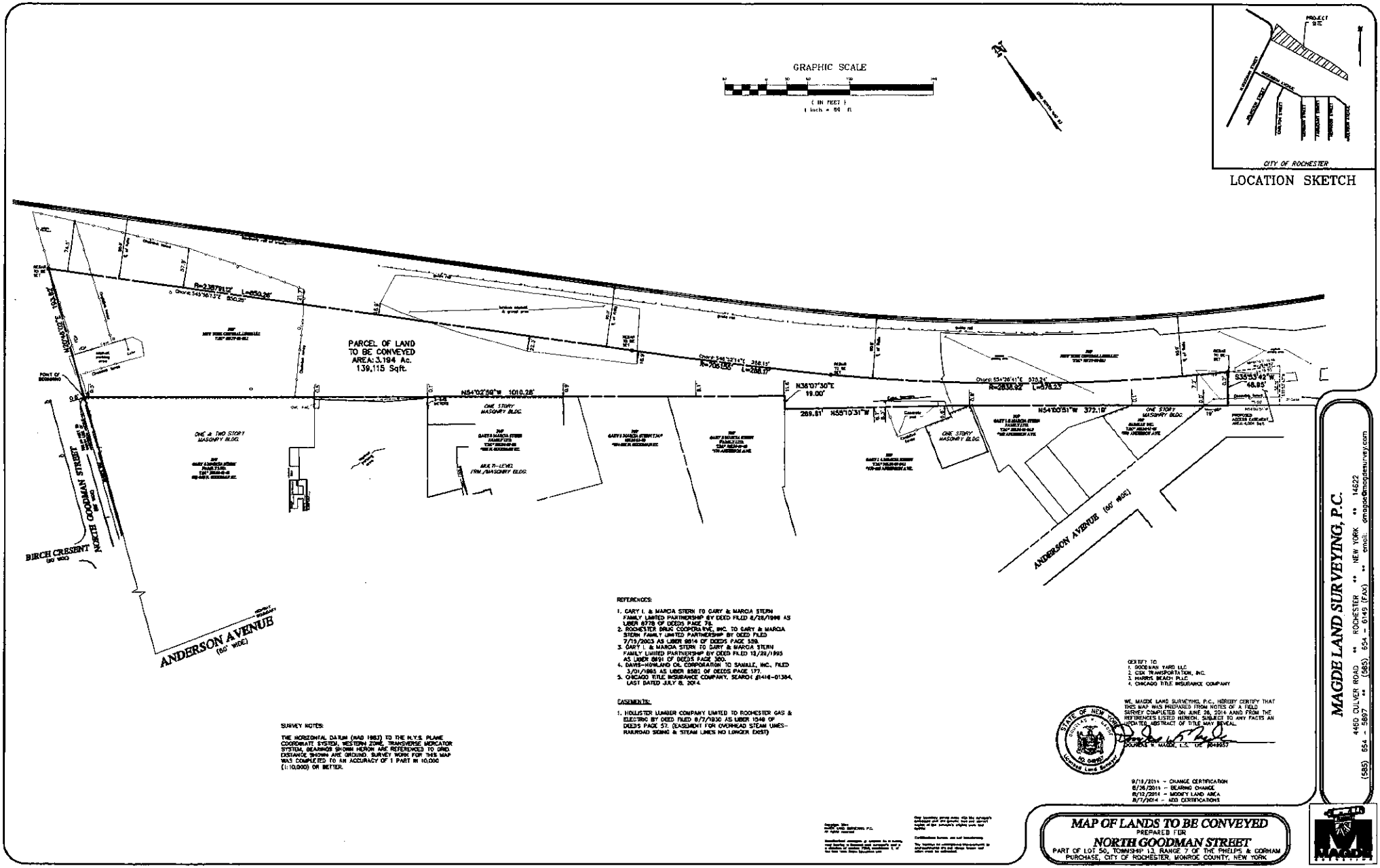
1. Continuing easterly, along an curve to the left, being 90 feet southerly of centerline of the nearest railroad track, having a radius of 2838.92 feet(Chord: S61°01'19"E, 75.55), an arc distance of 75.55 feet to a point; thence
2. South 35°53'42" West, a distance of 58.16 feet to the north highway boundary of Anderson Avenue; thence,
3. North 54°00'51" West, along the north highway boundary of Anderson Avenue, a distance of 75.00 feet to a point; thence,
4. North 35°53'42" East, a distance of 48.95 feet to the **PLACE AND POINT OF BEGINNING.**

Containing 4,004 square feet, or 0.092

BEING more particularly shown on plat of survey dated September 16, 2014 prepared by Douglas W. Magde, Licensed Land Surveyor Number 049957, Magde Land Surveying, P.C., 4460 Culver Road, Rochester, New York 14622 and attached hereto.

BEING a portion of the property acquired by New York Central And Hudson River Railroad, a predecessor of Grantor, by the following instruments, recorded among the Public Land Records of Monroe County, New York:

Acquired From	Date of Instrument	Book	Page
Chauncey Perry et al	July 14, 1871	247	123
Jacob & Frances Minges	July 17, 1871	247	124
Catherine & Joseph Glasser	July 17, 1871	241	120
Bernard & Beatrice Klem	July 17, 1871	241	118



LOCATION SKETCH

REFERENCES:

1. GARY I. & MARCIA STERN TO GARY & MARCIA STERN FAMILY LIMITED PARTNERSHIP BY DEED FILED 8/28/1998 AS LIBER 8778 OF DEEDS PAGE 71.
2. ROCHESTER DRUG COOPERATIVE, INC. TO GARY & MARCIA STERN FAMILY LIMITED PARTNERSHIP BY DEED FILED 7/15/2003 AS LIBER 8914 OF DEEDS PAGE 539.
3. GARY I. & MARCIA STERN TO GARY & MARCIA STERN FAMILY LIMITED PARTNERSHIP BY DEED FILED 12/28/1995 AS LIBER 8891 OF DEEDS PAGE 3000.
4. DAVIS-HOWLAND OIL CORPORATION TO SAMALLE, INC., FILED 3/01/1995 AS LIBER 8581 OF DEEDS PAGE 177.
5. CHICAGO TITLE INSURANCE COMPANY, SEARCH #1416-01384, LAST DATED JULY 8, 2014.

EASEMENTS:

1. HOLLISTER LUMBER COMPANY LIMITED TO ROCHESTER GAS & ELECTRIC BY DEED FILED 8/7/1930 AS LIBER 1548 OF DEEDS PAGE 57. (EASEMENT FOR OVERHEAD STEAM LINES-RAILROAD SIDING & STEAM LINES NO LONGER EXIST)

SURVEY NOTES:

THE HORIZONTAL DATUM (NAD 1983) TO THE N.Y.S. PLANE COORDINATE SYSTEM, WESTERN ZONE, TRANSVERSE MERCATOR SYSTEM. BEARINGS SHOWN HEREON ARE REFERENCED TO GRID. DISTANCE SHOWN ARE GROUND. SURVEY WORK FOR THIS MAP WAS COMPLETED TO AN ACCURACY OF 1 PART IN 10,000 (1:10,000) OR BETTER.

CERTIFY TO:
1. GOODMAN YARD, LLC
2. CSX TRANSPORTATION, INC.
3. HARRIS BEACH PLLC
4. CHICAGO TITLE INSURANCE COMPANY

I, MAGDE LAND SURVEYING, P.C., HEREBY CERTIFY THAT THIS MAP WAS PREPARED FROM NOTES OF A FIELD SURVEY COMPLETED ON JUNE 26, 2014 AND FROM THE REFERENCES LISTED HEREON. SUBJECT TO ANY FACTS AN UPDATED ABSTRACT OF TITLE MAY REVEAL.

DOUGLAS R. MAGDE, L.S. LIC. #049857

STATE OF NEW YORK
DOUGLAS R. MAGDE
049857
Licensed Land Surveyor

9/19/2014 - CHANGE CERTIFICATION
8/26/2014 - BEARING CHANGE
8/12/2014 - MODIFY LAND AREA
8/7/2014 - ADD CERTIFICATIONS

MAP OF LANDS TO BE CONVEYED

PREPARED FOR

NORTH GOODMAN STREET

PART OF LOT 50, TOWNSHIP 13, RANGE 7 OF THE PHELPS & GORHAM PURCHASE, CITY OF ROCHESTER, MONROE COUNTY, NEW YORK

MAGDE LAND SURVEYING, P.C.
446D CULVER ROAD ** ROCHESTER ** NEW YORK ** 14622
(585) 654 - 5897 ** (585) 654 - 6149 (FAX) ** email: dmagde@magdesurvey.com

MAGDE
SURVEYING