

**2013
Periodic Review Report
Former Davis-Howland Oil
Corporation Site
NYSDEC Site No. 8-28-088
City of Rochester
Monroe County, New York**

March 2014

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.
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Lancaster, New York 14086**



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, 2012 to December 31, 2013		
		YES NO
1. Is the information above correct?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. To your knowledge has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
		Box 2
		YES NO
6. Is the current site use consistent with the use(s) listed below? Industrial	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7. Are all ICs/ECs in place and functioning as designed?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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.		
<u>N/A</u>	_____	_____
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.

Periodic Review Report (PRR) Certification Statements

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

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

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

YES NO

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

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

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

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

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.

N/A

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.

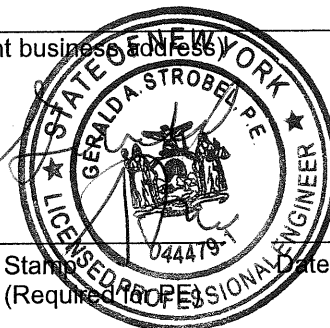
I Gerald A. Strobel at Ecology and Environment
print name Engineering, P.C.
368 Pleasant View Drive
Lancaster, NY 14086

(print business address)

I am certifying as a Professional Engineer.

Gerald A. Strobel

Signature of Professional Engineer



Stamp (Required) Date 3-25-14

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List of Abbreviations and Acronyms

ALTA	American Land Title Association
AS/SVE	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 Consulting Engineers and Surveyors, P.C.
QA/QC	quality assurance/quality control
RI	remedial investigation
RSO	Remedial Site Optimization
SMP	Site Management Plan
SVE	soil vapor extraction
SVOC	semivolatile organic compound
TCA	trichloroethane
TCE	trichloroethene
TPH	total petroleum hydrocarbon
VOC	volatile organic compound

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 2013. 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 *Draft Site Management Plan, Former Davis-Howland Oil Corporation Site, NYSDEC Site No. 8-28-088* (EEEPC 2008).

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, 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 the New York State Department of Environmental Conservation’s (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.

The remedial actions performed and remedial systems installed at the Site encompass 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 recent survey of the properties associated with the Site 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 at 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. 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 volatilizes 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 of groundwater under the paved AS/SVE area on a weekly basis.



Source: ESRI 2012.

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

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 |
| P | SHALLOW OVERBURDEN GROUNDWATER PUMPING WELLS |
| PW | BEDROCK GROUNDWATER PUMPING WELLS |
| 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.

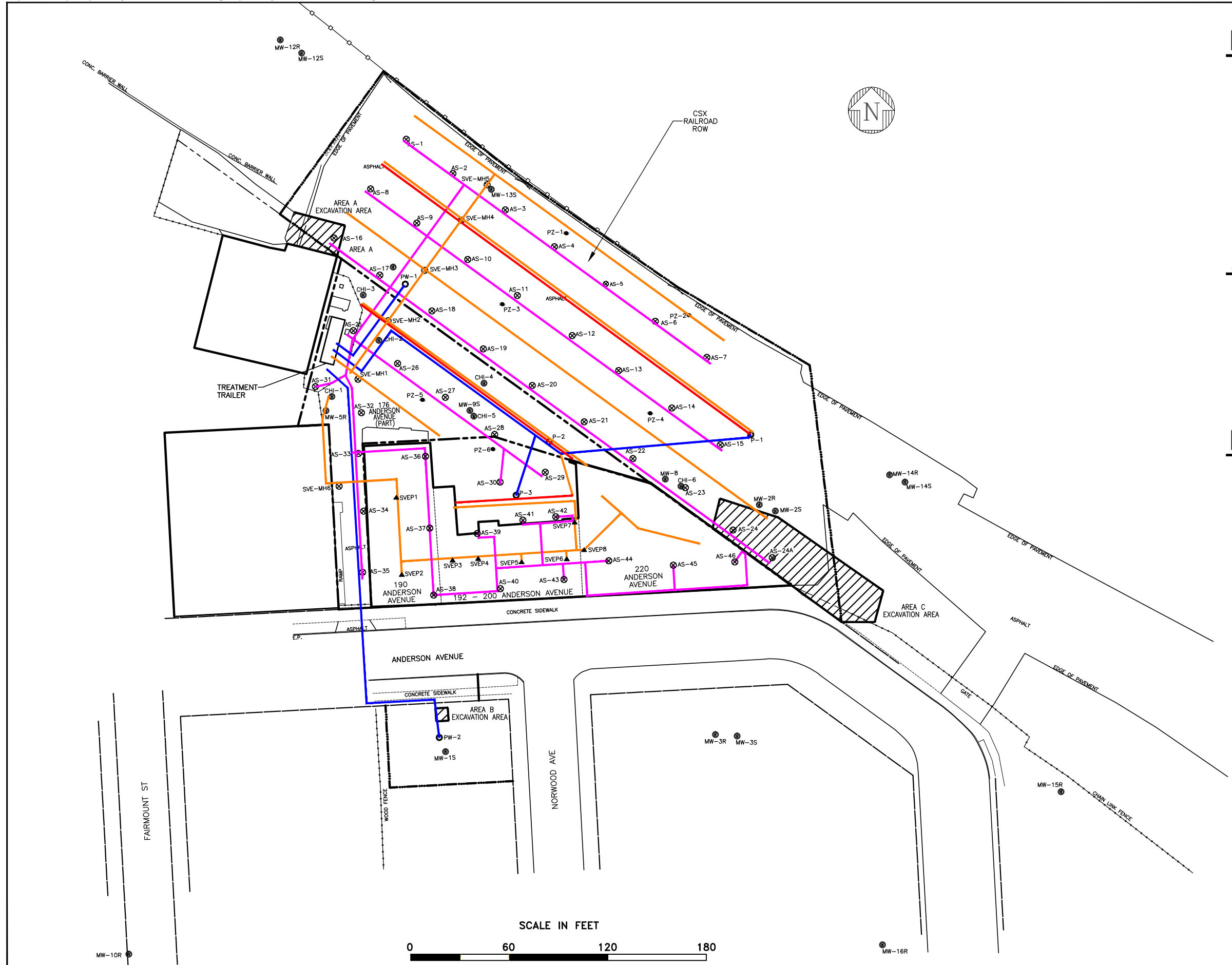


FIGURE 1-2

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 Department of Environmental Services Discharge Permit No. 864. Sewer Use Permit No. 864 expired on May 29, 2013. A Sewer Use Permit Renewal application was submitted to the Monroe County Department of Environmental Services on May 7, 2013. Sewer Use Permit No. 864 was renewed on May 16, 2013 and is 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	40CFR136-625	Monitor only
pH (s.u.)	MCAWW 150.1	5.0 to 12.0
Purgeable halocarbons	40CFR136-625	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 2013, 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 (EEEEPC 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 the 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 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 ICs are currently included in the NYSDEC environmental database for the Site:

- SMP
- Soil Management Plan and Excavation Work Plan
- Monitoring Plan
- O&M Plan
- Deed Restriction/Environmental Notice

The current SMP (EEEPC 2013a) includes a soil management plan, excavation work plan, monitoring plan, and O&M plan. The SMP is being revised to incorporate a deed restriction/environmental notice.

The ICs at the Site are necessary to verify that residual contaminated material remains undisturbed. Current and future Site owners will be required to perform soil characterization and disposal/reuse activities in accordance with NYSDEC regulations if residual contaminated soil is disturbed and/or excavated.

A permanent easement that provides access to the adjacent CSX Transportation property was obtained to facilitate operation of the DHOC Site's remedial treatment system. The existing permanent easement is adequate for site access at this time; however, if additional wells are installed as part of improvements to the groundwater monitoring well system, it may be necessary to obtain additional permanent easements from CSX Transportation. In addition, access to the 200 Anderson Avenue property has been obtained under a Consent Order with the owner (Mr. R. Klepper). This access will facilitate the continued operation of the

3 Evaluation of Site Institutional and Engineering Controls

remedial treatment system and underground equipment. A permanent environmental easement and/or deed restriction is under consideration by NYSDEC for the Site to reduce the potential for direct human contact with the Site's contaminated soils. The buildings and property north of Anderson Avenue and the parcel to the south of Anderson Avenue will be included in this easement and/or deed restriction. Some occupants in the buildings have restricted the access needed by EEEPC and its operation, maintenance, and monitoring (OM&M) subcontractor, Popli Consulting Engineers and Surveyors, P.C. (Popli), to inspect the remedial equipment. This issue will be resolved by NYSDEC with either the building manager or the property owner, as unrestricted access to these areas is needed to maintain the remedial equipment.

The revised property survey performed according to requirements established by the American Land Title Association (ALTA) in 2012 requires minor changes related to the sample IDs. These changes will be incorporated and the survey finalized in 2014.

There are 18 operable monitoring wells in the groundwater monitoring well network on and around the Site: Four are located on the Site, two are in the public highway right-of-way, nine are located on the CSX Transportation property easement, and three are located in the parking lot south of Anderson Avenue (see Section 6 for further location identification). Based on a review of NYSDEC and EEEPC records, it is unknown whether access agreements to facilitate the future maintenance and monitoring of the wells on the parcel south of Anderson Avenue were previously obtained as part of the remedial investigation/feasibility study (RI/FS) for this parcel south of Anderson Avenue. Accordingly, EEEPC recommends that an environmental easement be obtained for the parcel south of Anderson Avenue to facilitate access to perform OM&M activities.

3.2 Engineering Controls

The ECs that support remedial operations at the Site are consistent with the SMP regarding 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



3 Evaluation of Site Institutional and Engineering Controls

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 since the 2012 PRR was prepared.

4

Evaluation of Remedial Treatment Operations

4.1 System Operational Uptime in 2013

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 2013 the overall remedial treatment system operated 8,522 hours out of a possible 8,736 hours, for an uptime operation of approximately 97.6%. Major downtime incidents for various components of the treatment system included the following:

- The air stripper was cleaned on April 5, 2013, in order to maintain the stripper efficiency. During this time, the air sparge system and SVE system continued to operate; and
- The air sparge compressor was damaged and subsequently repaired between August 2 and September 3, 2013. During this time, the groundwater pumping and treatment system and the SVE system continued to operate.

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

Table 4-1 Former Davis-Howland Oil Corporation Site Remedial Treatment System Uptime in 2013

Reporting Period	Reporting Hours/ Maximum Hours	Operational Uptime (%)
December 28, 2012, to January 25, 2013	672/672	100
January 25, 2013, to February 22, 2013	672/672	100
February 22, 2013, to March 29, 2013	840/840	100
March 29, 2013, to April 26, 2013	668/672	99
April 26, 2013, to May 31, 2013	840/840	100
May 31, 2013, to June 28, 2013	672/672	100
June 28, 2013, to July 26, 2013	624/624	100
July 26, 2013, to August 30, 2013	684/888	77
August 30, 2013, to September 27, 2013	666/672	99
September 27, 2013, to October 25, 2013	672/672	100
October 25, 2013, to November 27, 2013	792/792	100
November 27, 2013, to December 27, 2013	720/720	100
Total Hours of Operation in 2013	8,522/8,736	97.6

Additional details are presented in the monthly OM&M reports (EEEEPC 2013b through 2013m).

4.2 Groundwater Processed and Discharged through the Remedial Treatment System in 2013

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 1,443,100 gallons of treated groundwater to the Monroe County sanitary sewer system from December 28, 2012, to December 27, 2013 (see Table 4-2). The decrease in total discharge flow throughout the year was due to the clogging of the transfer line from bedrock groundwater pumping well PW-1 to the treatment trailer with an iron-rich mud. This mud was removed in November 2013. In addition, overburden groundwater pumping well P-1 was turned off and removed from the system on November 15, 2013. 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.

4 Evaluation of Remedial Treatment Operations

Table 4-2 Groundwater Processed and Discharged by the Remedial Treatment System in 2013

Month	Actual Period	Gallons Treated
January 2013	12/28/12 to 1/25/13	151,000
February 2013	1/25/13 to 2/22/13	135,000
March 2013	2/22/13 to 3/29/13	178,000
April 2013	3/29/13 to 4/26/13	142,000
May 2013	4/26/13 to 5/31/13	151,400
June 2013	5/31/13 to 6/28/13	127,800
July 2013	6/28/13 to 7/26/13	99,500
August 2013	7/26/13 to 8/30/13	115,800
September 2013	8/30/13 to 9/27/13	85,500
October 2013	9/27/13 to 10/25/13	75,400
November 2013	10/25/13 to 11/27/13	92,700
December 2013	11/27/13 to 12/27/13	89,000
Total Gallons Treated in 2013		1,443,100

The average flow rate while the system was in operation was approximately 2.76 gallons per minute.

4.3 Volatile Organic Compounds Removed from Groundwater in 2012 (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 January 2013 to December 2013, approximately 8.36 pounds of VOCs were removed from the groundwater by the air stripper system in 2013 (see Table 4-3). Total VOCs removed from the Site also include 2.97 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 11.33 pounds of VOCs were removed from the Site by the groundwater pumping and treatment system during 2013. Additional VOC results are presented in the monthly OM&M reports (EEEPC 2013b through 2013m).

Table 4-3 VOCs Removed by the Former Davis-Howland Oil Corporation Site Remedial Treatment System in 2013

Month	Actual Period	Influent VOCs (µg/L)	Effluent VOCs (µg/L)	Removal Efficiency (%)	VOCs	
					Removed by Air Stripper (pounds)	Removed from Site (pounds)
January 2013	12/28/12 to 1/25/13	590	126	79%	0.13	0.50
February 2013	1/25/13 to 2/22/13	771	233	70%	0.25	0.61
March 2013	2/22/13 to 3/29/13	579	536	7%	0.07	0.94
April 2013	3/29/13 to 4/26/13	449	156	65%	0.39	0.60
May 2013	4/26/13 to 5/31/13	998	145	85%	1.18	1.38

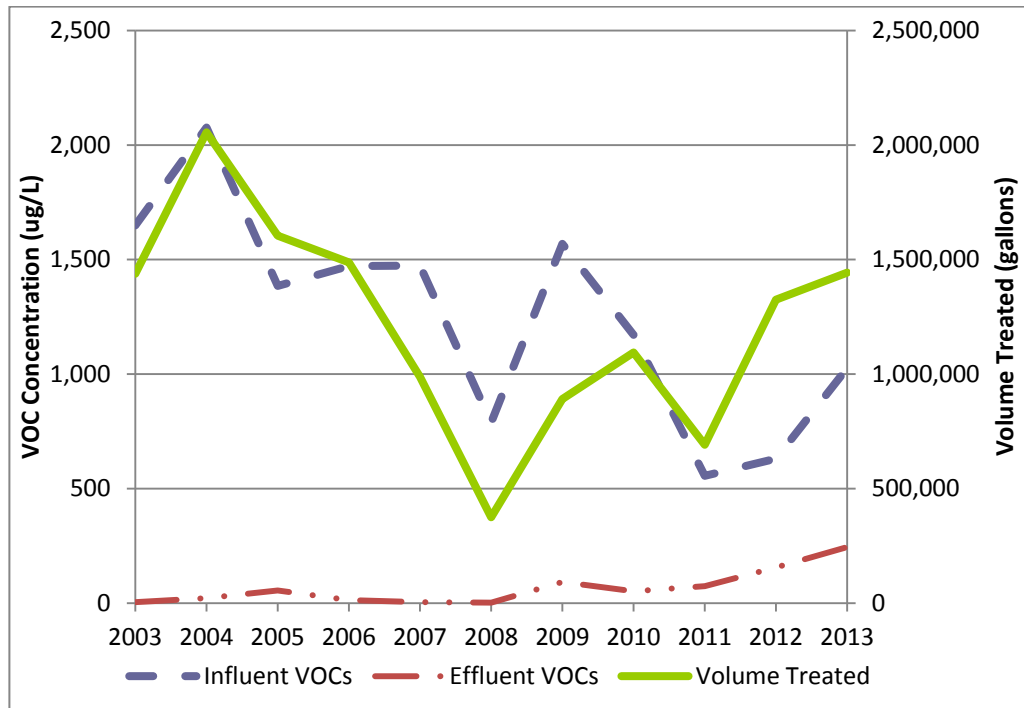
4 Evaluation of Remedial Treatment Operations

Table 4-3 VOCs Removed by the Former Davis-Howland Oil Corporation Site Remedial Treatment System in 2013

Month	Actual Period	Influent VOCs (µg/L)	Effluent VOCs (µg/L)	Removal Efficiency (%)	VOCs Removed by Air Stripper (pounds)	VOCs Removed from Site (pounds)
June 2013	5/31/13 to 6/28/13	288	8.8	97%	0.34	0.35
July 2013	6/28/13 to 7/26/13	209	14	93%	0.18	0.19
August 2013	7/26/13 to 8/30/13	542	67	88%	0.51	0.59
September 2013	8/30/13 to 9/27/13	4190	1479	65%	1.93	2.99
October 2013	9/27/13 to 10/25/13	542	22	96%	0.31	0.32
November 2013	10/25/13 to 11/27/13	1,714	39	98%	1.25	1.28
December 2013	11/27/13 to 12/27/13	1,449	111	92%	1.09	1.18
Total					8.36	11.33

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 2013. 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.



- 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, 2003-2013

4 Evaluation of Remedial Treatment Operations

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.

4.4 Groundwater Treatment - 2013

The effluent from the remedial treatment system met the discharge permit requirements (see Appendix B) for each month of 2013. 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.

Table 4-4 2013 Monthly Compliance Results for Treated Groundwater Effluent, Former Davis-Howland Oil Corporation Site

Month	Average Effluent (gpm)	pH (SU)	Purgeable Halocarbons and Purgeable Aromatics (ppm)	Permit Compliance
Discharge Permit Limits	28	5.0-12.0	2.13	
January	3.75	8.08	0.13	Yes
February	3.35	8.09	0.23	Yes
March	3.53	7.57	0.54	Yes
April	3.54	7.40	0.16	Yes
May	3.00	8.09	0.14	Yes
June	3.17	8.30	0.009	Yes
July	2.66	8.38	0.014	Yes
August	2.82	7.95	0.067	Yes
September	2.14	7.72	1.48	Yes
October	1.87	8.05	0.02	Yes
November	1.95	7.84	0.04	Yes
December	2.06	8.18	0.11	Yes

Key:

- gpm = gallons per minute
- SU = standard units
- ppm = parts per million

5

General Status of Remedial Treatment Equipment Oversight Activities

In 2013, OM&M of the DHOC Site remedial treatment system was performed on a weekly basis by EEEPC's OM&M subcontractor, Popli. In the event of a major component malfunction (resulting in a component shutdown) or a 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 General Status of Remedial Treatment Equipment Oversight Activities

5.1 Remedial Treatment Condition, Replacement, and Repairs in 2013

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 network remains in working condition. 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 2013:

- The flow meter and flow sensor for PW-1 was replaced on February 1, 2013. The flow meter and flow sensor for P-3 was replaced on February 15, 2013. Both totalizers were reset to zero on February 15, 2013. The water volumes from these two pumping wells were estimated for the month of February based on past pumping volumes and total flow for the month based on the effluent totalizer.
- The manholes for access to SVE lateral L-9 and air sparge points AS-26 through AS-30 were opened to assess the condition of the piping and instrumentation. The flow sensor/pressure gauge/control valve assemblies in AS-29 and AS-30 were rebuilt and placed back in operation in March 2013.
- The air sparge system was found to have malfunctioned at some point between the weekly monitoring performed on July 24 and August 2, 2013. The failure of a check valve allowed a water/air mixture to flow back into the compressor from the underground piping, which caused damage to the compressor vanes. The compressor was removed and sent to the manufacturer's service representative for evaluation and repair. The compressor (including a new muffler and new check valve) was reinstalled on September 3, 2013.
- During the visit on September 3, 2013, to install the compressor, the alarms for the "high-high" and "low-low" level floats were triggered. An electrical contractor evaluated the control panel malfunction that was causing the alarms for the "high-high" and "low-low" level floats to trigger. The contractor replaced the Warrick switch, but also noted that the ISB cards should be replaced. On September 11, 2013, the alarms for the High-High EQ Tank, Low-Low EQ Tank, and High-High Air Stripper Tank were activated. Upon arrival at the site, the ISB cards were removed and re-inserted, and the alarms and groundwater systems were reset.
- Pumping well P-1 was shut down and removed from the system. This change was recommended in the 2012 PRR because the AS/SVE system in that portion of the site is turned off.

5 General Status of Remedial Treatment Equipment Oversight Activities

- The pump and line from pumping well PW-1 was cleaned with a de-scaler on November 15, 2013. The pump and line was clogged with an iron-rich mud, which prevented groundwater from being pumped through the system.

5.2 Groundwater Monitoring Well Network Inspection

Long-term groundwater sampling was performed in October 2013. On October 7, 2013, EEEPC conducted brief inspections of shallow and bedrock groundwater monitoring wells. The purpose of these inspections was to document the physical condition of the wells and to 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 2013 Well Inspection, Former Davis-Howland Oil Corporation Site

Well Identification	Date Inspected	Well Casing ID (inches)	Inspection Observations
CHI-1	10/7/2013	2	
CHI-6	10/7/2013	2	
MW-1S	10/7/2013	2	Soft bottom
MW-2S	10/7/2013	2	
MW-3S	10/7/2013	2	
MW-9S	10/7/2013	2	
MW-12S	10/7/2013	2	Needs new bolts
MW-13S	10/7/2013	2	
MW-14S	10/7/2013	2	
MW-2R	10/7/2013	4	
MW-3R	10/7/2013	2	
MW-5R	10/7/2013	4	
MW-8R	10/7/2013	4	
MW-10R	10/7/2013	4	
MW-12R	10/7/2013	4	
MW-14R	10/7/2013	4	
MW-15R	10/7/2013	4	
MW-16R	10/7/2013	4	

Key:

ID = inner diameter

6

2013 Groundwater Sampling Event Summary

This section discusses the groundwater monitoring activities performed at the Site in October 2013 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 I of the draft SMP (EEEEPC 2013a). Sampling locations are identified on Figure 1-2. In addition to the revised 2008 Groundwater Sampling Procedures, an addendum to the existing EEEPC Site-specific health and safety plan was prepared and is included as Appendix L 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 8 through 11, 2013. Samples could not be collected from monitoring wells CHI-1 and CHI-6, which were dry, or from pumping well PW-2, which had no sampling port. Non-dedicated sampling equipment was decontaminated in accordance with the Groundwater Sampling Procedures. 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.

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, 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 parameters are presented in Table 6-2, except for ORP. The instrumentation was not calibrated for ORP; therefore, the recorded values are considered estimates and are included only on the purge

6 2013 Groundwater Sampling Event Summary

logs presented in Appendix C. 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 obtained during the October 2013 sampling event.

Table 6-1 October 2013 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	10/7/2013	5.61	498.54	498.19	Dry	< 492.6
CHI-6	10/7/2013	8.08	496.61	497.77	Dry	< 489.7
MW-1S	10/9/2013	17.96	500.23	499.72	13.08	487.15
MW-2S	10/9/2013	14.02	496.03	497.48	6.00	490.03
MW-3S	10/10/2013	17.10	497.97	497.46	7.77	490.20
MW-9S	10/10/2013	15.96	497.94	498.01	9.58	488.36
MW-12S	10/8/2013	14.68	495.78	495.33	4.41	491.37
MW-13S	10/9/2013	13.74	496.24	496.95	5.82	490.42
MW-14S	10/8/2013	33.99	495.48	495.16	2.25	489.42
PZ-1	10/8/2013	12.21	497.21	496.92	4.25	492.67
PZ-2	10/8/2013	12.52	497.13	496.87	5.70	491.17
PZ-3	10/8/2013	13.49	497.87	497.56	9.45	488.11
PZ-4	10/8/2013	11.50	497.76	497.22	9.00	488.22
PZ-5	10/8/2013	12.07	498.41	497.80	8.05	489.75
PZ-6	10/8/2013	11.52	499.21	498.72	9.30	489.42
P-1	10/9/2013	--	--	495.26	--	488.59*
P-2	10/9/2013	--	--	495.93	--	486.78*
P-3	10/9/2013	--	--	496.80	--	488.83*
Deep Bedrock Wells						
MW-2R	10/9/2013	26.09	496.14	497.54	17.78	478.36
MW-3R	10/10/2013	38.05	498.16	497.74	16.92	481.24
MW-5R	10/8/2013	34.73	501.32	498.23	14.09	487.23
MW-8R	10/8/2013	36.68	499.63	497.64	18.72	480.91
MW-10R	10/11/2013	35.60	497.89	497.44	18.70	479.19
MW-12R	10/8/2013	31.99	496.86	495.42	22.39	474.47
MW-14R	10/8/2013	12.97	495.6	495.18	6.06	493.35
MW-15R	10/10/2013	30.37	494.68	494.14	14.51	480.17
MW-16R	10/9/2013	31.21	493.48	493.04	19.23	474.25
PW-1	10/9/2013	--	--	494.41	--	472.38*
PW-2	10/9/2013	--	--	496.92	--	470.54*

* 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.

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

Well ID	Sample Date	pH (s.u.)	Temperature (°C)	Conductivity (µS/cm)	Unfiltered Turbidity (NTU)
Overburden Wells					
MW-1S	10/9/2013	6.75	16.1	1030	1.43
MW-2S	10/9/2013	6.75	18.9	1530	3.49
MW-3S	10/10/2013	6.76	19.8	934	0.74
MW-9S	10/10/2013	6.87	18.3	2240	3.09
MW-12S	10/8/2013	6.81	18.1	1080	1.02
MW-13S	10/9/2013	6.96	19.4	672	5.15
MW-14S	10/8/2013	6.61	18.9	341	0.51
Pumping Wells					
P-1	10/9/2013	6.76	20.4	919	0.64
P-2	10/9/2013	6.69	20.3	953	0.88
P-3	10/9/2013	6.69	20.6	922	0.64
PW-1	10/9/2013	7.02	19.5	1180	1.11
Bedrock Wells					
MW-2R	10/9/2013	7.36	15.5	316	5.41
MW-3R	10/10/2013	7.15	15.1	1250	0.91
MW-5R	10/8/2013	7.34	14.2	1130	0.81
MW-8R	10/8/2013	7.11	14.3	1670	14.1
MW-10R	10/11/2013	7.31	14.1	10.4	0.51
MW-12R	10/8/2013	7.25	14.4	824	0.55
MW-14R	10/8/2013	7.38	16.1	1120	0.36
MW-15R	10/10/2013	7.01	14	1000	0.51
MW-16R	10/9/2013	7.44	16.3	1430	>1000

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 prepared in accordance with the Groundwater Sampling Procedures. 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-9S-OCT13-FD, was collected from monitoring well MW-9S 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-12S 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. No samples were flagged due to method blank contamination; however, a detection of acetone in MW-2S was flagged as a non-detect value due to its presence in a rinse blank sample. Other concerns identified during the data review include the following:

- The use of hydrochloric acid to preserve the samples for VOC analysis caused rejection of 2-chloroethyl vinyl ether non-detect results due to the degradation of this compound in the presence of acid;
- The required dilution of several samples due to relatively high levels of some target VOCs resulted in elevated reporting limits for other compounds; 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 (EEEEPC 2007). The overburden groundwater flow in 2009 through 2011 was observed to be primarily toward the south and west (EEEEPC 2009, 2010, 2013n). In 2012, the flow was primarily to the southwest, with localized groundwater sinks in the middle of the Site, near P-2 and PZ-3 (EEEEPC 2013n).

As shown on Figure 6-1, overburden groundwater flow in October 2013 was once again primarily towards the south and west, with a localized groundwater sink in the middle of the Site in the vicinity of pumping well P-2. A groundwater flow divide is present south of pumping well P-3, with flow south of the divide flowing to the southwest; however, a majority of groundwater at the site north of the divide is captured by the pumping wells. The horizontal gradient at the Site generally ranges from 0.009 feet per foot (ft/ft) (between MW-14S and MW-1S) to 0.080 ft/ft (between PZ-1 and PZ-3).

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 (EEEEPC 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 (EEEEPC 2007, 2009, 2010, 2013n). In 2012, enhanced capture was observed at pumping wells PW-1 and PW-2, which is thought to be related to well maintenance producing higher flow rates (EEEEPC 2013n).

As shown on Figure 6-1, the primary bedrock groundwater flow direction in October 2013 was variable across the site, with radial capture by pumping wells PW-1 and PW-2. Groundwater mounds were observed in the vicinity of MW-6R on the west side of the site and at MW-14R on the east side of the site. Radial flow outward from MW-6R is captured by the pumping wells except for the area due west of MW-6R. Near MW-14R, flow to the west is captured by the pumping wells, but groundwater flowing to the northeast, east, and south eventually flows off site to the south, past MW-15R and MW-16R. On the western half of the Site,

the horizontal gradient towards PW-2 was about 0.032 ft/ft (between MW-10R and PW-2), while the horizontal gradient towards PW-2 on the eastern half of the site ranged from 0.034 ft/ft (between MW-3R and PW-2) to 0.057 ft/ft (between MW-14R and PW-2). The horizontal gradient toward PW-1 in the northern part of the Site was about 0.012 ft/ft (between MW-12R and PW-1).

6.3 Analytical Results

This section presents the analytical results for the October 2013 groundwater samples collected at the DHOC Site and compares them to historical results. The October 2013 laboratory results of detected contaminants for overburden monitoring wells are presented in Table 6-3; the detected contaminants for bedrock monitoring wells are presented Table 6-4; and the detected contaminants for pumping wells are presented 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 2013 sampling event is provided in Appendix C.

6.3.1 Overburden Groundwater Results

Volatile Organic Compounds

Fifteen different VOCs were detected in one or more groundwater samples collected from overburden wells. Ten of these compounds are chlorinated VOCs (cVOCs), including tetrachloroethene (PCE), trichloroethene (TCE), 1,1,1-trichloroethane (1,1,1-TCA), and their degradation byproducts, as well as three dichlorobenzene (DCB) isomers. Only the sample from well MW-9S contained any benzene, toluene, ethylbenzene, or xylenes (BTEX). Benzene and xylene were detected in this well at an estimated total concentration of 0.88 micrograms per liter ($\mu\text{g/L}$).

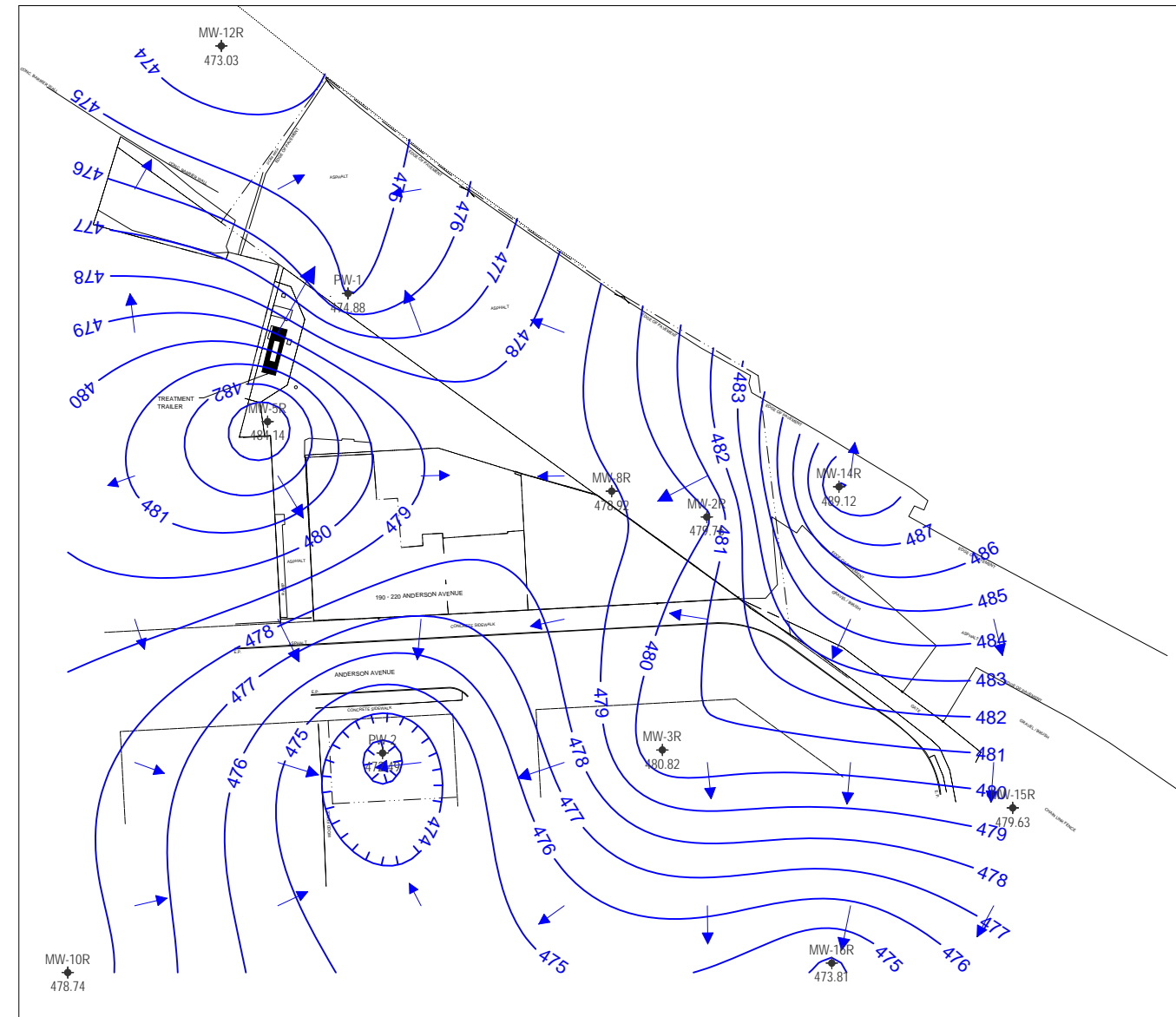
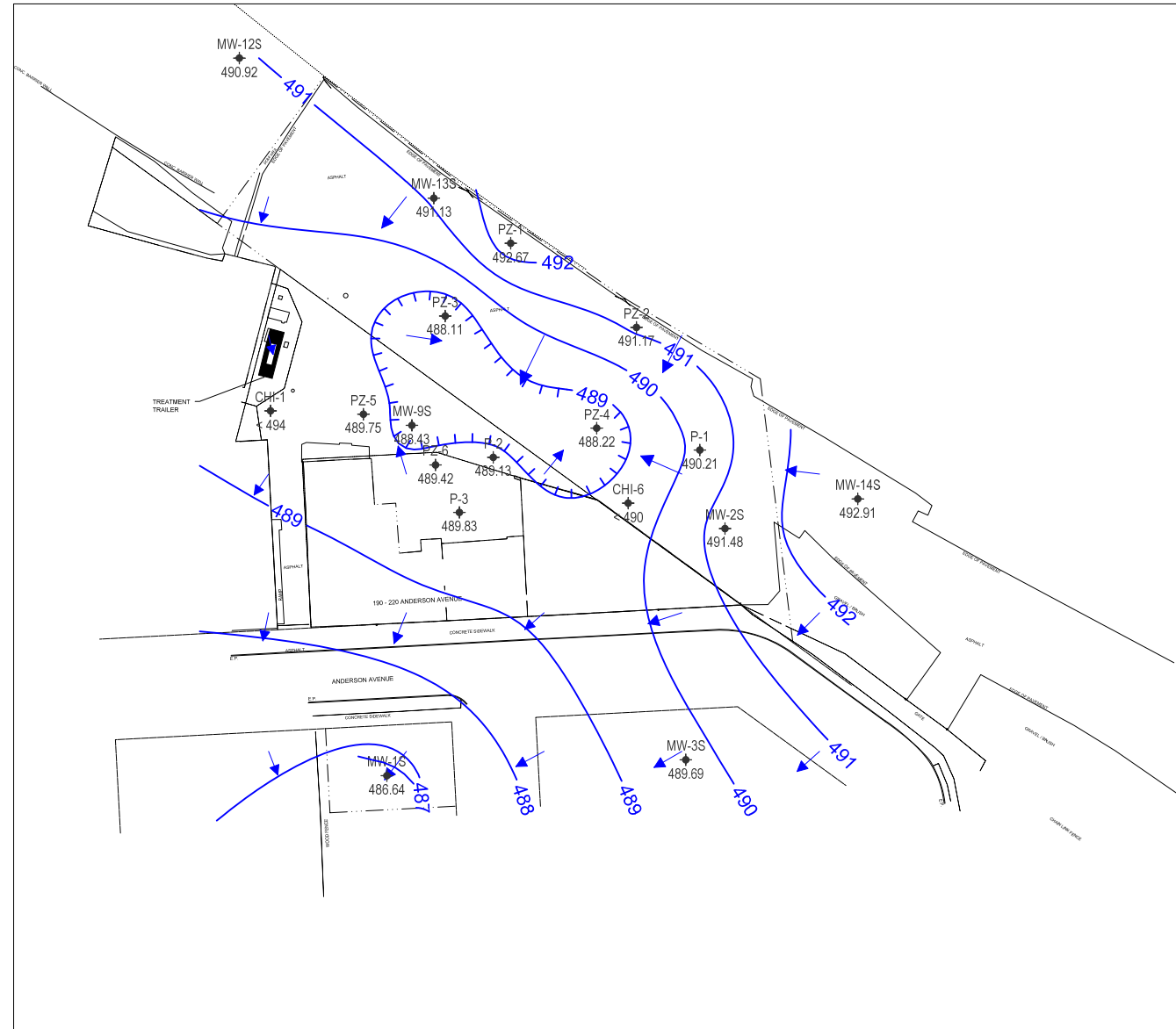
Seven VOCs were detected in one or more wells at concentrations exceeding NYSDEC Class GA groundwater standards. These chemicals (and their maximum concentrations in overburden groundwater samples) included the following:

- 1,1-Dichloroethane (1,1-DCA) at 23 $\mu\text{g/L}$ in MW-9S;
- 1,2-Dichlorobenzene at 100 $\mu\text{g/L}$ in MW-9S;
- 1,4-Dichlorobenzene at 6.6 $\mu\text{g/L}$ in MW-9S;
- cis-1,2-Dichloroethene (DCE) in three wells (MW-1S, MW-9S, and MW-13S) at a maximum of 78 $\mu\text{g/L}$;
- PCE in MW-9S at 40 $\mu\text{g/L}$;
- TCE in two wells (MW-1S and MW-9S) at a maximum of 56 $\mu\text{g/L}$; and
- Vinyl chloride in MW-9S at 28 $\mu\text{g/L}$.

**Groundwater Elevation Isoleths
 Overburden Monitoring Wells**



**Groundwater Elevation Isoleths
 Bedrock Monitoring Wells**



- Notes:
- 1) Groundwater elevations measured October 8 - 11, 2013.
 - 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.

Groundwater Flow Direction and Relative Magnitude of Gradient

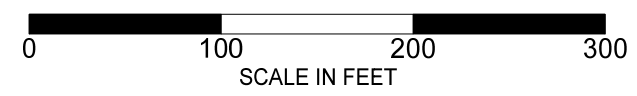


FIGURE 6-1
 Groundwater Elevation Isoleths
 Overburden and Bedrock Monitoring Wells
 October 2013
 Former Davis-Howland Oil Corporation Site
 Rochester, NY

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-1S 10/09/13	MW-2S 10/09/13	MW-3S 10/10/13	MW-9S 10/10/13	MW-9S-Q 10/10/13	MW-12S 10/08/13	MW-13S 10/09/13	MW-14S 10/08/13
VOCs by Method E624 (µg/L)									
1,1,1-TRICHLOROETHANE	5	1.9	0.18 U	0.18 U	4.7	4.7	0.18 U	0.29 J	0.18 U
1,1-DICHLOROETHANE	5	0.55 J	1.6	0.25 U	23	23	0.25 U	0.80 J	0.25 U
1,1-DICHLOROETHENE	5	0.43 U	0.43 U	0.43 U	1.8	1.7	0.43 U	0.43 U	0.43 U
1,2-DICHLOROBENZENE	3	0.22 U	0.22 U	0.22 U	100	100	0.22 U	0.22 U	0.22 U
1,3-DICHLOROBENZENE	3	0.14 U	0.14 U	0.14 U	1.7	1.6	0.14 U	0.14 U	0.14 U
1,4-DICHLOROBENZENE	3	0.23 U	0.23 U	0.23 U	6.6	6.5	0.23 U	0.23 U	0.23 U
BENZENE	1	0.17 U	0.17 U	0.17 U	0.30 J	0.29 J	0.17 U	0.17 U	0.17 U
CHLOROETHANE	5	0.40 U	0.40 U	0.40 U	0.69 J	0.69 J	0.40 U	0.40 U	0.40 U
CHLOROFORM	7	0.14 J	0.14 U	0.14 U	0.58 J	0.57 J	0.14 U	0.14 U	0.14 U
CIS-1,2-DICHLOROETHYLENE	5	13	0.88 J	0.68 J	78	78	0.19 U	8.8	0.19 U
O-XYLENE (1,2-DIMETHYLBENZENE)	5	0.15 U	0.15 U	0.15 U	0.58 J	0.57 J	0.15 U	0.15 U	0.15 U
TETRACHLOROETHYLENE (PCE)	5	3.3	0.24 U	0.24 U	40	37	0.24 U	0.24 U	0.24 U
TRANS-1,2-DICHLOROETHENE	5	0.19 U	0.19 U	0.19 U	4.5	4.3	0.19 U	0.29 J	0.19 U
TRICHLOROETHYLENE (TCE)	5	22	0.21 U	0.21 U	56	56	0.36 J	0.76 J	0.21 U
VINYL CHLORIDE	2	0.22 U	0.22 U	0.22 U	28	28	0.22 U	0.95 J	0.22 U
SVOCs 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	940 U	940 U	940 U	940 U

Notes:

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

Key:

µg/L = Micrograms per liter

J = Estimated value

NA = no applicable standard or guidance value

U = Not detected (method detection limit shown)

SVOC = Semivolatile organic compound

VOC = Volatile organic compound

"-Q" in sample name denotes field duplicate sample.

1	Bold values denote positive hits.
10	Exceeds screening criteria.

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-2R 10/09/13	MW-3R 10/10/13	MW-5R 10/08/13	MW-8R 10/08/13	MW-10R 10/11/2013	MW-12R 10/8/2013	MW-14R 10/08/13	MW-15R 10/10/13	MW-16R 10/09/13
VOCs by Method E624 (µg/L)										
1,1,1-TRICHLOROETHANE	5	0.19 J	0.83 J	0.36 U	4.5 U	6.9 J	0.18 U	0.18 U	0.18 J	0.18 U
1,1-DICHLOROETHANE	5	2.4	40	12	110	7.5 J	0.25 U	0.25 U	0.68 J	6.5
1,1-DICHLOROETHENE	5	0.43 U	14	2.8	50	18	0.43 U	0.43 U	0.43 U	1.8
BENZENE	1	0.17 U	0.43 U	4.6	4.3 U	1.8 U	0.17 U	0.17 U	0.17 U	0.17 U
CIS-1,2-DICHLOROETHYLENE	5	25	1100	240	3900	36	12	6.3	6.1	140
ETHYLBENZENE	5	0.16 U	0.40 U	0.32 U	16 J	1.6 U	0.16 U	0.16 U	0.16 U	0.16 U
METHYLENE CHLORIDE	5	0.20 U	0.50 U	0.40 U	9.8 J	2.0 U	0.20 U	0.20 U	0.20 U	0.20 U
TETRACHLOROETHYLENE (PCE)	5	0.67 J	0.60 U	0.48 U	6.0 U	3.6 J	0.24 U	0.24 U	0.36 J	0.24 U
TRANS-1,2-DICHLOROETHENE	5	0.28 J	6	2.1	5.0 J	9.8 J	0.56 J	4.8	0.26 J	1.4
TRICHLOROETHYLENE (TCE)	5	1.3	9.8	35	15 J	1300	21	60	2	1.9
VINYL CHLORIDE	2	0.66 J	180	53	520	2.2 U	0.22 J	0.57 J	1.2	33
SVOCs by Method E625 (µg/L)	SVOCs were non-detect or not analyzed for 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	940 U	940 U	940 U	940 U	--

Notes:

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

Key:

-- = Not tested for this analyte

µg/L = Micrograms per liter

J = Estimated value

NA = no applicable standard or guidance value

U = Not detected (method detection limit shown)

SVOC = Semivolatile organic compound

VOC = Volatile organic compound

"-Q" in sample name denotes field duplicate sample.

1	Bold values denote positive hits.
10	Exceeds screening criteria.

**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-1 10/09/13	P-2 10/09/13	P-3 10/09/13	PW-1 10/09/13
VOCs by Method E624 (µg/L)					
1,1,1-TRICHLOROETHANE	5	2.7	2.8	3	0.44 J
1,1-DICHLOROETHANE	5	11	12	11	9.6
1,1-DICHLOROETHENE	5	2.5	2.3	2.4	2.6
BENZENE	1	0.17 U	0.17 U	0.17 U	0.50 J
CIS-1,2-DICHLOROETHYLENE	5	150	150	150	200
TETRACHLOROETHYLENE (PCE)	5	18	18	28	0.48 U
TRANS-1,2-DICHLOROETHENE	5	0.93 J	0.94 J	0.84 J	1.4 J
TRICHLOROETHYLENE (TCE)	5	56	56	57	17
VINYL CHLORIDE	2	1.5	2.1	0.98 J	46
SVOCs by Method E625 (µg/L)		--	--	--	All non-detect
Fuels by Method NY310-13 (µg/L)					
FUEL OIL #2	NA	--	--	--	380 U
FUEL OIL #4	NA	--	--	--	940 U
FUEL OIL #6	NA	--	--	--	940 U
GASOLINE RANGE ORGANICS	NA	--	--	--	940 U
KEROSENE	NA	--	--	--	940 U
LUBE OIL	NA	--	--	--	940 U
N-DODECANE	NA	--	--	--	940 U

Notes:

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

Key:

-- = Not tested for this analyte

µg/L = Micrograms per liter

J = Estimated value

NA = no applicable standard or guidance value

U = Not detected (method detection limit shown)

SVOC = Semivolatile organic compound

VOC = Volatile organic compound

"-Q" in sample name denotes field duplicate sample.

1	Bold values denote positive hits.
10	Exceeds screening criteria.

Concentrations of VOCs in overburden groundwater were greatest in MW-9S. The concentration of chlorinated aliphatic (straight-chained) hydrocarbons in MW-9S was 240 µg/L in 2013, compared to 145 µg/L in 2012. In addition, DCBs were detected only in this well in 2013, at an approximate concentration of 110 µg/L, compared to 50 µg/L in 2012.

Semivolatile Organic Compounds

No SVOCs were detected in the overburden groundwater samples.

Petroleum Products

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

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 byproducts) and BTEX.

The concentrations of 10 of these VOCs (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 6.9 µg/L in MW-10R;
- 1,1-DCA in five wells, with a maximum of 110 µg/L at MW-8R;
- 1,1-DCE in three wells, with a maximum of 50 µg/L at MW-8R;
- Benzene in MW-5R only at 4.6 µg/L;
- cis-1,2-DCE in all nine wells, with a maximum of 3,900 µg/L at MW-8R;
- Ethylbenzene in MW-8R only at an estimated 16 µg/L;
- Methylene chloride in MW-8R only at an estimated 9.8 µg/L;
- trans-1,2-DCE in two wells, with an estimated maximum of 9.8 µg/L;
- TCE in six wells, with a maximum of 1,300 µg/L in MW-10R; and
- Vinyl chloride in four wells, with a maximum of 520 µg/L in MW-8R.

The maximum total cVOC concentration detected in bedrock groundwater samples was approximately 4,600 µg/L in MW-8R, primarily due to 3,900 µg/L of cis-1,2-DCE. The total cVOC concentrations dropped significantly (greater than 70%) from 2012 to 2013 in MW-2R and MW-5R but more than doubled in MW-3R during this time. In addition, the total cVOC concentration in MW-12R went from non-detect in 2012 to 34 µg/L in 2013. The remaining wells stayed relatively consistent in terms of total cVOC concentrations. BTEX was detected only at MW-5R (only benzene, at 4.6 µg/L) and MW-8R (only ethylbenzene, at 16 µg/L).

Semivolatile Organic Compounds

No SVOCs were detected in the bedrock groundwater samples (MW-16R was not tested for SVOCs due to a lack of sufficient volume for analysis). 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

Nine different VOCs were detected in one or more groundwater samples from the four pumping well samples, including cVOCs (PCE, TCE, 1,1,1-TCA, and their degradation byproducts) and benzene. The five VOCs detected at levels that exceeded NYSDEC Class GA groundwater standards include the following:

- 1,1-DCA in four wells, with a maximum of 12 µg/L at P-2;
- cis-1,2-DCE in four wells, with a maximum of 200 µg/L at PW-1;
- PCE in three wells, with a maximum of 28 µg/L;
- TCE in four wells, with a maximum of 57 µg/L in P-3; and
- Vinyl chloride in two wells, with a maximum of 46 µg/L in PW-1.

The highest total cVOC concentration (approximately 800 µg/L) was detected at PW-1; however, the concentrations were remarkably similar in three of the other wells. The highest single contaminant concentration detected in a bedrock pumping well sample was 200 µg/L for cis-1,2-DCE at PW-1.

Semivolatile Organic Compounds

No SVOCs were detected in any of the pumping well samples.

Petroleum Products

No petroleum products were detected in any of the pumping well samples.

Following a discussion with the sampling crew, it was determined that an error had been made in the sampling procedures designed to isolate the groundwater being pumped to the treatment system. The error was such that the individual pumping lines were not sufficiently isolated, and therefore, the samples collected were not distinct from each other or representative of the different pumping wells. Therefore, the results from the pumping wells were not included in the discussion of historical analytical data or included during preparation of the concentration isopleths, as discussed below.

6.3.4 Comparison with Historical Analytical Data

The October 2013 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 BTEX and cVOC results. 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, only a very low estimated concentration (0.88 µg/L) was 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. MW-5R has consistently contained some BTEX since 1997, but the concentration had decreased to 4.6 µg/L by 2013.
- 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 increased from 140 to 240 µg/L.
- Overall, cVOC concentrations in several 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). cVOC concentrations have generally decreased at MW-2R, MW-3R, MW-5R, and MW-16R; however, concentrations have shown significant variability at MW-3R, ranging from 410 µg/L in 2010 to 3,300 µg/L in 2007. Other wells (MW-10R, MW-12R, MW-14R, and MW-15R) have shown relatively stable concentrations for several years. The total cVOC concentration in MW-8R increased to a maximum of approximately 14,000 µg/L in 2010 and has decreased since, but this well continues to exhibit the highest cVOC concentration (4,600 µg/L in 2013) of the wells at the Site, primarily due to cis-1,2-DCE.

Table 6-6 Historical Total BTEX Results for Overburden Monitoring Wells

Well ID	Sample Date								
	2013	2012	2011	2010	2009	2007	2004	1998	1997
Overburden Monitoring Wells									
MW-1S	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-2S	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-3S	ND	ND	ND	ND	ND	ND	ND	ND	2.0
MW-9S	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
MW-13S	ND	ND	ND	ND	ND	ND	0.3	9,440	10,600
MW-14S	ND	ND	ND	ND	ND	ND	ND	ND	ND
Bedrock Monitoring Wells									
MW-2R	ND	ND	5	ND	ND	NA	1	NA	ND
MW-3R	ND	ND	ND	ND	ND	ND	20	ND	ND
MW-5R	5	32	45	45	3	15	71	42	200
MW-8R	16	ND	ND	ND	ND	21	18	NA	126
MW-10R	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-12R	ND	ND	ND	ND	ND	ND	ND	NA	4
MW-14R	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-15R	ND	ND	ND	ND	ND	ND	ND	NA	ND
MW-16R	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

Table 6-7 Historical Total Chlorinated VOCs Results for Overburden Monitoring Wells

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

Notes:

Analytical results are all in micrograms per liter ($\mu\text{g/L}$).

Key:

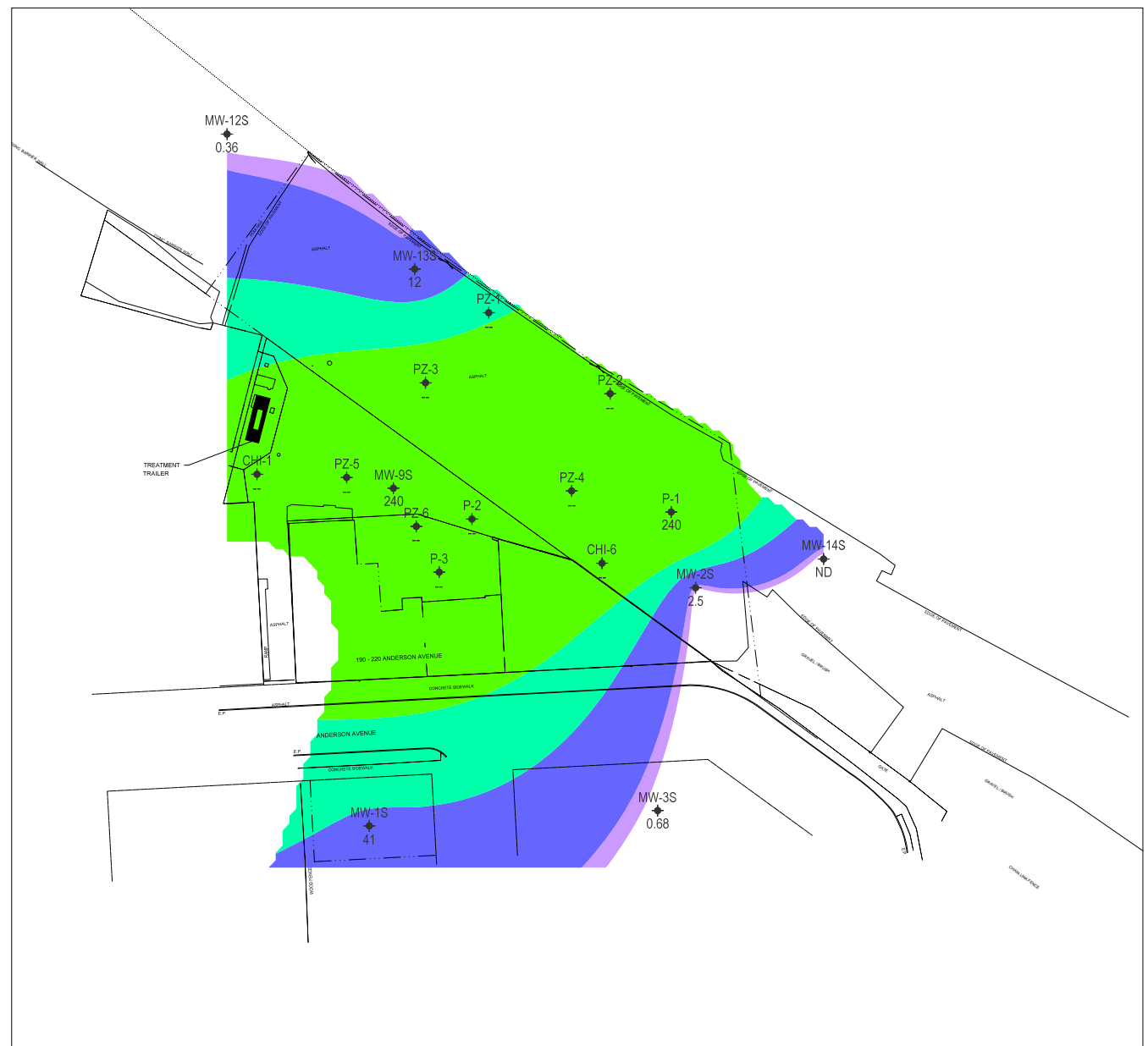
ND = Not detected

NA = Not analyzed

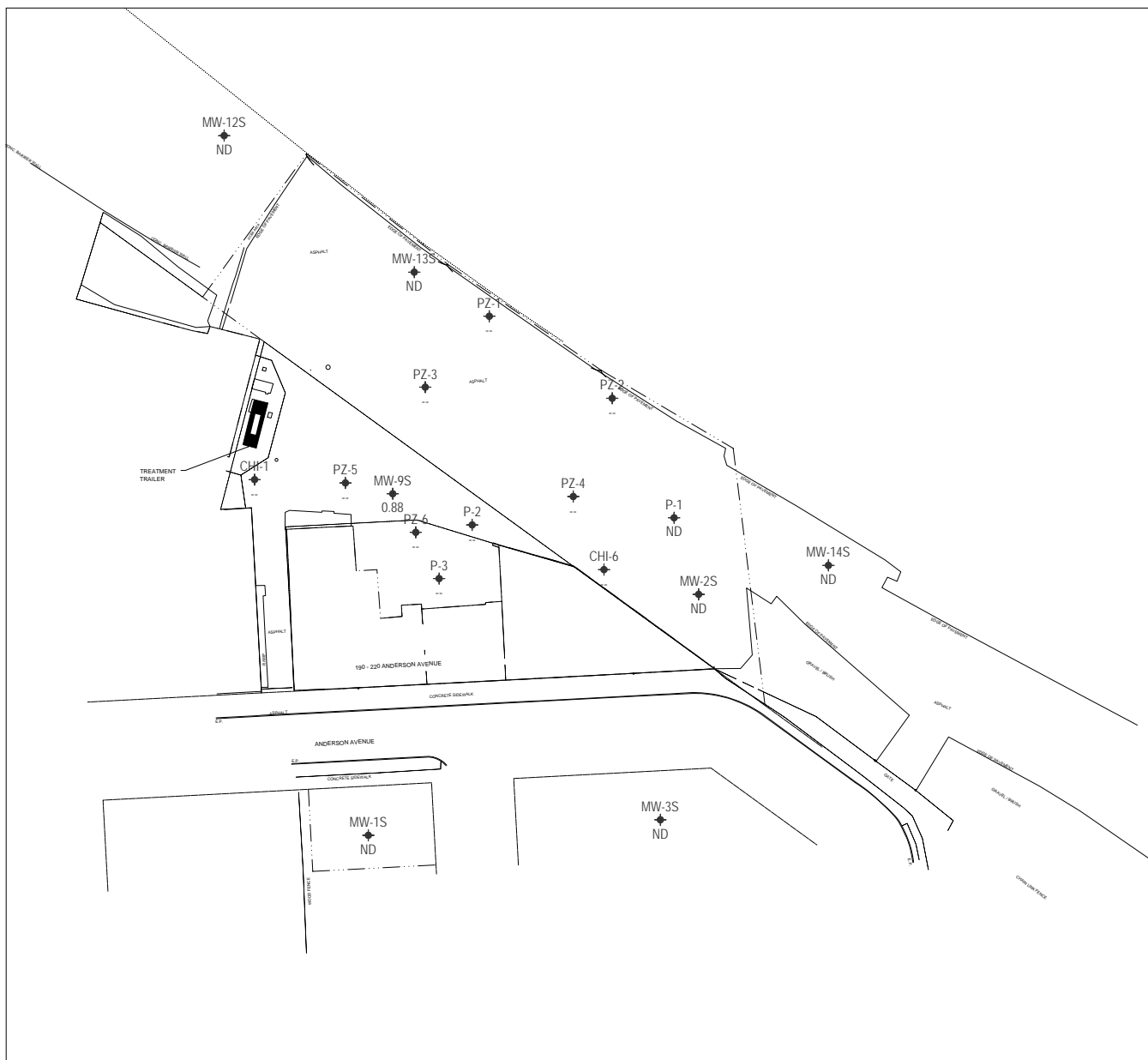
Chlorinated VOCs = sum of chlorinated aliphatic hydrocarbon concentrations (does not include dichlorobenzenes)



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-5R in October 2013).
 - 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., dichlorobenzenes) in MW-9S only (110 µg/L).
 - 4) ND = not detected.
 - 5) -- = not sampled.

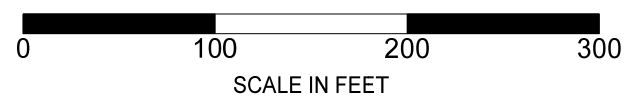
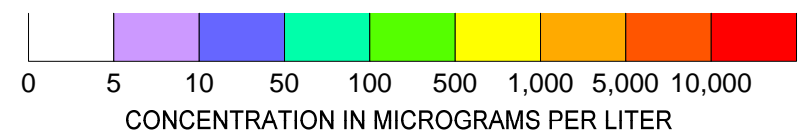
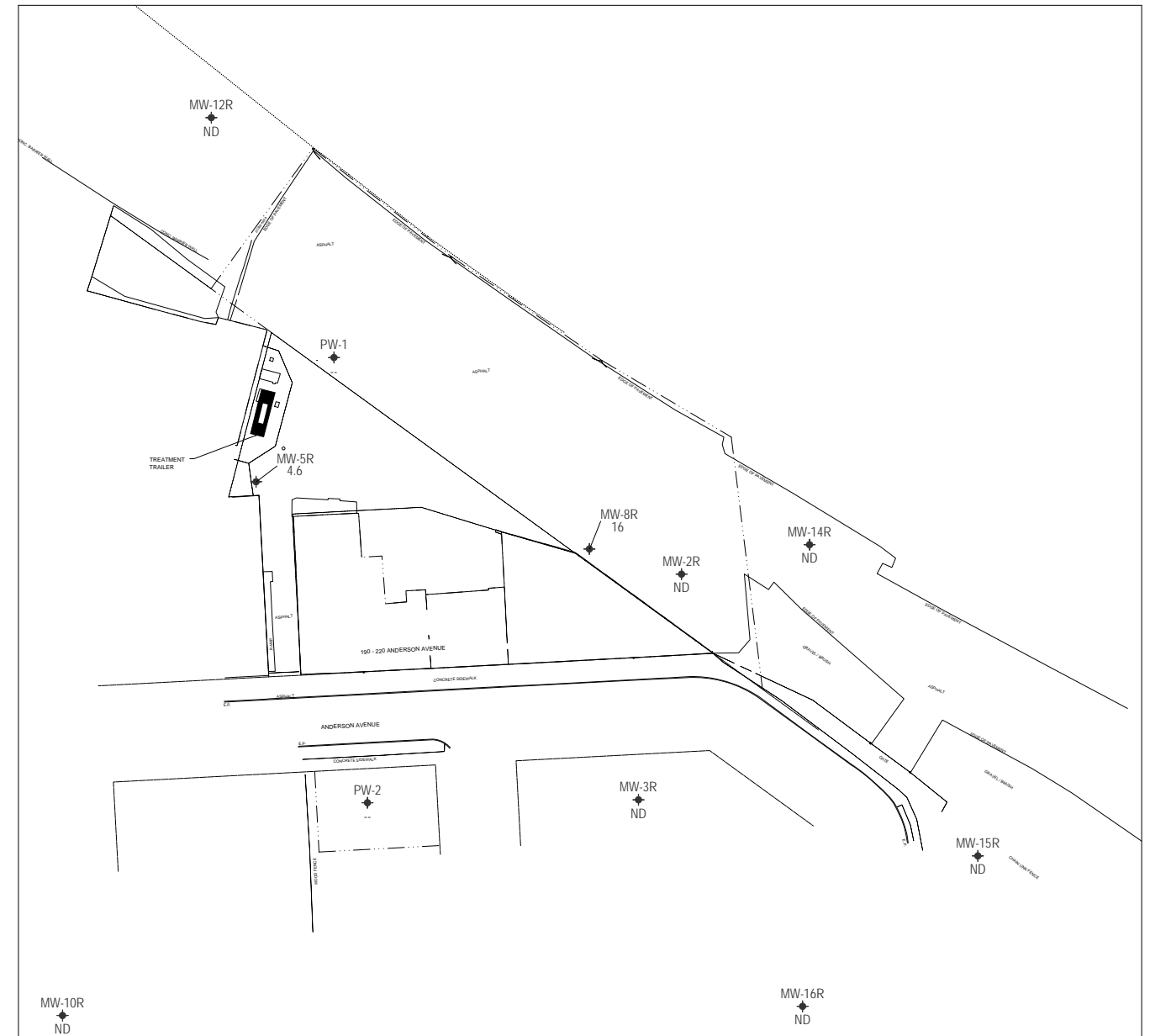
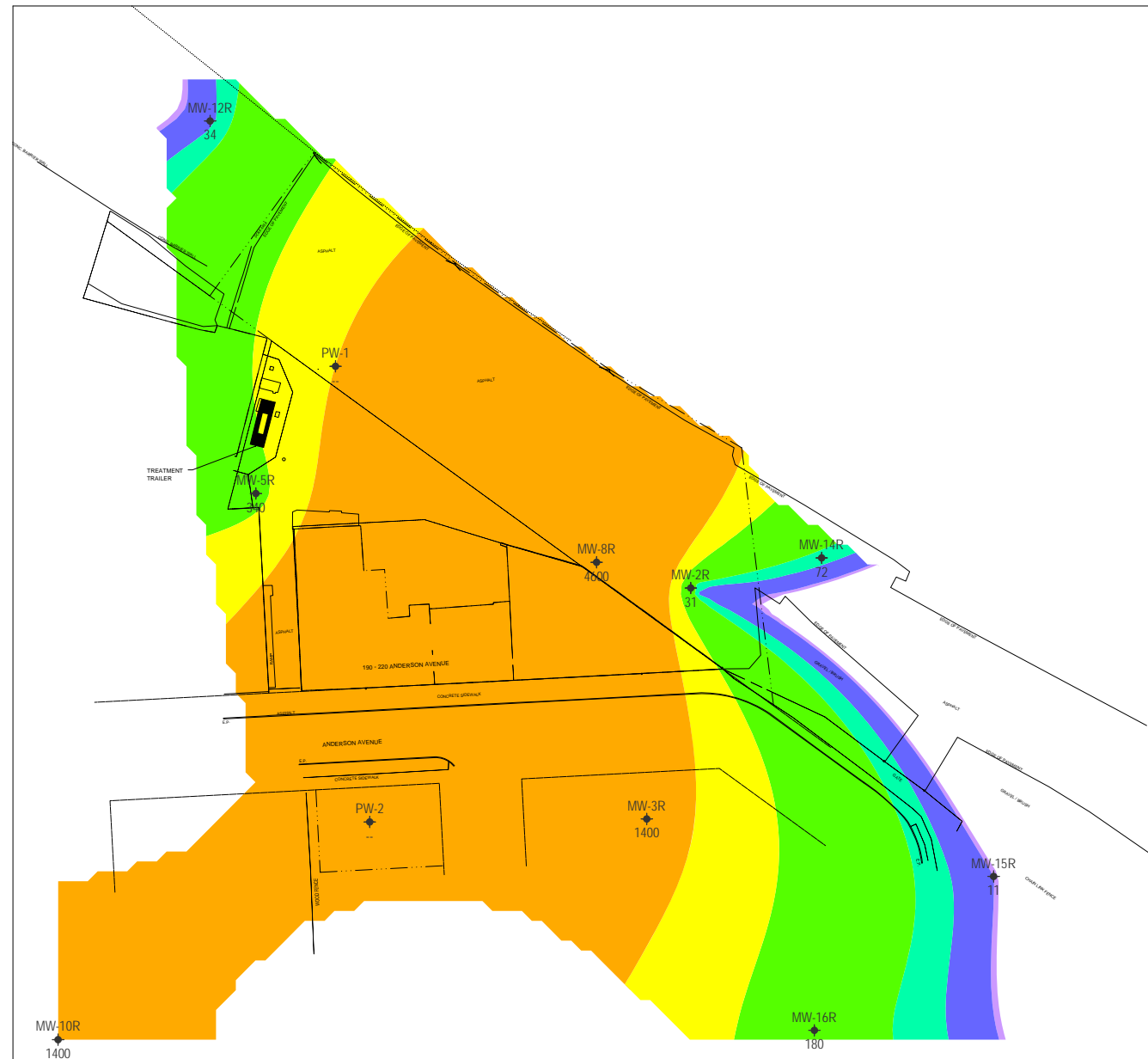


FIGURE 6-2
 Total BTEX and Chlorinated VOCs
 in Overburden Groundwater, October 2013
 Former Davis-Howland Oil Corporation Site
 Rochester, New York



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-5R in October 2013).
 - 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; -- = not sampled

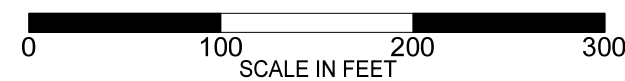
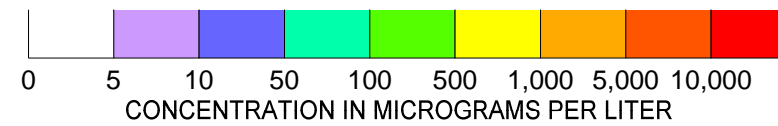


FIGURE 6-3
 Total BTEX and Total Chlorinated VOCs
 in Bedrock Groundwater, October 2013
 Former Davis-Howland Oil Corporation Site
 Rochester, New York

7

2013 Soil Vapor Sampling Event Summary

This section discusses the soil vapor monitoring activities performed at the Site in May 2013. Soil vapor sampling was performed to evaluate whether VOC concentrations in soil vapor were still sufficiently low to allow direct discharge to the atmosphere without further treatment. Concentrations of VOCs in the SVE system have not been measured since the CATOX unit was removed from service in 2008.

Soil vapor samples were collected from sample access ports on seven SVE points located in the Site buildings. Sampling activities were conducted according to EEEPC's Air Sampling Procedures presented as Appendix K of the SMP (EEEEPC 2013a). Sampling locations are identified on Figure 7-1. In addition to the Air Sampling Procedures, an addendum to the existing EEEPC Site-specific health and safety plan was prepared and is included as Appendix L of the SMP.

7.1 Field Activities

7.1.1 SVE Point Sampling

Air samples were collected from seven monitoring points at the Site on May 3, 2013. Samples could not be collected from one SVE point (SVEP-8) due to access issues. A duplicate sample was collected from SVE point SVE-P5.

Samples were collected from the sample access port located within the enclosure surrounding each SVE point. The SVE blower in the treatment trailer continued to operate during sample collection activities. During sampling of each point, the flow control valve was closed to isolate the sampling point. One-liter SUMMA® canisters were connected to the sample access port using dedicated teflon tubing. Samples were collected over a 60-minute period (0.017 liters/minute), representing an instantaneous concentration at the SVE point. Samples were analyzed for VOCs using EPA Method TO-15. The data were evaluated for quality purposes, and a summary of the data evaluation is presented in Appendix D. Total cVOCs were calculated by summing the detected results for each sample.

7.1.2 Results

The air sampling results are presented in Table 7-1. The detected compounds consisted primarily of PCE, TCE, cis-1,2-DCE, 1,1,1-TCA, 1,1-DCA, and carbon

tetrachloride. Total cVOC concentrations ranged from 100 $\mu\text{g}/\text{m}^3$ in SVE-P7 to 180,000 $\mu\text{g}/\text{m}^3$ in SVE-P3.

7.1.3 Discussion

Based on cVOC concentrations measured during this sampling event, continued operation of the SVE system is recommended. In addition, the cVOC concentrations in soil vapor should be checked on a more regular basis (i.e., annually), and soil vapor cVOC concentrations should be measured with the air sparge system both on and off. The cVOC concentrations should be evaluated to determine whether the SVE system can be modified to vent the effluent from SVE points in each separate building directly to the atmosphere instead of routing the effluent to the treatment trailer.

Table 7-1 SVE Detected Compounds

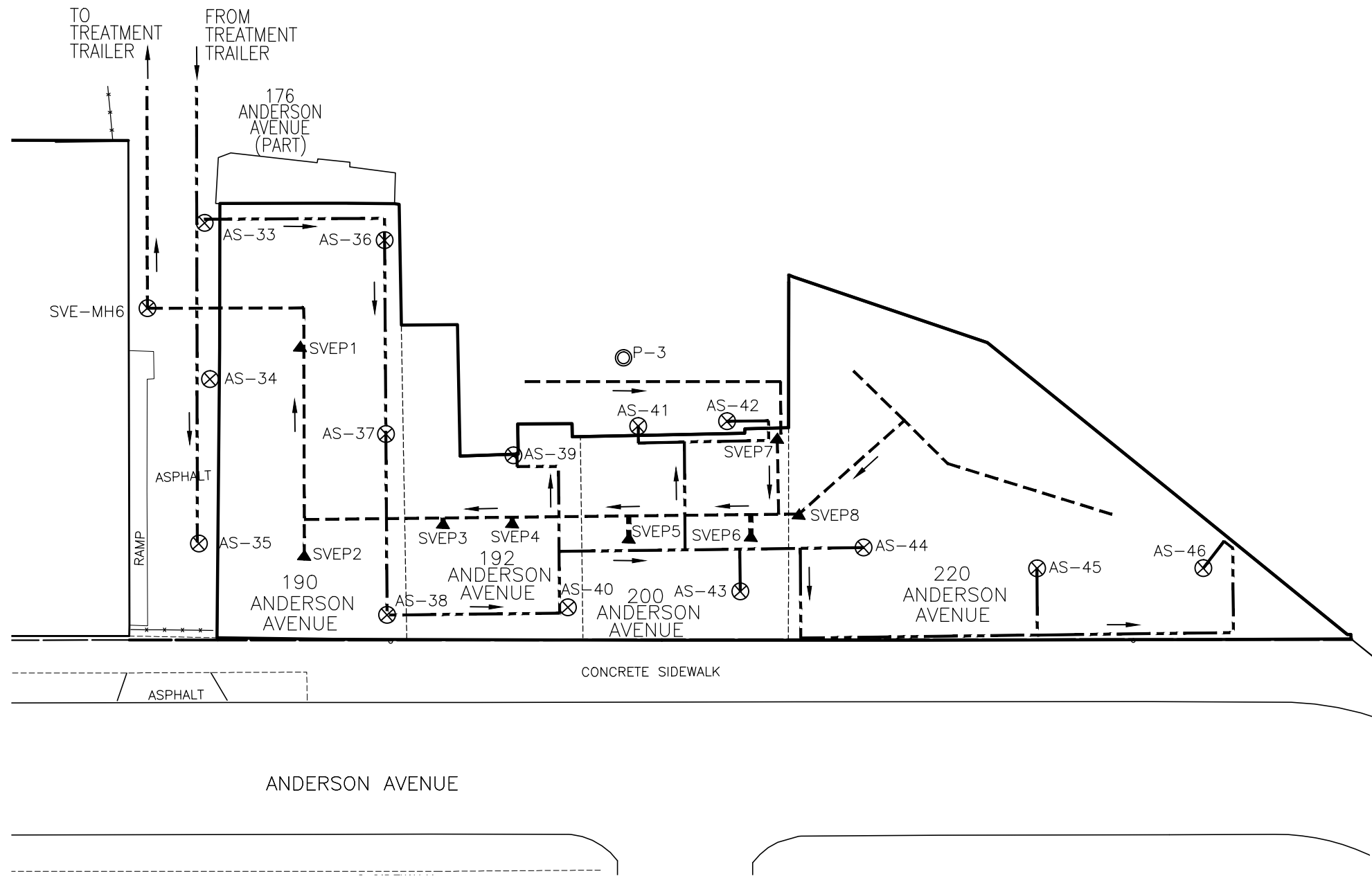
Field Sample ID and Date Analyte	Indoor Air Guideline Values	SVEP 1 5/3/2013	SVEP 2 5/3/2013	SVEP 3 5/3/2013	SVEP 4 5/3/2013	SVEP 5 5/3/2013	SVEP 5D 5/3/2013	SVEP 6 5/3/2013	SVEP 7 5/3/2013
Chlorinated VOCs ($\mu\text{g}/\text{m}^3$)									
Tetrachloroethene (PCE)	30 ²	7,100	360	160,000	26,000	700	690	29 U	23
Trichloroethene (TCE)	5 ³	32,000	4,700 D	16,000	31,000	1,700	1,700	17,000	55
cis-1,2-Dichloroethene	NA	340 U	59	2,500	8,300	1,400	1,300	1,600	5.9
1,1,1-Trichloroethane	NA	460 U	55 U	2,200 U	1,300	35 U	36 U	350	2.9
1,1-Dichloroethane	NA	340 U	41 U	1,600 U	270 U	100	100	160 U	0.85 U
Carbon tetrachloride	NA	56	17	1,000	310	4 U	4 U	210	3.1
Chloroform	NA	410 U	50 U	1,900 U	950	32 U	32 U	200 U	1.0 U
Chloromethane	NA	340 U	41 U	1,600 U	270 U	26 U	27 U	160 U	1.3
Methylene chloride	60 ⁴	290 U	35 U	1,400 U	230 U	22 U	23 U	140 U	2.9
Trichlorofluoromethane	NA	470 U	57 U	2,200 U	370 U	36 U	37 U	230 U	1.6
Trichlorotrifluoromethane	NA	130 U	33	610 U	100 U	10 U	10 U	62 U	6.1
Total chlorinated VOCs		39,000	5,200	180,000	68,000	3,900	3,800	19,000	100
Other VOCs									
Acetone	NA	3,800 U	460 U	18,000 U	3,000 U	290 U	300 U	1,800 U	35
Methyl ethyl ketone (2-butanone)	NA	500 U	60 U	2,300 U	390 U	38 U	39 U	240 U	2.5
Benzene	NA	270 U	32 U	1,300 U	210 U	21 U	21 U	130 U	1.0
Ethylbenzene	NA	730 U	88 U	3,400 U	570 U	56 U	57 U	350 U	32
Toluene	NA	310 U	38 U	1,500 U	250 U	24 U	24 U	150 U	7.2
m,p-Xylene (sum of isomers)	NA	1,500 U	180 U	6,900 U	1,100 U	110 U	110 U	700 U	96
o-Xylene (1,2-dimethylbenzene)	NA	730 U	88 U	3,400 U	570 U	56 U	57 U	350 U	28

Notes:

1. Samples analyzed by USEPA Method TO-15.
2. New York State Department of Health, Bureau of Toxic Substance Assessment, Guideline for Tetrachloroethene (PERC) in Indoor and Outdoor Air (September 2013).
3. New York State Department of Health, Bureau of Toxic Substance Assessment, Guideline for Trichloroethene (TCE) in Indoor and Outdoor Air (February 2005).
4. New York State Department of Health, Bureau of Toxic Substance Assessment, Tenant Notification Fact Sheet for Dichloromethane (methylene chloride) (February 2009).

Key:

- $\mu\text{g}/\text{m}^3$ = Micrograms per cubic meter
- D = Sample result obtained from a diluted sample
- NA = no applicable standard or guidance value
- U = Not detected (method detection limit shown)
- VOC = Volatile organic compound
- "D" in sample name denotes field duplicate sample.
- Bold values indicate a detected concentration.



LEGEND

- ⊗ MONITORING WELL
- PIEZOMETER
- ⊙ PUMPING WELL
- ⊗ AIR SPARGE POINT
- ▲ SOIL VAPOR EXTRACTION POINT
- SOIL VAPOR EXTRACTION COLLECTION TRENCH/LINE
- AIR SPARGE LINES
- AIR FLOW DIRECTION

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.



8

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 bedrock 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 are presented below.

8.1 Improvements/Modifications to the Remedial Treatment System

The following activities should be considered in order to improve the operation of the existing remedial treatment systems:

- Monitoring well CHI-6 has been dry over the past several monitoring events. On January 3, 2001, a sample of oil was collected from this well and analyzed for PCBs and VOCs. The analytical results indicated an estimated concentration of 2.2 micrograms per gram ($\mu\text{g/g}$, or parts per billion [ppb]) of PCBs and 205,000 micrograms per kilogram ($\mu\text{g/kg}$, or parts per million [ppm]) of VOCs, primarily TCA and 1,1-DCA. Since that time, the operation of overburden pumping wells P-2 and P-3 have lowered the water table in this area such that CHI-6 has been dry and a sample of groundwater has not been collected from that well. Thus, this well should be decommissioned, and a new well with a deeper screened interval should be installed.
- In conjunction with the change in operation of the AS/SVE system, the currently operational SVE points should be sampled on an annual basis to identify the points within the system that capture the greatest amounts of VOCs and to evaluate the current discharge operations relative to Air Guide 1. The sampling results should be used as a basis for identifying potential improvements to the SVE system, such as installing individual venting systems that could operate more efficiently than the current system. Operational changes in the AS/SVE system should be evaluated as part of the Remedial Site Optimization (RSO) activities described below.

- In conjunction with anticipated RSO activities, evaluate the groundwater cVOC concentrations from the deep bedrock pumping wells by pulsing the system. This process would involve shutting down the pumping wells for a period of time and then sampling the wells to determine whether cVOC concentrations change following operational changes. A typical operations/sampling scheme is presented below:
 - Collect and analyze samples from wells PW-1 and PW-2 for cVOCs during the use of current operating parameters.
 - Turn off pumping wells PW-1 and PW-2 for one month.
 - Collect and analyze samples from wells PW-1 and PW-2 for cVOCs.
 - Evaluate the differences in groundwater cVOC concentrations between the two sampling events to evaluate the effect of turning off the pumping wells.

8.2 Efforts to Support Site Closure

When in operation in 2013, 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 2013, VOC concentrations have decreased over time.

More specifically, PAHs are no longer present at concentrations exceeding NYSDEC's groundwater standards. BTEX concentrations have declined significantly in the bedrock groundwater and are no longer detectable in some wells where they were previously present. Only MW-5R contained concentrations of BTEX compounds above detection limits in 2012.

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 continues to extend to the northeast of the Site, toward the CSX Transportation property. Continued monitoring of the bedrock groundwater well network and maintenance of the associated groundwater and/or pumping wells on a regular basis is recommended to maintain a high pumping rate for treatment.

With the exception of bedrock pumping well PW-1, the treatment systems installed on the CSX right-of-way have been shut down and are not anticipated to be placed back in service. Therefore, NYSDEC should consider removing the portion of the site considered to be located on the CSX right-of-way from the site description.



8.3 System Optimization

A Remedial Site Optimization (RSO) report should be prepared for this site. RSO is a multi-tiered approach to improve efficiency, effectiveness, and net environmental benefit of the existing remedy, thereby reducing costs and achieving Site closure. Although the PRR includes suggestions for improving/modifying the existing remedial system, it does not provide a comprehensive audit of the performance of the Site remedial systems. Preparation of an RSO should be considered during the 2014 calendar year.

9

Annual Remedial Action Costs

The 2013 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 2013 cost for operating the remedial treatment system at the Site was \$128,153.55.

Description	WA D007617-12
Sub – OM&M Services	\$16,292.00
Sub – Analytical Services	\$10,077.10
Utilities – Electric	\$11,312.32
Utilities – Telephone	\$398.86
Replacement Equipment	\$1,343.63
Long-term Monitoring Program	\$24,750.79
EEEPC Administration, Management, and Reporting	\$63,978.85
2013 Total	\$128,153.55

Key:

OM&M = operations, maintenance, and monitoring

10

Department or Local Public Reporting

10.1 NYSDEC Fact Sheet

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

10.2 Local Public Reporting

No local public reporting of the Site or remedial Site operations were brought to EEEPC's attention in 2013. The local reporting newspaper in Rochester, New York, is the *Democrat and Chronicle*.

11

References

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- _____. 2013d. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, March 2013 Operations, Maintenance, and Monitoring Report.*
- _____. 2013e. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, April 2013 Operations, Maintenance, and Monitoring Report.*
- _____. 2013f. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, May 2013 Operations, Maintenance, and Monitoring Report.*
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- _____. 2013j. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, September 2013 Operations, Maintenance, and Monitoring Report.*
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- _____. 2013m. *Davis-Howland Oil Company Site, EEEPC Contract # D004442, Site # 8-28-088, December 2013 Operations, Maintenance, and Monitoring Report.*

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_____. 1998 (with updates). Division of Water Technical and Operational Guidance Series (1.1.1): *Ambient Water Quality Standards and Guidance Values and Groundwater Effluent Limitations*. Albany, New York: Division of Water.

A

ALTA Survey

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 total metals in mg/l (ppm): the following pollutant limits are based on daily maximum values:

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

REPORTING REQUIREMENTS:

- A.** Per the requirements of 40 CFR, Part 403.5, 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 2013 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: Doughland
EEPC Project No.: EN 083231-0001-037T0

Well ID: Mw-15
Date: 10/9/13

Initial Depth to Water: 13.08 feet TOIC
Total Well Depth: 17.96 feet TOIC
Depth to Pump: 15.96 feet TOIC
Initial Pump Rate: 700 Lpm / gpm
adjusted to: 325 at 113 minutes
adjusted to: _____ at _____ minutes

Start Time: 1301
End Time: 1338
 Bailer Pump
Pump Type: Min. Typhoon
Well Diameter: 2 inches
1x Well Volume: 0.795 gallons X3 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)
1305	1	6.76	16.6	125	1024		12.56	13.75
1310	2.5	6.77	16.2	98	1028		6.91	13.85
1315	3.5	6.77	16.3	101	1037		4.24	13.69
1320	4	6.77	16.1	91	1038		1.79	13.68
1325	4.5	6.75	16.1	91	1032		1.43	13.68
Final Sample Data:		6.75	16.1	91	1032		1.43	13.68

Sample ID: Mw-15-Oct13 Duplicate? Dupe Samp ID: _____
Sample Time: 1325 MS/MSD?

Analyses: VOCs SVOCs PCBs Metals _____
Methods: CLP SW846 Drink. Wtr. _____
Comments: _____
Sampler(s): TiDillon



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

WELL PURGE & SAMPLE RECORD

Site Name/Location: DAVOO bobland

Well ID: MW-2R

EEPC Project No.: EN 003231-0001-03 T10

Date: 10/9/13

Initial Depth to Water: 17.78 feet TOIC

Start Time: 8:20

Total Well Depth: 26.09 feet TOIC

End Time: 8:43

Depth to Pump: 24.09 feet TOIC

Bailer Pump

Initial Pump Rate: _____ Lpm / gpm

Pump Type: Typhoon

adjusted to: _____ at _____ minutes

Well Diameter: 4" inches

adjusted to: _____ at _____ minutes

1x Well Volume: 2.3 gallons \rightarrow 8.9 gal flow

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)
0820	200 ml	7.14	15.1	178	00	-	7.56	19.85
0830	2 gallons	7.13	14.5	153	290.5	-	11.81	20.46
0843	2.5 gallons		Dry					
Final Sample Data:		7.76	15.5	112	316.4	-	5.41	22.41

Sample ID: MW-2R-OCT13

Duplicate?

Dupe Samp ID: _____

Sample Time: 9:11

MS/MSD?

Analyses: _____ Methods: _____

Comments: Wanted to Recharge then Sampled.

VOCs CLP

SVOCs SW846

PCBs Drink. Wtr.

Metals _____

_____ _____

Sampler(s): L. Reed



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WELL PURGE & SAMPLE RECORD

Site Name/Location: PAVIS HIGHLAND
 EEEPC Project No.: EN 00 3231-0001-07 T70

Well ID: MW-23
 Date: 10/9/13

Initial Depth to Water: 6.00 feet TOIC
 Total Well Depth: 14.02 feet TOIC
 Depth to Pump: 12.02 feet TOIC
 Initial Pump Rate: _____ Lpm / gpm
 adjusted to: _____ at _____ minutes
 adjusted to: _____ at _____ minutes

Start Time: 0922
 End Time: _____
 Bailer Pump
 Pump Type: Typson
 Well Diameter: 2" inches
 1x Well Volume: 1.3 gallons $\times 3 = 3.9$ gal/min

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)
09:22	50mls	6.64	17.5	-35	1238	—	14.5	7.40
09:27	.5 gallon	6.73	18.4	-38	1514	—	9.44	8.75
09:32	1 gallon	6.73	18.7	-38	1529	—	4.47	8.99
9:37	1.5	6.74	18.5	-34	1531	—	3.33	9.00
9:42	2.0	6.73	18.4	-36	1533	—	2.99	9.00
9:47	2.5	6.74	18.3	-38	1529	—	2.81	9.00
9:52	3.0	6.75	18.5	-35	1531	—	3.55	9.00
9:57	3.5	6.76	18.9	-34	1530	—	3.48	9.00
10:02	4.0	6.75	18.9	-33	1531	—	3.49	9.00
Final Sample Data:		<u>6.75</u>	<u>18.9</u>	<u>-33</u>	<u>1531</u>	<u>—</u>	<u>3.49</u>	<u>9.00</u>

Sample ID: MW-23-10-09-13 Duplicate? Dupe Samp ID: _____
 Sample Time: 10:10 MS/MSD?

Analyses: VOCs CLP
 SVOCs SW846
 PCBs Drink. Wtr.
 Metals _____
 _____ _____
 Sampler(s): L. Roedel



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WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Island

Well ID: MW-3R

EEEP Project No.: EW-009231-0001-03 TFO

Date: 10/10/13

Initial Depth to Water: ~~17.92~~ 16.42 feet TOIC

Start Time: 0927

Total Well Depth: 34.05 feet TOIC

End Time: 1227

Depth to Pump: 36.05 feet TOIC

Bailer Pump

Initial Pump Rate: 1100 (Lpm) / gpm

Pump Type: M.A. Typhoon

adjusted to: 600 at 0940 minutes

Well Diameter: 4 inches

adjusted to: _____ at _____ minutes

1x Well Volume: 13.8 gallons x3: 41.4

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)
0929	<u>1</u>	6.97	15.6	-1	1178		20.7	17.60
0934	3	7.21	15.2	-64	1240		11.0	17.99
0934	4.5	7.20	15.1	-65	1233		7.54	18.32
0944	5	7.19	15.1	-68	1267		5.66	18.30
1004	9	7.18	15.1	-63	1253		2.67	17.97
1024	14	7.17	14.6	-66	1243		1.69	18.29
1044	19	7.17	15.0	-68	1252		2.04	18.54
1104	24	7.15	15.0	-69	1253		0.94	18.47
1124	29	7.14	15.0	-70	1243		1.05	18.48
1144	34	7.15	15.1	-73	1250		0.70	18.71
1154	36.5	7.16	15.2	-78	1252		0.61	18.83
1204	39	7.16	15.1	-77	1253		0.63	18.87
1209	40.5	7.16	15.2	-77	1254		0.72	18.84
1214	41.5	7.15	15.1	-78	1252		0.91	18.86
Final Sample Data:		7.15	15.1	-78	1252		0.91	18.86

Sample ID: MW-3R-0CT13

Duplicate?

Dupe Samp ID: _____

Sample Time: 1218

MS/MSD?

Analyses: _____ Methods: _____

Comments: Irregular flow rate

- VOCs CLP
- SVOCs SW846
- PCBs Drink. Wtr.
- Metals _____
- _____ _____

Sampler(s): T. Dillon

0.163
0.653



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

WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Road
EEEP Project No.: EN-003271-0001-03770

Well ID: MW-35
Date: 10/10/13

Initial Depth to Water: 7.77 feet TOIC
Total Well Depth: 17.10 feet TOIC
Depth to Pump: 15.10 feet TOIC
Initial Pump Rate: 500 (pm) gpm
adjusted to: _____ at _____ minutes
adjusted to: _____ at _____ minutes

Start Time: 1400
End Time: 1445

Bailer Pump
Pump Type: Mini Typhoon

Well Diameter: _____ inches

1x Well Volume: 1.6 gallons x 3 = 4.7

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)
1404	1	6.78	19.4	109	924.6		6.32	8.14
1409	1.5	6.75	19.7	99	918.6		3.95	8.28
1414	2	6.73	19.9	97	935.8		1.90	8.41
1419	2.5	6.73	19.9	95	933.5		1.12	8.64
1424	3	6.74	20.0	97	931.1		1.00	8.69
1429	4	6.74	19.8	99	933.8		0.70	8.78
1434	5	6.76	19.8	99	934.3		0.74	8.90
<i>D. Dillon</i>								
Final Sample Data:		6.76	19.8	99	934.3		0.74	8.90

Sample ID: MW-35-OCT13
Sample Time: 1435

Duplicate? Dupe Samp ID: _____

MS/MSD?

Analyses: _____ Methods: _____ Comments: _____

- VOCs CLP
- SVOCs SW846
- PCBs Drink. Wtr.
- Metals _____
- _____ _____

Sampler(s): T. Dillon



WELL PURGE & SAMPLE RECORD

Site Name/Location: DAVE HOWLAND
EEPC Project No.: EV-003231-0001-03 T70

Well ID: MW-SR
Date: 10/8/13

Initial Depth to Water: 14.09 feet TOIC
Total Well Depth: 34.73 feet TOIC
Depth to Pump: 32.73 feet TOIC
Initial Pump Rate: 400 (gpm) / gpm
adjusted to: 450 at 1530 minutes
adjusted to: 1000 at 1608 minutes

Start Time: 1440
End Time: 1800
 Bailer Pump
Pump Type: Typhoon
Well Diameter: 4 inches
1x Well Volume: 13.48 gallons $K3=40.43$

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)
1445	4.1	7.36	15.2	-40	2143	N/A	43.8	14.34
1450	4.2	7.38	15.0	-61	1802		30.1	14.40
1455	4.3	7.39	15.0	-51	1449		2.7	14.31
1500	4.4	7.39	15.5	-45	1401		21.8	14.31
1505	4.5	7.38	15.3	-43	1329		20.8	14.36
1515	5.5	7.41	15.2	-24	1166		11.02	14.35
1530	6.5	7.38	15.0	-1	1119		5.86	14.44
1545	8.3	7.37	15.0	15	1102		3.88	14.42
1600	10	7.38	14.8	33	1097		2.35	14.53
1610	13	7.36	14.5	35	1086		2.20	14.74
1625	17	7.34	14.6	37	1080		2.44	14.84
1640	21	7.35	14.5	38	1095		1.49	14.94
1655	26	7.32	14.4	33	1092		1.63	15.00
1715	30	7.32	14.4	35	1106		0.94	14.98
1730	35	7.36	14.3	20	1113		0.90	15.02
Final Sample Data:								

Sample ID: MW-SR-00713 Duplicate? Dupe Samp ID: _____
Sample Time: 1748 MS/MSD?

Analyses: Methods: Comments: Diff. culty getting pump to work
 VOCs CLP
 SVOCs SW846
 PCBs Drink. Wtr.
 Metals _____
 _____ _____ Sampler(s): T. Dillon



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20F2

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WELL PURGE & SAMPLE RECORD

Site Name/Location: PAVIS HIGHLAND
EEPC Project No.: EN-003231-0001-03TFO

Well ID: MW 5R
Date: 10/8/07

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

Start Time: /
End Time: /
 Bailer Pump
Pump Type: /
Well Diameter: / 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)
1740	39	7.32	14.3	11	1126	N/A	0.81	15.03
1745	42	7.34	14.2	10	1131	↓	0.81	15.03
Final Sample Data:		7.34	14.2	10	1131		0.81	15.03

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

Analyses: VOCs SVOCs PCBs Metals _____
Methods: CLP SW846 Drink. Wtr. _____
Comments: _____
Sampler(s): _____



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10E2

WELL PURGE & SAMPLE RECORD

Site Name/Location: District 10

Well ID: MW-8 R

EEPC Project No.: EW-003231-0001-03780

Date: 10/8/13

Initial Depth to Water: 18.72 feet TOIC

Start Time: 14:32

Total Well Depth: 36.68 feet TOIC

End Time: 18:40

Depth to Pump: _____ feet TOIC

Bailer Pump

Initial Pump Rate: 500ml Lpm / gpm

Pump Type: Typhoon

adjusted to: _____ at _____ minutes

Well Diameter: 4" inches

adjusted to: _____ at _____ minutes

1x Well Volume: 11.7 gallons $\times 3 = 35.1$

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)
14:32	200ml	7.45	15.1	-42	1885	-	5.71	19.46
14:37	2.7	7.20	14.8	-58	1816	-	4.76	20.19
14:47	7.7	7.20	14.9	-62	1795	-	5.89	21.08 21.15/13
14:57	12.7	7.13	14.9	-63	1773	-	4.72	21.73
15:07	17.7	7.15	14.9	-65	1692	-	4.13	21.21
15:17	22.7	7.24	14.6	-64	1721	-	3.52	21.69
15:27	27.7	7.25	14.5	-65	1720	-	3.60	21.69
15:37	32.7	7.28	14.7	-68	1719	-	3.57	21.69
15:47	37.7	7.27	14.9	-66	1725	-	3.61	21.69
15:57	42.7	7.38	14.6	-69	1677	-	6.22	21.71
16:07	47.7	7.29	14.5	-69	1725	-	4.46	21.81
16:17	52.7	7.18	14.4	-70	1728	-	5.82	22.05
16:27	57.7	7.12	14.4	-70	17.61	-	5.39	22.49
16:37	62.7	7.11	14.5	-70	17.50	-	5.74	22.81
16:47	67.7	7.15	14.5	-69	17.52	-	7.12	23.57
Final Sample Data:								

Sample ID: MW 8R-Oct13

Duplicate? Dupe Samp ID: _____

Sample Time: 18:40

MS/MSD?

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

Comments: Water level keep dropping will not recharge fast enough to keep up with 500ml per min, can not keep pump running before 500ml per min keeps stopping. Water level stable at 24.29.

Sampler(s): L. Smith



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10E2

WELL PURGE & SAMPLE RECORD

Site Name/Location: PAVISTON ROAD

Well ID: MW-8 R

EEEP Project No.: EN-003231-0001-03770

Date: 10/8/13

Initial Depth to Water: 18.72 feet TOIC

Start Time: 14:32

Total Well Depth: 36.68 feet TOIC

End Time: 18:40

Depth to Pump: _____ feet TOIC

Bailer Pump

Initial Pump Rate: 500mls Lpm / gpm

Pump Type: Typhoon

adjusted to: _____ at _____ minutes

Well Diameter: 4" inches

adjusted to: _____ at _____ minutes

1x Well Volume: 11.7 gallons $\times 3 = 35.1$

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)
14:32	200mls	7.45	15.1	-42	1885	✓	5.71	19.46
14:37	2.7	7.20	14.8	-58	1816	-	4.76	20.19
14:47	7.7	7.20	14.9	-62	1795	-	5.89	21.08 ^{21.18/13}
14:57	12.7	7.13	14.9	-63	1773	-	4.72	21.73
15:07	17.7	7.15	14.9	-65	1692	-	4.13	21.21
15:17	22.7	7.28	14.6	-64	1721	-	3.52	21.69
15:27	27.7	7.25	14.5	-65	1720	-	3.60	21.69
15:37	32.7	7.28	14.7	-68	1719	-	3.57	21.69
15:47	37.7	7.27	14.9	-66	1725	-	3.61	21.69
15:57	42.7	7.38	14.6	-69	1677	-	6.22	21.71
16:07	47.7	7.29	14.5	-69	1725	-	4.46	21.81
16:17	52.7	7.18	14.4	-70	1728	-	5.82	22.05
16:27	57.7	7.12	14.4	-70	17.61	-	5.39	22.49
16:37	62.7	7.11	14.5	-70	17.50	✓	5.74	22.81
16:47	67.7	7.15	14.5	-69	17.52	-	7.12	23.51
Final Sample Data:								

Sample ID: MW 8R-OCT13

Duplicate?

Dupe Samp ID: _____

Sample Time: 1846

MS/MSD?

Analyses: _____ Methods: _____

- VOCs
- SVOCs
- PCBs
- Metals
- _____
- CLP
- SW846
- Drink. Wtr.
- _____
- _____

Comments: Water level keep dropping will not recharge fast enough to keep up with 500mls per min. Can not keep pump running before 500mls per min keeps stopping. Water level stable at 24.29.

Sampler(s): L. daniel



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WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Howard

Well ID: MW9S

EEEP Project No.: EN-003231-0001-03-780

Date: 10/10/13

Initial Depth to Water: 9.58 feet TOIC

Start Time: 8:58

Total Well Depth: 13.96 feet TOIC

End Time: 10:35

Depth to Pump: 13.96 feet TOIC

Bailer Pump

Initial Pump Rate: 250mls Lpm / gpm

Pump Type: Typhoon

adjusted to: _____ at _____ minutes

Well Diameter: 2" inches

adjusted to: _____ at _____ minutes

1x Well Volume: 1.0 gallons B=3.11gal

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)
8:58	100mls	6.37	15.4	152	2233	-	655	10.26
9:03	0.73	6.78	16.5	121	2260	-	10.0	-
9:08	.66	6.85	17.3	109	2091	-	73.4	10.55
9:13	.99	6.90	17.0	105	1946	-	69.9	10.65
9:18	1.3	7.06	17.2	100	1651	-	30.5	10.95
9:28	1.6	6.99	17.3	92	1579	-	21.2	11.01
9:33	1.9	7.01	18.4	74	1511	-	19.6	11.82
9:43	2.31	6.95	18.3	55	1622	-	20.3	12.70
9:48	2.64	6.90	18.5	11	1980	-	30.5	12.79
9:53	2.97	6.88	18.4	7	2025	-	60.2	12.99
9:58	3.3	6.87	18.4	11	2022	-	100	13.0
10:03	3.63	6.87	18.4	17	2240	-	1000	14.01
10:08	3.96	6.87	18.4	18	2238	-	1000	15.96
10:09	4.29	Dry						
Final Sample Data:		6.87	18.3	18	2238	-	3.09	12.70

Sample ID: MW9S-oct13

Duplicate?

Dupe Samp ID: MW-9S-oct13-FD

Sample Time: 10:35

MS/MSD?

Analyses: Methods:

- VOCs CLP
- SVOCs SW846
- PCBs Drink. Wtr.
- Metals _____
- _____ _____

Comments: Water level kept dropping. Sample VOC's Turbidity was 3.09. Turbidity for 500's TPH were above 1000.

Sampler(s): 1 used



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10F2

WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Island
EEEP Project No.: EV-007231-0001-09-770

Well ID: MW10R
Date: 10/11/13

Initial Depth to Water: 18.70 feet TOIC
Total Well Depth: 35.60 feet TOIC
Depth to Pump: 33.60 feet TOIC
Initial Pump Rate: 600mls Lpm / gpm
adjusted to: _____ at _____ minutes
adjusted to: _____ at _____ minutes

Start Time: 8:59
End Time: 12:59
 Bailer Pump
Pump Type: Topkon
Well Diameter: 4" inches
1x Well Volume: 11.0 gallons $\times 3 = 33$ 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)
8:59	100mls	7.66	15.3	155	877.9	-	8.79	18.96
9:04	0.792	7.46	14.9	134	866.0	-	6.02	19.41
9:09	1.5	7.33	14.6	126	867.4	-	4.74	15.80
9:14	2.2	7.37	14.4	122	868.6	-	3.26	15.57
9:19	2.9	7.34	14.1	122	882.9	-	2.67	17.15
9:24	3.6	7.31	14.1	109	891.5	-	2.28	14.21
9:29	4.3	7.29	14.0	109	894.5	-	2.74	19.71
9:39	5.7	7.31	14.1	109	916.2	-	2.05	19.71
9:49	7.1	7.30	14.1	98	924.3	-	1.66	19.71
9:59	8.5	7.34	14.3	87	936.6	-	1.32	19.71
10:09	9.9	7.34	14.1	88	946.1	-	1.56	19.71
10:19	11.3	7.30	14.1	86	953.2	-	0.99	19.71
10:29	12.7	7.30	14.2	82	959.1	-	1.10	19.71
10:39	14.1	7.29	14.2	79	960.1	-	0.76	19.71
10:49	15.5	7.32	14.1	79	973.1	-	0.77	19.71
Final Sample Data:								

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

Analyses: Methods: Comments: Water level keep dropping at 600mls per min.
 VOCs CLP
 SVOCs SW846
 PCBs Drink. Wtr.
 Metals _____
 _____ _____ Sampler(s): C. Reed



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

WELL PURGE & SAMPLE RECORD

Site Name/Location: DAVISHOWLAND
EEPC Project No.: EV-003251-0001-03 TFO

Well ID: MW10R
Date: 10/11/13

Initial Depth to Water: See data feet TOIC
Total Well Depth: Sheet feet TOIC
Depth to Pump: 18F1 feet TOIC
Initial Pump Rate: _____ Lpm / gpm
adjusted to: _____ at _____ minutes
adjusted to: _____ at _____ minutes

Start Time: _____
End Time: _____
 Bailer Pump
Pump Type: Typhoon
Well Diameter: 4" inches
1x Well Volume: 11.0 gallons 23 33.1

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)
11:09	18.3	7.38	14.1	77	985.3	-	1.08	19.71
11:19	19.7	7.39	14.5	80	994.5	-	0.44	19.71
11:29	21.1	7.37	14.4	76	1012	-	0.54	19.71
11:39	22.5	7.31	14.2	72	1028	-	0.45	19.71
11:49	23.9	7.32	14.2	68	1035	-	0.57	19.71
11:59	25.7	7.31	14.1	67	1041	-	0.48	19.71
12:09	26.7	7.31	14.1	64	1042	-	0.51	19.71
12:19	28.1	7.32	14.1	64	1043	-	0.46	19.71
12:29	29.5	7.32	14.1	63	1040	-	0.47	19.71
12:39	30.9	7.31	14.2	61	1041	-	0.60	19.71
12:49	32.3	7.32	14.1	61	1041	-	0.52	19.71
12:59	33.7	7.31	14.1	61	1042	-	0.51	19.71
Final Sample Data:		7.31	14.1	61	1042	-	0.51	19.71

Sample ID: MW-10R-10/11/13 Duplicate? Dupe Samp ID: _____
Sample Time: 1300 MS/MSD?

Analyses: VOCs SVOCs PCBs Metals _____
Methods: CLP SW846 Drink. Wtr. _____
Comments: _____
Sampler(s): U. Hall



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WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Highland
EEEEC Project No.: EM 003231-0001-03 P70

Well ID: MW-125
Date: 10/8/13

Initial Depth to Water: 4.41 feet TOIC
Total Well Depth: 14.68 feet TOIC
Depth to Pump: 12.68 feet TOIC
Initial Pump Rate: 250 Lpm / gpm
adjusted to: _____ at _____ minutes
adjusted to: _____ at _____ minutes

Start Time: 1145
End Time: 1250
 Bailer Pump
Pump Type: Mini Typhoon
Well Diameter: 2 inches
1x Well Volume: 1.67 gallons $\times 3 = 5.02$

Time	Purge Volume (gallons)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
1150	1.25	6.82	17.0	102	1093	-	7.38	4.99
1155	2.5	6.80	17.6	109	1073	-	4.71	5.44
1200	3.75	6.80	17.9	109	1076	-	2.27	5.35
1205	5	6.81	18.0	112	1080	-	1.36	5.37
1210	6.25	6.81	18.1	114	1082	-	1.02	5.37
Final Sample Data:		6.81	18.1	114	1082	-	1.02	5.37

Sample ID: MW-125-0ct13
Sample Time: 1215

Duplicate?
MS/MSD?

Dupe Samp ID: _____

- Analyses: Methods: Comments: MS/MSD collected MW-125-0ct13 MS
 VOCs CLP
 SVOCs SW846
 PCBs Drink. Wtr.
 Metals

_____ MW-125-0ct13 SD

Sampler(s): T.D.110



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WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Hill and
EEPC Project No.: EN 003291-0001-03880

Well ID: MW-12R
Date: 10/8/13

Initial Depth to Water: 22.39 feet TOIC
Total Well Depth: 31.99 feet TOIC
Depth to Pump: _____ feet TOIC
Initial Pump Rate: 400 Lpm / gpm
adjusted to: 350 at 1015 minutes
adjusted to: _____ at _____ minutes

Start Time: 946
End Time: 1110
 Bailer Pump
Pump Type: Mini. typhoon
Well Diameter: 4 inches
1x Well Volume: 6.27 gallons $\times 3 = 18.8$

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)
1000 0950	1	7.22	14.6	138	825.8	-	1.11	22.86
0955	3	7.22	14.2	105	824.7	-	2.96	23.44
1000	5	7.25	14.4	86	824.9	-	0.86	23.42
1005	7	7.26	14.4	77	824.9	-	0.59	23.43
1010	8.75	7.27	14.5	75	824.6	-	0.64	23.32
1015	9	7.26	14.6	79	824.5	-	0.68	23.18
1020	10	7.24	14.5	70	824.1	-	1.15	23.18
1025	11	7.23	14.5	68	823.1	-	0.57	23.22
1030	12	7.24	14.4	68	823.0	-	0.48	23.20
1035	13	7.23	14.3	66	824.6	-	0.54	23.20
1040	15	7.23	14.4	67	824.2	-	0.45	23.20
1045	17	7.24	14.5	67	823.0	-	0.45	23.20
1050	20	7.25	14.4	66	824.4	-	0.55	23.20
Final Sample Data:		7.25	14.4	66	824.4	-	0.55	23.20

Sample ID: MW-12R-Oct13 Duplicate? Dupe Samp ID: _____
Sample Time: 1100 MS/MSD?

Analyses: VOCs SVOCs PCBs Metals _____
Methods: CLP SW846 Drink. Wtr. _____
Comments: some adjustment were made throughout purging to control flow. The flow was pretty irregular.
Sampler(s): T. Dillon



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WELL PURGE & SAMPLE RECORD

Site Name/Location: Darshondland
 EEEPC Project No.: EN-003231-0001-03 ETO

Well ID: MW-135
 Date: 10/9/13

Initial Depth to Water: 5.82 feet TOIC
 Total Well Depth: 13.74 feet TOIC
 Depth to Pump: 11.74 feet TOIC
 Initial Pump Rate: 750 (lpm) / gpm
 adjusted to: _____ at _____ minutes
 adjusted to: _____ at _____ minutes

Start Time: 0820
 End Time: 0907
 Bailer Pump
 Pump Type: Mini Typhoon
 Well Diameter: 2 inches
 1x Well Volume: 1.3 gallons x 3 = 3.87

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)
0823	1	6.51	17.8	40	665.4		9.55	6.54
0828	2	6.66	18.8	-12	656.8		21.3	6.58
0833	3	6.64	18.9	-11	660.7 660.1		4.76	6.64
0838	4.5	6.91	19.3	-24	662.6		2.47	6.66
0843	5.5	6.95	19.0	-42	670.7		25.0	6.75
0848	6.5	6.98	19.4	-43	672.8		11.73	6.76
0853	7.5	6.96	19.4	-38	671.7		5.15	6.77
Final Sample Data:		6.96	19.4	-38	671.7		5.15	6.77

Sample ID: MW-135-0CT13 Duplicate? Dupe Samp ID: _____
 Sample Time: 0858 MS/MSD?

Analyses: VOCs SVOCs PCBs Metals _____
 Methods: CLP SW846 Drink. Wtr. _____
 Comments: _____
 Sampler(s): T. Dillon



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WELL PURGE & SAMPLE RECORD

Site Name/Location: DANDY HILAND
EEPC Project No.: EP-007231-0001-03-780

Well ID: MW145
Date: 10/2/13

Initial Depth to Water: 2.25 feet TOIC

Start Time: 9:27

Total Well Depth: 12.97 feet TOIC

End Time: 10:03

Depth to Pump: 10.97 feet TOIC

Bailer Pump

Initial Pump Rate: 500 Lpm / gpm (mls)

Pump Type: Typhoon

adjusted to: _____ at _____ minutes

Well Diameter: 2" inches

adjusted to: _____ at _____ minutes

1x Well Volume: 0.9 gallons $\times 3 = 2.8$

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)
9:28	500 mls	6.39	19.0	207	270.6	-	4.51	3.43
9:32	900 mls	6.52	18.6	131	307.9	-	2.76	3.63
9:37	1.4 L	6.53	18.8	124	306.4	-	2.47	3.73
9:42	3.9 L	6.60	19.4	125	350.1	-	2.35	3.97
9:47	6.0 L	6.62	18.9	124	346.1	-	0.80	3.97
9:52	8.5 L	6.63	18.9	120	341.0	-	0.58	3.97
9:57	11.0 L	6.62	18.9	121	341.1	-	0.51	3.97
10:02	13.5 L	6.61	18.9	120	341.2	-	0.52	3.97
Final Sample Data:		6.61	18.9	120	341.2	-	0.51	3.97

Sample ID: MW-145-0CT13

Duplicate?

Dupe Samp ID: _____

Sample Time: 10:03

MS/MSD?

Analyses:

VOCs

SVOCs

PCBs

Metals

Methods:

CLP

SW846

Drink. Wtr.

Comments:

Sampler(s): 6 Rods



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WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Hauland
EEPC Project No.: CR-003231-0001-09770

Well ID: MW14R
Date: 10/8/13

Initial Depth to Water: 6.06 feet TOIC
Total Well Depth: 33.99 feet TOIC
Depth to Pump: 31.99 feet TOIC
Initial Pump Rate: 0.5 Lpm (gpm)
adjusted to: _____ at _____ minutes
adjusted to: _____ at _____ minutes

Start Time: 10:57
End Time: 13:00
 Bailer Pump
Pump Type: Tejman
Well Diameter: 1.4 inches
1x Well Volume: 18.2 gallons 2354.8

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)
10:57	500mls	7.10	16.3	121	340.9	-	8.85	6.41
11:02	5.0L	6.99	16.5	99	496.8	-	5.40	6.85
11:07	5.0 gallons	7.00	16.6	82	647.2	-	4.83	6.83
11:17	10.9gall	7.28	16.3	53	1052	-	1.48	6.84
11:22	15	7.29	16.9	47	1051	-	0.76	6.84
11:27	20	7.42	16.0	43	1096	-	1.35	6.84
11:47	25	7.40	16.4	35	1108	-	0.72	6.84
12:07	30	7.41	16.4	35	1104	-	0.90	6.84
12:17	35	7.42	16.8	29	1100	-	0.56	6.84
12:27	40	7.41	16.3	29	1103	-	0.82	6.84
12:37	45	7.39	16.4	21	1121	-	0.61	6.84
12:47	50	7.38	16.2	20	1120	-	0.43	6.84
13:07	55	7.38	16.1	21	1121	-	0.36	6.84
Final Sample Data:		7.38	16.1	21	1121	-	0.36	6.84

Sample ID: MW14R - Oct 13
Sample Time: 13:10

Duplicate? Dupe Samp ID: _____
MS/MSD?

Analyses: VOCs SVOCs PCBs Metals
Methods: CLP SW846 Drink. Wtr.
Comments: Spill Bottom
Sampler(s): U-Need



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92F2

WELL PURGE & SAMPLE RECORD

Site Name/Location: DWS Coaland
EEEPCC Project No.: CR-083270-0001-03 F70

Well ID: MW 15 R
Date: 10/18/13

Initial Depth to Water: 14.51 feet TOIC
Total Well Depth: 30.31 feet TOIC
Depth to Pump: 28.37 feet TOIC
Initial Pump Rate: 0.550 ^{gpm} Lpm ~~gpm~~ ^{cm}
adjusted to: _____ at _____ minutes
adjusted to: _____ at _____ minutes

Start Time: 12:08
End Time: 16:15
 Bailer Pump
Pump Type: Typhoon
Well Diameter: 4" inches
1x Well Volume: 10.3 gallons x 3 = 31 gallons

Time	Purge Volume (gallons/liters)	pH (s.u.)	Temp. (°C/°F)	ORP (mV)	Conductivity (µS/cm mS/cm)	DO (mg/L)	Turbidity (NTU)	Water Level (feet)
12:08	2.00 0.66	7.69	14.2	56	1888	-	4.26	15.16
12:13	0.66	7.16	14.7	10	1077	-	5.47	15.55
12:27	1.9	7.17	14.6	10	1074	-	4.69	15.79
12:33	3.22	7.20	14.5	10	1062	-	4.31	15.85
12:43	4.54	7.18	14.8	20	1031	-	3.61	15.89
12:53	5.86	7.19	14.7	28	1005	-	2.87	15.89
13:03	7.18	7.05	14.1	29	982.5	-	2.72	16.04
13:13	8.5	7.05	14.7	42	980.5	-	3.38	16.20
13:23	9.82	7.09	14.3	58	988.6	-	2.33	16.24
13:33	11.14	7.04	14.2	54	991.8	-	2.10	16.24
13:43	12.46	7.03	14.5	55	991.7	-	1.81	16.24
13:53	13.78	7.03	14.6	53	993.7	-	1.66	16.24
14:03	15.1	7.02	14.3	53	1003	-	1.06	16.24
14:13	16.42	7.02	14.2	69	1006	-	1.12	16.24
14:23	17.74	7.06	14.1	71	1007	-	0.89	16.24
Final Sample Data:								

Sample ID: MW-15R-oct13 Duplicate? Dupe Samp ID: _____
Sample Time: 16:15 MS/MSD?

Analyses: VOCs CLP
 SVOCs SW846
 PCBs Drink. Wtr.
 Metals _____
Sampler(s): L. [Signature]



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20F2

WELL PURGE & SAMPLE RECORD

Site Name/Location: Davis Island
EEEEPC Project No.: EN-009231-000 1-09770

Well ID: MW 15 R
Date: 10/10/13

Initial Depth to Water: SEE feet TOIC
Total Well Depth: 0 data feet TOIC
Depth to Pump: Sludg feet TOIC
Initial Pump Rate: 1001 Lpm / gpm
adjusted to: _____ at _____ minutes
adjusted to: _____ at _____ minutes

Start Time: SEE Data sheet 10 F 1
End Time: _____
 Bailer Pump
Pump Type: Typloc
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)
14:33	19.04	7.06	14.4	68	1008	-	0.82	16.24
14:43	20.38	7.04	14.3	69	999.9	-	0.78	16.24
14:53	21.7	7.03	14.3	71	1001	-	0.72	16.24
15:03	23.02	7.03	14.4	70	1001	-	0.64	16.24
15:12	24.34	7.07	14.0	83	1001	-	0.60	16.24
15:23	25.66	7.06	14.0	78	1001	-	0.59	16.24
15:33	26.98	7.05	14.0	76	1002	-	0.54	16.24
15:43	28.30	7.01	14.0	80	1001	-	0.55	16.24
15:53	29.6	7.02	14.0	82	1002	-	0.52	16.24
16:03	30.94	7.01	14.0	83	1001	-	0.51	16.24
16:13	32.26	7.01	14.0	82	1001	-	0.52	16.24
Final Sample Data:		7.01	14.0	81	1001	-	0.51	16.24

Sample ID: MW-15R-Oct 13 Duplicate? Dupe Samp ID: _____
Sample Time: 16:15 MS/MSD?

Analyses: VOCs CLP
 SVOCs SW846
 PCBs Drink. Wtr.
 Metals _____
 _____ _____
Sampler(s): L. Reed

Data Usability Summary Report	Project: Davis Howland Oil Company
Date Completed: November 12, 2013	Completed by: J. Z. Christopher

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);
- USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review (EPA-540-R-08-01, June 2008); and
- 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:

ProjectID	Lab Work Order
Davis Howland Oil Company Site Semiannual GW-October 2013	R1307504

Work Orders, Tests and Number of Samples included in this DUSR

Work Orders	Matrix	Test Method	Method Name	Number of Samples	Sample Type
R1307504	WG	E624	Purgeable Halocarbons and Purgeable Aromatics by GC/MS	21	N
R1307504	WG	E624	Purgeable Halocarbons and Purgeable Aromatics by GC/MS	1	FD
R1307504	WQ	E624	Purgeable Halocarbons and Purgeable Aromatics by GC/MS	1	RB
R1307504	WQ	E624	Purgeable Halocarbons and Purgeable Aromatics by GC/MS	4	TB
R1307504	WQ	E624	Purgeable Halocarbons and Purgeable Aromatics by GC/MS	2	MS/MSD
R1307504	WG	E625	Semivolatile Organic Compounds by GC/MS	16	N
R1307504	WG	E625	Semivolatile Organic Compounds by GC/MS	1	FD
R1307504	WQ	E625	Semivolatile Organic Compounds by GC/MS	1	RB
R1307504	WQ	E625	Semivolatile Organic Compounds by GC/MS	2	MS/MSD
R1307504	WG	NY 310-13	Petroleum Products in Water (Hydrocarbon Scan)	16	N
R1307504	WG	NY 310-13	Petroleum Products in Water (Hydrocarbon Scan)	1	FD
R1307504	WQ	NY 310-13	Petroleum Products in Water (Hydrocarbon Scan)	1	RB
R1307504	WQ	NY 310-13	Petroleum Products in Water (Hydrocarbon Scan)	2	MS/MSD

Data Usability Summary Report	Project: Davis Howland Oil Company
Date Completed: November 12, 2013	Completed by: J. Z. Christopher

Table 1 Sample Summary Tables from Electronic Data Deliverable

Work Order	Matrix	Sample ID	Lab ID	Sample Date	Lab QC	MS/MSD	ID Corrections
R1307504	WG	MW-14S-OCT13	R1307504-001	10/8/13			None
R1307504	WG	MW-14R-OCT13	R1307504-002	10/8/13			None
R1307504	WQ	MW-12S-OCT13	R1307504-003	10/8/13		MS/MSD	None
R1307504	WG	MW-12R-OCT13	R1307504-004	10/8/13			None
R1307504	WG	MW-5R-OCT13	R1307504-005	10/8/13			None
R1307504	WG	MW-8R-OCT13	R1307504-006	10/8/13			None
R1307504	WQ	TB131008	R1307504-007	10/8/13			None
R1307504	WG	MW-13S-OCT13	R1307504-008	10/9/13			None
R1307504	WG	MW-2R-OCT13	R1307504-009	10/9/13			None
R1307504	WG	MW-2S-OCT13	R1307504-010	10/9/13			None
R1307504	WG	P-1-OCT13	R1307504-011	10/9/13			None
R1307504	WQ	P-3-OCT13	R1307504-012	10/9/13			None
R1307504	WG	P-2-OCT13	R1307504-013	10/9/13			None
R1307504	WG	PW-1-OCT13	R1307504-014	10/9/13			None
R1307504	WG	MW-1S-OCT13	R1307504-015	10/9/13			None
R1307504	WQ	TB-20131009	R1307504-016	10/9/13			None
R1307504	WG	MW-16R-OCT13	R1307504-017	10/9/13			None
R1307504	WQ	TB131010	R1307504-018	10/10/13			None
R1307504	WQ	MW-9S-OCT13	R1307504-019	10/10/13			None
R1307504	WG	MW-9S-OCT13-FD	R1307504-020	10/10/13			None
R1307504	WQ	MW-3R-OCT13	R1307504-021	10/10/13			None
R1307504	WG	MW-3S-OCT13	R1307504-022	10/10/13			None
R1307504	WG	MW-15R-OCT13	R1307504-023	10/10/13			None
R1307504	WQ	TB-131011	R1307504-024	10/11/13			None
R1307504	WG	MW-10R-OCT13	R1307504-025	10/11/13			None
R1307504	WQ	RB-31011	R1307504-026	10/11/13			None

General Sample Information

Do Samples and Analyses on COC check against Lab Sample Tracking Form?	Yes
Did coolers arrive at lab between 2 and 6°C and in good condition as indicated on COC and Cooler Receipt Form?	Yes
Frequency of Field QC Samples Correct? Field Duplicate - 1/20 samples Trip Blank - Every cooler with VOCs waters only Equipment Blank - 1/ set of samples per day?	Yes – Field duplicate was supplied for sample MW-9S-OCT13; trip blanks were supplied for each cooler/day. One rinsate blank was supplied for the sampling round.
All ASP Forms complete?	Yes
Case narrative present and complete?	Yes. The laboratory reported results for “Lube Oil” per method NY 310-13; however, the NYSDEC valid value for the cas_rn was “NA” in the EDD; therefore the validator renamed the cas_rn accordingly in the EDD.
Any holding time violations?	No - All samples were prepared and analyzed within holding times.

Data Usability Summary Report	Project: Davis Howland Oil Company
Date Completed: November 12, 2013	Completed by: J. Z. Christopher

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 GCMS	
Description	Notes and Qualifiers
Any compounds present in method, trip, and field blanks (see Table 2)?	Yes. Low levels of ACETONE, METHYLENE CHLORIDE, and TOLUENE were detected in the equipment rinsate blank sample.
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.	The acetone result for sample MW-2S-OCT13 was qualified with a U for equipment rinsate blank contamination.
Surrogate for method blanks and LCS within limits?	Yes
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.	Yes
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)? If out and LCS is compliant, then J flag positive data in original sample due to matrix?	No – For volatile organics analyses, the MS and MSD for 2-Chloroethyl vinyl ether were below criteria. Acid preservation (which was used for these samples) is known to degrade this compound; therefore, all sample results are rejected and qualified R (all were non-detects). For semivolatile organics analyses, the MS/MSD recoveries were below criteria for benzidine (0%); therefore the parent sample results for benzidine were rejected and are qualified with R.
LCS within QC criteria (see Table 5)? If out, and the recovery high with no positive values, then no data qualification is required.	No – For semivolatile organics analyses, LCS recovery for Benzidine is acceptable; however, LCSD recovery is below criteria at 0%; therefore, sample results for benzidine are qualified with UJ (all are non-detects). The LCS/LSD RPDs for hexachlorobutadiene and hexachloroethane were above criteria; however, these compounds were not detected in any samples, therefore, no qualifiers were added on this basis.
Do internal standards areas and retention time meet criteria? If not was sample re-analyzed to establish matrix (see Table 6)?	N/A

Data Usability Summary Report	Project: Davis Howland Oil Company
Date Completed: November 12, 2013	Completed by: J. Z. Christopher

Volatile Organics and Semi-volatile Organics by GCMS	
Description	Notes and Qualifiers
Is initial calibration for target compounds <10 %RSD or curve fit?	Yes.
Is continuing calibration for target compounds < 20.5%D.	N/A
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. Several samples were diluted for volatile organics analyses due to high target compound concentrations.
For TICs are there any system related compounds that should not be reported?	No.
Do field duplicate results show good precision for all compounds except TICs (see Table 7)?	Yes.

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.	None.
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 Potential Impacts on Data Usability
Major Concerns
Volatile organics: The use of hydrochloric acid to preserve the samples for VOC analysis caused rejection of 2-chloroethylvinyl ether results.
Minor Concerns
Volatile organics: Dilutions of several samples resulted in elevated reporting limits.
Semivolatile organics: Benzidine recoveries in the LCSD and MS/MSD pairs were below criteria and and results were flagged "UJ".

Data Usability Summary Report	Project: Davis Howland Oil Company
Date Completed: November 12, 2013	Completed by: J. Z. Christopher

Table 2 - List of Positive Results for Blank Samples

Method	Sample ID	Sample Type	Analyte	Result	Qualifier	Analyte Type	Units	MDL	PQL
E624	RB-31011	RB	ACETONE	3.3	J	Total	µg/L	2.4	5.0
E624	RB-31011	RB	METHYLENE CHLORIDE	0.26	J	Total	µg/L	0.20	1.0
E624	RB-31011	RB	TOLUENE	0.45	J	Total	µg/L	0.17	1.0

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

None

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

Method	Field Blank	Matrix	Analyte	Blank Result	Sample Result	Lab Qualifier	PQL	Affected Samples	Sample Flag
E624	RB-31011	WQ	ACETONE	3.3	3.2	J	5.0	MW-2S-OCT13	U

Table 3 - List of Samples with Surrogates outside Control Limits

None

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

Method	Sample ID	Sample Type	Analyte	Orig. Result	Spike Amount	Rec.	Dil Fac	Low Limit	High Limit	Sample Qualifier
E6624	MW-12S-OCT13MS	MS	2-Chloroethyl Vinyl Ether	ND	20.0	0	1	10	305	R
E624	MW-12S-OCT13DMS	MSD	2-Chloroethyl Vinyl Ether	ND	20.0	0	1	10	305	R
E625	MW-12S-OCT13MS	MS	Benzidine	ND	94.3	0	1	10	169	R
E625	MW-12S-OCT13DMS	MSD	Benzidine	ND	94.3	0	1	10	169	R

Table 5 - List LCS Recoveries outside Control Limits

Method	Sample ID	Analyte	Spike Amount	Rec.	Low Limit	High Limit	Sample Qualifier
E625	RQ1312661-03	Benzidine	100	0	10	169	UJ
E625	RQ1312928-03	Benzidine	100	0	10	169	UJ

Data Usability Summary Report	Project: Davis Howland Oil Company
Date Completed: November 12, 2013	Completed by: J. Z. Christopher

Table 6 –Samples that were Reanalyzed

Sample ID	Lab ID	Method	Sample Type	Action
MW-5R-OCT13	R1307504-005	E624	SAMP	Results for 2X dilution only reported.
MW-8R-OCT13	R1307504-006	E624	SAMP	Results for 25X dilution only reported.
PW-1-OCT13	R1307504-014	E624	SAMP	Results for 2X dilution only reported.
MW-3R-OCT13	R1307504-021	E624	SAMP	Report results for 2.5X dilution and report CIS-1,2-DICHLOROETHYLENE result for 10X dilution
MW-3R-OCT13DL	R1307504-021	E624	SAMP	Report CIS-1,2-DICHLOROETHYLENE result for 10X dilution and report remaining results for 2.5X dilution
MW-10R-OCT13	R1307504-025	E624	SAMP	Results for 10X dilution only reported.

Table 7 – Summary of Field Duplicate Results

Method	Analyte	Unit	PQL	MW-9S-OCT13	MW-9S-OCT13-FD	RPD	Rating	Sample Qualifier
E624	1,1,1-TRICHLOROETHANE	ug/L	1	4.7	4.7	0.00	Good	None
E624	1,1-DICHLOROETHANE	ug/L	1	23	23	0.00	Good	None
E624	1,1-DICHLOROETHENE	ug/L	1	1.8	1.7	5.71	Good	None
E624	1,2-DICHLOROBENZENE	ug/L	1	100	100	0.00	Good	None
E624	1,3-DICHLOROBENZENE	ug/L	1	1.7	1.6	6.06	Good	None
E624	1,4-DICHLOROBENZENE	ug/L	1	6.6	6.5	1.53	Good	None
E624	BENZENE	ug/L	1	0.30	0.29	3.39	Good	None
E624	CHLOROETHANE	ug/L	1	0.69	0.69	0.00	Good	None
E624	CHLOROFORM	ug/L	1	0.58	0.57	1.74	Good	None
E624	CIS-1,2-DICHLOROETHYLENE	ug/L	1	78	78	0.00	Good	None
E624	O-XYLENE (1,2-DIMETHYLBENZENE)	ug/L	1	0.58	0.57	1.74	Good	None
E624	TETRACHLOROETHYLENE(PCE)	ug/L	1	40	37	7.79	Good	None
E624	TRANS-1,2-DICHLOROETHENE	ug/L	1	4.5	4.3	4.55	Good	None

Data Usability Summary Report	Project: Davis Howland Oil Company
Date Completed: November 12, 2013	Completed by: J. Z. Christopher

E624	TRICHLOROETHYLENE (TCE)	ug/L	1	56	56	0.00	Good	None
E624	VINYL CHLORIDE	ug/L	1	28	28	0.00	Good	None

Acronym List and Table Key:

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



October 21, 2013

Service Request No: R1307424

Mr. Michael Aloï
Ecology And Environment, Incorporated
368 Pleasantview Drive
Lancaster, NY 14086

Laboratory Results for: Davis Howland Oil Co Site - 10/2013/EN-003231-0001-02TTO

Dear Mr. Aloï:

Enclosed are the results of the sample(s) submitted to our laboratory on October 4, 2013. For your reference, these analyses have been assigned our service request number **R1307424**.

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 (ALS) 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

Page 1 of 24

ALS Environmental

Client: Ecology & Environment Service Request No.: R1307424
Project: Davis Howland Oil Co EN-003231-0001-02TTO Date Received: 10/4/2013
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

Four water samples were collected and received for analysis at ALS on 10/4/13. 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 8.2°C, outside the guidelines of 0-6°C however they were received on ice within one hour of collection.

General Chemistry Parameters

pH was not performed in the field as recommended by EPA to meet a holding time of "immediate." An "H" flag indicates the problem. pH is a temperature dependent analysis, so the pH and temperature analysis were conducted by the laboratory as soon as possible upon receipt.

No other analytical or quality control problems were encountered during analysis.

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.

Hits above the calibration range of the standards are flagged as "D". The samples were repeated at the appropriate dilutions for the hits. The data has been merged for EDD purposes.

All sample vials are checked for preservation after analysis to protect the integrity of the sample. All samples were found to be properly preserved analyzed within the holding time of 14 days for preserved samples except as noted above for the 624 analysis. All ALS vials are certified as preserved. 2-Chloroethylvinyl ether is degraded by samples preserved to pH<2. The recoveries of this compound may be biased low.

No analytical or quality control problems were encountered during analysis.

Approved by

Karen Bender

Date

10/11/13

00002

CASE NARRATIVE

This report contains analytical results for the following samples:

Service Request Number: R1307424

<u>Lab ID</u>	<u>Client ID</u>
R1307424-001	01 In
R1307424-002	01 Out
R1307424-003	02 In
R1307424-004	02 Out

00003



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/Aroclors).
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.



Rochester Lab ID # for State Certifications¹

Table with 3 columns: State/Agency, ID #, and Certification details. Rows include Maine, Nebraska, Nevada, New Jersey, New York, New Hampshire, North Carolina, Pennsylvania, Rhode Island, and Virginia.

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
 Project: Davis Howland Oil Co Site - 10/2013/EN-003231-0001-02TTO
 Sample Matrix: Water
 Sample Name: 01 In
 Lab Code: R1307424-001

Service Request: R1307424
 Date Collected: 10/4/13 1540
 Date Received: 10/4/13

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1-Trichloroethane (TCA)	8.7		1.0	1	NA	10/8/13 17:32		362254	
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
1,1,2-Trichloroethane	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
1,1-Dichloroethane (1,1-DCA)	19		1.0	1	NA	10/8/13 17:32		362254	
1,1-Dichloroethene (1,1-DCE)	3.4		1.0	1	NA	10/8/13 17:32		362254	
1,2-Dichlorobenzene	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
1,2-Dichloroethane	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
1,2-Dichloropropane	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
1,3-Dichlorobenzene	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
1,4-Dichlorobenzene	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
2-Chloroethyl Vinyl Ether	10	U	10	1	NA	10/8/13 17:32		362254	
Acetone	5.0	U	5.0	1	NA	10/8/13 17:32		362254	
Benzene	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
Bromodichloromethane	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
Bromoform	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
Bromomethane	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
Carbon Tetrachloride	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
Chlorobenzene	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
Chloroethane	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
Chloroform	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
Chloromethane	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
Dibromochloromethane	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
Methylene Chloride	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
Ethylbenzene	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
Tetrachloroethene (PCE)	130		1.0	1	NA	10/8/13 17:32		362254	
Toluene	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
Trichloroethene (TCE)	55		1.0	1	NA	10/8/13 17:32		362254	
Trichlorofluoromethane (CFC 11)	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
Vinyl Chloride	14		1.0	1	NA	10/8/13 17:32		362254	
cis-1,2-Dichloroethene	310	D	2.0	2	NA	10/9/13 08:21		362314	
cis-1,3-Dichloropropene	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
m,p-Xylenes	2.0	U	2.0	1	NA	10/8/13 17:32		362254	
o-Xylene	1.0	U	1.0	1	NA	10/8/13 17:32		362254	
trans-1,2-Dichloroethene	1.7		1.0	1	NA	10/8/13 17:32		362254	
trans-1,3-Dichloropropene	1.0	U	1.0	1	NA	10/8/13 17:32		362254	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Co Site - 10/2013/EN-003231-0001-02TTO
Sample Matrix: Water
Sample Name: 01 In
Lab Code: R1307424-001

Service Request: R1307424
Date Collected: 10/ 4/13 1540
Date Received: 10/ 4/13
Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	92	81-127	10/8/13 17:32	
4-Bromofluorobenzene	99	79-123	10/8/13 17:32	
Toluene-d8	96	83-120	10/8/13 17:32	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Co Site - 10/2013/EN-003231-0001-02TTO
Sample Name: 01 In
Lab Code: R1307424-001
Matrix: Water

Service Request: R1307424

Date Collected: 10/4/13

Date Received: 10/4/13

Analysis Method

Extracted/Digested By

Analyzed By

624

DLIPANI

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Co Site - 10/2013/EN-003231-0001-02TTO
 Sample Matrix: Water
 Sample Name: 01 Out
 Lab Code: R1307424-002

Service Request: R1307424
 Date Collected: 10/4/13 1544
 Date Received: 10/4/13

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1-Trichloroethane (TCA)	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
1,1,2-Trichloroethane	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
1,1-Dichloroethane (1,1-DCA)	1.1		1.0	1	NA	10/9/13 01:03		362314	
1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
1,2-Dichlorobenzene	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
1,2-Dichloroethane	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
1,2-Dichloropropane	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
1,3-Dichlorobenzene	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
1,4-Dichlorobenzene	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
2-Chloroethyl Vinyl Ether	10	U	10	1	NA	10/9/13 01:03		362314	
Acetone	5.0	U	5.0	1	NA	10/9/13 01:03		362314	
Benzene	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
Bromodichloromethane	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
Bromoform	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
Bromomethane	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
Carbon Tetrachloride	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
Chlorobenzene	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
Chloroethane	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
Chloroform	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
Chloromethane	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
Dibromochloromethane	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
Methylene Chloride	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
Ethylbenzene	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
Tetrachloroethene (PCE)	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
Toluene	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
Trichloroethene (TCE)	2.3		1.0	1	NA	10/9/13 01:03		362314	
Trichlorofluoromethane (CFC 11)	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
Vinyl Chloride	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
cis-1,2-Dichloroethene	19		1.0	1	NA	10/9/13 01:03		362314	
cis-1,3-Dichloropropene	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
m,p-Xylenes	2.0	U	2.0	1	NA	10/9/13 01:03		362314	
o-Xylene	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
trans-1,2-Dichloroethene	1.0	U	1.0	1	NA	10/9/13 01:03		362314	
trans-1,3-Dichloropropene	1.0	U	1.0	1	NA	10/9/13 01:03		362314	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Co Site - 10/2013/EN-003231-0001-02TTO
Sample Matrix: Water
Sample Name: 01 Out
Lab Code: R1307424-002

Service Request: R1307424
Date Collected: 10/ 4/13 1544
Date Received: 10/ 4/13
Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	81-127	10/9/13 01:03	
4-Bromofluorobenzene	99	79-123	10/9/13 01:03	
Toluene-d8	96	83-120	10/9/13 01:03	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Co Site - 10/2013/EN-003231-0001-02TTO
Sample Name: 01 Out
Lab Code: R1307424-002
Matrix: Water

Service Request: R1307424

Date Collected: 10/4/13

Date Received: 10/4/13

Analysis Method

Extracted/Digested By

Analyzed By

624

DLIPANI

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Co Site - 10/2013/EN-003231-0001-02TTO
 Sample Matrix: Water
 Sample Name: 02 In
 Lab Code: R1307424-003

Service Request: R1307424
 Date Collected: 10/4/13 1541
 Date Received: 10/4/13

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
pH	SM 4500-H+ B	7.41	pH Units		1	NA	10/7/13 15:05	H
Temperature of pH Analysis	SM 4500-H+ B	18.9	deg C		1	NA	10/7/13 15:05	H

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Co Site - 10/2013/EN-003231-0001-02TTO
Sample Name: 02 In
Lab Code: R1307424-003
Matrix: Water

Service Request: R1307424

Date Collected: 10/4/13

Date Received: 10/4/13

Analysis Method

Extracted/Digested By

Analyzed By

SM 4500-H+ B

DWARD

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Co Site - 10/2013/EN-003231-0001-02TTO
 Sample Matrix: Water
 Sample Name: 02 Out
 Lab Code: R1307424-004

Service Request: R1307424
 Date Collected: 10/4/13 1545
 Date Received: 10/4/13

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result Q	Units	MRL	Dilution Factor	Date Extracted	Date Analyzed	Note
pH	SM 4500-H+ B	8.05	pH Units		1	NA	10/7/13 15:05	H
Temperature of pH Analysis	SM 4500-H+ B	18.9	deg C		1	NA	10/7/13 15:05	H

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Co Site - 10/2013/EN-003231-0001-02TTO
Sample Name: 02 Out
Lab Code: R1307424-004
Matrix: Water

Service Request: R1307424

Date Collected: 10/4/13

Date Received: 10/4/13

Analysis Method

Extracted/Digested By

Analyzed By

SM 4500-H+ B

DWARD

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Co Site - 10/2013/EN-003231-0001-02TTO
 Sample Matrix: Water
 Sample Name: Method Blank
 Lab Code: RQ1312427-12

Service Request: R1307424
 Date Collected: NA
 Date Received: NA
 Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1-Trichloroethane (TCA)	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
1,1,2-Trichloroethane	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
1,2-Dichlorobenzene	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
1,2-Dichloroethane	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
1,2-Dichloropropane	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
1,3-Dichlorobenzene	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
1,4-Dichlorobenzene	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
2-Chloroethyl Vinyl Ether	10	U	10	1	NA	10/8/13 12:48		362254	
Acetone	5.0	U	5.0	1	NA	10/8/13 12:48		362254	
Benzene	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
Bromodichloromethane	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
Bromoform	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
Bromomethane	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
Carbon Tetrachloride	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
Chlorobenzene	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
Chloroethane	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
Chloroform	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
Chloromethane	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
Dibromochloromethane	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
Methylene Chloride	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
Ethylbenzene	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
Tetrachloroethene (PCE)	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
Toluene	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
Trichloroethene (TCE)	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
Trichlorofluoromethane (CFC 11)	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
Vinyl Chloride	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
cis-1,2-Dichloroethene	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
cis-1,3-Dichloropropene	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
m,p-Xylenes	2.0	U	2.0	1	NA	10/8/13 12:48		362254	
o-Xylene	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
trans-1,2-Dichloroethene	1.0	U	1.0	1	NA	10/8/13 12:48		362254	
trans-1,3-Dichloropropene	1.0	U	1.0	1	NA	10/8/13 12:48		362254	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Co Site - 10/2013/EN-003231-0001-02TTO
 Sample Matrix: Water
 Sample Name: Method Blank
 Lab Code: RQ1312427-12

Service Request: R1307424
 Date Collected: NA
 Date Received: NA
 Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	81-127	10/8/13 12:48	
4-Bromofluorobenzene	100	79-123	10/8/13 12:48	
Toluene-d8	97	83-120	10/8/13 12:48	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Co Site - 10/2013/EN-003231-0001-02TTO
 Sample Matrix: Water
 Sample Name: Method Blank
 Lab Code: RQ1312584-05

Service Request: R1307424
 Date Collected: NA
 Date Received: NA
 Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
1,1,1-Trichloroethane (TCA)	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
1,1,2,2-Tetrachloroethane	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
1,1,2-Trichloroethane	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
1,2-Dichlorobenzene	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
1,2-Dichloroethane	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
1,2-Dichloropropane	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
1,3-Dichlorobenzene	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
1,4-Dichlorobenzene	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
2-Chloroethyl Vinyl Ether	10	U	10	1	NA	10/9/13 00:04		362314	
Acetone	5.0	U	5.0	1	NA	10/9/13 00:04		362314	
Benzene	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
Bromodichloromethane	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
Bromoform	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
Bromomethane	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
Carbon Tetrachloride	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
Chlorobenzene	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
Chloroethane	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
Chloroform	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
Chloromethane	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
Dibromochloromethane	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
Methylene Chloride	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
Ethylbenzene	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
Tetrachloroethene (PCE)	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
Toluene	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
Trichloroethene (TCE)	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
Trichlorofluoromethane (CFC 11)	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
Vinyl Chloride	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
cis-1,2-Dichloroethene	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
cis-1,3-Dichloropropene	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
m,p-Xylenes	2.0	U	2.0	1	NA	10/9/13 00:04		362314	
o-Xylene	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
trans-1,2-Dichloroethene	1.0	U	1.0	1	NA	10/9/13 00:04		362314	
trans-1,3-Dichloropropene	1.0	U	1.0	1	NA	10/9/13 00:04		362314	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Co Site - 10/2013/EN-003231-0001-02TTO
 Sample Matrix: Water
 Sample Name: Method Blank
 Lab Code: RQ1312584-05

Service Request: R1307424
 Date Collected: NA
 Date Received: NA
 Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	81-127	10/9/13 00:04	
4-Bromofluorobenzene	97	79-123	10/9/13 00:04	
Toluene-d8	98	83-120	10/9/13 00:04	

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Co Site - 10/2013/EN-003231-0001-02TTO
 Sample Matrix: Water

Service Request: R1307424
 Date Analyzed: 10/ 8/13

Lab Control Sample Summary
 Volatile Organic Compounds by GC/MS

Analytical Method: 624

Units: µg/L
 Basis: NA

Analysis Lot: 362254

Lab Control Sample
 RQ1312427-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	19.6	20.0	98	52 - 162
1,1,2,2-Tetrachloroethane	19.0	20.0	95	46 - 157
1,1,2-Trichloroethane	19.3	20.0	97	52 - 150
1,1-Dichloroethane (1,1-DCA)	20.0	20.0	100	59 - 155
1,1-Dichloroethene (1,1-DCE)	19.4	20.0	97	10 - 234
1,2-Dichlorobenzene	20.8	20.0	104	18 - 190
1,2-Dichloroethane	19.1	20.0	95	49 - 155
1,2-Dichloropropane	19.3	20.0	96	10 - 210
1,3-Dichlorobenzene	20.7	20.0	104	59 - 156
1,4-Dichlorobenzene	21.4	20.0	107	18 - 190
2-Chloroethyl Vinyl Ether	20.0	20.0	100	10 - 305
Acetone	14.9	20.0	75	53 - 141
Benzene	19.3	20.0	96	37 - 151
Bromodichloromethane	18.9	20.0	94	35 - 155
Bromoform	19.9	20.0	99	45 - 169
Bromomethane	20.9	20.0	104	10 - 242
Carbon Tetrachloride	18.6	20.0	93	70 - 140
Chlorobenzene	19.9	20.0	99	37 - 160
Chloroethane	19.6	20.0	98	14 - 230
Chloroform	20.2	20.0	101	51 - 138
Chloromethane	18.6	20.0	93	10 - 273
Dibromochloromethane	20.3	20.0	101	53 - 149
Methylene Chloride	19.7	20.0	99	10 - 221
Ethylbenzene	20.5	20.0	103	37 - 162
Tetrachloroethene (PCE)	19.9	20.0	100	64 - 148
Toluene	19.3	20.0	96	47 - 150
Trichloroethene (TCE)	19.4	20.0	97	71 - 157
Trichlorofluoromethane (CFC 11)	20.1	20.0	101	17 - 181
Vinyl Chloride	20.0	20.0	100	10 - 251
cis-1,2-Dichloroethene	20.2	20.0	101	72 - 125
cis-1,3-Dichloropropene	19.9	20.0	99	10 - 227
m,p-Xylenes	41.5	40.0	104	76 - 131
o-Xylene	20.6	20.0	103	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 Co Site - 10/2013/EN-003231-0001-02TTO
Sample Matrix: Water

Service Request: R1307424
Date Analyzed: 10/ 8/13

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 624

Units: µg/L
Basis: NA

Analysis Lot: 362254

Lab Control Sample
RQ1312427-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	20.6	20.0	103	54 - 156
trans-1,3-Dichloropropene	20.6	20.0	103	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 Co Site - 10/2013/EN-003231-0001-02TTO
 Sample Matrix: Water

Service Request: R1307424
 Date Analyzed: 10/ 8/13

Lab Control Sample Summary
 Volatile Organic Compounds by GC/MS

Analytical Method: 624

Units: µg/L
 Basis: NA

Analysis Lot: 362314

Analyte Name	Lab Control Sample RQ1312584-03			Duplicate Lab Control Sample RQ1312584-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	19.7	20.0	99	19.8	20.0	99	52 - 162	<1	30
1,1,2,2-Tetrachloroethane	20.1	20.0	100	19.5	20.0	97	46 - 157	3	30
1,1,2-Trichloroethane	20.9	20.0	104	19.8	20.0	99	52 - 150	5	30
1,1-Dichloroethane (1,1-DCA)	19.9	20.0	100	18.9	20.0	95	59 - 155	5	30
1,1-Dichloroethene (1,1-DCE)	19.2	20.0	96	19.1	20.0	96	10 - 234	<1	30
1,2-Dichlorobenzene	21.5	20.0	107	21.3	20.0	106	18 - 190	<1	30
1,2-Dichloroethane	19.2	20.0	96	18.8	20.0	94	49 - 155	2	30
1,2-Dichloropropane	19.6	20.0	98	19.8	20.0	99	10 - 210	<1	30
1,3-Dichlorobenzene	21.3	20.0	107	21.0	20.0	105	59 - 156	1	30
1,4-Dichlorobenzene	21.7	20.0	108	21.7	20.0	108	18 - 190	<1	30
2-Chloroethyl Vinyl Ether	22.0	20.0	110	21.1	20.0	106	10 - 305	4	30
Acetone	19.4	20.0	97	19.5	20.0	97	53 - 141	<1	30
Benzene	19.9	20.0	99	19.3	20.0	97	37 - 151	3	30
Bromodichloromethane	19.8	20.0	99	19.3	20.0	97	35 - 155	3	30
Bromoform	20.7	20.0	103	20.6	20.0	103	45 - 169	<1	30
Bromomethane	19.5	20.0	97	18.7	20.0	94	10 - 242	4	30
Carbon Tetrachloride	19.0	20.0	95	18.7	20.0	93	70 - 140	2	30
Chlorobenzene	20.0	20.0	100	19.7	20.0	98	37 - 160	2	30
Chloroethane	19.3	20.0	97	18.4	20.0	92	14 - 230	5	30
Chloroform	19.9	20.0	99	20.0	20.0	100	51 - 138	<1	30
Chloromethane	18.4	20.0	92	17.8	20.0	89	10 - 273	3	30
Dibromochloromethane	20.5	20.0	103	20.7	20.0	104	53 - 149	<1	30
Methylene Chloride	19.2	20.0	96	19.0	20.0	95	10 - 221	1	30
Ethylbenzene	21.1	20.0	106	20.3	20.0	102	37 - 162	4	30
Tetrachloroethene (PCE)	20.5	20.0	103	19.6	20.0	98	64 - 148	5	30
Toluene	19.6	20.0	98	19.3	20.0	97	47 - 150	1	30
Trichloroethene (TCE)	19.7	20.0	99	20.1	20.0	100	71 - 157	2	30
Trichlorofluoromethane (CFC 11)	20.0	20.0	100	19.4	20.0	97	17 - 181	3	30
Vinyl Chloride	19.5	20.0	98	18.5	20.0	92	10 - 251	5	30
cis-1,2-Dichloroethene	20.1	20.0	101	20.0	20.0	100	72 - 125	<1	30
cis-1,3-Dichloropropene	20.4	20.0	102	20.6	20.0	103	10 - 227	<1	30
m,p-Xylenes	43.2	40.0	108	42.0	40.0	105	76 - 131	3	30
o-Xylene	20.6	20.0	103	20.7	20.0	104	78 - 127	<1	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 Co Site - 10/2013/EN-003231-0001-02TTO
 Sample Matrix: Water

Service Request: R1307424
 Date Analyzed: 10/ 8/13

Lab Control Sample Summary
 Volatile Organic Compounds by GC/MS

Analytical Method: 624

Units: µg/L
 Basis: NA

Analysis Lot: 362314

Analyte Name	Lab Control Sample RQ1312584-03			Duplicate Lab Control Sample RQ1312584-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
trans-1,2-Dichloroethene	20.0	20.0	100	19.6	20.0	98	54 - 156	2	30
trans-1,3-Dichloropropene	20.8	20.0	104	21.2	20.0	106	17 - 183	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.



CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM 11311

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 EN-003231-0001-02TT0		ANALYSIS REQUESTED (Include Method Number and Container Preservative)																			
Project Manager Mike Alois		Report CC		PRESERVATIVE 1 8																			
Company/Address 368 Pleasant View Dr Lancaster, NY 14086 EEPC		Phone # 716-684-8060		Email 716-684-0844		NUMBER OF CONTAINERS GC/MS VOAs • 8260 • 8270 • CLP GC/MS SVOCs • 8270 • 825 GC VOAs • 8021 • 801/802 PESTICIDES • 8081 • 808 PCBs • 8082 • 808 METALS, TOTAL (List in comments below) METALS, DISSOLVED (List in comments below) PH																	
Sampler's Signature <i>[Signature]</i>		Sampler's Printed Name Michael Crawford																					
CLIENT SAMPLE ID		FOR OFFICE USE ONLY LAB ID	SAMPLING DATE		TIME	MATRIX	PRESERVATIVE KEY 0. NONE 1. HCL 2. HNO ₃ 3. H ₂ SO ₄ 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO ₄ 8. Other Ice REMARKS/ ALTERNATE DESCRIPTION																
In 01		001	10/4/13		3:40	W	3	X	1, 2, 3														
Out 01		002	↓		3:44	↓	3	X	1, 2, 3														
In 02		003	↓		3:41	↓	1		X														
out 02		004	↓		3:45	↓	1		X														
SPECIAL INSTRUCTIONS/COMMENTS Metals				TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 1 day ____ 2 day ____ 3 day ____ 4 day ____ 5 day ____ REQUESTED REPORT DATE Standard				REPORT REQUIREMENTS I. Results Only <input checked="" type="checkbox"/> II. Results + QC Summaries (LCS, DUP, MS/MSD as required) III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data Edata ____ Yes ____ No				INVOICE INFORMATION PO # BILL TO: R1307424											
STATE WHERE SAMPLES WERE COLLECTED												RELINQUISHED BY											
RELINQUISHED BY <i>[Signature]</i> Signature Michael Crawford Printed Name EEPC Firm 10/4/13/ 4:20 Date/Time				RECEIVED BY <i>[Signature]</i> Signature Daniel Ward Printed Name ALS Firm 10/4/13/ 10:20 Date/Time				RELINQUISHED BY Signature Printed Name Firm Date/Time				RECEIVED BY Signature Printed Name Firm Date/Time				RELINQUISHED BY Signature Printed Name Firm Date/Time							
See QAPP <input type="checkbox"/>												R1307424 5 Ecology And Environment, Incorporated Davis Howland Oil Co Site - 10/2013 											



Cooler Receipt and Preservation Check Form

APR 13 2013

Project/Client E+E Folder Number R130704

Cooler received on 10/4/13 by: ohw COURIER: ALS UPS FEDEX VELOCITY CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles? YES NO N/A
5. Were ~~Ice~~ or Ice packs present? YES NO
6. Where did the bottles originate? ALS/ROC, CLIENT
7. Soil VOA samples received as: Bulk Jar Encore TerraCore Lab5035set N/A
8. Temperature of cooler(s) upon receipt: 8.20

Is the temperature within 0° - 6° C?: Y N Y N Y N Y N
If No, Explain Below Date/Time Temperatures Taken: 10/4/13 / 1620

Thermometer ID: IR GUN#3 / IR GUN#4 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition & Client Approval to Run Samples:

All Samples held in storage location R002 by ohw on 10/4/13 at 1620
5035 samples placed in storage location _____ by _____ on _____ at _____

PC Secondary Review: 10/9/13 Beck on ice
same day

Cooler Breakdown: Date: 10/7/13 Time: 0948 by: JFS

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	Yes = All samples OK
		YES	NO							
≥12	NaOH									No = Samples were preserved at lab as listed
≤2	HNO ₃									
≤2	H ₂ SO ₄									
<4	NaHSO ₄									
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)						PM OK to Adjust:
	Na ₂ S ₂ O ₃	-	-						*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem on a separate worksheet	
	Zn Aceta	-	-							
	HCl	*	*	412070	9/14					

Bottle lot numbers: 3-212-002 - 0017

Other Comments: 0000

PC Secondary Review: 03/02/13

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



October 31, 2013

Service Request No: R1307504

Mr. Michael Aloï
Ecology And Environment, Incorporated
368 Pleasantview Drive
Lancaster, NY 14086

**Laboratory Results for: Davis Howland Oil Company Site - Semiannual
Water/EN-003231-0001-03-TTO**

Dear Mr. Aloï:

Enclosed are the results of the sample(s) submitted to our laboratory between October 8, 2013 and October 11, 2013. For your reference, these analyses have been assigned our service request number **R1307504**.

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 (ALS) 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

Page 1 of 176

ALS Environmental

Client: Ecology & Environment Service Request No.: R1307504
Project: Davis Howland Oil Co Site – Semiannual Water Date Received: 10/8-11/2013
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

Twenty-two water samples were received for analysis at ALS-Rochester on 10/8-11/2013. 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.

Total Petroleum Hydrocarbons by DOH Method 310-13

This method is not a field of accreditation for the NYS ELAP program.

Site QC is included for sample MW-12S-OCT13 (R1307504-003). All MS/DMS recoveries and RPDs are acceptable. All LSC/DLCS is acceptable.

No analytical or quality control problems were encountered during analysis.

Volatile Organic Compounds by EPA Method 624

2-Chloroethylvinyl Ether is degraded by samples preserved to pH<2. The recoveries of this compound may be biased low.

Site QC is included for sample MW-12S-OCT13 (R1307504-003). All Matrix Spike (MS) and MS Duplicate (MSD) recoveries were within limits except for 2-Chloroethylvinyl Ether due to the above noted issue. The recoveries are flagged as “*”.


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. Subsequent hits in the dilution are flagged as “D”.

No other analytical or quality control problems were encountered during analysis.

Semivolatile Organic Compounds by EPA Method 625

Site QC is included for sample MW-12S-OCT13 (R1307504-003). All Matrix Spike (MS) and MS Duplicate (MSD) recoveries were within limits except for Benzidine. LCS and DLCS recoveries were within QC acceptance limits with the exception of Benzidine which was outside of acceptable range low in the 10/15/13 and 10/18/13 DLCS only. Sample data is not significantly affected. QC outliers are “*” flagged on the appropriate form.

No other analytical or quality control problems were encountered during analysis.

Approved by  Date 10/31/13

CASE NARRATIVE

This report contains analytical results for the following samples:
Service Request Number: R1307504

<u>Lab ID</u>	<u>Client ID</u>
R1307504-001	MW-14S-OCT13
R1307504-002	MW-14R-OCT13
R1307504-003	MW-12S-OCT13
R1307504-004	MW-12R-OCT13
R1307504-005	MW-5R-OCT13
R1307504-006	MW-8R-OCT13
R1307504-007	TB131008
R1307504-008	MW-13S-OCT13
R1307504-009	MW-2R-OCT13
R1307504-010	MW-2S-OCT13
R1307504-011	P-1-OCT13
R1307504-012	P-3-OCT13
R1307504-013	P-2-OCT13
R1307504-014	PW-1-OCT13
R1307504-015	MW-1S-OCT13
R1307504-016	TB-20131009
R1307504-017	MW-16R-OCT13
R1307504-018	TB131010
R1307504-019	MW-9S-OCT13
R1307504-020	MW-9S-OCT13-FD
R1307504-021	MW-3R-OCT13
R1307504-022	MW-3S-OCT13
R1307504-023	MW-15R-OCT13
R1307504-024	TB-131011
R1307504-025	MW-10R-OCT13
R1307504-026	RB-31011



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/Aroclors).
- 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 ($\geq 100\%$ 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.



Rochester Lab ID # for State Certifications¹

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

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>





INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	3010A
200.8	ILM05.3
6010C	3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3010A
6010 SPLP (1312) extract	3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.

RIGHT SOLUTIONS | RIGHT PARTNER

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1003
 Date Received: 10/ 8/13
 Date Analyzed: 10/15/13 12:46

Sample Name: MW-14S-OCT13
 Lab Code: R1307504-001

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\101513\L0810.D\

Analysis Lot: 363257
 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	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10 U	10	0.40	
67-64-1	Acetone	5.0 U	5.0	2.4	
71-43-2	Benzene	1.0 U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.21	
75-25-2	Bromoform	1.0 U	1.0	0.25	
74-83-9	Bromomethane	1.0 U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.24	
108-90-7	Chlorobenzene	1.0 U	1.0	0.13	
75-00-3	Chloroethane	1.0 U	1.0	0.40	
67-66-3	Chloroform	1.0 U	1.0	0.14	
74-87-3	Chloromethane	1.0 U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.19	
75-09-2	Methylene Chloride	1.0 U	1.0	0.20	
100-41-4	Ethylbenzene	1.0 U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.24	
108-88-3	Toluene	1.0 U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	1.0 U	1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.31	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0 U	2.0	0.32	
95-47-6	o-Xylene	1.0 U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/ 8/13 1003
Date Received: 10/ 8/13
Date Analyzed: 10/15/13 12:46

Sample Name: MW-14S-OCT13
Lab Code: R1307504-001

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\101513\L0810.D\

Analysis Lot: 363257
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	81-127	10/15/13 12:46	
4-Bromofluorobenzene	98	79-123	10/15/13 12:46	
Toluene-d8	96	83-120	10/15/13 12:46	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1003
 Date Received: 10/ 8/13
 Date Extracted: 10/11/13
 Date Analyzed: 10/17/13 01:30

Sample Name: MW-14S-OCT13
 Lab Code: R1307504-001

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUDATA\5973D\Data\101613\AR175.D\

Analysis Lot: 363784
 Extraction Lot: 193999
 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	1.1	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.0	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	2.2	
51-28-5	2,4-Dinitrophenol	47	U	47	34	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.2	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.3	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.3	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.2	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	1.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	22	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	1.0	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.0	
100-02-7	4-Nitrophenol	47	U	47	9.4	
83-32-9	Acenaphthene	4.7	U	4.7	1.2	
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	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.4	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	1.3	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.0	
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	1.0	
218-01-9	Chrysene	4.7	U	4.7	1.2	
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
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/ 8/13 1003
Date Received: 10/ 8/13
Date Extracted: 10/11/13
Date Analyzed: 10/17/13 01:30

Sample Name: MW-14S-OCT13
Lab Code: R1307504-001

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\101613\AR175.D\

Analysis Lot: 363784
Extraction Lot: 193999
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	1.1	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.1	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	2.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.0	
78-59-1	Isophorone	4.7	U	4.7	1.4	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.6	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.2	
91-20-3	Naphthalene	4.7	U	4.7	1.1	
98-95-3	Nitrobenzene	4.7	U	4.7	1.3	
87-86-5	Pentachlorophenol (PCP)	47	U	47	23	
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	94	28-157	10/17/13 01:30	
2-Fluorobiphenyl	84	39-119	10/17/13 01:30	
2-Fluorophenol	41	10-105	10/17/13 01:30	
Nitrobenzene-d5	75	37-117	10/17/13 01:30	
Phenol-d6	25	10-107	10/17/13 01:30	
p-Terphenyl-d14	97	40-133	10/17/13 01:30	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water
Sample Name: MW-14S-OCT13
Lab Code: R1307504-001

Service Request: R1307504
Date Collected: 10/ 8/13 1003
Date Received: 10/ 8/13
Units: µg/L
Basis: NA

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

Analytical Method: NY 310-13
Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Time	Extraction Analysis		Note
								Lot	Lot	
Fuel Oil No. 2	940	U	940	1	10/14/13	10/18/13	12:23	194077	364811	
Fuel Oil No. 4	940	U	940	1	10/14/13	10/18/13	12:23	194077	364811	
Fuel Oil No. 6	940	U	940	1	10/14/13	10/18/13	12:23	194077	364811	
Gasoline	940	U	940	1	10/14/13	10/18/13	12:23	194077	364811	
Kerosene	940	U	940	1	10/14/13	10/23/13	14:27	194077	364812	
Lube Oil	940	U	940	1	10/14/13	10/18/13	12:23	194077	364811	
n-Dodecane	940	U	940	1	10/14/13	10/18/13	12:23	194077	364811	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-001
Sample Name: MW-14S-OCT13
Lab Code: R1307504-001
Matrix: Water

Service Request: R1307504

Date Collected: 10/8/13
Date Received: 10/8/13

Analysis Method	Extracted/Digested By	Analyzed By
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1310
 Date Received: 10/ 8/13
 Date Analyzed: 10/15/13 13:16

Sample Name: MW-14R-OCT13
 Lab Code: R1307504-002

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\101513\L0811.D\

Analysis Lot: 363257
 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	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.40	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.21	
75-25-2	Bromoform	1.0	U	1.0	0.25	
74-83-9	Bromomethane	1.0	U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.24	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.40	
67-66-3	Chloroform	1.0	U	1.0	0.14	
74-87-3	Chloromethane	1.0	U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.19	
75-09-2	Methylene Chloride	1.0	U	1.0	0.20	
100-41-4	Ethylbenzene	1.0	U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.24	
108-88-3	Toluene	1.0	U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	60		1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.31	
75-01-4	Vinyl Chloride	0.57	J	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	6.3		1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.32	
95-47-6	o-Xylene	1.0	U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	4.8		1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1310
 Date Received: 10/ 8/13
 Date Analyzed: 10/15/13 13:16

Sample Name: MW-14R-OCT13
 Lab Code: R1307504-002

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQU\DATA\MSVOA6\DATA\101513\L0811.D\

Analysis Lot: 363257
 Instrument Name: R-MS-06
 Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	81-127	10/15/13 13:16	
4-Bromofluorobenzene	99	79-123	10/15/13 13:16	
Toluene-d8	99	83-120	10/15/13 13:16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1310
 Date Received: 10/ 8/13
 Date Extracted: 10/11/13
 Date Analyzed: 10/17/13 02:00

Sample Name: MW-14R-OCT13
 Lab Code: R1307504-002

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101613\AR176.D\

Analysis Lot: 363784
 Extraction Lot: 193999
 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	1.1	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.0	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	2.2	
51-28-5	2,4-Dinitrophenol	47	U	47	34	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.2	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.3	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.3	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.2	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	1.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	22	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	1.0	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.0	
100-02-7	4-Nitrophenol	47	U	47	9.4	
83-32-9	Acenaphthene	4.7	U	4.7	1.2	
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	Benzydine	94	U	94	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.4	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	1.3	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.0	
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	1.0	
218-01-9	Chrysene	4.7	U	4.7	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1310
 Date Received: 10/ 8/13
 Date Extracted: 10/11/13
 Date Analyzed: 10/17/13 02:00

Sample Name: MW-14R-OCT13
 Lab Code: R1307504-002

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101613\AR176.D\

Analysis Lot: 363784
 Extraction Lot: 193999
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	4.7 U	4.7	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	4.7 U	4.7	1.1	
87-68-3	Hexachlorobutadiene	4.7 U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7 U	4.7	2.0	
67-72-1	Hexachloroethane	4.7 U	4.7	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7 U	4.7	1.0	
78-59-1	Isophorone	4.7 U	4.7	1.4	
621-64-7	N-Nitrosodi-n-propylamine	4.7 U	4.7	1.6	
62-75-9	N-Nitrosodimethylamine	4.7 U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7 U	4.7	1.2	
91-20-3	Naphthalene	4.7 U	4.7	1.1	
98-95-3	Nitrobenzene	4.7 U	4.7	1.3	
87-86-5	Pentachlorophenol (PCP)	47 U	47	23	
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	100	28-157	10/17/13 02:00	
2-Fluorobiphenyl	90	39-119	10/17/13 02:00	
2-Fluorophenol	44	10-105	10/17/13 02:00	
Nitrobenzene-d5	83	37-117	10/17/13 02:00	
Phenol-d6	27	10-107	10/17/13 02:00	
p-Terphenyl-d14	104	40-133	10/17/13 02:00	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water
 Sample Name: MW-14R-OCT13
 Lab Code: R1307504-002

Service Request: R1307504
 Date Collected: 10/ 8/13 1310
 Date Received: 10/ 8/13
 Units: µg/L
 Basis: NA

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

Analytical Method: NY 310-13
 Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Fuel Oil No. 2	940	U	940	1	10/14/13	10/18/13 13:25	194077	364811	
Fuel Oil No. 4	940	U	940	1	10/14/13	10/18/13 13:25	194077	364811	
Fuel Oil No. 6	940	U	940	1	10/14/13	10/18/13 13:25	194077	364811	
Gasoline	940	U	940	1	10/14/13	10/18/13 13:25	194077	364811	
Kerosene	940	U	940	1	10/14/13	10/23/13 14:54	194077	364812	
Lube Oil	940	U	940	1	10/14/13	10/18/13 13:25	194077	364811	
n-Dodecane	940	U	940	1	10/14/13	10/18/13 13:25	194077	364811	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-001
Sample Name: MW-14R-OCT13
Lab Code: R1307504-002
Matrix: Water

Service Request: R1307504

Date Collected: 10/8/13
Date Received: 10/8/13

Analysis Method	Extracted/Digested By	Analyzed By
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1215
 Date Received: 10/ 8/13
 Date Analyzed: 10/15/13 13:46

Sample Name: MW-12S-OCT13
 Lab Code: R1307504-003

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQU\DATA\MSVOA6\DATA\101513\L0812.D\

Analysis Lot: 363257
 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	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10 U	10	0.40	
67-64-1	Acetone	5.0 U	5.0	2.4	
71-43-2	Benzene	1.0 U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.21	
75-25-2	Bromoform	1.0 U	1.0	0.25	
74-83-9	Bromomethane	1.0 U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.24	
108-90-7	Chlorobenzene	1.0 U	1.0	0.13	
75-00-3	Chloroethane	1.0 U	1.0	0.40	
67-66-3	Chloroform	1.0 U	1.0	0.14	
74-87-3	Chloromethane	1.0 U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.19	
75-09-2	Methylene Chloride	1.0 U	1.0	0.20	
100-41-4	Ethylbenzene	1.0 U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.24	
108-88-3	Toluene	1.0 U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	0.36 J	1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.31	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0 U	2.0	0.32	
95-47-6	o-Xylene	1.0 U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/ 8/13 1215
Date Received: 10/ 8/13
Date Analyzed: 10/15/13 13:46

Sample Name: MW-12S-OCT13
Lab Code: R1307504-003

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\101513\L0812.D\

Analysis Lot: 363257
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	81-127	10/15/13 13:46	
4-Bromofluorobenzene	99	79-123	10/15/13 13:46	
Toluene-d8	98	83-120	10/15/13 13:46	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1215
 Date Received: 10/ 8/13
 Date Extracted: 10/11/13
 Date Analyzed: 10/17/13 02:31

Sample Name: MW-12S-OCT13
 Lab Code: R1307504-003

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUDATA\5973D\Data\101613\AR177.D\

Analysis Lot: 363784
 Extraction Lot: 193999
 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	1.1	
120-83-2	2,4-Dichlorophenol	4.7 U	4.7	1.0	
105-67-9	2,4-Dimethylphenol	4.7 U	4.7	2.2	
51-28-5	2,4-Dinitrophenol	47 U	47	34	
121-14-2	2,4-Dinitrotoluene	4.7 U	4.7	1.2	
606-20-2	2,6-Dinitrotoluene	4.7 U	4.7	1.3	
91-58-7	2-Chloronaphthalene	4.7 U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7 U	4.7	1.3	
88-75-5	2-Nitrophenol	4.7 U	4.7	1.2	
91-94-1	3,3'-Dichlorobenzidine	4.7 U	4.7	1.5	
534-52-1	4,6-Dinitro-o-cresol	47 U	47	22	
101-55-3	4-Bromophenyl Phenyl Ether	4.7 U	4.7	1.0	
59-50-7	4-Chloro-m-cresol	4.7 U	4.7	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7 U	4.7	1.0	
100-02-7	4-Nitrophenol	47 U	47	9.4	
83-32-9	Acenaphthene	4.7 U	4.7	1.2	
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	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7 U	4.7	1.4	
111-91-1	Bis(2-chloroethoxy)methane	4.7 U	4.7	1.3	
111-44-4	Bis(2-chloroethyl) Ether	4.7 U	4.7	1.0	
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	1.0	
218-01-9	Chrysene	4.7 U	4.7	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1215
 Date Received: 10/ 8/13
 Date Extracted: 10/11/13
 Date Analyzed: 10/17/13 02:31

Sample Name: MW-12S-OCT13
 Lab Code: R1307504-003

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101613\AR177.D\

Analysis Lot: 363784
 Extraction Lot: 193999
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.1	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	2.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.0	
78-59-1	Isophorone	4.7	U	4.7	1.4	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.6	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.2	
91-20-3	Naphthalene	4.7	U	4.7	1.1	
98-95-3	Nitrobenzene	4.7	U	4.7	1.3	
87-86-5	Pentachlorophenol (PCP)	47	U	47	23	
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	95	28-157	10/17/13 02:31	
2-Fluorobiphenyl	82	39-119	10/17/13 02:31	
2-Fluorophenol	43	10-105	10/17/13 02:31	
Nitrobenzene-d5	76	37-117	10/17/13 02:31	
Phenol-d6	26	10-107	10/17/13 02:31	
p-Terphenyl-d14	95	40-133	10/17/13 02:31	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water
Sample Name: MW-12S-OCT13
Lab Code: R1307504-003

Service Request: R1307504
Date Collected: 10/ 8/13 1215
Date Received: 10/ 8/13
Units: µg/L
Basis: NA

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

Analytical Method: NY 310-13
Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Fuel Oil No. 2	940	U	940	1	10/14/13	10/18/13 13:52	194077	364811	
Fuel Oil No. 4	940	U	940	1	10/14/13	10/18/13 13:52	194077	364811	
Fuel Oil No. 6	940	U	940	1	10/14/13	10/18/13 13:52	194077	364811	
Gasoline	940	U	940	1	10/14/13	10/18/13 13:52	194077	364811	
Kerosene	940	U	940	1	10/14/13	10/23/13 15:21	194077	364812	
Lube Oil	940	U	940	1	10/14/13	10/18/13 13:52	194077	364811	
n-Dodecane	940	U	940	1	10/14/13	10/18/13 13:52	194077	364811	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-00
Sample Name: MW-12S-OCT13
Lab Code: R1307504-003
Matrix: Water

Service Request: R1307504

Date Collected: 10/8/13

Date Received: 10/8/13

<u>Analysis Method</u>	<u>Extracted/Digested By</u>	<u>Analyzed By</u>
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1100
 Date Received: 10/ 8/13
 Date Analyzed: 10/15/13 14:17

Sample Name: MW-12R-OCT13
 Lab Code: R1307504-004

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\101513\L0813.D\

Analysis Lot: 363257
 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	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.40	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.21	
75-25-2	Bromoform	1.0	U	1.0	0.25	
74-83-9	Bromomethane	1.0	U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.24	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.40	
67-66-3	Chloroform	1.0	U	1.0	0.14	
74-87-3	Chloromethane	1.0	U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.19	
75-09-2	Methylene Chloride	1.0	U	1.0	0.20	
100-41-4	Ethylbenzene	1.0	U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.24	
108-88-3	Toluene	1.0	U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	21		1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.31	
75-01-4	Vinyl Chloride	0.22	J	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	12		1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.32	
95-47-6	o-Xylene	1.0	U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	0.56	J	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1100
 Date Received: 10/ 8/13
 Date Analyzed: 10/15/13 14:17

Sample Name: MW-12R-OCT13
 Lab Code: R1307504-004

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQU\DATA\MSVOA6\DATA\101513\L0813.D\

Analysis Lot: 363257
 Instrument Name: R-MS-06
 Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	81-127	10/15/13 14:17	
4-Bromofluorobenzene	98	79-123	10/15/13 14:17	
Toluene-d8	97	83-120	10/15/13 14:17	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1100
 Date Received: 10/ 8/13
 Date Extracted: 10/11/13
 Date Analyzed: 10/17/13 04:02

Sample Name: MW-12R-OCT13
 Lab Code: R1307504-004

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUDATA\5973D\Data\101613\AR180.D\

Analysis Lot: 363784
 Extraction Lot: 193999
 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	1.1	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.0	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	2.2	
51-28-5	2,4-Dinitrophenol	47	U	47	34	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.2	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.3	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.3	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.2	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	1.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	22	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	1.0	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.0	
100-02-7	4-Nitrophenol	47	U	47	9.4	
83-32-9	Acenaphthene	4.7	U	4.7	1.2	
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	Benzydine	94	U	94	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.4	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	1.3	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.0	
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	1.0	
218-01-9	Chrysene	4.7	U	4.7	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1100
 Date Received: 10/ 8/13
 Date Extracted: 10/11/13
 Date Analyzed: 10/17/13 04:02

Sample Name: MW-12R-OCT13
 Lab Code: R1307504-004

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101613\AR180.D\

Analysis Lot: 363784
 Extraction Lot: 193999
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.1	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	2.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.0	
78-59-1	Isophorone	4.7	U	4.7	1.4	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.6	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.2	
91-20-3	Naphthalene	4.7	U	4.7	1.1	
98-95-3	Nitrobenzene	4.7	U	4.7	1.3	
87-86-5	Pentachlorophenol (PCP)	47	U	47	23	
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	102	28-157	10/17/13 04:02	
2-Fluorobiphenyl	90	39-119	10/17/13 04:02	
2-Fluorophenol	44	10-105	10/17/13 04:02	
Nitrobenzene-d5	79	37-117	10/17/13 04:02	
Phenol-d6	27	10-107	10/17/13 04:02	
p-Terphenyl-d14	105	40-133	10/17/13 04:02	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water
 Sample Name: MW-12R-OCT13
 Lab Code: R1307504-004

Service Request: R1307504
 Date Collected: 10/ 8/13 1100
 Date Received: 10/ 8/13
 Units: µg/L
 Basis: NA

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

Analytical Method: NY 310-13
 Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Analysis		Note
							Lot	Lot	
Fuel Oil No. 2	940	U	940	1	10/14/13	10/18/13 15:13	194077	364811	
Fuel Oil No. 4	940	U	940	1	10/14/13	10/18/13 15:13	194077	364811	
Fuel Oil No. 6	940	U	940	1	10/14/13	10/18/13 15:13	194077	364811	
Gasoline	940	U	940	1	10/14/13	10/18/13 15:13	194077	364811	
Kerosene	940	U	940	1	10/14/13	10/23/13 15:48	194077	364812	
Lube Oil	940	U	940	1	10/14/13	10/18/13 15:13	194077	364811	
n-Dodecane	940	U	940	1	10/14/13	10/18/13 15:13	194077	364811	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-001
Sample Name: MW-12R-OCT13
Lab Code: R1307504-004
Matrix: Water

Service Request: R1307504

Date Collected: 10/8/13

Date Received: 10/8/13

Analysis Method	Extracted/Digested By	Analyzed By
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1748
 Date Received: 10/ 8/13
 Date Analyzed: 10/15/13 19:23

Sample Name: MW-5R-OCT13
 Lab Code: R1307504-005

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUADATA\MSVOA6\DATA\101513\L0823.D\

Analysis Lot: 363257
 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)	2.0	U	2.0	0.36	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.52	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	0.42	
75-34-3	1,1-Dichloroethane (1,1-DCA)	12		2.0	0.50	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.8		2.0	0.86	
95-50-1	1,2-Dichlorobenzene	2.0	U	2.0	0.44	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	0.32	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	0.44	
541-73-1	1,3-Dichlorobenzene	2.0	U	2.0	0.28	
106-46-7	1,4-Dichlorobenzene	2.0	U	2.0	0.46	
110-75-8	2-Chloroethyl Vinyl Ether	20	U	20	0.80	
67-64-1	Acetone	10	U	10	4.7	
71-43-2	Benzene	4.6		2.0	0.34	
75-27-4	Bromodichloromethane	2.0	U	2.0	0.42	
75-25-2	Bromoform	2.0	U	2.0	0.50	
74-83-9	Bromomethane	2.0	U	2.0	0.62	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	0.48	
108-90-7	Chlorobenzene	2.0	U	2.0	0.26	
75-00-3	Chloroethane	2.0	U	2.0	0.80	
67-66-3	Chloroform	2.0	U	2.0	0.28	
74-87-3	Chloromethane	2.0	U	2.0	0.38	
124-48-1	Dibromochloromethane	2.0	U	2.0	0.38	
75-09-2	Methylene Chloride	2.0	U	2.0	0.40	
100-41-4	Ethylbenzene	2.0	U	2.0	0.32	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	0.48	
108-88-3	Toluene	2.0	U	2.0	0.34	
79-01-6	Trichloroethene (TCE)	35		2.0	0.42	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	0.62	
75-01-4	Vinyl Chloride	53		2.0	0.44	
156-59-2	cis-1,2-Dichloroethene	240		2.0	0.38	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	0.50	
179601-23-1	m,p-Xylenes	4.0	U	4.0	0.64	
95-47-6	o-Xylene	2.0	U	2.0	0.30	
156-60-5	trans-1,2-Dichloroethene	2.1		2.0	0.38	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	0.32	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1748
 Date Received: 10/ 8/13
 Date Analyzed: 10/15/13 19:23

Sample Name: MW-5R-OCT13
 Lab Code: R1307504-005

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQU\DATA\MSVOA6\DATA\101513\L0823.D\

Analysis Lot: 363257
 Instrument Name: R-MS-06
 Dilution Factor: 2

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	93	81-127	10/15/13 19:23	
4-Bromofluorobenzene	99	79-123	10/15/13 19:23	
Toluene-d8	98	83-120	10/15/13 19:23	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1748
 Date Received: 10/ 8/13
 Date Extracted: 10/11/13
 Date Analyzed: 10/17/13 04:32

Sample Name: MW-5R-OCT13
 Lab Code: R1307504-005

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUDATA\5973D\Data\101613\AR181.D\

Analysis Lot: 363784
 Extraction Lot: 193999
 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	1.1	
120-83-2	2,4-Dichlorophenol	4.7 U	4.7	1.0	
105-67-9	2,4-Dimethylphenol	4.7 U	4.7	2.2	
51-28-5	2,4-Dinitrophenol	47 U	47	34	
121-14-2	2,4-Dinitrotoluene	4.7 U	4.7	1.2	
606-20-2	2,6-Dinitrotoluene	4.7 U	4.7	1.3	
91-58-7	2-Chloronaphthalene	4.7 U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7 U	4.7	1.3	
88-75-5	2-Nitrophenol	4.7 U	4.7	1.2	
91-94-1	3,3'-Dichlorobenzidine	4.7 U	4.7	1.5	
534-52-1	4,6-Dinitro-o-cresol	47 U	47	22	
101-55-3	4-Bromophenyl Phenyl Ether	4.7 U	4.7	1.0	
59-50-7	4-Chloro-m-cresol	4.7 U	4.7	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7 U	4.7	1.0	
100-02-7	4-Nitrophenol	47 U	47	9.4	
83-32-9	Acenaphthene	4.7 U	4.7	1.2	
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	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7 U	4.7	1.4	
111-91-1	Bis(2-chloroethoxy)methane	4.7 U	4.7	1.3	
111-44-4	Bis(2-chloroethyl) Ether	4.7 U	4.7	1.0	
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	1.0	
218-01-9	Chrysene	4.7 U	4.7	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1748
 Date Received: 10/ 8/13
 Date Extracted: 10/11/13
 Date Analyzed: 10/17/13 04:32

Sample Name: MW-5R-OCT13
 Lab Code: R1307504-005

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101613\AR181.D\

Analysis Lot: 363784
 Extraction Lot: 193999
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.1	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	2.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.0	
78-59-1	Isophorone	4.7	U	4.7	1.4	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.6	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.2	
91-20-3	Naphthalene	4.7	U	4.7	1.1	
98-95-3	Nitrobenzene	4.7	U	4.7	1.3	
87-86-5	Pentachlorophenol (PCP)	47	U	47	23	
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	96	28-157	10/17/13 04:32	
2-Fluorobiphenyl	85	39-119	10/17/13 04:32	
2-Fluorophenol	43	10-105	10/17/13 04:32	
Nitrobenzene-d5	78	37-117	10/17/13 04:32	
Phenol-d6	27	10-107	10/17/13 04:32	
p-Terphenyl-d14	96	40-133	10/17/13 04:32	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water
 Sample Name: MW-5R-OCT13
 Lab Code: R1307504-005

Service Request: R1307504
 Date Collected: 10/ 8/13 1748
 Date Received: 10/ 8/13

Units: µg/L
 Basis: NA

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

Analytical Method: NY 310-13

Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Analysis			Note
							Lot	Lot	Lot	
Fuel Oil No. 2	940	U	940	1	10/14/13	10/18/13 15:40	194077	364811		
Fuel Oil No. 4	940	U	940	1	10/14/13	10/18/13 15:40	194077	364811		
Fuel Oil No. 6	940	U	940	1	10/14/13	10/18/13 15:40	194077	364811		
Gasoline	940	U	940	1	10/14/13	10/18/13 15:40	194077	364811		
Kerosene	940	U	940	1	10/14/13	10/23/13 16:15	194077	364812		
Lube Oil	940	U	940	1	10/14/13	10/18/13 15:40	194077	364811		
n-Dodecane	940	U	940	1	10/14/13	10/18/13 15:40	194077	364811		

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-001
Sample Name: MW-5R-OCT13
Lab Code: R1307504-005
Matrix: Water

Service Request: R1307504

Date Collected: 10/8/13

Date Received: 10/8/13

Analysis Method	Extracted/Digested By	Analyzed By
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1840
 Date Received: 10/ 8/13
 Date Analyzed: 10/15/13 18:22

Sample Name: MW-8R-OCT13
 Lab Code: R1307504-006

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\101513\L0821.D

Analysis Lot: 363257
 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	4.5	
79-34-5	1,1,2,2-Tetrachloroethane	25 U	25	6.5	
79-00-5	1,1,2-Trichloroethane	25 U	25	5.3	
75-34-3	1,1-Dichloroethane (1,1-DCA)	110	25	6.3	
75-35-4	1,1-Dichloroethene (1,1-DCE)	50	25	11	
95-50-1	1,2-Dichlorobenzene	25 U	25	5.5	
107-06-2	1,2-Dichloroethane	25 U	25	4.0	
78-87-5	1,2-Dichloropropane	25 U	25	5.5	
541-73-1	1,3-Dichlorobenzene	25 U	25	3.6	
106-46-7	1,4-Dichlorobenzene	25 U	25	5.8	
110-75-8	2-Chloroethyl Vinyl Ether	250 U	250	10	
67-64-1	Acetone	130 U	130	58	
71-43-2	Benzene	25 U	25	4.3	
75-27-4	Bromodichloromethane	25 U	25	5.3	
75-25-2	Bromoform	25 U	25	6.3	
74-83-9	Bromomethane	25 U	25	7.8	
56-23-5	Carbon Tetrachloride	25 U	25	6.0	
108-90-7	Chlorobenzene	25 U	25	3.3	
75-00-3	Chloroethane	25 U	25	10	
67-66-3	Chloroform	25 U	25	3.6	
74-87-3	Chloromethane	25 U	25	4.8	
124-48-1	Dibromochloromethane	25 U	25	4.8	
75-09-2	Methylene Chloride	9.8 J	25	5.0	
100-41-4	Ethylbenzene	16 J	25	4.0	
127-18-4	Tetrachloroethene (PCE)	25 U	25	6.0	
108-88-3	Toluene	25 U	25	4.3	
79-01-6	Trichloroethene (TCE)	15 J	25	5.3	
75-69-4	Trichlorofluoromethane (CFC 11)	25 U	25	7.8	
75-01-4	Vinyl Chloride	520	25	5.5	
156-59-2	cis-1,2-Dichloroethene	3900	25	4.8	
10061-01-5	cis-1,3-Dichloropropene	25 U	25	6.3	
179601-23-1	m,p-Xylenes	50 U	50	8.0	
95-47-6	o-Xylene	25 U	25	3.8	
156-60-5	trans-1,2-Dichloroethene	5.0 J	25	4.8	
10061-02-6	trans-1,3-Dichloropropene	25 U	25	4.0	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/ 8/13 1840
Date Received: 10/ 8/13
Date Analyzed: 10/15/13 18:22

Sample Name: MW-8R-OCT13
Lab Code: R1307504-006

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\101513\L0821.D\

Analysis Lot: 363257
Instrument Name: R-MS-06
Dilution Factor: 25

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	94	81-127	10/15/13 18:22	
4-Bromofluorobenzene	99	79-123	10/15/13 18:22	
Toluene-d8	96	83-120	10/15/13 18:22	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1840
 Date Received: 10/ 8/13
 Date Extracted: 10/11/13
 Date Analyzed: 10/17/13 05:03

Sample Name: MW-8R-OCT13
 Lab Code: R1307504-006

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUDATA\5973D\Data\101613\AR182.D\

Analysis Lot: 363784
 Extraction Lot: 193999
 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	1.1	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.0	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	2.2	
51-28-5	2,4-Dinitrophenol	47	U	47	34	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.2	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.3	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.3	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.2	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	1.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	22	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	1.0	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.0	
100-02-7	4-Nitrophenol	47	U	47	9.4	
83-32-9	Acenaphthene	4.7	U	4.7	1.2	
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	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.4	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	1.3	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.0	
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	1.0	
218-01-9	Chrysene	4.7	U	4.7	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1840
 Date Received: 10/ 8/13
 Date Extracted: 10/11/13
 Date Analyzed: 10/17/13 05:03

Sample Name: MW-8R-OCT13
 Lab Code: R1307504-006

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101613\AR182.D\

Analysis Lot: 363784
 Extraction Lot: 193999
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.1	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	2.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.0	
78-59-1	Isophorone	4.7	U	4.7	1.4	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.6	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.2	
91-20-3	Naphthalene	4.7	U	4.7	1.1	
98-95-3	Nitrobenzene	4.7	U	4.7	1.3	
87-86-5	Pentachlorophenol (PCP)	47	U	47	23	
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	97	28-157	10/17/13 05:03	
2-Fluorobiphenyl	83	39-119	10/17/13 05:03	
2-Fluorophenol	44	10-105	10/17/13 05:03	
Nitrobenzene-d5	77	37-117	10/17/13 05:03	
Phenol-d6	27	10-107	10/17/13 05:03	
p-Terphenyl-d14	95	40-133	10/17/13 05:03	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water
 Sample Name: MW-8R-OCT13
 Lab Code: R1307504-006

Service Request: R1307504
 Date Collected: 10/ 8/13 1840
 Date Received: 10/ 8/13

Units: µg/L
 Basis: NA

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

Analytical Method: NY 310-13
 Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Fuel Oil No. 2	940	U	940	1	10/14/13	10/18/13 16:07	194077	364811	
Fuel Oil No. 4	940	U	940	1	10/14/13	10/18/13 16:07	194077	364811	
Fuel Oil No. 6	940	U	940	1	10/14/13	10/18/13 16:07	194077	364811	
Gasoline	940	U	940	1	10/14/13	10/18/13 16:07	194077	364811	
Kerosene	940	U	940	1	10/14/13	10/23/13 16:42	194077	364812	
Lube Oil	940	U	940	1	10/14/13	10/18/13 16:07	194077	364811	
n-Dodecane	940	U	940	1	10/14/13	10/18/13 16:07	194077	364811	



ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-00
Sample Name: MW-8R-OCT13
Lab Code: R1307504-006
Matrix: Water

Service Request: R1307504

Date Collected: 10/8/13

Date Received: 10/8/13

Analysis Method	Extracted/Digested By	Analyzed By
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 8/13 1003
 Date Received: 10/ 8/13
 Date Analyzed: 10/15/13 14:47

Sample Name: TB131008
 Lab Code: R1307504-007

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\101513\L0814.D\

Analysis Lot: 363257
 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	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10 U	10	0.40	
67-64-1	Acetone	5.0 U	5.0	2.4	
71-43-2	Benzene	1.0 U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.21	
75-25-2	Bromoform	1.0 U	1.0	0.25	
74-83-9	Bromomethane	1.0 U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.24	
108-90-7	Chlorobenzene	1.0 U	1.0	0.13	
75-00-3	Chloroethane	1.0 U	1.0	0.40	
67-66-3	Chloroform	1.0 U	1.0	0.14	
74-87-3	Chloromethane	1.0 U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.19	
75-09-2	Methylene Chloride	1.0 U	1.0	0.20	
100-41-4	Ethylbenzene	1.0 U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.24	
108-88-3	Toluene	1.0 U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	1.0 U	1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.31	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0 U	2.0	0.32	
95-47-6	o-Xylene	1.0 U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/ 8/13 1003
Date Received: 10/ 8/13
Date Analyzed: 10/15/13 14:47

Sample Name: TB131008
Lab Code: R1307504-007

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQUADATA\MSVOA6\DATA\101513\L0814.D\

Analysis Lot: 363257
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	81-127	10/15/13 14:47	
4-Bromofluorobenzene	98	79-123	10/15/13 14:47	
Toluene-d8	97	83-120	10/15/13 14:47	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-001
Sample Name: TB131008
Lab Code: R1307504-007
Matrix: Water

Service Request: R1307504

Date Collected: 10/8/13

Date Received: 10/8/13

Analysis Method

Extracted/Digested By

Analyzed By

624

DLIPANI

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/9/13 0858
 Date Received: 10/9/13
 Date Analyzed: 10/15/13 15:17

Sample Name: MW-13S-OCT13
 Lab Code: R1307504-008

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\101513\L0815.D\

Analysis Lot: 363257
 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)	0.29 J	1.0	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	0.80 J	1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10 U	10	0.40	
67-64-1	Acetone	5.0 U	5.0	2.4	
71-43-2	Benzene	1.0 U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.21	
75-25-2	Bromoform	1.0 U	1.0	0.25	
74-83-9	Bromomethane	1.0 U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.24	
108-90-7	Chlorobenzene	1.0 U	1.0	0.13	
75-00-3	Chloroethane	1.0 U	1.0	0.40	
67-66-3	Chloroform	1.0 U	1.0	0.14	
74-87-3	Chloromethane	1.0 U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.19	
75-09-2	Methylene Chloride	1.0 U	1.0	0.20	
100-41-4	Ethylbenzene	1.0 U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.24	
108-88-3	Toluene	1.0 U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	0.76 J	1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.31	
75-01-4	Vinyl Chloride	0.95 J	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	8.8	1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0 U	2.0	0.32	
95-47-6	o-Xylene	1.0 U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	0.29 J	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/9/13 0858
Date Received: 10/9/13
Date Analyzed: 10/15/13 15:17

Sample Name: MW-13S-OCT13
Lab Code: R1307504-008

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\101513\L0815.D\

Analysis Lot: 363257
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	94	81-127	10/15/13 15:17	
4-Bromofluorobenzene	99	79-123	10/15/13 15:17	
Toluene-d8	97	83-120	10/15/13 15:17	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/9/13 0858
 Date Received: 10/9/13
 Date Extracted: 10/11/13
 Date Analyzed: 10/17/13 05:33

Sample Name: MW-13S-OCT13
 Lab Code: R1307504-008

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101613\AR183.D\

Analysis Lot: 363784
 Extraction Lot: 193999
 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	1.1	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.0	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	2.2	
51-28-5	2,4-Dinitrophenol	47	U	47	34	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.2	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.3	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.3	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.2	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	1.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	22	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	1.0	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.0	
100-02-7	4-Nitrophenol	47	U	47	9.4	
83-32-9	Acenaphthene	4.7	U	4.7	1.2	
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	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.4	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	1.3	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.0	
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	1.0	
218-01-9	Chrysene	4.7	U	4.7	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/9/13 0858
 Date Received: 10/9/13
 Date Extracted: 10/11/13
 Date Analyzed: 10/17/13 05:33

Sample Name: MW-13S-OCT13
 Lab Code: R1307504-008

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101613\AR183.D\

Analysis Lot: 363784
 Extraction Lot: 193999
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.1	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	2.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.0	
78-59-1	Isophorone	4.7	U	4.7	1.4	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.6	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.2	
91-20-3	Naphthalene	4.7	U	4.7	1.1	
98-95-3	Nitrobenzene	4.7	U	4.7	1.3	
87-86-5	Pentachlorophenol (PCP)	47	U	47	23	
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	96	28-157	10/17/13 05:33	
2-Fluorobiphenyl	84	39-119	10/17/13 05:33	
2-Fluorophenol	43	10-105	10/17/13 05:33	
Nitrobenzene-d5	75	37-117	10/17/13 05:33	
Phenol-d6	25	10-107	10/17/13 05:33	
p-Terphenyl-d14	96	40-133	10/17/13 05:33	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water
Sample Name: MW-13S-OCT13
Lab Code: R1307504-008

Service Request: R1307504
Date Collected: 10/ 9/13 0858
Date Received: 10/ 9/13
Units: µg/L
Basis: NA

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

Analytical Method: NY 310-13
Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Fuel Oil No. 2	940	U	940	1	10/14/13	10/18/13 16:34	194077	364811	
Fuel Oil No. 4	940	U	940	1	10/14/13	10/18/13 16:34	194077	364811	
Fuel Oil No. 6	940	U	940	1	10/14/13	10/18/13 16:34	194077	364811	
Gasoline	940	U	940	1	10/14/13	10/18/13 16:34	194077	364811	
Kerosene	940	U	940	1	10/14/13	10/23/13 17:36	194077	364812	
Lube Oil	940	U	940	1	10/14/13	10/18/13 16:34	194077	364811	
n-Dodecane	940	U	940	1	10/14/13	10/18/13 16:34	194077	364811	

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Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-001
Sample Name: MW-13S-OCT13
Lab Code: R1307504-008
Matrix: Water

Service Request: R1307504

Date Collected: 10/9/13
Date Received: 10/9/13

<u>Analysis Method</u>	<u>Extracted/Digested By</u>	<u>Analyzed By</u>
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/9/13 0911
 Date Received: 10/9/13
 Date Analyzed: 10/22/13 13:03

Sample Name: MW-2R-OCT13
 Lab Code: R1307504-009

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\102213\L1018.D\

Analysis Lot: 364416
 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)	0.19	J	1.0	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	2.4		1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.40	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.21	
75-25-2	Bromoform	1.0	U	1.0	0.25	
74-83-9	Bromomethane	1.0	U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.24	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.40	
67-66-3	Chloroform	1.0	U	1.0	0.14	
74-87-3	Chloromethane	1.0	U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.19	
75-09-2	Methylene Chloride	1.0	U	1.0	0.20	
100-41-4	Ethylbenzene	1.0	U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	0.67	J	1.0	0.24	
108-88-3	Toluene	1.0	U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	1.3		1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.31	
75-01-4	Vinyl Chloride	0.66	J	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	25		1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.32	
95-47-6	o-Xylene	1.0	U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	0.28	J	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/9/13 0911
Date Received: 10/9/13
Date Analyzed: 10/22/13 13:03

Sample Name: MW-2R-OCT13
Lab Code: R1307504-009

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQUDATA\MSVOA6\DATA\102213\L1018.D\

Analysis Lot: 364416
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	81-127	10/22/13 13:03	
4-Bromofluorobenzene	97	79-123	10/22/13 13:03	
Toluene-d8	100	83-120	10/22/13 13:03	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/9/13 0911
 Date Received: 10/9/13
 Date Extracted: 10/14/13
 Date Analyzed: 10/16/13 20:58

Sample Name: MW-2R-OCT13
 Lab Code: R1307504-009

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101613\AR166.D\

Analysis Lot: 363784
 Extraction Lot: 194084
 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	1.1	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.0	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	2.2	
51-28-5	2,4-Dinitrophenol	47	U	47	34	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.2	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.3	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.3	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.2	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	1.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	22	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	1.0	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.0	
100-02-7	4-Nitrophenol	47	U	47	9.4	
83-32-9	Acenaphthene	4.7	U	4.7	1.2	
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	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.4	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	1.3	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.0	
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	1.0	
218-01-9	Chrysene	4.7	U	4.7	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 9/13 0911
 Date Received: 10/ 9/13
 Date Extracted: 10/14/13
 Date Analyzed: 10/16/13 20:58

Sample Name: MW-2R-OCT13
 Lab Code: R1307504-009

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101613\AR166.D\

Analysis Lot: 363784
 Extraction Lot: 194084
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.1	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	2.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.0	
78-59-1	Isophorone	4.7	U	4.7	1.4	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.6	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.2	
91-20-3	Naphthalene	4.7	U	4.7	1.1	
98-95-3	Nitrobenzene	4.7	U	4.7	1.3	
87-86-5	Pentachlorophenol (PCP)	47	U	47	23	
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	99	28-157	10/16/13 20:58	
2-Fluorobiphenyl	88	39-119	10/16/13 20:58	
2-Fluorophenol	43	10-105	10/16/13 20:58	
Nitrobenzene-d5	79	37-117	10/16/13 20:58	
Phenol-d6	26	10-107	10/16/13 20:58	
p-Terphenyl-d14	74	40-133	10/16/13 20:58	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water
 Sample Name: MW-2R-OCT13
 Lab Code: R1307504-009

Service Request: R1307504
 Date Collected: 10/ 9/13 0911
 Date Received: 10/ 9/13
 Units: µg/L
 Basis: NA

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

Analytical Method: NY 310-13
 Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Fuel Oil No. 2	940	U	940	1	10/14/13	10/18/13 17:00	194077	364811	
Fuel Oil No. 4	940	U	940	1	10/14/13	10/18/13 17:00	194077	364811	
Fuel Oil No. 6	940	U	940	1	10/14/13	10/18/13 17:00	194077	364811	
Gasoline	940	U	940	1	10/14/13	10/18/13 17:00	194077	364811	
Kerosene	940	U	940	1	10/14/13	10/23/13 18:03	194077	364812	
Lube Oil	940	U	940	1	10/14/13	10/18/13 17:00	194077	364811	
n-Dodecane	940	U	940	1	10/14/13	10/18/13 17:00	194077	364811	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-001
Sample Name: MW-2R-OCT13
Lab Code: R1307504-009
Matrix: Water

Service Request: R1307504

Date Collected: 10/9/13

Date Received: 10/9/13

Analysis Method	Extracted/Digested By	Analyzed By
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/9/13 1010
Date Received: 10/9/13
Date Analyzed: 10/15/13 15:48

Sample Name: MW-2S-OCT13
Lab Code: R1307504-010

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\101513\L0816.D\

Analysis Lot: 363257
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	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.6	1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10 U	10	0.40	
67-64-1	Acetone	3.2 J	5.0	2.4	
71-43-2	Benzene	1.0 U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.21	
75-25-2	Bromoform	1.0 U	1.0	0.25	
74-83-9	Bromomethane	1.0 U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.24	
108-90-7	Chlorobenzene	1.0 U	1.0	0.13	
75-00-3	Chloroethane	1.0 U	1.0	0.40	
67-66-3	Chloroform	1.0 U	1.0	0.14	
74-87-3	Chloromethane	1.0 U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.19	
75-09-2	Methylene Chloride	1.0 U	1.0	0.20	
100-41-4	Ethylbenzene	1.0 U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.24	
108-88-3	Toluene	1.0 U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	1.0 U	1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.31	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	0.88 J	1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0 U	2.0	0.32	
95-47-6	o-Xylene	1.0 U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/9/13 1010
Date Received: 10/9/13
Date Analyzed: 10/15/13 15:48

Sample Name: MW-2S-OCT13
Lab Code: R1307504-010

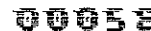
Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\101513\L0816.D\

Analysis Lot: 363257
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	81-127	10/15/13 15:48	
4-Bromofluorobenzene	99	79-123	10/15/13 15:48	
Toluene-d8	96	83-120	10/15/13 15:48	



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/9/13 1010
Date Received: 10/9/13
Date Extracted: 10/14/13
Date Analyzed: 10/16/13 21:29

Sample Name: MW-2S-OCT13
Lab Code: R1307504-010

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
Prep Method: EPA 3510C
Data File Name: I:\ACQUDATA\5973D\Data\101613\AR167.D\

Analysis Lot: 363784
Extraction Lot: 194084
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	1.1	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.0	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	2.2	
51-28-5	2,4-Dinitrophenol	47	U	47	34	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.2	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.3	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.3	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.2	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	1.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	22	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	1.0	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.0	
100-02-7	4-Nitrophenol	47	U	47	9.4	
83-32-9	Acenaphthene	4.7	U	4.7	1.2	
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	Benidine	94	U	94	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.4	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	1.3	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.0	
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	1.0	
218-01-9	Chrysene	4.7	U	4.7	1.2	
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
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/9/13 1010
Date Received: 10/9/13
Date Extracted: 10/14/13
Date Analyzed: 10/16/13 21:29

Sample Name: MW-2S-OCT13
Lab Code: R1307504-010

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
Prep Method: EPA 3510C
Data File Name: I:\ACQUADATA\5973D\Data\101613\AR167.D\

Analysis Lot: 363784
Extraction Lot: 194084
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	1.1	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.1	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	2.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.0	
78-59-1	Isophorone	4.7	U	4.7	1.4	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.6	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.2	
91-20-3	Naphthalene	4.7	U	4.7	1.1	
98-95-3	Nitrobenzene	4.7	U	4.7	1.3	
87-86-5	Pentachlorophenol (PCP)	47	U	47	23	
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	106	28-157	10/16/13 21:29	
2-Fluorobiphenyl	91	39-119	10/16/13 21:29	
2-Fluorophenol	46	10-105	10/16/13 21:29	
Nitrobenzene-d5	86	37-117	10/16/13 21:29	
Phenol-d6	29	10-107	10/16/13 21:29	
p-Terphenyl-d14	73	40-133	10/16/13 21:29	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03.
Sample Matrix: Water
Sample Name: MW-2S-OCT13
Lab Code: R1307504-010

Service Request: R1307504
Date Collected: 10/9/13 1010
Date Received: 10/9/13
Units: µg/L
Basis: NA

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

Analytical Method: NY 310-13
Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Analysis		Note
							Lot	Lot	
Fuel Oil No. 2	940	U	940	1	10/14/13	10/18/13 11:56	194077	364811	
Fuel Oil No. 4	940	U	940	1	10/14/13	10/18/13 11:56	194077	364811	
Fuel Oil No. 6	940	U	940	1	10/14/13	10/18/13 11:56	194077	364811	
Gasoline	940	U	940	1	10/14/13	10/18/13 11:56	194077	364811	
Kerosene	940	U	940	1	10/14/13	10/23/13 18:30	194077	364812	
Lube Oil	940	U	940	1	10/14/13	10/18/13 11:56	194077	364811	
n-Dodecane	940	U	940	1	10/14/13	10/18/13 11:56	194077	364811	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-001
Sample Name: MW-2S-OCT13
Lab Code: R1307504-010
Matrix: Water

Service Request: R1307504

Date Collected: 10/9/13

Date Received: 10/9/13

Analysis Method	Extracted/Digested By	Analyzed By
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/9/13 1030
 Date Received: 10/9/13
 Date Analyzed: 10/15/13 17:21

Sample Name: P-1-OCT13
 Lab Code: R1307504-011

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQU\DATA\MSVOA6\DATA\101513\L0819.D\

Analysis Lot: 363257
 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)	2.7		1.0	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	11		1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.5		1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.40	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.21	
75-25-2	Bromoform	1.0	U	1.0	0.25	
74-83-9	Bromomethane	1.0	U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.24	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.40	
67-66-3	Chloroform	1.0	U	1.0	0.14	
74-87-3	Chloromethane	1.0	U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.19	
75-09-2	Methylene Chloride	1.0	U	1.0	0.20	
100-41-4	Ethylbenzene	1.0	U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	18		1.0	0.24	
108-88-3	Toluene	1.0	U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	56		1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.31	
75-01-4	Vinyl Chloride	1.5		1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	150		1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.32	
95-47-6	o-Xylene	1.0	U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	0.93	J	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/9/13 1030
Date Received: 10/9/13
Date Analyzed: 10/15/13 17:21

Sample Name: P-1-OCT13
Lab Code: R1307504-011

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\101513\L0819.D\

Analysis Lot: 363257
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	81-127	10/15/13 17:21	
4-Bromofluorobenzene	97	79-123	10/15/13 17:21	
Toluene-d8	95	83-120	10/15/13 17:21	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-001
Sample Name: P-1-OCT13
Lab Code: R1307504-011
Matrix: Water

Service Request: R1307504

Date Collected: 10/9/13

Date Received: 10/9/13

Analysis Method

Extracted/Digested By

Analyzed By

624

DLIPANI

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/ 9/13 1035
Date Received: 10/ 9/13
Date Analyzed: 10/22/13 16:24

Sample Name: P-3-OCT13
Lab Code: R1307504-012

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQUDATA\MSVOA6\DATA\102213\1025.D\

Analysis Lot: 364416
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)	3.0		1.0	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	11		1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.4		1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.40	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.21	
75-25-2	Bromoform	1.0	U	1.0	0.25	
74-83-9	Bromomethane	1.0	U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.24	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.40	
67-66-3	Chloroform	1.0	U	1.0	0.14	
74-87-3	Chloromethane	1.0	U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.19	
75-09-2	Methylene Chloride	1.0	U	1.0	0.20	
100-41-4	Ethylbenzene	1.0	U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	28		1.0	0.24	
108-88-3	Toluene	1.0	U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	57		1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.31	
75-01-4	Vinyl Chloride	0.98	J	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	150		1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.32	
95-47-6	o-Xylene	1.0	U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	0.84	J	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/ 9/13 1035
Date Received: 10/ 9/13
Date Analyzed: 10/22/13 16:24

Sample Name: P-3-OCT13
Lab Code: R1307504-012

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\102213\L1025.D\

Analysis Lot: 364416
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	101	81-127	10/22/13 16:24	
4-Bromofluorobenzene	94	79-123	10/22/13 16:24	
Toluene-d8	98	83-120	10/22/13 16:24	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-00
Sample Name: P-3-OCT13
Lab Code: R1307504-012
Matrix: Water

Service Request: R1307504

Date Collected: 10/9/13

Date Received: 10/9/13

Analysis Method	Extracted/Digested By	Analyzed By
624		DLIPANI

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/9/13 1100
Date Received: 10/9/13
Date Analyzed: 10/22/13 16:53

Sample Name: P-2-OCT13
Lab Code: R1307504-013

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQUDATA\MSVOA6\DATA\102213\L1026.D\

Analysis Lot: 364416
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)	2.8	1.0	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	12	1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.3	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10 U	10	0.40	
67-64-1	Acetone	5.0 U	5.0	2.4	
71-43-2	Benzene	1.0 U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.21	
75-25-2	Bromoform	1.0 U	1.0	0.25	
74-83-9	Bromomethane	1.0 U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.24	
108-90-7	Chlorobenzene	1.0 U	1.0	0.13	
75-00-3	Chloroethane	1.0 U	1.0	0.40	
67-66-3	Chloroform	1.0 U	1.0	0.14	
74-87-3	Chloromethane	1.0 U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.19	
75-09-2	Methylene Chloride	1.0 U	1.0	0.20	
100-41-4	Ethylbenzene	1.0 U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	18	1.0	0.24	
108-88-3	Toluene	1.0 U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	56	1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.31	
75-01-4	Vinyl Chloride	2.1	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	150	1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0 U	2.0	0.32	
95-47-6	o-Xylene	1.0 U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	0.94 J	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/9/13 1100
Date Received: 10/9/13
Date Analyzed: 10/22/13 16:53

Sample Name: P-2-OCT13
Lab Code: R1307504-013

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQUADATA\MSVOA6\DATA\102213\1026.D\

Analysis Lot: 364416
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	99	81-127	10/22/13 16:53	
4-Bromofluorobenzene	96	79-123	10/22/13 16:53	
Toluene-d8	101	83-120	10/22/13 16:53	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-00
Sample Name: P-2-OCT13
Lab Code: R1307504-013
Matrix: Water

Service Request: R1307504

Date Collected: 10/9/13

Date Received: 10/9/13

Analysis Method

Extracted/Digested By

Analyzed By

624

DLIPANI

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/9/13 1108
 Date Received: 10/9/13
 Date Analyzed: 10/22/13 20:46

Sample Name: PW-1-OCT13
 Lab Code: R1307504-014

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\102213\L1034.D\

Analysis Lot: 364416
 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)	0.44	J	2.0	0.36	
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.52	
79-00-5	1,1,2-Trichloroethane	2.0	U	2.0	0.42	
75-34-3	1,1-Dichloroethane (1,1-DCA)	9.6		2.0	0.50	
75-35-4	1,1-Dichloroethene (1,1-DCE)	2.6		2.0	0.86	
95-50-1	1,2-Dichlorobenzene	2.0	U	2.0	0.44	
107-06-2	1,2-Dichloroethane	2.0	U	2.0	0.32	
78-87-5	1,2-Dichloropropane	2.0	U	2.0	0.44	
541-73-1	1,3-Dichlorobenzene	2.0	U	2.0	0.28	
106-46-7	1,4-Dichlorobenzene	2.0	U	2.0	0.46	
110-75-8	2-Chloroethyl Vinyl Ether	20	U	20	0.80	
67-64-1	Acetone	10	U	10	4.7	
71-43-2	Benzene	0.50	J	2.0	0.34	
75-27-4	Bromodichloromethane	2.0	U	2.0	0.42	
75-25-2	Bromoform	2.0	U	2.0	0.50	
74-83-9	Bromomethane	2.0	U	2.0	0.62	
56-23-5	Carbon Tetrachloride	2.0	U	2.0	0.48	
108-90-7	Chlorobenzene	2.0	U	2.0	0.26	
75-00-3	Chloroethane	2.0	U	2.0	0.80	
67-66-3	Chloroform	2.0	U	2.0	0.28	
74-87-3	Chloromethane	2.0	U	2.0	0.38	
124-48-1	Dibromochloromethane	2.0	U	2.0	0.38	
75-09-2	Methylene Chloride	2.0	U	2.0	0.40	
100-41-4	Ethylbenzene	2.0	U	2.0	0.32	
127-18-4	Tetrachloroethene (PCE)	2.0	U	2.0	0.48	
108-88-3	Toluene	2.0	U	2.0	0.34	
79-01-6	Trichloroethene (TCE)	17		2.0	0.42	
75-69-4	Trichlorofluoromethane (CFC 11)	2.0	U	2.0	0.62	
75-01-4	Vinyl Chloride	46		2.0	0.44	
156-59-2	cis-1,2-Dichloroethene	200		2.0	0.38	
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	0.50	
179601-23-1	m,p-Xylenes	4.0	U	4.0	0.64	
95-47-6	o-Xylene	2.0	U	2.0	0.30	
156-60-5	trans-1,2-Dichloroethene	1.4	J	2.0	0.38	
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	0.32	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/9/13 1108
 Date Received: 10/9/13
 Date Analyzed: 10/22/13 20:46

Sample Name: PW-1-OCT13
 Lab Code: R1307504-014

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\102213\L1034.D\

Analysis Lot: 364416
 Instrument Name: R-MS-06
 Dilution Factor: 2

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	81-127	10/22/13 20:46	
4-Bromofluorobenzene	98	79-123	10/22/13 20:46	
Toluene-d8	99	83-120	10/22/13 20:46	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 9/13 1108
 Date Received: 10/ 9/13
 Date Extracted: 10/14/13
 Date Analyzed: 10/16/13 08:31

Sample Name: PW-1-OCT13
 Lab Code: R1307504-014

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUDATA\5973D\Data\101513\AR142.D\

Analysis Lot: 363556
 Extraction Lot: 194084
 Instrument Name: R-MS-54
 Dilution Factor: 1

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

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/9/13 1108
 Date Received: 10/9/13
 Date Extracted: 10/14/13
 Date Analyzed: 10/16/13 08:31

Sample Name: PW-1-OCT13
 Lab Code: R1307504-014

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101513\AR142.D\

Analysis Lot: 363556
 Extraction Lot: 194084
 Instrument Name: R-MS-54
 Dilution Factor: 1

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

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
2,4,6-Tribromophenol	99	28-157	10/16/13 08:31	
2-Fluorobiphenyl	86	39-119	10/16/13 08:31	
2-Fluorophenol	42	10-105	10/16/13 08:31	
Nitrobenzene-d5	80	37-117	10/16/13 08:31	
Phenol-d6	27	10-107	10/16/13 08:31	
p-Terphenyl-d14	66	40-133	10/16/13 08:31	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water
 Sample Name: PW-1-OCT13
 Lab Code: R1307504-014

Service Request: R1307504
 Date Collected: 10/9/13 1108
 Date Received: 10/9/13
 Units: µg/L
 Basis: NA

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

Analytical Method: NY 310-13
 Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Fuel Oil No. 2	940	U	940	1	10/14/13	10/18/13 17:27	194077	364811	
Fuel Oil No. 4	940	U	940	1	10/14/13	10/18/13 17:27	194077	364811	
Fuel Oil No. 6	940	U	940	1	10/14/13	10/18/13 17:27	194077	364811	
Gasoline	940	U	940	1	10/14/13	10/18/13 17:27	194077	364811	
Kerosene	940	U	940	1	10/14/13	10/23/13 18:57	194077	364812	
Lube Oil	940	U	940	1	10/14/13	10/18/13 17:27	194077	364811	
n-Dodecane	940	U	940	1	10/14/13	10/18/13 17:27	194077	364811	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-00
Sample Name: PW-1-OCT13
Lab Code: R1307504-014
Matrix: Water

Service Request: R1307504

Date Collected: 10/9/13

Date Received: 10/9/13

Analysis Method	Extracted/Digested By	Analyzed By
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/9/13 1325
 Date Received: 10/9/13
 Date Analyzed: 10/22/13 13:33

Sample Name: MW-1S-OCT13
 Lab Code: R1307504-015

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQU\DATA\MSVOA6\DATA\102213\1019.D\

Analysis Lot: 364416
 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	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	0.55	J	1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.40	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.21	
75-25-2	Bromoform	1.0	U	1.0	0.25	
74-83-9	Bromomethane	1.0	U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.24	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.40	
67-66-3	Chloroform	0.14	J	1.0	0.14	
74-87-3	Chloromethane	1.0	U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.19	
75-09-2	Methylene Chloride	1.0	U	1.0	0.20	
100-41-4	Ethylbenzene	1.0	U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	3.3		1.0	0.24	
108-88-3	Toluene	1.0	U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	22		1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.31	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	13		1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.32	
95-47-6	o-Xylene	1.0	U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/ 9/13 1325
Date Received: 10/ 9/13
Date Analyzed: 10/22/13 13:33

Sample Name: MW-1S-OCT13
Lab Code: R1307504-015

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\102213\L1019.D\

Analysis Lot: 364416
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	81-127	10/22/13 13:33	
4-Bromofluorobenzene	97	79-123	10/22/13 13:33	
Toluene-d8	100	83-120	10/22/13 13:33	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/ 9/13 1325
 Date Received: 10/ 9/13
 Date Extracted: 10/14/13
 Date Analyzed: 10/16/13 09:02

Sample Name: MW-1S-OCT13
 Lab Code: R1307504-015

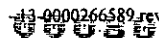
Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQU\DATA\5973D\Data\101513\AR143.D\

Analysis Lot: 363556
 Extraction Lot: 194084
 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	1.1	
120-83-2	2,4-Dichlorophenol	4.7 U	4.7	1.0	
105-67-9	2,4-Dimethylphenol	4.7 U	4.7	2.2	
51-28-5	2,4-Dinitrophenol	47 U	47	34	
121-14-2	2,4-Dinitrotoluene	4.7 U	4.7	1.2	
606-20-2	2,6-Dinitrotoluene	4.7 U	4.7	1.3	
91-58-7	2-Chloronaphthalene	4.7 U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7 U	4.7	1.3	
88-75-5	2-Nitrophenol	4.7 U	4.7	1.2	
91-94-1	3,3'-Dichlorobenzidine	4.7 U	4.7	1.5	
534-52-1	4,6-Dinitro-o-cresol	47 U	47	22	
101-55-3	4-Bromophenyl Phenyl Ether	4.7 U	4.7	1.0	
59-50-7	4-Chloro-m-cresol	4.7 U	4.7	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7 U	4.7	1.0	
100-02-7	4-Nitrophenol	47 U	47	9.4	
83-32-9	Acenaphthene	4.7 U	4.7	1.2	
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	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7 U	4.7	1.4	
111-91-1	Bis(2-chloroethoxy)methane	4.7 U	4.7	1.3	
111-44-4	Bis(2-chloroethyl) Ether	4.7 U	4.7	1.0	
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	1.0	
218-01-9	Chrysene	4.7 U	4.7	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/9/13 1325
 Date Received: 10/9/13
 Date Extracted: 10/14/13
 Date Analyzed: 10/16/13 09:02

Sample Name: MW-1S-OCT13
 Lab Code: R1307504-015

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQ\DATA\5973D\Data\101513\AR143.D\

Analysis Lot: 363556
 Extraction Lot: 194084
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.1	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	2.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.0	
78-59-1	Isophorone	4.7	U	4.7	1.4	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.6	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.2	
91-20-3	Naphthalene	4.7	U	4.7	1.1	
98-95-3	Nitrobenzene	4.7	U	4.7	1.3	
87-86-5	Pentachlorophenol (PCP)	47	U	47	23	
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	98	28-157	10/16/13 09:02	
2-Fluorobiphenyl	85	39-119	10/16/13 09:02	
2-Fluorophenol	42	10-105	10/16/13 09:02	
Nitrobenzene-d5	77	37-117	10/16/13 09:02	
Phenol-d6	26	10-107	10/16/13 09:02	
p-Terphenyl-d14	73	40-133	10/16/13 09:02	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water
Sample Name: MW-1S-OCT13
Lab Code: R1307504-015

Service Request: R1307504
Date Collected: 10/ 9/13 1325
Date Received: 10/ 9/13
Units: µg/L
Basis: NA

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

Analytical Method: NY 310-13
Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Fuel Oil No. 2	940	U	940	1	10/14/13	10/18/13 18:21	194077	364811	
Fuel Oil No. 4	940	U	940	1	10/14/13	10/18/13 18:21	194077	364811	
Fuel Oil No. 6	940	U	940	1	10/14/13	10/18/13 18:21	194077	364811	
Gasoline	940	U	940	1	10/14/13	10/18/13 18:21	194077	364811	
Kerosene	940	U	940	1	10/14/13	10/23/13 19:24	194077	364812	
Lube Oil	940	U	940	1	10/14/13	10/18/13 18:21	194077	364811	
n-Dodecane	940	U	940	1	10/14/13	10/18/13 18:21	194077	364811	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-00
Sample Name: MW-1S-OCT13
Lab Code: R1307504-015
Matrix: Water

Service Request: R1307504

Date Collected: 10/9/13

Date Received: 10/9/13

Analysis Method	Extracted/Digested By	Analyzed By
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/9/13 0858
 Date Received: 10/9/13
 Date Analyzed: 10/22/13 14:01

Sample Name: TB-20131009
 Lab Code: R1307504-016

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\102213\L1020.D\

Analysis Lot: 364416
 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	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10 U	10	0.40	
67-64-1	Acetone	5.0 U	5.0	2.4	
71-43-2	Benzene	1.0 U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.21	
75-25-2	Bromoform	1.0 U	1.0	0.25	
74-83-9	Bromomethane	1.0 U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.24	
108-90-7	Chlorobenzene	1.0 U	1.0	0.13	
75-00-3	Chloroethane	1.0 U	1.0	0.40	
67-66-3	Chloroform	1.0 U	1.0	0.14	
74-87-3	Chloromethane	1.0 U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.19	
75-09-2	Methylene Chloride	1.0 U	1.0	0.20	
100-41-4	Ethylbenzene	1.0 U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.24	
108-88-3	Toluene	1.0 U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	1.0 U	1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.31	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0 U	2.0	0.32	
95-47-6	o-Xylene	1.0 U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/ 9/13 0858
Date Received: 10/ 9/13
Date Analyzed: 10/22/13 14:01

Sample Name: TB-20131009
Lab Code: R1307504-016

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\102213\L1020.D\

Analysis Lot: 364416
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	81-127	10/22/13 14:01	
4-Bromofluorobenzene	92	79-123	10/22/13 14:01	
Toluene-d8	99	83-120	10/22/13 14:01	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-00
Sample Name: TB-20131009
Lab Code: R1307504-016
Matrix: Water

Service Request: R1307504

Date Collected: 10/9/13
Date Received: 10/9/13

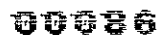
Analysis Method

Extracted/Digested By

Analyzed By

624

DLIPANI



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/9/13 1500
 Date Received: 10/9/13
 Date Analyzed: 10/22/13 17:22

Sample Name: MW-16R-OCT13
 Lab Code: R1307504-017

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\102213\1027.D\

Analysis Lot: 364416
 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	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	6.5		1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.8		1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.40	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.21	
75-25-2	Bromoform	1.0	U	1.0	0.25	
74-83-9	Bromomethane	1.0	U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.24	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.40	
67-66-3	Chloroform	1.0	U	1.0	0.14	
74-87-3	Chloromethane	1.0	U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.19	
75-09-2	Methylene Chloride	1.0	U	1.0	0.20	
100-41-4	Ethylbenzene	1.0	U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.24	
108-88-3	Toluene	1.0	U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	1.9		1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.31	
75-01-4	Vinyl Chloride	33		1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	140		1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.32	
95-47-6	o-Xylene	1.0	U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	1.4		1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/9/13 1500
Date Received: 10/9/13
Date Analyzed: 10/22/13 17:22

Sample Name: MW-16R-OCT13
Lab Code: R1307504-017

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQUADATA\MSVOA6\DATA\102213\L1027.D\

Analysis Lot: 364416
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	81-127	10/22/13 17:22	
4-Bromofluorobenzene	98	79-123	10/22/13 17:22	
Toluene-d8	101	83-120	10/22/13 17:22	



ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-001
Sample Name: MW-16R-OCT13
Lab Code: R1307504-017
Matrix: Water

Service Request: R1307504

Date Collected: 10/9/13

Date Received: 10/9/13

Analysis Method

Extracted/Digested By

Analyzed By

624

DLIPANI

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 0800
 Date Received: 10/10/13
 Date Analyzed: 10/22/13 14:30

Sample Name: TB131010
 Lab Code: R1307504-018

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQU\DATA\MSVOA6\DATA\102213\1021.D\

Analysis Lot: 364416
 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	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.40	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.21	
75-25-2	Bromoform	1.0	U	1.0	0.25	
74-83-9	Bromomethane	1.0	U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.24	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.40	
67-66-3	Chloroform	1.0	U	1.0	0.14	
74-87-3	Chloromethane	1.0	U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.19	
75-09-2	Methylene Chloride	1.0	U	1.0	0.20	
100-41-4	Ethylbenzene	1.0	U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.24	
108-88-3	Toluene	1.0	U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.31	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.32	
95-47-6	o-Xylene	1.0	U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/10/13 0800
Date Received: 10/10/13
Date Analyzed: 10/22/13 14:30

Sample Name: TB131010
Lab Code: R1307504-018

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\102213\L1021.D\

Analysis Lot: 364416
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	94	81-127	10/22/13 14:30	
4-Bromofluorobenzene	97	79-123	10/22/13 14:30	
Toluene-d8	98	83-120	10/22/13 14:30	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-001
Sample Name: TB131010
Lab Code: R1307504-018
Matrix: Water

Service Request: R1307504

Date Collected: 10/10/13

Date Received: 10/10/13

Analysis Method

Extracted/Digested By

Analyzed By

624

DLIPANI

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 1035
 Date Received: 10/10/13
 Date Analyzed: 10/22/13 17:50

Sample Name: MW-9S-OCT13
 Lab Code: R1307504-019

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUADATA\MSVOA6\DATA\102213\L1028.D\

Analysis Lot: 364416
 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)	4.7		1.0	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	23		1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.8		1.0	0.43	
95-50-1	1,2-Dichlorobenzene	100		1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.7		1.0	0.14	
106-46-7	1,4-Dichlorobenzene	6.6		1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.40	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	0.30	J	1.0	0.17	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.21	
75-25-2	Bromoform	1.0	U	1.0	0.25	
74-83-9	Bromomethane	1.0	U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.24	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	0.69	J	1.0	0.40	
67-66-3	Chloroform	0.58	J	1.0	0.14	
74-87-3	Chloromethane	1.0	U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.19	
75-09-2	Methylene Chloride	1.0	U	1.0	0.20	
100-41-4	Ethylbenzene	1.0	U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	40		1.0	0.24	
108-88-3	Toluene	1.0	U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	56		1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.31	
75-01-4	Vinyl Chloride	28		1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	78		1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.32	
95-47-6	o-Xylene	0.58	J	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	4.5		1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.16	



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/10/13 1035
Date Received: 10/10/13
Date Analyzed: 10/22/13 17:50

Sample Name: MW-9S-OCT13
Lab Code: R1307504-019

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\102213\L1028.D\

Analysis Lot: 364416
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	95	81-127	10/22/13 17:50	
4-Bromofluorobenzene	101	79-123	10/22/13 17:50	
Toluene-d8	97	83-120	10/22/13 17:50	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 1035
 Date Received: 10/10/13
 Date Extracted: 10/14/13
 Date Analyzed: 10/16/13 21:59

Sample Name: MW-9S-OCT13
 Lab Code: R1307504-019

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUDATA\5973D\Data\101613\AR168.D\

Analysis Lot: 363784
 Extraction Lot: 194084
 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	1.1	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.0	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	2.2	
51-28-5	2,4-Dinitrophenol	47	U	47	34	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.2	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.3	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.3	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.2	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	1.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	22	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	1.0	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.0	
100-02-7	4-Nitrophenol	47	U	47	9.4	
83-32-9	Acenaphthene	4.7	U	4.7	1.2	
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	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.4	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	1.3	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.0	
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	1.0	
218-01-9	Chrysene	4.7	U	4.7	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 1035
 Date Received: 10/10/13
 Date Extracted: 10/14/13
 Date Analyzed: 10/16/13 21:59

Sample Name: MW-9S-OCT13
 Lab Code: R1307504-019

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUDATA\5973D\Data\101613\AR168.D\

Analysis Lot: 363784
 Extraction Lot: 194084
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.1	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	2.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.0	
78-59-1	Isophorone	4.7	U	4.7	1.4	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.6	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.2	
91-20-3	Naphthalene	4.7	U	4.7	1.1	
98-95-3	Nitrobenzene	4.7	U	4.7	1.3	
87-86-5	Pentachlorophenol (PCP)	47	U	47	23	
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	94	28-157	10/16/13 21:59	
2-Fluorobiphenyl	76	39-119	10/16/13 21:59	
2-Fluorophenol	40	10-105	10/16/13 21:59	
Nitrobenzene-d5	73	37-117	10/16/13 21:59	
Phenol-d6	25	10-107	10/16/13 21:59	
p-Terphenyl-d14	83	40-133	10/16/13 21:59	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water
 Sample Name: MW-9S-OCT13
 Lab Code: R1307504-019

Service Request: R1307504
 Date Collected: 10/10/13 1035
 Date Received: 10/10/13
 Units: µg/L
 Basis: NA

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

Analytical Method: NY 310-13
 Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Fuel Oil No. 2	940	U	940	1	10/14/13	10/18/13 18:48	194077	364811	
Fuel Oil No. 4	940	U	940	1	10/14/13	10/18/13 18:48	194077	364811	
Fuel Oil No. 6	940	U	940	1	10/14/13	10/18/13 18:48	194077	364811	
Gasoline	940	U	940	1	10/14/13	10/18/13 18:48	194077	364811	
Kerosene	940	U	940	1	10/14/13	10/23/13 19:51	194077	364812	
Lube Oil	940	U	940	1	10/14/13	10/18/13 18:48	194077	364811	
n-Dodecane	940	U	940	1	10/14/13	10/18/13 18:48	194077	364811	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-00
Sample Name: MW-9S-OCT13
Lab Code: R1307504-019
Matrix: Water

Service Request: R1307504

Date Collected: 10/10/13

Date Received: 10/10/13

Analysis Method	Extracted/Digested By	Analyzed By
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 1035
 Date Received: 10/10/13
 Date Analyzed: 10/22/13 18:19

Sample Name: MW-9S-OCT13-FD
 Lab Code: R1307504-020

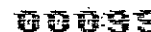
Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\102213\1029.D\

Analysis Lot: 364416
 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)	4.7		1.0	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	23		1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.7		1.0	0.43	
95-50-1	1,2-Dichlorobenzene	100		1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.6		1.0	0.14	
106-46-7	1,4-Dichlorobenzene	6.5		1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.40	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	0.29	J	1.0	0.17	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.21	
75-25-2	Bromoform	1.0	U	1.0	0.25	
74-83-9	Bromomethane	1.0	U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.24	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	0.69	J	1.0	0.40	
67-66-3	Chloroform	0.57	J	1.0	0.14	
74-87-3	Chloromethane	1.0	U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.19	
75-09-2	Methylene Chloride	1.0	U	1.0	0.20	
100-41-4	Ethylbenzene	1.0	U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	37		1.0	0.24	
108-88-3	Toluene	1.0	U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	56		1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.31	
75-01-4	Vinyl Chloride	28		1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	78		1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.32	
95-47-6	o-Xylene	0.57	J	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	4.3		1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.16	



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/10/13 1035
Date Received: 10/10/13
Date Analyzed: 10/22/13 18:19

Sample Name: MW-9S-OCT13-FD
Lab Code: R1307504-020

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\102213\L1029.D\

Analysis Lot: 364416
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	94	81-127	10/22/13 18:19	
4-Bromofluorobenzene	93	79-123	10/22/13 18:19	
Toluene-d8	97	83-120	10/22/13 18:19	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 1035
 Date Received: 10/10/13
 Date Extracted: 10/14/13
 Date Analyzed: 10/16/13 09:33

Sample Name: MW-9S-OCT13-FD
 Lab Code: R1307504-020

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUDATA\5973D\Data\101513\AR144.D\

Analysis Lot: 363556
 Extraction Lot: 194084
 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	1.1	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.0	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	2.2	
51-28-5	2,4-Dinitrophenol	47	U	47	34	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.2	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.3	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.3	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.2	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	1.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	22	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	1.0	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.0	
100-02-7	4-Nitrophenol	47	U	47	9.4	
83-32-9	Acenaphthene	4.7	U	4.7	1.2	
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	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.4	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	1.3	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.0	
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	1.0	
218-01-9	Chrysene	4.7	U	4.7	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 1035
 Date Received: 10/10/13
 Date Extracted: 10/14/13
 Date Analyzed: 10/16/13 09:33

Sample Name: MW-9S-OCT13-FD
 Lab Code: R1307504-020

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101513\AR144.D\

Analysis Lot: 363556
 Extraction Lot: 194084
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.1	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	2.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.0	
78-59-1	Isophorone	4.7	U	4.7	1.4	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.6	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.2	
91-20-3	Naphthalene	4.7	U	4.7	1.1	
98-95-3	Nitrobenzene	4.7	U	4.7	1.3	
87-86-5	Pentachlorophenol (PCP)	47	U	47	23	
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	97	28-157	10/16/13 09:33	
2-Fluorobiphenyl	84	39-119	10/16/13 09:33	
2-Fluorophenol	44	10-105	10/16/13 09:33	
Nitrobenzene-d5	79	37-117	10/16/13 09:33	
Phenol-d6	28	10-107	10/16/13 09:33	
p-Terphenyl-d14	95	40-133	10/16/13 09:33	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water
 Sample Name: MW-9S-OCT13-FD
 Lab Code: R1307504-020

Service Request: R1307504
 Date Collected: 10/10/13 1035
 Date Received: 10/10/13
 Units: µg/L
 Basis: NA

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

Analytical Method: NY 310-13
 Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Analysis			Note
							Lot	Lot	Lot	
Fuel Oil No. 2	940	U	940	1	10/14/13	10/18/13 19:15	194077	364811		
Fuel Oil No. 4	940	U	940	1	10/14/13	10/18/13 19:15	194077	364811		
Fuel Oil No. 6	940	U	940	1	10/14/13	10/18/13 19:15	194077	364811		
Gasoline	940	U	940	1	10/14/13	10/18/13 19:15	194077	364811		
Kerosene	940	U	940	1	10/14/13	10/23/13 20:18	194077	364812		
Lube Oil	940	U	940	1	10/14/13	10/18/13 19:15	194077	364811		
n-Dodecane	940	U	940	1	10/14/13	10/18/13 19:15	194077	364811		

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Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-001
Sample Name: MW-9S-OCT13-FD
Lab Code: R1307504-020
Matrix: Water

Service Request: R1307504

Date Collected: 10/10/13

Date Received: 10/10/13

Analysis Method	Extracted/Digested By	Analyzed By
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 1218
 Date Received: 10/10/13
 Date Analyzed: 10/22/13 20:16

Sample Name: MW-3R-OCT13
 Lab Code: R1307504-021

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQU\DATA\MSVOA6\DATA\102213\L1033.D\

Analysis Lot: 364416
 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)	0.83 J	2.5	0.45	
79-34-5	1,1,2,2-Tetrachloroethane	2.5 U	2.5	0.65	
79-00-5	1,1,2-Trichloroethane	2.5 U	2.5	0.53	
75-34-3	1,1-Dichloroethane (1,1-DCA)	40	2.5	0.63	
75-35-4	1,1-Dichloroethene (1,1-DCE)	14	2.5	1.1	
95-50-1	1,2-Dichlorobenzene	2.5 U	2.5	0.55	
107-06-2	1,2-Dichloroethane	2.5 U	2.5	0.40	
78-87-5	1,2-Dichloropropane	2.5 U	2.5	0.55	
541-73-1	1,3-Dichlorobenzene	2.5 U	2.5	0.36	
106-46-7	1,4-Dichlorobenzene	2.5 U	2.5	0.58	
110-75-8	2-Chloroethyl Vinyl Ether	25 U	25	1.0	
67-64-1	Acetone	13 U	13	5.8	
71-43-2	Benzene	2.5 U	2.5	0.43	
75-27-4	Bromodichloromethane	2.5 U	2.5	0.53	
75-25-2	Bromoform	2.5 U	2.5	0.63	
74-83-9	Bromomethane	2.5 U	2.5	0.78	
56-23-5	Carbon Tetrachloride	2.5 U	2.5	0.60	
108-90-7	Chlorobenzene	2.5 U	2.5	0.33	
75-00-3	Chloroethane	2.5 U	2.5	1.0	
67-66-3	Chloroform	2.5 U	2.5	0.36	
74-87-3	Chloromethane	2.5 U	2.5	0.48	
124-48-1	Dibromochloromethane	2.5 U	2.5	0.48	
75-09-2	Methylene Chloride	2.5 U	2.5	0.50	
100-41-4	Ethylbenzene	2.5 U	2.5	0.40	
127-18-4	Tetrachloroethene (PCE)	2.5 U	2.5	0.60	
108-88-3	Toluene	2.5 U	2.5	0.43	
79-01-6	Trichloroethene (TCE)	9.8	2.5	0.53	
75-69-4	Trichlorofluoromethane (CFC 11)	2.5 U	2.5	0.78	
75-01-4	Vinyl Chloride	180	2.5	0.55	
156-59-2	cis-1,2-Dichloroethene	1000 E	2.5	0.48	
10061-01-5	cis-1,3-Dichloropropene	2.5 U	2.5	0.63	
179601-23-1	m,p-Xylenes	5.0 U	5.0	0.80	
95-47-6	o-Xylene	2.5 U	2.5	0.38	
156-60-5	trans-1,2-Dichloroethene	6.0	2.5	0.48	
10061-02-6	trans-1,3-Dichloropropene	2.5 U	2.5	0.40	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 12:18
 Date Received: 10/10/13
 Date Analyzed: 10/22/13 20:16

Sample Name: MW-3R-OCT13
 Lab Code: R1307504-021

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQU\DATA\MSVOA6\DATA\102213\L1033.D\

Analysis Lot: 364416
 Instrument Name: R-MS-06
 Dilution Factor: 2.5

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	99	81-127	10/22/13 20:16	
4-Bromofluorobenzene	94	79-123	10/22/13 20:16	
Toluene-d8	99	83-120	10/22/13 20:16	



ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 12:18
 Date Received: 10/10/13
 Date Analyzed: 10/22/13 21:16

Sample Name: MW-3R-OCT13
 Lab Code: R1307504-021
 Run Type: Dilution

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQU\DATA\MSVOA6\DATA\102213\L1035.D\

Analysis Lot: 364416
 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	1.8	
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	2.6	
79-00-5	1,1,2-Trichloroethane	10	U	10	2.1	
75-34-3	1,1-Dichloroethane (1,1-DCA)	41	D	10	2.5	
75-35-4	1,1-Dichloroethene (1,1-DCE)	14	D	10	4.3	
95-50-1	1,2-Dichlorobenzene	10	U	10	2.2	
107-06-2	1,2-Dichloroethane	10	U	10	1.6	
78-87-5	1,2-Dichloropropane	10	U	10	2.2	
541-73-1	1,3-Dichlorobenzene	10	U	10	1.5	
106-46-7	1,4-Dichlorobenzene	10	U	10	2.4	
110-75-8	2-Chloroethyl Vinyl Ether	100	U	100	4.0	
67-64-1	Acetone	50	U	50	24	
71-43-2	Benzene	10	U	10	1.8	
75-27-4	Bromodichloromethane	10	U	10	2.1	
75-25-2	Bromoform	10	U	10	2.5	
74-83-9	Bromomethane	10	U	10	3.1	
56-23-5	Carbon Tetrachloride	10	U	10	2.4	
108-90-7	Chlorobenzene	10	U	10	1.3	
75-00-3	Chloroethane	10	U	10	4.0	
67-66-3	Chloroform	10	U	10	1.5	
74-87-3	Chloromethane	10	U	10	1.9	
124-48-1	Dibromochloromethane	10	U	10	1.9	
75-09-2	Methylene Chloride	10	U	10	2.0	
100-41-4	Ethylbenzene	10	U	10	1.6	
127-18-4	Tetrachloroethene (PCE)	10	U	10	2.4	
108-88-3	Toluene	10	U	10	1.8	
79-01-6	Trichloroethene (TCE)	10	D	10	2.1	
75-69-4	Trichlorofluoromethane (CFC 11)	10	U	10	3.1	
75-01-4	Vinyl Chloride	190	D	10	2.2	
156-59-2	cis-1,2-Dichloroethene	1100	D	10	1.9	
10061-01-5	cis-1,3-Dichloropropene	10	U	10	2.5	
179601-23-1	m,p-Xylenes	20	U	20	3.2	
95-47-6	o-Xylene	10	U	10	1.5	
156-60-5	trans-1,2-Dichloroethene	6.9	DJ	10	1.9	
10061-02-6	trans-1,3-Dichloropropene	10	U	10	1.6	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/10/13 12:18
Date Received: 10/10/13
Date Analyzed: 10/22/13 21:16

Sample Name: MW-3R-OCT13
Lab Code: R1307504-021
Run Type: Dilution

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\102213\L1035.D\

Analysis Lot: 364416
Instrument Name: R-MS-06
Dilution Factor: 10

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	81-127	10/22/13 21:16	
4-Bromofluorobenzene	95	79-123	10/22/13 21:16	
Toluene-d8	99	83-120	10/22/13 21:16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/10/13 12:18
Date Received: 10/10/13
Date Extracted: 10/14/13
Date Analyzed: 10/16/13 22:29

Sample Name: MW-3R-OCT13
Lab Code: R1307504-021

Units: µg/L
Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
Prep Method: EPA 3510C
Data File Name: I:\ACQUDATA\5973D\Data\101613\AR169.D\

Analysis Lot: 363784
Extraction Lot: 194084
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	1.1	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.0	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	2.2	
51-28-5	2,4-Dinitrophenol	47	U	47	34	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.2	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.3	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.3	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.2	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	1.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	22	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	1.0	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.0	
100-02-7	4-Nitrophenol	47	U	47	9.4	
83-32-9	Acenaphthene	4.7	U	4.7	1.2	
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	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.4	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	1.3	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.0	
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	1.0	
218-01-9	Chrysene	4.7	U	4.7	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 1218
 Date Received: 10/10/13
 Date Extracted: 10/14/13
 Date Analyzed: 10/16/13 22:29

Sample Name: MW-3R-OCT13
 Lab Code: R1307504-021

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101613\AR169.D\

Analysis Lot: 363784
 Extraction Lot: 194084
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.1	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	2.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.0	
78-59-1	Isophorone	4.7	U	4.7	1.4	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.6	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.2	
91-20-3	Naphthalene	4.7	U	4.7	1.1	
98-95-3	Nitrobenzene	4.7	U	4.7	1.3	
87-86-5	Pentachlorophenol (PCP)	47	U	47	23	
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	101	28-157	10/16/13 22:29	
2-Fluorobiphenyl	83	39-119	10/16/13 22:29	
2-Fluorophenol	44	10-105	10/16/13 22:29	
Nitrobenzene-d5	77	37-117	10/16/13 22:29	
Phenol-d6	28	10-107	10/16/13 22:29	
p-Terphenyl-d14	103	40-133	10/16/13 22:29	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water
 Sample Name: MW-3R-OCT13
 Lab Code: R1307504-021

Service Request: R1307504
 Date Collected: 10/10/13 1218
 Date Received: 10/10/13
 Units: µg/L
 Basis: NA

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

Analytical Method: NY 310-13
 Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction	Analysis Lot	Lot	Note
Fuel Oil No. 2	940	U	940	1	10/14/13	10/18/13 19:42	194077	364811		
Fuel Oil No. 4	940	U	940	1	10/14/13	10/18/13 19:42	194077	364811		
Fuel Oil No. 6	940	U	940	1	10/14/13	10/18/13 19:42	194077	364811		
Gasoline	940	U	940	1	10/14/13	10/18/13 19:42	194077	364811		
Kerosene	940	U	940	1	10/14/13	10/23/13 20:45	194077	364812		
Lube Oil	940	U	940	1	10/14/13	10/18/13 19:42	194077	364811		
n-Dodecane	940	U	940	1	10/14/13	10/18/13 19:42	194077	364811		

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-00
Sample Name: MW-3R-OCT13
Lab Code: R1307504-021
Matrix: Water

Service Request: R1307504

Date Collected: 10/10/13
Date Received: 10/10/13

Analysis Method	Extracted/Digested By	Analyzed By
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 1435
 Date Received: 10/10/13
 Date Analyzed: 10/22/13 22:16

Sample Name: MW-3S-OCT13
 Lab Code: R1307504-022

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\102213\L1037.D\

Analysis Lot: 364416
 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	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.40	
67-64-1	Acetone	5.0	U	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.21	
75-25-2	Bromoform	1.0	U	1.0	0.25	
74-83-9	Bromomethane	1.0	U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.24	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.40	
67-66-3	Chloroform	1.0	U	1.0	0.14	
74-87-3	Chloromethane	1.0	U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.19	
75-09-2	Methylene Chloride	1.0	U	1.0	0.20	
100-41-4	Ethylbenzene	1.0	U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.24	
108-88-3	Toluene	1.0	U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.31	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	0.68	J	1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.32	
95-47-6	o-Xylene	1.0	U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 1435
 Date Received: 10/10/13
 Date Analyzed: 10/22/13 22:16

Sample Name: MW-3S-OCT13
 Lab Code: R1307504-022

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQU\DATA\MSVOA6\DATA\102213\L1037.D\

Analysis Lot: 364416
 Instrument Name: R-MS-06
 Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	94	81-127	10/22/13 22:16	
4-Bromofluorobenzene	96	79-123	10/22/13 22:16	
Toluene-d8	101	83-120	10/22/13 22:16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 1435
 Date Received: 10/10/13
 Date Extracted: 10/14/13
 Date Analyzed: 10/16/13 22:59

Sample Name: MW-3S-OCT13
 Lab Code: R1307504-022

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUDATA\5973D\Data\101613\AR170.D\

Analysis Lot: 363784
 Extraction Lot: 194084
 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	1.1	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.0	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	2.2	
51-28-5	2,4-Dinitrophenol	47	U	47	34	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.2	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.3	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.3	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.2	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	1.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	22	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	1.0	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.0	
100-02-7	4-Nitrophenol	47	U	47	9.4	
83-32-9	Acenaphthene	4.7	U	4.7	1.2	
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	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.4	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	1.3	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.0	
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	1.0	
218-01-9	Chrysene	4.7	U	4.7	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 1435
 Date Received: 10/10/13
 Date Extracted: 10/14/13
 Date Analyzed: 10/16/13 22:59

Sample Name: MW-3S-OCT13
 Lab Code: R1307504-022

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101613\AR170.D\

Analysis Lot: 363784
 Extraction Lot: 194084
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.1	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	2.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.0	
78-59-1	Isophorone	4.7	U	4.7	1.4	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.6	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.2	
91-20-3	Naphthalene	4.7	U	4.7	1.1	
98-95-3	Nitrobenzene	4.7	U	4.7	1.3	
87-86-5	Pentachlorophenol (PCP)	47	U	47	23	
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	91	28-157	10/16/13 22:59	
2-Fluorobiphenyl	79	39-119	10/16/13 22:59	
2-Fluorophenol	38	10-105	10/16/13 22:59	
Nitrobenzene-d5	68	37-117	10/16/13 22:59	
Phenol-d6	23	10-107	10/16/13 22:59	
p-Terphenyl-d14	99	40-133	10/16/13 22:59	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water
 Sample Name: MW-3S-OCT13
 Lab Code: R1307504-022

Service Request: R1307504
 Date Collected: 10/10/13 1435
 Date Received: 10/10/13
 Units: µg/L
 Basis: NA

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

Analytical Method: NY 310-13
 Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Fuel Oil No. 2	940	U	940	1	10/14/13	10/18/13 20:09	194077	364811	
Fuel Oil No. 4	940	U	940	1	10/14/13	10/18/13 20:09	194077	364811	
Fuel Oil No. 6	940	U	940	1	10/14/13	10/18/13 20:09	194077	364811	
Gasoline	940	U	940	1	10/14/13	10/18/13 20:09	194077	364811	
Kerosene	940	U	940	1	10/14/13	10/23/13 21:12	194077	364812	
Lube Oil	940	U	940	1	10/14/13	10/18/13 20:09	194077	364811	
n-Dodecane	940	U	940	1	10/14/13	10/18/13 20:09	194077	364811	

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Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-001
Sample Name: MW-3S-OCT13
Lab Code: R1307504-022
Matrix: Water

Service Request: R1307504

Date Collected: 10/10/13

Date Received: 10/10/13

<u>Analysis Method</u>	<u>Extracted/Digested By</u>	<u>Analyzed By</u>
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 1615
 Date Received: 10/10/13
 Date Analyzed: 10/22/13 14:58

Sample Name: MW-15R-OCT13
 Lab Code: R1307504-023

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\102213\L1022.DA

Analysis Lot: 364416
 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)	0.18 J	1.0	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	0.68 J	1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10 U	10	0.40	
67-64-1	Acetone	5.0 U	5.0	2.4	
71-43-2	Benzene	1.0 U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.21	
75-25-2	Bromoform	1.0 U	1.0	0.25	
74-83-9	Bromomethane	1.0 U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.24	
108-90-7	Chlorobenzene	1.0 U	1.0	0.13	
75-00-3	Chloroethane	1.0 U	1.0	0.40	
67-66-3	Chloroform	1.0 U	1.0	0.14	
74-87-3	Chloromethane	1.0 U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.19	
75-09-2	Methylene Chloride	1.0 U	1.0	0.20	
100-41-4	Ethylbenzene	1.0 U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	0.36 J	1.0	0.24	
108-88-3	Toluene	1.0 U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	2.0	1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.31	
75-01-4	Vinyl Chloride	1.2	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	6.1	1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0 U	2.0	0.32	
95-47-6	o-Xylene	1.0 U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	0.26 J	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/10/13 1615
Date Received: 10/10/13
Date Analyzed: 10/22/13 14:58

Sample Name: MW-15R-OCT13
Lab Code: R1307504-023

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\102213\L1022.D\

Analysis Lot: 364416
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	101	81-127	10/22/13 14:58	
4-Bromofluorobenzene	93	79-123	10/22/13 14:58	
Toluene-d8	104	83-120	10/22/13 14:58	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 1615
 Date Received: 10/10/13
 Date Extracted: 10/14/13
 Date Analyzed: 10/16/13 23:29

Sample Name: MW-15R-OCT13
 Lab Code: R1307504-023

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUDATA\5973D\Data\101613\AR171.D\

Analysis Lot: 363784
 Extraction Lot: 194084
 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	1.1	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.0	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	2.2	
51-28-5	2,4-Dinitrophenol	47	U	47	34	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.2	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.3	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.3	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.2	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	1.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	22	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	1.0	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.0	
100-02-7	4-Nitrophenol	47	U	47	9.4	
83-32-9	Acenaphthene	4.7	U	4.7	1.2	
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	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.4	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	1.3	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.0	
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	1.0	
218-01-9	Chrysene	4.7	U	4.7	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/10/13 1615
 Date Received: 10/10/13
 Date Extracted: 10/14/13
 Date Analyzed: 10/16/13 23:29

Sample Name: MW-15R-OCT13
 Lab Code: R1307504-023

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101613\AR171.D\

Analysis Lot: 363784
 Extraction Lot: 194084
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.1	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	2.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.0	
78-59-1	Isophorone	4.7	U	4.7	1.4	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.6	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.2	
91-20-3	Naphthalene	4.7	U	4.7	1.1	
98-95-3	Nitrobenzene	4.7	U	4.7	1.3	
87-86-5	Pentachlorophenol (PCP)	47	U	47	23	
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	99	28-157	10/16/13 23:29	
2-Fluorobiphenyl	86	39-119	10/16/13 23:29	
2-Fluorophenol	40	10-105	10/16/13 23:29	
Nitrobenzene-d5	76	37-117	10/16/13 23:29	
Phenol-d6	25	10-107	10/16/13 23:29	
p-Terphenyl-d14	100	40-133	10/16/13 23:29	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water
 Sample Name: MW-15R-OCT13
 Lab Code: R1307504-023

Service Request: R1307504
 Date Collected: 10/10/13 1615
 Date Received: 10/10/13
 Units: µg/L
 Basis: NA

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

Analytical Method: NY 310-13
 Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction	Analysis Lot	Lot	Note
Fuel Oil No. 2	940	U	940	1	10/14/13	10/18/13 20:36	194077	364811		
Fuel Oil No. 4	940	U	940	1	10/14/13	10/18/13 20:36	194077	364811		
Fuel Oil No. 6	940	U	940	1	10/14/13	10/18/13 20:36	194077	364811		
Gasoline	940	U	940	1	10/14/13	10/18/13 20:36	194077	364811		
Kerosene	940	U	940	1	10/14/13	10/23/13 21:38	194077	364812		
Lube Oil	940	U	940	1	10/14/13	10/18/13 20:36	194077	364811		
n-Dodecane	940	U	940	1	10/14/13	10/18/13 20:36	194077	364811		

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-00
Sample Name: MW-15R-OCT13
Lab Code: R1307504-023
Matrix: Water

Service Request: R1307504

Date Collected: 10/10/13
Date Received: 10/10/13

Analysis Method	Extracted/Digested By	Analyzed By
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/11/13 0800
 Date Received: 10/11/13
 Date Analyzed: 10/22/13 15:27

Sample Name: TB-131011
 Lab Code: R1307504-024

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUADATA\MSVOA6\DATA\102213\L1023.D\

Analysis Lot: 364416
 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	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10 U	10	0.40	
67-64-1	Acetone	5.0 U	5.0	2.4	
71-43-2	Benzene	1.0 U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.21	
75-25-2	Bromoform	1.0 U	1.0	0.25	
74-83-9	Bromomethane	1.0 U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.24	
108-90-7	Chlorobenzene	1.0 U	1.0	0.13	
75-00-3	Chloroethane	1.0 U	1.0	0.40	
67-66-3	Chloroform	1.0 U	1.0	0.14	
74-87-3	Chloromethane	1.0 U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.19	
75-09-2	Methylene Chloride	1.0 U	1.0	0.20	
100-41-4	Ethylbenzene	1.0 U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.24	
108-88-3	Toluene	1.0 U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	1.0 U	1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.31	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0 U	2.0	0.32	
95-47-6	o-Xylene	1.0 U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/11/13 0800
Date Received: 10/11/13
Date Analyzed: 10/22/13 15:27

Sample Name: TB-131011
Lab Code: R1307504-024

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\102213\L1023.D\

Analysis Lot: 364416
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	81-127	10/22/13 15:27	
4-Bromofluorobenzene	96	79-123	10/22/13 15:27	
Toluene-d8	98	83-120	10/22/13 15:27	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-00
Sample Name: TB-131011
Lab Code: R1307504-024
Matrix: Water

Service Request: R1307504

Date Collected: 10/11/13

Date Received: 10/11/13

Analysis Method

Extracted/Digested By

Analyzed By

624

DLIPANI

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/11/13 1300
 Date Received: 10/11/13
 Date Analyzed: 10/22/13 19:47

Sample Name: MW-10R-OCT13
 Lab Code: R1307504-025

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUDATA\MSVOA6\DATA\102213\L1032.D\

Analysis Lot: 364416
 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)	6.9 J	10	1.8	
79-34-5	1,1,2,2-Tetrachloroethane	10 U	10	2.6	
79-00-5	1,1,2-Trichloroethane	10 U	10	2.1	
75-34-3	1,1-Dichloroethane (1,1-DCA)	7.5 J	10	2.5	
75-35-4	1,1-Dichloroethene (1,1-DCE)	18	10	4.3	
95-50-1	1,2-Dichlorobenzene	10 U	10	2.2	
107-06-2	1,2-Dichloroethane	10 U	10	1.6	
78-87-5	1,2-Dichloropropane	10 U	10	2.2	
541-73-1	1,3-Dichlorobenzene	10 U	10	1.5	
106-46-7	1,4-Dichlorobenzene	10 U	10	2.4	
110-75-8	2-Chloroethyl Vinyl Ether	100 U	100	4.0	
67-64-1	Acetone	50 U	50	24	
71-43-2	Benzene	10 U	10	1.8	
75-27-4	Bromodichloromethane	10 U	10	2.1	
75-25-2	Bromoform	10 U	10	2.5	
74-83-9	Bromomethane	10 U	10	3.1	
56-23-5	Carbon Tetrachloride	10 U	10	2.4	
108-90-7	Chlorobenzene	10 U	10	1.3	
75-00-3	Chloroethane	10 U	10	4.0	
67-66-3	Chloroform	10 U	10	1.5	
74-87-3	Chloromethane	10 U	10	1.9	
124-48-1	Dibromochloromethane	10 U	10	1.9	
75-09-2	Methylene Chloride	10 U	10	2.0	
100-41-4	Ethylbenzene	10 U	10	1.6	
127-18-4	Tetrachloroethene (PCE)	3.6 J	10	2.4	
108-88-3	Toluene	10 U	10	1.8	
79-01-6	Trichloroethene (TCE)	1300	10	2.1	
75-69-4	Trichlorofluoromethane (CFC 11)	10 U	10	3.1	
75-01-4	Vinyl Chloride	10 U	10	2.2	
156-59-2	cis-1,2-Dichloroethene	36	10	1.9	
10061-01-5	cis-1,3-Dichloropropene	10 U	10	2.5	
179601-23-1	m,p-Xylenes	20 U	20	3.2	
95-47-6	o-Xylene	10 U	10	1.5	
156-60-5	trans-1,2-Dichloroethene	9.8 J	10	1.9	
10061-02-6	trans-1,3-Dichloropropene	10 U	10	1.6	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/11/13 1300
Date Received: 10/11/13
Date Analyzed: 10/22/13 19:47

Sample Name: MW-10R-OCT13
Lab Code: R1307504-025

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQU\DATA\MSVOA6\DATA\102213\L1032.D\

Analysis Lot: 364416
Instrument Name: R-MS-06
Dilution Factor: 10

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	81-127	10/22/13 19:47	
4-Bromofluorobenzene	94	79-123	10/22/13 19:47	
Toluene-d8	100	83-120	10/22/13 19:47	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/11/13 1300
 Date Received: 10/11/13
 Date Extracted: 10/17/13
 Date Analyzed: 10/18/13 21:58

Sample Name: MW-10R-OCT13
 Lab Code: R1307504-025

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUDATA\5973D\Data\101813\AR235.D\

Analysis Lot: 364395
 Extraction Lot: 194525
 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	1.1	
120-83-2	2,4-Dichlorophenol	4.7	U	4.7	1.0	
105-67-9	2,4-Dimethylphenol	4.7	U	4.7	2.2	
51-28-5	2,4-Dinitrophenol	47	U	47	34	
121-14-2	2,4-Dinitrotoluene	4.7	U	4.7	1.2	
606-20-2	2,6-Dinitrotoluene	4.7	U	4.7	1.3	
91-58-7	2-Chloronaphthalene	4.7	U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7	U	4.7	1.3	
88-75-5	2-Nitrophenol	4.7	U	4.7	1.2	
91-94-1	3,3'-Dichlorobenzidine	4.7	U	4.7	1.5	
534-52-1	4,6-Dinitro-o-cresol	47	U	47	22	
101-55-3	4-Bromophenyl Phenyl Ether	4.7	U	4.7	1.0	
59-50-7	4-Chloro-m-cresol	4.7	U	4.7	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7	U	4.7	1.0	
100-02-7	4-Nitrophenol	47	U	47	9.4	
83-32-9	Acenaphthene	4.7	U	4.7	1.2	
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	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7	U	4.7	1.4	
111-91-1	Bis(2-chloroethoxy)methane	4.7	U	4.7	1.3	
111-44-4	Bis(2-chloroethyl) Ether	4.7	U	4.7	1.0	
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	1.0	
218-01-9	Chrysene	4.7	U	4.7	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/11/13 1300
 Date Received: 10/11/13
 Date Extracted: 10/17/13
 Date Analyzed: 10/18/13 21:58

Sample Name: MW-10R-OCT13
 Lab Code: R1307504-025

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101813\AR235.D\

Analysis Lot: 364395
 Extraction Lot: 194525
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.1	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	2.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.0	
78-59-1	Isophorone	4.7	U	4.7	1.4	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.6	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.2	
91-20-3	Naphthalene	4.7	U	4.7	1.1	
98-95-3	Nitrobenzene	4.7	U	4.7	1.3	
87-86-5	Pentachlorophenol (PCP)	47	U	47	23	
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	98	28-157	10/18/13 21:58	
2-Fluorobiphenyl	82	39-119	10/18/13 21:58	
2-Fluorophenol	41	10-105	10/18/13 21:58	
Nitrobenzene-d5	75	37-117	10/18/13 21:58	
Phenol-d6	25	10-107	10/18/13 21:58	
p-Terphenyl-d14	79	40-133	10/18/13 21:58	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water
Sample Name: MW-10R-OCT13
Lab Code: R1307504-025

Service Request: R1307504
Date Collected: 10/11/13 1300
Date Received: 10/11/13
Units: µg/L
Basis: NA

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

Analytical Method: NY 310-13
Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Fuel Oil No. 2	940	U	940	1	10/15/13	10/18/13 09:41	194289	364811	
Fuel Oil No. 4	940	U	940	1	10/15/13	10/18/13 09:41	194289	364811	
Fuel Oil No. 6	940	U	940	1	10/15/13	10/18/13 09:41	194289	364811	
Gasoline	940	U	940	1	10/15/13	10/18/13 09:41	194289	364811	
Kerosene	940	U	940	1	10/15/13	10/23/13 13:06	194289	364812	
Lube Oil	940	U	940	1	10/15/13	10/18/13 09:41	194289	364811	
n-Dodecane	940	U	940	1	10/15/13	10/18/13 09:41	194289	364811	

ALS ENVIRONMENTAL

Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-001
Sample Name: MW-10R-OCT13
Lab Code: R1307504-025
Matrix: Water

Service Request: R1307504

Date Collected: 10/11/13

Date Received: 10/11/13

Analysis Method	Extracted/Digested By	Analyzed By
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/11/13 1305
 Date Received: 10/11/13
 Date Analyzed: 10/22/13 15:56

Sample Name: RB-31011
 Lab Code: R1307504-026

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUADATA\MSVOA6\DATA\102213\1024.D

Analysis Lot: 364416
 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	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0	U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0	U	1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0	U	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10	U	10	0.40	
67-64-1	Acetone	3.3	J	5.0	2.4	
71-43-2	Benzene	1.0	U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0	U	1.0	0.21	
75-25-2	Bromoform	1.0	U	1.0	0.25	
74-83-9	Bromomethane	1.0	U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0	U	1.0	0.24	
108-90-7	Chlorobenzene	1.0	U	1.0	0.13	
75-00-3	Chloroethane	1.0	U	1.0	0.40	
67-66-3	Chloroform	1.0	U	1.0	0.14	
74-87-3	Chloromethane	1.0	U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0	U	1.0	0.19	
75-09-2	Methylene Chloride	0.26	J	1.0	0.20	
100-41-4	Ethylbenzene	1.0	U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	1.0	U	1.0	0.24	
108-88-3	Toluene	0.45	J	1.0	0.17	
79-01-6	Trichloroethene (TCE)	1.0	U	1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0	U	1.0	0.31	
75-01-4	Vinyl Chloride	1.0	U	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0	U	2.0	0.32	
95-47-6	o-Xylene	1.0	U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: 10/11/13 1305
Date Received: 10/11/13
Date Analyzed: 10/22/13 15:56

Sample Name: RB-31011
Lab Code: R1307504-026

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQUADATA\MSVOA6\DATA\102213\L1024.D\

Analysis Lot: 364416
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	94	81-127	10/22/13 15:56	
4-Bromofluorobenzene	94	79-123	10/22/13 15:56	
Toluene-d8	98	83-120	10/22/13 15:56	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/11/13 1305
 Date Received: 10/11/13
 Date Extracted: 10/17/13
 Date Analyzed: 10/18/13 22:29

Sample Name: RB-31011
 Lab Code: R1307504-026

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUDATA\5973D\Data\101813\AR236.D\

Analysis Lot: 364395
 Extraction Lot: 194525
 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	1.1	
120-83-2	2,4-Dichlorophenol	4.7 U	4.7	1.0	
105-67-9	2,4-Dimethylphenol	4.7 U	4.7	2.2	
51-28-5	2,4-Dinitrophenol	4.7 U	4.7	34	
121-14-2	2,4-Dinitrotoluene	4.7 U	4.7	1.2	
606-20-2	2,6-Dinitrotoluene	4.7 U	4.7	1.3	
91-58-7	2-Chloronaphthalene	4.7 U	4.7	1.0	
95-57-8	2-Chlorophenol	4.7 U	4.7	1.3	
88-75-5	2-Nitrophenol	4.7 U	4.7	1.2	
91-94-1	3,3'-Dichlorobenzidine	4.7 U	4.7	1.5	
534-52-1	4,6-Dinitro-o-cresol	4.7 U	4.7	22	
101-55-3	4-Bromophenyl Phenyl Ether	4.7 U	4.7	1.0	
59-50-7	4-Chloro-m-cresol	4.7 U	4.7	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	4.7 U	4.7	1.0	
100-02-7	4-Nitrophenol	4.7 U	4.7	9.4	
83-32-9	Acenaphthene	4.7 U	4.7	1.2	
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	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	4.7 U	4.7	1.4	
111-91-1	Bis(2-chloroethoxy)methane	4.7 U	4.7	1.3	
111-44-4	Bis(2-chloroethyl) Ether	4.7 U	4.7	1.0	
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	1.0	
218-01-9	Chrysene	4.7 U	4.7	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/11/13 1305
 Date Received: 10/11/13
 Date Extracted: 10/17/13
 Date Analyzed: 10/18/13 22:29

Sample Name: RB-31011
 Lab Code: R1307504-026

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101813\AR236.D\

Analysis Lot: 364395
 Extraction Lot: 194525
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	4.7	U	4.7	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	4.7	U	4.7	1.1	
87-68-3	Hexachlorobutadiene	4.7	U	4.7	1.3	
77-47-4	Hexachlorocyclopentadiene	4.7	U	4.7	2.0	
67-72-1	Hexachloroethane	4.7	U	4.7	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	U	4.7	1.0	
78-59-1	Isophorone	4.7	U	4.7	1.4	
621-64-7	N-Nitrosodi-n-propylamine	4.7	U	4.7	1.6	
62-75-9	N-Nitrosodimethylamine	4.7	U	4.7	1.0	
86-30-6	N-Nitrosodiphenylamine	4.7	U	4.7	1.2	
91-20-3	Naphthalene	4.7	U	4.7	1.1	
98-95-3	Nitrobenzene	4.7	U	4.7	1.3	
87-86-5	Pentachlorophenol (PCP)	47	U	47	23	
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	84	28-157	10/18/13 22:29	
2-Fluorobiphenyl	78	39-119	10/18/13 22:29	
2-Fluorophenol	39	10-105	10/18/13 22:29	
Nitrobenzene-d5	72	37-117	10/18/13 22:29	
Phenol-d6	24	10-107	10/18/13 22:29	
p-Terphenyl-d14	72	40-133	10/18/13 22:29	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water
 Sample Name: RB-31011
 Lab Code: R1307504-026

Service Request: R1307504
 Date Collected: 10/11/13 1305
 Date Received: 10/11/13
 Units: µg/L
 Basis: NA

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

Analytical Method: NY 310-13
 Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Fuel Oil No. 2	940	U	940	1	10/15/13	10/18/13 10:08	194289	364811	
Fuel Oil No. 4	940	U	940	1	10/15/13	10/18/13 10:08	194289	364811	
Fuel Oil No. 6	940	U	940	1	10/15/13	10/18/13 10:08	194289	364811	
Gasoline	940	U	940	1	10/15/13	10/18/13 10:08	194289	364811	
Kerosene	940	U	940	1	10/15/13	10/23/13 13:33	194289	364812	
Lube Oil	940	U	940	1	10/15/13	10/18/13 10:08	194289	364811	
n-Dodecane	940	U	940	1	10/15/13	10/18/13 10:08	194289	364811	

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Analyst Summary Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-001
Sample Name: RB-31011
Lab Code: R1307504-026
Matrix: Water

Service Request: R1307504

Date Collected: 10/11/13

Date Received: 10/11/13

Analysis Method	Extracted/Digested By	Analyzed By
624		DLIPANI
625	DMURPHY	ZMIAO
NY 310-13	DMURPHY	MCYMBAL

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: NA
 Date Received: NA
 Date Analyzed: 10/15/13 10:41

Sample Name: Method Blank
 Lab Code: RQ1312864-04

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUADATA\MSVOA6\DATA\101513\L0806.D\

Analysis Lot: 363257
 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	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10 U	10	0.40	
67-64-1	Acetone	5.0 U	5.0	2.4	
71-43-2	Benzene	1.0 U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.21	
75-25-2	Bromoform	1.0 U	1.0	0.25	
74-83-9	Bromomethane	1.0 U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.24	
108-90-7	Chlorobenzene	1.0 U	1.0	0.13	
75-00-3	Chloroethane	1.0 U	1.0	0.40	
67-66-3	Chloroform	1.0 U	1.0	0.14	
74-87-3	Chloromethane	1.0 U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.19	
75-09-2	Methylene Chloride	1.0 U	1.0	0.20	
100-41-4	Ethylbenzene	1.0 U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.24	
108-88-3	Toluene	1.0 U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	1.0 U	1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.31	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0 U	2.0	0.32	
95-47-6	o-Xylene	1.0 U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: NA
Date Received: NA
Date Analyzed: 10/15/13 10:41

Sample Name: Method Blank
Lab Code: RQ1312864-04

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQUDATA\MSVOA6\DATA\101513\L0806.D\

Analysis Lot: 363257
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	94	81-127	10/15/13 10:41	
4-Bromofluorobenzene	101	79-123	10/15/13 10:41	
Toluene-d8	98	83-120	10/15/13 10:41	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: NA
 Date Received: NA
 Date Analyzed: 10/22/13 12:33

Sample Name: Method Blank
 Lab Code: RQ1313622-05

Units: µg/L
 Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
 Data File Name: I:\ACQUADATA\MSVOA6\DATA\102213\L1017.D

Analysis Lot: 364416
 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	0.18	
79-34-5	1,1,2,2-Tetrachloroethane	1.0 U	1.0	0.26	
79-00-5	1,1,2-Trichloroethane	1.0 U	1.0	0.21	
75-34-3	1,1-Dichloroethane (1,1-DCA)	1.0 U	1.0	0.25	
75-35-4	1,1-Dichloroethene (1,1-DCE)	1.0 U	1.0	0.43	
95-50-1	1,2-Dichlorobenzene	1.0 U	1.0	0.22	
107-06-2	1,2-Dichloroethane	1.0 U	1.0	0.16	
78-87-5	1,2-Dichloropropane	1.0 U	1.0	0.22	
541-73-1	1,3-Dichlorobenzene	1.0 U	1.0	0.14	
106-46-7	1,4-Dichlorobenzene	1.0 U	1.0	0.23	
110-75-8	2-Chloroethyl Vinyl Ether	10 U	10	0.40	
67-64-1	Acetone	5.0 U	5.0	2.4	
71-43-2	Benzene	1.0 U	1.0	0.17	
75-27-4	Bromodichloromethane	1.0 U	1.0	0.21	
75-25-2	Bromoform	1.0 U	1.0	0.25	
74-83-9	Bromomethane	1.0 U	1.0	0.31	
56-23-5	Carbon Tetrachloride	1.0 U	1.0	0.24	
108-90-7	Chlorobenzene	1.0 U	1.0	0.13	
75-00-3	Chloroethane	1.0 U	1.0	0.40	
67-66-3	Chloroform	1.0 U	1.0	0.14	
74-87-3	Chloromethane	1.0 U	1.0	0.19	
124-48-1	Dibromochloromethane	1.0 U	1.0	0.19	
75-09-2	Methylene Chloride	1.0 U	1.0	0.20	
100-41-4	Ethylbenzene	1.0 U	1.0	0.16	
127-18-4	Tetrachloroethene (PCE)	1.0 U	1.0	0.24	
108-88-3	Toluene	1.0 U	1.0	0.17	
79-01-6	Trichloroethene (TCE)	1.0 U	1.0	0.21	
75-69-4	Trichlorofluoromethane (CFC 11)	1.0 U	1.0	0.31	
75-01-4	Vinyl Chloride	1.0 U	1.0	0.22	
156-59-2	cis-1,2-Dichloroethene	1.0 U	1.0	0.19	
10061-01-5	cis-1,3-Dichloropropene	1.0 U	1.0	0.25	
179601-23-1	m,p-Xylenes	2.0 U	2.0	0.32	
95-47-6	o-Xylene	1.0 U	1.0	0.15	
156-60-5	trans-1,2-Dichloroethene	1.0 U	1.0	0.19	
10061-02-6	trans-1,3-Dichloropropene	1.0 U	1.0	0.16	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Collected: NA
Date Received: NA
Date Analyzed: 10/22/13 12:33

Sample Name: Method Blank
Lab Code: RQ1313622-05

Units: µg/L
Basis: NA

Volatile Organic Compounds by GC/MS

Analytical Method: 624
Data File Name: I:\ACQUDATA\MSVOA6\DATA\102213\L1017.D\

Analysis Lot: 364416
Instrument Name: R-MS-06
Dilution Factor: 1

Surrogate Name	%Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	101	81-127	10/22/13 12:33	
4-Bromofluorobenzene	96	79-123	10/22/13 12:33	
Toluene-d8	100	83-120	10/22/13 12:33	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: NA
 Date Received: NA
 Date Extracted: 10/14/13
 Date Analyzed: 10/15/13 18:14

Sample Name: Method Blank
 Lab Code: RQ1312661-01

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUDATA\5973D\Data\101513\AR117.D\

Analysis Lot: 363556
 Extraction Lot: 194084
 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	1.1	
120-83-2	2,4-Dichlorophenol	5.0	U	5.0	1.0	
105-67-9	2,4-Dimethylphenol	5.0	U	5.0	2.2	
51-28-5	2,4-Dinitrophenol	50	U	50	34	
121-14-2	2,4-Dinitrotoluene	5.0	U	5.0	1.2	
606-20-2	2,6-Dinitrotoluene	5.0	U	5.0	1.3	
91-58-7	2-Chloronaphthalene	5.0	U	5.0	1.0	
95-57-8	2-Chlorophenol	5.0	U	5.0	1.3	
88-75-5	2-Nitrophenol	5.0	U	5.0	1.2	
91-94-1	3,3'-Dichlorobenzidine	5.0	U	5.0	1.5	
534-52-1	4,6-Dinitro-o-cresol	50	U	50	22	
101-55-3	4-Bromophenyl Phenyl Ether	5.0	U	5.0	1.0	
59-50-7	4-Chloro-m-cresol	5.0	U	5.0	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	5.0	U	5.0	1.0	
100-02-7	4-Nitrophenol	50	U	50	9.4	
83-32-9	Acenaphthene	5.0	U	5.0	1.2	
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	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	5.0	U	5.0	1.4	
111-91-1	Bis(2-chloroethoxy)methane	5.0	U	5.0	1.3	
111-44-4	Bis(2-chloroethyl) Ether	5.0	U	5.0	1.0	
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	1.0	
218-01-9	Chrysene	5.0	U	5.0	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: NA
 Date Received: NA
 Date Extracted: 10/14/13
 Date Analyzed: 10/15/13 18:14

Sample Name: Method Blank
 Lab Code: RQ1312661-01

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101513\VAR117.D\

Analysis Lot: 363556
 Extraction Lot: 194084
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	5.0	U	5.0	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	5.0	U	5.0	1.1	
87-68-3	Hexachlorobutadiene	5.0	U	5.0	1.3	
77-47-4	Hexachlorocyclopentadiene	5.0	U	5.0	2.0	
67-72-1	Hexachloroethane	5.0	U	5.0	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U	5.0	1.0	
78-59-1	Isophorone	5.0	U	5.0	1.4	
621-64-7	N-Nitrosodi-n-propylamine	5.0	U	5.0	1.6	
62-75-9	N-Nitrosodimethylamine	5.0	U	5.0	1.0	
86-30-6	N-Nitrosodiphenylamine	5.0	U	5.0	1.2	
91-20-3	Naphthalene	5.0	U	5.0	1.1	
98-95-3	Nitrobenzene	5.0	U	5.0	1.3	
87-86-5	Pentachlorophenol (PCP)	5.0	U	5.0	23	
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	99	28-157	10/15/13 18:14	
2-Fluorobiphenyl	83	39-119	10/15/13 18:14	
2-Fluorophenol	46	10-105	10/15/13 18:14	
Nitrobenzene-d5	77	37-117	10/15/13 18:14	
Phenol-d6	30	10-107	10/15/13 18:14	
p-Terphenyl-d14	74	40-133	10/15/13 18:14	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: NA
 Date Received: NA
 Date Extracted: 10/11/13
 Date Analyzed: 10/16/13 23:59

Sample Name: Method Blank
 Lab Code: RQ1312563-01

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101613\AR172.D\

Analysis Lot: 363784
 Extraction Lot: 193999
 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	1.1	
120-83-2	2,4-Dichlorophenol	5.0	U	5.0	1.0	
105-67-9	2,4-Dimethylphenol	5.0	U	5.0	2.2	
51-28-5	2,4-Dinitrophenol	50	U	50	34	
121-14-2	2,4-Dinitrotoluene	5.0	U	5.0	1.2	
606-20-2	2,6-Dinitrotoluene	5.0	U	5.0	1.3	
91-58-7	2-Chloronaphthalene	5.0	U	5.0	1.0	
95-57-8	2-Chlorophenol	5.0	U	5.0	1.3	
88-75-5	2-Nitrophenol	5.0	U	5.0	1.2	
91-94-1	3,3'-Dichlorobenzidine	5.0	U	5.0	1.5	
534-52-1	4,6-Dinitro-o-cresol	50	U	50	22	
101-55-3	4-Bromophenyl Phenyl Ether	5.0	U	5.0	1.0	
59-50-7	4-Chloro-m-cresol	5.0	U	5.0	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	5.0	U	5.0	1.0	
100-02-7	4-Nitrophenol	50	U	50	9.4	
83-32-9	Acenaphthene	5.0	U	5.0	1.2	
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	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	5.0	U	5.0	1.4	
111-91-1	Bis(2-chloroethoxy)methane	5.0	U	5.0	1.3	
111-44-4	Bis(2-chloroethyl) Ether	5.0	U	5.0	1.0	
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	1.0	
218-01-9	Chrysene	5.0	U	5.0	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: NA
 Date Received: NA
 Date Extracted: 10/11/13
 Date Analyzed: 10/16/13 23:59

Sample Name: Method Blank
 Lab Code: RQ1312563-01

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101613\AR172.D\

Analysis Lot: 363784
 Extraction Lot: 193999
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	5.0	U	5.0	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	5.0	U	5.0	1.1	
87-68-3	Hexachlorobutadiene	5.0	U	5.0	1.3	
77-47-4	Hexachlorocyclopentadiene	5.0	U	5.0	2.0	
67-72-1	Hexachloroethane	5.0	U	5.0	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U	5.0	1.0	
78-59-1	Isophorone	5.0	U	5.0	1.4	
621-64-7	N-Nitrosodi-n-propylamine	5.0	U	5.0	1.6	
62-75-9	N-Nitrosodimethylamine	5.0	U	5.0	1.0	
86-30-6	N-Nitrosodiphenylamine	5.0	U	5.0	1.2	
91-20-3	Naphthalene	5.0	U	5.0	1.1	
98-95-3	Nitrobenzene	5.0	U	5.0	1.3	
87-86-5	Pentachlorophenol (PCP)	50	U	50	23	
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	91	28-157	10/16/13 23:59	
2-Fluorobiphenyl	67	39-119	10/16/13 23:59	
2-Fluorophenol	39	10-105	10/16/13 23:59	
Nitrobenzene-d5	69	37-117	10/16/13 23:59	
Phenol-d6	24	10-107	10/16/13 23:59	
p-Terphenyl-d14	86	40-133	10/16/13 23:59	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: NA
 Date Received: NA
 Date Extracted: 10/17/13
 Date Analyzed: 10/18/13 17:52

Sample Name: Method Blank
 Lab Code: RQ1312928-01

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101813\AR227.D\

Analysis Lot: 364395
 Extraction Lot: 194525
 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	1.1	
120-83-2	2,4-Dichlorophenol	5.0	U	5.0	1.0	
105-67-9	2,4-Dimethylphenol	5.0	U	5.0	2.2	
51-28-5	2,4-Dinitrophenol	50	U	50	34	
121-14-2	2,4-Dinitrotoluene	5.0	U	5.0	1.2	
606-20-2	2,6-Dinitrotoluene	5.0	U	5.0	1.3	
91-58-7	2-Chloronaphthalene	5.0	U	5.0	1.0	
95-57-8	2-Chlorophenol	5.0	U	5.0	1.3	
88-75-5	2-Nitrophenol	5.0	U	5.0	1.2	
91-94-1	3,3'-Dichlorobenzidine	5.0	U	5.0	1.5	
534-52-1	4,6-Dinitro-o-cresol	50	U	50	22	
101-55-3	4-Bromophenyl Phenyl Ether	5.0	U	5.0	1.0	
59-50-7	4-Chloro-m-cresol	5.0	U	5.0	1.0	
7005-72-3	4-Chlorophenyl Phenyl Ether	5.0	U	5.0	1.0	
100-02-7	4-Nitrophenol	50	U	50	9.4	
83-32-9	Acenaphthene	5.0	U	5.0	1.2	
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	53	
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	1.1	
108-60-1	Bis(1-chloroisopropyl) Ether	5.0	U	5.0	1.4	
111-91-1	Bis(2-chloroethoxy)methane	5.0	U	5.0	1.3	
111-44-4	Bis(2-chloroethyl) Ether	5.0	U	5.0	1.0	
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	1.0	
218-01-9	Chrysene	5.0	U	5.0	1.2	
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
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: NA
 Date Received: NA
 Date Extracted: 10/17/13
 Date Analyzed: 10/18/13 17:52

Sample Name: Method Blank
 Lab Code: RQ1312928-01

Units: µg/L
 Basis: NA

Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C
 Data File Name: I:\ACQUADATA\5973D\Data\101813\AR227.D\

Analysis Lot: 364395
 Extraction Lot: 194525
 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	1.1	
53-70-3	Dibenz(a,h)anthracene	5.0	U	5.0	1.0	
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	1.1	
118-74-1	Hexachlorobenzene	5.0	U	5.0	1.1	
87-68-3	Hexachlorobutadiene	5.0	U	5.0	1.3	
77-47-4	Hexachlorocyclopentadiene	5.0	U	5.0	2.0	
67-72-1	Hexachloroethane	5.0	U	5.0	1.3	
193-39-5	Indeno(1,2,3-cd)pyrene	5.0	U	5.0	1.0	
78-59-1	Isophorone	5.0	U	5.0	1.4	
621-64-7	N-Nitrosodi-n-propylamine	5.0	U	5.0	1.6	
62-75-9	N-Nitrosodimethylamine	5.0	U	5.0	1.0	
86-30-6	N-Nitrosodiphenylamine	5.0	U	5.0	1.2	
91-20-3	Naphthalene	5.0	U	5.0	1.1	
98-95-3	Nitrobenzene	5.0	U	5.0	1.3	
87-86-5	Pentachlorophenol (PCP)	50	U	50	23	
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	89	28-157	10/18/13 17:52	
2-Fluorobiphenyl	81	39-119	10/18/13 17:52	
2-Fluorophenol	44	10-105	10/18/13 17:52	
Nitrobenzene-d5	74	37-117	10/18/13 17:52	
Phenol-d6	28	10-107	10/18/13 17:52	
p-Terphenyl-d14	76	40-133	10/18/13 17:52	

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water
 Sample Name: Method Blank
 Lab Code: RQ1312626-01

Service Request: R1307504
 Date Collected: NA
 Date Received: NA
 Units: µg/L
 Basis: NA

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

Analytical Method: NY 310-13
 Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Analysis			Note
							Lot	Lot	Lot	
Fuel Oil No. 2	1000	U	1000	1	10/14/13	10/18/13 10:35	194077	364811		
Fuel Oil No. 4	1000	U	1000	1	10/14/13	10/18/13 10:35	194077	364811		
Fuel Oil No. 6	1000	U	1000	1	10/14/13	10/18/13 10:35	194077	364811		
Gasoline	1000	U	1000	1	10/14/13	10/18/13 10:35	194077	364811		
Kerosene	1000	U	1000	1	10/14/13	10/23/13 14:00	194077	364812		
Lube Oil	1000	U	1000	1	10/14/13	10/18/13 10:35	194077	364811		
n-Dodecane	1000	U	1000	1	10/14/13	10/18/13 10:35	194077	364811		

ALS Group USA, Corp. dba ALS Environmental

Analytical Report

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: RQ1312809-01

Service Request: R1307504
Date Collected: NA
Date Received: NA
Units: µg/L
Basis: NA

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

Analytical Method: NY 310-13
Prep Method: Method

Analyte Name	Result	Q	MRL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Analysis Lot	Note
Fuel Oil No. 2	1000	U	1000	1	10/15/13	10/18/13 08:20	194289	364811	
Fuel Oil No. 4	1000	U	1000	1	10/15/13	10/18/13 08:20	194289	364811	
Fuel Oil No. 6	1000	U	1000	1	10/15/13	10/18/13 08:20	194289	364811	
Gasoline	1000	U	1000	1	10/15/13	10/18/13 08:20	194289	364811	
Kerosene	1000	U	1000	1	10/15/13	10/23/13 12:39	194289	364812	
Lube Oil	1000	U	1000	1	10/15/13	10/18/13 08:20	194289	364811	
n-Dodecane	1000	U	1000	1	10/15/13	10/18/13 08:20	194289	364811	

ALS Group USA, Corp. dba ALS Environmental

QA/QC Report

Client: Ecology And Environment, Incorporated
 Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/8/13
 Date Received: 10/8/13
 Date Analyzed: 10/15/13

Matrix Spike Summary
 Volatile Organic Compounds by GC/MS

Sample Name: MW-12S-OCT13
 Lab Code: R1307504-003

Units: µg/L
 Basis: NA

Analytical Method: 624

Analyte Name	Sample Result	MW-12S-OCT13MS Matrix Spike RQ1312864-05			MW-12S-OCT13DMS Duplicate Matrix Spike RQ1312864-06			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	ND	19.9	20.0	100	19.8	20.0	99	52 - 162	<1	30
1,1,2,2-Tetrachloroethane	ND	17.7	20.0	89	18.1	20.0	90	46 - 157	2	30
1,1,2-Trichloroethane	ND	18.8	20.0	94	18.8	20.0	94	52 - 150	<1	30
1,1-Dichloroethane (1,1-DCA)	ND	20.3	20.0	101	19.7	20.0	99	59 - 155	3	30
1,1-Dichloroethene (1,1-DCE)	ND	19.2	20.0	96	19.3	20.0	96	10 - 234	<1	30
1,2-Dichlorobenzene	ND	20.8	20.0	104	21.4	20.0	107	18 - 190	3	30
1,2-Dichloroethane	ND	18.2	20.0	91	18.1	20.0	90	49 - 155	<1	30
1,2-Dichloropropane	ND	19.1	20.0	96	19.3	20.0	97	10 - 210	1	30
1,3-Dichlorobenzene	ND	21.7	20.0	108	21.6	20.0	108	59 - 156	<1	30
1,4-Dichlorobenzene	ND	22.1	20.0	111	21.4	20.0	107	18 - 190	3	30
2-Chloroethyl Vinyl Ether	ND	ND	20.0	0 *	ND	20.0	0 *	10 - 305	NC	30
Acetone	ND	12.0	20.0	60	12.1	20.0	60	53 - 141	<1	30
Benzene	ND	19.8	20.0	99	19.8	20.0	99	37 - 151	<1	30
Bromodichloromethane	ND	19.4	20.0	97	19.5	20.0	98	35 - 155	<1	30
Bromoform	ND	18.9	20.0	94	19.2	20.0	96	45 - 169	2	30
Bromomethane	ND	18.4	20.0	92	20.1	20.0	101	10 - 242	9	30
Carbon Tetrachloride	ND	19.5	20.0	98	19.7	20.0	99	70 - 140	1	30
Chlorobenzene	ND	20.6	20.0	103	20.4	20.0	102	37 - 160	<1	30
Chloroethane	ND	19.8	20.0	99	18.9	20.0	95	14 - 230	5	30
Chloroform	ND	20.8	20.0	104	20.0	20.0	100	51 - 138	4	30
Chloromethane	ND	16.8	20.0	84	16.5	20.0	82	10 - 273	2	30
Dibromochloromethane	ND	19.7	20.0	99	19.8	20.0	99	53 - 149	<1	30
Methylene Chloride	ND	19.1	20.0	95	18.9	20.0	94	10 - 221	1	30
Ethylbenzene	ND	21.5	20.0	107	21.8	20.0	109	37 - 162	1	30
Tetrachloroethene (PCE)	ND	21.1	20.0	106	21.1	20.0	105	64 - 148	<1	30
Toluene	ND	19.8	20.0	99	19.9	20.0	99	47 - 150	<1	30
Trichloroethene (TCE)	0.36	20.6	20.0	101	20.2	20.0	99	71 - 157	2	30
Trichlorofluoromethane (CFC 11)	ND	20.8	20.0	104	20.3	20.0	102	17 - 181	2	30

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

Results flagged with a pound (#) indicate the control criteria is not applicable.

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 - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/8/13
 Date Received: 10/8/13
 Date Analyzed: 10/15/13

Matrix Spike Summary
 Volatile Organic Compounds by GC/MS

Sample Name: MW-12S-OCT13
 Lab Code: R1307504-003

Units: µg/L
 Basis: NA

Analytical Method: 624

Analyte Name	Sample Result	MW-12S-OCT13MS Matrix Spike RQ1312864-05			MW-12S-OCT13DMS Duplicate Matrix Spike RQ1312864-06			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Vinyl Chloride	ND	19.5	20.0	97	19.3	20.0	96	10 - 251	1	30
cis-1,2-Dichloroethene	ND	21.0	20.0	105	20.5	20.0	102	72 - 125	2	30
cis-1,3-Dichloropropene	ND	19.2	20.0	96	19.6	20.0	98	10 - 227	2	30
m,p-Xylenes	ND	44.5	40.0	111	44.0	40.0	110	76 - 131	1	30
o-Xylene	ND	21.2	20.0	106	20.6	20.0	103	78 - 127	3	30
trans-1,2-Dichloroethene	ND	21.0	20.0	105	20.2	20.0	101	54 - 156	4	30
trans-1,3-Dichloropropene	ND	19.8	20.0	99	20.4	20.0	102	17 - 183	3	30

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

Results flagged with a pound (#) indicate the control criteria is not applicable.

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 - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/8/13
 Date Received: 10/8/13
 Date Analyzed: 10/17/13

Matrix Spike Summary
 Semivolatile Organic Compounds by GC/MS

Sample Name: MW-12S-OCT13
 Lab Code: R1307504-003

Units: µg/L
 Basis: NA

Analytical Method: 625
 Prep Method: EPA 3510C

Analyte Name	Sample Result	MW-12S-OCT13MS Matrix Spike RQ1312563-06			MW-12S-OCT13DMS Duplicate Matrix Spike RQ1312563-07			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,2,4-Trichlorobenzene	ND	69.3	94.3	73	72.4	94.3	77	29 - 85	4	30
1,2-Diphenylhydrazine	ND	94.3	94.3	100	91.3	94.3	97	64 - 114	3	30
2,4,6-Trichlorophenol	ND	95.6	94.3	101	94.0	94.3	100	37 - 144	2	30
2,4-Dichlorophenol	ND	88.6	94.3	94	87.0	94.3	92	39 - 135	2	30
2,4-Dimethylphenol	ND	83.6	94.3	89	78.4	94.3	83	32 - 119	6	30
2,4-Dinitrophenol	ND	110	94.3	117	106	94.3	113	10 - 191	3	30
2,4-Dinitrotoluene	ND	92.6	94.3	98	89.0	94.3	94	39 - 139	4	30
2,6-Dinitrotoluene	ND	92.0	94.3	98	88.4	94.3	94	50 - 158	4	30
2-Chloronaphthalene	ND	85.0	94.3	90	83.6	94.3	89	60 - 118	2	30
2-Chlorophenol	ND	77.7	94.3	82	73.8	94.3	78	23 - 134	5	30
2-Nitrophenol	ND	87.4	94.3	93	85.4	94.3	91	29 - 182	2	30
3,3'-Dichlorobenzidine	ND	54.4	94.3	58	49.4	94.3	52	10 - 262	10	30
4,6-Dinitro-o-cresol	ND	106	94.3	112	102	94.3	108	10 - 181	4	30
4-Bromophenyl Phenyl Ether	ND	95.7	94.3	101	94.0	94.3	100	53 - 127	2	30
4-Chloro-m-cresol	ND	90.6	94.3	96	86.4	94.3	92	22 - 147	5	30
4-Chlorophenyl Phenyl Ether	ND	91.7	94.3	97	88.6	94.3	94	25 - 158	3	30
4-Nitrophenol	ND	30.5	94.3	32	35.0	94.3	37	10 - 132	14	30
Acenaphthene	ND	88.8	94.3	94	86.2	94.3	91	47 - 145	3	30
Acenaphthylene	ND	91.3	94.3	97	89.6	94.3	95	33 - 145	2	30
Anthracene	ND	89.3	94.3	95	85.7	94.3	91	27 - 133	4	30
Benz(a)anthracene	ND	90.2	94.3	96	87.6	94.3	93	33 - 143	3	30
Benzidine	ND	ND	94.3	0 *	ND	94.3	0 *	10 - 169	NC	30
Benzo(a)pyrene	ND	92.4	94.3	98	89.5	94.3	95	17 - 163	3	30
3,4-Benzofluoranthene	ND	87.9	94.3	93	84.2	94.3	89	24 - 159	4	30
Benzo(g,h,i)perylene	ND	103	94.3	109	99.5	94.3	106	10 - 219	3	30
Benzo(k)fluoranthene	ND	91.4	94.3	97	80.1	94.3	85	11 - 162	13	30
Bis(1-chloroisopropyl) Ether	ND	93.5	94.3	99	88.3	94.3	94	36 - 166	6	30
Bis(2-chloroethoxy)methane	ND	89.4	94.3	95	85.4	94.3	90	33 - 184	5	30

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Results flagged with a pound (#) indicate the control criteria is not applicable.

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 - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/8/13
 Date Received: 10/8/13
 Date Analyzed: 10/17/13

Matrix Spike Summary
 Semivolatile Organic Compounds by GC/MS

Sample Name: MW-12S-OCT13
 Lab Code: R1307504-003
 Analytical Method: 625
 Prep Method: EPA 3510C

Units: µg/L
 Basis: NA

Analyte Name	Sample Result	MW-12S-OCT13MS Matrix Spike RQ1312563-06			MW-12S-OCT13DMS Duplicate Matrix Spike RQ1312563-07			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Bis(2-chloroethyl) Ether	ND	82.8	94.3	88	78.0	94.3	83	12 - 158	6	30
Bis(2-ethylhexyl) Phthalate	ND	96.9	94.3	103	94.5	94.3	100	10 - 158	3	30
Butyl Benzyl Phthalate	ND	91.2	94.3	97	89.0	94.3	94	10 - 152	2	30
Chrysene	ND	91.0	94.3	96	88.9	94.3	94	17 - 168	2	30
Di-n-butyl Phthalate	ND	93.3	94.3	99	91.1	94.3	97	10 - 118	2	30
Di-n-octyl Phthalate	ND	85.7	94.3	91	83.3	94.3	88	10 - 146	3	30
Dibenz(a,h)anthracene	ND	103	94.3	109	100	94.3	106	10 - 227	3	30
Diethyl Phthalate	ND	92.0	94.3	98	89.3	94.3	95	10 - 114	3	30
Dimethyl Phthalate	ND	93.0	94.3	99	89.0	94.3	94	10 - 112	4	30
Fluoranthene	ND	89.7	94.3	95	86.6	94.3	92	26 - 137	3	30
Fluorene	ND	89.5	94.3	95	86.9	94.3	92	59 - 121	3	30
Hexachlorobenzene	ND	93.2	94.3	99	90.9	94.3	96	10 - 152	2	30
Hexachlorobutadiene	ND	66.8	94.3	71	71.6	94.3	76	24 - 116	7	30
Hexachlorocyclopentadiene	ND	75.9	94.3	80	79.4	94.3	84	30 - 93	4	30
Hexachloroethane	ND	59.0	94.3	63	59.7	94.3	63	40 - 113	1	30
Indeno(1,2,3-cd)pyrene	ND	100	94.3	107	96.9	94.3	103	10 - 171	4	30
Isophorone	ND	90.4	94.3	96	88.2	94.3	94	21 - 196	2	30
N-Nitrosodi-n-propylamine	ND	87.0	94.3	92	80.9	94.3	86	10 - 230	7	30
N-Nitrosodimethylamine	ND	49.4	94.3	52	45.4	94.3	48	39 - 67	8	30
N-Nitrosodiphenylamine	ND	98.3	94.3	104	95.0	94.3	101	50 - 117	3	30
Naphthalene	ND	74.9	94.3	79	76.0	94.3	81	21 - 133	1	30
Nitrobenzene	ND	82.0	94.3	87	79.6	94.3	84	35 - 180	3	30
Pentachlorophenol (PCP)	ND	102	94.3	108	98.1	94.3	104	14 - 176	3	30
Phenanthrene	ND	94.2	94.3	100	91.6	94.3	97	54 - 120	3	30
Phenol	ND	32.9	94.3	35	30.9	94.3	33	10 - 112	6	30
Pyrene	ND	95.1	94.3	101	92.4	94.3	98	52 - 115	3	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 - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Collected: 10/8/13
 Date Received: 10/8/13
 Date Analyzed: 10/18/13

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

Sample Name: MW-12S-OCT13
 Lab Code: R1307504-003
 Analytical Method: NY 310-13
 Prep Method: Method

Units: µg/L
 Basis: NA

Analyte Name	Sample Result	MW-12S-OCT13MS Matrix Spike RQ1312626-04			MW-12S-OCT13DMS Duplicate Matrix Spike RQ1312626-05			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Fuel Oil No. 2	ND	4820	4720	102	4870	4720	103	70 - 136	<1	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 - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Analyzed: 10/15/13

Lab Control Sample Summary
 Volatile Organic Compounds by GC/MS

Analytical Method: 624

Units: µg/L
 Basis: NA

Analysis Lot: 363257

Lab Control Sample
 RQ1312864-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
1,1,1-Trichloroethane (TCA)	19.1	20.0	96	52 - 162
1,1,2,2-Tetrachloroethane	17.8	20.0	89	46 - 157
1,1,2-Trichloroethane	18.5	20.0	93	52 - 150
1,1-Dichloroethane (1,1-DCA)	19.1	20.0	95	59 - 155
1,1-Dichloroethene (1,1-DCE)	18.8	20.0	94	10 - 234
1,2-Dichlorobenzene	20.7	20.0	103	18 - 190
1,2-Dichloroethane	18.2	20.0	91	49 - 155
1,2-Dichloropropane	19.3	20.0	96	10 - 210
1,3-Dichlorobenzene	21.1	20.0	105	59 - 156
1,4-Dichlorobenzene	21.3	20.0	106	18 - 190
2-Chloroethyl Vinyl Ether	18.6	20.0	93	10 - 305
Acetone	16.3	20.0	82	53 - 141
Benzene	19.3	20.0	96	37 - 151
Bromodichloromethane	19.4	20.0	97	35 - 155
Bromoform	19.4	20.0	97	45 - 169
Bromomethane	19.8	20.0	99	10 - 242
Carbon Tetrachloride	19.0	20.0	95	70 - 140
Chlorobenzene	19.8	20.0	99	37 - 160
Chloroethane	18.8	20.0	94	14 - 230
Chloroform	19.7	20.0	98	51 - 138
Chloromethane	15.9	20.0	79	10 - 273
Dibromochloromethane	19.1	20.0	95	53 - 149
Methylene Chloride	18.8	20.0	94	10 - 221
Ethylbenzene	20.7	20.0	103	37 - 162
Tetrachloroethene (PCE)	20.5	20.0	103	64 - 148
Toluene	19.2	20.0	96	47 - 150
Trichloroethene (TCE)	20.0	20.0	100	71 - 157
Trichlorofluoromethane (CFC 11)	20.2	20.0	101	17 - 181
Vinyl Chloride	18.4	20.0	92	10 - 251
cis-1,2-Dichloroethene	19.2	20.0	96	72 - 125
cis-1,3-Dichloropropene	19.8	20.0	99	10 - 227
m,p-Xylenes	42.3	40.0	106	76 - 131
o-Xylene	20.4	20.0	102	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.

Client: Ecology And Environment, Incorporated
Project: Davis Howland Oil Company Site - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Analyzed: 10/15/13

Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analytical Method: 624

Units: µg/L
Basis: NA

Analysis Lot: 363257

Lab Control Sample
 RQ1312864-03

Analyte Name	Result	Spike Amount	% Rec	% Rec Limits
trans-1,2-Dichloroethene	20.0	20.0	100	54 - 156
trans-1,3-Dichloropropene	19.7	20.0	99	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 - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Analyzed: 10/22/13

Lab Control Sample Summary
 Volatile Organic Compounds by GC/MS

Analytical Method: 624

Units: µg/L
 Basis: NA

Analysis Lot: 364416

Analyte Name	Lab Control Sample RQ1313622-03			Duplicate Lab Control Sample RQ1313622-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,1,1-Trichloroethane (TCA)	20.8	20.0	104	20.4	20.0	102	52 - 162	2	30
1,1,2,2-Tetrachloroethane	18.1	20.0	90	18.7	20.0	94	46 - 157	3	30
1,1,2-Trichloroethane	20.2	20.0	101	19.8	20.0	99	52 - 150	2	30
1,1-Dichloroethane (1,1-DCA)	20.7	20.0	103	20.0	20.0	100	59 - 155	3	30
1,1-Dichloroethene (1,1-DCE)	19.5	20.0	97	19.0	20.0	95	10 - 234	2	30
1,2-Dichlorobenzene	20.2	20.0	101	20.7	20.0	103	18 - 190	2	30
1,2-Dichloroethane	20.3	20.0	101	19.1	20.0	96	49 - 155	6	30
1,2-Dichloropropane	19.2	20.0	96	19.4	20.0	97	10 - 210	1	30
1,3-Dichlorobenzene	20.8	20.0	104	21.2	20.0	106	59 - 156	2	30
1,4-Dichlorobenzene	20.9	20.0	104	21.3	20.0	106	18 - 190	2	30
2-Chloroethyl Vinyl Ether	15.5	20.0	78	15.8	20.0	79	10 - 305	2	30
Acetone	17.8	20.0	89	15.8	20.0	79	53 - 141	12	30
Benzene	20.2	20.0	101	19.7	20.0	98	37 - 151	3	30
Bromodichloromethane	20.6	20.0	103	20.5	20.0	103	35 - 155	<1	30
Bromoform	18.9	20.0	95	19.3	20.0	97	45 - 169	2	30
Bromomethane	20.6	20.0	103	20.6	20.0	103	10 - 242	<1	30
Carbon Tetrachloride	20.4	20.0	102	20.4	20.0	102	70 - 140	<1	30
Chlorobenzene	20.2	20.0	101	20.8	20.0	104	37 - 160	3	30
Chloroethane	19.6	20.0	98	20.1	20.0	101	14 - 230	2	30
Chloroform	21.9	20.0	109	21.0	20.0	105	51 - 138	4	30
Chloromethane	18.5	20.0	92	18.6	20.0	93	10 - 273	<1	30
Dibromochloromethane	19.6	20.0	98	20.5	20.0	102	53 - 149	4	30
Methylene Chloride	21.0	20.0	105	19.7	20.0	99	10 - 221	6	30
Ethylbenzene	20.7	20.0	104	21.3	20.0	107	37 - 162	3	30
Tetrachloroethene (PCE)	20.6	20.0	103	21.0	20.0	105	64 - 148	2	30
Toluene	20.6	20.0	103	20.7	20.0	104	47 - 150	<1	30
Trichloroethene (TCE)	20.3	20.0	101	20.1	20.0	101	71 - 157	<1	30
Trichlorofluoromethane (CFC 11)	21.8	20.0	109	21.1	20.0	105	17 - 181	3	30
Vinyl Chloride	20.5	20.0	103	19.5	20.0	97	10 - 251	5	30
cis-1,2-Dichloroethene	20.7	20.0	103	19.7	20.0	99	72 - 125	5	30
cis-1,3-Dichloropropene	20.1	20.0	100	20.0	20.0	100	10 - 227	<1	30
m,p-Xylenes	43.1	40.0	108	44.0	40.0	110	76 - 131	2	30
o-Xylene	20.8	20.0	104	21.6	20.0	108	78 - 127	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 - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Analyzed: 10/22/13

Lab Control Sample Summary
 Volatile Organic Compounds by GC/MS

Analytical Method: 624

Units: µg/L
 Basis: NA

Analysis Lot: 364416

Analyte Name	Lab Control Sample RQ1313622-03			Duplicate Lab Control Sample RQ1313622-04			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
trans-1,2-Dichloroethene	20.9	20.0	104	20.2	20.0	101	54 - 156	4	30
trans-1,3-Dichloropropene	20.2	20.0	101	20.3	20.0	101	17 - 183	<1	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 - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Analyzed: 10/15/13

Lab Control Sample Summary
 Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C

Units: µg/L
 Basis: NA

Extraction Lot: 194084

Analyte Name	Lab Control Sample RQ1312661-02			Duplicate Lab Control Sample RQ1312661-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,2,4-Trichlorobenzene	56.4	100	56	60.3	100	60	29 - 85	7	30
1,2-Diphenylhydrazine	96.0	100	96	97.7	100	98	64 - 114	2	30
2,4,6-Trichlorophenol	98.7	100	99	103	100	103	37 - 144	4	30
2,4-Dichlorophenol	91.9	100	92	94.8	100	95	39 - 135	3	30
2,4-Dimethylphenol	87.4	100	87	88.2	100	88	32 - 119	<1	30
2,4-Dinitrophenol	103	100	103	87.0	100	87	10 - 191	17	30
2,4-Dinitrotoluene	100	100	100	102	100	102	39 - 139	2	30
2,6-Dinitrotoluene	97.9	100	98	99.7	100	100	50 - 158	2	30
2-Chloronaphthalene	85.1	100	85	82.0	100	82	60 - 118	4	30
2-Chlorophenol	80.3	100	80	83.2	100	83	23 - 134	4	30
2-Nitrophenol	90.0	100	90	91.6	100	92	29 - 182	2	30
3,3'-Dichlorobenzidine	85.8	100	86	78.4	100	78	10 - 262	9	30
4,6-Dinitro-o-cresol	105	100	105	106	100	106	10 - 181	2	30
4-Bromophenyl Phenyl Ether	96.7	100	97	98.8	100	99	53 - 127	2	30
4-Chloro-m-cresol	96.0	100	96	97.9	100	98	22 - 147	2	30
4-Chlorophenyl Phenyl Ether	96.4	100	96	95.2	100	95	25 - 158	1	30
4-Nitrophenol	40.8	100	41	44.4	100	44	10 - 132	9	30
Acenaphthene	91.3	100	91	89.3	100	89	47 - 145	2	30
Acenaphthylene	94.4	100	94	92.7	100	93	33 - 145	2	30
Anthracene	93.8	100	94	95.9	100	96	27 - 133	2	30
Benz(a)anthracene	94.9	100	95	98.4	100	98	33 - 143	4	30
Benzidine	95.0	100	95	100 U	100	0 *	10 - 169	NC	30
Benzo(a)pyrene	96.1	100	96	99.4	100	99	17 - 163	3	30
3,4-Benzofluoranthene	91.4	100	91	95.3	100	95	24 - 159	4	30
Benzo(g,h,i)perylene	103	100	103	109	100	109	10 - 219	5	30
Benzo(k)fluoranthene	98.4	100	98	91.2	100	91	11 - 162	8	30
Bis(1-chloroisopropyl) Ether	94.7	100	95	94.6	100	95	36 - 166	<1	30
Bis(2-chloroethoxy)methane	92.5	100	93	94.0	100	94	33 - 184	2	30
Bis(2-chloroethyl) Ether	81.0	100	81	85.7	100	86	12 - 158	6	30
Bis(2-ethylhexyl) Phthalate	106	100	106	106	100	106	10 - 158	<1	30
Butyl Benzyl Phthalate	103	100	103	103	100	103	10 - 152	<1	30
Chrysene	96.1	100	96	99.1	100	99	17 - 168	3	30
Di-n-butyl Phthalate	99.2	100	99	101	100	101	10 - 118	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 - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Analyzed: 10/15/13

Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 194084

Analyte Name	Lab Control Sample RQ1312661-02			Duplicate Lab Control Sample RQ1312661-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Di-n-octyl Phthalate	97.7	100	98	98.1	100	98	10 - 146	<1	30
Dibenz(a,h)anthracene	104	100	104	110	100	110	10 - 227	6	30
Diethyl Phthalate	99.7	100	100	100	100	100	10 - 114	<1	30
Dimethyl Phthalate	98.7	100	99	100	100	100	10 - 112	1	30
Fluoranthene	95.5	100	96	95.9	100	96	26 - 137	<1	30
Fluorene	94.6	100	95	94.2	100	94	59 - 121	<1	30
Hexachlorobenzene	95.1	100	95	96.7	100	97	10 - 152	2	30
Hexachlorobutadiene	48.9	100	49	56.4	100	56	24 - 116	14	30
Hexachlorocyclopentadiene	63.3	100	63	63.6	100	64	30 - 93	<1	30
Hexachloroethane	43.8	100	44	53.8	100	54	40 - 113	21	30
Indeno(1,2,3-cd)pyrene	100	100	100	106	100	106	10 - 171	6	30
Isophorone	94.6	100	95	96.2	100	96	21 - 196	2	30
N-Nitrosodi-n-propylamine	93.6	100	94	92.7	100	93	10 - 230	<1	30
N-Nitrosodimethylamine	51.6	100	52	55.9	100	56	39 - 67	8	30
N-Nitrosodiphenylamine	100	100	100	104	100	104	50 - 117	3	30
Naphthalene	67.6	100	68	70.4	100	70	21 - 133	4	30
Nitrobenzene	83.5	100	83	86.5	100	86	35 - 180	4	30
Pentachlorophenol (PCP)	88.8	100	89	95.8	100	96	14 - 176	8	30
Phenanthrene	97.3	100	97	98.2	100	98	54 - 120	<1	30
Phenol	39.1	100	39	41.3	100	41	10 - 112	6	30
Pyrene	103	100	103	108	100	108	52 - 115	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 - Semiannual Water/EN-003231-0001-03-
Sample Matrix: Water

Service Request: R1307504
Date Analyzed: 10/17/13

Lab Control Sample Summary
Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
Prep Method: EPA 3510C

Units: µg/L
Basis: NA

Extraction Lot: 193999

Analyte Name	Lab Control Sample RQ1312563-02			Duplicate Lab Control Sample RQ1312563-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,2,4-Trichlorobenzene	54.5	100	54	61.2	100	61	29 - 85	12	30
1,2-Diphenylhydrazine	96.2	100	96	95.7	100	96	64 - 114	<1	30
2,4,6-Trichlorophenol	96.6	100	97	97.8	100	98	37 - 144	1	30
2,4-Dichlorophenol	89.9	100	90	88.7	100	89	39 - 135	1	30
2,4-Dimethylphenol	81.8	100	82	81.0	100	81	32 - 119	1	30
2,4-Dinitrophenol	99.9	100	100	103	100	103	10 - 191	4	30
2,4-Dinitrotoluene	94.4	100	94	95.9	100	96	39 - 139	2	30
2,6-Dinitrotoluene	93.9	100	94	94.4	100	94	50 - 158	<1	30
2-Chloronaphthalene	78.8	100	79	81.2	100	81	60 - 118	3	30
2-Chlorophenol	77.2	100	77	75.9	100	76	23 - 134	2	30
2-Nitrophenol	88.4	100	88	87.8	100	88	29 - 182	<1	30
3,3'-Dichlorobenzidine	82.9	100	83	83.7	100	84	10 - 262	1	30
4,6-Dinitro-o-cresol	102	100	102	105	100	105	10 - 181	3	30
4-Bromophenyl Phenyl Ether	97.6	100	98	96.3	100	96	53 - 127	1	30
4-Chloro-m-cresol	93.8	100	94	93.4	100	93	22 - 147	<1	30
4-Chlorophenyl Phenyl Ether	90.8	100	91	91.3	100	91	25 - 158	<1	30
4-Nitrophenol	36.3	100	36	44.1	100	44	10 - 132	19	30
Acenaphthene	86.4	100	86	87.1	100	87	47 - 145	<1	30
Acenaphthylene	89.3	100	89	90.1	100	90	33 - 145	<1	30
Anthracene	93.0	100	93	92.1	100	92	27 - 133	<1	30
Benz(a)anthracene	92.1	100	92	93.2	100	93	33 - 143	1	30
Benidine	61.6	100	62	72.5	100	72	10 - 169	16	30
Benzo(a)pyrene	94.7	100	95	94.7	100	95	17 - 163	<1	30
3,4-Benzofluoranthene	87.0	100	87	86.4	100	86	24 - 159	<1	30
Benzo(g,h,i)perylene	103	100	103	106	100	106	10 - 219	3	30
Benzo(k)fluoranthene	87.3	100	87	90.7	100	91	11 - 162	4	30
Bis(1-chloroisopropyl) Ether	92.4	100	92	89.2	100	89	36 - 166	4	30
Bis(2-chloroethoxy)methane	91.0	100	91	90.6	100	91	33 - 184	<1	30
Bis(2-chloroethyl) Ether	80.2	100	80	81.0	100	81	12 - 158	<1	30
Bis(2-ethylhexyl) Phthalate	98.2	100	98	97.9	100	98	10 - 158	<1	30
Butyl Benzyl Phthalate	94.4	100	94	97.3	100	97	10 - 152	3	30
Chrysene	93.4	100	93	93.2	100	93	17 - 168	<1	30
Di-n-butyl Phthalate	95.8	100	96	95.8	100	96	10 - 118	<1	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 - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Analyzed: 10/17/13

Lab Control Sample Summary
 Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C

Units: µg/L
 Basis: NA

Extraction Lot: 193999

Analyte Name	Lab Control Sample RQ1312563-02			Duplicate Lab Control Sample RQ1312563-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Di-n-octyl Phthalate	88.0	100	88	90.1	100	90	10 - 146	2	30
Dibenz(a,h)anthracene	104	100	104	107	100	107	10 - 227	3	30
Diethyl Phthalate	93.9	100	94	95.3	100	95	10 - 114	1	30
Dimethyl Phthalate	94.4	100	94	96.0	100	96	10 - 112	2	30
Fluoranthene	92.4	100	92	92.3	100	92	26 - 137	<1	30
Fluorene	89.3	100	89	90.3	100	90	59 - 121	1	30
Hexachlorobenzene	94.4	100	94	94.9	100	95	10 - 152	<1	30
Hexachlorobutadiene	50.5	100	50	58.4	100	58	24 - 116	15	30
Hexachlorocyclopentadiene	55.4	100	55	64.0	100	64	30 - 93	14	30
Hexachloroethane	47.5	100	47	51.7	100	52	40 - 113	9	30
Indeno(1,2,3-cd)pyrene	100	100	100	103	100	103	10 - 171	3	30
Isophorone	92.0	100	92	92.7	100	93	21 - 196	<1	30
N-Nitrosodi-n-propylamine	88.6	100	89	87.8	100	88	10 - 230	<1	30
N-Nitrosodimethylamine	49.7	100	50	46.4	100	46	39 - 67	7	30
N-Nitrosodiphenylamine	100	100	100	101	100	101	50 - 117	1	30
Naphthalene	66.8	100	67	70.1	100	70	21 - 133	5	30
Nitrobenzene	82.5	100	83	80.3	100	80	35 - 180	3	30
Pentachlorophenol (PCP)	87.4	100	87	89.2	100	89	14 - 176	2	30
Phenanthrene	95.7	100	96	97.0	100	97	54 - 120	1	30
Phenol	38.0	100	38	39.5	100	39	10 - 112	4	30
Pyrene	99.0	100	99	101	100	101	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 - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Analyzed: 10/18/13

Lab Control Sample Summary
 Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C

Units: µg/L
 Basis: NA

Extraction Lot: 194525

Analyte Name	Lab Control Sample RQ1312928-02			Duplicate Lab Control Sample RQ1312928-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
1,2,4-Trichlorobenzene	77.6	100	78	57.8	100	58	29 - 85	29	30
1,2-Diphenylhydrazine	97.5	100	98	96.2	100	96	64 - 114	1	30
2,4,6-Trichlorophenol	98.2	100	98	99.9	100	100	37 - 144	2	30
2,4-Dichlorophenol	89.5	100	89	91.7	100	92	39 - 135	2	30
2,4-Dimethylphenol	85.3	100	85	87.3	100	87	32 - 119	2	30
2,4-Dinitrophenol	72.8	100	73	74.0	100	74	10 - 191	2	30
2,4-Dinitrotoluene	96.7	100	97	98.4	100	98	39 - 139	2	30
2,6-Dinitrotoluene	95.8	100	96	97.9	100	98	50 - 158	2	30
2-Chloronaphthalene	91.4	100	91	84.8	100	85	60 - 118	7	30
2-Chlorophenol	81.1	100	81	79.2	100	79	23 - 134	2	30
2-Nitrophenol	88.2	100	88	92.5	100	92	29 - 182	5	30
3,3'-Dichlorobenzidine	80.0	100	80	89.0	100	89	10 - 262	11	30
4,6-Dinitro-o-cresol	98.5	100	98	102	100	102	10 - 181	4	30
4-Bromophenyl Phenyl Ether	98.3	100	98	97.2	100	97	53 - 127	1	30
4-Chloro-m-cresol	92.9	100	93	94.4	100	94	22 - 147	2	30
4-Chlorophenyl Phenyl Ether	95.3	100	95	94.6	100	95	25 - 158	<1	30
4-Nitrophenol	32.1	100	32	34.4	100	34	10 - 132	7	30
Acenaphthene	93.9	100	94	90.3	100	90	47 - 145	4	30
Acenaphthylene	97.1	100	97	94.1	100	94	33 - 145	3	30
Anthracene	93.4	100	93	94.4	100	94	27 - 133	1	30
Benz(a)anthracene	93.2	100	93	95.0	100	95	33 - 143	2	30
Benzidine	72.3	100	72	100 U	100	0 *	10 - 169	NC	30
Benzo(a)pyrene	94.5	100	95	97.6	100	98	17 - 163	3	30
3,4-Benzofluoranthene	87.4	100	87	93.9	100	94	24 - 159	7	30
Benzo(g,h,i)perylene	102	100	102	104	100	104	10 - 219	2	30
Benzo(k)fluoranthene	89.6	100	90	85.0	100	85	11 - 162	5	30
Bis(1-chloroisopropyl) Ether	98.4	100	98	92.8	100	93	36 - 166	6	30
Bis(2-chloroethoxy)methane	91.0	100	91	93.9	100	94	33 - 184	3	30
Bis(2-chloroethyl) Ether	81.8	100	82	84.4	100	84	12 - 158	3	30
Bis(2-ethylhexyl) Phthalate	97.5	100	98	99.6	100	100	10 - 158	2	30
Butyl Benzyl Phthalate	95.4	100	95	97.1	100	97	10 - 152	2	30
Chrysene	94.4	100	94	96.5	100	96	17 - 168	2	30
Di-n-butyl Phthalate	96.2	100	96	96.5	100	96	10 - 118	<1	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 - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Analyzed: 10/18/13

Lab Control Sample Summary
 Semivolatile Organic Compounds by GC/MS

Analytical Method: 625
 Prep Method: EPA 3510C

Units: µg/L
 Basis: NA

Extraction Lot: 194525

Analyte Name	Lab Control Sample RQ1312928-02			Duplicate Lab Control Sample RQ1312928-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Di-n-octyl Phthalate	87.6	100	88	88.9	100	89	10 - 146	1	30
Dibenz(a,h)anthracene	103	100	103	106	100	106	10 - 227	3	30
Diethyl Phthalate	95.8	100	96	97.0	100	97	10 - 114	1	30
Dimethyl Phthalate	97.0	100	97	98.0	100	98	10 - 112	1	30
Fluoranthene	92.0	100	92	92.3	100	92	26 - 137	<1	30
Fluorene	92.9	100	93	91.9	100	92	59 - 121	1	30
Hexachlorobenzene	96.6	100	97	96.3	100	96	10 - 152	<1	30
Hexachlorobutadiene	77.3	100	77	50.2	100	50	24 - 116	42 *	30
Hexachlorocyclopentadiene	78.8	100	79	71.0	100	71	30 - 93	10	30
Hexachloroethane	71.4	100	71	47.9	100	48	40 - 113	39 *	30
Indeno(1,2,3-cd)pyrene	99.7	100	100	103	100	103	10 - 171	4	30
Isophorone	93.5	100	94	95.4	100	95	21 - 196	2	30
N-Nitrosodi-n-propylamine	91.0	100	91	90.4	100	90	10 - 230	<1	30
N-Nitrosodimethylamine	49.7	100	50	45.9	100	46	39 - 67	8	30
N-Nitrosodiphenylamine	101	100	101	102	100	102	50 - 117	1	30
Naphthalene	81.1	100	81	69.8	100	70	21 - 133	15	30
Nitrobenzene	84.2	100	84	85.6	100	86	35 - 180	2	30
Pentachlorophenol (PCP)	87.0	100	87	88.8	100	89	14 - 176	2	30
Phenanthrene	96.5	100	96	96.3	100	96	54 - 120	<1	30
Phenol	38.1	100	38	37.9	100	38	10 - 112	<1	30
Pyrene	99.9	100	100	102	100	102	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 - Semiannual Water/EN-003231-0001-03
 Sample Matrix: Water

Service Request: R1307504
 Date Analyzed: 10/18/13

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: 194077

Analyte Name	Lab Control Sample RQ1312626-02			Duplicate Lab Control Sample RQ1312626-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Fuel Oil No. 2	5270	5010	105	5760	5010	115	70 - 136	9	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 - Semiannual Water/EN-003231-0001-03-
 Sample Matrix: Water

Service Request: R1307504
 Date Analyzed: 10/18/13

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: 194289

Analyte Name	Lab Control Sample RQ1312809-02			Duplicate Lab Control Sample RQ1312809-03			% Rec Limits	RPD	RPD Limit
	Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Fuel Oil No. 2	6010	5010	120	5820	5010	116	70 - 136	3	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.




CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM 3988

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 EN-003231-0001-03 TTO		ANALYSIS REQUESTED (Include Method Number and Container Preservative)															
Project Manager MIKE ALOI		Report CC		PRESERVATIVE															
Company/Address Ecology: Environment Inc		NUMBER OF CONTAINERS GC/MS VOAs • 8280 • 824 • CLP GC/MS SVOAs • 8270 • 825 GC VOAs • 8021 • 801/802 PESTICIDES • 8081 • 808 PCBs • 8082 • 808 METALS, TOTAL (List in comments below) METALS, DISSOLVED (List in comments below) VOC (E601-2) SVOC (E625) TPH		1 0 0															
368 Pleasantview Dr Lancaster NY 14086				Preservative Key 0. NONE 1. HCL 2. HNO ₃ 3. H ₂ SO ₄ 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO ₄ 8. Other _____ REMARKS/ ALTERNATE DESCRIPTION															
Phone # 716 684-8060																Email MALOI@ENE.COM			
Sampler's Signature <i>Lawrence Reed</i>																Sampler's Printed Name Lawrence Reed			
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	DATE	SAMPLING TIME	MATRIX															
MW-14S-Oct13		10/8/13	10:03	WG	6														
MW-14R-Oct13		10/8/13	13:10	WG	6														
MW-12S-Oct13		10/8/13	12:15	WG	6														
MW-12S-Oct13ms		10/8/13	12:15	WG	6														
MW-12S-Oct13SD		10/8/13	12:15	WG	6														
MW-12R-Oct																			
MW-12R-Oct13		10/8/13	11:00	WG	6														
MW-5R-Oct13		10/5/13	17:48	WG	6														
MW-8R-Oct13		10/8/13	18:40	WG	6														
TB1310078		10/8/13	8:30	WG	3														
SPECIAL INSTRUCTIONS/COMMENTS Metals <i>OK 10/13 per Larry Reed</i>					TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 1 day 2 day 3 day 4 day 5 day <input checked="" type="checkbox"/> As per Contract REQUESTED REPORT DATE					REPORT REQUIREMENTS I. Results Only II. Results + QC Summaries (LCS, DUP, MS/MSD as required) <input checked="" type="checkbox"/> III. Results + QC and Calibration Summaries IV. Data Validation Report with Raw Data Edata Yes No					INVOICE INFORMATION PO # BILL TO: R1307504 RECEIVED BY				
STATE WHERE SAMPLES WERE COLLECTED																			
RELINQUISHED BY			RECEIVED BY			RELINQUISHED BY			RECEIVED BY			RELINQUISHED BY			RECEIVED BY				
Signature <i>Lawrence Reed</i>			Signature <i>Greg Lita</i>			Signature			Signature			Signature			Signature				
Printed Name Lawrence Reed			Printed Name Greg Lita			Printed Name			Printed Name			Printed Name			Printed Name				
Firm Ecology: Environment			Firm ALS			Firm			Firm			Firm			Firm				
Date/Time 10/8/13 18:58			Date/Time 10/8/13 18:58			Date/Time			Date/Time			Date/Time			Date/Time				

R1307504 5

Ecology And Environment, Incorporated
Davis Howland Oil Company Site - Semiannual Wa

Project Name Davis Howland		Project Number EN-003231-0001-03TTO		ANALYSIS REQUESTED (Include Method Number and Container Preservative)																							
Project Manager Mike Alois		Report CC		PRESERVATIVE																							
Company/Address E+E				NUMBER OF CONTAINERS	GC/MS VOAs • 8260 • 824 • CLP	GC/MS SVOAs • 8270 • 825	GC VOAs • 8021 • 801/802	PESTICIDES • 8081 • 808	PCBs • 808g • 808	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	VOL (E 601-2)	SVOC (E 625)	TPH	PRESERVATIVE KEY	0. NONE 1. HCL 2. HNO ₃ 3. H ₂ SO ₄ 4. NaOH 5. Zn. Acetate 6. MeOH 7. NaHSO ₄ 8. Other _____											
368 Pleasantview Dr. Lancaster, NY 14086																REMARKS/ ALTERNATE DESCRIPTION											
Phone # 716-644-4060		Email MAlois@ene.com																									
Sampler's Signature <i>[Signature]</i>		Sampler's Printed Name Tim Dillon																									
CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE TIME		MATRIX																							
MW-13S-OCT13		10/9/13	0858	W6	6										3	2	1										
MW-2R-OCT13		10/9/13	0911	W6	6										3	2	1										
MW-2S-OCT13		10/9/13	1010	W6	6										3	2	1										
P-1-OCT13		10/9/13	1030	W6	3										3												
P-3-OCT13		10/9/13	1035	W6	3										3												
P-2-OCT13		10/9/13	1100	W6	3										3												
PW-1-OCT13		10/9/13	1108	W6	3										3	2	1										
MW-15-OCT13		10/9/13	1325	W6	6										3	2	1										
TB-20131008		10/9/13	0800	W6	3										3												
MW-16R-OCT13		10/9/13	1500	W6	6										3	2	1										
SPECIAL INSTRUCTIONS/COMMENTS Metals					TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 1 day 2 day 3 day 4 day 5 day As per contract REQUESTED REPORT DATE					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					INVOICE INFORMATION PO # BILL TO:												
See QAPP <input type="checkbox"/>										Edata <input type="checkbox"/> Yes					<div style="border: 1px solid black; padding: 5px;"> R1307504 5 Ecology And Environment, Incorporated Davis Howland Oil Company Site - Semiannual Wa  </div>												
STATE WHERE SAMPLES WERE COLLECTED																											
RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY		RELINQUISHED BY		RECEIVED BY					
<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>		<i>[Signature]</i>					
Printed Name Tim Dillon		Printed Name ALS		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name		Printed Name					
Firm E+E		Firm 10/9/13/1555		Firm		Firm		Firm		Firm		Firm		Firm		Firm		Firm		Firm		Firm					
Date/Time 10/9/13 1555		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time		Date/Time					

per Larry Reed
10/9/13
[Signature]



Cooler Receipt and Preservation

R1307504 5
 Ecology And Environment, Incorporated
 Davis Howland Oil Company Site - Semiannual Wa

Project/Client E+E Folder Number _____

Cooler received on 10/19/13 by: dlw COURIER: ALS UPS FEDEX VELOCITY CLIENT

1. Were custody seals on outside of cooler? YES ~~NO~~
2. Were custody papers properly filled out (ink, signed, etc.)? ~~YES~~ NO
3. Did all bottles arrive in good condition (unbroken)? ~~YES~~ NO
4. Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles? YES ~~NO~~ N/A
5. Were ~~Ice~~ or Ice packs present? ~~YES~~ NO
6. Where did the bottles originate? ALS/ROC, CLIENT
7. Soil VOA samples received as: Bulk Jar Encore TerraCore Lab5035set N/A
8. Temperature of cooler(s) upon receipt: 14.40 13.10

Is the temperature within 0° - 6° C?: Y ~~N~~ * ~~Y~~ N Y N Y N Y N

If No, Explain Below - Date/Time Temperatures Taken: 10/19/13/1605

Thermometer ID: IR GUN#3 / ~~IR GUN#4~~ Reading From: *Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition & Client Approval to Run Samples:

All Samples held in storage location R-002 by dlw on 10/19/13 at 1605
 5035 samples placed in storage location _____ by _____ on _____ at _____

PC Secondary Review: [Signature]

Cooler Breakdown: Date: 10/10 Time: 1340 by: JES

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			Lot Received	Exp	Sample ID	Vol. Added	Lot Added	Final pH	Yes = All samples OK No = Samples were preserved at lab as listed PM OK to Adjust:
		YES	NO							
≥12	NaOH									
≤2	HNO ₃									
≤2	H ₂ SO ₄									
<4	NaHSO ₄									
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)						
	Na ₂ S ₂ O ₃	-	-							*Not to be tested before analysis - pH tested and recorded by VOAs or GenChem on a separate worksheet
	Zn Aceta	-	-							
	HCl	*	*	9112100	8/14					

Bottle lot numbers: 2122
 Other Comments:

PC Secondary Review: [Signature]
 G:\SMODOCS\Cooler Receipt 6.doc 11/6/12

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

00172



Cooler Receipt and Preservation

R1307504

5

Ecology And Environment, Incorporated
Davis Howland Oil Company Site - Semiannual Wa



Project/Client E+E Folder Number _____

Cooler received on 10/10/13 by: dm COURIER: ALS UPS FEDEX VELOCITY CLIENT

- Were custody seals on outside of cooler? YES ~~NO~~
- Were custody papers properly filled out (ink, signed, etc.)? YES NO
- Did all bottles arrive in good condition (unbroken)? YES NO
- Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles? YES NO N/A
- Were Ice or ~~ice packs~~ present? YES NO
- Where did the bottles originate? ALS/ROC, CLIENT
- Soil VOA samples received as: Bulk Jar Encore TerraCore Lab5035set N/A
- Temperature of cooler(s) upon receipt: 41.8° 3.8° _____

Is the temperature within 0° - 6° C?: YN YN Y N Y N Y N

If No, Explain Below Date/Time Temperatures Taken: 10/10/13/1753

Thermometer ID: IR GUN#3 / ~~IR GUN#4~~ Reading From: Temp Blank / ~~Sample Bottle~~

If out of Temperature, note packing/ice condition & Client Approval to Run Samples:

All Samples held in storage location R002 by dm on 10/10/13 at 1753
 5035 samples placed in storage location _____ by _____ on _____ at _____

PC: Secondary Review: [Signature]

Cooler Breakdown: Date: 10-11-13 Time: 15:00 by: [Signature]

- Were all bottle labels complete (i.e. analysis, preservation, etc.)? YES NO
- Did all bottle labels and tags agree with custody papers? YES NO
- Were correct containers used for the tests indicated? YES NO
- 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
		YES	NO						
≥12	NaOH								
≤2	HNO ₃								
≤2	H ₂ SO ₄								
<4	NaHSO ₄								
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)					
	Na ₂ S ₂ O ₃	-	-						
	Zn Aceta	-	-						
	HCl	*	*	<u>4112100</u>	<u>10/14</u>				


Yes = All samples OK
 No = Samples were preserved at lab as listed
 PM OK to Adjust: _____

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

Bottle lot numbers: 3-212-002, 072213-1 BLT
Other Comments:

PC Secondary Review: [Signature]

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

Project Name DAVID Howland		Project Number EN-3231-0001-03TTO		ANALYSIS REQUESTED (Include Method Number and Container Preservative)																																				
Project Manager MIKE Alois		Report CC		PRESERVATIVE																																				
Company/Address Ecology environment 368 Pleasantview Dr Lancaster NY 14086		Phone # 716-684-8060		Email mlaloi@EVE.com		<table border="1" style="width:100%; text-align: center;"> <tr> <td>NUMBER OF CONTAINERS</td> <td>GC/MS VOAs • 8289 • 824 • CLP • 8270 • 825</td> <td>GC/MS SVOAs • 8221 • 801/802</td> <td>PESTICIDES • 8287 • 828</td> <td>PCBS • 8282 • 828</td> <td>METALS, TOTAL (List in comments below)</td> <td>METALS, DISSOLVED (List in comments below)</td> <td>1</td> <td>0</td> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>												NUMBER OF CONTAINERS	GC/MS VOAs • 8289 • 824 • CLP • 8270 • 825	GC/MS SVOAs • 8221 • 801/802	PESTICIDES • 8287 • 828	PCBS • 8282 • 828	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	1	0	0													
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Sampler's Signature <i>Lawrence R. ...</i>		Sampler's Printed Name Lawrence R. ...		<table border="1" style="width:100%; text-align: center;"> <tr> <td>GC/MS VOAs • 8289 • 824 • CLP • 8270 • 825</td> <td>GC/MS SVOAs • 8221 • 801/802</td> <td>PESTICIDES • 8287 • 828</td> <td>PCBS • 8282 • 828</td> <td>METALS, TOTAL (List in comments below)</td> <td>METALS, DISSOLVED (List in comments below)</td> <td>3</td> <td>2</td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>												GC/MS VOAs • 8289 • 824 • CLP • 8270 • 825	GC/MS SVOAs • 8221 • 801/802	PESTICIDES • 8287 • 828	PCBS • 8282 • 828	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	3	2	1																
GC/MS VOAs • 8289 • 824 • CLP • 8270 • 825	GC/MS SVOAs • 8221 • 801/802	PESTICIDES • 8287 • 828	PCBS • 8282 • 828	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	3	2	1																																
CLIENT SAMPLE ID		FOR OFFICE USE ONLY LAB ID	SAMPLING DATE		SAMPLING TIME		MATRIX		PRESERVATIVE KEY																															
TR-131017			10/11/13		8:00		WG		<table border="1" style="width:100%; text-align: center;"> <tr> <td>0. NONE</td> <td>1. HCL</td> <td>2. HNO3</td> <td>3. H2SO4</td> <td>4. NaOH</td> <td>5. Zn. Acetate</td> <td>6. MeOH</td> <td>7. NaHSO4</td> <td>8. Other</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>												0. NONE	1. HCL	2. HNO3	3. H2SO4	4. NaOH	5. Zn. Acetate	6. MeOH	7. NaHSO4	8. Other											
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MW-102-Oct 13			10/11/13		1300		WG		REMARKS/ ALTERNATE DESCRIPTION																															
RB 131011			11/11/13		1305		WG																																	
SPECIAL INSTRUCTIONS/COMMENTS Metals												TURNAROUND REQUIREMENTS RUSH (SURCHARGES APPLY) 1 day 2 day 3 day 4 day 5 day As per contract REQUESTED REPORT DATE			REPORT REQUIREMENTS I. Results Only II. Results + QC Summaries (LCS, DUP, MS/MSD as required) <input checked="" type="checkbox"/> III. Results + QC and Calibration Summaries IV. Data Validation Report with Edata Yes			INVOICE INFORMATION PO # BILL TO: R1307504 5 Ecology And Environment, Incorporated David Howland Oil Company Site - Semiannual Wa 																						
STATE WHERE SAMPLES WERE COLLECTED												RELINQUISHED BY			RECEIVED BY			RELINQUISHED BY			RECEIVED BY																			
RELINQUISHED BY												Signature			Signature			Signature			Signature																			
Printed Name												Printed Name			Printed Name			Printed Name			Printed Name																			
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Cooler Receipt and Preservation CI

R1307504

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Ecology And Environment, Incorporated
Davis Howland Oil Company Site - Semiannual Wa

Project/Client E+E Folder Number 1



Cooler received on 10/11/13 by: AP COURIER: ALS UPS FEDEX VELOCITY- CLIENT

1. Were custody seals on outside of cooler? YES NO
2. Were custody papers properly filled out (ink, signed, etc.)? YES NO
3. Did all bottles arrive in good condition (unbroken)? YES NO
4. Did VOA vials, Alkalinity, or Sulfide have significant* air bubbles? YES NO N/A
5. Were **Ice** or **Ice packs** present? YES NO
6. Where did the bottles originate? ALS/ROC CLIENT
7. Soil VOA samples received as: Bulk Jar Encore TerraCore Lab5035set N/A
8. Temperature of cooler(s) upon receipt: 39°

Is the temperature within 0° - 6° C?: Y N Y N Y N Y N Y N

If No, Explain Below Date/Time Temperatures Taken: 10/11/13 1402

Thermometer ID: IR GUN#3 / IR GUN#4 Reading From: Temp Blank / Sample Bottle

If out of Temperature, note packing/ice condition & Client Approval to Run Samples:

All Samples held in storage location 2-002 by AP on 10/11/13 at 1403
5035 samples placed in storage location _____ by _____ on _____ at _____

PC Secondary Review: [Signature]

Cooler Breakdown: Date: 10/14/13 Time: 1324 by: AP

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	Yes = All samples OK
		YES	NO							
≥12	NaOH									No = Samples were preserved at lab as listed
≤2	HNO ₃									
≤2	H ₂ SO ₄									
<4	NaHSO ₄									
Residual Chlorine (-)	For TCN Phenol and 522			If present, contact PM to add ascorbic acid Or sodium sulfite (522)						PM OK to Adjust: _____
	Na ₂ S ₂ O ₃	-	-						*Not to be tested before analysis – pH tested and recorded by VOAs or GenChem on a separate worksheet	
	Zn Aceta	-	-							
	HCl	*	*	<u>4/12/100</u>	<u>10/14</u>					

Bottle lot numbers: 081213-1217, client record
Other Comments: _____

PC Secondary Review: [Signature] *significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter

D

**May 2013 Soil Vapor Sampling
Event Data Review Memo**

ecology and environment, inc.

MEMORANDUM

To: Michael Aloï
From: Joanna Christopher
Date: June 4, 2013
Subject: Data Review for SVE Samples, Davis Howland WA #12
CC: Richard Watt

This memo documents data review for soil vapor extraction analyses by method TO-15 for the following eight samples collected on May 3, 2013 and analyzed by ALS/Columbia Analytical Services: SVEP-1, SVEP-2, SVEP-3, SVEP-4, SVEP-5, SVEP-5D (field duplicate sample of SVEP-5), SVEP-6, and SVEP-7. In the data package the laboratory identified sample SVEP-5D as SVEP-50, however, it was identified correctly in the EDD as SVEP-5D.

All samples were received in good condition within required acceptance criteria and analyzed within required holding times.

The laboratory method blank and laboratory control sample results were within criteria.

Surrogate recoveries were within criteria.

Sample SVEP-2 was diluted 2X due to TCE exceeding the calibration range; the initial result is reported for all analytes except TCE, for which the dilution result is reported.

The field duplicate sample pair showed good reproducibility for all analytes.

Sample quantitation limits vary based on the sample amount analyzed, which is based on the highest concentrations of analytes in the sample.

Multiple analytes were detected at low levels in sample SVEP-7 that were not detected in the other samples. Some of those compounds are common laboratory contaminants (acetone, methyl ethyl ketone, methylene chloride, toluene, trichlorofluoromethane, and trichlorotrifluoromethane); however, none of those compounds were detected in either of the laboratory method blanks; therefore, the results are reported without qualification. In addition, the sample amount for sample SVEP-7 (800 mL) was greater than the other sample amounts (ranging from 0.45 to 25 mL) due to low concentrations of analytes (most are below the quantitation limits for the other samples).

All reportable results are considered valid and usable.

E

2009 Fact Sheet

FACT SHEET

DAVIS HOWLAND OIL CORPORATION

Update of Cleanup Activities at the
Davis Howland Oil Corporation Site
200 Anderson Avenue, Rochester, NY

December 2009

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

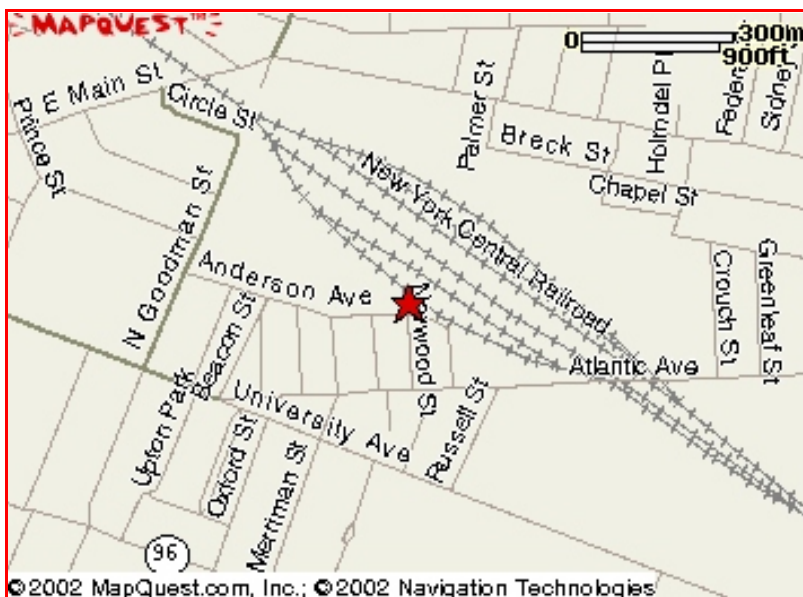
For site related health questions, please contact the following New York State Department of Health (NYSDOH) representative:

Mr. Joseph Crua
Public Health Specialist
NYSDOH
Flanigan Square, 547 River Street
Troy, NY 12180
(518) 402-7860 or
(800) 458-1158, ext. 27860

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.



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.

Draft

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.