STATE OF COLORADO
OIL & GAS
CONSERVATION COMMISSION

DEPARTMENT OF NATURAL RESOURCES
John W. Hickenlooper., Governor
1120 Lincoln St. Suite 801
Denver, CO 80203
Phone: (303) 894-2100
FAX: (303) 894-2109
www.colorado.gov/cogcc

February 14, 2011

Ms. Barbara Ireland
2059 Elizabeth Drive
Parker, CO 80138

RE: Response to Complaint Report – Baseline Water Sampling Request
Section 26 - Township 6 South – Range 65 West
Elbert County, Colorado; Complaint No. 200293007

Dear Ms. Ireland:

In response to your request, the Colorado Oil and Gas Conservation Commission (COGCC) conducted an investigation to examine groundwater quality in the vicinity of your property in northwestern Elbert County. On January 18, 2011, a COGCC contractor (Terracon) obtained groundwater samples from your domestic well (permit number 197443). The water samples were analyzed by TestAmerica Laboratories in Arvada, Colorado for organic and inorganic parameters and dissolved methane. This letter summarizes the analytical laboratory results of the water samples collected from these locations. A copy of the laboratory analytical report is included in Attachment 1. Field data forms as well as photographs of the sampling location and bacteria test kits are included as Attachment 2.

METHANE

Methane gas alone is physiologically inert and non-toxic to humans. Normal breath exhalation contains 1 to 99 parts per million of methane (parts per million [ppm] is the same units as milligrams per liter [mg/L]). The presence of methane in drinking water does not present a known health hazard to humans or other animals via ingestion; however, methane in domestic water supplies can be associated with undesirable and potentially serious side effects. The following discussion is provided as background information.

Methane gas dissolved in water "exsolves" when exposed to the atmosphere and dissipates rapidly because it is lighter than air. This is often responsible for the "fizzing" observed in water wells that contain methane gas. If the methane occurs at a high enough concentration and if it is allowed to accumulate in a confined space, such as a well pit, crawl space, closet, etc., an explosion hazard can be established. In addition, if methane concentrations in well water are high, bubbles of free gas form within the water and cause the well pump to cavitate and no longer bring water to the surface.

Methane gas is common in water wells in Colorado. It occurs naturally and the source of the methane is commonly from one or more of the sources listed below.

1. Methane is commonly found as a gas in coal or black shale seams in the subsurface.

2. Methane is often found as a byproduct of the decay of organic matter and the presence of bacteria in water wells can provide the conditions favorable for the production of methane either from the activity or decay of bacteria.

As the result of extensive testing for methane gas in water wells throughout Colorado, concentrations of methane gas below 1 mg/L are considered harmless, with concern for possible hazards from the methane increasing at concentrations in well water at or exceeding 7 mg/L.

Laboratory analysis indicated that dissolved methane was not detected in your domestic water well.

VOLATILE ORGANIC COMPOUNDS

The Water Quality Control Commission (WQCC) of the Colorado Department of Public Health and Environment (CDPHE) has established drinking water standards for volatile organic compounds for the protection of human health. The analytical results from the water samples have been compared to applicable ground water and/or drinking water standards and are discussed below.

Volatile Organic Compounds: Often, water well impacts due to oil and gas exploration and production activities would be evidenced by elevated levels of volatile organic compounds VOCs) including benzene, ethylbenzene, toluene, and xylenes (BTEX compounds). Some of these constituents have been classified by the U.S. Department of Health and Human Services as carcinogens while others have been shown to have other detrimental health effects. A target list of 66 volatile organic compounds was utilized during analysis of water from your domestic well.

None of the target list compounds were present above the laboratory reporting limit.

Semi-Volatile Organic Compounds (SVOCs): A target list of 64 semi-volatile organic compounds was utilized during analysis of water from your domestic well.

None of the target list compounds were present above the laboratory reporting limit.

BACTERIAL ANALYSIS

Samples were collected from your domestic water well to analyze for the presence of sulfate and slime bacteria. Samples were tested for the presence of iron-related bacteria (IRB), sulfate reducing (SRB) and slime forming (SLYM) bacteria using Biological Activity Reaction Test (BART) kits. The results of the tests are provided below and documented in photographs included in Attachment 2.

- Iron-Related Bacteria (IRB): Although not harmful, iron-related bacteria can become a nuisance by plugging the well pump, causing red staining on plumbing fixtures and laundered clothing, building up red, slimy accumulations on any surface the water touches, and causing what appears to be a sheen on standing water. Signs that may indicate an iron bacteria problem include "yellowish, red or orange colored water, rusty

deposits in toilet tanks and strange smells resembling fuel oil, cucumbers or sewage. Sometimes the odor will only be apparent in the morning or after other extended periods of non-use" (CDPHE, Laboratory Services Division).

Moderately aggressive IRB bacteria were detected in the water sample collected from your domestic water well. IRB are present when an orange cloudy layer, at the bottom of the IRB tube (red cap) and foam at the top develop.

- Sulfate-Reducing Bacteria (SRB): Sulfate reducing bacteria are serious nuisance organisms in water since they can cause severe taste and odor problems. These bacteria reduce sulfate that occurs naturally in the water and generate hydrogen sulfide (H2S) gas as they grow. In turn, the hydrogen sulfide (H2S) gas is a nuisance because it smells like rotten eggs, initiates corrosion on metal surfaces and reacts with dissolved metals such as iron to generate black sulfide deposits.

  SRB bacteria were not detected in the water sample collected from your domestic well. SRB are present when black particulates develop at the bottom of the sample vial.

- Slime Forming Bacteria (SLYM): Although not usually harmful, Slime Forming Bacteria (SFB) can become a nuisance by plugging well pumps and causing slimy accumulations on plumbing fixtures and standing water. Slimes are often gelatinous in nature and may range in color from white, to red, or black. As slime bacteria mats grow they create an environment in which complex associations of other strains of bacteria can develop.

  SLYM bacteria were not detected in the water sample collected from your domestic well.

INORGANIC ANALYTICAL RESULTS

The WQCC has also established drinking water standards for inorganic constituents in groundwater. The analytical results from the water samples have been compared to applicable ground water and/or drinking water standards and are summarized below. Please keep in mind that these water standards were established for public drinking water supplies. People often use and consume ground water from private wells that can exceed these standards.

- Total Dissolved Solids (TDS): CDPHE has established a TDS standard for human drinking water of 500 milligrams per liter (mg/L). The standard is called the secondary maximum contaminant level (SMCL) and is based on the aesthetic quality of the water (such as taste and odor) and is intended as a guideline for public water supply systems and is not an enforceable standard. Although CDPHE does not have an agricultural standard for TDS, other agencies recommend concentrations below 2,000 mg/L for irrigation, and below 5,000 mg/L for most livestock watering. TDS concentrations are related to the

presence of naturally occurring elements and chemical compounds such as chloride, sodium, potassium, calcium, magnesium, and sulfate.

The concentration of TDS measured in the water sample from your domestic well was 140 mg/L, which is below the CDPHE guideline of 500 mg/L.

- Sodium (Na): Although CDPHE does not have a standard for sodium, people on salt restricted diets should be aware of the sodium concentration in the water they drink. Drinking water with a concentration of sodium less than 20 mg/L is recommended by some for people on salt restricted diets or for people suffering from hypertension or heart disease. Sodium occurs naturally in ground water in many areas at concentrations that exceed the recommended level.

  The concentration of sodium measured in the water sample from your domestic well was 7.2 mg/L, which is below the CDPHE guideline of 20 mg/L.

- Chloride (Cl): The CDPHE chloride standard (SMCL) for drinking water is 250 mg/L. Chloride concentrations in excess of 250 mg/L usually produce a noticeable taste in drinking water.

  The concentration of chloride measured in the water sample from your domestic well was 3.8 mg/L, which is below the CDPHE guideline of 250 mg/L.

- Total Nitrate (NO_3) + Nitrite (NO_2) as Nitrogen (N): The CDPHE total nitrate (NO_3) + nitrite (NO_2) as nitrogen (N) standard for human drinking water is 10 mg/L. Nitrate and nitrite are common contaminants in ground water from agricultural sources, such as fertilizer and animal, including human, wastes. They are known to cause infant cyanosis or "blue baby disease" in humans and, at concentrations greater than 100 mg/L as nitrogen, may be dangerous to livestock. High concentrations of nitrate and nitrite in ground water are known to occur in agricultural areas in Colorado.

  Nitrate/nitrite as nitrogen was detected at a concentration of 1.3 mg/L in the sample from your domestic well, which is less than the CDPHE standard.

- Iron (Fe): The CDPHE standard for iron in human drinking water is 0.3 mg/L (SMCL). Small amounts of iron are common in ground water. Iron may produce a brownish-red color in laundered clothing, can leave reddish stains on fixtures, and impart a metallic taste to beverages and food made with it. After a period of time iron deposits can build up in pressure tanks, water heaters, and pipelines, reducing the effective flow rate and efficiency of the water supply.

  Dissolved iron was detected in the water sample from your domestic well at a concentration of 0.029 mg/L, which is less than the CDPHE standard.

- Selenium (Se): The CDPHE selenium standard for human drinking water is 0.05 mg/L. Excessive selenium (concentrations greater than 0.05 mg/L) can cause loss of hair and/or fingernails as well as adverse effects on the central nervous system. Selenium occurs naturally in the ground water in many areas of Colorado at concentrations that exceed the drinking water standard.

  Dissolved selenium was not detected in the sample from your domestic well.

- Fluoride (F): CDPHE has established a fluoride standard for human drinking water of 4.0 mg/L. Where fluoride concentrations are in the range of 0.7 mg/L to 1.2 mg/L, health benefits such as reduced dental decay have been observed. Consumption of fluoride at concentrations of greater than 2.0 mg/L can result in mottling of teeth. Consumption of fluoride at concentrations greater than 4.0 mg/L can increase the risk of skeletal fluorosis or other adverse health effects.

  The concentration of fluoride measured in the water sample from your domestic well was 0.36 mg/L, which is below the CDPHE guideline of 4.0 mg/L.

- Calcium (Ca), Magnesium (Mg), Manganese (Mn), Potassium (K), Bicarbonate (HCO_3), Carbonate (CO_3), pH, and Specific Conductance (Conductance) were also tested for in water from both wells. No primary standards exist for these parameters and a secondary standard (S) has only been established for manganese and pH. These results are summarized in the following table. Please note that Primary standard (P) is the CDPHE Human Health Standard and the Secondary standard (S) is the CDPHE secondary maximum contaminant level (SMCL).

Table 1. Ireland Water Samples, January 2011
Concentrations in mg/L

PARAMETER	Domestic well (Permit #197443)	CDPHE Standard P –Primary S-Secondary
Calcium	28	NS
Magnesium	3.7	NS
Manganese	0.00041	0.05 (S)
Potassium	2.0	NS
pH	7.14	6.5-8.5 (S)
Conductance (umhos/cm)	220	NS

NS – No standard
CDPHE – Colorado Department of Public Health and Environment

CONCLUSION

As noted in the discussion above and summarized in Table 1, the overall quality of water from samples collected from you water well is very good. None of the parameters tested exceeded the CDPHE established groundwater and drinking water standards.

The Colorado Oil & Gas Conservation Commission has participated in the publication of a general information pamphlet on water supply wells which includes a simple well disinfection procedure to help control nuisance bacteria, should they ever become an issue. This brochure is available on the COGCC website (www.cogcc.state.co.us) on the Library Page under the heading Water Well

Related Reports and Papers. In addition, the National Groundwater Association has sponsored a website (http://www.wellowner.org/) with resources and information for water well owners.

If you have any questions or would like to discuss these matters further, please contact me at the COGCC in Denver via e-mail (steven.lindblom@state.co.us) or by phone at 303-894-2100, extension 5114.

Respectfully,

Steven R. Lindblom, P.G.
Environmental Supervisor - Eastern Colorado

Attachments

ATTACHMENT 1

Laboratory Data Package

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 280-11687-1

Job Description: Ireland Well

For:
Colorado Oil&Gas Conservation Commision
1120 Lincoln St.
Suite 801
Denver, CO 80203

Attention: Steven Lindblom

Lori Parsons

Approved for release.
Lori A Parsons
Project Manager I
1/28/2011 3:05 PM

Lori A Parsons
Project Manager I
lori.parsons@testamericainc.com
01/28/2011

cc: Jared C Geissler

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

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CASE NARRATIVE

Client: Colorado Oil&Gas Conservation Commision

Project: Ireland Well

Report Number: 280-11687-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 01/18/2011; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was C.

The laboratory received a total of four trip blank vials preserved with HCl not on COC, 2 traveled with each sample set. Each set was logged following the sample it accompanied.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples IRELAND 1 (280-11687-3) and TRIP BLANK 2 (280-11687-4) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 01/25/2011.

Acetone and Methylene Chloride were detected in method blank MB 280-50262/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged “J”. If the associated sample reported a result above the MDL and/or RL, the result has been “B” flagged.

The MS/MSD associated with analytical batch 50262 was performed on an unrelated sample and exhibited a percent recovery in the MSD below the control limits for carbon tetrachloride. The laboratory noted non-homogeneity of the sample matrix was suspected. The acceptable LCS analyses data indicated the analytical system was within control; therefore corrective action was deemed unnecessary.

The Continuing Calibration Verification (CCV) associated with analytical batch 50262 exhibited a percent difference above the control limits, biased high for isopropyl benzene. All CCC and SPCC compounds are in control; therefore, method criteria have been met and corrective action was deemed unnecessary.

No other difficulties were encountered during the volatiles analyses.

All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample IRELAND 1 (280-11687-3) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 01/18/2011 and analyzed on 01/21/2011.

No difficulties were encountered during the SVOC analysis.

All quality control parameters were within the acceptance limits.

DISSOLVED GASES

Sample IRELAND 1 (280-11687-3) was analyzed for dissolved gases in accordance with RSK_175. The samples were analyzed on 01/19/2011.

TestAmerica Denver’s practice for the reporting of dual column data is to report the results from both columns, and the preferred result for any given target analyte from the analyst selected column. The preferred results for target analytes are reported as PRIMARY on the Sample Datasheets.

The Method required MS/MSD could not be performed for analytical batch 49631, due to insufficient sample volume submitted. Method precision and accuracy have been verified by the acceptable LCS/LCSD analysis data.

No difficulties were encountered during the dissolved gases analysis.

All quality control parameters were within the acceptance limits.

DISSOLVED METALS
Sample IRELAND 1 (280-11687-3) was analyzed for dissolved metals in accordance with EPA SW-846 Method 6010B. The samples were prepared on 01/19/2011 and analyzed on 01/20/2011.

Manganese was detected in method blank MB 280-49503/1-B at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged “J”. If the associated sample reported a result above the MDL and/or RL, the result has been “B” flagged.

No other difficulties were encountered during the dissolved metals analysis.

All other quality control parameters were within the acceptance limits.

ANIONS
Sample IRELAND 1 (280-11687-3) was analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 01/24/2011.

No difficulties were encountered during the anions analysis.

All quality control parameters were within the acceptance limits.

NITRATE-NITRITE AS NITROGEN
Sample IRELAND 1 (280-11687-3) was analyzed for nitrate-nitrite as nitrogen in accordance with EPA Method 353.2. The samples were analyzed on 01/21/2011.

No difficulties were encountered during the nitrate-nitrite analysis.

All quality control parameters were within the acceptance limits.

ALKALINITY
Sample IRELAND 1 (280-11687-3) was analyzed for Alkalinity in accordance with SM20 2320B. The samples were analyzed on 01/19/2011.

No difficulties were encountered during the alkalinity analysis.

All quality control parameters were within the acceptance limits.

SPECIFIC CONDUCTIVITY
Sample IRELAND 1 (280-11687-3) was analyzed for specific conductivity in accordance with SM20 2510B. The samples were analyzed on 01/27/2011.

No difficulties were encountered during the conductivity analysis.

All quality control parameters were within the acceptance limits.

TOTAL DISSOLVED SOLIDS
Sample IRELAND 1 (280-11687-3) was analyzed for total dissolved solids in accordance with SM20 2540C. The samples were analyzed on 01/21/2011.

No difficulties were encountered during the TDS analysis.

All quality control parameters were within the acceptance limits.

CORROSIVITY (PH)
Sample IRELAND 1 (280-11687-3) was analyzed for corrosivity (pH) in accordance with SM20 4500 H+ B. The samples were analyzed on 01/19/2011.

No other difficulties were encountered during the pH analysis.

All other quality control parameters were within the acceptance limits.

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-11687-1

SDG No.:

Instrument ID: MSV_MS1 Analysis Batch Number: 49126

Lab Sample ID: IC 280-49126/13 Client Sample ID:

Date Analyzed: 01/14/11 01:32 Lab File ID: ms0338.D GC Column: DB-624 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Chloroethyl vinyl ether	9.08	Analyte not Identified by the Data System	STAPPJ	01/14/11 17:03

Lab Sample ID: IC 280-49126/14 Client Sample ID:

Date Analyzed: 01/14/11 01:52 Lab File ID: ms0339.D GC Column: DB-624 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Chloroethyl vinyl ether	9.08	Analyte not Identified by the Data System	STAPPJ	01/14/11 17:04

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-11687-1

SDG No.:

Instrument ID: MSV_MS1 Analysis Batch Number: 50262

Lab Sample ID: 280-11691-G-1 MS Client Sample ID:

Date Analyzed: 01/25/11 09:28 Lab File ID: ms0630.D GC Column: DB-624 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	4.54	Peak Tailing or Fronting	dobransky m	01/25/11 10:08
Vinyl chloride	4.96	Analyte not Identified by the Data System	dobransky m	01/25/11 10:04

Lab Sample ID: 280-11691-G-1 MSD Client Sample ID:

Date Analyzed: 01/25/11 09:48 Lab File ID: ms0631.D GC Column: DB-624 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Vinyl chloride	4.96	Analyte not Identified by the Data System	dobransky m	01/25/11 10:06

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-11687-1

SDG No.:

Instrument ID: MSS_K Analysis Batch Number: 43250

Lab Sample ID: ICIS 280-43250/2 Client Sample ID:

Date Analyzed: 12/01/10 08:49 Lab File ID: K8074.D GC Column: Vf-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
a,a-Dimethylphenethylamine	5.82	Split Peak	kiekeld	12/01/10 11:46

Lab Sample ID: STD050 280-43250/5 IC Client Sample ID:

Date Analyzed: 12/01/10 09:51 Lab File ID: K8077.D GC Column: Vf-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
a,a-Dimethylphenethylamine	5.82	Split Peak	kiekeld	12/01/10 11:49

Lab Sample ID: STD120 280-43250/6 IC Client Sample ID:

Date Analyzed: 12/01/10 10:12 Lab File ID: K8078.D GC Column: Vf-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
a,a-Dimethylphenethylamine	5.82	Split Peak	kiekeld	12/01/10 11:50

Lab Sample ID: STD160 280-43250/7 IC Client Sample ID:

Date Analyzed: 12/01/10 10:33 Lab File ID: K8079.D GC Column: Vf-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
a,a-Dimethylphenethylamine	5.85	Split Peak	kiekeld	12/01/10 11:52

Lab Sample ID: STD200 280-43250/8 IC Client Sample ID:

Date Analyzed: 12/01/10 10:54 Lab File ID: K8080.D GC Column: Vf-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
a,a-Dimethylphenethylamine	5.99	Split Peak	kiekeld	12/01/10 11:52

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-11687-1

SDG No.:

Instrument ID: MSV_MS1 Analysis Batch Number: 49126

Lab Sample ID: IC 280-49126/13 Client Sample ID:

Date Analyzed: 01/14/11 01:32 Lab File ID: ms0338.D GC Column: DB-624 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Chloroethyl vinyl ether	9.08	Analyte not Identified by the Data System	STAPPJ	01/14/11 17:03

Lab Sample ID: IC 280-49126/14 Client Sample ID:

Date Analyzed: 01/14/11 01:52 Lab File ID: ms0339.D GC Column: DB-624 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
2-Chloroethyl vinyl ether	9.08	Analyte not Identified by the Data System	STAPPJ	01/14/11 17:04

01/27

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-11687-1

SDG No.:

Instrument ID: MSV_MS1 Analysis Batch Number: 50262

Lab Sample ID: 280-11691-G-1 MS Client Sample ID:

Date Analyzed: 01/25/11 09:28 Lab File ID: ms0630.D GC Column: DB-624 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	4.54	Peak Tailing or Fronting	dobransky m	01/25/11 10:08
Vinyl chloride	4.96	Analyte not Identified by the Data System	dobransky m	01/25/11 10:04

Lab Sample ID: 280-11691-G-1 MSD Client Sample ID:

Date Analyzed: 01/25/11 09:48 Lab File ID: ms0631.D GC Column: DB-624 ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Vinyl chloride	4.96	Analyte not Identified by the Data System	dobransky m	01/25/11 10:06

01/27

GC/MS SEMI VOA MANUAL INTEGRATION SUMMARY

Lab Name: TestAmerica Denver Job No.: 280-11687-1

SDG No.:

Instrument ID: MSS_K Analysis Batch Number: 43250

Lab Sample ID: ICIS 280-43250/2 Client Sample ID:

Date Analyzed: 12/01/10 08:49 Lab File ID: K8074.D GC Column: Vf-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
a,a-Dimethylphenethylamine	5.82	Split Peak	kiekeld	12/01/10 11:46

Lab Sample ID: STD050 280-43250/5 IC Client Sample ID:

Date Analyzed: 12/01/10 09:51 Lab File ID: K8077.D GC Column: Vf-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
a,a-Dimethylphenethylamine	5.82	Split Peak	kiekeld	12/01/10 11:49

Lab Sample ID: STD120 280-43250/6 IC Client Sample ID:

Date Analyzed: 12/01/10 10:12 Lab File ID: K8078.D GC Column: Vf-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
a,a-Dimethylphenethylamine	5.82	Split Peak	kiekeld	12/01/10 11:50

Lab Sample ID: STD160 280-43250/7 IC Client Sample ID:

Date Analyzed: 12/01/10 10:33 Lab File ID: K8079.D GC Column: Vf-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
a,a-Dimethylphenethylamine	5.85	Split Peak	kiekeld	12/01/10 11:52

Lab Sample ID: STD200 280-43250/8 IC Client Sample ID:

Date Analyzed: 12/01/10 10:54 Lab File ID: K8080.D GC Column: Vf-5MS ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
a,a-Dimethylphenethylamine	5.99	Split Peak	kiekeld	12/01/10 11:52

01/27

SAMPLE SUMMARY

Client: Colorado Oil&Gas Conservation Commision Job Number: 280-11687-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
280-11687-3	IRELAND 1	Water	01/18/2011 1342	01/18/2011 1555
280-11687-4TB	TRIP BLANK 2	Water	01/18/2011 0000	01/18/2011 1555

EXECUTIVE SUMMARY - Detections

Client: Colorado Oil&Gas Conservation Commision Job Number: 280-11687-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
280-11687-3	**IRELAND 1**					
Methylene Chloride		0.32	J B	2.0	ug/L	8260B
Chloride		3.8		3.0	mg/L	300.0
Fluoride		0.36	J	0.50	mg/L	300.0
Sulfate		7.2		5.0	mg/L	300.0
Nitrate Nitrite as N		1.3		0.10	mg/L	353.2
Total Alkalinity		90		5.0	mg/L	SM 2320B
Bicarbonate Alkalinity as CaCO3		90		5.0	mg/L	SM 2320B
Specific Conductance		220		2.0	umhos/cm	SM 2510B
Total Dissolved Solids		140		10	mg/L	SM 2540C
pH		7.14	HF	0.100	SU	SM 4500 H+ B
Dissolved						
Calcium		28000		200	ug/L	6010B
Iron		29	J	100	ug/L	6010B
Magnesium		3700		200	ug/L	6010B
Manganese		0.41	J B	10	ug/L	6010B
Potassium		2000	J	3000	ug/L	6010B
Sodium		7200		1000	ug/L	6010B
280-11687-4TB	**TRIP BLANK 2**					
Acetone		2.3	J B	10	ug/L	8260B
Methylene Chloride		0.43	J B	2.0	ug/L	8260B

METHOD SUMMARY

Client: Colorado Oil&Gas Conservation Commision Job Number: 280-11687-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Volatile Organic Compounds (GC/MS)	TAL DEN	SW846 8260B	
Purge and Trap	TAL DEN		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL DEN	SW846 8270C	
Liquid-Liquid Extraction (Continuous)	TAL DEN		SW846 3520C
Dissolved Gases (GC)	TAL DEN	RSK RSK-175	
Metals (ICP)	TAL DEN	SW846 6010B	
Preparation, Total Recoverable or Dissolved Metals	TAL DEN		SW846 3005A
Sample Filtration	TAL DEN		FILTRATION
Anions, Ion Chromatography	TAL DEN	MCAWW 300.0	
Nitrogen, Nitrate-Nitrite	TAL DEN	MCAWW 353.2	
Alkalinity	TAL DEN	SM SM 2320B	
Conductivity, Specific Conductance	TAL DEN	SM SM 2510B	
Solids, Total Dissolved (TDS)	TAL DEN	SM SM 2540C	
pH	TAL DEN	SM SM 4500 H+ B	

Lab References:

TAL DEN = TestAmerica Denver

Method References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

RSK = Sample Prep And Calculations For Dissolved Gas Analysis In Water Samples Using A GC Headspace Equilibration Technique, RSKSOP-175, Rev. 0, 8/11/94, USEPA Research Lab

SM = "Standard Methods For The Examination Of Water And Wastewater",

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

METHOD / ANALYST SUMMARY

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Method	Analyst	Analyst ID
SW846 8260B	Dobransky, Michael E	MD
SW846 8270C	Kiekel, Daniel C	DCK
RSK RSK-175	Smith, Matthew P	MPS
SW846 6010B	Harre, John K	JKH
MCAWW 300.0	Phan, Thu L	TLP
MCAWW 353.2	Stosak, Lara E	LES
SM SM 2320B	Derosia, Marcia R	MRD
SM SM 2510B	Plumb, Paul M	PMP
SM SM 2540C	Domnick, Brandon J	BJD
SM SM 4500 H+ B	Taylor, Juli M	JMT

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Client Sample ID: **IRELAND 1**

Lab Sample ID: 280-11687-3
Client Matrix: Water

Date Sampled: 01/18/2011 1342
Date Received: 01/18/2011 1555

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 280-50262	Instrument ID: MSV_MS1
Preparation:	5030B		Lab File ID: ms0629.D
Dilution:	1.0		Initial Weight/Volume: 20 mL
Date Analyzed:	01/25/2011 0907		Final Weight/Volume: 20 mL
Date Prepared:	01/25/2011 0907		

Analyte	Result (ug/L)	Qualifier	MDL	RL
cis-1,2-Dichloroethene	ND		0.15	1.0
cis-1,3-Dichloropropene	ND		0.16	1.0
m-Xylene & p-Xylene	ND		0.34	2.0
N-Propylbenzene	ND		0.16	1.0
n-Butylbenzene	ND		0.14	1.0
o-Xylene	ND		0.19	1.0
sec-Butylbenzene	ND		0.17	1.0
tert-Butylbenzene	ND		0.16	1.0
trans-1,2-Dichloroethene	ND		0.15	1.0
trans-1,3-Dichloropropene	ND		0.19	3.0
Acetone	ND		1.9	10
Benzene	ND		0.16	1.0
Bromobenzene	ND		0.17	1.0
Chlorobromomethane	ND		0.10	1.0
Dichlorobromomethane	ND		0.17	1.0
Bromoform	ND		0.19	1.0
Bromomethane	ND		0.21	2.0
Carbon tetrachloride	ND		0.19	1.0
Chlorobenzene	ND		0.17	1.0
Chlorodibromomethane	ND		0.17	1.0
Chloroethane	ND		0.41	2.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	2.0
Dibromomethane	ND		0.17	1.0
Dichlorodifluoromethane	ND		0.31	2.0
Ethylbenzene	ND		0.16	1.0
Hexachlorobutadiene	ND		0.12	1.0
Isopropylbenzene	ND		0.19	1.0
Methyl tert-butyl ether	ND		0.25	5.0
Methylene Chloride	0.32	J B	0.32	2.0
Naphthalene	ND		0.22	1.0
Styrene	ND		0.17	1.0
Tetrachloroethene	ND		0.20	1.0
Toluene	ND		0.17	1.0
Trichloroethene	ND		0.16	1.0
Trichlorofluoromethane	ND		0.29	2.0
Vinyl chloride	ND		0.10	1.0
Xylenes, Total	ND		0.19	2.0
1,1-Dichloroethane	ND		0.22	1.0
1,1-Dichloroethene	ND		0.23	1.0
1,1-Dichloropropene	ND		0.19	1.0
1,1,1-Trichloroethane	ND		0.16	1.0
1,1,1,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,2-Dibromo-3-Chloropropane	ND		0.47	5.0

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Client Sample ID: **IRELAND 1**

Lab Sample ID: 280-11687-3
Client Matrix: Water

Date Sampled: 01/18/2011 1342
Date Received: 01/18/2011 1555

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 280-50262	Instrument ID: MSV_MS1
Preparation:	5030B		Lab File ID: ms0629.D
Dilution:	1.0		Initial Weight/Volume: 20 mL
Date Analyzed:	01/25/2011 0907		Final Weight/Volume: 20 mL
Date Prepared:	01/25/2011 0907		

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2-Dibromoethane	ND		0.18	1.0
1,2-Dichlorobenzene	ND		0.15	1.0
1,2-Dichloroethane	ND		0.13	1.0
1,2-Dichloroethene, Total	ND		0.24	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,2,3-Trichlorobenzene	ND		0.21	1.0
1,2,3-Trichloropropane	ND		0.33	2.5
1,2,4-Trichlorobenzene	ND		0.21	1.0
1,2,4-Trimethylbenzene	ND		0.15	1.0
1,3-Dichlorobenzene	ND		0.13	1.0
1,3-Dichloropropane	ND		0.22	1.0
1,3,5-Trimethylbenzene	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.16	1.0
2-Butanone (MEK)	ND		2.0	6.0
2-Chlorotoluene	ND		0.17	1.0
2-Hexanone	ND		1.7	5.0
2,2-Dichloropropane	ND		0.18	1.0
4-Chlorotoluene	ND		0.21	1.0
4-Isopropyltoluene	ND		0.20	1.0
4-Methyl-2-pentanone (MIBK)	ND		0.98	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	104		70 - 127
Toluene-d8 (Surr)	112		80 - 125
4-Bromofluorobenzene (Surr)	112		78 - 120
Dibromofluoromethane (Surr)	111		77 - 120

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Client Sample ID: **TRIP BLANK 2**

Lab Sample ID: 280-11687-4TB
Client Matrix: Water

Date Sampled: 01/18/2011 0000
Date Received: 01/18/2011 1555

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 280-50262	Instrument ID: MSV_MS1
Preparation:	5030B		Lab File ID: ms0633.D
Dilution:	1.0		Initial Weight/Volume: 20 mL
Date Analyzed:	01/25/2011 1029		Final Weight/Volume: 20 mL
Date Prepared:	01/25/2011 1029		

Analyte	Result (ug/L)	Qualifier	MDL	RL
cis-1,2-Dichloroethene	ND		0.15	1.0
cis-1,3-Dichloropropene	ND		0.16	1.0
m-Xylene & p-Xylene	ND		0.34	2.0
N-Propylbenzene	ND		0.16	1.0
n-Butylbenzene	ND		0.14	1.0
o-Xylene	ND		0.19	1.0
sec-Butylbenzene	ND		0.17	1.0
tert-Butylbenzene	ND		0.16	1.0
trans-1,2-Dichloroethene	ND		0.15	1.0
trans-1,3-Dichloropropene	ND		0.19	3.0
Acetone	2.3	J B	1.9	10
Benzene	ND		0.16	1.0
Bromobenzene	ND		0.17	1.0
Chlorobromomethane	ND		0.10	1.0
Dichlorobromomethane	ND		0.17	1.0
Bromoform	ND		0.19	1.0
Bromomethane	ND		0.21	2.0
Carbon tetrachloride	ND		0.19	1.0
Chlorobenzene	ND		0.17	1.0
Chlorodibromomethane	ND		0.17	1.0
Chloroethane	ND		0.41	2.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	2.0
Dibromomethane	ND		0.17	1.0
Dichlorodifluoromethane	ND		0.31	2.0
Ethylbenzene	ND		0.16	1.0
Hexachlorobutadiene	ND		0.12	1.0
Isopropylbenzene	ND		0.19	1.0
Methyl tert-butyl ether	ND		0.25	5.0
Methylene Chloride	0.43	J B	0.32	2.0
Naphthalene	ND		0.22	1.0
Styrene	ND		0.17	1.0
Tetrachloroethene	ND		0.20	1.0
Toluene	ND		0.17	1.0
Trichloroethene	ND		0.16	1.0
Trichlorofluoromethane	ND		0.29	2.0
Vinyl chloride	ND		0.10	1.0
Xylenes, Total	ND		0.19	2.0
1,1-Dichloroethane	ND		0.22	1.0
1,1-Dichloroethene	ND		0.23	1.0
1,1-Dichloropropene	ND		0.19	1.0
1,1,1-Trichloroethane	ND		0.16	1.0
1,1,1,2-Tetrachloroethane	ND		0.21	1.0
1,1,2-Trichloroethane	ND		0.27	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,2-Dibromo-3-Chloropropane	ND		0.47	5.0

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Client Sample ID: **TRIP BLANK 2**

Lab Sample ID: 280-11687-4TB
Client Matrix: Water

Date Sampled: 01/18/2011 0000
Date Received: 01/18/2011 1555

8260B Volatile Organic Compounds (GC/MS)

Method:	8260B	Analysis Batch: 280-50262	Instrument ID: MSV_MS1
Preparation:	5030B		Lab File ID: ms0633.D
Dilution:	1.0		Initial Weight/Volume: 20 mL
Date Analyzed:	01/25/2011 1029		Final Weight/Volume: 20 mL
Date Prepared:	01/25/2011 1029		

Analyte	Result (ug/L)	Qualifier	MDL	RL
1,2-Dibromoethane	ND		0.18	1.0
1,2-Dichlorobenzene	ND		0.15	1.0
1,2-Dichloroethane	ND		0.13	1.0
1,2-Dichloroethene, Total	ND		0.24	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,2,3-Trichlorobenzene	ND		0.21	1.0
1,2,3-Trichloropropane	ND		0.33	2.5
1,2,4-Trichlorobenzene	ND		0.21	1.0
1,2,4-Trimethylbenzene	ND		0.15	1.0
1,3-Dichlorobenzene	ND		0.13	1.0
1,3-Dichloropropane	ND		0.22	1.0
1,3,5-Trimethylbenzene	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.16	1.0
2-Butanone (MEK)	ND		2.0	6.0
2-Chlorotoluene	ND		0.17	1.0
2-Hexanone	ND		1.7	5.0
2,2-Dichloropropane	ND		0.18	1.0
4-Chlorotoluene	ND		0.21	1.0
4-Isopropyltoluene	ND		0.20	1.0
4-Methyl-2-pentanone (MIBK)	ND		0.98	5.0

Surrogate	%Rec	Qualifier	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	92		70 - 127
Toluene-d8 (Surr)	101		80 - 125
4-Bromofluorobenzene (Surr)	101		78 - 120
Dibromofluoromethane (Surr)	99		77 - 120

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Client Sample ID: **IRELAND 1**

Lab Sample ID: 280-11687-3
Client Matrix: Water

Date Sampled: 01/18/2011 1342
Date Received: 01/18/2011 1555

8270C Semivolatile Organic Compounds (GC/MS)

Method:	8270C	Analysis Batch: 280-50057		Instrument ID:	MSS_K
Preparation:	3520C	Prep Batch: 280-49497		Lab File ID:	K8991.D
Dilution:	1.0			Initial Weight/Volume:	1053.4 mL
Date Analyzed:	01/21/2011 2028			Final Weight/Volume:	1000 uL
Date Prepared:	01/18/2011 2206			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Bis(2-chloroethoxy)methane	ND		0.92	9.5
Bis(2-chloroethyl)ether	ND		0.39	9.5
Bis(2-ethylhexyl) phthalate	ND		0.53	9.5
2,2'-oxybis[1-chloropropane]	ND		0.27	9.5
Acenaphthene	ND		0.27	3.8
Acenaphthylene	ND		0.47	3.8
Acetophenone	ND		0.23	9.5
Anthracene	ND		0.40	3.8
Atrazine	ND		0.69	9.5
Benzidine	ND		47	95
Benzo[a]anthracene	ND		0.33	3.8
Benzo[a]pyrene	ND		0.29	3.8
Benzo[b]fluoranthene	ND		0.50	3.8
Benzo[g,h,i]perylene	ND		0.47	3.8
Benzo[k]fluoranthene	ND		0.44	3.8
Butyl benzyl phthalate	ND		0.95	3.8
Caprolactam	ND		4.7	9.5
Carbazole	ND		0.41	3.8
Chrysene	ND		0.51	3.8
Di-n-butyl phthalate	ND		1.1	3.8
Di-n-octyl phthalate	ND		0.33	3.8
Dibenz(a,h)anthracene	ND		0.48	3.8
Dibenzofuran	ND		0.28	3.8
Diethyl phthalate	ND		0.36	3.8
Dimethyl phthalate	ND		0.20	3.8
Fluoranthene	ND		0.19	3.8
Fluorene	ND		0.29	3.8
Hexachlorobenzene	ND		0.63	9.5
Hexachlorobutadiene	ND		3.1	9.5
Hexachlorocyclopentadiene	ND		1.5	47
Hexachloroethane	ND		2.0	9.5
Indeno[1,2,3-cd]pyrene	ND		0.62	3.8
N-Nitrosodi-n-propylamine	ND		0.33	9.5
n-Nitrosodiphenylamine(as diphenylamine)	ND		0.42	9.5
Naphthalene	ND		0.28	3.8
Nitrobenzene	ND		0.77	9.5
Pentachlorophenol	ND		19	47
Phenanthrene	ND		0.25	3.8
Phenol	ND		1.9	9.5
Pyrene	ND		0.35	9.5
2-Chloronaphthalene	ND		0.25	3.8
2-Chlorophenol	ND		1.9	9.5
2-Methylnaphthalene	ND		0.28	3.8
2-Methylphenol	ND		0.93	9.5
2-Nitroaniline	ND		1.6	9.5
2-Nitrophenol	ND		0.37	9.5

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Client Sample ID: **IRELAND 1**

Lab Sample ID: 280-11687-3
Client Matrix: Water

Date Sampled: 01/18/2011 1342
Date Received: 01/18/2011 1555

8270C Semivolatile Organic Compounds (GC/MS)

Method:	8270C	Analysis Batch: 280-50057		Instrument ID:	MSS_K
Preparation:	3520C	Prep Batch: 280-49497		Lab File ID:	K8991.D
Dilution:	1.0			Initial Weight/Volume:	1053.4 mL
Date Analyzed:	01/21/2011 2028			Final Weight/Volume:	1000 uL
Date Prepared:	01/18/2011 2206			Injection Volume:	0.5 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
2,4-Dichlorophenol	ND		0.61	9.5
2,4-Dimethylphenol	ND		0.55	9.5
2,4-Dinitrophenol	ND		9.5	28
2,4-Dinitrotoluene	ND		1.6	9.5
2,4,5-Trichlorophenol	ND		0.43	9.5
2,4,6-Trichlorophenol	ND		0.28	9.5
2,6-Dinitrotoluene	ND		1.8	9.5
3-Nitroaniline	ND		1.9	9.5
3,3'-Dichlorobenzidine	ND		1.9	47
4-Bromophenyl phenyl ether	ND		0.41	9.5
4-Chloro-3-methylphenol	ND		2.3	9.5
4-Chloroaniline	ND		2.0	9.5
4-Chlorophenyl phenyl ether	ND		1.6	9.5
3 & 4 Methylphenol	ND		0.24	9.5
4-Nitroaniline	ND		1.9	9.5
4-Nitrophenol	ND		1.2	9.5
4,6-Dinitro-2-methylphenol	ND		3.8	47
Cresols, Total	ND		0.24	9.5

Surrogate	%Rec	Qualifier	Acceptance Limits
Nitrobenzene-d5	89		48 - 120
2-Fluorophenol	92		51 - 120
2-Fluorobiphenyl	87		38 - 120
2,4,6-Tribromophenol	98		57 - 120
Terphenyl-d14	92		50 - 120
Phenol-d5	92		51 - 120

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Client Sample ID: **IRELAND 1**

Lab Sample ID: 280-11687-3
Client Matrix: Water

Date Sampled: 01/18/2011 1342
Date Received: 01/18/2011 1555

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 280-49631	Instrument ID: GCV_J
Preparation:	N/A		Initial Weight/Volume: 18 mL
Dilution:	1.0		Final Weight/Volume: 18 mL
Date Analyzed:	01/19/2011 1427		Injection Volume:
Date Prepared:			Result Type: PRIMARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methane	ND		0.22	5.0

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Client Sample ID: **IRELAND 1**

Lab Sample ID: 280-11687-3
Client Matrix: Water

Date Sampled: 01/18/2011 1342
Date Received: 01/18/2011 1555

RSK-175 Dissolved Gases (GC)

Method:	RSK-175	Analysis Batch: 280-49631		Instrument ID:	GCV_J
Preparation:	N/A			Initial Weight/Volume:	18 mL
Dilution:	1.0			Final Weight/Volume:	18 mL
Date Analyzed:	01/19/2011 1427			Injection Volume:	
Date Prepared:				Result Type:	SECONDARY

Analyte	Result (ug/L)	Qualifier	MDL	RL
Methane	ND		0.22	5.0

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Client Sample ID: **IRELAND 1**

Lab Sample ID: 280-11687-3
Client Matrix: Water

Date Sampled: 01/18/2011 1342
Date Received: 01/18/2011 1555

6010B Metals (ICP)-Dissolved

Method:	6010B	Analysis Batch: 280-49844		Instrument ID:	MT_025
Preparation:	3005A	Prep Batch: 280-49511		Lab File ID:	25A4012011.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	01/20/2011 2002			Final Weight/Volume:	50 mL
Date Prepared:	01/19/2011 1430				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Calcium	28000		34	200
Iron	29	J	22	100
Magnesium	3700		11	200
Manganese	0.41	J B	0.25	10
Potassium	2000	J	240	3000
Sodium	7200		92	1000
Selenium	ND		4.9	15

General Chemistry

Client Sample ID: **IRELAND 1**

Lab Sample ID: 280-11687-3 Date Sampled: 01/18/2011 1342
Client Matrix: Water Date Received: 01/18/2011 1555

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
Bromide	ND		mg/L	0.11	0.20	1.0	300.0
Analysis Batch: 280-50290	Date Analyzed: 01/24/2011 2034						
Chloride	3.8		mg/L	0.25	3.0	1.0	300.0
Analysis Batch: 280-50290	Date Analyzed: 01/24/2011 2034						
Fluoride	0.36	J	mg/L	0.060	0.50	1.0	300.0
Analysis Batch: 280-50290	Date Analyzed: 01/24/2011 2034						
Sulfate	7.2		mg/L	0.23	5.0	1.0	300.0
Analysis Batch: 280-50290	Date Analyzed: 01/24/2011 2034						
Nitrate Nitrite as N	1.3		mg/L	0.019	0.10	1.0	353.2
Analysis Batch: 280-49965	Date Analyzed: 01/21/2011 1309						
Total Alkalinity	90		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-49804	Date Analyzed: 01/19/2011 2230						
Bicarbonate Alkalinity as CaCO3	90		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-49804	Date Analyzed: 01/19/2011 2230						
Carbonate Alkalinity as CaCO3	ND		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-49804	Date Analyzed: 01/19/2011 2230						
Hydroxide Alkalinity	ND		mg/L	1.1	5.0	1.0	SM 2320B
Analysis Batch: 280-49804	Date Analyzed: 01/19/2011 2230						
Total Dissolved Solids	140		mg/L	4.7	10	1.0	SM 2540C
Analysis Batch: 280-49849	Date Analyzed: 01/21/2011 0746						

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Specific Conductance	220		umhos/cm	2.0	2.0	1.0	SM 2510B
Analysis Batch: 280-50684	Date Analyzed: 01/27/2011 1107						
pH	7.14	HF	SU	0.100	0.100	1.0	SM 4500 H+ B
Analysis Batch: 280-49621	Date Analyzed: 01/19/2011 1030						

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Surrogate Recovery Report

8260B Volatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	DBFM %Rec	DCA %Rec	TOL %Rec	BFB %Rec
280-11687-3	IRELAND 1	111	104	112	112
280-11687-4	TRIP BLANK 2	99	92	101	101
MB 280-50262/5		101	99	108	105
LCS 280-50262/6		103	96	104	112
280-11691-G-1 MS		110	102	103	109
280-11691-G-1 MSD		101	90	97	103

Surrogate	Acceptance Limits
DBFM = Dibromofluoromethane (Surr)	77-120
DCA = 1,2-Dichloroethane-d4 (Surr)	70-127
TOL = Toluene-d8 (Surr)	80-125
BFB = 4-Bromofluorobenzene (Surr)	78-120

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Surrogate Recovery Report

8270C Semivolatile Organic Compounds (GC/MS)

Client Matrix: Water

Lab Sample ID	Client Sample ID	2FP %Rec	PHL %Rec	NBZ %Rec	FBP %Rec	TBP %Rec	TPH %Rec
280-11687-3	IRELAND 1	92	92	89	87	98	92
MB 280-49497/1-A		85	86	79	53	89	85
LCS 280-49497/2-A		85	86	81	66	105	94
280-11669-C-4-A MS		91	90	90	85	101	89
280-11669-H-4-A MSD		90	93	92	92	109	96

Surrogate	Acceptance Limits
2FP = 2-Fluorophenol	51-120
PHL = Phenol-d5	51-120
NBZ = Nitrobenzene-d5	48-120
FBP = 2-Fluorobiphenyl	38-120
TBP = 2,4,6-Tribromophenol	57-120
TPH = Terphenyl-d14	50-120

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Method Blank - Batch: 280-50262

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 280-50262/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/25/2011 0719
Date Prepared: 01/25/2011 0719

Analysis Batch: 280-50262
Prep Batch: N/A
Units: ug/L

Instrument ID: MSV_MS1
Lab File ID: ms0624.D
Initial Weight/Volume: 20 mL
Final Weight/Volume: 20 mL

Analyte	Result	Qual	MDL	RL
cis-1,2-Dichloroethene	ND		0.15	1.0
cis-1,3-Dichloropropene	ND		0.16	1.0
m-Xylene & p-Xylene	ND		0.34	2.0
N-Propylbenzene	ND		0.16	1.0
n-Butylbenzene	ND		0.14	1.0
o-Xylene	ND		0.19	1.0
sec-Butylbenzene	ND		0.17	1.0
tert-Butylbenzene	ND		0.16	1.0
trans-1,2-Dichloroethene	ND		0.15	1.0
trans-1,3-Dichloropropene	ND		0.19	3.0
Acetone	2.43	J	1.9	10
Benzene	ND		0.16	1.0
Bromobenzene	ND		0.17	1.0
Chlorobromomethane	ND		0.10	1.0
Dichlorobromomethane	ND		0.17	1.0
Bromoform	ND		0.19	1.0
Bromomethane	ND		0.21	2.0
Carbon tetrachloride	ND		0.19	1.0
Chlorobenzene	ND		0.17	1.0
Chlorodibromomethane	ND		0.17	1.0
Chloroethane	ND		0.41	2.0
Chloroform	ND		0.16	1.0
Chloromethane	ND		0.30	2.0
Dibromomethane	ND		0.17	1.0
Dichlorodifluoromethane	ND		0.31	2.0
Ethylbenzene	ND		0.16	1.0
Hexachlorobutadiene	ND		0.12	1.0
Isopropylbenzene	ND		0.19	1.0
Methyl tert-butyl ether	ND		0.25	5.0
Methylene Chloride	0.516	J	0.32	2.0
Naphthalene	ND		0.22	1.0
Styrene	ND		0.17	1.0
Tetrachloroethene	ND		0.20	1.0
Toluene	ND		0.17	1.0
Trichloroethene	ND		0.16	1.0
Trichlorofluoromethane	ND		0.29	2.0
Vinyl chloride	ND		0.10	1.0
Xylenes, Total	ND		0.19	2.0
1,1-Dichloroethane	ND		0.22	1.0
1,1-Dichloroethene	ND		0.23	1.0
1,1-Dichloropropene	ND		0.19	1.0
1,1,1-Trichloroethane	ND		0.16	1.0
1,1,1,2-Tetrachloroethane	ND		0.21	1.0

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Method Blank - Batch: 280-50262

Method: 8260B
Preparation: 5030B

Lab Sample ID: MB 280-50262/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/25/2011 0719
Date Prepared: 01/25/2011 0719

Analysis Batch: 280-50262
Prep Batch: N/A
Units: ug/L

Instrument ID: MSV_MS1
Lab File ID: ms0624.D
Initial Weight/Volume: 20 mL
Final Weight/Volume: 20 mL

Analyte	Result	Qual	MDL	RL
1,1,2-Trichloroethane	ND		0.27	1.0
1,1,2,2-Tetrachloroethane	ND		0.21	1.0
1,2-Dibromo-3-Chloropropane	ND		0.47	5.0
1,2-Dibromoethane	ND		0.18	1.0
1,2-Dichlorobenzene	ND		0.15	1.0
1,2-Dichloroethane	ND		0.13	1.0
1,2-Dichloroethene, Total	ND		0.24	1.0
1,2-Dichloropropane	ND		0.18	1.0
1,2,3-Trichlorobenzene	ND		0.21	1.0
1,2,3-Trichloropropane	ND		0.33	2.5
1,2,4-Trichlorobenzene	ND		0.21	1.0
1,2,4-Trimethylbenzene	ND		0.15	1.0
1,3-Dichlorobenzene	ND		0.13	1.0
1,3-Dichloropropane	ND		0.22	1.0
1,3,5-Trimethylbenzene	ND		0.16	1.0
1,4-Dichlorobenzene	ND		0.16	1.0
2-Butanone (MEK)	ND		2.0	6.0
2-Chlorotoluene	ND		0.17	1.0
2-Hexanone	ND		1.7	5.0
2,2-Dichloropropane	ND		0.18	1.0
4-Chlorotoluene	ND		0.21	1.0
4-Isopropyltoluene	ND		0.20	1.0
4-Methyl-2-pentanone (MIBK)	ND		0.98	5.0

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	99	70 - 127
Toluene-d8 (Surr)	108	80 - 125
4-Bromofluorobenzene (Surr)	105	78 - 120
Dibromofluoromethane (Surr)	101	77 - 120

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Lab Control Sample - Batch: 280-50262

Method: 8260B
Preparation: 5030B

Lab Sample ID: LCS 280-50262/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/25/2011 0739
Date Prepared: 01/25/2011 0739

Analysis Batch: 280-50262
Prep Batch: N/A
Units: ug/L

Instrument ID: MSV_MS1
Lab File ID: ms0625.D
Initial Weight/Volume: 20 mL
Final Weight/Volume: 20 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
trans-1,2-Dichloroethene	5.00	4.55	91	80 - 120	
Benzene	5.00	4.50	90	77 - 120	
Dichlorobromomethane	5.00	4.22	84	78 - 120	
Carbon tetrachloride	5.00	4.63	93	80 - 120	
Chlorobenzene	5.00	4.39	88	78 - 120	
Chloroform	5.00	4.29	86	78 - 120	
Ethylbenzene	5.00	4.54	91	78 - 120	
Methylene Chloride	5.00	4.27	85	60 - 134	
Tetrachloroethene	5.00	4.61	92	77 - 120	
Toluene	5.00	4.64	93	73 - 120	
Trichloroethene	5.00	4.50	90	78 - 122	
1,1-Dichloroethane	5.00	4.47	89	77 - 120	
1,1-Dichloroethene	5.00	4.53	91	68 - 133	
1,1,1-Trichloroethane	5.00	4.64	93	78 - 120	
1,2-Dichloropropane	5.00	4.42	88	76 - 120	
1,3-Dichlorobenzene	5.00	4.57	91	75 - 120	

Surrogate	% Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	96	70 - 127
Toluene-d8 (Surr)	104	80 - 125
4-Bromofluorobenzene (Surr)	112	78 - 120
Dibromofluoromethane (Surr)	103	77 - 120

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-50262

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	280-11691-G-1 MS	Analysis Batch: 280-50262	Instrument ID: MSV_MS1
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: ms0630.D
Dilution:	1.0		Initial Weight/Volume: 20 mL
Date Analyzed:	01/25/2011 0928		Final Weight/Volume: 20 mL
Date Prepared:	01/25/2011 0928		

MSD Lab Sample ID:	280-11691-G-1 MSD	Analysis Batch: 280-50262	Instrument ID: MSV_MS1
Client Matrix:	Water	Prep Batch: N/A	Lab File ID: ms0631.D
Dilution:	1.0		Initial Weight/Volume: 20 mL
Date Analyzed:	01/25/2011 0948		Final Weight/Volume: 20 mL
Date Prepared:	01/25/2011 0948		

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
trans-1,2-Dichloroethene	92	83	80 - 120	9	24		
Benzene	90	84	77 - 120	6	20		
Dichlorobromomethane	90	82	78 - 120	9	20		
Carbon tetrachloride	87	77	80 - 120	12	21		F
Chlorobenzene	88	82	78 - 120	7	20		
Chloroform	89	81	78 - 120	8	20		
Ethylbenzene	89	83	78 - 120	7	26		
Methylene Chloride	79	74	60 - 134	5	20		
Tetrachloroethene	89	78	77 - 120	13	20		
Toluene	91	84	73 - 120	8	20		
Trichloroethene	89	79	78 - 122	11	20		
1,1-Dichloroethane	91	84	77 - 120	9	21		
1,1-Dichloroethene	90	81	68 - 133	10	20		
1,1,1-Trichloroethane	94	82	78 - 120	13	20		
1,2-Dichloropropane	93	89	76 - 120	5	20		
1,3-Dichlorobenzene	90	83	75 - 120	8	20		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
1,2-Dichloroethane-d4 (Surr)	102	90	70 - 127
Toluene-d8 (Surr)	103	97	80 - 125
4-Bromofluorobenzene (Surr)	109	103	78 - 120
Dibromofluoromethane (Surr)	110	101	77 - 120

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-50262

Method: 8260B
Preparation: 5030B

MS Lab Sample ID:	280-11691-G-1 MS	Units: ug/L	MSD Lab Sample ID:	280-11691-G-1 MSD	
Client Matrix:	Water		Client Matrix:	Water	
Dilution:	1.0		Dilution:	1.0	
Date Analyzed:	01/25/2011 0928		Date Analyzed:	01/25/2011 0948	
Date Prepared:	01/25/2011 0928		Date Prepared:	01/25/2011 0948	

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual	
trans-1,2-Dichloroethene	ND		5.00	5.00	4.58	4.16	
Benzene	ND		5.00	5.00	4.48	4.20	
Dichlorobromomethane	ND		5.00	5.00	4.52	4.12	
Carbon tetrachloride	ND		5.00	5.00	4.35	3.84	F
Chlorobenzene	ND		5.00	5.00	4.41	4.12	
Chloroform	ND		5.00	5.00	4.43	4.07	
Ethylbenzene	ND		5.00	5.00	4.44	4.16	
Methylene Chloride	0.34	J	5.00	5.00	4.27	4.06	
Tetrachloroethene	ND		5.00	5.00	4.44	3.90	
Toluene	ND		5.00	5.00	4.57	4.21	
Trichloroethene	ND		5.00	5.00	4.43	3.96	
1,1-Dichloroethane	ND		5.00	5.00	4.57	4.19	
1,1-Dichloroethene	ND		5.00	5.00	4.48	4.05	
1,1,1-Trichloroethane	ND		5.00	5.00	4.68	4.10	
1,2-Dichloropropane	ND		5.00	5.00	4.65	4.44	
1,3-Dichlorobenzene	ND		5.00	5.00	4.48	4.14	

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Method Blank - Batch: 280-49497

Method: 8270C
Preparation: 3520C

Lab Sample ID: MB 280-49497/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/21/2011 1243
Date Prepared: 01/18/2011 2206

Analysis Batch: 280-50057
Prep Batch: 280-49497
Units: ug/L

Instrument ID: MSS_K
Lab File ID: K8969.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1000 uL
Injection Volume: 0.5 uL

Analyte	Result	Qual	MDL	RL
Bis(2-chloroethoxy)methane	ND		0.97	10
Bis(2-chloroethyl)ether	ND		0.41	10
Bis(2-ethylhexyl) phthalate	ND		0.56	10
2,2'-oxybis[1-chloropropane]	ND		0.28	10
Acenaphthene	ND		0.28	4.0
Acenaphthylene	ND		0.49	4.0
Acetophenone	ND		0.24	10
Anthracene	ND		0.42	4.0
Atrazine	ND		0.73	10
Benzidine	ND		50	100
Benzo[a]anthracene	ND		0.35	4.0
Benzo[a]pyrene	ND		0.31	4.0
Benzo[b]fluoranthene	ND		0.53	4.0
Benzo[g,h,i]perylene	ND		0.50	4.0
Benzo[k]fluoranthene	ND		0.46	4.0
Butyl benzyl phthalate	ND		1.0	4.0
Caprolactam	ND		5.0	10
Carbazole	ND		0.43	4.0
Chrysene	ND		0.54	4.0
Di-n-butyl phthalate	ND		1.2	4.0
Di-n-octyl phthalate	ND		0.35	4.0
Dibenz(a,h)anthracene	ND		0.51	4.0
Dibenzofuran	ND		0.29	4.0
Diethyl phthalate	ND		0.38	4.0
Dimethyl phthalate	ND		0.21	4.0
Fluoranthene	ND		0.20	4.0
Fluorene	ND		0.31	4.0
Hexachlorobenzene	ND		0.66	10
Hexachlorobutadiene	ND		3.3	10
Hexachlorocyclopentadiene	ND		1.5	50
Hexachloroethane	ND		2.1	10
Indeno[1,2,3-cd]pyrene	ND		0.65	4.0
N-Nitrosodi-n-propylamine	ND		0.35	10
n-Nitrosodiphenylamine(as diphenylamine)	ND		0.44	10
Naphthalene	ND		0.29	4.0
Nitrobenzene	ND		0.81	10
Pentachlorophenol	ND		20	50
Phenanthrene	ND		0.26	4.0
Phenol	ND		2.0	10
Pyrene	ND		0.37	10
2-Chloronaphthalene	ND		0.26	4.0
2-Chlorophenol	ND		2.0	10
2-Methylnaphthalene	ND		0.29	4.0

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Method Blank - Batch: 280-49497

Method: 8270C
Preparation: 3520C

Lab Sample ID: MB 280-49497/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/21/2011 1243
Date Prepared: 01/18/2011 2206

Analysis Batch: 280-50057
Prep Batch: 280-49497
Units: ug/L

Instrument ID: MSS_K
Lab File ID: K8969.D
Initial Weight/Volume: 1000 mL
Final Weight/Volume: 1000 uL
Injection Volume: 0.5 uL

Analyte	Result	Qual	MDL	RL
2-Methylphenol	ND		0.98	10
2-Nitroaniline	ND		1.7	10
2-Nitrophenol	ND		0.39	10
2,4-Dichlorophenol	ND		0.64	10
2,4-Dimethylphenol	ND		0.58	10
2,4-Dinitrophenol	ND		10	30
2,4-Dinitrotoluene	ND		1.7	10
2,4,5-Trichlorophenol	ND		0.45	10
2,4,6-Trichlorophenol	ND		0.29	10
2,6-Dinitrotoluene	ND		1.9	10
3-Nitroaniline	ND		2.0	10
3,3'-Dichlorobenzidine	ND		2.0	50
4-Bromophenyl phenyl ether	ND		0.43	10
4-Chloro-3-methylphenol	ND		2.4	10
4-Chloroaniline	ND		2.1	10
4-Chlorophenyl phenyl ether	ND		1.7	10
3 & 4 Methylphenol	ND		0.25	10
4-Nitroaniline	ND		2.0	10
4-Nitrophenol	ND		1.2	10
4,6-Dinitro-2-methylphenol	ND		4.0	50
Cresols, Total	ND		0.25	10

Surrogate	% Rec	Acceptance Limits
Nitrobenzene-d5	79	48 - 120
2-Fluorophenol	85	51 - 120
2-Fluorobiphenyl	53	38 - 120
2,4,6-Tribromophenol	89	57 - 120
Terphenyl-d14	85	50 - 120
Phenol-d5	86	51 - 120

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Lab Control Sample - Batch: 280-49497

Method: 8270C
Preparation: 3520C

Lab Sample ID:	LCS 280-49497/2-A	Analysis Batch:	280-50057	Instrument ID:	MSS_K
Client Matrix:	Water	Prep Batch:	280-49497	Lab File ID:	K8970.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	1000 mL
Date Analyzed:	01/21/2011 1303			Final Weight/Volume:	1000 uL
Date Prepared:	01/18/2011 2206			Injection Volume:	0.5 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Acenaphthene	80.0	61.2	76	45 - 120	
Anthracene	80.0	73.3	92	56 - 120	
Carbazole	80.0	72.7	91	48 - 120	
N-Nitrosodi-n-propylamine	80.0	68.5	86	50 - 120	
Pentachlorophenol	80.0	71.2	89	40 - 120	
Phenol	80.0	70.6	88	52 - 120	
Pyrene	80.0	71.8	90	56 - 120	
2-Chlorophenol	80.0	70.1	88	57 - 120	
2-Methylnaphthalene	80.0	51.4	64	32 - 120	
2-Methylphenol	80.0	69.8	87	50 - 120	
2,4-Dinitrotoluene	80.0	75.0	94	51 - 120	
2,4,5-Trichlorophenol	80.0	76.2	95	60 - 120	
2,4,6-Trichlorophenol	80.0	74.5	93	52 - 120	
4-Chloro-3-methylphenol	80.0	72.7	91	63 - 120	
4-Nitrophenol	80.0	73.3	92	49 - 124	
1,4-Dichlorobenzene	80.0	49.0	61	27 - 120	
1,2,4-Trichlorobenzene	80.0	46.1	58	23 - 120	

Surrogate	% Rec	Acceptance Limits
Nitrobenzene-d5	81	48 - 120
2-Fluorophenol	85	51 - 120
2-Fluorobiphenyl	66	38 - 120
2,4,6-Tribromophenol	105	57 - 120
Terphenyl-d14	94	50 - 120
Phenol-d5	86	51 - 120

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-49497

Method: 8270C
Preparation: 3520C

MS Lab Sample ID:	280-11669-C-4-A MS	Analysis Batch: 280-50057	Instrument ID: MSS_K
Client Matrix:	Water	Prep Batch: 280-49497	Lab File ID: K8976.D
Dilution:	1.0		Initial Weight/Volume: 937.2 mL
Date Analyzed:	01/21/2011 1505		Final Weight/Volume: 1000 uL
Date Prepared:	01/18/2011 2206		Injection Volume: 0.5 uL

MSD Lab Sample ID:	280-11669-H-4-A MSD	Analysis Batch: 280-50057	Instrument ID: MSS_K
Client Matrix:	Water	Prep Batch: 280-49497	Lab File ID: K8977.D
Dilution:	1.0		Initial Weight/Volume: 928.1 mL
Date Analyzed:	01/21/2011 1525		Final Weight/Volume: 1000 uL
Date Prepared:	01/18/2011 2206		Injection Volume: 0.5 uL

	% Rec.					
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Acenaphthene	85	90	45 - 120	7	30		
Anthracene	86	95	56 - 120	10	30		
Carbazole	86	94	48 - 120	9	30		
N-Nitrosodi-n-propylamine	89	90	50 - 120	2	30		
Pentachlorophenol	82	88	40 - 120	8	33		
Phenol	91	93	52 - 120	4	42		
Pyrene	84	94	56 - 120	12	30		
2-Chlorophenol	94	94	57 - 120	1	30		
2-Methylnaphthalene	84	89	32 - 120	7	32		
2-Methylphenol	91	92	50 - 120	2	30		
2,4-Dinitrotoluene	94	98	51 - 120	5	32		
2,4,5-Trichlorophenol	93	100	60 - 120	9	30		
2,4,6-Trichlorophenol	94	101	52 - 120	9	30		
4-Chloro-3-methylphenol	92	97	63 - 120	6	30		
4-Nitrophenol	88	94	49 - 124	8	35		
1,4-Dichlorobenzene	60	71	27 - 120	18	52		
1,2,4-Trichlorobenzene	71	78	23 - 120	11	42		

Surrogate	MS % Rec	MSD % Rec	Acceptance Limits
Nitrobenzene-d5	90	92	48 - 120
2-Fluorophenol	91	90	51 - 120
2-Fluorobiphenyl	85	92	38 - 120
2,4,6-Tribromophenol	101	109	57 - 120
Terphenyl-d14	89	96	50 - 120
Phenol-d5	90	93	51 - 120

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-49497

Method: 8270C
Preparation: 3520C

MS Lab Sample ID:	280-11669-C-4-A MS	Units: ug/L	MSD Lab Sample ID:	280-11669-H-4-A MSD	
Client Matrix:	Water		Client Matrix:	Water	
Dilution:	1.0		Dilution:	1.0	
Date Analyzed:	01/21/2011 1505		Date Analyzed:	01/21/2011 1525	
Date Prepared:	01/18/2011 2206		Date Prepared:	01/18/2011 2206	

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Acenaphthene	ND	85.4	86.2	72.8	77.8
Anthracene	ND	85.4	86.2	73.8	81.7
Carbazole	ND	85.4	86.2	73.5	80.7
N-Nitrosodi-n-propylamine	ND	85.4	86.2	75.9	77.6
Pentachlorophenol	ND	85.4	86.2	70.0	75.8
Phenol	ND	85.4	86.2	77.7	80.5
Pyrene	ND	85.4	86.2	72.0	81.2
2-Chlorophenol	ND	85.4	86.2	80.2	80.7
2-Methylnaphthalene	ND	85.4	86.2	72.1	76.9
2-Methylphenol	ND	85.4	86.2	77.9	79.7
2,4-Dinitrotoluene	ND	85.4	86.2	80.3	84.2
2,4,5-Trichlorophenol	ND	85.4	86.2	79.2	86.4
2,4,6-Trichlorophenol	ND	85.4	86.2	80.0	87.5
4-Chloro-3-methylphenol	ND	85.4	86.2	78.7	83.8
4-Nitrophenol	ND	85.4	86.2	75.1	81.2
1,4-Dichlorobenzene	ND	85.4	86.2	51.3	61.5
1,2,4-Trichlorobenzene	ND	85.4	86.2	60.6	67.6

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Method Blank - Batch: 280-49631

Method: RSK-175
Preparation: N/A

Lab Sample ID: MB 280-49631/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/19/2011 1351
Date Prepared: N/A

Analysis Batch: 280-49631
Prep Batch: N/A
Units: ug/L

Instrument ID: GCV_J
Lab File ID: 007F0701.D
Initial Weight/Volume: 18 mL
Final Weight/Volume: 18 mL
Injection Volume:
Column ID: PRIMARY

Analyte	Result	Qual	MDL	RL
Methane	ND		0.22	5.0

Method Blank - Batch: 280-49631

Method: RSK-175
Preparation: N/A

Lab Sample ID: MB 280-49631/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/19/2011 1351
Date Prepared: N/A

Analysis Batch: 280-49631
Prep Batch: N/A
Units: ug/L

Instrument ID: GCV_J
Lab File ID: 007F0701.D
Initial Weight/Volume: 18 mL
Final Weight/Volume: 18 mL
Injection Volume:
Column ID: SECONDARY

Analyte	Result	Qual	MDL	RL
Methane	ND		0.22	5.0

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-49631

Method: RSK-175
Preparation: N/A

LCS Lab Sample ID:	LCS 280-49631/2	Analysis Batch:	280-49631	Instrument ID:	GCV_J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	005F0501.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	18 mL
Date Analyzed:	01/19/2011 1343			Final Weight/Volume:	18 mL
Date Prepared:	N/A			Injection Volume:	
				Column ID:	PRIMARY

LCSD Lab Sample ID:	LCSD 280-49631/3	Analysis Batch:	280-49631	Instrument ID:	GCV_J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	006F0601.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	18 mL
Date Analyzed:	01/19/2011 1347			Final Weight/Volume:	18 mL
Date Prepared:	N/A			Injection Volume:	
				Column ID:	PRIMARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methane	88	88	75 - 125	0	20		

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-49631

Method: RSK-175
Preparation: N/A

LCS Lab Sample ID:	LCS 280-49631/2	Analysis Batch:	280-49631	Instrument ID:	GCV_J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	005F0501.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	18 mL
Date Analyzed:	01/19/2011 1343			Final Weight/Volume:	18 mL
Date Prepared:	N/A			Injection Volume:	
				Column ID:	SECONDARY

LCSD Lab Sample ID:	LCSD 280-49631/3	Analysis Batch:	280-49631	Instrument ID:	GCV_J
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	006F0601.D
Dilution:	1.0	Units:	ug/L	Initial Weight/Volume:	18 mL
Date Analyzed:	01/19/2011 1347			Final Weight/Volume:	18 mL
Date Prepared:	N/A			Injection Volume:	
				Column ID:	SECONDARY

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Methane	88	88	75 - 125	0	20		

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-49631

Method: RSK-175
Preparation: N/A

LCS Lab Sample ID:	LCS 280-49631/2	Units:	ug/L	LCSD Lab Sample ID:	LCSD 280-49631/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Date Analyzed:	01/19/2011 1343			Date Analyzed:	01/19/2011 1347
Date Prepared:	N/A			Date Prepared:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Methane	73.0	73.0	63.9	64.2

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-49631

Method: RSK-175
Preparation: N/A

LCS Lab Sample ID:	LCS 280-49631/2	Units:	ug/L	LCSD Lab Sample ID:	LCSD 280-49631/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Date Analyzed:	01/19/2011 1343			Date Analyzed:	01/19/2011 1347
Date Prepared:	N/A			Date Prepared:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Methane	73.0	73.0	64.2	64.4

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Method Blank - Batch: 280-49511

Method: 6010B
Preparation: 3005A
Dissolved

Lab Sample ID: MB 280-49503/1-B
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/20/2011 1955
Date Prepared: 01/19/2011 1430

Analysis Batch: 280-49844
Prep Batch: 280-49511
Units: ug/L

Instrument ID: MT_025
Lab File ID: 25A4012011.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Calcium	ND		34	200
Iron	ND		22	100
Magnesium	ND		11	200
Manganese	0.390	J	0.25	10
Potassium	ND		240	3000
Sodium	ND		92	1000
Selenium	ND		4.9	15

Lab Control Sample - Batch: 280-49511

Method: 6010B
Preparation: 3005A
Dissolved

Lab Sample ID: LCS 280-49503/2-B
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/20/2011 1958
Date Prepared: 01/19/2011 1430

Analysis Batch: 280-49844
Prep Batch: 280-49511
Units: ug/L

Instrument ID: MT_025
Lab File ID: 25A4012011.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Calcium	50000	50000	100	90 - 111	
Iron	1000	1070	107	89 - 115	
Magnesium	50000	51100	102	90 - 113	
Manganese	500	524	105	90 - 110	
Potassium	50000	52700	105	89 - 114	
Sodium	50000	53500	107	90 - 115	
Selenium	2000	2210	110	85 - 112	

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-49511

Method: 6010B
Preparation: 3005A
Dissolved

MS Lab Sample ID:	280-11687-3	Analysis Batch:	280-49844	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-49511	Lab File ID:	25A4012011.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	01/20/2011 2007			Final Weight/Volume:	50 mL
Date Prepared:	01/19/2011 1430				

MSD Lab Sample ID:	280-11687-3	Analysis Batch:	280-49844	Instrument ID:	MT_025
Client Matrix:	Water	Prep Batch:	280-49511	Lab File ID:	25A4012011.asc
Dilution:	1.0			Initial Weight/Volume:	50 mL
Date Analyzed:	01/20/2011 2009			Final Weight/Volume:	50 mL
Date Prepared:	01/19/2011 1430				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Calcium	99	96	48 - 153	2	25		
Iron	102	100	52 - 155	1	25		
Magnesium	99	98	62 - 146	1	25		
Manganese	102	101	79 - 121	1	25		
Potassium	104	103	76 - 132	1	25		
Sodium	107	105	70 - 203	2	40		
Selenium	108	107	71 - 140	0	25		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-49511

Method: 6010B
Preparation: 3005A
Dissolved

MS Lab Sample ID:	280-11687-3	Units: ug/L	MSD Lab Sample ID: 280-11687-3
Client Matrix:	Water		Client Matrix: Water
Dilution:	1.0		Dilution: 1.0
Date Analyzed:	01/20/2011 2007		Date Analyzed: 01/20/2011 2009
Date Prepared:	01/19/2011 1430		Date Prepared: 01/19/2011 1430

Analyte	Sample Result/Qual		MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Calcium	28000		50000	50000	77200	75800
Iron	29	J	1000	1000	1050	1030
Magnesium	3700		50000	50000	53300	52800
Manganese	0.41	J	500	500	512	506
Potassium	2000	J	50000	50000	53900	53400
Sodium	7200		50000	50000	60600	59600
Selenium	ND		2000	2000	2160	2150

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Serial Dilution - Batch: 280-49511

Method: 6010B
Preparation: 3005A
Dissolved

Lab Sample ID: 280-11687-3
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 01/20/2011 2004
Date Prepared: 01/19/2011 1430

Analysis Batch: 280-49844
Prep Batch: 280-49511
Units: ug/L

Instrument ID: MT_025
Lab File ID: 25A4012011.asc
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Sample Result/Qual		Result	%Diff	Limit	Qual
Calcium	28000		25800	6.7	10	
Iron	29	J	ND	NC	10	
Magnesium	3700		3380	7.3	10	
Manganese	0.41	J	ND	NC	10	
Potassium	2000	J	2000	NC	10	J
Sodium	7200		7040	3.0	10	
Selenium	ND		ND	NC	10	

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Method Blank - Batch: 280-50290

Method: 300.0
Preparation: N/A

Lab Sample ID: MB 280-50290/14
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/24/2011 1515
Date Prepared: N/A

Analysis Batch: 280-50290
Prep Batch: N/A
Units: mg/L

Instrument ID: WC_IC8
Lab File ID: 113.TXT
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Bromide	ND		0.11	0.20
Chloride	ND		0.25	3.0
Fluoride	ND		0.060	0.50
Sulfate	ND		0.23	5.0

Method Reporting Limit Check - Batch: 280-50290

Method: 300.0
Preparation: N/A

Lab Sample ID: MRL 280-50290/11
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/24/2011 1424
Date Prepared: N/A

Analysis Batch: 280-50290
Prep Batch: N/A
Units: mg/L

Instrument ID: WC_IC8
Lab File ID: 110.TXT
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 5 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Bromide	0.200	0.151	76	50 - 150	J
Chloride	1.00	0.993	99	50 - 150	J
Fluoride	0.200	0.210	105	50 - 150	J
Sulfate	1.00	0.830	83	50 - 150	J

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-50290

Method: 300.0
Preparation: N/A

LCS Lab Sample ID:	LCS 280-50290/12	Analysis Batch:	280-50290	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	111.TXT
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	1.0 mL
Date Analyzed:	01/24/2011 1441			Final Weight/Volume:	1.0 mL
Date Prepared:	N/A				

LCSD Lab Sample ID:	LCSD 280-50290/13	Analysis Batch:	280-50290	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	112.TXT
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	1.0 mL
Date Analyzed:	01/24/2011 1458			Final Weight/Volume:	1.0 mL
Date Prepared:	N/A				

	% Rec.					
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Bromide	101	104	90 - 110	2	10		
Chloride	102	102	90 - 110	0	10		
Fluoride	98	98	90 - 110	1	10		
Sulfate	102	102	90 - 110	0	10		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-50290

Method: 300.0
Preparation: N/A

LCS Lab Sample ID:	LCS 280-50290/12	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-50290/13
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Date Analyzed:	01/24/2011 1441			Date Analyzed:	01/24/2011 1458
Date Prepared:	N/A			Date Prepared:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Bromide	5.00	5.00	5.07	5.19
Chloride	25.0	25.0	25.4	25.5
Fluoride	5.00	5.00	4.88	4.91
Sulfate	25.0	25.0	25.4	25.5

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-50290

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	280-11841-A-1 MS	Analysis Batch:	280-50290	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	117.TXT
Dilution:	1.0			Initial Weight/Volume:	1.0 mL
Date Analyzed:	01/24/2011 1622			Final Weight/Volume:	5 mL
Date Prepared:	N/A				

MSD Lab Sample ID:	280-11841-A-1 MSD	Analysis Batch:	280-50290	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	118.TXT
Dilution:	1.0			Initial Weight/Volume:	1.0 mL
Date Analyzed:	01/24/2011 1639			Final Weight/Volume:	5 mL
Date Prepared:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Bromide	105	106	80 - 120	0	20		
Fluoride	91	92	80 - 120	1	20		

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-50290

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	280-11714-A-1 MS	Analysis Batch:	280-50290	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	120.TXT
Dilution:	5.0			Initial Weight/Volume:	1.0 mL
Date Analyzed:	01/24/2011 1712			Final Weight/Volume:	5 mL
Date Prepared:	N/A				

MSD Lab Sample ID:	280-11714-A-1 MSD	Analysis Batch:	280-50290	Instrument ID:	WC_IC8
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	121.TXT
Dilution:	5.0			Initial Weight/Volume:	1.0 mL
Date Analyzed:	01/24/2011 1729			Final Weight/Volume:	5 mL
Date Prepared:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Chloride	98	95	80 - 120	1	20	E	E
Sulfate	96	97	80 - 120	0	20	E	E

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-50290

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	280-11841-A-1 MS	Units: mg/L	MSD Lab Sample ID:	280-11841-A-1 MSD
Client Matrix:	Water		Client Matrix:	Water
Dilution:	1.0		Dilution:	1.0
Date Analyzed:	01/24/2011 1622		Date Analyzed:	01/24/2011 1639
Date Prepared:	N/A		Date Prepared:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Bromide	ND	5.00	5.00	5.26	5.28
Fluoride	0.90	5.00	5.00	5.46	5.50

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-50290

Method: 300.0
Preparation: N/A

MS Lab Sample ID:	280-11714-A-1 MS	Units: mg/L	MSD Lab Sample ID:	280-11714-A-1 MSD
Client Matrix:	Water		Client Matrix:	Water
Dilution:	5.0		Dilution:	5.0
Date Analyzed:	01/24/2011 1712		Date Analyzed:	01/24/2011 1729
Date Prepared:	N/A		Date Prepared:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual		MSD Result/Qual	
Chloride	170	125	125	290	E	287	E
Sulfate	180	125	125	305	E	305	E

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Duplicate - Batch: 280-50290

Method: 300.0
Preparation: N/A

Lab Sample ID: 280-11841-A-1 DU
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/24/2011 1605
Date Prepared: N/A

Analysis Batch: 280-50290
Prep Batch: N/A
Units: mg/L

Instrument ID: WC_IC8
Lab File ID: 116.TXT
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Bromide	ND	ND	NC	15	
Fluoride	0.90	0.873	3	15	

Duplicate - Batch: 280-50290

Method: 300.0
Preparation: N/A

Lab Sample ID: 280-11714-A-1 DU
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 01/24/2011 1655
Date Prepared: N/A

Analysis Batch: 280-50290
Prep Batch: N/A
Units: mg/L

Instrument ID: WC_IC8
Lab File ID: 119.TXT
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Chloride	170	167	0.9	15	
Sulfate	180	178	4	15	

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Method Blank - Batch: 280-49965

Method: 353.2
Preparation: N/A

Lab Sample ID: MB 280-49965/99
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/21/2011 1257
Date Prepared: N/A

Analysis Batch: 280-49965
Prep Batch: N/A
Units: mg/L

Instrument ID: WC_Alp 2
Lab File ID: C:\FLOW_4\0121NXN.RST
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N	ND		0.019	0.10

Method Reporting Limit Check - Batch: 280-49965

Method: 353.2
Preparation: N/A

Lab Sample ID: MRL 280-49965/17
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/21/2011 1035
Date Prepared: N/A

Analysis Batch: 280-49965
Prep Batch: N/A
Units: mg/L

Instrument ID: WC_Alp 2
Lab File ID: C:\FLOW_4\0121NXN.RST
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N	0.100	0.0810	81	50 - 150	J

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-49965

Method: 353.2
Preparation: N/A

LCS Lab Sample ID: LCS 280-49965/100
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/21/2011 1258
Date Prepared: N/A

Analysis Batch: 280-49965
Prep Batch: N/A
Units: mg/L

Instrument ID: WC_Alp 2
Lab File ID: C:\FLOW_4\0121NXN.RST
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-49965/101
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/21/2011 1300
Date Prepared: N/A

Analysis Batch: 280-49965
Prep Batch: N/A
Units: mg/L

Instrument ID: WC_Alp 2
Lab File ID: C:\FLOW_4\0121NXN.RST
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Nitrate Nitrite as N	107	107	90 - 110	1	10		

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-49965

Method: 353.2
Preparation: N/A

LCS Lab Sample ID:	LCS 280-49965/100	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-49965/101
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Date Analyzed:	01/21/2011 1258			Date Analyzed:	01/21/2011 1300
Date Prepared:	N/A			Date Prepared:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrate Nitrite as N	5.00	5.00	5.33	5.37

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-49965

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-11683-A-1 MS	Analysis Batch:	280-49965	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0121NXN.RST
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	01/21/2011 1303			Final Weight/Volume:	5 mL
Date Prepared:	N/A				

MSD Lab Sample ID:	280-11683-A-1 MSD	Analysis Batch:	280-49965	Instrument ID:	WC_Alp 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0121NXN.RST
Dilution:	1.0			Initial Weight/Volume:	5 mL
Date Analyzed:	01/21/2011 1304			Final Weight/Volume:	5 mL
Date Prepared:	N/A				

	% Rec.						
Analyte	MS	MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Nitrate Nitrite as N	102	103	72 - 113	0	17		

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 280-49965

Method: 353.2
Preparation: N/A

MS Lab Sample ID:	280-11683-A-1 MS	Units: mg/L	MSD Lab Sample ID:	280-11683-A-1 MSD	
Client Matrix:	Water		Client Matrix:	Water	
Dilution:	1.0		Dilution:	1.0	
Date Analyzed:	01/21/2011 1303		Date Analyzed:	01/21/2011 1304	
Date Prepared:	N/A		Date Prepared:	N/A	

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Nitrate Nitrite as N	3.2	4.00	4.00	7.31	7.35

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Method Blank - Batch: 280-49804

Method: SM 2320B
Preparation: N/A

Lab Sample ID: MB 280-49804/6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/19/2011 2004
Date Prepared: N/A

Analysis Batch: 280-49804
Prep Batch: N/A
Units: mg/L

Instrument ID: WC_AT2
Lab File ID: 011911.txt
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Total Alkalinity	ND		1.1	5.0
Bicarbonate Alkalinity as CaCO3	ND		1.1	5.0
Carbonate Alkalinity as CaCO3	ND		1.1	5.0
Hydroxide Alkalinity	ND		1.1	5.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-49804

Method: SM 2320B
Preparation: N/A

LCS Lab Sample ID: LCS 280-49804/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/19/2011 1946
Date Prepared: N/A

Analysis Batch: 280-49804
Prep Batch: N/A
Units: mg/L

Instrument ID: WC_AT2
Lab File ID: 011911.txt
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

LCSD Lab Sample ID: LCSD 280-49804/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/19/2011 1956
Date Prepared: N/A

Analysis Batch: 280-49804
Prep Batch: N/A
Units: mg/L

Instrument ID: WC_AT2
Lab File ID: 011911.txt
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Total Alkalinity	103	103	90 - 110	0	10		

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-49804

Method: SM 2320B
Preparation: N/A

LCS Lab Sample ID:	LCS 280-49804/4	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-49804/5
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Date Analyzed:	01/19/2011 1946			Date Analyzed:	01/19/2011 1956
Date Prepared:	N/A			Date Prepared:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Alkalinity	200	200	206	206

Duplicate - Batch: 280-49804

Method: SM 2320B
Preparation: N/A

Lab Sample ID:	280-11676-B-1 DU	Analysis Batch:	280-49804	Instrument ID:	WC_AT2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	011911.txt
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	1.0 mL
Date Analyzed:	01/19/2011 2028			Final Weight/Volume:	1.0 mL
Date Prepared:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Alkalinity	1200	1140	2	10	

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Method Blank - Batch: 280-50684

Method: SM 2510B
Preparation: N/A

Lab Sample ID: MB 280-50684/5
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/27/2011 1107
Date Prepared: N/A

Analysis Batch: 280-50684
Prep Batch: N/A
Units: umhos/cm

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	RL	RL
Specific Conductance	ND		2.0	2.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-50684

Method: SM 2510B
Preparation: N/A

LCS Lab Sample ID: LCS 280-50684/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/27/2011 1107
Date Prepared: N/A

Analysis Batch: 280-50684
Prep Batch: N/A
Units: umhos/cm

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

LCSD Lab Sample ID: LCSD 280-50684/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/27/2011 1107
Date Prepared: N/A

Analysis Batch: 280-50684
Prep Batch: N/A
Units: umhos/cm

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Specific Conductance	102	102	90 - 110	0	10		

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-50684

Method: SM 2510B
Preparation: N/A

LCS Lab Sample ID: LCS 280-50684/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/27/2011 1107
Date Prepared: N/A

Units: umhos/cm

LCSD Lab Sample ID: LCSD 280-50684/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/27/2011 1107
Date Prepared: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Specific Conductance	1410	1410	1440	1430

Duplicate - Batch: 280-50684

Method: SM 2510B
Preparation: N/A

Lab Sample ID: 280-11669-F-29 DU
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/27/2011 1107
Date Prepared: N/A

Analysis Batch: 280-50684
Prep Batch: N/A
Units: umhos/cm

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Specific Conductance	1100	1100	0.5	10	

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Method Blank - Batch: 280-49849

Method: SM 2540C
Preparation: N/A

Lab Sample ID: MB 280-49849/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/21/2011 0746
Date Prepared: N/A

Analysis Batch: 280-49849
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Total Dissolved Solids	ND		4.7	10

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-49849

Method: SM 2540C
Preparation: N/A

LCS Lab Sample ID: LCS 280-49849/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/21/2011 0746
Date Prepared: N/A

Analysis Batch: 280-49849
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-49849/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/21/2011 0746
Date Prepared: N/A

Analysis Batch: 280-49849
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 100 mL
Final Weight/Volume: 100 mL

Analyte	% Rec. LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Total Dissolved Solids	95	93	86 - 110	1	20		

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-49849

Method: SM 2540C
Preparation: N/A

LCS Lab Sample ID:	LCS 280-49849/2	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-49849/3
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Date Analyzed:	01/21/2011 0746			Date Analyzed:	01/21/2011 0746
Date Prepared:	N/A			Date Prepared:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Dissolved Solids	500	500	474	467

Duplicate - Batch: 280-49849

Method: SM 2540C
Preparation: N/A

Lab Sample ID:	280-11680-I-5 DU	Analysis Batch:	280-49849	Instrument ID:	No Equipment Assigned
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Units:	mg/L	Initial Weight/Volume:	100 mL
Date Analyzed:	01/21/2011 0746			Final Weight/Volume:	100 mL
Date Prepared:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Dissolved Solids	400	400	0.8	10	

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 280-49621

Method: SM 4500 H+ B
Preparation: N/A

LCS Lab Sample ID:	LCS 280-49621/4	Analysis Batch:	280-49621	Instrument ID:	WC_pH Probe
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	011911.txt
Dilution:	1.0	Units:	SU	Initial Weight/Volume:	
Date Analyzed:	01/19/2011 0904			Final Weight/Volume:	1.0 mL
Date Prepared:	N/A				

LCSD Lab Sample ID:	LCSD 280-49621/5	Analysis Batch:	280-49621	Instrument ID:	WC_pH Probe
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	011911.txt
Dilution:	1.0	Units:	SU	Initial Weight/Volume:	
Date Analyzed:	01/19/2011 0905			Final Weight/Volume:	1.0 mL
Date Prepared:	N/A				

	% Rec.						
Analyte	LCS	LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
pH	100	100	99 - 101	0	5		

Laboratory Control/
Laboratory Duplicate Data Report - Batch: 280-49621

Method: SM 4500 H+ B
Preparation: N/A

LCS Lab Sample ID:	LCS 280-49621/4	Units:	SU	LCSD Lab Sample ID:	LCSD 280-49621/5
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Date Analyzed:	01/19/2011 0904			Date Analyzed:	01/19/2011 0905
Date Prepared:	N/A			Date Prepared:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
pH	7.00	7.00	7.020	7.020

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Duplicate - Batch: 280-49621

Method: SM 4500 H+ B
Preparation: N/A

Lab Sample ID: 280-11644-A-1 DU
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 01/19/2011 0914
Date Prepared: N/A

Analysis Batch: 280-49621
Prep Batch: N/A
Units: SU

Instrument ID: WC_pH Probe
Lab File ID: 011911.txt
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
pH	8.35	8.360	0.1	5	HF

DATA REPORTING QUALIFIERS

Client: Colorado Oil&Gas Conservation Commision Job Number: 280-11687-1

Lab Section	Qualifier	Description
GC/MS VOA		
	B	Compound was found in the blank and sample.
	F	MS or MSD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC/MS Semi VOA		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	HF	Field parameter with a holding time of 15 minutes
	E	Result exceeded calibration range.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
GC/MS VOA					
Analysis Batch:280-50262					
LCS 280-50262/6	Lab Control Sample	T	Water	8260B	
MB 280-50262/5	Method Blank	T	Water	8260B	
280-11687-3	IRELAND 1	T	Water	8260B	
280-11687-4TB	TRIP BLANK 2	T	Water	8260B	
280-11691-G-1 MS	Matrix Spike	T	Water	8260B	
280-11691-G-1 MSD	Matrix Spike Duplicate	T	Water	8260B	

Report Basis
T = Total

GC/MS Semi VOA					
Prep Batch: 280-49497					
LCS 280-49497/2-A	Lab Control Sample	T	Water	3520C	
MB 280-49497/1-A	Method Blank	T	Water	3520C	
280-11669-C-4-A MS	Matrix Spike	T	Water	3520C	
280-11669-H-4-A MSD	Matrix Spike Duplicate	T	Water	3520C	
280-11687-3	IRELAND 1	T	Water	3520C	
Analysis Batch:280-50057					
LCS 280-49497/2-A	Lab Control Sample	T	Water	8270C	280-49497
MB 280-49497/1-A	Method Blank	T	Water	8270C	280-49497
280-11669-C-4-A MS	Matrix Spike	T	Water	8270C	280-49497
280-11669-H-4-A MSD	Matrix Spike Duplicate	T	Water	8270C	280-49497
280-11687-3	IRELAND 1	T	Water	8270C	280-49497

Report Basis
T = Total

GC VOA					
Analysis Batch:280-49631					
LCS 280-49631/2	Lab Control Sample	T	Water	RSK-175	
LCSD 280-49631/3	Lab Control Sample Duplicate	T	Water	RSK-175	
MB 280-49631/4	Method Blank	T	Water	RSK-175	
280-11687-3	IRELAND 1	T	Water	RSK-175	

Report Basis
T = Total

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Prep Batch: 280-49511					
LCS 280-49503/2-B	Lab Control Sample	D	Water	3005A	
MB 280-49503/1-B	Method Blank	D	Water	3005A	
280-11687-3	IRELAND 1	D	Water	3005A	
280-11687-3MS	Matrix Spike	D	Water	3005A	
280-11687-3MSD	Matrix Spike Duplicate	D	Water	3005A	
Analysis Batch:280-49844					
LCS 280-49503/2-B	Lab Control Sample	D	Water	6010B	280-49511
MB 280-49503/1-B	Method Blank	D	Water	6010B	280-49511
280-11687-3	IRELAND 1	D	Water	6010B	280-49511
280-11687-3MS	Matrix Spike	D	Water	6010B	280-49511
280-11687-3MSD	Matrix Spike Duplicate	D	Water	6010B	280-49511

Report Basis

D = Dissolved

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:280-49621					
LCS 280-49621/4	Lab Control Sample	T	Water	SM 4500 H+ B	
LCSD 280-49621/5	Lab Control Sample Duplicate	T	Water	SM 4500 H+ B	
280-11644-A-1 DU	Duplicate	T	Water	SM 4500 H+ B	
280-11687-3	IRELAND 1	T	Water	SM 4500 H+ B	
Analysis Batch:280-49804					
LCS 280-49804/4	Lab Control Sample	T	Water	SM 2320B	
LCSD 280-49804/5	Lab Control Sample Duplicate	T	Water	SM 2320B	
MB 280-49804/6	Method Blank	T	Water	SM 2320B	
280-11676-B-1 DU	Duplicate	T	Water	SM 2320B	
280-11687-3	IRELAND 1	T	Water	SM 2320B	
Analysis Batch:280-49849					
LCS 280-49849/2	Lab Control Sample	T	Water	SM 2540C	
LCSD 280-49849/3	Lab Control Sample Duplicate	T	Water	SM 2540C	
MB 280-49849/1	Method Blank	T	Water	SM 2540C	
280-11680-I-5 DU	Duplicate	T	Water	SM 2540C	
280-11687-3	IRELAND 1	T	Water	SM 2540C	
Analysis Batch:280-49965					
LCS 280-49965/100	Lab Control Sample	T	Water	353.2	
LCSD 280-49965/101	Lab Control Sample Duplicate	T	Water	353.2	
MB 280-49965/99	Method Blank	T	Water	353.2	
280-11683-A-1 MS	Matrix Spike	T	Water	353.2	
280-11683-A-1 MSD	Matrix Spike Duplicate	T	Water	353.2	
280-11687-3	IRELAND 1	T	Water	353.2	
Analysis Batch:280-50290					
LCS 280-50290/12	Lab Control Sample	T	Water	300.0	
LCSD 280-50290/13	Lab Control Sample Duplicate	T	Water	300.0	
MB 280-50290/14	Method Blank	T	Water	300.0	
280-11687-3	IRELAND 1	T	Water	300.0	
280-11714-A-1 DU	Duplicate	T	Water	300.0	
280-11714-A-1 MS	Matrix Spike	T	Water	300.0	
280-11714-A-1 MSD	Matrix Spike Duplicate	T	Water	300.0	
280-11841-A-1 DU	Duplicate	T	Water	300.0	
280-11841-A-1 MS	Matrix Spike	T	Water	300.0	
280-11841-A-1 MSD	Matrix Spike Duplicate	T	Water	300.0	
Analysis Batch:280-50684					
LCS 280-50684/3	Lab Control Sample	T	Water	SM 2510B	
LCSD 280-50684/4	Lab Control Sample Duplicate	T	Water	SM 2510B	
MB 280-50684/5	Method Blank	T	Water	SM 2510B	
280-11669-F-29 DU	Duplicate	T	Water	SM 2510B	
280-11687-3	IRELAND 1	T	Water	SM 2510B	

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch

Report Basis

T = Total

Client: Colorado Oil&Gas Conservation Commision Job Number: 280-11687-1

Laboratory Chronicle

Lab ID: 280-11687-3 **Client ID: IRELAND 1**

Sample Date/Time: 01/18/2011 13:42 Received Date/Time: 01/18/2011 15:55

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-11687-H-3		280-50262		01/25/2011 09:07	1	TAL DEN	MD
A:8260B	280-11687-H-3		280-50262		01/25/2011 09:07	1	TAL DEN	MD
P:3520C	280-11687-B-3-A		280-50057	280-49497	01/18/2011 22:06	1	TAL DEN	TJA
A:8270C	280-11687-B-3-A		280-50057	280-49497	01/21/2011 20:28	1	TAL DEN	DCK
A:RSK-175	280-11687-L-3		280-49631		01/19/2011 14:27	1	TAL DEN	MPS
P:3005A	280-11687-F-3-B		280-49844	280-49511	01/19/2011 14:30	1	TAL DEN	JM
A:6010B	280-11687-F-3-B		280-49844	280-49511	01/20/2011 20:02	1	TAL DEN	JKH
A:300.0	280-11687-D-3		280-50290		01/24/2011 20:34	1	TAL DEN	TLP
A:353.2	280-11687-E-3		280-49965		01/21/2011 13:09	1	TAL DEN	LES
A:SM 2320B	280-11687-C-3		280-49804		01/19/2011 22:30	1	TAL DEN	MRD
A:SM 2510B	280-11687-D-3		280-50684		01/27/2011 11:07	1	TAL DEN	PMP
A:SM 2540C	280-11687-D-3		280-49849		01/21/2011 07:46	1	TAL DEN	BJD
A:SM 4500 H+ B	280-11687-C-3		280-49621		01/19/2011 10:30	1	TAL DEN	JMT

Lab ID: 280-11687-3 MS **Client ID: IRELAND 1**

Sample Date/Time: 01/18/2011 13:42 Received Date/Time: 01/18/2011 15:55

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-11687-F-3-C MS		280-49844	280-49511	01/19/2011 14:30	1	TAL DEN	JM
A:6010B	280-11687-F-3-C MS		280-49844	280-49511	01/20/2011 20:07	1	TAL DEN	JKH

Lab ID: 280-11687-3 MSD **Client ID: IRELAND 1**

Sample Date/Time: 01/18/2011 13:42 Received Date/Time: 01/18/2011 15:55

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-11687-F-3-D MSD		280-49844	280-49511	01/19/2011 14:30	1	TAL DEN	JM
A:6010B	280-11687-F-3-D MSD		280-49844	280-49511	01/20/2011 20:09	1	TAL DEN	JKH

Lab ID: 280-11687-3 SD **Client ID: IRELAND 1**

Sample Date/Time: 01/18/2011 13:42 Received Date/Time: 01/18/2011 15:55

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:3005A	280-11687-F-3-B SD ^5		280-49844	280-49511	01/19/2011 14:30	5	TAL DEN	JM
A:6010B	280-11687-F-3-B SD ^5		280-49844	280-49511	01/20/2011 20:04	5	TAL DEN	JKH

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Laboratory Chronicle

Lab ID: 280-11687-4 **Client ID:** TRIP BLANK 2

Sample Date/Time: 01/18/2011 00:00 Received Date/Time: 01/18/2011 15:55

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-11687-A-4		280-50262		01/25/2011 10:29	1	TAL DEN	MD
A:8260B	280-11687-A-4		280-50262		01/25/2011 10:29	1	TAL DEN	MD

Lab ID: MB **Client ID:** N/A

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	MB 280-50262/5		280-50262		01/25/2011 07:19	1	TAL DEN	MD
A:8260B	MB 280-50262/5		280-50262		01/25/2011 07:19	1	TAL DEN	MD
P:3520C	MB 280-49497/1-A		280-50057	280-49497	01/18/2011 22:06	1	TAL DEN	TJA
A:8270C	MB 280-49497/1-A		280-50057	280-49497	01/21/2011 12:43	1	TAL DEN	DCK
A:RSK-175	MB 280-49631/4		280-49631		01/19/2011 13:51	1	TAL DEN	MPS
P:3005A	MB 280-49503/1-B		280-49844	280-49511	01/19/2011 14:30	1	TAL DEN	JM
A:6010B	MB 280-49503/1-B		280-49844	280-49511	01/20/2011 19:55	1	TAL DEN	JKH
A:300.0	MB 280-50290/14		280-50290		01/24/2011 15:15	1	TAL DEN	TLP
A:353.2	MB 280-49965/99		280-49965		01/21/2011 12:57	1	TAL DEN	LES
A:SM 2320B	MB 280-49804/6		280-49804		01/19/2011 20:04	1	TAL DEN	MRD
A:SM 2510B	MB 280-50684/5		280-50684		01/27/2011 11:07	1	TAL DEN	PMP
A:SM 2540C	MB 280-49849/1		280-49849		01/21/2011 07:46	1	TAL DEN	BJD

Lab ID: LCS **Client ID:** N/A

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	LCS 280-50262/6		280-50262		01/25/2011 07:39	1	TAL DEN	MD
A:8260B	LCS 280-50262/6		280-50262		01/25/2011 07:39	1	TAL DEN	MD
P:3520C	LCS 280-49497/2-A		280-50057	280-49497	01/18/2011 22:06	1	TAL DEN	TJA
A:8270C	LCS 280-49497/2-A		280-50057	280-49497	01/21/2011 13:03	1	TAL DEN	DCK
A:RSK-175	LCS 280-49631/2		280-49631		01/19/2011 13:43	1	TAL DEN	MPS
P:3005A	LCS 280-49503/2-B		280-49844	280-49511	01/19/2011 14:30	1	TAL DEN	JM
A:6010B	LCS 280-49503/2-B		280-49844	280-49511	01/20/2011 19:58	1	TAL DEN	JKH
A:300.0	LCS 280-50290/12		280-50290		01/24/2011 14:41	1	TAL DEN	TLP
A:353.2	LCS 280-49965/100		280-49965		01/21/2011 12:58	1	TAL DEN	LES
A:SM 2320B	LCS 280-49804/4		280-49804		01/19/2011 19:46	1	TAL DEN	MRD
A:SM 2510B	LCS 280-50684/3		280-50684		01/27/2011 11:07	1	TAL DEN	PMP
A:SM 2540C	LCS 280-49849/2		280-49849		01/21/2011 07:46	1	TAL DEN	BJD
A:SM 4500 H+ B	LCS 280-49621/4		280-49621		01/19/2011 09:04	1	TAL DEN	JMT

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Laboratory Chronicle

Lab ID: LCSD **Client ID:** N/A

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:RSK-175	LCSD 280-49631/3		280-49631		01/19/2011 13:47	1	TAL DEN	MPS
A:300.0	LCSD 280-50290/13		280-50290		01/24/2011 14:58	1	TAL DEN	TLP
A:353.2	LCSD 280-49965/101		280-49965		01/21/2011 13:00	1	TAL DEN	LES
A:SM 2320B	LCSD 280-49804/5		280-49804		01/19/2011 19:56	1	TAL DEN	MRD
A:SM 2510B	LCSD 280-50684/4		280-50684		01/27/2011 11:07	1	TAL DEN	PMP
A:SM 2540C	LCSD 280-49849/3		280-49849		01/21/2011 07:46	1	TAL DEN	BJD
A:SM 4500 H+ B	LCSD 280-49621/5		280-49621		01/19/2011 09:05	1	TAL DEN	JMT

Lab ID: MRL **Client ID:** N/A

Sample Date/Time: N/A Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	MRL 280-50290/11		280-50290		01/24/2011 14:24	1	TAL DEN	TLP
A:353.2	MRL 280-49965/17		280-49965		01/21/2011 10:35	1	TAL DEN	LES

Lab ID: MS **Client ID:** N/A

Sample Date/Time: 01/18/2011 14:35 Received Date/Time: 01/19/2011 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-11691-G-1 MS		280-50262		01/25/2011 09:28	1	TAL DEN	MD
A:8260B	280-11691-G-1 MS		280-50262		01/25/2011 09:28	1	TAL DEN	MD
P:3520C	280-11669-C-4-A MS		280-50057	280-49497	01/18/2011 22:06	1	TAL DEN	TJA
A:8270C	280-11669-C-4-A MS		280-50057	280-49497	01/21/2011 15:05	1	TAL DEN	DCK
A:300.0	280-11841-A-1 MS		280-50290		01/24/2011 16:22	1	TAL DEN	TLP
A:300.0	280-11714-A-1 MS		280-50290		01/24/2011 17:12	5	TAL DEN	TLP
A:353.2	280-11683-A-1 MS		280-49965		01/21/2011 13:03	1	TAL DEN	LES

Lab ID: MSD **Client ID:** N/A

Sample Date/Time: 01/18/2011 14:35 Received Date/Time: 01/19/2011 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:5030B	280-11691-G-1 MSD		280-50262		01/25/2011 09:48	1	TAL DEN	MD
A:8260B	280-11691-G-1 MSD		280-50262		01/25/2011 09:48	1	TAL DEN	MD
P:3520C	280-11669-H-4-A MSD		280-50057	280-49497	01/18/2011 22:06	1	TAL DEN	TJA
A:8270C	280-11669-H-4-A MSD		280-50057	280-49497	01/21/2011 15:25	1	TAL DEN	DCK
A:300.0	280-11841-A-1 MSD		280-50290		01/24/2011 16:39	1	TAL DEN	TLP
A:300.0	280-11714-A-1 MSD		280-50290		01/24/2011 17:29	5	TAL DEN	TLP
A:353.2	280-11683-A-1 MSD		280-49965		01/21/2011 13:04	1	TAL DEN	LES

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Laboratory Chronicle

Lab ID: DU **Client ID:** N/A

Sample Date/Time: 01/24/2011 05:00 Received Date/Time: 01/24/2011 09:19

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:300.0	280-11841-A-1 DU		280-50290		01/24/2011 16:05	1	TAL DEN	TLP
A:300.0	280-11714-A-1 DU		280-50290		01/24/2011 16:55	5	TAL DEN	TLP
A:SM 2320B	280-11676-B-1 DU		280-49804		01/19/2011 20:28	1	TAL DEN	MRD
A:SM 2510B	280-11669-F-29 DU		280-50684		01/27/2011 11:07	1	TAL DEN	PMP
A:SM 2540C	280-11680-I-5 DU		280-49849		01/21/2011 07:46	1	TAL DEN	BJD
A:SM 4500 H+ B	280-11644-A-1 DU		280-49621		01/19/2011 09:14	1	TAL DEN	JMT

Lab References:

TAL DEN = TestAmerica Denver

Method 8260B

Volatile Organic Compounds (GC/MS) by Method 8260B

TestAmerica

VOLATILE REPORT SW-846

Data file : \\DenSvr03\Public\chem\MSV\GCMS1.i\012511.b\ms0629.D
Lab Smp Id: 280-11687-H-3 Client Smp ID: IRELAND 1
Inj Date : 25-JAN-2011 09:07
Operator : DOBRANSKYM Inst ID: GCMS1.i
Smp Info : 280-11687-h-3,,PH~7
Misc Info : 280-11687-H-3
Comment   :
Method   : \\DenSvr03\Public\chem\MSV\GCMS1.i\012511.b\8260B-H2O.m
Meth Date : 25-Jan-2011 07:32 GCMS1.i Quant Type: ISTD
Cal Date : 14-JAN-2011 03:14 Cal File: ms0343.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TALS.sub
Target Version: 4.14
Processing Host: DENPC096

Concentration Formula: Amt * DF * Vp/Vs * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (mL)
Vs	20.000	Sample Volume purged (mL)
Cpnd Variable		Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
* 69 Fluorobenzene	96	8.354	8.354	(1.000)	2797902	12.5000	
* 95 Chlorobenzene-d5	119	10.602	10.616	(1.000)	585323	12.5000	
* 121 1,4-Dichlorobenzene-d4	152	12.544	12.544	(1.000)	779191	12.5000	
$ 58 Dibromofluoromethane (Surr)	111	7.809	7.809	(0.935)	661846	13.3040	13.3040
$ 64 1,2-Dichloroethane-d4	65	8.102	8.102	(0.970)	620347	12.4326	12.4326
$ 83 Toluene-d8	98	9.499	9.499	(0.896)	3280951	13.4424	13.4424
$ 106 4-Bromofluorobenzene (Surr)	95	11.510	11.510	(0.918)	978292	13.4191	13.4191
M 1 1,2-Dichloroethene (total)	96	Compound Not Detected.					
M 2 Xylene (total)	106	Compound Not Detected.					
5 dichlorodifluoromethane	85	Compound Not Detected.					
6 1,2-Dichlorotetrafluoroethane	85	Compound Not Detected.					
7 Chloromethane	50	Compound Not Detected.					
8 Vinyl Chloride	62	Compound Not Detected.					
9 Ethylene Oxide	43	Compound Not Detected.					
10 Bromomethane	94	Compound Not Detected.					
11 Chloroethane	64	Compound Not Detected.					
12 Dichlorofluoromethane	67	Compound Not Detected.					
14 Trichlorofluoromethane	101	Compound Not Detected.					
13 Ethanol	45	Compound Not Detected.					
15 1,2-dichloro-1,1,2-trifluoroe	117	Compound Not Detected.					
17 Ethyl Ether	59	Compound Not Detected.					
16 2,2-dichloro-1,1,1-trifluoroe	83	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
19 Acrolein	56	Compound Not Detected.					
20 Acetone	43	Compound Not Detected.					
21 Trichlorotrifluoroethane	151	Compound Not Detected.					
22 2-propanol	45	Compound Not Detected.					
23 1,1-Dichloroethene	96	Compound Not Detected.					
27 Iodomethane	142	Compound Not Detected.					
26 Acetonitrile	41	Compound Not Detected.					
28 Methyl Acetate	43	Compound Not Detected.					
31 Carbon Disulfide	76	6.440	6.440	(0.771)	87955	0.37728	0.377275(a)
29 Allyl Chloride	41	Compound Not Detected.					
30 tert-Butyl alcohol	59	Compound Not Detected.					
33 Methylene Chloride	84	6.496	6.482	(0.778)	20267	0.32242	0.322420(a)
34 Acrylonitrile	53	Compound Not Detected.					
35 Methyl t-butyl ether	73	Compound Not Detected.					
36 trans-1,2-Dichloroethene	96	Compound Not Detected.					
40 Hexane	57	Compound Not Detected.					
42 Vinyl acetate	43	Compound Not Detected.					
43 Isopropyl ether	87	Compound Not Detected.					
44 1,1-Dichloroethane	63	Compound Not Detected.					
46 Chloroprene	53	Compound Not Detected.					
48 ETBE	59	Compound Not Detected.					
50 2-Butanone	43	Compound Not Detected.					
49 Ethyl Acetate	43	Compound Not Detected.					
52 cis-1,2-Dichloroethene	96	Compound Not Detected.					
51 Propionitrile	54	Compound Not Detected.					
53 2,2-Dichloropropane	77	Compound Not Detected.					
54 Methacrylonitrile	41	Compound Not Detected.					
55 Bromochloromethane	128	Compound Not Detected.					
56 Chloroform	83	Compound Not Detected.					
57 Tetrahydrofuran	42	Compound Not Detected.					
60 1,1,1-Trichloroethane	97	Compound Not Detected.					
59 Isobutanol	41	Compound Not Detected.					
61 Cyclohexane	56	Compound Not Detected.					
62 1,1-Dichloropropene	75	Compound Not Detected.					
63 Carbon Tetrachloride	117	Compound Not Detected.					
65 1,2-Dichloroethane	62	Compound Not Detected.					
67 Benzene	78	Compound Not Detected.					
66 TAME	73	Compound Not Detected.					
68 n-Butanol	56	Compound Not Detected.					
71 Trichloroethene	130	Compound Not Detected.					
72 2-Pentanone	43	Compound Not Detected.					
73 Methyl Methacrylate	100	Compound Not Detected.					
74 1,2-Dichloropropane	63	Compound Not Detected.					
75 Methyl Cyclohexane	55	Compound Not Detected.					
76 1,4-Dioxane	88	Compound Not Detected.					
77 Dibromomethane	93	Compound Not Detected.					
78 Bromodichloromethane	83	Compound Not Detected.					
79 2-nitropropane	41	Compound Not Detected.					
80 2-Chloroethyl vinyl ether	63	Compound Not Detected.					
81 cis-1,3-Dichloropropene	75	Compound Not Detected.					
82 4-Methyl-2-pentanone	43	Compound Not Detected.					
84 Toluene	91	Compound Not Detected.					
86 trans-1,3-Dichloropropene	75	Compound Not Detected.					
85 Ethyl methacrylate	69	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
87	1,1,2-Trichloroethane	97	Compound Not Detected.					
88	2-Hexanone	43	Compound Not Detected.					
89	1,3-Dichloropropane	76	Compound Not Detected.					
90	Tetrachloroethene	164	Compound Not Detected.					
91	Dibromochloromethane	129	Compound Not Detected.					
92	Tetrahydrothiophene	60	Compound Not Detected.					
93	1,2-Dibromoethane	107	Compound Not Detected.					
94	1-Chlorohexane	91	Compound Not Detected.					
96	Chlorobenzene	112	Compound Not Detected.					
97	1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
98	Ethylbenzene	106	Compound Not Detected.					
99	m and p-Xylene	106	Compound Not Detected.					
101	o-Xylene	106	Compound Not Detected.					
100	Styrene	104	Compound Not Detected.					
102	Bromoform	173	Compound Not Detected.					
103	isopropyl benzene	105	Compound Not Detected.					
104	cis-1,4-dichloro-2-butene	53	Compound Not Detected.					
105	Cyclohexanone	55	Compound Not Detected.					
107	1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
108	t-1,4-Dichloro-2-butene	53	Compound Not Detected.					
109	1,2,3-Trichloropropane	110	Compound Not Detected.					
111	Bromobenzene	156	Compound Not Detected.					
110	n-Propylbenzene	120	Compound Not Detected.					
113	2-Chlorotoluene	126	Compound Not Detected.					
112	1,3,5-Trimethylbenzene	105	Compound Not Detected.					
114	4-Chlorotoluene	126	Compound Not Detected.					
115	tert-Butylbenzene	119	Compound Not Detected.					
116	1,2,4-Trimethylbenzene	105	Compound Not Detected.					
118	sec-Butylbenzene	134	Compound Not Detected.					
119	4-Isopropyltoluene	119	Compound Not Detected.					
120	1,3-Dichlorobenzene	146	Compound Not Detected.					
122	1,4-dichlorobenzene	146	Compound Not Detected.					
123	1,2,3-Trimethylbenzene	105	Compound Not Detected.					
124	n-Butylbenzene	91	Compound Not Detected.					
126	1,2-Dichlorobenzene	146	Compound Not Detected.					
127	1,2-Dibromo-3-chloropropane	157	Compound Not Detected.					
129	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
130	Hexachlorobutadiene	225	Compound Not Detected.					
131	Naphthalene	128	Compound Not Detected.					
132	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

QC Flag Legend

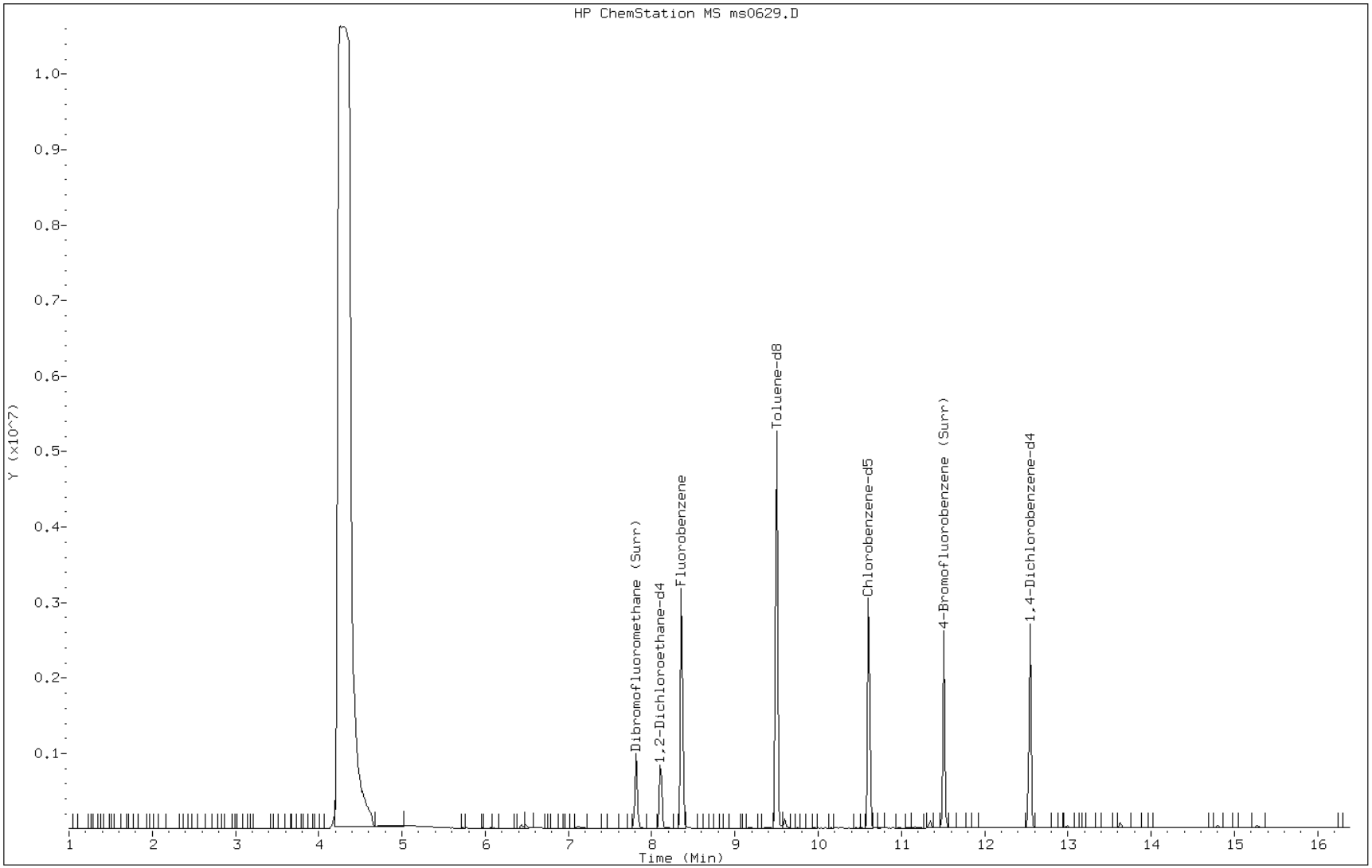
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: ms0629.D

Date: 25-JAN-2011 09:07

Client ID: IRELAND 1 Instrument: GCMS1.i

Sample Info: 280-11687-h-3,,PH~7 Operator: DOBRANSKYM



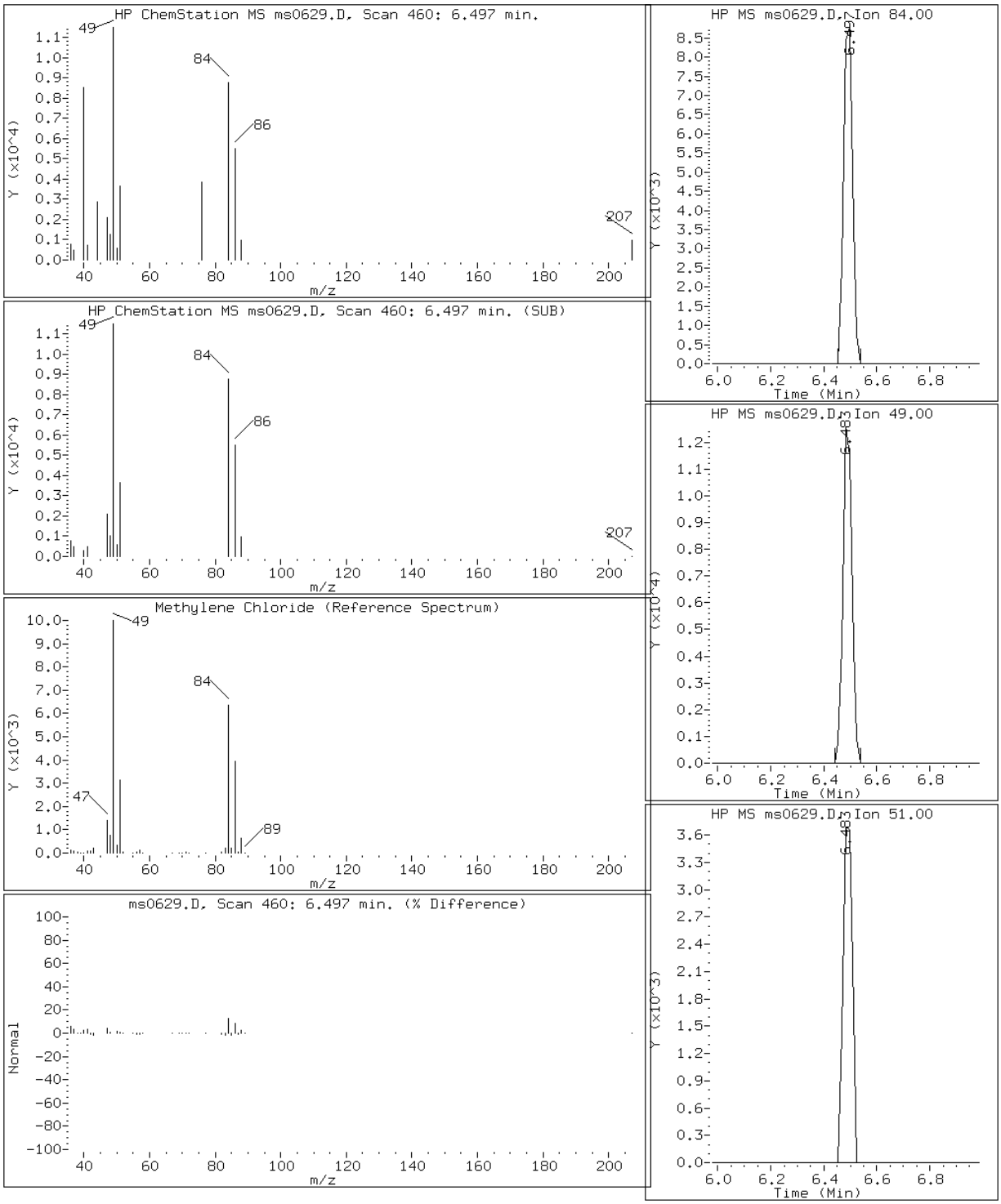
Data File: ms0629.D

Date: 25-JAN-2011 09:07

Client ID: IRELAND 1 Instrument: GCMS1.i

Sample Info: 280-11687-h-3,,PH~7 Operator: DOBRANSKYM

33 Methylene Chloride



TestAmerica

VOLATILE REPORT SW-846

Data file : \\DenSvr03\Public\chem\MSV\GCMS1.i\012511.b\ms0633.D
Lab Smp Id: 280-11687-A-4 Client Smp ID: TRIP BLANK 2
Inj Date : 25-JAN-2011 10:29
Operator : DOBRANSKYM Inst ID: GCMS1.i
Smp Info : 280-11687-a-4,,PH<2
Misc Info : 280-11687-A-4
Comment :
Method : \\DenSvr03\Public\chem\MSV\GCMS1.i\012511.b\8260B-H2O.m
Meth Date : 25-Jan-2011 10:37 dobranskym Quant Type: ISTD
Cal Date : 14-JAN-2011 03:14 Cal File: ms0343.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: TALS.sub
Target Version: 4.14
Processing Host: DENPC096

Concentration Formula: Amt * DF * Vp/Vs * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vp	20.000	Purge Volume (mL)
Vs	20.000	Sample Volume purged (mL)
Cpnd Variable		Local Compound Variable

		QUANT SIG					CONCENTRATIONS	
	Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/L)	FINAL (ug/L)
*	69 Fluorobenzene	96	8.354	8.354	(1.000)	3936789	12.5000	
*	95 Chlorobenzene-d5	119	10.616	10.616	(1.000)	821043	12.5000	
*	121 1,4-Dichlorobenzene-d4	152	12.544	12.544	(1.000)	1090251	12.5000	
$	58 Dibromofluoromethane (Surr)	111	7.809	7.809	(0.935)	830589	11.8659	11.8659
$	64 1,2-Dichloroethane-d4	65	8.102	8.102	(0.970)	773018	11.0105	11.0105
$	83 Toluene-d8	98	9.499	9.499	(0.895)	4160125	12.1511	12.1511
$	106 4-Bromofluorobenzene (Surr)	95	11.510	11.510	(0.918)	1242299	12.1786	12.1786
M	1 1,2-Dichloroethene (total)	96	Compound Not Detected.					
M	2 Xylene (total)	106	Compound Not Detected.					
	5 dichlorodifluoromethane	85	Compound Not Detected.					
	6 1,2-Dichlorotetrafluoroethane	85	Compound Not Detected.					
	7 Chloromethane	50	Compound Not Detected.					
	8 Vinyl Chloride	62	Compound Not Detected.					
	9 Ethylene Oxide	43	Compound Not Detected.					
	10 Bromomethane	94	Compound Not Detected.					
	11 Chloroethane	64	Compound Not Detected.					
	12 Dichlorofluoromethane	67	Compound Not Detected.					
	14 Trichlorofluoromethane	101	Compound Not Detected.					
	13 Ethanol	45	Compound Not Detected.					
	15 1,2-dichloro-1,1,2-trifluoroe	117	Compound Not Detected.					
	17 Ethyl Ether	59	Compound Not Detected.					
	16 2,2-dichloro-1,1,1-trifluoroe	83	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
19 Acrolein	56	Compound Not Detected.					
20 Acetone	43	6.105	6.091	(0.731)	20451	2.34656	2.34656
21 Trichlorotrifluoroethane	151	Compound Not Detected.					
22 2-propanol	45	Compound Not Detected.					
23 1,1-Dichloroethene	96	Compound Not Detected.					
27 Iodomethane	142	Compound Not Detected.					
26 Acetonitrile	41	Compound Not Detected.					
28 Methyl Acetate	43	Compound Not Detected.					
31 Carbon Disulfide	76	6.440	6.440	(0.771)	241007	0.73471	0.734713(a)
29 Allyl Chloride	41	Compound Not Detected.					
30 tert-Butyl alcohol	59	Compound Not Detected.					
33 Methylene Chloride	84	6.496	6.482	(0.778)	37940	0.42896	0.428963(a)
34 Acrylonitrile	53	Compound Not Detected.					
35 Methyl t-butyl ether	73	Compound Not Detected.					
36 trans-1,2-Dichloroethene	96	Compound Not Detected.					
40 Hexane	57	Compound Not Detected.					
42 Vinyl acetate	43	Compound Not Detected.					
43 Isopropyl ether	87	Compound Not Detected.					
44 1,1-Dichloroethane	63	Compound Not Detected.					
46 Chloroprene	53	Compound Not Detected.					
48 ETBE	59	Compound Not Detected.					
50 2-Butanone	43	Compound Not Detected.					
49 Ethyl Acetate	43	Compound Not Detected.					
52 cis-1,2-Dichloroethene	96	Compound Not Detected.					
51 Propionitrile	54	Compound Not Detected.					
53 2,2-Dichloropropane	77	Compound Not Detected.					
54 Methacrylonitrile	41	Compound Not Detected.					
55 Bromochloromethane	128	Compound Not Detected.					
56 Chloroform	83	Compound Not Detected.					
57 Tetrahydrofuran	42	Compound Not Detected.					
60 1,1,1-Trichloroethane	97	Compound Not Detected.					
59 Isobutanol	41	Compound Not Detected.					
61 Cyclohexane	56	Compound Not Detected.					
62 1,1-Dichloropropene	75	Compound Not Detected.					
63 Carbon Tetrachloride	117	Compound Not Detected.					
65 1,2-Dichloroethane	62	Compound Not Detected.					
67 Benzene	78	Compound Not Detected.					
66 TAME	73	Compound Not Detected.					
68 n-Butanol	56	Compound Not Detected.					
71 Trichloroethene	130	Compound Not Detected.					
72 2-Pentanone	43	Compound Not Detected.					
73 Methyl Methacrylate	100	Compound Not Detected.					
74 1,2-Dichloropropane	63	Compound Not Detected.					
75 Methyl Cyclohexane	55	Compound Not Detected.					
76 1,4-Dioxane	88	Compound Not Detected.					
77 Dibromomethane	93	Compound Not Detected.					
78 Bromodichloromethane	83	Compound Not Detected.					
79 2-nitropropane	41	Compound Not Detected.					
80 2-Chloroethyl vinyl ether	63	Compound Not Detected.					
81 cis-1,3-Dichloropropene	75	Compound Not Detected.					
82 4-Methyl-2-pentanone	43	Compound Not Detected.					
84 Toluene	91	Compound Not Detected.					
86 trans-1,3-Dichloropropene	75	Compound Not Detected.					
85 Ethyl methacrylate	69	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
87	1,1,2-Trichloroethane	97	Compound Not Detected.					
88	2-Hexanone	43	Compound Not Detected.					
89	1,3-Dichloropropane	76	Compound Not Detected.					
90	Tetrachloroethene	164	Compound Not Detected.					
91	Dibromochloromethane	129	Compound Not Detected.					
92	Tetrahydrothiophene	60	Compound Not Detected.					
93	1,2-Dibromoethane	107	Compound Not Detected.					
94	1-Chlorohexane	91	Compound Not Detected.					
96	Chlorobenzene	112	Compound Not Detected.					
97	1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
98	Ethylbenzene	106	Compound Not Detected.					
99	m and p-Xylene	106	Compound Not Detected.					
101	o-Xylene	106	Compound Not Detected.					
100	Styrene	104	Compound Not Detected.					
102	Bromoform	173	Compound Not Detected.					
103	isopropyl benzene	105	Compound Not Detected.					
104	cis-1,4-dichloro-2-butene	53	Compound Not Detected.					
105	Cyclohexanone	55	Compound Not Detected.					
107	1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
108	t-1,4-Dichloro-2-butene	53	Compound Not Detected.					
109	1,2,3-Trichloropropane	110	Compound Not Detected.					
111	Bromobenzene	156	Compound Not Detected.					
110	n-Propylbenzene	120	Compound Not Detected.					
113	2-Chlorotoluene	126	Compound Not Detected.					
112	1,3,5-Trimethylbenzene	105	Compound Not Detected.					
114	4-Chlorotoluene	126	Compound Not Detected.					
115	tert-Butylbenzene	119	Compound Not Detected.					
116	1,2,4-Trimethylbenzene	105	Compound Not Detected.					
118	sec-Butylbenzene	134	Compound Not Detected.					
119	4-Isopropyltoluene	119	Compound Not Detected.					
120	1,3-Dichlorobenzene	146	Compound Not Detected.					
122	1,4-dichlorobenzene	146	Compound Not Detected.					
123	1,2,3-Trimethylbenzene	105	Compound Not Detected.					
124	n-Butylbenzene	91	Compound Not Detected.					
126	1,2-Dichlorobenzene	146	Compound Not Detected.					
127	1,2-Dibromo-3-chloropropane	157	Compound Not Detected.					
129	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
130	Hexachlorobutadiene	225	Compound Not Detected.					
131	Naphthalene	128	Compound Not Detected.					
132	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

QC Flag Legend

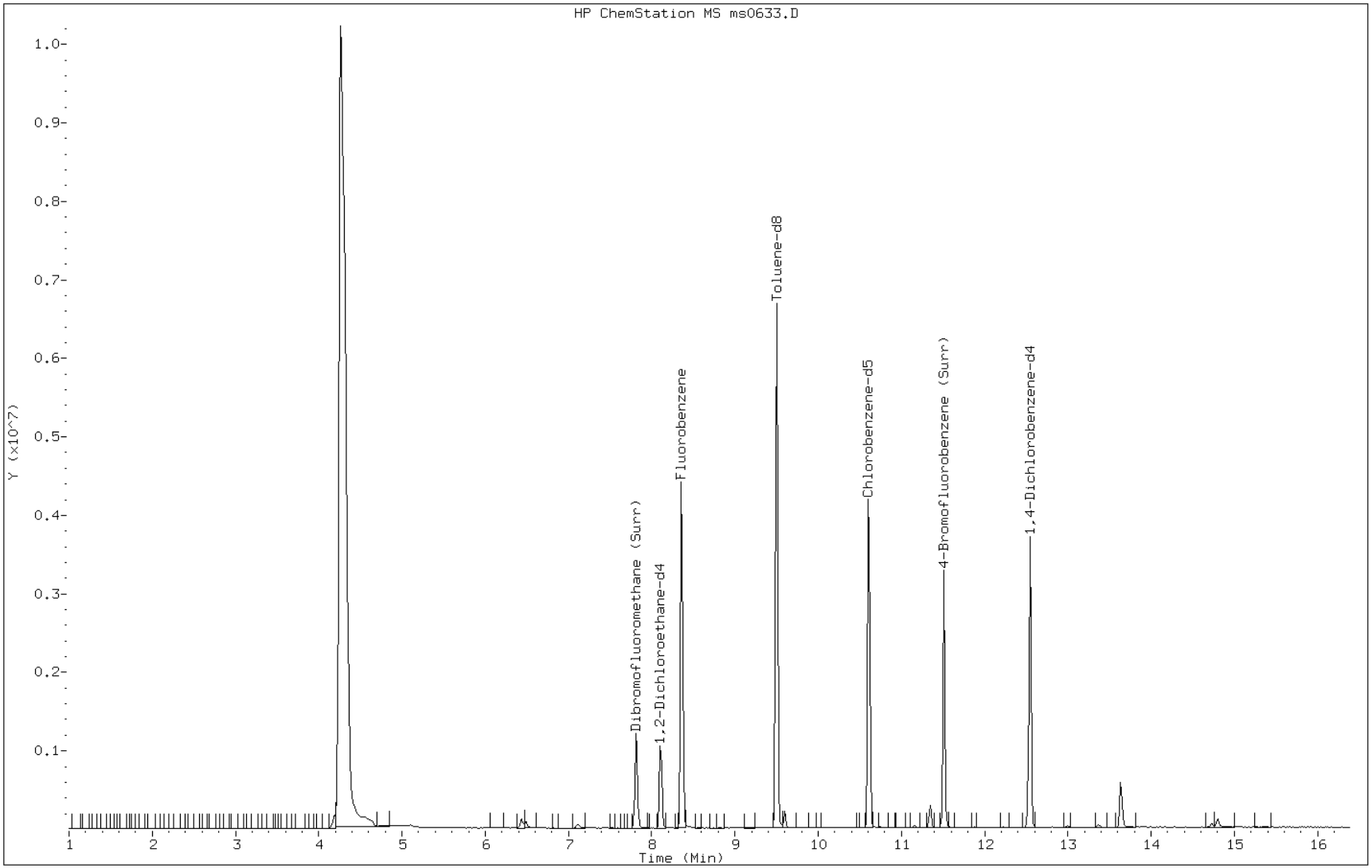
a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: ms0633.D

Date: 25-JAN-2011 10:29

Client ID: TRIP BLANK 2 Instrument: GCMS1.i

Sample Info: 280-11687-a-4,,PH<2 Operator: DOBRANSKYM



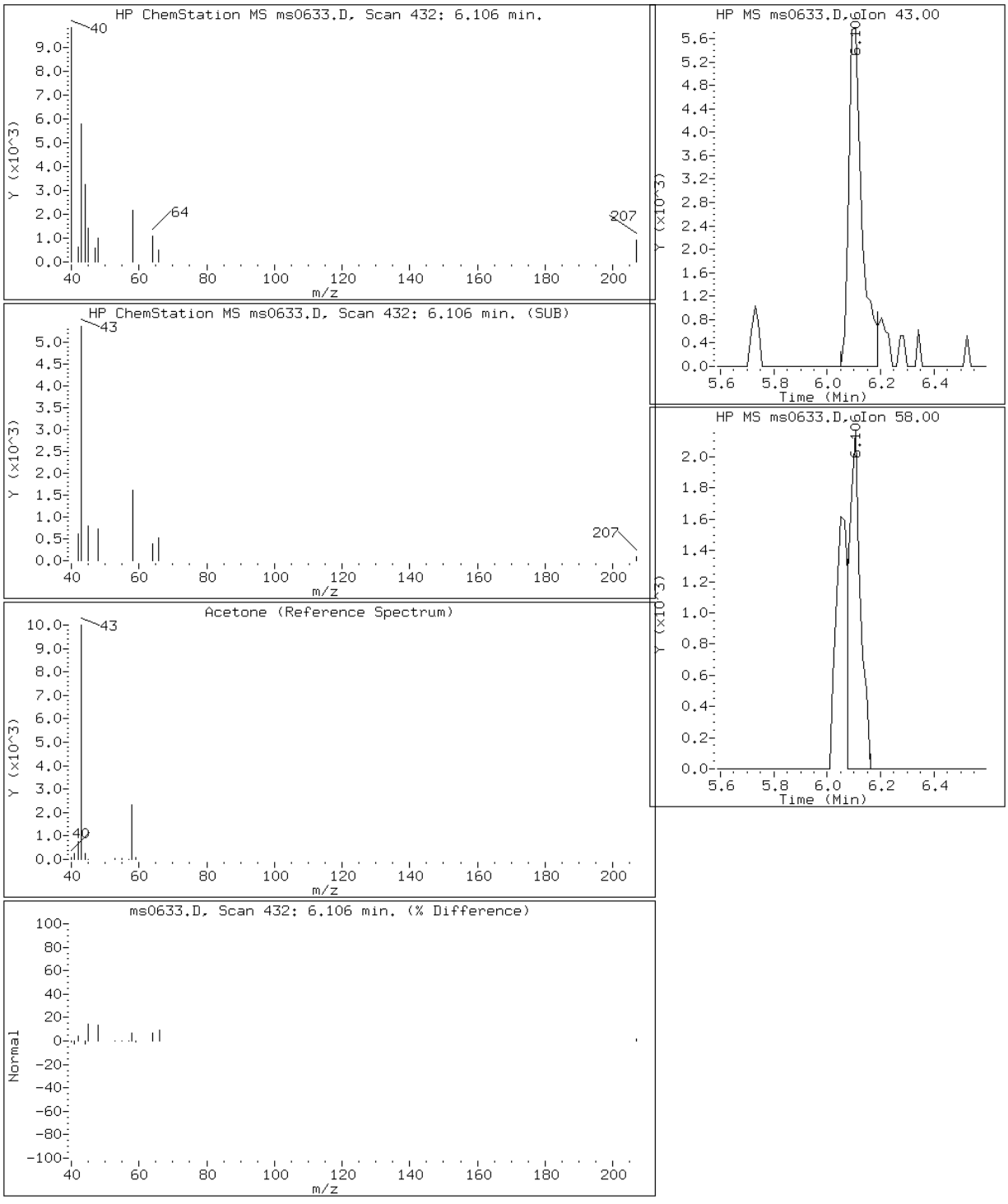
Data File: ms0633.D

Date: 25-JAN-2011 10:29

Client ID: TRIP BLANK 2 Instrument: GCMS1.i

Sample Info: 280-11687-a-4,,PH<2 Operator: DOBRANSKYM

20 Acetone



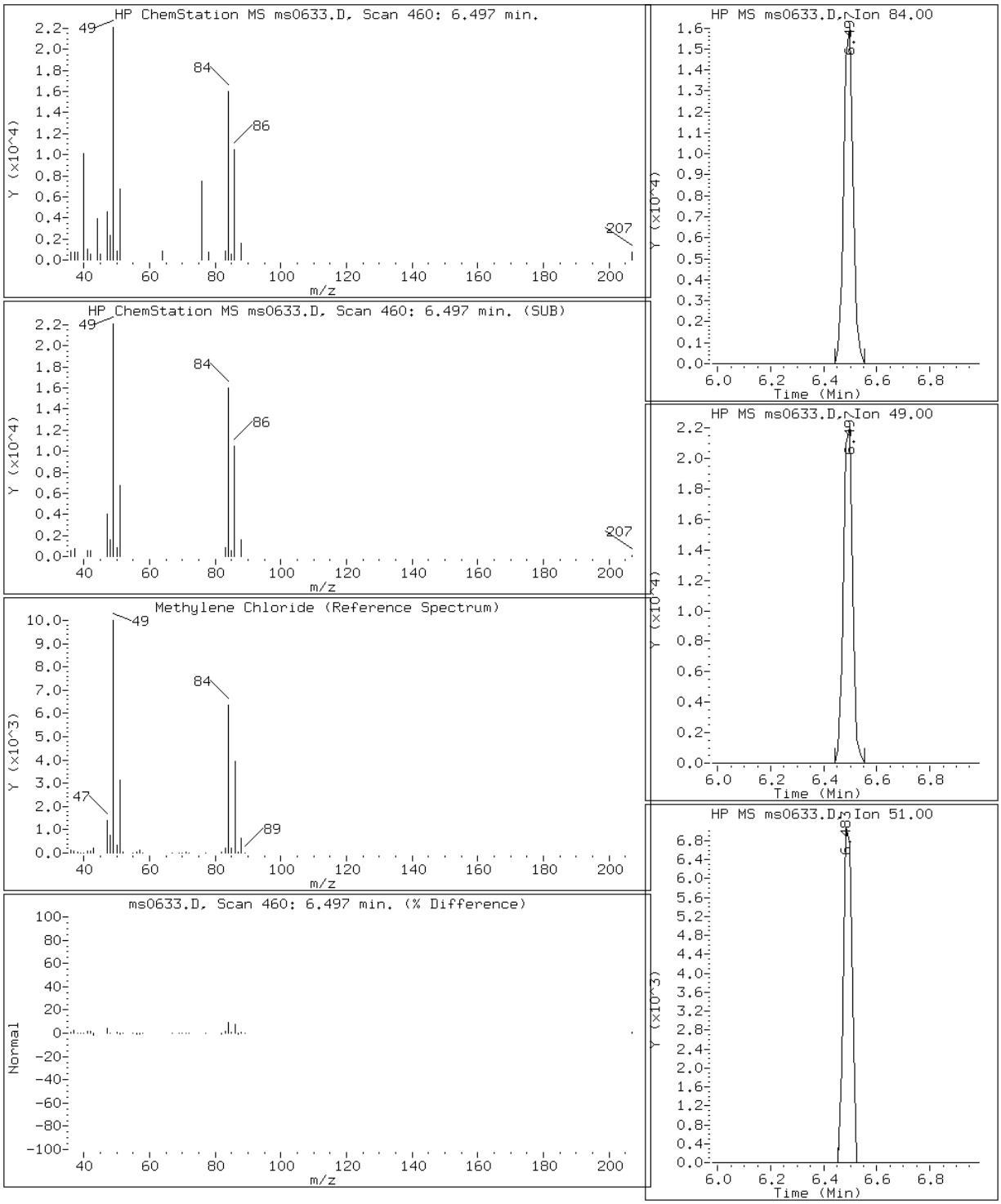
Data File: ms0633.D

Date: 25-JAN-2011 10:29

Client ID: TRIP BLANK 2 Instrument: GCMS1.i

Sample Info: 280-11687-a-4,,PH<2 Operator: DOBRANSKYM

33 Methylene Chloride



Method 8270C

Semivolatile Organic Compounds (GC/MS) by Method 8270C

TestAmerica

BNA ANALYSIS QUANTITATION REPORT

Data file : \\DenSvr03\Public\chem\MSS\K.i\012111.b\K8991.D
Lab Smp Id: 280-11687-B-3-A Client Smp ID: IRELAND 1
Inj Date : 21-JAN-2011 20:28
Operator : KIEKELD Inst ID: K.i
Smp Info : 280-11687-B-3-A
Misc Info : 280-11687-B-3-A
Comment : SOP#CORP-MS-0001DEN, revision1.1
Method : \\DenSvr03\Public\chem\MSS\K.i\012111.b\8270C.m
Meth Date : 24-Jan-2011 07:09 kiekeld Quant Type: ISTD
Cal Date : 21-JAN-2011 12:23 Cal File: K8968.D
Als bottle: 29
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: H.sub
Target Version: 4.14
Processing Host: DENPC307

Concentration Formula: Amt * DF * Vf/Vs * CpndVariable

Name	Value	Description
DF	1.000	Dilution Factor
Vf	1000.000	final volume at end of extraction (uL)
Vs	1053.400	volume of sample extracted (mL)
Cpnd Variable		Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
*	26 1,4-Dichlorobenzene-d4	152	4.737	4.737	(1.000)	199605	40.0000	
*	58 Naphthalene-d8	136	5.971	5.971	(1.000)	778206	40.0000	
*	96 Acenaphthene-d10	164	7.687	7.686	(1.000)	462163	40.0000	
*	135 Phenanthrene-d10	188	8.956	8.956	(1.000)	786685	40.0000	
*	166 Chrysene-d12	240	11.018	11.030	(1.000)	869343	40.0000	
*	179 Perylene-d12	264	12.352	12.381	(1.000)	835566	40.0000	
$	8 2-Fluorophenol	112	3.538	3.533	(0.747)	950462	137.918	130.926
$	15 Phenol-d5	99	4.355	4.361	(0.919)	1147181	138.158	131.154
$	43 Nitrobenzene-d5	82	5.272	5.272	(0.883)	646437	89.4001	84.8682
$	81 2-Fluorobiphenyl	172	7.029	7.029	(0.914)	1257970	86.7155	82.3196
$	118 2,4,6-Tribromophenol	330	8.380	8.386	(1.090)	302642	147.438	139.964
$	154 Terphenyl-d14	244	10.154	10.160	(0.922)	1546529	91.5692	86.9273
$	29 1,2-Dichlorobenzene-d4	152	4.890	4.890	(1.032)	390795	81.0885	76.9779
$	22 2-Chlorophenol-d4	132	4.526	4.526	(0.955)	1013726	141.038	133.888
	6 Pyridine	79	Compound Not Detected.					
	5 N-Nitrosodimethylamine	74	Compound Not Detected.					
	18 Aniline	93	Compound Not Detected.					
	16 Phenol	94	Compound Not Detected.					
	20 Bis(2-chloroethyl) ether	93	Compound Not Detected.					
	23 2-Chlorophenol	128	Compound Not Detected.					
	25 1,3-Dichlorobenzene	146	Compound Not Detected.					
	27 1,4-Dichlorobenzene	146	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	CONCENTRATIONS FINAL (ug/L)
28	Benzyl alcohol	108	Compound Not Detected.					
30	1,2-Dichlorobenzene	146	Compound Not Detected.					
32	2-Methylphenol	108	Compound Not Detected.					
35	1H-Indene	116	Compound Not Detected.					
34	2,2'-oxybis(1-chloropropane)	45	Compound Not Detected.					
138	3-Methylphenol	108	Compound Not Detected.					
36	4-Methylphenol	108	Compound Not Detected.					
139	3 & 4-Methylphenol	108	Compound Not Detected.					
37	N-nitrosodi-n-propylamine	70	Compound Not Detected.					
38	Acetophenone	105	Compound Not Detected.					
41	Hexachloroethane	117	Compound Not Detected.					
44	Nitrobenzene	77	Compound Not Detected.					
47	Isophorone	82	Compound Not Detected.					
49	2-Nitrophenol	139	Compound Not Detected.					
50	2,4-Dimethylphenol	107	Compound Not Detected.					
52	Bis(2-chloroethoxy)methane	93	Compound Not Detected.					
53	Benzoic acid	122	Compound Not Detected.					
54	2,4-Dichlorophenol	162	Compound Not Detected.					
57	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
59	Naphthalene	128	Compound Not Detected.					
60	4-Chloroaniline	127	Compound Not Detected.					
62	Hexachlorobutadiene	225	Compound Not Detected.					
68	4-Chloro-3-methylphenol	107	Compound Not Detected.					
71	2-Methylnaphthalene	142	Compound Not Detected.					
72	1-Methylnaphthalene	142	Compound Not Detected.					
74	Hexachlorocyclopentadiene	237	Compound Not Detected.					
78	2,4,6-Trichlorophenol	196	Compound Not Detected.					
80	2,4,5-Trichlorophenol	196	Compound Not Detected.					
86	2-Chloronaphthalene	162	Compound Not Detected.					
88	2-Nitroaniline	65	Compound Not Detected.					
91	Dimethyl phthalate	163	Compound Not Detected.					
93	2,6-Dinitrotoluene	165	Compound Not Detected.					
94	Acenaphthylene	152	Compound Not Detected.					
95	3-Nitroaniline	138	Compound Not Detected.					
97	Acenaphthene	153	Compound Not Detected.					
98	2,4-Dinitrophenol	184	Compound Not Detected.					
99	4-Nitrophenol	109	Compound Not Detected.					
101	2,4-Dinitrotoluene	165	Compound Not Detected.					
102	Dibenzofuran	168	Compound Not Detected.					
107	Diethyl phthalate	149	Compound Not Detected.					
109	4-Chlorophenyl phenyl ether	204	Compound Not Detected.					
110	Fluorene	166	Compound Not Detected.					
112	4-Nitroaniline	138	Compound Not Detected.					
113	4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
115	N-nitrosodiphenylamine	169	Compound Not Detected.					
116	Azobenzene	77	Compound Not Detected.					
234	1,2-DPH(as Azobenzene)	77	Compound Not Detected.					
124	4-Bromophenyl phenyl ether	248	Compound Not Detected.					
125	Hexachlorobenzene	284	Compound Not Detected.					
129	Pentachlorophenol	266	Compound Not Detected.					
136	Phenanthrene	178	Compound Not Detected.					
137	Anthracene	178	Compound Not Detected.					
140	Carbazole	167	Compound Not Detected.					
143	Di-n-butyl phthalate	149	Compound Not Detected.					

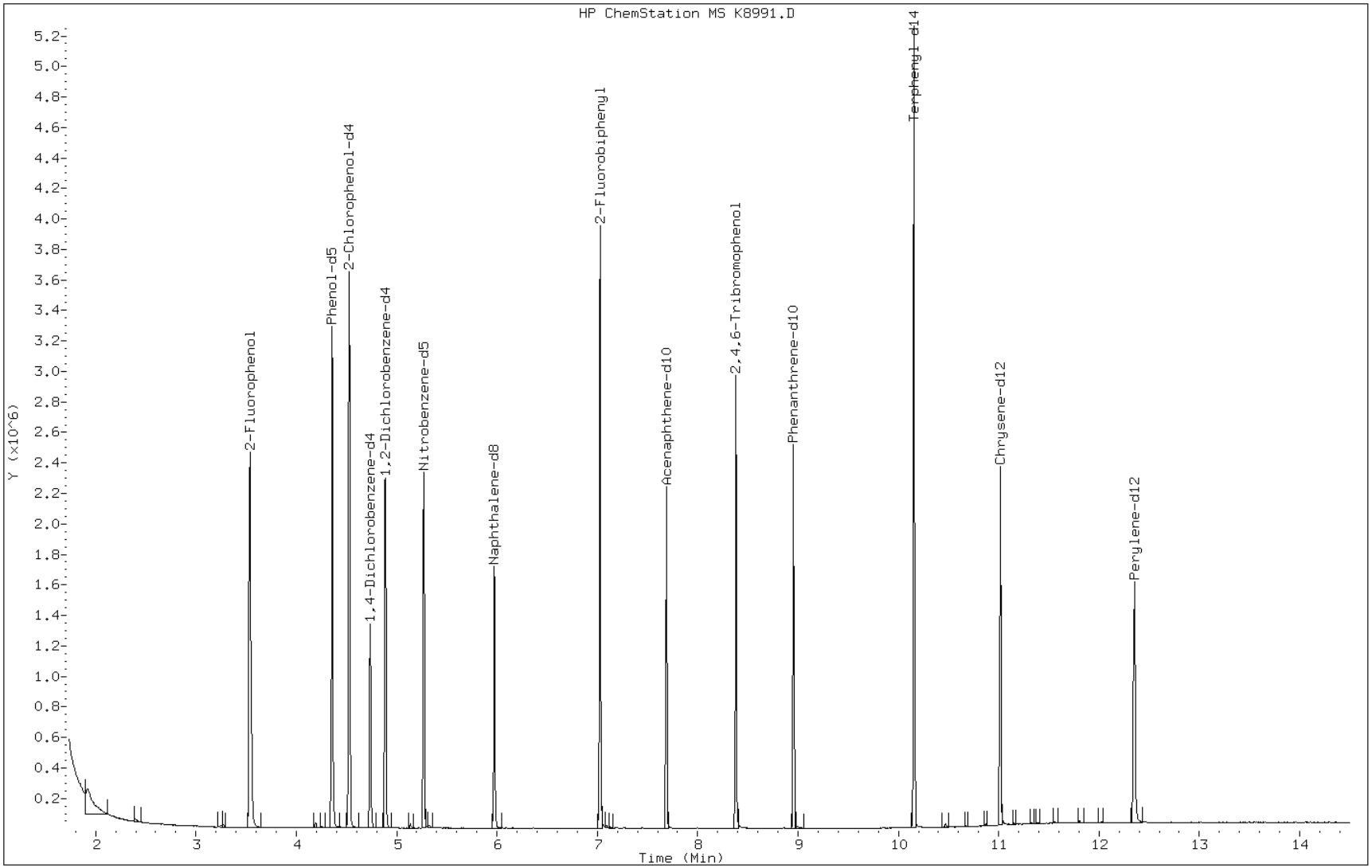
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/ml)	FINAL (ug/L)
149	Fluoranthene	202	Compound Not Detected.					
151	Benzidine	184	Compound Not Detected.					
152	Pyrene	202	Compound Not Detected.					
159	Butyl benzyl phthalate	149	Compound Not Detected.					
164	3 3'-Dichlorobenzidine	252	Compound Not Detected.					
165	Benzo(a)anthracene	228	Compound Not Detected.					
167	Chrysene	228	Compound Not Detected.					
162	Bis(2-ethylhexyl) phthalate	149	Compound Not Detected.					
168	Di-n-octyl phthalate	149	Compound Not Detected.					
171	Benzo(b)fluoranthene	252	Compound Not Detected.					
172	Benzo(k)fluoranthene	252	Compound Not Detected.					
178	Benzo(a)pyrene	252	Compound Not Detected.					
186	Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
185	Dibenz(a,h)anthracene	278	Compound Not Detected.					
188	Benzo(g,h,i)perylene	276	Compound Not Detected.					
19	Methyl Styrene	118	Compound Not Detected.					
141	Alachlor	188	Compound Not Detected.					
127	Atrazine	200	Compound Not Detected.					
67	Caprolactam	55	Compound Not Detected.					
79	2,3-Dichlorobenzeneamine	161	Compound Not Detected.					
21	Decane	43	Compound Not Detected.					
56	n-Dodecane	43	Compound Not Detected.					
83	Tetradecane	43	Compound Not Detected.					
105	Hexadecane	57	Compound Not Detected.					
128	n-Octadecane	85	Compound Not Detected.					
144	n-Eicosane	43	Compound Not Detected.					
150	n-docosane	43	Compound Not Detected.					
4	1,4-Dioxane	88	Compound Not Detected.					
158	Famphur	218	Compound Not Detected.					

Data File: K8991.D

Date: 21-JAN-2011 20:28

Client ID: IRELAND 1 Instrument: K.i

Sample Info: 280-11687-B-3-A Operator: KIEKELD



Method RSK-175

Dissolved Gases (GC) by Method RSK_175

TestAmerica

RSK-175 Dissolved Gasses in Water

Data file : \\DenSvr03\Public\chem\GCV\GC_J.i\0119111.B\014F1401.D
Lab Smp Id: 280-11687-L-3 Client Smp ID: IRELAND 1
Inj Date : 19-JAN-2011 14:27
Operator : mps Inst ID: GC_J.i
Smp Info : 280-11687-L-3
Misc Info : 280-11687-L-3
Comment : SOP: DV-GC-0025
Method : \\DenSvr03\Public\chem\GCV\GC_J.i\0119111.B\RSK-1_7PT.m
Meth Date : 19-Jan-2011 16:24 smithm Quant Type: ESTD
Cal Date : 16-DEC-2010 15:44 Cal File: 035F3501.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.01.sub
Target Version: 4.14
Processing Host: DENPC290

Concentration Formula: Amt * DF * 1 * CpndVariable
Cpnd Variable Local Compound Variable

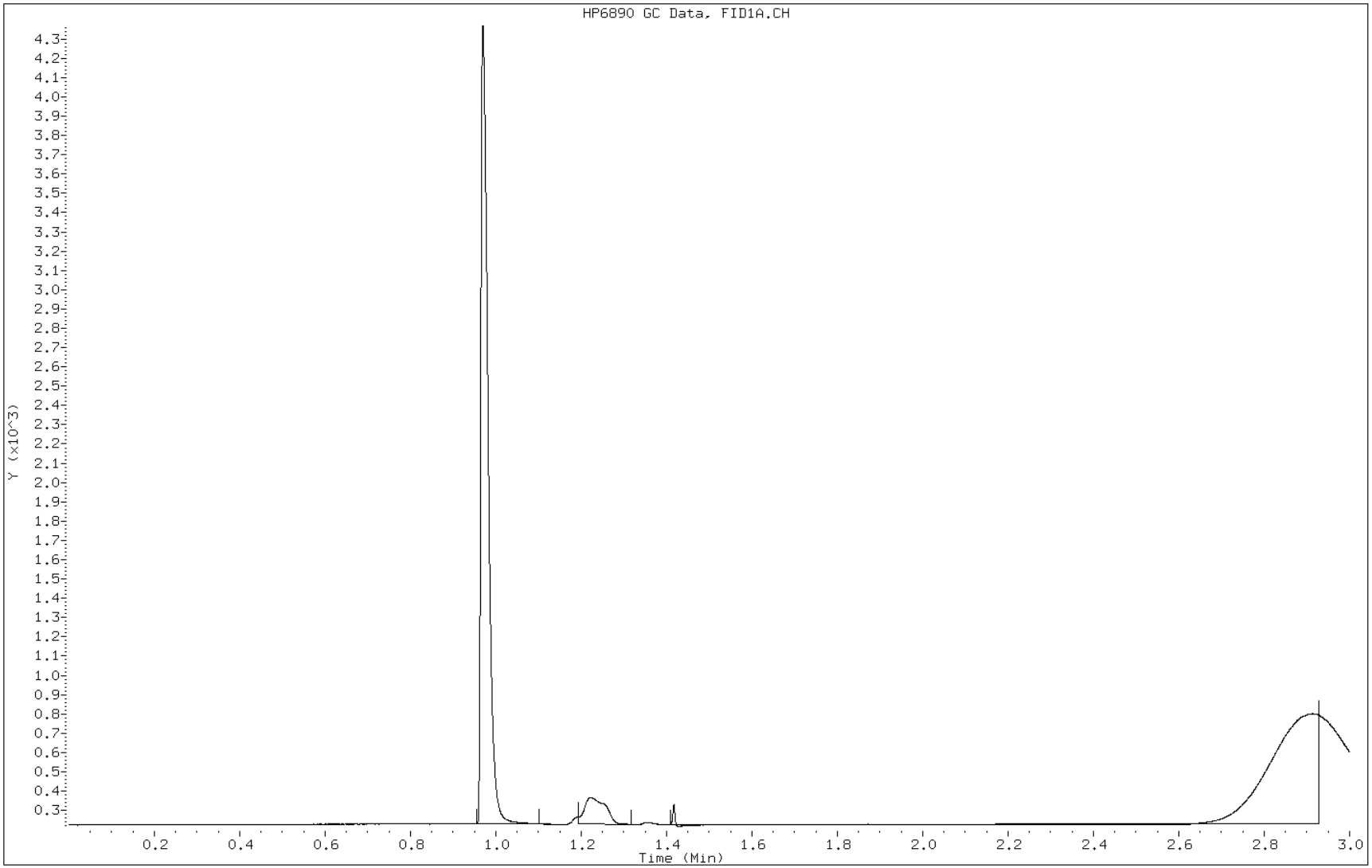
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	Compound Not Detected.					
2 Ethene	Compound Not Detected.					
3 Ethane	Compound Not Detected.					
4 Acetylene	Compound Not Detected.					

Data File: 014F1401.D

Date: 19-JAN-2011 14:27

Client ID: IRELAND 1 Instrument: GC_J.i

Sample Info: 280-11687-L-3 Operator: mps



TestAmerica

RSK-175 Dissolved Gasses in Water

Data file : \\DenSvr03\Public\chem\GCV\GC_J.i\0119112.B\014F1401.D
Lab Smp Id: 280-11687-L-3 Client Smp ID: IRELAND 1
Inj Date : 19-JAN-2011 14:27
Operator : mps Inst ID: GC_J.i
Smp Info : 280-11687-L-3
Misc Info : 280-11687-L-3
Comment : SOP: DV-GC-0025
Method : \\DenSvr03\Public\chem\GCV\GC_J.i\0119112.B\RSK-2_7PT.m
Meth Date : 19-Jan-2011 16:28 smithm Quant Type: ESTD
Cal Date : 16-DEC-2010 15:44 Cal File: 035F3501.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: RSK175.01.sub
Target Version: 4.14
Processing Host: DENPC290

Concentration Formula: Amt * DF * 1 * CpndVariable
Cpnd Variable Local Compound Variable

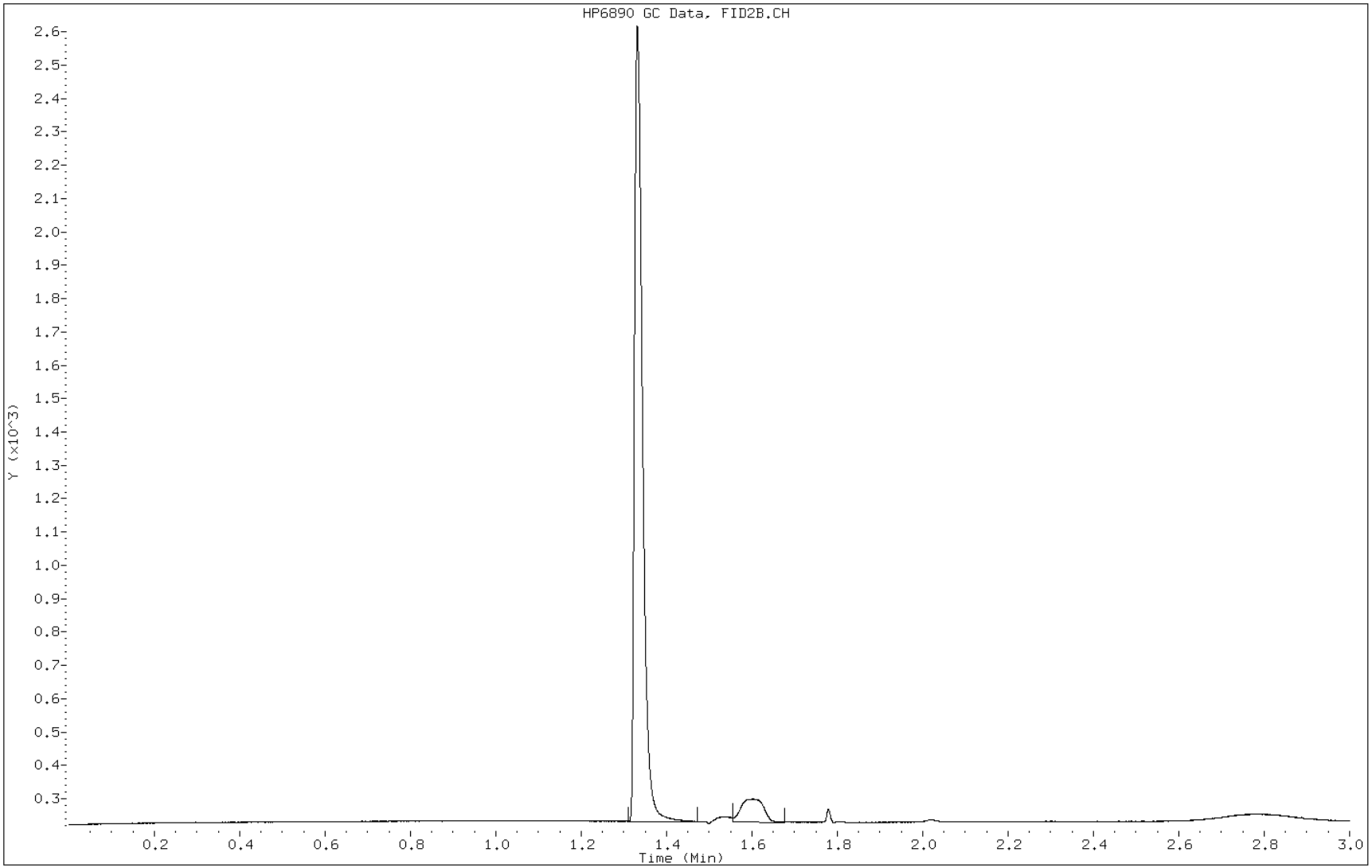
Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
1 Methane	Compound Not Detected.					
2 Ethene	Compound Not Detected.					
3 AcetyleneEthane	Compound Not Detected.					

Data File: 014F1401.D

Date: 19-JAN-2011 14:27

Client ID: IRELAND 1 Instrument: GC_J.i

Sample Info: 280-11687-L-3 Operator: mps



Shipping and Receiving Documents

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
COGCC & Terracon	Steve Lindblom	1/18/11	139472
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 **of** 1
City / State / Zip Code	**Site Contact**	**Lab Contact**	
		Jon Parsons	
Project Name and Location (State)	**Carrier/Waybill Number**		
Ireland well			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Analysis: 300.0_28D	2320 B	2510 B	SM4500	353.2_Prs	RSK-175	8260 B	6010 B	8270 C	8021 B	Special Instructions/ Conditions of Receipt
Ireland 1	1/18/11	1342		X				X		X			X	X	X	X	X	X	X	X	X	X	

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Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months
(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required
☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☒ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: E. Mapson	1/18/11	1555	1. Received By:	1/18/11	1555
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

01/28/2011

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Login Sample Receipt Check List

Client: Colorado Oil&Gas Conservation Commision

Job Number: 280-11687-1

Login Number: 11687

List Source: TestAmerica Denver

Creator: Lazarte, Noah M

List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	False	TRIP BLANKS NOT ON COC
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	False	ALL HCL PRESERVED VOAS 1/2 OR 3/4 FULL
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

ATTACHMENT 2

Field Data Sheets

Biological Activity Reaction Test (BART) Results

Residential Water Well Field Data Form

Terracon

Project Name: COGCC - Environmental Support Complaint # 200293007 Permit No: 197443
Project Number: 25087038 Owner: Barbara Ireland
Address: 2059 Elizabeth Dr.
Parker, CO 80138
Location: S35, T6S, R65W
Date: 01/18/2011
Weather: Sunny

Well Owner Survey

	Yes	No
Is there a holding tank for the well?		X
Do you have a water softener/treatment system?		X
Do you have an in-line filter?		X
Sampling point upstream of pressure tank and treatment system?	X	

Location of well: Southwest of main house
Type of pump (jet, submersible, suction): Submersible
Casing material and diameter:
Depth to Static Water Table (fluctuations):
Description of area around well: clear field area
Location and description of sample point: pump in barn before pressure tank
Pump start time: 3:58 PM

Time	Volume Purged (gal.)	pH (Si Units)	Spec Cond (µs/cm)	DO (mg/L)	Turbidity (NTU)	Temperature (°C)	Clarity	Other *(ORP mv)
1:21 PM	50	6.77	2195	5.88	<5	11.39	clr	266.1
1:26 PM	55	6.85	2195	5.61	"	11.15	"	278
1:30 PM	60	6.87	2195	5.52	"	10.86	"	286.1
1:34 PM	65	6.83	2195	5.53	"	10.8	"	291.3
1:39 PM	70	6.81	2195	5.46	"	10.73	"	297
1:41 PM	75	6.76	2195	5.74	"	11.2	"	293.3
					"		"	
					"		"	

* odors (if any); effervescence (if any); produced sediment (if any); evidence of bacterial fouling (bioslimes or biofilms).

NA = not analyzed

Field Sample ID : Ireland 1 Collection Time: 1:43 PM Number of Containers: 12 + BART

Sampler: EM

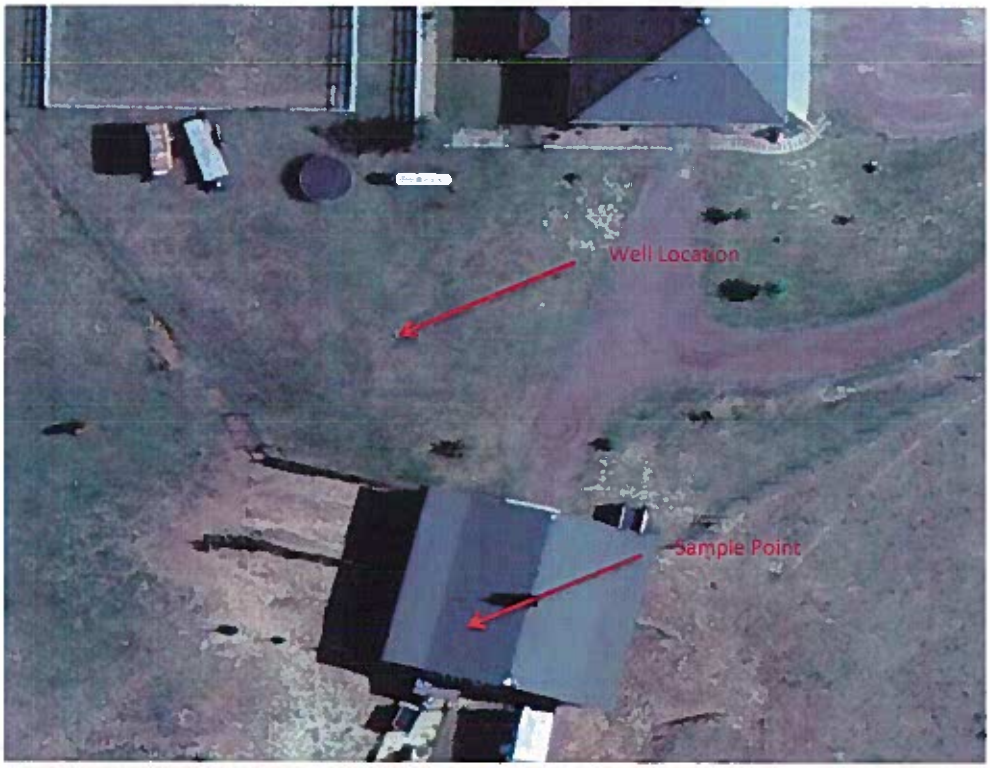
Analyte	# of Container	Container Size	Type	Analytical Method	Preservative
Dissolved Methane	3	40 ml	vial	RSK175	4°C
Diss. Metals (Ca, Na, Fe, As, Cr, Cd, Pb, Mn, Mg, K, Se)	1	500 ml	HDPE	6010B	4° C
Major cations and anions, Br, Cl, F, SO_4	1	250 ml	HDPE	300	4° C
BTEX, MTBE	3	40 ml	vial	8021	HCl, 4°C
Total Dissolved Solids	1	500 ml	poly	TDS_W	4° C
Specific Conductance at 25°C	-	-		2510B	4°C
NO_3, NO_2	1	500 ml	Amber	353.2	H_2S0_4, 4° C
pH	-	-		150.1	4°C
SVOCs	1	1 L	Amber	8270C	4°C
Alkalinity (Carbonate/Bicarbonate)	1	250 ml	poly	CARB/BICAR	4°C
Duplicate Sample Collected?	Yes:		No:	X	

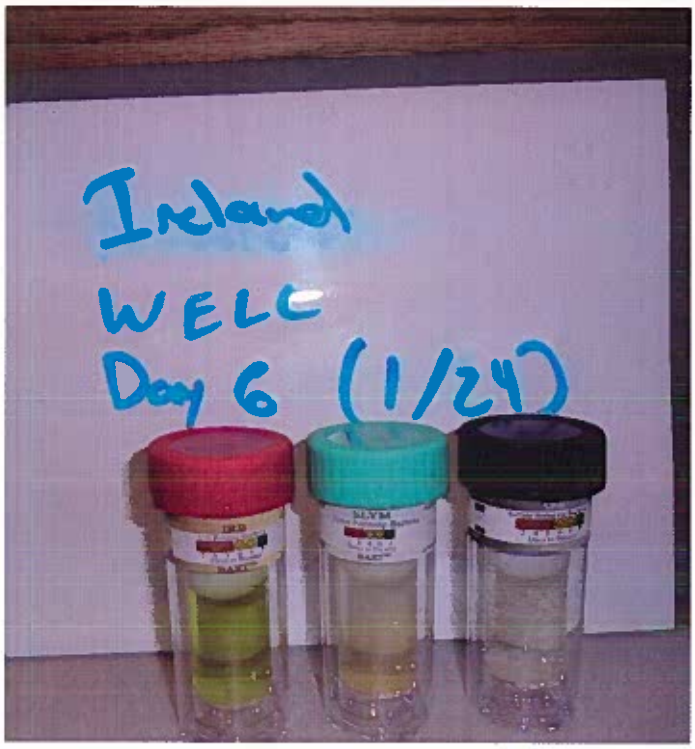
Duplicate ID: None

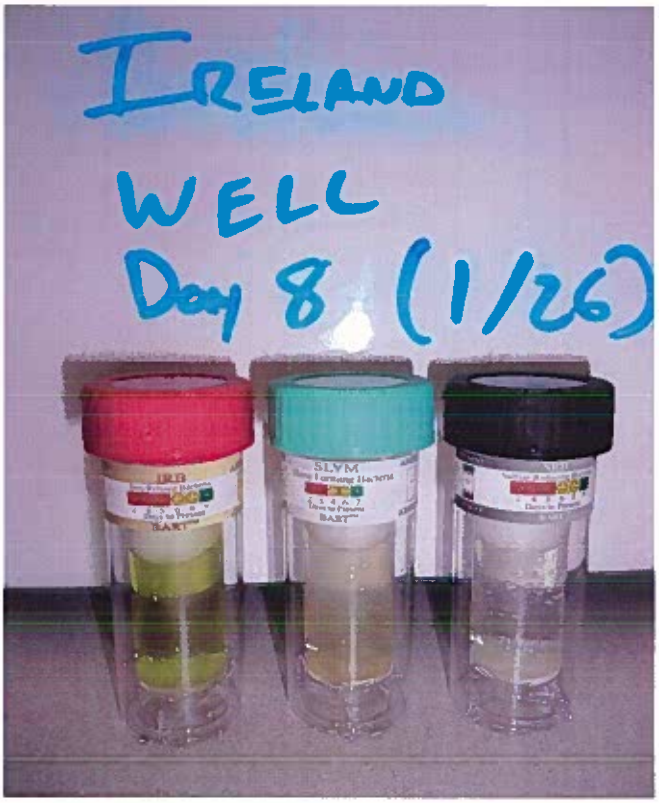
GPS Coordinates

Latitude: 39°29'31.2" (39.492) Longitude: 104°37'51.3" (104.6309)

Comments:







Bart Test

Green Capped Vial – Test for Slime Forming Bacteria – Not Present
Black Capped Vial – Test for Sulfate Reducing Bacteria – Not Present
Red Capped Vial - Test for Iron Related Bacteria - Slightly Present