



John Whitehead  
Utah Division of Water Quality  
PO Box 144870  
SLC, UT 84114  
TEL: (801) 536-4300

RE: Willard Bay Chevron Incident

Dear John Whitehead:

Lab Set ID: 1303453

463 West 3600 South  
Salt Lake City, UT 84115

American West Analytical Laboratories received 8 sample(s) on 3/20/2013 for the analyses presented in the following report.

Phone: (801) 263-8686  
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American West Analytical Laboratories (AWAL) is accredited by The National Environmental Laboratory Accreditation Program (NELAP) in Utah and Texas; and is state accredited in Colorado, Idaho, New Mexico, and Missouri.

All analyses were performed in accordance to the NELAP protocols unless noted otherwise. Accreditation scope documents are available upon request. If you have any questions or concerns regarding this report please feel free to call.

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

The abbreviation "Surr" found in organic reports indicates a surrogate compound that is intentionally added by the laboratory to determine sample injection, extraction, and/or purging efficiency. The "Reporting Limit" found on the report is equivalent to the practical quantitation limit (PQL). This is the minimum concentration that can be reported by the method referenced and the sample matrix. The reporting limit must not be confused with any regulatory limit. Analytical results are reported to three significant figures for quality control and calculation purposes.

Thank You,

Approved by: \_\_\_\_\_  
Laboratory Director or designee



## Inorganic Case Narrative

**Client:** Utah Division of Water Quality  
**Contact:** John Whitehead  
**Project:** Willard Bay Chevron Incident  
**Lab Set ID:** 1303453

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

### **Sample Receipt Information:**

**Date of Receipt:** 3/20/2013  
**Date of Collection:** 3/20/2013  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None

**Holding Time and Preservation Requirements:** The analysis and preparation for the samples were performed within the method holding times. The samples were properly preserved.

**Preparation and Analysis Requirements:** The samples were analyzed following the methods stated on the analytical reports.

**Analytical QC Requirements:** All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

**Batch QC Requirements:** MB, LCS, MS, MSD, RPD:

**Method Blanks (MB):** No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

**Laboratory Control Samples (LCS):** All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

**Matrix Spike / Matrix Spike Duplicates (MS/MSD):** The MS percent recovery for Chemical Oxygen Demand on sample 1303453-005C was outside of the control limits due to sample matrix interference. The MSD percent recovery and RPD (Relative Percent Differences) were inside established limits.

**Corrective Action:** None required.



## TPH (DRO) and (ORO) Case Narrative

**Client:** Utah Division of Water Quality  
**Contact:** John Whitehead  
**Project:** Willard Bay Chevron Incident  
**Lab Set ID:** 1303453

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Kyle F. Gross  
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Jose Rocha  
QA Officer

### Sample Receipt Information:

<b>Date of Receipt:</b>	3/20/2013
<b>Date of Collection:</b>	3/20/2013
<b>Sample Condition:</b>	Intact
<b>C-O-C Discrepancies:</b>	None
<b>Method:</b>	SW-846 8015D /3510C
<b>Analysis:</b>	Total Petroleum Hydrocarbon (DRO - C10-28) Total Petroleum Hydrocarbon (ORO - C28-36)

**General Set Comments:** One sample exhibited TPH-DRO above the reporting limit.

**Holding Time Requirements:** The preparations and analyses of the samples were performed within respective holding times.

**Analysis Requirements:** The samples were prepared and/or analyzed following the methods stated on the analytical reports.

**Analytical QC Requirements:** All instrument calibration and calibration check requirements were met.

**Batch QC Requirements:** MB, LCS, MS, MSD, RPD, and Surrogates:

**Method Blank (MB):** No target analytes were detected above reporting limits, evaluated to MDL, indicating the procedure was free from contamination.

**Laboratory Control Samples (LCS):** All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

**Matrix Spike / Matrix Spike Duplicate (MS/MSD):** All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, indicating no apparent matrix interferences.

**Surrogates:** All surrogate recoveries were within established limits.

**Corrective Action:** None required.



## Semivolatile Case Narrative

**Client:** Utah Division of Water Quality  
**Contact:** John Whitehead  
**Project:** Willard Bay Chevron Incident  
**Lab Set ID:** 1303453

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

### **Sample Receipt Information:**

<b>Date of Receipt:</b>	3/20/2013
<b>Date of Collection:</b>	3/20/2013
<b>Sample Condition:</b>	Intact
<b>C-O-C Discrepancies:</b>	None
<b>Method:</b>	SW-846 8270D/3510C
<b>Analysis:</b>	Semivolatile Organics

**General Set Comments:** Multiple target analytes were observed above their reporting limits. The samples were analyzed for TICs.

**Holding Time Requirements:** The preparations and analyses of the samples were performed within respective holding times.

**Preparation Requirements:** The samples were prepared and analyzed following the methods stated on the analytical reports.

**Analytical QC Requirements:** All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

**Batch QC Requirements:** MB, LCS, MS, MSD, RPD, and Surrogates:

**Method Blanks:** No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

**Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD):** All LCS percent recoveries were within control limits, indicating that the preparation and analysis were in control.

**Matrix Spike / Matrix Spike Duplicate (MS/MSD):** All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, indicating no apparent matrix interferences.

**Surrogates:** All surrogate recoveries were within established limits.

**Corrective Action:** None required.



## Volatile Case Narrative

**Client:** Utah Division of Water Quality  
**Contact:** John Whitehead  
**Project:** Willard Bay Chevron Incident  
**Lab Set ID:** 1303453

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

### **Sample Receipt Information:**

**Date of Receipt:** 3/20/2013  
**Date of Collection:** 3/20/2013  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None  
**Method:** SW-846 8260C/5030C  
**Analysis:** Volatile Organic Compounds

**General Set Comments:** Multiple target analytes were observed above reporting limits.

**Holding Time and Preservation Requirements:** All samples were received in appropriate containers and properly preserved. The analysis and preparation of all samples were performed within the method holding times following the methods stated on the analytical reports.

**Analytical QC Requirements:** All instrument calibration and calibration check requirements were met. All internal standard recoveries met method criterion.

**Batch QC Requirements:** MB, LCS, MS, MSD, RPD, and Surrogates:

**Method Blanks (MBs):** No target analytes were detected above reporting limits, indicating that the procedure was free from contamination.

**Laboratory Control Sample (LCSs):** All LCS recoveries were within control limits, indicating that the preparation and analysis were in control.

**Matrix Spike / Matrix Spike Duplicate (MS/MSD):** All percent recoveries and RPDs (Relative Percent Differences) were inside established limits, indicating no apparent matrix interferences.

**Surrogates:** All surrogate recoveries were within established limits.

**Corrective Action:** None required.



## Product ID Case Narrative

**Client:** Utah Division of Water Quality  
**Contact:** John Whitehead  
**Project:** Willard Bay Chevron Incident  
**Lab Set ID:** 1303453

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### Sample Receipt Information:

**Date of Receipt:** 3/20/2013  
**Date of Collection:** 3/20/2013  
**Sample Condition:** Intact  
**C-O-C Discrepancies:** None  
**Method:** SW-846 8015D Modified/3580A  
**Analysis:** Product Identification

**General Set Comments:** This set contained one sample, "Source AB Culvert / 4920393" (1303453-001A). The sample was diluted 10X and an aliquot of these dilutions was analyzed on a Gas Chromatograph equipped with a Flame Ionization Detector (GC/FID).

**Analytical Methodology:** The data generated from Product ID analysis is purely qualitative. The GC column employed separates petroleum hydrocarbons ranging from C<sub>6</sub>-C<sub>28</sub>. The sample chromatogram is compared to a library of chromatograms, analyzed under identical conditions, as follows:

- A piano hydrocarbon standard ranging C<sub>10</sub>-C<sub>25</sub>
- Unleaded gasoline at various weatherings (i.e. 25, 50, 75% & unweathered)
- Diesel at various weatherings (i.e. 25, 50, 75% & unweathered)
- Kerosene at various weatherings (i.e. 25, 50, 75% & unweathered)
- Mineral Spirits at various weatherings (i.e. 25, 50, 75% & unweathered)
- Oils (i.e. Synthetic Oil , 5W-30, 10W-30, 20W-50 & Used Motor Oil)
- Turpentine
- Fuel Oil (Nos. 1 through 6)
- Military Fuels (JP-4, 5 & 8), Jet & Aviation Fuels
- Synthetic Transmission Fluid

**Results & Discussion:** Based on the chromatographic evidence, "Source AB Culvert / 4920393" (1303453-001A) was identified as 80% diesel and 20 % biodiesel.

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer









## ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality      **Contact:** John Whitehead  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-002B  
**Client Sample ID:** Drainage East of I15 / 492032  
**Collection Date:** 3/20/2013 1300h  
**Received Date:** 3/20/2013 1534h

### Analytical Results

TPH-ORO (C28-C36) by GC/FID Method 8015D/3510C

**Analyzed:** 3/22/2013 1151h      **Extracted:** 3/20/2013 2104h  
**Units:** mg/L      **Dilution Factor:** 1      **Method:** SW8015D

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		0.500	< 0.500	

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Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: C27		0.198	0.2000	99.1	10-200	

web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer





















# ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-002B  
**Client Sample ID:** Drainage East of I15 / 492032  
**Collection Date:** 3/20/2013 1300h  
**Received Date:** 3/20/2013 1534h

**Contact:** John Whitehead

## Analytical Results

SVOA PNA SIM List by GC/MS Method 8270D/3510C

**Analyzed:** 3/21/2013 2129h      **Extracted:** 3/21/2013 826h  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8270D

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Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	0.100	< 0.100	
2-Methylnaphthalene	91-57-6	0.100	< 0.100	
Acenaphthene	83-32-9	0.100	< 0.100	
Acenaphthylene	208-96-8	0.100	< 0.100	
Anthracene	120-12-7	0.100	< 0.100	
Benz(a)anthracene	56-55-3	0.100	< 0.100	
Benzo(a)pyrene	50-32-8	0.100	<b>0.190</b>	
Benzo(b)fluoranthene	205-99-2	0.100	< 0.100	
Benzo(g,h,i)perylene	191-24-2	0.100	< 0.100	
Benzo(k)fluoranthene	207-08-9	0.100	< 0.100	
Chrysene	218-01-9	0.100	< 0.100	
Dibenz(a,h)anthracene	53-70-3	0.100	< 0.100	
Fluoranthene	206-44-0	0.100	< 0.100	
Fluorene	86-73-7	0.100	< 0.100	
Indene	95-13-6	0.100	< 0.100	
Indeno(1,2,3-cd)pyrene	193-39-5	0.100	< 0.100	
Naphthalene	91-20-3	0.100	< 0.100	
Phenanthrene	85-01-8	0.100	< 0.100	
Pyrene	129-00-0	0.100	< 0.100	



# ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-003B  
**Client Sample ID:** W of Main Boom / 4920396  
**Collection Date:** 3/20/2013 1130h  
**Received Date:** 3/20/2013 1534h

**Contact:** John Whitehead

## Analytical Results

SVOA PNA SIM List by GC/MS Method 8270D/3510C

**Analyzed:** 3/21/2013 2156h      **Extracted:** 3/21/2013 826h  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8270D

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Kyle F. Gross  
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Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	0.100	< 0.100	
2-Methylnaphthalene	91-57-6	0.100	< 0.100	
Acenaphthene	83-32-9	0.100	< 0.100	
Acenaphthylene	208-96-8	0.100	< 0.100	
Anthracene	120-12-7	0.100	< 0.100	
Benz(a)anthracene	56-55-3	0.100	< 0.100	
Benzo(a)pyrene	50-32-8	0.100	< 0.100	
Benzo(b)fluoranthene	205-99-2	0.100	< 0.100	
Benzo(g,h,i)perylene	191-24-2	0.100	< 0.100	
Benzo(k)fluoranthene	207-08-9	0.100	< 0.100	
Chrysene	218-01-9	0.100	< 0.100	
Dibenz(a,h)anthracene	53-70-3	0.100	< 0.100	
Fluoranthene	206-44-0	0.100	< 0.100	
Fluorene	86-73-7	0.100	< 0.100	
Indene	95-13-6	0.100	< 0.100	
Indeno(1,2,3-cd)pyrene	193-39-5	0.100	< 0.100	
Naphthalene	91-20-3	0.100	< 0.100	
Phenanthrene	85-01-8	0.100	< 0.100	
Pyrene	129-00-0	0.100	< 0.100	



# ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-004B  
**Client Sample ID:** E of Main Boom / 4920395  
**Collection Date:** 3/20/2013 1145h  
**Received Date:** 3/20/2013 1534h

**Contact:** John Whitehead

## Analytical Results

SVOA PNA SIM List by GC/MS Method 8270D/3510C

**Analyzed:** 3/21/2013 2315h      **Extracted:** 3/21/2013 826h  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8270D

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Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	0.100	<b>0.240</b>	
2-Methylnaphthalene	91-57-6	0.100	<b>0.180</b>	
Acenaphthene	83-32-9	0.100	< 0.100	
Acenaphthylene	208-96-8	0.100	< 0.100	
Anthracene	120-12-7	0.100	< 0.100	
Benz(a)anthracene	56-55-3	0.100	< 0.100	
Benzo(a)pyrene	50-32-8	0.100	<b>0.200</b>	
Benzo(b)fluoranthene	205-99-2	0.100	<b>0.190</b>	
Benzo(g,h,i)perylene	191-24-2	0.100	< 0.100	
Benzo(k)fluoranthene	207-08-9	0.100	< 0.100	
Chrysene	218-01-9	0.100	< 0.100	
Dibenz(a,h)anthracene	53-70-3	0.100	< 0.100	
Fluoranthene	206-44-0	0.100	< 0.100	
Fluorene	86-73-7	0.100	< 0.100	
Indene	95-13-6	0.100	< 0.100	
Indeno(1,2,3-cd)pyrene	193-39-5	0.100	< 0.100	
Naphthalene	91-20-3	0.100	<b>0.200</b>	
Phenanthrene	85-01-8	0.100	< 0.100	
Pyrene	129-00-0	0.100	< 0.100	



## ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-005B  
**Client Sample ID:** Between Weirs / 4920394  
**Collection Date:** 3/20/2013 1200h  
**Received Date:** 3/20/2013 1534h

**Contact:** John Whitehead

### Analytical Results

SVOA PNA SIM List by GC/MS Method 8270D/3510C

**Analyzed:** 3/21/2013 2342h      **Extracted:** 3/21/2013 826h  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	0.100	<b>4.17</b>	
2-Methylnaphthalene	91-57-6	0.100	<b>2.75</b>	
Acenaphthene	83-32-9	0.100	< 0.100	
Acenaphthylene	208-96-8	0.100	< 0.100	
Anthracene	120-12-7	0.100	< 0.100	
Benz(a)anthracene	56-55-3	0.100	< 0.100	
Benzo(a)pyrene	50-32-8	0.100	< 0.100	
Benzo(b)fluoranthene	205-99-2	0.100	< 0.100	
Benzo(g,h,i)perylene	191-24-2	0.100	< 0.100	
Benzo(k)fluoranthene	207-08-9	0.100	< 0.100	
Chrysene	218-01-9	0.100	< 0.100	
Dibenz(a,h)anthracene	53-70-3	0.100	< 0.100	
Fluoranthene	206-44-0	0.100	< 0.100	
Fluorene	86-73-7	0.100	< 0.100	
Indene	95-13-6	0.100	< 0.100	
Indeno(1,2,3-cd)pyrene	193-39-5	0.100	< 0.100	
Naphthalene	91-20-3	0.100	<b>2.57</b>	
Phenanthrene	85-01-8	0.100	<b>0.680</b>	
Pyrene	129-00-0	0.100	<b>0.400</b>	

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-006B  
**Client Sample ID:** W. Bay South Marina / 4920495  
**Collection Date:** 3/20/2013 1100h  
**Received Date:** 3/20/2013 1534h

**Contact:** John Whitehead

### Analytical Results

SVOA PNA SIM List by GC/MS Method 8270D/3510C

**Analyzed:** 3/22/2013 009h      **Extracted:** 3/21/2013 826h  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8270D

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	0.100	< 0.100	
2-Methylnaphthalene	91-57-6	0.100	< 0.100	
Acenaphthene	83-32-9	0.100	< 0.100	
Acenaphthylene	208-96-8	0.100	< 0.100	
Anthracene	120-12-7	0.100	< 0.100	
Benz(a)anthracene	56-55-3	0.100	< 0.100	
Benzo(a)pyrene	50-32-8	0.100	< 0.100	
Benzo(b)fluoranthene	205-99-2	0.100	< 0.100	
Benzo(g,h,i)perylene	191-24-2	0.100	< 0.100	
Benzo(k)fluoranthene	207-08-9	0.100	< 0.100	
Chrysene	218-01-9	0.100	< 0.100	
Dibenz(a,h)anthracene	53-70-3	0.100	< 0.100	
Fluoranthene	206-44-0	0.100	< 0.100	
Fluorene	86-73-7	0.100	< 0.100	
Indene	95-13-6	0.100	< 0.100	
Indeno(1,2,3-cd)pyrene	193-39-5	0.100	< 0.100	
Naphthalene	91-20-3	0.100	< 0.100	
Phenanthrene	85-01-8	0.100	< 0.100	
Pyrene	129-00-0	0.100	< 0.100	



## ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-002B  
**Client Sample ID:** Drainage East of I15 / 492032  
**Collection Date:** 3/20/2013 1300h  
**Received Date:** 3/20/2013 1534h

**Contact:** John Whitehead

### Analytical Results

SVOA List by GC/MS Method 8270D/3510C

**Analyzed:** 3/22/2013 1539h

**Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8270D

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1'-Biphenyl	92-52-4	10.0	< 10.0	
1,2,4,5-Tetrachlorobenzene	95-94-3	10.0	< 10.0	
1,2,4-Trichlorobenzene	120-82-1	10.0	< 10.0	
1,2-Dichlorobenzene	95-50-1	10.0	< 10.0	
1,3,5-Trinitrobenzene	99-35-4	10.0	< 10.0	
1,3-Dichlorobenzene	541-73-1	10.0	< 10.0	
1,3-Dinitrobenzene	99-65-0	10.0	< 10.0	
1,4-Dichlorobenzene	106-46-7	10.0	< 10.0	
1,4-Dinitrobenzene	100-25-4	10.0	< 10.0	
1,4-Naphthoquinone	130-15-4	10.0	< 10.0	
1,4-Phenylenediamine	106-50-3	10.0	< 10.0	
1-Chloronaphthalene	90-13-1	10.0	< 10.0	
1-Methylnaphthalene	90-12-0	10.0	< 10.0	
1-Naphthylamine	134-32-7	10.0	< 10.0	
2,3,4,6-Tetrachlorophenol	58-90-2	10.0	< 10.0	
2,4,5-Trichlorophenol	95-95-4	10.0	< 10.0	
2,4,6-Trichlorophenol	88-06-2	10.0	< 10.0	
2,4-Dichlorophenol	120-83-2	10.0	< 10.0	
2,4-Dimethylphenol	105-67-9	10.0	< 10.0	
2,4-Dinitrophenol	51-28-5	10.0	< 10.0	
2,4-Dinitrotoluene	121-14-2	10.0	< 10.0	
2,6-Dichlorophenol	87-65-0	10.0	< 10.0	
2,6-Dinitrotoluene	606-20-2	10.0	< 10.0	
2-Acetylaminofluorene	53-96-3	10.0	< 10.0	
2-Chloronaphthalene	91-58-7	10.0	< 10.0	
2-Chlorophenol	95-57-8	10.0	< 10.0	
2-Methylnaphthalene	91-57-6	10.0	< 10.0	
2-Methylphenol	95-48-7	10.0	< 10.0	
2-Naphthylamine	91-59-8	10.0	< 10.0	
2-Nitroaniline	88-74-4	10.0	< 10.0	



**Lab Sample ID:** 1303453-002B

**Client Sample ID:** Drainage East of I15 / 492032

**Analyzed:** 3/22/2013 1539h

**Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8270D

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Nitrophenol	88-75-5	10.0	< 10.0	
2-Picoline	109-06-8	10.0	< 10.0	
3&4-Methylphenol		10.0	< 10.0	
3,3'-Dichlorobenzidine	91-94-1	10.0	< 10.0	
3,3'-Dimethylbenzidine	119-93-7	10.0	< 10.0	
3-Methylcholanthrene	56-49-5	10.0	< 10.0	
3-Nitroaniline	99-09-2	10.0	< 10.0	
4,6-Dinitro-2-methylphenol	534-52-1	10.0	< 10.0	
4-Aminobiphenyl	92-67-1	10.0	< 10.0	
4-Bromophenyl phenyl ether	101-55-3	10.0	< 10.0	
4-Chloro-3-methylphenol	59-50-7	10.0	< 10.0	
4-Chloroaniline	106-47-8	10.0	< 10.0	
4-Chlorophenyl phenyl ether	7005-72-3	10.0	< 10.0	
4-Nitroaniline	100-01-6	10.0	< 10.0	
4-Nitrophenol	100-02-7	10.0	< 10.0	
5-Nitro-o-toluidine	99-55-8	10.0	< 10.0	
7,12-Dimethylbenz(a)anthracene	57-97-6	10.0	< 10.0	
a,a-Dimethylphenethylamine	122-09-8	10.0	< 10.0	
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Acetophenone	98-86-2	10.0	< 10.0	
alpha-Terpineol	98-55-5	10.0	< 10.0	
Aniline	62-53-3	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Aramite	140-57-8	10.0	< 10.0	
Atrazine	1912-24-9	10.0	< 10.0	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	
Benzaldehyde	100-52-7	10.0	< 10.0	
Benzidine	92-87-5	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Benzoic acid	65-85-0	20.0	< 20.0	
Benzyl alcohol	100-51-6	10.0	< 10.0	
Bis(2-chloroethoxy)methane	111-91-1	10.0	< 10.0	



**Lab Sample ID:** 1303453-002B

**Client Sample ID:** Drainage East of I15 / 492032

**Analyzed:** 3/22/2013 1539h

**Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8270D

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Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Bis(2-chloroethyl) ether	111-44-4	10.0	< 10.0	
Bis(2-chloroisopropyl) ether	108-60-1	10.0	< 10.0	
Bis(2-ethylhexyl) phthalate	117-81-7	10.0	< 10.0	
bis(2-ethylhexyl)adipate	103-23-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	10.0	< 10.0	
Caprolactam	105-60-2	10.0	< 10.0	
Carbazole	86-74-8	10.0	< 10.0	
Chlorobenzilate	510-15-6	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Di-n-butyl phthalate	84-74-2	10.0	< 10.0	
Di-n-octyl phthalate	117-84-0	10.0	< 10.0	
Diallate (cis or trans)	2303-16-4	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Dibenzofuran	132-64-9	10.0	< 10.0	
Diethyl phthalate	84-66-2	10.0	< 10.0	
Dimethoate	60-51-5	10.0	< 10.0	
Dimethyl phthalate	131-11-3	10.0	< 10.0	
Dimethylaminoazobenzene	60-11-7	10.0	< 10.0	
Dinoseb	88-85-7	10.0	< 10.0	
Diphenylamine	122-39-4	10.0	< 10.0	
Disulfoton	298-04-4	10.0	< 10.0	
Ethyl methanesulfonate	62-50-0	10.0	< 10.0	
Famphur	52-85-7	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	
Fluorene	86-73-7	10.0	< 10.0	
Hexachlorobenzene	118-74-1	10.0	< 10.0	
Hexachlorobutadiene	87-68-3	10.0	< 10.0	
Hexachlorocyclopentadiene	77-47-4	10.0	< 10.0	
Hexachloroethane	67-72-1	10.0	< 10.0	
Hexachlorophene	70-30-4	10.0	< 10.0	
Hexachloropropene	1888-71-7	10.0	< 10.0	
Indene	95-13-6	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Isodrin	465-73-6	10.0	< 10.0	
Isophorone	78-59-1	10.0	< 10.0	
Isosafrole	120-58-1	10.0	< 10.0	
Kepone	143-50-0	10.0	< 10.0	



**Lab Sample ID:** 1303453-002B

**Client Sample ID:** Drainage East of I15 / 492032

**Analyzed:** 3/22/2013 1539h

**Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

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Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Methapyrilene	91-80-5	10.0	< 10.0	
Methyl methanesulfonate	66-27-3	10.0	< 10.0	
n-Decane	124-18-5	10.0	< 10.0	
N-Nitrosodi-n-butylamine	924-16-3	10.0	< 10.0	
N-Nitrosodiethylamine	55-18-5	10.0	< 10.0	
N-Nitrosodimethylamine	62-75-9	10.0	< 10.0	
N-Nitrosodiphenylamine	86-30-6	10.0	< 10.0	
N-Nitrosodi-n-propylamine	621-64-7	10.0	< 10.0	
N-Nitrosomethylethylamine	10595-95-6	10.0	< 10.0	
N-Nitrosomorpholine	59-89-2	10.0	< 10.0	
N-Nitrosopiperidine	100-75-4	10.0	< 10.0	
N-Nitrosopyrrolidine	930-55-2	10.0	< 10.0	
n-Octadecane	593-45-3	10.0	< 10.0	
Naphthalene	91-20-3	10.0	< 10.0	
Nitrobenzene	98-95-3	10.0	< 10.0	
Nitroquinoline-1-oxide	56-57-5	10.0	< 10.0	
O,O,O-Triethyl phosphorothioate	126-68-1	10.0	< 10.0	
o-Toluidine	95-53-4	10.0	< 10.0	
Parathion	56-38-2	10.0	< 10.0	
Methyl parathion	298-00-0	10.0	< 10.0	
Pentachlorobenzene	608-93-5	10.0	< 10.0	
Pentachloronitrobenzene	82-68-8	10.0	< 10.0	
Pentachlorophenol	87-86-5	10.0	< 10.0	
Phenacetin	62-44-2	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Phenol	108-95-2	10.0	< 10.0	
Phorate	298-02-2	10.0	< 10.0	
Pronamide	23950-58-5	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
Pyridine	110-86-1	10.0	< 10.0	
Quinoline	91-22-5	10.0	< 10.0	
Safrole	94-59-7	10.0	< 10.0	
Tetraethyl dithiopyrophosphate	3689-24-5	10.0	< 10.0	
Thionazin	297-97-2	10.0	< 10.0	
TIC: 9-Octadecenamide, (Z)-	000301-02-0		19.4	JN
TIC: Cyclopentadecane	000295-48-7		6.03	JN
TIC: n-Hexadecanoic acid	000057-10-3		7.75	JN



**Lab Sample ID:** 1303453-002B

**Client Sample ID:** Drainage East of I15 / 492032

**Analyzed:** 3/22/2013 1539h

**Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual		
<b>Surrogate</b>	<b>CAS</b>	<b>Result</b>	<b>Amount Spiked</b>	<b>% REC</b>	<b>Limits</b>	<b>Qual</b>
Surr: 2,4,6-Tribromophenol	118-79-6	51.0	80.00	63.8	14-159	
Surr: 2-Fluorobiphenyl	321-60-8	16.2	40.00	40.6	10-124	
Surr: 2-Fluorophenol	367-12-4	19.0	80.00	23.7	10-106	
Surr: Nitrobenzene-d5	4165-60-0	13.3	40.00	33.3	10-180	
Surr: Phenol-d6	13127-88-3	15.9	80.00	19.9	10-122	
Surr: Terphenyl-d14	1718-51-0	37.7	40.00	94.3	10-199	

*J - This flag indicates an estimated value.*

*N - This flag indicates presumptive evidence of a compound.*

*This sample was analyzed for TICs.*

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-003B  
**Client Sample ID:** W of Main Boom / 4920396  
**Collection Date:** 3/20/2013 1130h  
**Received Date:** 3/20/2013 1534h

**Contact:** John Whitehead

### Analytical Results

SVOA List by GC/MS Method 8270D/3510C

**Analyzed:** 3/22/2013 1605h

**Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8270D

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1'-Biphenyl	92-52-4	10.0	< 10.0	
1,2,4,5-Tetrachlorobenzene	95-94-3	10.0	< 10.0	
1,2,4-Trichlorobenzene	120-82-1	10.0	< 10.0	
1,2-Dichlorobenzene	95-50-1	10.0	< 10.0	
1,3,5-Trinitrobenzene	99-35-4	10.0	< 10.0	
1,3-Dichlorobenzene	541-73-1	10.0	< 10.0	
1,3-Dinitrobenzene	99-65-0	10.0	< 10.0	
1,4-Dichlorobenzene	106-46-7	10.0	< 10.0	
1,4-Dinitrobenzene	100-25-4	10.0	< 10.0	
1,4-Naphthoquinone	130-15-4	10.0	< 10.0	
1,4-Phenylenediamine	106-50-3	10.0	< 10.0	
1-Chloronaphthalene	90-13-1	10.0	< 10.0	
1-Methylnaphthalene	90-12-0	10.0	< 10.0	
1-Naphthylamine	134-32-7	10.0	< 10.0	
2,3,4,6-Tetrachlorophenol	58-90-2	10.0	< 10.0	
2,4,5-Trichlorophenol	95-95-4	10.0	< 10.0	
2,4,6-Trichlorophenol	88-06-2	10.0	< 10.0	
2,4-Dichlorophenol	120-83-2	10.0	< 10.0	
2,4-Dimethylphenol	105-67-9	10.0	< 10.0	
2,4-Dinitrophenol	51-28-5	10.0	< 10.0	
2,4-Dinitrotoluene	121-14-2	10.0	< 10.0	
2,6-Dichlorophenol	87-65-0	10.0	< 10.0	
2,6-Dinitrotoluene	606-20-2	10.0	< 10.0	
2-Acetylaminofluorene	53-96-3	10.0	< 10.0	
2-Chloronaphthalene	91-58-7	10.0	< 10.0	
2-Chlorophenol	95-57-8	10.0	< 10.0	
2-Methylnaphthalene	91-57-6	10.0	< 10.0	
2-Methylphenol	95-48-7	10.0	< 10.0	
2-Naphthylamine	91-59-8	10.0	< 10.0	
2-Nitroaniline	88-74-4	10.0	< 10.0	



**Lab Sample ID:** 1303453-003B  
**Client Sample ID:** W of Main Boom / 4920396

**Analyzed:** 3/22/2013 1605h      **Extracted:** 3/21/2013 826h  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8270D

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QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Nitrophenol	88-75-5	10.0	< 10.0	
2-Picoline	109-06-8	10.0	< 10.0	
3&4-Methylphenol		10.0	< 10.0	
3,3'-Dichlorobenzidine	91-94-1	10.0	< 10.0	
3,3'-Dimethylbenzidine	119-93-7	10.0	< 10.0	
3-Methylcholanthrene	56-49-5	10.0	< 10.0	
3-Nitroaniline	99-09-2	10.0	< 10.0	
4,6-Dinitro-2-methylphenol	534-52-1	10.0	< 10.0	
4-Aminobiphenyl	92-67-1	10.0	< 10.0	
4-Bromophenyl phenyl ether	101-55-3	10.0	< 10.0	
4-Chloro-3-methylphenol	59-50-7	10.0	< 10.0	
4-Chloroaniline	106-47-8	10.0	< 10.0	
4-Chlorophenyl phenyl ether	7005-72-3	10.0	< 10.0	
4-Nitroaniline	100-01-6	10.0	< 10.0	
4-Nitrophenol	100-02-7	10.0	< 10.0	
5-Nitro-o-toluidine	99-55-8	10.0	< 10.0	
7,12-Dimethylbenz(a)anthracene	57-97-6	10.0	< 10.0	
a,a-Dimethylphenethylamine	122-09-8	10.0	< 10.0	
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Acetophenone	98-86-2	10.0	< 10.0	
alpha-Terpineol	98-55-5	10.0	< 10.0	
Aniline	62-53-3	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Aramite	140-57-8	10.0	< 10.0	
Atrazine	1912-24-9	10.0	< 10.0	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	
Benzaldehyde	100-52-7	10.0	< 10.0	
Benzidine	92-87-5	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Benzoic acid	65-85-0	20.0	< 20.0	
Benzyl alcohol	100-51-6	10.0	< 10.0	
Bis(2-chloroethoxy)methane	111-91-1	10.0	< 10.0	



**Lab Sample ID:** 1303453-003B

**Client Sample ID:** W of Main Boom / 4920396

**Analyzed:** 3/22/2013 1605h

**Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8270D

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Bis(2-chloroethyl) ether	111-44-4	10.0	< 10.0	
Bis(2-chloroisopropyl) ether	108-60-1	10.0	< 10.0	
Bis(2-ethylhexyl) phthalate	117-81-7	10.0	< 10.0	
bis(2-ethylhexyl)adipate	103-23-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	10.0	< 10.0	
Caprolactam	105-60-2	10.0	< 10.0	
Carbazole	86-74-8	10.0	< 10.0	
Chlorobenzilate	510-15-6	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Di-n-butyl phthalate	84-74-2	10.0	< 10.0	
Di-n-octyl phthalate	117-84-0	10.0	< 10.0	
Diallate (cis or trans)	2303-16-4	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Dibenzofuran	132-64-9	10.0	< 10.0	
Diethyl phthalate	84-66-2	10.0	< 10.0	
Dimethoate	60-51-5	10.0	< 10.0	
Dimethyl phthalate	131-11-3	10.0	< 10.0	
Dimethylaminoazobenzene	60-11-7	10.0	< 10.0	
Dinoseb	88-85-7	10.0	< 10.0	
Diphenylamine	122-39-4	10.0	< 10.0	
Disulfoton	298-04-4	10.0	< 10.0	
Ethyl methanesulfonate	62-50-0	10.0	< 10.0	
Famphur	52-85-7	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	
Fluorene	86-73-7	10.0	< 10.0	
Hexachlorobenzene	118-74-1	10.0	< 10.0	
Hexachlorobutadiene	87-68-3	10.0	< 10.0	
Hexachlorocyclopentadiene	77-47-4	10.0	< 10.0	
Hexachloroethane	67-72-1	10.0	< 10.0	
Hexachlorophene	70-30-4	10.0	< 10.0	
Hexachloropropene	1888-71-7	10.0	< 10.0	
Indene	95-13-6	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Isodrin	465-73-6	10.0	< 10.0	
Isophorone	78-59-1	10.0	< 10.0	
Isosafrole	120-58-1	10.0	< 10.0	
Kepone	143-50-0	10.0	< 10.0	



**Lab Sample ID:** 1303453-003B

**Client Sample ID:** W of Main Boom / 4920396

**Analyzed:** 3/22/2013 1605h

**Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8270D

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Methapyrilene	91-80-5	10.0	< 10.0	
Methyl methanesulfonate	66-27-3	10.0	< 10.0	
n-Decane	124-18-5	10.0	< 10.0	
N-Nitrosodi-n-butylamine	924-16-3	10.0	< 10.0	
N-Nitrosodiethylamine	55-18-5	10.0	< 10.0	
N-Nitrosodimethylamine	62-75-9	10.0	< 10.0	
N-Nitrosodiphenylamine	86-30-6	10.0	< 10.0	
N-Nitrosodi-n-propylamine	621-64-7	10.0	< 10.0	
N-Nitrosomethylethylamine	10595-95-6	10.0	< 10.0	
N-Nitrosomorpholine	59-89-2	10.0	< 10.0	
N-Nitrosopiperidine	100-75-4	10.0	< 10.0	
N-Nitrosopyrrolidine	930-55-2	10.0	< 10.0	
n-Octadecane	593-45-3	10.0	< 10.0	
Naphthalene	91-20-3	10.0	< 10.0	
Nitrobenzene	98-95-3	10.0	< 10.0	
Nitroquinoline-1-oxide	56-57-5	10.0	< 10.0	
O,O,O-Triethyl phosphorothioate	126-68-1	10.0	< 10.0	
o-Toluidine	95-53-4	10.0	< 10.0	
Parathion	56-38-2	10.0	< 10.0	
Methyl parathion	298-00-0	10.0	< 10.0	
Pentachlorobenzene	608-93-5	10.0	< 10.0	
Pentachloronitrobenzene	82-68-8	10.0	< 10.0	
Pentachlorophenol	87-86-5	10.0	< 10.0	
Phenacetin	62-44-2	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Phenol	108-95-2	10.0	< 10.0	
Phorate	298-02-2	10.0	< 10.0	
Pronamide	23950-58-5	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
Pyridine	110-86-1	10.0	< 10.0	
Quinoline	91-22-5	10.0	< 10.0	
Safrole	94-59-7	10.0	< 10.0	
Tetraethyl dithiopyrophosphate	3689-24-5	10.0	< 10.0	
Thionazin	297-97-2	10.0	< 10.0	
TIC: 1-Heneicosyl formate	077899-03-7		6.33	JN
TIC: n-Hexadecanoic acid	000057-10-3		6.04	JN



**Lab Sample ID:** 1303453-003B

**Client Sample ID:** W of Main Boom / 4920396

**Analyzed:** 3/22/2013 1605h      **Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual		
<b>Surrogate</b>	<b>CAS</b>	<b>Result</b>	<b>Amount Spiked</b>	<b>% REC</b>	<b>Limits</b>	<b>Qual</b>
Surr: 2,4,6-Tribromophenol	118-79-6	53.4	80.00	66.8	14-159	
Surr: 2-Fluorobiphenyl	321-60-8	18.0	40.00	45.0	10-124	
Surr: 2-Fluorophenol	367-12-4	23.2	80.00	28.9	10-106	
Surr: Nitrobenzene-d5	4165-60-0	14.2	40.00	35.6	10-180	
Surr: Phenol-d6	13127-88-3	19.3	80.00	24.2	10-122	
Surr: Terphenyl-d14	1718-51-0	36.3	40.00	90.8	10-199	

*J - This flag indicates an estimated value.*

*N - This flag indicates presumptive evidence of a compound.*

*This sample was analyzed for TICs.*

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-004B  
**Client Sample ID:** E of Main Boom / 4920395  
**Collection Date:** 3/20/2013 1145h  
**Received Date:** 3/20/2013 1534h

**Contact:** John Whitehead

### Analytical Results

SVOA List by GC/MS Method 8270D/3510C

**Analyzed:** 3/22/2013 1725h      **Extracted:** 3/21/2013 826h  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8270D

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QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1'-Biphenyl	92-52-4	10.0	< 10.0	
1,2,4,5-Tetrachlorobenzene	95-94-3	10.0	< 10.0	
1,2,4-Trichlorobenzene	120-82-1	10.0	< 10.0	
1,2-Dichlorobenzene	95-50-1	10.0	< 10.0	
1,3,5-Trinitrobenzene	99-35-4	10.0	< 10.0	
1,3-Dichlorobenzene	541-73-1	10.0	< 10.0	
1,3-Dinitrobenzene	99-65-0	10.0	< 10.0	
1,4-Dichlorobenzene	106-46-7	10.0	< 10.0	
1,4-Dinitrobenzene	100-25-4	10.0	< 10.0	
1,4-Naphthoquinone	130-15-4	10.0	< 10.0	
1,4-Phenylenediamine	106-50-3	10.0	< 10.0	
1-Chloronaphthalene	90-13-1	10.0	< 10.0	
1-Methylnaphthalene	90-12-0	10.0	< 10.0	
1-Naphthylamine	134-32-7	10.0	< 10.0	
2,3,4,6-Tetrachlorophenol	58-90-2	10.0	< 10.0	
2,4,5-Trichlorophenol	95-95-4	10.0	< 10.0	
2,4,6-Trichlorophenol	88-06-2	10.0	< 10.0	
2,4-Dichlorophenol	120-83-2	10.0	< 10.0	
2,4-Dimethylphenol	105-67-9	10.0	< 10.0	
2,4-Dinitrophenol	51-28-5	10.0	< 10.0	
2,4-Dinitrotoluene	121-14-2	10.0	< 10.0	
2,6-Dichlorophenol	87-65-0	10.0	< 10.0	
2,6-Dinitrotoluene	606-20-2	10.0	< 10.0	
2-Acetylaminofluorene	53-96-3	10.0	< 10.0	
2-Chloronaphthalene	91-58-7	10.0	< 10.0	
2-Chlorophenol	95-57-8	10.0	< 10.0	
2-Methylnaphthalene	91-57-6	10.0	< 10.0	
2-Methylphenol	95-48-7	10.0	< 10.0	
2-Naphthylamine	91-59-8	10.0	< 10.0	
2-Nitroaniline	88-74-4	10.0	< 10.0	



**Lab Sample ID:** 1303453-004B  
**Client Sample ID:** E of Main Boom / 4920395

**Analyzed:** 3/22/2013 1725h      **Extracted:** 3/21/2013 826h  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8270D

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Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Nitrophenol	88-75-5	10.0	< 10.0	
2-Picoline	109-06-8	10.0	< 10.0	
3&4-Methylphenol		10.0	< 10.0	
3,3'-Dichlorobenzidine	91-94-1	10.0	< 10.0	
3,3'-Dimethylbenzidine	119-93-7	10.0	< 10.0	
3-Methylcholanthrene	56-49-5	10.0	< 10.0	
3-Nitroaniline	99-09-2	10.0	< 10.0	
4,6-Dinitro-2-methylphenol	534-52-1	10.0	< 10.0	
4-Aminobiphenyl	92-67-1	10.0	< 10.0	
4-Bromophenyl phenyl ether	101-55-3	10.0	< 10.0	
4-Chloro-3-methylphenol	59-50-7	10.0	< 10.0	
4-Chloroaniline	106-47-8	10.0	< 10.0	
4-Chlorophenyl phenyl ether	7005-72-3	10.0	< 10.0	
4-Nitroaniline	100-01-6	10.0	< 10.0	
4-Nitrophenol	100-02-7	10.0	< 10.0	
5-Nitro-o-toluidine	99-55-8	10.0	< 10.0	
7,12-Dimethylbenz(a)anthracene	57-97-6	10.0	< 10.0	
a,a-Dimethylphenethylamine	122-09-8	10.0	< 10.0	
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Acetophenone	98-86-2	10.0	< 10.0	
alpha-Terpineol	98-55-5	10.0	< 10.0	
Aniline	62-53-3	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Aramite	140-57-8	10.0	< 10.0	
Atrazine	1912-24-9	10.0	< 10.0	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	
Benzaldehyde	100-52-7	10.0	< 10.0	
Benzidine	92-87-5	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Benzoic acid	65-85-0	20.0	< 20.0	
Benzyl alcohol	100-51-6	10.0	< 10.0	
Bis(2-chloroethoxy)methane	111-91-1	10.0	< 10.0	



**Lab Sample ID:** 1303453-004B

**Client Sample ID:** E of Main Boom / 4920395

**Analyzed:** 3/22/2013 1725h

**Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8270D

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Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Bis(2-chloroethyl) ether	111-44-4	10.0	< 10.0	
Bis(2-chloroisopropyl) ether	108-60-1	10.0	< 10.0	
Bis(2-ethylhexyl) phthalate	117-81-7	10.0	< 10.0	
bis(2-ethylhexyl)adipate	103-23-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	10.0	< 10.0	
Caprolactam	105-60-2	10.0	< 10.0	
Carbazole	86-74-8	10.0	< 10.0	
Chlorobenzilate	510-15-6	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Di-n-butyl phthalate	84-74-2	10.0	< 10.0	
Di-n-octyl phthalate	117-84-0	10.0	< 10.0	
Diallate (cis or trans)	2303-16-4	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Dibenzofuran	132-64-9	10.0	< 10.0	
Diethyl phthalate	84-66-2	10.0	< 10.0	
Dimethoate	60-51-5	10.0	< 10.0	
Dimethyl phthalate	131-11-3	10.0	< 10.0	
Dimethylaminoazobenzene	60-11-7	10.0	< 10.0	
Dinoseb	88-85-7	10.0	< 10.0	
Diphenylamine	122-39-4	10.0	< 10.0	
Disulfoton	298-04-4	10.0	< 10.0	
Ethyl methanesulfonate	62-50-0	10.0	< 10.0	
Famphur	52-85-7	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	
Fluorene	86-73-7	10.0	< 10.0	
Hexachlorobenzene	118-74-1	10.0	< 10.0	
Hexachlorobutadiene	87-68-3	10.0	< 10.0	
Hexachlorocyclopentadiene	77-47-4	10.0	< 10.0	
Hexachloroethane	67-72-1	10.0	< 10.0	
Hexachlorophene	70-30-4	10.0	< 10.0	
Hexachloropropene	1888-71-7	10.0	< 10.0	
Indene	95-13-6	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Isodrin	465-73-6	10.0	< 10.0	
Isophorone	78-59-1	10.0	< 10.0	
Isosafrole	120-58-1	10.0	< 10.0	
Kepone	143-50-0	10.0	< 10.0	



**Lab Sample ID:** 1303453-004B

**Client Sample ID:** E of Main Boom / 4920395

**Analyzed:** 3/22/2013 1725h

**Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8270D

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Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Methapyrilene	91-80-5	10.0	< 10.0	
Methyl methanesulfonate	66-27-3	10.0	< 10.0	
n-Decane	124-18-5	10.0	< 10.0	
N-Nitrosodi-n-butylamine	924-16-3	10.0	< 10.0	
N-Nitrosodiethylamine	55-18-5	10.0	< 10.0	
N-Nitrosodimethylamine	62-75-9	10.0	< 10.0	
N-Nitrosodiphenylamine	86-30-6	10.0	< 10.0	
N-Nitrosodi-n-propylamine	621-64-7	10.0	< 10.0	
N-Nitrosomethylethylamine	10595-95-6	10.0	< 10.0	
N-Nitrosomorpholine	59-89-2	10.0	< 10.0	
N-Nitrosopiperidine	100-75-4	10.0	< 10.0	
N-Nitrosopyrrolidine	930-55-2	10.0	< 10.0	
n-Octadecane	593-45-3	10.0	< 10.0	
Naphthalene	91-20-3	10.0	< 10.0	
Nitrobenzene	98-95-3	10.0	< 10.0	
Nitroquinoline-1-oxide	56-57-5	10.0	< 10.0	
O,O,O-Triethyl phosphorothioate	126-68-1	10.0	< 10.0	
o-Toluidine	95-53-4	10.0	< 10.0	
Parathion	56-38-2	10.0	< 10.0	
Methyl parathion	298-00-0	10.0	< 10.0	
Pentachlorobenzene	608-93-5	10.0	< 10.0	
Pentachloronitrobenzene	82-68-8	10.0	< 10.0	
Pentachlorophenol	87-86-5	10.0	< 10.0	
Phenacetin	62-44-2	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Phenol	108-95-2	10.0	< 10.0	
Phorate	298-02-2	10.0	< 10.0	
Pronamide	23950-58-5	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
Pyridine	110-86-1	10.0	< 10.0	
Quinoline	91-22-5	10.0	< 10.0	
Safrole	94-59-7	10.0	< 10.0	
Tetraethyl dithiopyrophosphate	3689-24-5	10.0	< 10.0	
Thionazin	297-97-2	10.0	< 10.0	
TIC: 1,2-Benzenedicarboxylic acid, bi...	000084-69-5		5.72	JN
TIC: 3-Eicosene, (E)-	074685-33-9		7.69	JN
TIC: n-Hexadecanoic acid	000057-10-3		11.0	JN



**Lab Sample ID:** 1303453-004B

**Client Sample ID:** E of Main Boom / 4920395

**Analyzed:** 3/22/2013 1725h

**Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual		
<b>Surrogate</b>	<b>CAS</b>	<b>Result</b>	<b>Amount Spiked</b>	<b>% REC</b>	<b>Limits</b>	<b>Qual</b>
Surr: 2,4,6-Tribromophenol	118-79-6	57.4	80.00	71.7	14-159	
Surr: 2-Fluorobiphenyl	321-60-8	12.7	40.00	31.9	10-124	
Surr: 2-Fluorophenol	367-12-4	20.0	80.00	25.0	10-106	
Surr: Nitrobenzene-d5	4165-60-0	12.0	40.00	30.0	10-180	
Surr: Phenol-d6	13127-88-3	16.4	80.00	20.6	10-122	
Surr: Terphenyl-d14	1718-51-0	36.6	40.00	91.5	10-199	

*J - This flag indicates an estimated value.*

*N - This flag indicates presumptive evidence of a compound.*

*This sample was analyzed for TICs.*

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Kyle F. Gross  
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Jose Rocha  
QA Officer



## ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-005B  
**Client Sample ID:** Between Weirs / 4920394  
**Collection Date:** 3/20/2013 1200h  
**Received Date:** 3/20/2013 1534h

**Contact:** John Whitehead

### Analytical Results

SVOA List by GC/MS Method 8270D/3510C

**Analyzed:** 3/22/2013 1751h      **Extracted:** 3/21/2013 826h  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8270D

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1'-Biphenyl	92-52-4	10.0	< 10.0	
1,2,4,5-Tetrachlorobenzene	95-94-3	10.0	< 10.0	
1,2,4-Trichlorobenzene	120-82-1	10.0	< 10.0	
1,2-Dichlorobenzene	95-50-1	10.0	< 10.0	
1,3,5-Trinitrobenzene	99-35-4	10.0	< 10.0	
1,3-Dichlorobenzene	541-73-1	10.0	< 10.0	
1,3-Dinitrobenzene	99-65-0	10.0	< 10.0	
1,4-Dichlorobenzene	106-46-7	10.0	< 10.0	
1,4-Dinitrobenzene	100-25-4	10.0	< 10.0	
1,4-Naphthoquinone	130-15-4	10.0	< 10.0	
1,4-Phenylenediamine	106-50-3	10.0	< 10.0	
1-Chloronaphthalene	90-13-1	10.0	< 10.0	
1-Methylnaphthalene	90-12-0	10.0	< 10.0	
1-Naphthylamine	134-32-7	10.0	< 10.0	
2,3,4,6-Tetrachlorophenol	58-90-2	10.0	< 10.0	
2,4,5-Trichlorophenol	95-95-4	10.0	< 10.0	
2,4,6-Trichlorophenol	88-06-2	10.0	< 10.0	
2,4-Dichlorophenol	120-83-2	10.0	< 10.0	
2,4-Dimethylphenol	105-67-9	10.0	< 10.0	
2,4-Dinitrophenol	51-28-5	10.0	< 10.0	
2,4-Dinitrotoluene	121-14-2	10.0	< 10.0	
2,6-Dichlorophenol	87-65-0	10.0	< 10.0	
2,6-Dinitrotoluene	606-20-2	10.0	< 10.0	
2-Acetylamino fluorene	53-96-3	10.0	< 10.0	
2-Chloronaphthalene	91-58-7	10.0	< 10.0	
2-Chlorophenol	95-57-8	10.0	< 10.0	
2-Methylnaphthalene	91-57-6	10.0	< 10.0	
2-Methylphenol	95-48-7	10.0	< 10.0	
2-Naphthylamine	91-59-8	10.0	< 10.0	
2-Nitroaniline	88-74-4	10.0	< 10.0	



**Lab Sample ID:** 1303453-005B

**Client Sample ID:** Between Weirs / 4920394

**Analyzed:** 3/22/2013 1751h

**Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8270D

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QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Nitrophenol	88-75-5	10.0	< 10.0	
2-Picoline	109-06-8	10.0	< 10.0	
3&4-Methylphenol		10.0	< 10.0	
3,3'-Dichlorobenzidine	91-94-1	10.0	< 10.0	
3,3'-Dimethylbenzidine	119-93-7	10.0	< 10.0	
3-Methylcholanthrene	56-49-5	10.0	< 10.0	
3-Nitroaniline	99-09-2	10.0	< 10.0	
4,6-Dinitro-2-methylphenol	534-52-1	10.0	< 10.0	
4-Aminobiphenyl	92-67-1	10.0	< 10.0	
4-Bromophenyl phenyl ether	101-55-3	10.0	< 10.0	
4-Chloro-3-methylphenol	59-50-7	10.0	< 10.0	
4-Chloroaniline	106-47-8	10.0	< 10.0	
4-Chlorophenyl phenyl ether	7005-72-3	10.0	< 10.0	
4-Nitroaniline	100-01-6	10.0	< 10.0	
4-Nitrophenol	100-02-7	10.0	< 10.0	
5-Nitro-o-toluidine	99-55-8	10.0	< 10.0	
7,12-Dimethylbenz(a)anthracene	57-97-6	10.0	< 10.0	
a,a-Dimethylphenethylamine	122-09-8	10.0	< 10.0	
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Acetophenone	98-86-2	10.0	< 10.0	
alpha-Terpineol	98-55-5	10.0	< 10.0	
Aniline	62-53-3	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Aramite	140-57-8	10.0	< 10.0	
Atrazine	1912-24-9	10.0	< 10.0	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	
Benzaldehyde	100-52-7	10.0	< 10.0	
Benzidine	92-87-5	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Benzoic acid	65-85-0	20.0	< 20.0	
Benzyl alcohol	100-51-6	10.0	< 10.0	
Bis(2-chloroethoxy)methane	111-91-1	10.0	< 10.0	



**Lab Sample ID:** 1303453-005B  
**Client Sample ID:** Between Weirs / 4920394

**Analyzed:** 3/22/2013 1751h      **Extracted:** 3/21/2013 826h  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8270D

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Bis(2-chloroethyl) ether	111-44-4	10.0	< 10.0	
Bis(2-chloroisopropyl) ether	108-60-1	10.0	< 10.0	
Bis(2-ethylhexyl) phthalate	117-81-7	10.0	<b>47.9</b>	
bis(2-ethylhexyl)adipate	103-23-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	10.0	< 10.0	
Caprolactam	105-60-2	10.0	< 10.0	
Carbazole	86-74-8	10.0	< 10.0	
Chlorobenzilate	510-15-6	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Di-n-butyl phthalate	84-74-2	10.0	< 10.0	
Di-n-octyl phthalate	117-84-0	10.0	< 10.0	
Diallate (cis or trans)	2303-16-4	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Dibenzofuran	132-64-9	10.0	< 10.0	
Diethyl phthalate	84-66-2	10.0	< 10.0	
Dimethoate	60-51-5	10.0	< 10.0	
Dimethyl phthalate	131-11-3	10.0	< 10.0	
Dimethylaminoazobenzene	60-11-7	10.0	< 10.0	
Dinoseb	88-85-7	10.0	< 10.0	
Diphenylamine	122-39-4	10.0	< 10.0	
Disulfoton	298-04-4	10.0	< 10.0	
Ethyl methanesulfonate	62-50-0	10.0	< 10.0	
Famphur	52-85-7	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	
Fluorene	86-73-7	10.0	< 10.0	
Hexachlorobenzene	118-74-1	10.0	< 10.0	
Hexachlorobutadiene	87-68-3	10.0	< 10.0	
Hexachlorocyclopentadiene	77-47-4	10.0	< 10.0	
Hexachloroethane	67-72-1	10.0	< 10.0	
Hexachlorophene	70-30-4	10.0	< 10.0	
Hexachloropropene	1888-71-7	10.0	< 10.0	
Indene	95-13-6	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Isodrin	465-73-6	10.0	< 10.0	
Isophorone	78-59-1	10.0	< 10.0	
Isosafrole	120-58-1	10.0	< 10.0	
Kepone	143-50-0	10.0	< 10.0	



**Lab Sample ID:** 1303453-005B  
**Client Sample ID:** Between Weirs / 4920394

**Analyzed:** 3/22/2013 1751h      **Extracted:** 3/21/2013 826h  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8270D

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Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Methapyrilene	91-80-5	10.0	< 10.0	
Methyl methanesulfonate	66-27-3	10.0	< 10.0	
n-Decane	124-18-5	10.0	< 10.0	
N-Nitrosodi-n-butylamine	924-16-3	10.0	< 10.0	
N-Nitrosodiethylamine	55-18-5	10.0	< 10.0	
N-Nitrosodimethylamine	62-75-9	10.0	< 10.0	
N-Nitrosodiphenylamine	86-30-6	10.0	< 10.0	
N-Nitrosodi-n-propylamine	621-64-7	10.0	< 10.0	
N-Nitrosomethylethylamine	10595-95-6	10.0	< 10.0	
N-Nitrosomorpholine	59-89-2	10.0	< 10.0	
N-Nitrosopiperidine	100-75-4	10.0	< 10.0	
N-Nitrosopyrrolidine	930-55-2	10.0	< 10.0	
n-Octadecane	593-45-3	10.0	<b>106</b>	
Naphthalene	91-20-3	10.0	< 10.0	
Nitrobenzene	98-95-3	10.0	< 10.0	
Nitroquinoline-1-oxide	56-57-5	10.0	< 10.0	
O,O,O-Triethyl phosphorothioate	126-68-1	10.0	< 10.0	
o-Toluidine	95-53-4	10.0	< 10.0	
Parathion	56-38-2	10.0	< 10.0	
Methyl parathion	298-00-0	10.0	< 10.0	
Pentachlorobenzene	608-93-5	10.0	< 10.0	
Pentachloronitrobenzene	82-68-8	10.0	< 10.0	
Pentachlorophenol	87-86-5	10.0	< 10.0	
Phenacetin	62-44-2	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Phenol	108-95-2	10.0	< 10.0	
Phorate	298-02-2	10.0	< 10.0	
Pronamide	23950-58-5	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
Pyridine	110-86-1	10.0	< 10.0	
Quinoline	91-22-5	10.0	< 10.0	
Safrole	94-59-7	10.0	< 10.0	
Tetraethyl dithiopyrophosphate	3689-24-5	10.0	< 10.0	
Thionazin	297-97-2	10.0	< 10.0	
TIC: Benzene, 1,2,3-trimethyl-	000526-73-8		38.6	JN
TIC: Docosane	000629-97-0		50.6	JN
TIC: Eicosane	000112-95-8		96.4	JN



**Lab Sample ID:** 1303453-005B  
**Client Sample ID:** Between Weirs / 4920394

**Analyzed:** 3/22/2013 1751h      **Extracted:** 3/21/2013 826h  
**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
TIC: Heneicosane	000629-94-7		69.7	JN
TIC: Naphthalene, 1,2,3,4-tetrahydro-...	004175-54-6		23.4	JN
TIC: Nonadecane	000629-92-5		115	JN
TIC: Pentadecane, 2,6,10-trimethyl-	003892-00-0		29.5	JN
TIC: Tetradecane	000629-59-4		51.7	JN
TIC: Tricosane	000638-67-5		21.3	JN
TIC: Tridecane	000629-50-5		28.1	JN

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 2,4,6-Tribromophenol	118-79-6	64.6	80.00	80.7	14-159	
Surr: 2-Fluorobiphenyl	321-60-8	14.2	40.00	35.6	10-124	
Surr: 2-Fluorophenol	367-12-4	23.4	80.00	29.2	10-106	
Surr: Nitrobenzene-d5	4165-60-0	14.4	40.00	35.9	10-180	
Surr: Phenol-d6	13127-88-3	19.4	80.00	24.3	10-122	
Surr: Terphenyl-d14	1718-51-0	35.0	40.00	87.6	10-199	

*J - This flag indicates an estimated value.*  
*N - This flag indicates presumptive evidence of a compound.*  
*This sample was analyzed for TICs.*

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-006B  
**Client Sample ID:** W. Bay South Marina / 4920495  
**Collection Date:** 3/20/2013 1100h  
**Received Date:** 3/20/2013 1534h

**Contact:** John Whitehead

## Analytical Results

SVOA List by GC/MS Method 8270D/3510C

**Analyzed:** 3/22/2013 1818h

**Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8270D

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1'-Biphenyl	92-52-4	10.0	< 10.0	
1,2,4,5-Tetrachlorobenzene	95-94-3	10.0	< 10.0	
1,2,4-Trichlorobenzene	120-82-1	10.0	< 10.0	
1,2-Dichlorobenzene	95-50-1	10.0	< 10.0	
1,3,5-Trinitrobenzene	99-35-4	10.0	< 10.0	
1,3-Dichlorobenzene	541-73-1	10.0	< 10.0	
1,3-Dinitrobenzene	99-65-0	10.0	< 10.0	
1,4-Dichlorobenzene	106-46-7	10.0	< 10.0	
1,4-Dinitrobenzene	100-25-4	10.0	< 10.0	
1,4-Naphthoquinone	130-15-4	10.0	< 10.0	
1,4-Phenylenediamine	106-50-3	10.0	< 10.0	
1-Chloronaphthalene	90-13-1	10.0	< 10.0	
1-Methylnaphthalene	90-12-0	10.0	< 10.0	
1-Naphthylamine	134-32-7	10.0	< 10.0	
2,3,4,6-Tetrachlorophenol	58-90-2	10.0	< 10.0	
2,4,5-Trichlorophenol	95-95-4	10.0	< 10.0	
2,4,6-Trichlorophenol	88-06-2	10.0	< 10.0	
2,4-Dichlorophenol	120-83-2	10.0	< 10.0	
2,4-Dimethylphenol	105-67-9	10.0	< 10.0	
2,4-Dinitrophenol	51-28-5	10.0	< 10.0	
2,4-Dinitrotoluene	121-14-2	10.0	< 10.0	
2,6-Dichlorophenol	87-65-0	10.0	< 10.0	
2,6-Dinitrotoluene	606-20-2	10.0	< 10.0	
2-Acetylaminofluorene	53-96-3	10.0	< 10.0	
2-Chloronaphthalene	91-58-7	10.0	< 10.0	
2-Chlorophenol	95-57-8	10.0	< 10.0	
2-Methylnaphthalene	91-57-6	10.0	< 10.0	
2-Methylphenol	95-48-7	10.0	< 10.0	
2-Naphthylamine	91-59-8	10.0	< 10.0	
2-Nitroaniline	88-74-4	10.0	< 10.0	



**Lab Sample ID:** 1303453-006B

**Client Sample ID:** W. Bay South Marina / 4920495

**Analyzed:** 3/22/2013 1818h

**Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8270D

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
2-Nitrophenol	88-75-5	10.0	< 10.0	
2-Picoline	109-06-8	10.0	< 10.0	
3&4-Methylphenol		10.0	< 10.0	
3,3'-Dichlorobenzidine	91-94-1	10.0	< 10.0	
3,3'-Dimethylbenzidine	119-93-7	10.0	< 10.0	
3-Methylcholanthrene	56-49-5	10.0	< 10.0	
3-Nitroaniline	99-09-2	10.0	< 10.0	
4,6-Dinitro-2-methylphenol	534-52-1	10.0	< 10.0	
4-Aminobiphenyl	92-67-1	10.0	< 10.0	
4-Bromophenyl phenyl ether	101-55-3	10.0	< 10.0	
4-Chloro-3-methylphenol	59-50-7	10.0	< 10.0	
4-Chloroaniline	106-47-8	10.0	< 10.0	
4-Chlorophenyl phenyl ether	7005-72-3	10.0	< 10.0	
4-Nitroaniline	100-01-6	10.0	< 10.0	
4-Nitrophenol	100-02-7	10.0	< 10.0	
5-Nitro-o-toluidine	99-55-8	10.0	< 10.0	
7,12-Dimethylbenz(a)anthracene	57-97-6	10.0	< 10.0	
a,a-Dimethylphenethylamine	122-09-8	10.0	< 10.0	
Acenaphthene	83-32-9	10.0	< 10.0	
Acenaphthylene	208-96-8	10.0	< 10.0	
Acetophenone	98-86-2	10.0	< 10.0	
alpha-Terpineol	98-55-5	10.0	< 10.0	
Aniline	62-53-3	10.0	< 10.0	
Anthracene	120-12-7	10.0	< 10.0	
Aramite	140-57-8	10.0	< 10.0	
Atrazine	1912-24-9	10.0	< 10.0	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	10.0	< 10.0	
Benzaldehyde	100-52-7	10.0	< 10.0	
Benzidine	92-87-5	10.0	< 10.0	
Benzo(a)pyrene	50-32-8	10.0	< 10.0	
Benzo(b)fluoranthene	205-99-2	10.0	< 10.0	
Benzo(g,h,i)perylene	191-24-2	10.0	< 10.0	
Benzo(k)fluoranthene	207-08-9	10.0	< 10.0	
Benzoic acid	65-85-0	20.0	< 20.0	
Benzyl alcohol	100-51-6	10.0	< 10.0	
Bis(2-chloroethoxy)methane	111-91-1	10.0	< 10.0	



**Lab Sample ID:** 1303453-006B

**Client Sample ID:** W. Bay South Marina / 4920495

**Analyzed:** 3/22/2013 1818h

**Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8270D

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Bis(2-chloroethyl) ether	111-44-4	10.0	< 10.0	
Bis(2-chloroisopropyl) ether	108-60-1	10.0	< 10.0	
Bis(2-ethylhexyl) phthalate	117-81-7	10.0	< 10.0	
bis(2-ethylhexyl)adipate	103-23-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	10.0	< 10.0	
Caprolactam	105-60-2	10.0	< 10.0	
Carbazole	86-74-8	10.0	< 10.0	
Chlorobenzilate	510-15-6	10.0	< 10.0	
Chrysene	218-01-9	10.0	< 10.0	
Di-n-butyl phthalate	84-74-2	10.0	< 10.0	
Di-n-octyl phthalate	117-84-0	10.0	< 10.0	
Diallate (cis or trans)	2303-16-4	10.0	< 10.0	
Dibenz(a,h)anthracene	53-70-3	10.0	< 10.0	
Dibenzofuran	132-64-9	10.0	< 10.0	
Diethyl phthalate	84-66-2	10.0	< 10.0	
Dimethoate	60-51-5	10.0	< 10.0	
Dimethyl phthalate	131-11-3	10.0	< 10.0	
Dimethylaminoazobenzene	60-11-7	10.0	< 10.0	
Dinoseb	88-85-7	10.0	< 10.0	
Diphenylamine	122-39-4	10.0	< 10.0	
Disulfoton	298-04-4	10.0	< 10.0	
Ethyl methanesulfonate	62-50-0	10.0	< 10.0	
Famphur	52-85-7	10.0	< 10.0	
Fluoranthene	206-44-0	10.0	< 10.0	
Fluorene	86-73-7	10.0	< 10.0	
Hexachlorobenzene	118-74-1	10.0	< 10.0	
Hexachlorobutadiene	87-68-3	10.0	< 10.0	
Hexachlorocyclopentadiene	77-47-4	10.0	< 10.0	
Hexachloroethane	67-72-1	10.0	< 10.0	
Hexachlorophene	70-30-4	10.0	< 10.0	
Hexachloropropene	1888-71-7	10.0	< 10.0	
Indene	95-13-6	10.0	< 10.0	
Indeno(1,2,3-cd)pyrene	193-39-5	10.0	< 10.0	
Isodrin	465-73-6	10.0	< 10.0	
Isophorone	78-59-1	10.0	< 10.0	
Isosafrole	120-58-1	10.0	< 10.0	
Kepone	143-50-0	10.0	< 10.0	



**Lab Sample ID:** 1303453-006B

**Client Sample ID:** W. Bay South Marina / 4920495

**Analyzed:** 3/22/2013 1818h

**Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8270D

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Methapyrilene	91-80-5	10.0	< 10.0	
Methyl methanesulfonate	66-27-3	10.0	< 10.0	
n-Decane	124-18-5	10.0	< 10.0	
N-Nitrosodi-n-butylamine	924-16-3	10.0	< 10.0	
N-Nitrosodiethylamine	55-18-5	10.0	< 10.0	
N-Nitrosodimethylamine	62-75-9	10.0	< 10.0	
N-Nitrosodiphenylamine	86-30-6	10.0	< 10.0	
N-Nitrosodi-n-propylamine	621-64-7	10.0	< 10.0	
N-Nitrosomethylethylamine	10595-95-6	10.0	< 10.0	
N-Nitrosomorpholine	59-89-2	10.0	< 10.0	
N-Nitrosopiperidine	100-75-4	10.0	< 10.0	
N-Nitrosopyrrolidine	930-55-2	10.0	< 10.0	
n-Octadecane	593-45-3	10.0	< 10.0	
Naphthalene	91-20-3	10.0	< 10.0	
Nitrobenzene	98-95-3	10.0	< 10.0	
Nitroquinoline-1-oxide	56-57-5	10.0	< 10.0	
O,O,O-Triethyl phosphorothioate	126-68-1	10.0	< 10.0	
o-Toluidine	95-53-4	10.0	< 10.0	
Parathion	56-38-2	10.0	< 10.0	
Methyl parathion	298-00-0	10.0	< 10.0	
Pentachlorobenzene	608-93-5	10.0	< 10.0	
Pentachloronitrobenzene	82-68-8	10.0	< 10.0	
Pentachlorophenol	87-86-5	10.0	< 10.0	
Phenacetin	62-44-2	10.0	< 10.0	
Phenanthrene	85-01-8	10.0	< 10.0	
Phenol	108-95-2	10.0	< 10.0	
Phorate	298-02-2	10.0	< 10.0	
Pronamide	23950-58-5	10.0	< 10.0	
Pyrene	129-00-0	10.0	< 10.0	
Pyridine	110-86-1	10.0	< 10.0	
Quinoline	91-22-5	10.0	< 10.0	
Safrole	94-59-7	10.0	< 10.0	
Tetraethyl dithiopyrophosphate	3689-24-5	10.0	< 10.0	
Thionazin	297-97-2	10.0	< 10.0	
TIC: 3-Eicosene, (E)-	074685-33-9		10.3	JN
TIC: n-Hexadecanoic acid	000057-10-3		12.1	JN



**Lab Sample ID:** 1303453-006B

**Client Sample ID:** W. Bay South Marina / 4920495

**Analyzed:** 3/22/2013 1818h

**Extracted:** 3/21/2013 826h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual		
<b>Surrogate</b>	<b>CAS</b>	<b>Result</b>	<b>Amount Spiked</b>	<b>% REC</b>	<b>Limits</b>	<b>Qual</b>
Surr: 2,4,6-Tribromophenol	118-79-6	63.5	80.00	79.4	14-159	
Surr: 2-Fluorobiphenyl	321-60-8	16.9	40.00	42.2	10-124	
Surr: 2-Fluorophenol	367-12-4	28.0	80.00	35.0	10-106	
Surr: Nitrobenzene-d5	4165-60-0	16.3	40.00	40.8	10-180	
Surr: Phenol-d6	13127-88-3	22.9	80.00	28.6	10-122	
Surr: Terphenyl-d14	1718-51-0	36.8	40.00	91.9	10-199	

*J - This flag indicates an estimated value.*

*N - This flag indicates presumptive evidence of a compound.*

*This sample was analyzed for TICs.*

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-002A  
**Client Sample ID:** Drainage East of I15 / 492032  
**Collection Date:** 3/20/2013 1300h  
**Received Date:** 3/20/2013 1534h

**Contact:** John Whitehead

### Analytical Results

VOAs Full List by GC/MS Method 8260C/5030C

**Analyzed:** 3/20/2013 1941h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.00	< 2.00	
1,1,1-Trichloroethane	71-55-6	2.00	< 2.00	
1,1,2,2-Tetrachloroethane	79-34-5	2.00	< 2.00	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.00	< 2.00	
1,1,2-Trichloroethane	79-00-5	2.00	< 2.00	
1,1-Dichloropropene	563-58-6	2.00	< 2.00	
1,1-Dichloroethane	75-34-3	2.00	< 2.00	
1,1-Dichloroethene	75-35-4	2.00	< 2.00	
1,2,3-Trichlorobenzene	87-61-6	2.00	< 2.00	
1,2,3-Trichloropropane	96-18-4	2.00	< 2.00	
1,2,3-Trimethylbenzene	526-73-8	2.00	< 2.00	
1,2,4-Trichlorobenzene	120-82-1	2.00	< 2.00	
1,2,4-Trimethylbenzene	95-63-6	2.00	< 2.00	
1,2-Dibromo-3-chloropropane	96-12-8	5.00	< 5.00	
1,2-Dibromoethane	106-93-4	2.00	< 2.00	
1,2-Dichlorobenzene	95-50-1	2.00	< 2.00	
1,2-Dichloroethane	107-06-2	2.00	< 2.00	
1,2-Dichloropropane	78-87-5	2.00	< 2.00	
1,3,5-Trimethylbenzene	108-67-8	2.00	< 2.00	
1,3-Dichlorobenzene	541-73-1	2.00	< 2.00	
1,3-Dichloropropane	142-28-9	2.00	< 2.00	
1,4-Dichlorobenzene	106-46-7	2.00	< 2.00	
1,4-Dioxane	123-91-1	50.0	< 50.0	
2,2-Dichloropropane	594-20-7	2.00	< 2.00	
2-Butanone	78-93-3	10.0	< 10.0	
2-Chloroethyl vinyl ether	110-75-8	5.00	< 5.00	
2-Chlorotoluene	95-49-8	2.00	< 2.00	
2-Hexanone	591-78-6	5.00	< 5.00	
2-Nitropropane	79-46-9	5.00	< 5.00	
4-Chlorotoluene	106-43-4	2.00	< 2.00	



**Lab Sample ID:** 1303453-002A  
**Client Sample ID:** Drainage East of I15 / 492032

**Analyzed:** 3/20/2013 1941h

**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Isopropyltoluene	99-87-6	2.00	< 2.00	
4-Methyl-2-pentanone	108-10-1	5.00	< 5.00	
Acetone	67-64-1	10.0	< 10.0	
Acetonitrile	75-05-8	5.00	< 5.00	
Acrolein	107-02-8	5.00	< 5.00	
Acrylonitrile	107-13-1	10.0	< 10.0	
Allyl chloride	107-05-1	5.00	< 5.00	
Benzene	71-43-2	2.00	< 2.00	
Benzyl chloride	100-44-7	5.00	< 5.00	
Bis(2-chloroisopropyl) ether	108-60-1	5.00	< 5.00	
Bromobenzene	108-86-1	2.00	< 2.00	
Bromochloromethane	74-97-5	2.00	< 2.00	
Bromodichloromethane	75-27-4	2.00	< 2.00	
Bromoform	75-25-2	2.00	< 2.00	
Bromomethane	74-83-9	5.00	< 5.00	
Butyl acetate	123-86-4	10.0	< 10.0	
Carbon disulfide	75-15-0	2.00	< 2.00	
Carbon tetrachloride	56-23-5	2.00	< 2.00	
Chlorobenzene	108-90-7	2.00	< 2.00	
Chloroethane	75-00-3	2.00	< 2.00	
Chloroform	67-66-3	2.00	< 2.00	
Chloromethane	74-87-3	3.00	< 3.00	
Chloroprene	126-99-8	2.00	< 2.00	
cis-1,2-Dichloroethene	156-59-2	2.00	< 2.00	
cis-1,3-Dichloropropene	10061-01-5	2.00	< 2.00	
Cyclohexane	110-82-7	2.00	< 2.00	
Cyclohexanone	108-94-1	50.0	< 50.0	
Dibromochloromethane	124-48-1	2.00	< 2.00	
Dibromomethane	74-95-3	2.00	< 2.00	
Dichlorodifluoromethane	75-71-8	2.00	< 2.00	
Ethyl acetate	141-78-6	10.0	< 10.0	
Ethyl ether	60-29-7	10.0	< 10.0	
Ethyl methacrylate	97-63-2	2.00	< 2.00	
Ethylbenzene	100-41-4	2.00	< 2.00	
Hexachlorobutadiene	87-68-3	2.00	< 2.00	
Iodomethane	74-88-4	5.00	< 5.00	
Isobutyl alcohol	78-83-1	100	< 100	



**Lab Sample ID:** 1303453-002A  
**Client Sample ID:** Drainage East of I15 / 492032

**Analyzed:** 3/20/2013 1941h

**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl acetate	108-21-4	10.0	< 10.0	
Isopropyl alcohol	67-63-0	40.0	< 40.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
m,p-Xylene	179601-23-1	2.00	< 2.00	
Methacrylonitrile	126-98-7	5.00	< 5.00	
Methyl Acetate	79-20-9	5.00	< 5.00	
Methyl methacrylate	80-62-6	5.00	< 5.00	
Methyl tert-butyl ether	1634-04-4	2.00	< 2.00	
Methylcyclohexane	108-87-2	2.00	< 2.00	
Methylene chloride	75-09-2	2.00	< 2.00	
n-Amyl acetate	628-63-7	10.0	< 10.0	
n-Butyl alcohol	71-36-3	100	< 100	
n-Butylbenzene	104-51-8	2.00	< 2.00	
n-Hexane	110-54-3	2.00	< 2.00	
n-Octane	111-65-9	2.00	< 2.00	
n-Propylbenzene	103-65-1	2.00	< 2.00	
Naphthalene	91-20-3	2.00	< 2.00	
o-Xylene	95-47-6	2.00	< 2.00	
Pentachloroethane	76-01-7	5.00	< 5.00	
Propionitrile	107-12-0	25.0	< 25.0	
Propyl acetate	109-60-4	10.0	< 10.0	
sec-Butylbenzene	135-98-8	2.00	< 2.00	
Styrene	100-42-5	2.00	< 2.00	
tert-Butyl alcohol	76-65-0	20.0	< 20.0	
tert-Butylbenzene	98-06-6	2.00	< 2.00	
Tetrachloroethene	127-18-4	2.00	< 2.00	
Tetrahydrofuran	109-99-9	2.00	< 2.00	
Toluene	108-88-3	2.00	< 2.00	
trans-1,2-Dichloroethene	156-60-5	2.00	< 2.00	
trans-1,3-Dichloropropene	10061-02-6	2.00	< 2.00	
trans-1,4-Dichloro-2-butene	110-57-6	2.00	< 2.00	
Trichloroethene	79-01-6	2.00	< 2.00	
Trichlorofluoromethane	75-69-4	2.00	< 2.00	
Vinyl acetate	108-05-4	10.0	< 10.0	
Vinyl chloride	75-01-4	1.00	< 1.00	
Xylenes, Total	1330-20-7	2.00	< 2.00	



**Lab Sample ID:** 1303453-002A  
**Client Sample ID:** Drainage East of I15 / 492032

**Analyzed:** 3/20/2013 1941h

**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
<b>Surrogate</b>	<b>CAS</b>	<b>Result</b>	<b>Amount Spiked</b>	<b>% REC</b>
Surr: 1,2-Dichloroethane-d4	17060-07-0	52.7	50.00	105
Surr: 4-Bromofluorobenzene	460-00-4	53.2	50.00	106
Surr: Dibromofluoromethane	1868-53-7	51.2	50.00	102
Surr: Toluene-d8	2037-26-5	50.5	50.00	101

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-003A  
**Client Sample ID:** W of Main Boom / 4920396  
**Collection Date:** 3/20/2013 1130h  
**Received Date:** 3/20/2013 1534h

**Contact:** John Whitehead

### Analytical Results

VOAs Full List by GC/MS Method 8260C/5030C

**Analyzed:** 3/20/2013 2000h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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Kyle F. Gross  
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Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.00	< 2.00	
1,1,1-Trichloroethane	71-55-6	2.00	< 2.00	
1,1,2,2-Tetrachloroethane	79-34-5	2.00	< 2.00	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.00	< 2.00	
1,1,2-Trichloroethane	79-00-5	2.00	< 2.00	
1,1-Dichloropropene	563-58-6	2.00	< 2.00	
1,1-Dichloroethane	75-34-3	2.00	< 2.00	
1,1-Dichloroethene	75-35-4	2.00	< 2.00	
1,2,3-Trichlorobenzene	87-61-6	2.00	< 2.00	
1,2,3-Trichloropropane	96-18-4	2.00	< 2.00	
1,2,3-Trimethylbenzene	526-73-8	2.00	< 2.00	
1,2,4-Trichlorobenzene	120-82-1	2.00	< 2.00	
1,2,4-Trimethylbenzene	95-63-6	2.00	< 2.00	
1,2-Dibromo-3-chloropropane	96-12-8	5.00	< 5.00	
1,2-Dibromoethane	106-93-4	2.00	< 2.00	
1,2-Dichlorobenzene	95-50-1	2.00	< 2.00	
1,2-Dichloroethane	107-06-2	2.00	< 2.00	
1,2-Dichloropropane	78-87-5	2.00	< 2.00	
1,3,5-Trimethylbenzene	108-67-8	2.00	< 2.00	
1,3-Dichlorobenzene	541-73-1	2.00	< 2.00	
1,3-Dichloropropane	142-28-9	2.00	< 2.00	
1,4-Dichlorobenzene	106-46-7	2.00	< 2.00	
1,4-Dioxane	123-91-1	50.0	< 50.0	
2,2-Dichloropropane	594-20-7	2.00	< 2.00	
2-Butanone	78-93-3	10.0	< 10.0	
2-Chloroethyl vinyl ether	110-75-8	5.00	< 5.00	
2-Chlorotoluene	95-49-8	2.00	< 2.00	
2-Hexanone	591-78-6	5.00	< 5.00	
2-Nitropropane	79-46-9	5.00	< 5.00	
4-Chlorotoluene	106-43-4	2.00	< 2.00	



**Lab Sample ID:** 1303453-003A  
**Client Sample ID:** W of Main Boom / 4920396

**Analyzed:** 3/20/2013 2000h

**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260C

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Kyle F. Gross  
 Laboratory Director  
  
 Jose Rocha  
 QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Isopropyltoluene	99-87-6	2.00	< 2.00	
4-Methyl-2-pentanone	108-10-1	5.00	< 5.00	
Acetone	67-64-1	10.0	< 10.0	
Acetonitrile	75-05-8	5.00	< 5.00	
Acrolein	107-02-8	5.00	< 5.00	
Acrylonitrile	107-13-1	10.0	< 10.0	
Allyl chloride	107-05-1	5.00	< 5.00	
Benzene	71-43-2	2.00	< 2.00	
Benzyl chloride	100-44-7	5.00	< 5.00	
Bis(2-chloroisopropyl) ether	108-60-1	5.00	< 5.00	
Bromobenzene	108-86-1	2.00	< 2.00	
Bromochloromethane	74-97-5	2.00	< 2.00	
Bromodichloromethane	75-27-4	2.00	< 2.00	
Bromoform	75-25-2	2.00	< 2.00	
Bromomethane	74-83-9	5.00	< 5.00	
Butyl acetate	123-86-4	10.0	< 10.0	
Carbon disulfide	75-15-0	2.00	< 2.00	
Carbon tetrachloride	56-23-5	2.00	< 2.00	
Chlorobenzene	108-90-7	2.00	< 2.00	
Chloroethane	75-00-3	2.00	< 2.00	
Chloroform	67-66-3	2.00	< 2.00	
Chloromethane	74-87-3	3.00	< 3.00	
Chloroprene	126-99-8	2.00	< 2.00	
cis-1,2-Dichloroethene	156-59-2	2.00	< 2.00	
cis-1,3-Dichloropropene	10061-01-5	2.00	< 2.00	
Cyclohexane	110-82-7	2.00	< 2.00	
Cyclohexanone	108-94-1	50.0	< 50.0	
Dibromochloromethane	124-48-1	2.00	< 2.00	
Dibromomethane	74-95-3	2.00	< 2.00	
Dichlorodifluoromethane	75-71-8	2.00	< 2.00	
Ethyl acetate	141-78-6	10.0	< 10.0	
Ethyl ether	60-29-7	10.0	< 10.0	
Ethyl methacrylate	97-63-2	2.00	< 2.00	
Ethylbenzene	100-41-4	2.00	< 2.00	
Hexachlorobutadiene	87-68-3	2.00	< 2.00	
Iodomethane	74-88-4	5.00	< 5.00	
Isobutyl alcohol	78-83-1	100	< 100	



**Lab Sample ID:** 1303453-003A  
**Client Sample ID:** W of Main Boom / 4920396

**Analyzed:** 3/20/2013 2000h

**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260C

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Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl acetate	108-21-4	10.0	< 10.0	
Isopropyl alcohol	67-63-0	40.0	< 40.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
m,p-Xylene	179601-23-1	2.00	< 2.00	
Methacrylonitrile	126-98-7	5.00	< 5.00	
Methyl Acetate	79-20-9	5.00	< 5.00	
Methyl methacrylate	80-62-6	5.00	< 5.00	
Methyl tert-butyl ether	1634-04-4	2.00	< 2.00	
Methylcyclohexane	108-87-2	2.00	< 2.00	
Methylene chloride	75-09-2	2.00	< 2.00	
n-Amyl acetate	628-63-7	10.0	< 10.0	
n-Butyl alcohol	71-36-3	100	< 100	
n-Butylbenzene	104-51-8	2.00	< 2.00	
n-Hexane	110-54-3	2.00	< 2.00	
n-Octane	111-65-9	2.00	< 2.00	
n-Propylbenzene	103-65-1	2.00	< 2.00	
Naphthalene	91-20-3	2.00	< 2.00	
o-Xylene	95-47-6	2.00	< 2.00	
Pentachloroethane	76-01-7	5.00	< 5.00	
Propionitrile	107-12-0	25.0	< 25.0	
Propyl acetate	109-60-4	10.0	< 10.0	
sec-Butylbenzene	135-98-8	2.00	< 2.00	
Styrene	100-42-5	2.00	< 2.00	
tert-Butyl alcohol	76-65-0	20.0	< 20.0	
tert-Butylbenzene	98-06-6	2.00	< 2.00	
Tetrachloroethene	127-18-4	2.00	< 2.00	
Tetrahydrofuran	109-99-9	2.00	< 2.00	
Toluene	108-88-3	2.00	< 2.00	
trans-1,2-Dichloroethene	156-60-5	2.00	< 2.00	
trans-1,3-Dichloropropene	10061-02-6	2.00	< 2.00	
trans-1,4-Dichloro-2-butene	110-57-6	2.00	< 2.00	
Trichloroethene	79-01-6	2.00	< 2.00	
Trichlorofluoromethane	75-69-4	2.00	< 2.00	
Vinyl acetate	108-05-4	10.0	< 10.0	
Vinyl chloride	75-01-4	1.00	< 1.00	
Xylenes, Total	1330-20-7	2.00	< 2.00	



**Lab Sample ID:** 1303453-003A  
**Client Sample ID:** W of Main Boom / 4920396

**Analyzed:** 3/20/2013 2000h

**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual		
<b>Surrogate</b>	<b>CAS</b>	<b>Result</b>	<b>Amount Spiked</b>	<b>% REC</b>	<b>Limits</b>	<b>Qual</b>
Surr: 1,2-Dichloroethane-d4	17060-07-0	52.1	50.00	104	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	51.4	50.00	103	80-128	
Surr: Dibromofluoromethane	1868-53-7	50.8	50.00	102	80-124	
Surr: Toluene-d8	2037-26-5	49.3	50.00	98.7	77-129	

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Laboratory Director

Jose Rocha  
QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-004A  
**Client Sample ID:** E of Main Boom / 4920395  
**Collection Date:** 3/20/2013 1145h  
**Received Date:** 3/20/2013 1534h

**Contact:** John Whitehead

## Analytical Results

VOAs Full List by GC/MS Method 8260C/5030C

**Analyzed:** 3/20/2013 2019h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.00	< 2.00	
1,1,1-Trichloroethane	71-55-6	2.00	< 2.00	
1,1,2,2-Tetrachloroethane	79-34-5	2.00	< 2.00	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.00	< 2.00	
1,1,2-Trichloroethane	79-00-5	2.00	< 2.00	
1,1-Dichloropropene	563-58-6	2.00	< 2.00	
1,1-Dichloroethane	75-34-3	2.00	< 2.00	
1,1-Dichloroethene	75-35-4	2.00	< 2.00	
1,2,3-Trichlorobenzene	87-61-6	2.00	< 2.00	
1,2,3-Trichloropropane	96-18-4	2.00	< 2.00	
1,2,3-Trimethylbenzene	526-73-8	2.00	<b>4.21</b>	
1,2,4-Trichlorobenzene	120-82-1	2.00	< 2.00	
1,2,4-Trimethylbenzene	95-63-6	2.00	<b>7.90</b>	
1,2-Dibromo-3-chloropropane	96-12-8	5.00	< 5.00	
1,2-Dibromoethane	106-93-4	2.00	< 2.00	
1,2-Dichlorobenzene	95-50-1	2.00	< 2.00	
1,2-Dichloroethane	107-06-2	2.00	< 2.00	
1,2-Dichloropropane	78-87-5	2.00	< 2.00	
1,3,5-Trimethylbenzene	108-67-8	2.00	< 2.00	
1,3-Dichlorobenzene	541-73-1	2.00	< 2.00	
1,3-Dichloropropane	142-28-9	2.00	< 2.00	
1,4-Dichlorobenzene	106-46-7	2.00	< 2.00	
1,4-Dioxane	123-91-1	50.0	< 50.0	
2,2-Dichloropropane	594-20-7	2.00	< 2.00	
2-Butanone	78-93-3	10.0	< 10.0	
2-Chloroethyl vinyl ether	110-75-8	5.00	< 5.00	
2-Chlorotoluene	95-49-8	2.00	< 2.00	
2-Hexanone	591-78-6	5.00	< 5.00	
2-Nitropropane	79-46-9	5.00	< 5.00	
4-Chlorotoluene	106-43-4	2.00	< 2.00	



**Lab Sample ID:** 1303453-004A  
**Client Sample ID:** E of Main Boom / 4920395

**Analyzed:** 3/20/2013 2019h

**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Isopropyltoluene	99-87-6	2.00	< 2.00	
4-Methyl-2-pentanone	108-10-1	5.00	< 5.00	
Acetone	67-64-1	10.0	< 10.0	
Acetonitrile	75-05-8	5.00	< 5.00	
Acrolein	107-02-8	5.00	< 5.00	
Acrylonitrile	107-13-1	10.0	< 10.0	
Allyl chloride	107-05-1	5.00	< 5.00	
Benzene	71-43-2	2.00	< 2.00	
Benzyl chloride	100-44-7	5.00	< 5.00	
Bis(2-chloroisopropyl) ether	108-60-1	5.00	< 5.00	
Bromobenzene	108-86-1	2.00	< 2.00	
Bromochloromethane	74-97-5	2.00	< 2.00	
Bromodichloromethane	75-27-4	2.00	< 2.00	
Bromoform	75-25-2	2.00	< 2.00	
Bromomethane	74-83-9	5.00	< 5.00	
Butyl acetate	123-86-4	10.0	< 10.0	
Carbon disulfide	75-15-0	2.00	< 2.00	
Carbon tetrachloride	56-23-5	2.00	< 2.00	
Chlorobenzene	108-90-7	2.00	< 2.00	
Chloroethane	75-00-3	2.00	< 2.00	
Chloroform	67-66-3	2.00	< 2.00	
Chloromethane	74-87-3	3.00	< 3.00	
Chloroprene	126-99-8	2.00	< 2.00	
cis-1,2-Dichloroethene	156-59-2	2.00	< 2.00	
cis-1,3-Dichloropropene	10061-01-5	2.00	< 2.00	
Cyclohexane	110-82-7	2.00	< 2.00	
Cyclohexanone	108-94-1	50.0	< 50.0	
Dibromochloromethane	124-48-1	2.00	< 2.00	
Dibromomethane	74-95-3	2.00	< 2.00	
Dichlorodifluoromethane	75-71-8	2.00	< 2.00	
Ethyl acetate	141-78-6	10.0	< 10.0	
Ethyl ether	60-29-7	10.0	< 10.0	
Ethyl methacrylate	97-63-2	2.00	< 2.00	
Ethylbenzene	100-41-4	2.00	< 2.00	
Hexachlorobutadiene	87-68-3	2.00	< 2.00	
Iodomethane	74-88-4	5.00	< 5.00	
Isobutyl alcohol	78-83-1	100	< 100	



**Lab Sample ID:** 1303453-004A  
**Client Sample ID:** E of Main Boom / 4920395

**Analyzed:** 3/20/2013 2019h

**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl acetate	108-21-4	10.0	< 10.0	
Isopropyl alcohol	67-63-0	40.0	< 40.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
m,p-Xylene	179601-23-1	2.00	<b>12.6</b>	
Methacrylonitrile	126-98-7	5.00	< 5.00	
Methyl Acetate	79-20-9	5.00	< 5.00	
Methyl methacrylate	80-62-6	5.00	< 5.00	
Methyl tert-butyl ether	1634-04-4	2.00	< 2.00	
Methylcyclohexane	108-87-2	2.00	< 2.00	
Methylene chloride	75-09-2	2.00	< 2.00	
n-Amyl acetate	628-63-7	10.0	< 10.0	
n-Butyl alcohol	71-36-3	100	< 100	
n-Butylbenzene	104-51-8	2.00	< 2.00	
n-Hexane	110-54-3	2.00	< 2.00	
n-Octane	111-65-9	2.00	< 2.00	
n-Propylbenzene	103-65-1	2.00	< 2.00	
Naphthalene	91-20-3	2.00	< 2.00	
o-Xylene	95-47-6	2.00	<b>5.09</b>	
Pentachloroethane	76-01-7	5.00	< 5.00	
Propionitrile	107-12-0	25.0	< 25.0	
Propyl acetate	109-60-4	10.0	< 10.0	
sec-Butylbenzene	135-98-8	2.00	< 2.00	
Styrene	100-42-5	2.00	< 2.00	
tert-Butyl alcohol	76-65-0	20.0	< 20.0	
tert-Butylbenzene	98-06-6	2.00	< 2.00	
Tetrachloroethene	127-18-4	2.00	< 2.00	
Tetrahydrofuran	109-99-9	2.00	< 2.00	
Toluene	108-88-3	2.00	<b>6.96</b>	
trans-1,2-Dichloroethene	156-60-5	2.00	< 2.00	
trans-1,3-Dichloropropene	10061-02-6	2.00	< 2.00	
trans-1,4-Dichloro-2-butene	110-57-6	2.00	< 2.00	
Trichloroethene	79-01-6	2.00	< 2.00	
Trichlorofluoromethane	75-69-4	2.00	< 2.00	
Vinyl acetate	108-05-4	10.0	< 10.0	
Vinyl chloride	75-01-4	1.00	< 1.00	
Xylenes, Total	1330-20-7	2.00	<b>17.7</b>	



**Lab Sample ID:** 1303453-004A

**Client Sample ID:** E of Main Boom / 4920395

**Analyzed:** 3/20/2013 2019h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual		
<b>Surrogate</b>	<b>CAS</b>	<b>Result</b>	<b>Amount Spiked</b>	<b>% REC</b>	<b>Limits</b>	<b>Qual</b>
Surr: 1,2-Dichloroethane-d4	17060-07-0	52.9	50.00	106	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	50.6	50.00	101	80-128	
Surr: Dibromofluoromethane	1868-53-7	50.5	50.00	101	80-124	
Surr: Toluene-d8	2037-26-5	49.4	50.00	98.8	77-129	

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-005A  
**Client Sample ID:** Between Weirs / 4920394  
**Collection Date:** 3/20/2013 1200h  
**Received Date:** 3/20/2013 1534h

**Contact:** John Whitehead

## Analytical Results

VOAs Full List by GC/MS Method 8260C/5030C

**Analyzed:** 3/20/2013 2038h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.00	< 2.00	
1,1,1-Trichloroethane	71-55-6	2.00	< 2.00	
1,1,2,2-Tetrachloroethane	79-34-5	2.00	< 2.00	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.00	< 2.00	
1,1,2-Trichloroethane	79-00-5	2.00	< 2.00	
1,1-Dichloropropene	563-58-6	2.00	< 2.00	
1,1-Dichloroethane	75-34-3	2.00	< 2.00	
1,1-Dichloroethene	75-35-4	2.00	< 2.00	
1,2,3-Trichlorobenzene	87-61-6	2.00	< 2.00	
1,2,3-Trichloropropane	96-18-4	2.00	< 2.00	
1,2,3-Trimethylbenzene	526-73-8	2.00	<b>36.4</b>	
1,2,4-Trichlorobenzene	120-82-1	2.00	< 2.00	
1,2,4-Trimethylbenzene	95-63-6	2.00	<b>78.5</b>	
1,2-Dibromo-3-chloropropane	96-12-8	5.00	< 5.00	
1,2-Dibromoethane	106-93-4	2.00	< 2.00	
1,2-Dichlorobenzene	95-50-1	2.00	< 2.00	
1,2-Dichloroethane	107-06-2	2.00	< 2.00	
1,2-Dichloropropane	78-87-5	2.00	< 2.00	
1,3,5-Trimethylbenzene	108-67-8	2.00	<b>2.34</b>	
1,3-Dichlorobenzene	541-73-1	2.00	< 2.00	
1,3-Dichloropropane	142-28-9	2.00	< 2.00	
1,4-Dichlorobenzene	106-46-7	2.00	< 2.00	
1,4-Dioxane	123-91-1	50.0	< 50.0	
2,2-Dichloropropane	594-20-7	2.00	< 2.00	
2-Butanone	78-93-3	10.0	< 10.0	
2-Chloroethyl vinyl ether	110-75-8	5.00	< 5.00	
2-Chlorotoluene	95-49-8	2.00	< 2.00	
2-Hexanone	591-78-6	5.00	< 5.00	
2-Nitropropane	79-46-9	5.00	< 5.00	
4-Chlorotoluene	106-43-4	2.00	< 2.00	



**Lab Sample ID:** 1303453-005A  
**Client Sample ID:** Between Weirs / 4920394

**Analyzed:** 3/20/2013 2038h

**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260C

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Kyle F. Gross  
 Laboratory Director  
  
 Jose Rocha  
 QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Isopropyltoluene	99-87-6	2.00	<b>3.80</b>	
4-Methyl-2-pentanone	108-10-1	5.00	< 5.00	
Acetone	67-64-1	10.0	< 10.0	
Acetonitrile	75-05-8	5.00	< 5.00	
Acrolein	107-02-8	5.00	< 5.00	
Acrylonitrile	107-13-1	10.0	< 10.0	
Allyl chloride	107-05-1	5.00	< 5.00	
Benzene	71-43-2	2.00	<b>6.90</b>	
Benzyl chloride	100-44-7	5.00	< 5.00	
Bis(2-chloroisopropyl) ether	108-60-1	5.00	< 5.00	
Bromobenzene	108-86-1	2.00	< 2.00	
Bromochloromethane	74-97-5	2.00	< 2.00	
Bromodichloromethane	75-27-4	2.00	< 2.00	
Bromoform	75-25-2	2.00	< 2.00	
Bromomethane	74-83-9	5.00	< 5.00	
Butyl acetate	123-86-4	10.0	< 10.0	
Carbon disulfide	75-15-0	2.00	< 2.00	
Carbon tetrachloride	56-23-5	2.00	< 2.00	
Chlorobenzene	108-90-7	2.00	< 2.00	
Chloroethane	75-00-3	2.00	< 2.00	
Chloroform	67-66-3	2.00	< 2.00	
Chloromethane	74-87-3	3.00	< 3.00	
Chloroprene	126-99-8	2.00	< 2.00	
cis-1,2-Dichloroethene	156-59-2	2.00	< 2.00	
cis-1,3-Dichloropropene	10061-01-5	2.00	< 2.00	
Cyclohexane	110-82-7	2.00	< 2.00	
Cyclohexanone	108-94-1	50.0	< 50.0	
Dibromochloromethane	124-48-1	2.00	< 2.00	
Dibromomethane	74-95-3	2.00	< 2.00	
Dichlorodifluoromethane	75-71-8	2.00	< 2.00	
Ethyl acetate	141-78-6	10.0	< 10.0	
Ethyl ether	60-29-7	10.0	< 10.0	
Ethyl methacrylate	97-63-2	2.00	< 2.00	
Ethylbenzene	100-41-4	2.00	<b>17.9</b>	
Hexachlorobutadiene	87-68-3	2.00	< 2.00	
Iodomethane	74-88-4	5.00	< 5.00	
Isobutyl alcohol	78-83-1	100	< 100	



**Lab Sample ID:** 1303453-005A  
**Client Sample ID:** Between Weirs / 4920394

**Analyzed:** 3/20/2013 2038h

**Units:** µg/L      **Dilution Factor:** 1      **Method:** SW8260C

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Kyle F. Gross  
 Laboratory Director

Jose Rocha  
 QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl acetate	108-21-4	10.0	< 10.0	
Isopropyl alcohol	67-63-0	40.0	< 40.0	
Isopropylbenzene	98-82-8	2.00	<b>2.55</b>	
m,p-Xylene	179601-23-1	2.00	<b>130</b>	
Methacrylonitrile	126-98-7	5.00	< 5.00	
Methyl Acetate	79-20-9	5.00	< 5.00	
Methyl methacrylate	80-62-6	5.00	< 5.00	
Methyl tert-butyl ether	1634-04-4	2.00	< 2.00	
Methylcyclohexane	108-87-2	2.00	< 2.00	
Methylene chloride	75-09-2	2.00	< 2.00	
n-Amyl acetate	628-63-7	10.0	< 10.0	
n-Butyl alcohol	71-36-3	100	< 100	
n-Butylbenzene	104-51-8	2.00	< 2.00	
n-Hexane	110-54-3	2.00	< 2.00	
n-Octane	111-65-9	2.00	< 2.00	
n-Propylbenzene	103-65-1	2.00	<b>4.45</b>	
Naphthalene	91-20-3	2.00	<b>6.21</b>	
o-Xylene	95-47-6	2.00	<b>53.8</b>	
Pentachloroethane	76-01-7	5.00	< 5.00	
Propionitrile	107-12-0	25.0	< 25.0	
Propyl acetate	109-60-4	10.0	< 10.0	
sec-Butylbenzene	135-98-8	2.00	< 2.00	
Styrene	100-42-5	2.00	< 2.00	
tert-Butyl alcohol	76-65-0	20.0	< 20.0	
tert-Butylbenzene	98-06-6	2.00	< 2.00	
Tetrachloroethene	127-18-4	2.00	< 2.00	
Tetrahydrofuran	109-99-9	2.00	< 2.00	
Toluene	108-88-3	2.00	<b>68.8</b>	
trans-1,2-Dichloroethene	156-60-5	2.00	< 2.00	
trans-1,3-Dichloropropene	10061-02-6	2.00	< 2.00	
trans-1,4-Dichloro-2-butene	110-57-6	2.00	< 2.00	
Trichloroethene	79-01-6	2.00	< 2.00	
Trichlorofluoromethane	75-69-4	2.00	< 2.00	
Vinyl acetate	108-05-4	10.0	< 10.0	
Vinyl chloride	75-01-4	1.00	< 1.00	
Xylenes, Total	1330-20-7	2.00	<b>184</b>	



**Lab Sample ID:** 1303453-005A  
**Client Sample ID:** Between Weirs / 4920394

**Analyzed:** 3/20/2013 2038h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual		
<b>Surrogate</b>	<b>CAS</b>	<b>Result</b>	<b>Amount Spiked</b>	<b>% REC</b>	<b>Limits</b>	<b>Qual</b>
Surr: 1,2-Dichloroethane-d4	17060-07-0	52.4	50.00	105	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	48.6	50.00	97.1	80-128	
Surr: Dibromofluoromethane	1868-53-7	50.3	50.00	101	80-124	
Surr: Toluene-d8	2037-26-5	49.2	50.00	98.5	77-129	

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



## ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-006A  
**Client Sample ID:** W. Bay South Marina / 4920495  
**Collection Date:** 3/20/2013 1100h  
**Received Date:** 3/20/2013 1534h

**Contact:** John Whitehead

### Analytical Results

VOAs Full List by GC/MS Method 8260C/5030C

**Analyzed:** 3/20/2013 2154h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.00	< 2.00	
1,1,1-Trichloroethane	71-55-6	2.00	< 2.00	
1,1,2,2-Tetrachloroethane	79-34-5	2.00	< 2.00	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.00	< 2.00	
1,1,2-Trichloroethane	79-00-5	2.00	< 2.00	
1,1-Dichloropropene	563-58-6	2.00	< 2.00	
1,1-Dichloroethane	75-34-3	2.00	< 2.00	
1,1-Dichloroethene	75-35-4	2.00	< 2.00	
1,2,3-Trichlorobenzene	87-61-6	2.00	< 2.00	
1,2,3-Trichloropropane	96-18-4	2.00	< 2.00	
1,2,3-Trimethylbenzene	526-73-8	2.00	< 2.00	
1,2,4-Trichlorobenzene	120-82-1	2.00	< 2.00	
1,2,4-Trimethylbenzene	95-63-6	2.00	< 2.00	
1,2-Dibromo-3-chloropropane	96-12-8	5.00	< 5.00	
1,2-Dibromoethane	106-93-4	2.00	< 2.00	
1,2-Dichlorobenzene	95-50-1	2.00	< 2.00	
1,2-Dichloroethane	107-06-2	2.00	< 2.00	
1,2-Dichloropropane	78-87-5	2.00	< 2.00	
1,3,5-Trimethylbenzene	108-67-8	2.00	< 2.00	
1,3-Dichlorobenzene	541-73-1	2.00	< 2.00	
1,3-Dichloropropane	142-28-9	2.00	< 2.00	
1,4-Dichlorobenzene	106-46-7	2.00	< 2.00	
1,4-Dioxane	123-91-1	50.0	< 50.0	
2,2-Dichloropropane	594-20-7	2.00	< 2.00	
2-Butanone	78-93-3	10.0	< 10.0	
2-Chloroethyl vinyl ether	110-75-8	5.00	< 5.00	
2-Chlorotoluene	95-49-8	2.00	< 2.00	
2-Hexanone	591-78-6	5.00	< 5.00	
2-Nitropropane	79-46-9	5.00	< 5.00	
4-Chlorotoluene	106-43-4	2.00	< 2.00	



**Lab Sample ID:** 1303453-006A  
**Client Sample ID:** W. Bay South Marina / 4920495

**Analyzed:** 3/20/2013 2154h

**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260C

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Kyle F. Gross  
 Laboratory Director  
  
 Jose Rocha  
 QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Isopropyltoluene	99-87-6	2.00	< 2.00	
4-Methyl-2-pentanone	108-10-1	5.00	< 5.00	
Acetone	67-64-1	10.0	< 10.0	
Acetonitrile	75-05-8	5.00	< 5.00	
Acrolein	107-02-8	5.00	< 5.00	
Acrylonitrile	107-13-1	10.0	< 10.0	
Allyl chloride	107-05-1	5.00	< 5.00	
Benzene	71-43-2	2.00	< 2.00	
Benzyl chloride	100-44-7	5.00	< 5.00	
Bis(2-chloroisopropyl) ether	108-60-1	5.00	< 5.00	
Bromobenzene	108-86-1	2.00	< 2.00	
Bromochloromethane	74-97-5	2.00	< 2.00	
Bromodichloromethane	75-27-4	2.00	< 2.00	
Bromoform	75-25-2	2.00	< 2.00	
Bromomethane	74-83-9	5.00	< 5.00	
Butyl acetate	123-86-4	10.0	< 10.0	
Carbon disulfide	75-15-0	2.00	< 2.00	
Carbon tetrachloride	56-23-5	2.00	< 2.00	
Chlorobenzene	108-90-7	2.00	< 2.00	
Chloroethane	75-00-3	2.00	< 2.00	
Chloroform	67-66-3	2.00	< 2.00	
Chloromethane	74-87-3	3.00	< 3.00	
Chloroprene	126-99-8	2.00	< 2.00	
cis-1,2-Dichloroethene	156-59-2	2.00	< 2.00	
cis-1,3-Dichloropropene	10061-01-5	2.00	< 2.00	
Cyclohexane	110-82-7	2.00	< 2.00	
Cyclohexanone	108-94-1	50.0	< 50.0	
Dibromochloromethane	124-48-1	2.00	< 2.00	
Dibromomethane	74-95-3	2.00	< 2.00	
Dichlorodifluoromethane	75-71-8	2.00	< 2.00	
Ethyl acetate	141-78-6	10.0	< 10.0	
Ethyl ether	60-29-7	10.0	< 10.0	
Ethyl methacrylate	97-63-2	2.00	< 2.00	
Ethylbenzene	100-41-4	2.00	< 2.00	
Hexachlorobutadiene	87-68-3	2.00	< 2.00	
Iodomethane	74-88-4	5.00	< 5.00	
Isobutyl alcohol	78-83-1	100	< 100	



**Lab Sample ID:** 1303453-006A

**Client Sample ID:** W. Bay South Marina / 4920495

**Analyzed:** 3/20/2013 2154h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl acetate	108-21-4	10.0	< 10.0	
Isopropyl alcohol	67-63-0	40.0	< 40.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
m,p-Xylene	179601-23-1	2.00	< 2.00	
Methacrylonitrile	126-98-7	5.00	< 5.00	
Methyl Acetate	79-20-9	5.00	< 5.00	
Methyl methacrylate	80-62-6	5.00	< 5.00	
Methyl tert-butyl ether	1634-04-4	2.00	< 2.00	
Methylcyclohexane	108-87-2	2.00	< 2.00	
Methylene chloride	75-09-2	2.00	< 2.00	
n-Amyl acetate	628-63-7	10.0	< 10.0	
n-Butyl alcohol	71-36-3	100	< 100	
n-Butylbenzene	104-51-8	2.00	< 2.00	
n-Hexane	110-54-3	2.00	< 2.00	
n-Octane	111-65-9	2.00	< 2.00	
n-Propylbenzene	103-65-1	2.00	< 2.00	
Naphthalene	91-20-3	2.00	< 2.00	
o-Xylene	95-47-6	2.00	< 2.00	
Pentachloroethane	76-01-7	5.00	< 5.00	
Propionitrile	107-12-0	25.0	< 25.0	
Propyl acetate	109-60-4	10.0	< 10.0	
sec-Butylbenzene	135-98-8	2.00	< 2.00	
Styrene	100-42-5	2.00	< 2.00	
tert-Butyl alcohol	76-65-0	20.0	< 20.0	
tert-Butylbenzene	98-06-6	2.00	< 2.00	
Tetrachloroethene	127-18-4	2.00	< 2.00	
Tetrahydrofuran	109-99-9	2.00	< 2.00	
Toluene	108-88-3	2.00	< 2.00	
trans-1,2-Dichloroethene	156-60-5	2.00	< 2.00	
trans-1,3-Dichloropropene	10061-02-6	2.00	< 2.00	
trans-1,4-Dichloro-2-butene	110-57-6	2.00	< 2.00	
Trichloroethene	79-01-6	2.00	< 2.00	
Trichlorofluoromethane	75-69-4	2.00	< 2.00	
Vinyl acetate	108-05-4	10.0	< 10.0	
Vinyl chloride	75-01-4	1.00	< 1.00	
Xylenes, Total	1330-20-7	2.00	< 2.00	



**Lab Sample ID:** 1303453-006A  
**Client Sample ID:** W. Bay South Marina / 4920495

**Analyzed:** 3/20/2013 2154h

**Units:** µg/L                      **Dilution Factor:** 1                      **Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual		
<b>Surrogate</b>	<b>CAS</b>	<b>Result</b>	<b>Amount Spiked</b>	<b>% REC</b>	<b>Limits</b>	<b>Qual</b>
Surr: 1,2-Dichloroethane-d4	17060-07-0	49.6	50.00	99.2	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	53.2	50.00	106	80-128	
Surr: Dibromofluoromethane	1868-53-7	49.8	50.00	99.6	80-124	
Surr: Toluene-d8	2037-26-5	50.7	50.00	101	77-129	

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer



# ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-007A  
**Client Sample ID:** Field Blank  
**Collection Date:** 3/20/2013 1000h  
**Received Date:** 3/20/2013 1534h

**Contact:** John Whitehead

## Analytical Results

VOAs Full List by GC/MS Method 8260C/5030C

**Analyzed:** 3/20/2013 2213h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.00	< 2.00	
1,1,1-Trichloroethane	71-55-6	2.00	< 2.00	
1,1,2,2-Tetrachloroethane	79-34-5	2.00	< 2.00	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.00	< 2.00	
1,1,2-Trichloroethane	79-00-5	2.00	< 2.00	
1,1-Dichloropropene	563-58-6	2.00	< 2.00	
1,1-Dichloroethane	75-34-3	2.00	< 2.00	
1,1-Dichloroethene	75-35-4	2.00	< 2.00	
1,2,3-Trichlorobenzene	87-61-6	2.00	< 2.00	
1,2,3-Trichloropropane	96-18-4	2.00	< 2.00	
1,2,3-Trimethylbenzene	526-73-8	2.00	< 2.00	
1,2,4-Trichlorobenzene	120-82-1	2.00	< 2.00	
1,2,4-Trimethylbenzene	95-63-6	2.00	< 2.00	
1,2-Dibromo-3-chloropropane	96-12-8	5.00	< 5.00	
1,2-Dibromoethane	106-93-4	2.00	< 2.00	
1,2-Dichlorobenzene	95-50-1	2.00	< 2.00	
1,2-Dichloroethane	107-06-2	2.00	< 2.00	
1,2-Dichloropropane	78-87-5	2.00	< 2.00	
1,3,5-Trimethylbenzene	108-67-8	2.00	< 2.00	
1,3-Dichlorobenzene	541-73-1	2.00	< 2.00	
1,3-Dichloropropane	142-28-9	2.00	< 2.00	
1,4-Dichlorobenzene	106-46-7	2.00	< 2.00	
1,4-Dioxane	123-91-1	50.0	< 50.0	
2,2-Dichloropropane	594-20-7	2.00	< 2.00	
2-Butanone	78-93-3	10.0	< 10.0	
2-Chloroethyl vinyl ether	110-75-8	5.00	< 5.00	
2-Chlorotoluene	95-49-8	2.00	< 2.00	
2-Hexanone	591-78-6	5.00	< 5.00	
2-Nitropropane	79-46-9	5.00	< 5.00	
4-Chlorotoluene	106-43-4	2.00	< 2.00	



**Lab Sample ID:** 1303453-007A

**Client Sample ID:** Field Blank

**Analyzed:** 3/20/2013 2213h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Isopropyltoluene	99-87-6	2.00	< 2.00	
4-Methyl-2-pentanone	108-10-1	5.00	< 5.00	
Acetone	67-64-1	10.0	< 10.0	
Acetonitrile	75-05-8	5.00	< 5.00	
Acrolein	107-02-8	5.00	< 5.00	
Acrylonitrile	107-13-1	10.0	< 10.0	
Allyl chloride	107-05-1	5.00	< 5.00	
Benzene	71-43-2	2.00	< 2.00	
Benzyl chloride	100-44-7	5.00	< 5.00	
Bis(2-chloroisopropyl) ether	108-60-1	5.00	< 5.00	
Bromobenzene	108-86-1	2.00	< 2.00	
Bromochloromethane	74-97-5	2.00	< 2.00	
Bromodichloromethane	75-27-4	2.00	< 2.00	
Bromoform	75-25-2	2.00	< 2.00	
Bromomethane	74-83-9	5.00	< 5.00	
Butyl acetate	123-86-4	10.0	< 10.0	
Carbon disulfide	75-15-0	2.00	< 2.00	
Carbon tetrachloride	56-23-5	2.00	< 2.00	
Chlorobenzene	108-90-7	2.00	< 2.00	
Chloroethane	75-00-3	2.00	< 2.00	
Chloroform	67-66-3	2.00	< 2.00	
Chloromethane	74-87-3	3.00	< 3.00	
Chloroprene	126-99-8	2.00	< 2.00	
cis-1,2-Dichloroethene	156-59-2	2.00	< 2.00	
cis-1,3-Dichloropropene	10061-01-5	2.00	< 2.00	
Cyclohexane	110-82-7	2.00	< 2.00	
Cyclohexanone	108-94-1	50.0	< 50.0	
Dibromochloromethane	124-48-1	2.00	< 2.00	
Dibromomethane	74-95-3	2.00	< 2.00	
Dichlorodifluoromethane	75-71-8	2.00	< 2.00	
Ethyl acetate	141-78-6	10.0	< 10.0	
Ethyl ether	60-29-7	10.0	< 10.0	
Ethyl methacrylate	97-63-2	2.00	< 2.00	
Ethylbenzene	100-41-4	2.00	< 2.00	
Hexachlorobutadiene	87-68-3	2.00	< 2.00	
Iodomethane	74-88-4	5.00	< 5.00	
Isobutyl alcohol	78-83-1	100	< 100	



**Lab Sample ID:** 1303453-007A

**Client Sample ID:** Field Blank

**Analyzed:** 3/20/2013 2213h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl acetate	108-21-4	10.0	< 10.0	
Isopropyl alcohol	67-63-0	40.0	< 40.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
m,p-Xylene	179601-23-1	2.00	< 2.00	
Methacrylonitrile	126-98-7	5.00	< 5.00	
Methyl Acetate	79-20-9	5.00	< 5.00	
Methyl methacrylate	80-62-6	5.00	< 5.00	
Methyl tert-butyl ether	1634-04-4	2.00	< 2.00	
Methylcyclohexane	108-87-2	2.00	< 2.00	
Methylene chloride	75-09-2	2.00	< 2.00	
n-Amyl acetate	628-63-7	10.0	< 10.0	
n-Butyl alcohol	71-36-3	100	< 100	
n-Butylbenzene	104-51-8	2.00	< 2.00	
n-Hexane	110-54-3	2.00	< 2.00	
n-Octane	111-65-9	2.00	< 2.00	
n-Propylbenzene	103-65-1	2.00	< 2.00	
Naphthalene	91-20-3	2.00	< 2.00	
o-Xylene	95-47-6	2.00	< 2.00	
Pentachloroethane	76-01-7	5.00	< 5.00	
Propionitrile	107-12-0	25.0	< 25.0	
Propyl acetate	109-60-4	10.0	< 10.0	
sec-Butylbenzene	135-98-8	2.00	< 2.00	
Styrene	100-42-5	2.00	< 2.00	
tert-Butyl alcohol	76-65-0	20.0	< 20.0	
tert-Butylbenzene	98-06-6	2.00	< 2.00	
Tetrachloroethene	127-18-4	2.00	< 2.00	
Tetrahydrofuran	109-99-9	2.00	< 2.00	
Toluene	108-88-3	2.00	< 2.00	
trans-1,2-Dichloroethene	156-60-5	2.00	< 2.00	
trans-1,3-Dichloropropene	10061-02-6	2.00	< 2.00	
trans-1,4-Dichloro-2-butene	110-57-6	2.00	< 2.00	
Trichloroethene	79-01-6	2.00	< 2.00	
Trichlorofluoromethane	75-69-4	2.00	< 2.00	
Vinyl acetate	108-05-4	10.0	< 10.0	
Vinyl chloride	75-01-4	1.00	< 1.00	
Xylenes, Total	1330-20-7	2.00	< 2.00	



**Lab Sample ID:** 1303453-007A

**Client Sample ID:** Field Blank

**Analyzed:** 3/20/2013 2213h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual		
<b>Surrogate</b>	<b>CAS</b>	<b>Result</b>	<b>Amount Spiked</b>	<b>% REC</b>	<b>Limits</b>	<b>Qual</b>
Surr: 1,2-Dichloroethane-d4	17060-07-0	51.3	50.00	103	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	52.7	50.00	105	80-128	
Surr: Dibromofluoromethane	1868-53-7	50.8	50.00	102	80-124	
Surr: Toluene-d8	2037-26-5	50.6	50.00	101	77-129	

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



## ORGANIC ANALYTICAL REPORT

**Client:** Utah Division of Water Quality  
**Project:** Willard Bay Chevron Incident  
**Lab Sample ID:** 1303453-008A  
**Client Sample ID:** Trip Blank  
**Collection Date:** 3/20/2013 700h  
**Received Date:** 3/20/2013 1534h

**Contact:** John Whitehead

### Analytical Results

VOAs Full List by GC/MS Method 8260C/5030C

**Analyzed:** 3/20/2013 2232h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.00	< 2.00	
1,1,1-Trichloroethane	71-55-6	2.00	< 2.00	
1,1,2,2-Tetrachloroethane	79-34-5	2.00	< 2.00	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.00	< 2.00	
1,1,2-Trichloroethane	79-00-5	2.00	< 2.00	
1,1-Dichloropropene	563-58-6	2.00	< 2.00	
1,1-Dichloroethane	75-34-3	2.00	< 2.00	
1,1-Dichloroethene	75-35-4	2.00	< 2.00	
1,2,3-Trichlorobenzene	87-61-6	2.00	< 2.00	
1,2,3-Trichloropropane	96-18-4	2.00	< 2.00	
1,2,3-Trimethylbenzene	526-73-8	2.00	< 2.00	
1,2,4-Trichlorobenzene	120-82-1	2.00	< 2.00	
1,2,4-Trimethylbenzene	95-63-6	2.00	< 2.00	
1,2-Dibromo-3-chloropropane	96-12-8	5.00	< 5.00	
1,2-Dibromoethane	106-93-4	2.00	< 2.00	
1,2-Dichlorobenzene	95-50-1	2.00	< 2.00	
1,2-Dichloroethane	107-06-2	2.00	< 2.00	
1,2-Dichloropropane	78-87-5	2.00	< 2.00	
1,3,5-Trimethylbenzene	108-67-8	2.00	< 2.00	
1,3-Dichlorobenzene	541-73-1	2.00	< 2.00	
1,3-Dichloropropane	142-28-9	2.00	< 2.00	
1,4-Dichlorobenzene	106-46-7	2.00	< 2.00	
1,4-Dioxane	123-91-1	50.0	< 50.0	
2,2-Dichloropropane	594-20-7	2.00	< 2.00	
2-Butanone	78-93-3	10.0	< 10.0	
2-Chloroethyl vinyl ether	110-75-8	5.00	< 5.00	
2-Chlorotoluene	95-49-8	2.00	< 2.00	
2-Hexanone	591-78-6	5.00	< 5.00	
2-Nitropropane	79-46-9	5.00	< 5.00	
4-Chlorotoluene	106-43-4	2.00	< 2.00	



**Lab Sample ID:** 1303453-008A

**Client Sample ID:** Trip Blank

**Analyzed:** 3/20/2013 2232h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Isopropyltoluene	99-87-6	2.00	< 2.00	
4-Methyl-2-pentanone	108-10-1	5.00	< 5.00	
Acetone	67-64-1	10.0	< 10.0	
Acetonitrile	75-05-8	5.00	< 5.00	
Acrolein	107-02-8	5.00	< 5.00	
Acrylonitrile	107-13-1	10.0	< 10.0	
Allyl chloride	107-05-1	5.00	< 5.00	
Benzene	71-43-2	2.00	< 2.00	
Benzyl chloride	100-44-7	5.00	< 5.00	
Bis(2-chloroisopropyl) ether	108-60-1	5.00	< 5.00	
Bromobenzene	108-86-1	2.00	< 2.00	
Bromochloromethane	74-97-5	2.00	< 2.00	
Bromodichloromethane	75-27-4	2.00	< 2.00	
Bromoform	75-25-2	2.00	< 2.00	
Bromomethane	74-83-9	5.00	< 5.00	
Butyl acetate	123-86-4	10.0	< 10.0	
Carbon disulfide	75-15-0	2.00	< 2.00	
Carbon tetrachloride	56-23-5	2.00	< 2.00	
Chlorobenzene	108-90-7	2.00	< 2.00	
Chloroethane	75-00-3	2.00	< 2.00	
Chloroform	67-66-3	2.00	< 2.00	
Chloromethane	74-87-3	3.00	< 3.00	
Chloroprene	126-99-8	2.00	< 2.00	
cis-1,2-Dichloroethene	156-59-2	2.00	< 2.00	
cis-1,3-Dichloropropene	10061-01-5	2.00	< 2.00	
Cyclohexane	110-82-7	2.00	< 2.00	
Cyclohexanone	108-94-1	50.0	< 50.0	
Dibromochloromethane	124-48-1	2.00	< 2.00	
Dibromomethane	74-95-3	2.00	< 2.00	
Dichlorodifluoromethane	75-71-8	2.00	< 2.00	
Ethyl acetate	141-78-6	10.0	< 10.0	
Ethyl ether	60-29-7	10.0	< 10.0	
Ethyl methacrylate	97-63-2	2.00	< 2.00	
Ethylbenzene	100-41-4	2.00	< 2.00	
Hexachlorobutadiene	87-68-3	2.00	< 2.00	
Iodomethane	74-88-4	5.00	< 5.00	
Isobutyl alcohol	78-83-1	100	< 100	



**Lab Sample ID:** 1303453-008A

**Client Sample ID:** Trip Blank

**Analyzed:** 3/20/2013 2232h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

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Laboratory Director

Jose Rocha  
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl acetate	108-21-4	10.0	< 10.0	
Isopropyl alcohol	67-63-0	40.0	< 40.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
m,p-Xylene	179601-23-1	2.00	< 2.00	
Methacrylonitrile	126-98-7	5.00	< 5.00	
Methyl Acetate	79-20-9	5.00	< 5.00	
Methyl methacrylate	80-62-6	5.00	< 5.00	
Methyl tert-butyl ether	1634-04-4	2.00	< 2.00	
Methylcyclohexane	108-87-2	2.00	< 2.00	
Methylene chloride	75-09-2	2.00	< 2.00	
n-Amyl acetate	628-63-7	10.0	< 10.0	
n-Butyl alcohol	71-36-3	100	< 100	
n-Butylbenzene	104-51-8	2.00	< 2.00	
n-Hexane	110-54-3	2.00	< 2.00	
n-Octane	111-65-9	2.00	< 2.00	
n-Propylbenzene	103-65-1	2.00	< 2.00	
Naphthalene	91-20-3	2.00	< 2.00	
o-Xylene	95-47-6	2.00	< 2.00	
Pentachloroethane	76-01-7	5.00	< 5.00	
Propionitrile	107-12-0	25.0	< 25.0	
Propyl acetate	109-60-4	10.0	< 10.0	
sec-Butylbenzene	135-98-8	2.00	< 2.00	
Styrene	100-42-5	2.00	< 2.00	
tert-Butyl alcohol	76-65-0	20.0	< 20.0	
tert-Butylbenzene	98-06-6	2.00	< 2.00	
Tetrachloroethene	127-18-4	2.00	< 2.00	
Tetrahydrofuran	109-99-9	2.00	< 2.00	
Toluene	108-88-3	2.00	< 2.00	
trans-1,2-Dichloroethene	156-60-5	2.00	< 2.00	
trans-1,3-Dichloropropene	10061-02-6	2.00	< 2.00	
trans-1,4-Dichloro-2-butene	110-57-6	2.00	< 2.00	
Trichloroethene	79-01-6	2.00	< 2.00	
Trichlorofluoromethane	75-69-4	2.00	< 2.00	
Vinyl acetate	108-05-4	10.0	< 10.0	
Vinyl chloride	75-01-4	1.00	< 1.00	
Xylenes, Total	1330-20-7	2.00	< 2.00	



**Lab Sample ID:** 1303453-008A

**Client Sample ID:** Trip Blank

**Analyzed:** 3/20/2013 2232h

**Units:** µg/L

**Dilution Factor:** 1

**Method:** SW8260C

Compound	CAS Number	Reporting Limit	Analytical Result	Qual		
<b>Surrogate</b>	<b>CAS</b>	<b>Result</b>	<b>Amount Spiked</b>	<b>% REC</b>	<b>Limits</b>	<b>Qual</b>
Surr: 1,2-Dichloroethane-d4	17060-07-0	52.6	50.00	105	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	53.5	50.00	107	80-128	
Surr: Dibromofluoromethane	1868-53-7	51.5	50.00	103	80-124	
Surr: Toluene-d8	2037-26-5	51.0	50.00	102	77-129	

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## QC SUMMARY REPORT

**Client:** Utah Division of Water Quality  
**Lab Set ID:** 1303453  
**Project:** Willard Bay Chevron Incident

**Contact:** John Whitehead  
**Dept:** WC  
**QC Type:** LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS1-R51738	Chemical Oxygen Demand	mg/L	HACH 8000	329	300.0	0	110	85-115				3/21/2013 1000h
LCS2-R51738	Chemical Oxygen Demand	mg/L	HACH 8000	108	100.0	0	108	85-115				3/21/2013 1000h
LCS3-R51738	Chemical Oxygen Demand	mg/L	HACH 8000	11.0	10.00	0	110	85-115				3/21/2013 1000h
LCS-R51738	Chemical Oxygen Demand	mg/L	HACH 8000	1,030	1,000	0	103	85-115				3/21/2013 1000h



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## QC SUMMARY REPORT

**Client:** Utah Division of Water Quality  
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**Project:** Willard Bay Chevron Incident

**Contact:** John Whitehead  
**Dept:** WC  
**QC Type:** MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-R51738	Chemical Oxygen Demand	mg/L	HACH 8000	< 10.0				-				3/21/2013 1000h



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**Dept:** WC  
**QC Type:** MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1303453-005CMS	Chemical Oxygen Demand	mg/L	HACH 8000	87.0	50.00	26.00	122	85-115			<sup>1</sup>	3/21/2013 1000h

<sup>1</sup> - Matrix spike recovery indicates matrix interference. The method is in control as indicated by the LCS.



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**QC Type:** MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1303453-005CMSD	Chemical Oxygen Demand	mg/L	HACH 8000	81.0	50.00	26.00	110	85-115	7.14	10		3/21/2013 1000h



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**Contact:** John Whitehead  
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**QC Type:** LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-24250	Oil Range Organics (ORO) (C28-C36)	mg/L	SW8015D	0.816	0.9000	0	90.7	10-200				3/22/2013 1016h
LCS-24250	Surr: C27	%REC	SW8015D	0.193	0.2000		96.7	10-200				3/22/2013 1016h
LCS-24272	Diesel Range Organics (DRO) (C10-C28)	mg/L	SW8015D	1.24	2.000	0	62.1	48-118				3/21/2013 2110h
LCS-24272	Surr: 4-Bromofluorobenzene	%REC	SW8015D	0.200	0.4000		50.0	18-95				3/21/2013 2110h



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**QC Type:** MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-24250	Oil Range Organics (ORO) (C28-C36)	mg/L	SW8015D	< 0.500				-				3/22/2013 952h
MB-24250	Surr: C27	%REC	SW8015D	0.193	0.2000		96.4	10-200				3/22/2013 952h
MB-24272	Diesel Range Organics (DRO) (C10-C28)	mg/L	SW8015D	< 0.500				-				3/21/2013 2051h
MB-24272	Surr: 4-Bromofluorobenzene	%REC	SW8015D	0.171	0.4000		42.8	18-95				3/21/2013 2051h



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**QC Type:** MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1303453-002BMS	Oil Range Organics (ORO) (C28-C36)	mg/L	SW8015D	0.714	0.9000	0	79.3	10-200				3/22/2013 1215h
1303453-002BMS	Surr: C27	%REC	SW8015D	0.188	0.2000		93.9	10-200				3/22/2013 1215h
1303453-004BMS	Diesel Range Organics (DRO) (C10-C28)	mg/L	SW8015D	1.88	2.000	0	94.2	60-161				3/21/2013 2227h
1303453-004BMS	Surr: 4-Bromofluorobenzene	%REC	SW8015D	0.236	0.4000		59.0	10-190				3/21/2013 2227h



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**Contact:** John Whitehead  
**Dept:** GC  
**QC Type:** MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1303453-002BMSD	Oil Range Organics (ORO) (C28-C36)	mg/L	SW8015D	0.624	0.9000	0	69.3	10-200	13.5	30		3/22/2013 1238h
1303453-002BMSD	Surr: C27	%REC	SW8015D	0.163	0.2000		81.6	10-200				3/22/2013 1238h
1303453-004BMSD	Diesel Range Organics (DRO) (C10-C28)	mg/L	SW8015D	1.96	2.000	0	97.9	60-161	3.83	25		3/21/2013 2247h
1303453-004BMSD	Surr: 4-Bromofluorobenzene	%REC	SW8015D	0.249	0.4000		62.1	10-190				3/21/2013 2247h



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## QC SUMMARY REPORT

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**Contact:** John Whitehead  
**Dept:** MSSV  
**QC Type:** LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-24252	1,2,4-Trichlorobenzene	µg/L	SW8270D	29.9	80.00	0	37.4	10-104				3/22/2013 1512h
LCS-24252	1,4-Dichlorobenzene	µg/L	SW8270D	20.1	80.00	0	25.2	10-118				3/22/2013 1512h
LCS-24252	2,4,6-Trichlorophenol	µg/L	SW8270D	69.1	80.00	0	86.3	17-119				3/22/2013 1512h
LCS-24252	2,4-Dimethylphenol	µg/L	SW8270D	61.3	80.00	0	76.6	10-131				3/22/2013 1512h
LCS-24252	2,4-Dinitrotoluene	µg/L	SW8270D	85.9	80.00	0	107	42-219				3/22/2013 1512h
LCS-24252	2-Chloronaphthalene	µg/L	SW8270D	57.4	80.00	0	71.8	23-126				3/22/2013 1512h
LCS-24252	2-Chlorophenol	µg/L	SW8270D	51.0	80.00	0	63.7	15-128				3/22/2013 1512h
LCS-24252	4,6-Dinitro-2-methylphenol	µg/L	SW8270D	77.8	80.00	0	97.3	30-198				3/22/2013 1512h
LCS-24252	4-Chloro-3-methylphenol	µg/L	SW8270D	68.2	80.00	0	85.3	29-148				3/22/2013 1512h
LCS-24252	4-Nitrophenol	µg/L	SW8270D	33.8	80.00	0	42.2	10-157				3/22/2013 1512h
LCS-24252	Acenaphthene	µg/L	SW8270D	64.7	80.00	0	80.9	20-116				3/22/2013 1512h
LCS-24252	Benzo(a)pyrene	µg/L	SW8270D	91.2	80.00	0	114	10-221				3/22/2013 1512h
LCS-24252	N-Nitrosodi-n-propylamine	µg/L	SW8270D	54.5	80.00	0	68.2	20-148				3/22/2013 1512h
LCS-24252	Pentachlorophenol	µg/L	SW8270D	73.8	80.00	0	92.2	21-153				3/22/2013 1512h
LCS-24252	Phenol	µg/L	SW8270D	29.6	80.00	0	37.0	10-131				3/22/2013 1512h
LCS-24252	Pyrene	µg/L	SW8270D	81.3	80.00	0	102	37-150				3/22/2013 1512h
LCS-24252	Surr: 2,4,6-Tribromophenol	%REC	SW8270D	77.8	80.00		97.3	10-165				3/22/2013 1512h
LCS-24252	Surr: 2-Fluorobiphenyl	%REC	SW8270D	29.4	40.00		73.5	10-118				3/22/2013 1512h
LCS-24252	Surr: 2-Fluorophenol	%REC	SW8270D	33.2	80.00		41.5	10-121				3/22/2013 1512h
LCS-24252	Surr: Nitrobenzene-d5	%REC	SW8270D	23.8	40.00		59.6	10-127				3/22/2013 1512h
LCS-24252	Surr: Phenol-d6	%REC	SW8270D	29.7	80.00		37.1	10-124				3/22/2013 1512h
LCS-24252	Surr: Terphenyl-d14	%REC	SW8270D	42.2	40.00		105	51-221				3/22/2013 1512h
LCS-24252	Acenaphthene	µg/L	SW8270D	62.6	80.00	0	78.3	23-159				3/21/2013 2103h
LCS-24252	Benzo(a)pyrene	µg/L	SW8270D	89.4	80.00	0	112	26-223				3/21/2013 2103h
LCS-24252	Pentachlorophenol	µg/L	SW8270D	136	80.00	0	171	10-249				3/21/2013 2103h
LCS-24252	Pyrene	µg/L	SW8270D	81.6	80.00	0	102	28-204				3/21/2013 2103h



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## QC SUMMARY REPORT

**Client:** Utah Division of Water Quality  
**Lab Set ID:** 1303453  
**Project:** Willard Bay Chevron Incident

**Contact:** John Whitehead  
**Dept:** MSSV  
**QC Type:** MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-24252	1,1'-Biphenyl	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	1,2,4,5-Tetrachlorobenzene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	1,2,4-Trichlorobenzene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	1,2-Dichlorobenzene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	1,3,5-Trinitrobenzene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	1,3-Dichlorobenzene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	1,3-Dinitrobenzene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	1,4-Dichlorobenzene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	1,4-Dinitrobenzene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	1,4-Naphthoquinone	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	1,4-Phenylenediamine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	1-Chloronaphthalene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	1-Methylnaphthalene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	1-Naphthylamine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	2,3,4,6-Tetrachlorophenol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	2,4,5-Trichlorophenol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	2,4,6-Trichlorophenol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	2,4-Dichlorophenol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	2,4-Dimethylphenol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	2,4-Dinitrophenol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	2,4-Dinitrotoluene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	2,6-Dichlorophenol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	2,6-Dinitrotoluene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	2-Acetylaminofluorene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	2-Chloronaphthalene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	2-Chlorophenol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	2-Methylnaphthalene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h

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Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-24252	2-Methylphenol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	2-Naphthylamine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	2-Nitroaniline	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	2-Nitrophenol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	2-Picoline	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	3&4-Methylphenol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	3,3'-Dichlorobenzidine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	3,3'-Dimethylbenzidine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	3-Methylcholanthrene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	3-Nitroaniline	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	4,6-Dinitro-2-methylphenol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	4-Aminobiphenyl	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	4-Bromophenyl phenyl ether	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	4-Chloro-3-methylphenol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	4-Chloroaniline	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	4-Chlorophenyl phenyl ether	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	4-Nitroaniline	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	4-Nitrophenol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	5-Nitro-o-toluidine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	7,12-Dimethylbenz(a)anthracene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	a,a-Dimethylphenethylamine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Acenaphthene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Acenaphthylene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Acetophenone	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	alpha-Terpineol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Aniline	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Anthracene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h

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**QC Type:** MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-24252	Aramite	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Atrazine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Azobenzene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Benz(a)anthracene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Benzaldehyde	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Benzidine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Benzo(a)pyrene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Benzo(b)fluoranthene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Benzo(g,h,i)perylene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Benzo(k)fluoranthene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Benzoic acid	µg/L	SW8270D	< 20.0				-				3/22/2013 1446h
MB-24252	Benzyl alcohol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Bis(2-chloroethoxy)methane	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Bis(2-chloroethyl) ether	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Bis(2-chloroisopropyl) ether	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Bis(2-ethylhexyl) phthalate	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	bis(2-ethylhexyl)adipate	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Butyl benzyl phthalate	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Caprolactam	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Carbazole	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Chlorobenzilate	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Chrysene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Diallate (cis or trans)	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Dibenz(a,h)anthracene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Dibenzofuran	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Diethyl phthalate	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Dimethoate	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Utah Division of Water Quality  
**Lab Set ID:** 1303453  
**Project:** Willard Bay Chevron Incident

**Contact:** John Whitehead  
**Dept:** MSSV  
**QC Type:** MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-24252	Dimethyl phthalate	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Dimethylaminoazobenzene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Di-n-butyl phthalate	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Di-n-octyl phthalate	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Dinoseb	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Diphenylamine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Disulfoton	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Ethyl methanesulfonate	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Famphur	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Fluoranthene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Fluorene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Hexachlorobenzene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Hexachlorobutadiene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Hexachlorocyclopentadiene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Hexachloroethane	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Hexachlorophene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Hexachloropropene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Indene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Indeno(1,2,3-cd)pyrene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Isodrin	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Isophorone	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Isosafrole	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Kepone	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Methapyrilene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Methyl methanesulfonate	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Naphthalene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	n-Decane	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h

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Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Utah Division of Water Quality  
**Lab Set ID:** 1303453  
**Project:** Willard Bay Chevron Incident

**Contact:** John Whitehead  
**Dept:** MSSV  
**QC Type:** MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-24252	Nitrobenzene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Nitroquinoline-1-oxide	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	N-Nitrosodiethylamine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	N-Nitrosodimethylamine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	N-Nitrosodi-n-butylamine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	N-Nitrosodiphenylamine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	N-Nitrosodi-n-propylamine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	N-Nitrosomethylethylamine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	N-Nitrosomorpholine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	N-Nitrosopiperidine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	N-Nitrosopyrrolidine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	n-Octadecane	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	O,O,O-Triethyl phosphorothioate	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	o-Toluidine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Parathion	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Methyl parathion	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Pentachlorobenzene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Pentachloronitrobenzene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Pentachlorophenol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Phenacetin	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Phenanthrene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Phenol	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Phorate	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Pronamide	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Pyrene	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Pyridine	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Quinoline	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h

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Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Utah Division of Water Quality  
**Lab Set ID:** 1303453  
**Project:** Willard Bay Chevron Incident

**Contact:** John Whitehead  
**Dept:** MSSV  
**QC Type:** MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-24252	Safrole	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Tetraethyl dithiopyrophosphate	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Thionazin	µg/L	SW8270D	< 10.0				-				3/22/2013 1446h
MB-24252	Surr: 2,4,6-Tribromophenol	%REC	SW8270D	53.3	80.00		66.6	10-165				3/22/2013 1446h
MB-24252	Surr: 2-Fluorobiphenyl	%REC	SW8270D	16.0	40.00		40.1	10-118				3/22/2013 1446h
MB-24252	Surr: 2-Fluorophenol	%REC	SW8270D	26.9	80.00		33.6	10-121				3/22/2013 1446h
MB-24252	Surr: Nitrobenzene-d5	%REC	SW8270D	14.5	40.00		36.3	10-127				3/22/2013 1446h
MB-24252	Surr: Phenol-d6	%REC	SW8270D	20.3	80.00		25.4	10-124				3/22/2013 1446h
MB-24252	Surr: Terphenyl-d14	%REC	SW8270D	45.9	40.00		115	51-221				3/22/2013 1446h
MB-24252	1-Methylnaphthalene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h
MB-24252	2-Methylnaphthalene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h
MB-24252	Acenaphthene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h
MB-24252	Acenaphthylene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h
MB-24252	Anthracene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h
MB-24252	Benz(a)anthracene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h
MB-24252	Benzo(a)pyrene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h
MB-24252	Benzo(b)fluoranthene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h
MB-24252	Benzo(g,h,i)perylene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h
MB-24252	Benzo(k)fluoranthene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h
MB-24252	Chrysene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h
MB-24252	Dibenz(a,h)anthracene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h
MB-24252	Fluoranthene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h
MB-24252	Fluorene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h
MB-24252	Hexachlorobenzene	µg/L	SW8270D	< 1.00				-				3/21/2013 2036h
MB-24252	Indene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h
MB-24252	Indeno(1,2,3-cd)pyrene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h
MB-24252	Naphthalene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h

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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Utah Division of Water Quality  
**Lab Set ID:** 1303453  
**Project:** Willard Bay Chevron Incident

**Contact:** John Whitehead  
**Dept:** MSSV  
**QC Type:** MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-24252	Pentachlorophenol	µg/L	SW8270D	< 1.00				-				3/21/2013 2036h
MB-24252	Phenanthrene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h
MB-24252	Pyrene	µg/L	SW8270D	< 0.100				-				3/21/2013 2036h



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Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Utah Division of Water Quality  
**Lab Set ID:** 1303453  
**Project:** Willard Bay Chevron Incident

**Contact:** John Whitehead  
**Dept:** MSSV  
**QC Type:** MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1303453-003BMS	1,2,4-Trichlorobenzene	µg/L	SW8270D	30.1	80.00	0	37.6	20-107				3/22/2013 1632h
1303453-003BMS	1,4-Dichlorobenzene	µg/L	SW8270D	20.0	80.00	0	25.0	11-90				3/22/2013 1632h
1303453-003BMS	2,4,6-Trichlorophenol	µg/L	SW8270D	63.6	80.00	0	79.5	10-223				3/22/2013 1632h
1303453-003BMS	2,4-Dimethylphenol	µg/L	SW8270D	56.4	80.00	0	70.6	10-176				3/22/2013 1632h
1303453-003BMS	2,4-Dinitrotoluene	µg/L	SW8270D	83.3	80.00	0	104	21-191				3/22/2013 1632h
1303453-003BMS	2-Chloronaphthalene	µg/L	SW8270D	54.8	80.00	0	68.4	12-132				3/22/2013 1632h
1303453-003BMS	2-Chlorophenol	µg/L	SW8270D	47.5	80.00	0	59.3	20-107				3/22/2013 1632h
1303453-003BMS	4,6-Dinitro-2-methylphenol	µg/L	SW8270D	78.1	80.00	0	97.7	20-250				3/22/2013 1632h
1303453-003BMS	4-Chloro-3-methylphenol	µg/L	SW8270D	66.0	80.00	0	82.6	10-136				3/22/2013 1632h
1303453-003BMS	4-Nitrophenol	µg/L	SW8270D	33.2	80.00	0	41.5	10-135				3/22/2013 1632h
1303453-003BMS	Acenaphthene	µg/L	SW8270D	59.0	80.00	0	73.8	21-113				3/22/2013 1632h
1303453-003BMS	Benzo(a)pyrene	µg/L	SW8270D	87.2	80.00	0	109	15-169				3/22/2013 1632h
1303453-003BMS	N-Nitrosodi-n-propylamine	µg/L	SW8270D	50.1	80.00	0	62.6	10-133				3/22/2013 1632h
1303453-003BMS	Pentachlorophenol	µg/L	SW8270D	23.2	80.00	0	29.0	10-131				3/22/2013 1632h
1303453-003BMS	Phenol	µg/L	SW8270D	28.3	80.00	0	35.4	10-71				3/22/2013 1632h
1303453-003BMS	Pyrene	µg/L	SW8270D	78.0	80.00	0	97.5	23-150				3/22/2013 1632h
1303453-003BMS	Surr: 2,4,6-Tribromophenol	%REC	SW8270D	68.5	80.00		85.6	14-159				3/22/2013 1632h
1303453-003BMS	Surr: 2-Fluorobiphenyl	%REC	SW8270D	26.5	40.00		66.2	10-124				3/22/2013 1632h
1303453-003BMS	Surr: 2-Fluorophenol	%REC	SW8270D	30.5	80.00		38.2	10-106				3/22/2013 1632h
1303453-003BMS	Surr: Nitrobenzene-d5	%REC	SW8270D	20.8	40.00		52.0	10-180				3/22/2013 1632h
1303453-003BMS	Surr: Phenol-d6	%REC	SW8270D	27.4	80.00		34.3	10-122				3/22/2013 1632h
1303453-003BMS	Surr: Terphenyl-d14	%REC	SW8270D	39.0	40.00		97.4	10-199				3/22/2013 1632h
1303453-003BMS	Acenaphthene	µg/L	SW8270D	53.4	80.00	0	66.8	21-113				3/21/2013 2222h
1303453-003BMS	Benzo(a)pyrene	µg/L	SW8270D	78.4	80.00	0	98.0	15-169				3/21/2013 2222h
1303453-003BMS	Pentachlorophenol	µg/L	SW8270D	76.4	80.00	0	95.5	10-131				3/21/2013 2222h
1303453-003BMS	Pyrene	µg/L	SW8270D	72.8	80.00	0	91.0	23-150				3/21/2013 2222h



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Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Utah Division of Water Quality  
**Lab Set ID:** 1303453  
**Project:** Willard Bay Chevron Incident

**Contact:** John Whitehead  
**Dept:** MSSV  
**QC Type:** MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1303453-003BMSD	1,2,4-Trichlorobenzene	µg/L	SW8270D	29.0	80.00	0	36.2	20-107	3.86	25		3/22/2013 1658h
1303453-003BMSD	1,4-Dichlorobenzene	µg/L	SW8270D	19.8	80.00	0	24.7	11-90	1.11	25		3/22/2013 1658h
1303453-003BMSD	2,4,6-Trichlorophenol	µg/L	SW8270D	61.7	80.00	0	77.1	10-223	3.08	25		3/22/2013 1658h
1303453-003BMSD	2,4-Dimethylphenol	µg/L	SW8270D	55.6	80.00	0	69.4	10-176	1.57	25		3/22/2013 1658h
1303453-003BMSD	2,4-Dinitrotoluene	µg/L	SW8270D	74.9	80.00	0	93.6	21-191	10.6	25		3/22/2013 1658h
1303453-003BMSD	2-Chloronaphthalene	µg/L	SW8270D	50.4	80.00	0	63.0	12-132	8.37	25		3/22/2013 1658h
1303453-003BMSD	2-Chlorophenol	µg/L	SW8270D	46.9	80.00	0	58.7	20-107	1.12	25		3/22/2013 1658h
1303453-003BMSD	4,6-Dinitro-2-methylphenol	µg/L	SW8270D	79.3	80.00	0	99.1	20-250	1.44	25		3/22/2013 1658h
1303453-003BMSD	4-Chloro-3-methylphenol	µg/L	SW8270D	64.0	80.00	0	80.0	10-136	3.11	25		3/22/2013 1658h
1303453-003BMSD	4-Nitrophenol	µg/L	SW8270D	32.8	80.00	0	40.9	10-135	1.42	25		3/22/2013 1658h
1303453-003BMSD	Acenaphthene	µg/L	SW8270D	55.9	80.00	0	69.8	21-113	5.5	25		3/22/2013 1658h
1303453-003BMSD	Benzo(a)pyrene	µg/L	SW8270D	81.3	80.00	0	102	15-169	6.92	25		3/22/2013 1658h
1303453-003BMSD	N-Nitrosodi-n-propylamine	µg/L	SW8270D	48.7	80.00	0	60.9	10-133	2.71	25		3/22/2013 1658h
1303453-003BMSD	Pentachlorophenol	µg/L	SW8270D	24.9	80.00	0	31.1	10-131	7.19	25		3/22/2013 1658h
1303453-003BMSD	Phenol	µg/L	SW8270D	27.3	80.00	0	34.2	10-71	3.49	25		3/22/2013 1658h
1303453-003BMSD	Pyrene	µg/L	SW8270D	75.5	80.00	0	94.4	23-150	3.27	25		3/22/2013 1658h
1303453-003BMSD	Surr: 2,4,6-Tribromophenol	%REC	SW8270D	68.2	80.00		85.3	14-159				3/22/2013 1658h
1303453-003BMSD	Surr: 2-Fluorobiphenyl	%REC	SW8270D	24.9	40.00		62.2	10-124				3/22/2013 1658h
1303453-003BMSD	Surr: 2-Fluorophenol	%REC	SW8270D	29.9	80.00		37.4	10-106				3/22/2013 1658h
1303453-003BMSD	Surr: Nitrobenzene-d5	%REC	SW8270D	20.4	40.00		51.0	10-180				3/22/2013 1658h
1303453-003BMSD	Surr: Phenol-d6	%REC	SW8270D	27.0	80.00		33.8	10-122				3/22/2013 1658h
1303453-003BMSD	Surr: Terphenyl-d14	%REC	SW8270D	37.5	40.00		93.8	10-199				3/22/2013 1658h
1303453-003BMSD	Acenaphthene	µg/L	SW8270D	52.4	80.00	0	65.5	21-113	1.89	25		3/21/2013 2249h
1303453-003BMSD	Benzo(a)pyrene	µg/L	SW8270D	76.4	80.00	0	95.5	15-169	2.58	25		3/21/2013 2249h
1303453-003BMSD	Pentachlorophenol	µg/L	SW8270D	77.8	80.00	0	97.3	10-131	1.82	25		3/21/2013 2249h
1303453-003BMSD	Pyrene	µg/L	SW8270D	72.2	80.00	0	90.3	23-150	0.828	25		3/21/2013 2249h



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Utah Division of Water Quality  
**Lab Set ID:** 1303453  
**Project:** Willard Bay Chevron Incident

**Contact:** John Whitehead  
**Dept:** MSVOA  
**QC Type:** LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS VOC 032013B	1,1,1-Trichloroethane	µg/L	SW8260C	26.0	20.00	0	130	59-156				3/20/2013 1844h
LCS VOC 032013B	1,1-Dichloroethene	µg/L	SW8260C	27.8	20.00	0	139	46-171				3/20/2013 1844h
LCS VOC 032013B	1,2-Dichlorobenzene	µg/L	SW8260C	22.4	20.00	0	112	67-135				3/20/2013 1844h
LCS VOC 032013B	1,2-Dichloroethane	µg/L	SW8260C	22.0	20.00	0	110	60-137				3/20/2013 1844h
LCS VOC 032013B	1,2-Dichloropropane	µg/L	SW8260C	21.8	20.00	0	109	59-135				3/20/2013 1844h
LCS VOC 032013B	Benzene	µg/L	SW8260C	23.7	20.00	0	118	62-127				3/20/2013 1844h
LCS VOC 032013B	Chlorobenzene	µg/L	SW8260C	23.3	20.00	0	117	63-140				3/20/2013 1844h
LCS VOC 032013B	Chloroform	µg/L	SW8260C	23.2	20.00	0	116	67-132				3/20/2013 1844h
LCS VOC 032013B	Ethylbenzene	µg/L	SW8260C	23.6	20.00	0	118	55-133				3/20/2013 1844h
LCS VOC 032013B	Isopropylbenzene	µg/L	SW8260C	24.3	20.00	0	122	60-147				3/20/2013 1844h
LCS VOC 032013B	Methyl tert-butyl ether	µg/L	SW8260C	21.7	20.00	0	108	37-189				3/20/2013 1844h
LCS VOC 032013B	Methylene chloride	µg/L	SW8260C	23.7	20.00	0	119	32-185				3/20/2013 1844h
LCS VOC 032013B	Naphthalene	µg/L	SW8260C	20.0	20.00	0	99.8	28-136				3/20/2013 1844h
LCS VOC 032013B	Tetrahydrofuran	µg/L	SW8260C	16.5	20.00	0	82.6	43-146				3/20/2013 1844h
LCS VOC 032013B	Toluene	µg/L	SW8260C	23.6	20.00	0	118	64-128				3/20/2013 1844h
LCS VOC 032013B	Trichloroethene	µg/L	SW8260C	24.2	20.00	0	121	54-152				3/20/2013 1844h
LCS VOC 032013B	Xylenes, Total	µg/L	SW8260C	72.2	60.00	0	120	52-134				3/20/2013 1844h
LCS VOC 032013B	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	48.9	50.00		97.8	76-138				3/20/2013 1844h
LCS VOC 032013B	Surr: 4-Bromofluorobenzene	%REC	SW8260C	49.2	50.00		98.5	77-121				3/20/2013 1844h
LCS VOC 032013B	Surr: Dibromofluoromethane	%REC	SW8260C	51.1	50.00		102	67-128				3/20/2013 1844h
LCS VOC 032013B	Surr: Toluene-d8	%REC	SW8260C	49.7	50.00		99.3	81-135				3/20/2013 1844h



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Utah Division of Water Quality  
**Lab Set ID:** 1303453  
**Project:** Willard Bay Chevron Incident

**Contact:** John Whitehead  
**Dept:** MSVOA  
**QC Type:** MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB VOC 032013B	1,1,1,2-Tetrachloroethane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,1,1-Trichloroethane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,1,1,2,2-Tetrachloroethane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,1,2-Trichloroethane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,1-Dichloropropene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,1-Dichloroethane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,1-Dichloroethene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,2,3-Trichlorobenzene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,2,3-Trichloropropane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,2,3-Trimethylbenzene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,2,4-Trichlorobenzene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,2,4-Trimethylbenzene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,2-Dibromo-3-chloropropane	µg/L	SW8260C	< 5.00				-				3/20/2013 1922h
MB VOC 032013B	1,2-Dibromoethane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,2-Dichlorobenzene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,2-Dichloroethane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,2-Dichloropropane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,3,5-Trimethylbenzene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,3-Dichlorobenzene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,3-Dichloropropane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,4-Dichlorobenzene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	1,4-Dioxane	µg/L	SW8260C	< 50.0				-				3/20/2013 1922h
MB VOC 032013B	2,2-Dichloropropane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	2-Butanone	µg/L	SW8260C	< 10.0				-				3/20/2013 1922h
MB VOC 032013B	2-Chloroethyl vinyl ether	µg/L	SW8260C	< 5.00				-				3/20/2013 1922h



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Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Utah Division of Water Quality  
**Lab Set ID:** 1303453  
**Project:** Willard Bay Chevron Incident

**Contact:** John Whitehead  
**Dept:** MSVOA  
**QC Type:** MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB VOC 032013B	2-Chlorotoluene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	2-Hexanone	µg/L	SW8260C	< 5.00				-				3/20/2013 1922h
MB VOC 032013B	2-Nitropropane	µg/L	SW8260C	< 5.00				-				3/20/2013 1922h
MB VOC 032013B	4-Chlorotoluene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	4-Isopropyltoluene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	4-Methyl-2-pentanone	µg/L	SW8260C	< 5.00				-				3/20/2013 1922h
MB VOC 032013B	Acetone	µg/L	SW8260C	< 10.0				-				3/20/2013 1922h
MB VOC 032013B	Acetonitrile	µg/L	SW8260C	< 5.00				-				3/20/2013 1922h
MB VOC 032013B	Acrolein	µg/L	SW8260C	< 5.00				-				3/20/2013 1922h
MB VOC 032013B	Acrylonitrile	µg/L	SW8260C	< 10.0				-				3/20/2013 1922h
MB VOC 032013B	Allyl chloride	µg/L	SW8260C	< 5.00				-				3/20/2013 1922h
MB VOC 032013B	Benzene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Benzyl chloride	µg/L	SW8260C	< 5.00				-				3/20/2013 1922h
MB VOC 032013B	Bis(2-chloroisopropyl) ether	µg/L	SW8260C	< 5.00				-				3/20/2013 1922h
MB VOC 032013B	Bromobenzene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Bromochloromethane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Bromodichloromethane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Bromoform	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Bromomethane	µg/L	SW8260C	< 5.00				-				3/20/2013 1922h
MB VOC 032013B	Butyl acetate	µg/L	SW8260C	< 10.0				-				3/20/2013 1922h
MB VOC 032013B	Carbon disulfide	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Carbon tetrachloride	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Chlorobenzene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Chloroethane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Chloroform	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Chloromethane	µg/L	SW8260C	< 3.00				-				3/20/2013 1922h
MB VOC 032013B	Chloroprene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h

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Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Utah Division of Water Quality  
**Lab Set ID:** 1303453  
**Project:** Willard Bay Chevron Incident

**Contact:** John Whitehead  
**Dept:** MSVOA  
**QC Type:** MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB VOC 032013B	cis-1,2-Dichloroethene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	cis-1,3-Dichloropropene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Cyclohexane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Cyclohexanone	µg/L	SW8260C	< 50.0				-				3/20/2013 1922h
MB VOC 032013B	Dibromochloromethane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Dibromomethane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Dichlorodifluoromethane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Ethyl acetate	µg/L	SW8260C	< 10.0				-				3/20/2013 1922h
MB VOC 032013B	Ethyl ether	µg/L	SW8260C	< 10.0				-				3/20/2013 1922h
MB VOC 032013B	Ethyl methacrylate	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Ethylbenzene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Hexachlorobutadiene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Iodomethane	µg/L	SW8260C	< 5.00				-				3/20/2013 1922h
MB VOC 032013B	Isobutyl alcohol	µg/L	SW8260C	< 100				-				3/20/2013 1922h
MB VOC 032013B	Isopropyl acetate	µg/L	SW8260C	< 10.0				-				3/20/2013 1922h
MB VOC 032013B	Isopropyl alcohol	µg/L	SW8260C	< 40.0				-				3/20/2013 1922h
MB VOC 032013B	Isopropylbenzene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	m,p-Xylene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Methacrylonitrile	µg/L	SW8260C	< 5.00				-				3/20/2013 1922h
MB VOC 032013B	Methyl Acetate	µg/L	SW8260C	< 5.00				-				3/20/2013 1922h
MB VOC 032013B	Methyl methacrylate	µg/L	SW8260C	< 5.00				-				3/20/2013 1922h
MB VOC 032013B	Methyl tert-butyl ether	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Methylcyclohexane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Methylene chloride	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	n-Amyl acetate	µg/L	SW8260C	< 10.0				-				3/20/2013 1922h
MB VOC 032013B	Naphthalene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	n-Butyl alcohol	µg/L	SW8260C	< 100				-				3/20/2013 1922h

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Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Utah Division of Water Quality  
**Lab Set ID:** 1303453  
**Project:** Willard Bay Chevron Incident

**Contact:** John Whitehead  
**Dept:** MSVOA  
**QC Type:** MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB VOC 032013B	n-Butylbenzene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	n-Hexane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	n-Octane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	n-Propylbenzene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	o-Xylene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Pentachloroethane	µg/L	SW8260C	< 5.00				-				3/20/2013 1922h
MB VOC 032013B	Propionitrile	µg/L	SW8260C	< 25.0				-				3/20/2013 1922h
MB VOC 032013B	Propyl acetate	µg/L	SW8260C	< 10.0				-				3/20/2013 1922h
MB VOC 032013B	sec-Butylbenzene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Styrene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	tert-Butyl alcohol	µg/L	SW8260C	< 20.0				-				3/20/2013 1922h
MB VOC 032013B	tert-Butylbenzene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Tetrachloroethene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Tetrahydrofuran	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Toluene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	trans-1,2-Dichloroethene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	trans-1,3-Dichloropropene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	trans-1,4-Dichloro-2-butene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Trichloroethene	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Trichlorofluoromethane	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Vinyl acetate	µg/L	SW8260C	< 10.0				-				3/20/2013 1922h
MB VOC 032013B	Vinyl chloride	µg/L	SW8260C	< 1.00				-				3/20/2013 1922h
MB VOC 032013B	Xylenes, Total	µg/L	SW8260C	< 2.00				-				3/20/2013 1922h
MB VOC 032013B	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	51.4	50.00		103	76-138				3/20/2013 1922h
MB VOC 032013B	Surr: 4-Bromofluorobenzene	%REC	SW8260C	51.7	50.00		103	77-121				3/20/2013 1922h
MB VOC 032013B	Surr: Dibromofluoromethane	%REC	SW8260C	50.5	50.00		101	67-128				3/20/2013 1922h
MB VOC 032013B	Surr: Toluene-d8	%REC	SW8260C	50.1	50.00		100	81-135				3/20/2013 1922h



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Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Utah Division of Water Quality  
**Lab Set ID:** 1303453  
**Project:** Willard Bay Chevron Incident

**Contact:** John Whitehead  
**Dept:** MSVOA  
**QC Type:** MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1303453-005AMS	1,1,1-Trichloroethane	µg/L	SW8260C	255	200.0	0	128	67-147				3/20/2013 2116h
1303453-005AMS	1,1-Dichloroethene	µg/L	SW8260C	268	200.0	0	134	51-152				3/20/2013 2116h
1303453-005AMS	1,2-Dichlorobenzene	µg/L	SW8260C	222	200.0	0	111	70-130				3/20/2013 2116h
1303453-005AMS	1,2-Dichloroethane	µg/L	SW8260C	218	200.0	0	109	39-162				3/20/2013 2116h
1303453-005AMS	1,2-Dichloropropane	µg/L	SW8260C	216	200.0	0	108	59-135				3/20/2013 2116h
1303453-005AMS	Benzene	µg/L	SW8260C	244	200.0	6.900	119	66-145				3/20/2013 2116h
1303453-005AMS	Chlorobenzene	µg/L	SW8260C	230	200.0	0	115	63-140				3/20/2013 2116h
1303453-005AMS	Chloroform	µg/L	SW8260C	230	200.0	0	115	50-146				3/20/2013 2116h
1303453-005AMS	Ethylbenzene	µg/L	SW8260C	253	200.0	17.89	118	69-133				3/20/2013 2116h
1303453-005AMS	Isopropylbenzene	µg/L	SW8260C	242	200.0	2.550	120	60-147				3/20/2013 2116h
1303453-005AMS	Methyl tert-butyl ether	µg/L	SW8260C	217	200.0	0	109	37-189				3/20/2013 2116h
1303453-005AMS	Methylene chloride	µg/L	SW8260C	227	200.0	0	113	30-192				3/20/2013 2116h
1303453-005AMS	Naphthalene	µg/L	SW8260C	223	200.0	6.210	109	41-131				3/20/2013 2116h
1303453-005AMS	Tetrahydrofuran	µg/L	SW8260C	240	200.0	0	120	43-146				3/20/2013 2116h
1303453-005AMS	Toluene	µg/L	SW8260C	303	200.0	68.75	117	18-192				3/20/2013 2116h
1303453-005AMS	Trichloroethene	µg/L	SW8260C	236	200.0	0	118	61-153				3/20/2013 2116h
1303453-005AMS	Xylenes, Total	µg/L	SW8260C	885	600.0	183.7	117	42-167				3/20/2013 2116h
1303453-005AMS	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	492	500.0		98.5	72-151				3/20/2013 2116h
1303453-005AMS	Surr: 4-Bromofluorobenzene	%REC	SW8260C	503	500.0		101	80-128				3/20/2013 2116h
1303453-005AMS	Surr: Dibromofluoromethane	%REC	SW8260C	509	500.0		102	80-124				3/20/2013 2116h
1303453-005AMS	Surr: Toluene-d8	%REC	SW8260C	503	500.0		101	77-129				3/20/2013 2116h



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Salt Lake City, UT 84115

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e-mail: awal@awal-labs.com, web: www.awal-labs.com

Kyle F. Gross  
Laboratory Director

Jose Rocha  
QA Officer

## QC SUMMARY REPORT

**Client:** Utah Division of Water Quality  
**Lab Set ID:** 1303453  
**Project:** Willard Bay Chevron Incident

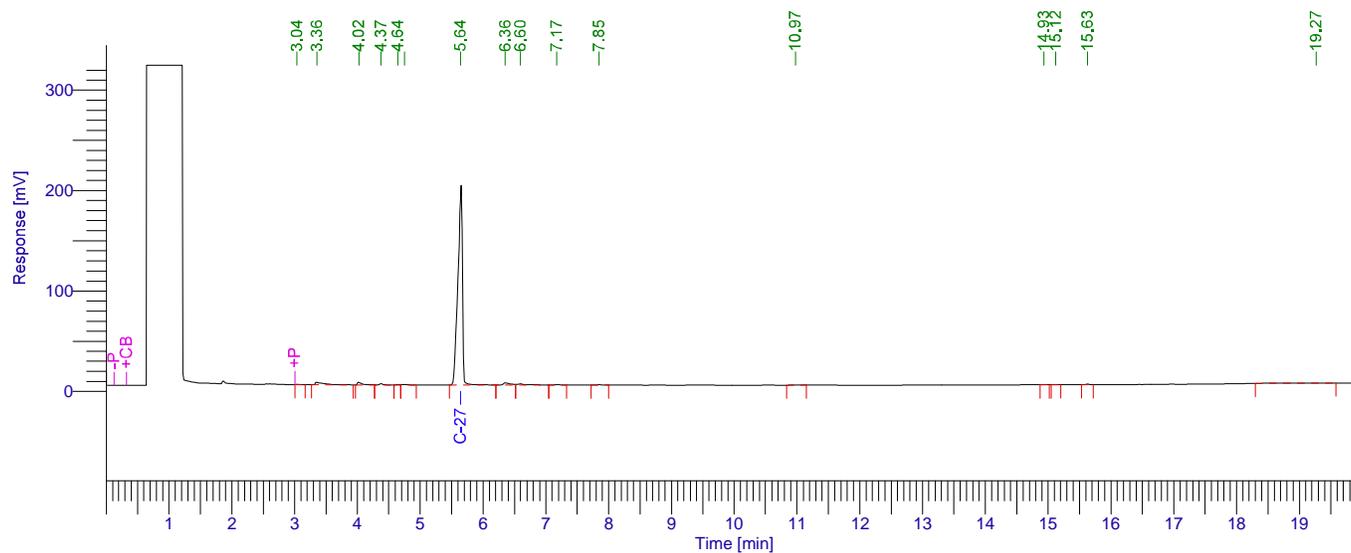
**Contact:** John Whitehead  
**Dept:** MSVOA  
**QC Type:** MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1303453-005AMSD	1,1,1-Trichloroethane	µg/L	SW8260C	251	200.0	0	126	67-147	1.5	25		3/20/2013 2135h
1303453-005AMSD	1,1-Dichloroethene	µg/L	SW8260C	260	200.0	0	130	51-152	3.37	25		3/20/2013 2135h
1303453-005AMSD	1,2-Dichlorobenzene	µg/L	SW8260C	221	200.0	0	111	70-130	0.631	25		3/20/2013 2135h
1303453-005AMSD	1,2-Dichloroethane	µg/L	SW8260C	219	200.0	0	110	39-162	0.32	25		3/20/2013 2135h
1303453-005AMSD	1,2-Dichloropropane	µg/L	SW8260C	213	200.0	0	107	59-135	1.17	25		3/20/2013 2135h
1303453-005AMSD	Benzene	µg/L	SW8260C	237	200.0	6.900	115	66-145	2.83	25		3/20/2013 2135h
1303453-005AMSD	Chlorobenzene	µg/L	SW8260C	228	200.0	0	114	63-140	1.09	25		3/20/2013 2135h
1303453-005AMSD	Chloroform	µg/L	SW8260C	226	200.0	0	113	50-146	1.8	25		3/20/2013 2135h
1303453-005AMSD	Ethylbenzene	µg/L	SW8260C	247	200.0	17.89	115	69-133	2.2	25		3/20/2013 2135h
1303453-005AMSD	Isopropylbenzene	µg/L	SW8260C	234	200.0	2.550	116	60-147	3.37	25		3/20/2013 2135h
1303453-005AMSD	Methyl tert-butyl ether	µg/L	SW8260C	220	200.0	0	110	37-189	1.23	25		3/20/2013 2135h
1303453-005AMSD	Methylene chloride	µg/L	SW8260C	230	200.0	0	115	30-192	1.23	25		3/20/2013 2135h
1303453-005AMSD	Naphthalene	µg/L	SW8260C	226	200.0	6.210	110	41-131	1.2	25		3/20/2013 2135h
1303453-005AMSD	Tetrahydrofuran	µg/L	SW8260C	193	200.0	0	96.6	43-146	21.8	25		3/20/2013 2135h
1303453-005AMSD	Toluene	µg/L	SW8260C	293	200.0	68.75	112	18-192	3.29	25		3/20/2013 2135h
1303453-005AMSD	Trichloroethene	µg/L	SW8260C	229	200.0	0	115	61-153	3.01	25		3/20/2013 2135h
1303453-005AMSD	Xylenes, Total	µg/L	SW8260C	860	600.0	183.7	113	42-167	2.8	25		3/20/2013 2135h
1303453-005AMSD	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	496	500.0		99.2	72-151				3/20/2013 2135h
1303453-005AMSD	Surr: 4-Bromofluorobenzene	%REC	SW8260C	503	500.0		101	80-128				3/20/2013 2135h
1303453-005AMSD	Surr: Dibromofluoromethane	%REC	SW8260C	511	500.0		102	80-124				3/20/2013 2135h
1303453-005AMSD	Surr: Toluene-d8	%REC	SW8260C	503	500.0		101	77-129				3/20/2013 2135h

Software Version : 6.3.1.0504  
 Sample Name : 1303453-002B  
 Instrument Name : 900 interface  
 Rack/Vial : 0/0  
 Sample Amount : 1.000000  
 Cycle : 35

Date : 3/22/2013 2:26:50 PM  
 Data Acquisition Time : 3/22/2013 11:51:21 AM  
 Channel : B  
 Operator : awaluser  
 Dilution Factor : 1.000000

Result File : C:\gc#2\ORO\0320g035.rst  
 Sequence File : C:\sequences\0320-ORO.seq



## ORO Analysis (FID)

capillary column gas chromatography  
 instrument: GC#2 HP5890 Series II Plus  
 column: Zebron ZB-5HT  
 column dimensions: 30m X 0.53mm X 0.15 $\mu$ m  
 carrier gas: Helium  
 oven temp prgrm: 180C/0min @ 30C/min to 220C/0.00min  
 20C/min to 360 hold 1.67  
 injection temp: 340C      detector temp: 360C      Range: 2      injection amount: 5 $\mu$ L

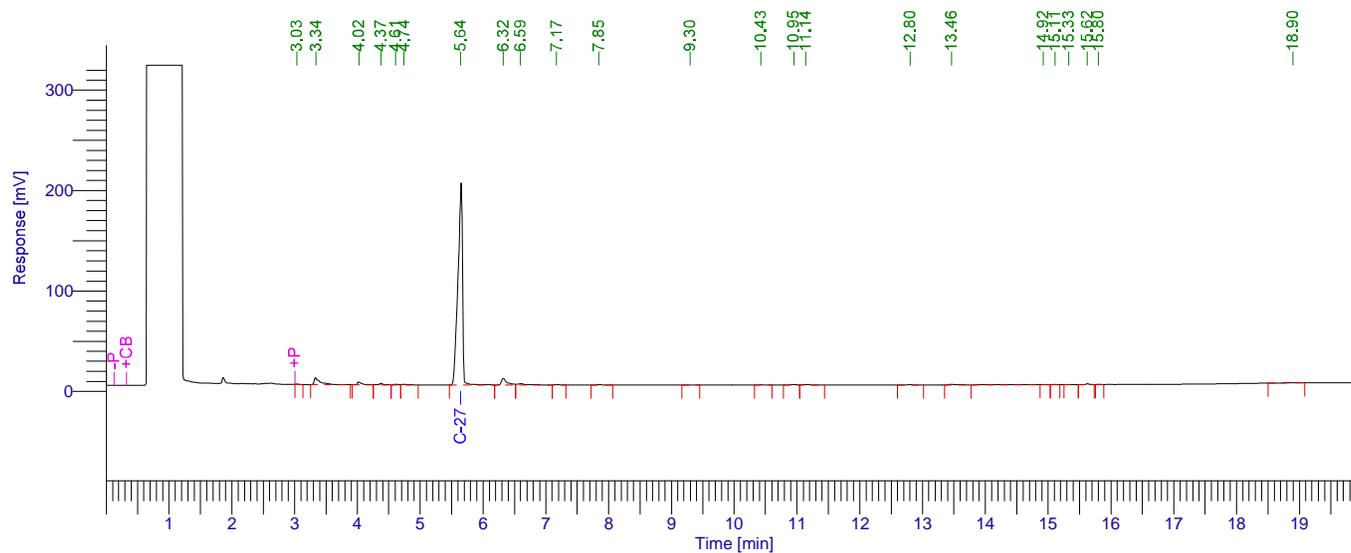
time [min]	component name	height [ $\mu$ V]	area [ $\mu$ V-s]	raw amt $\mu$ g/mL	target $\mu$ g/mL	% recs
5.643	C-27	199874	994848	99.14139	100.00	99.1
11.311	ORO	2880	20296	7.49596	100.00	7.5 <PQL
						106.6

Report stored in ASCII file: C:\gc#2\ORO\0320g035.TX0

Software Version : 6.3.1.0504  
 Sample Name : 1303453-003B  
 Instrument Name : 900 interface  
 Rack/Vial : 0/0  
 Sample Amount : 1.000000  
 Cycle : 38

Date : 3/22/2013 2:28:04 PM  
 Data Acquisition Time : 3/22/2013 1:02:34 PM  
 Channel : B  
 Operator : awaluser  
 Dilution Factor : 1.000000

Result File : C:\gc#2\ORO\0320g038.rst  
 Sequence File : C:\sequences\0320-ORO.seq



## ORO Analysis (FID)

capillary column gas chromatography  
 instrument: GC#2 HP5890 Series II Plus  
 column: Zebron ZB-5HT  
 column dimensions: 30m X 0.53mm X 0.15µm  
 carrier gas: Helium  
 oven temp prgrm: 180C/0min @ 30C/min to 220C/0.00min  
 20C/min to 360 hold 1.67

injection temp: 340C detector temp: 360C Range: 2

injection amount: 5µL

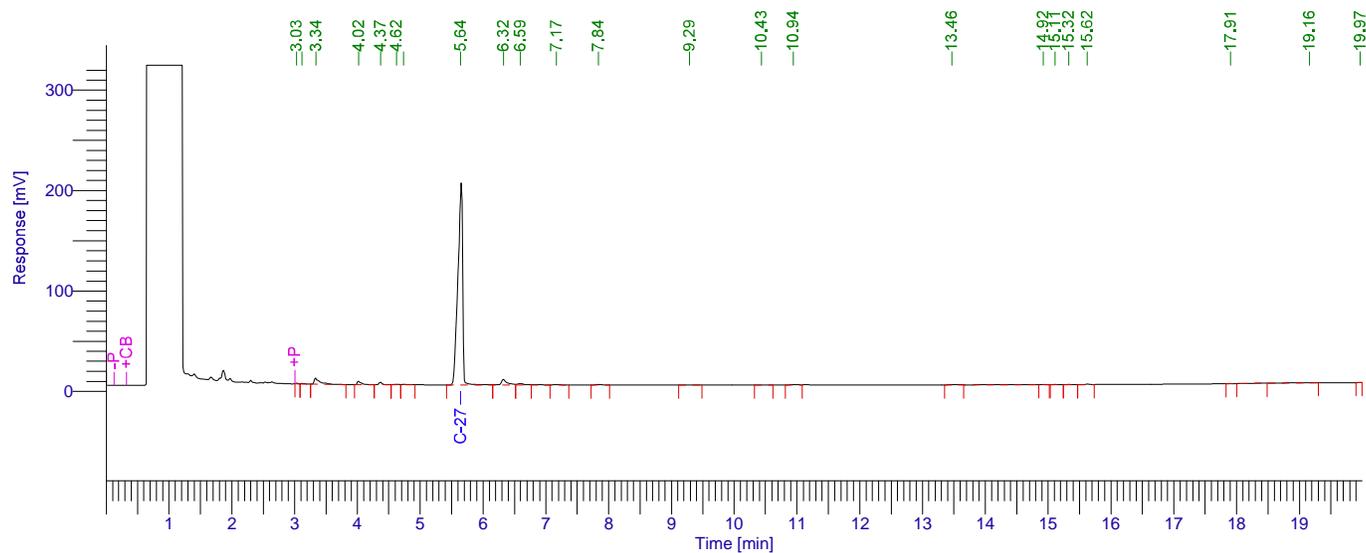
time [min]	component name	height [µV]	area [µV·s]	raw amt µg/mL	target µg/mL	% recs
5.644	C-27	202767	1010287	1.01e+02	100.00	100.6
11.311	ORO	5744	43530	9.70838	100.00	9.7 <PQL
						110.3

Report stored in ASCII file: C:\gc#2\ORO\0320g038.TX0

Software Version : 6.3.1.0504  
 Sample Name : 1303453-004B  
 Instrument Name : 900 interface  
 Rack/Vial : 0/0  
 Sample Amount : 1.000000  
 Cycle : 39

Date : 3/22/2013 2:28:34 PM  
 Data Acquisition Time : 3/22/2013 1:26:19 PM  
 Channel : B  
 Operator : awaluser  
 Dilution Factor : 1.000000

Result File : C:\gc#2\ORO\0320g039.rst  
 Sequence File : C:\sequences\0320-ORO.seq



## ORO Analysis (FID)

capillary column gas chromatography  
 instrument: GC#2 HP5890 Series II Plus  
 column: Zebron ZB-5HT  
 column dimensions: 30m X 0.53mm X 0.15 $\mu$ m  
 carrier gas: Helium  
 oven temp prgm: 180C/0min @ 30C/min to 220C/0.00min  
 20C/min to 360 hold 1.67  
 injection temp: 340C      detector temp: 360C      Range: 2      injection amount: 5 $\mu$ L

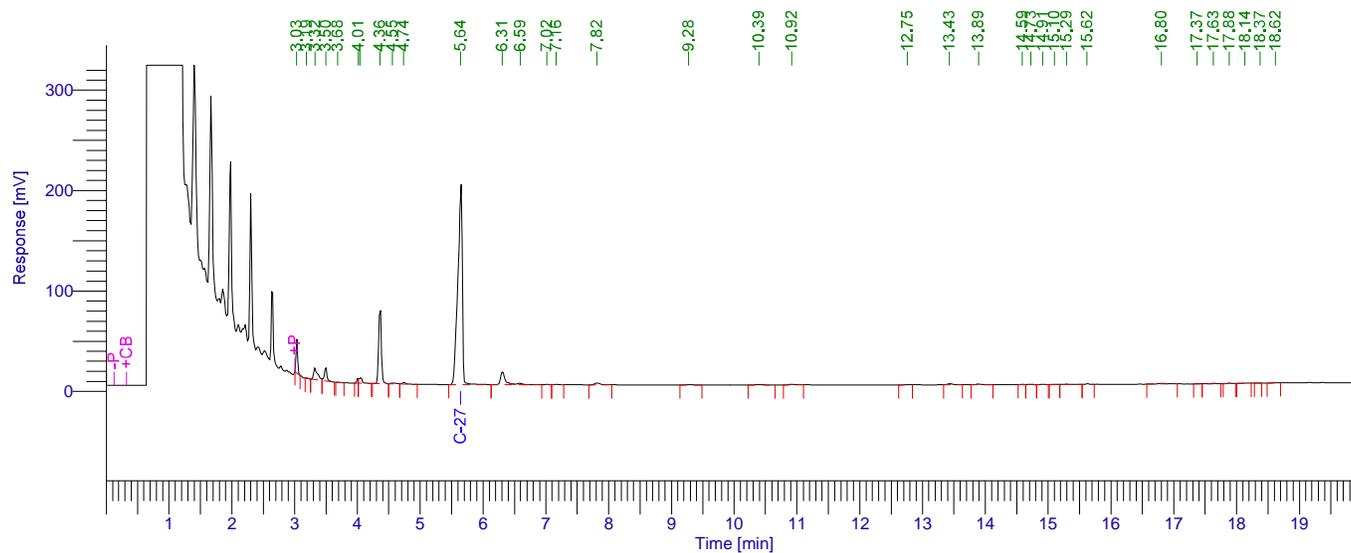
time [min]	component name	height [ $\mu$ V]	area [ $\mu$ V·s]	raw amt $\mu$ g/mL	target $\mu$ g/mL	% recs
5.644	C-27	206951	1050411	1.04e+02	100.00	104.5
11.311	ORO	4822	31565	8.56916	100.00	8.6 <PQL
						113.0

Report stored in ASCII file: C:\gc#2\ORO\0320g039.TX0

Software Version : 6.3.1.0504  
 Sample Name : 1303453-005B  
 Instrument Name : 900 interface  
 Rack/Vial : 0/0  
 Sample Amount : 1.000000  
 Cycle : 40

Date : 3/22/2013 2:29:10 PM  
 Data Acquisition Time : 3/22/2013 1:50:04 PM  
 Channel : B  
 Operator : awaluser  
 Dilution Factor : 1.000000

Result File : C:\gc#2\ORO\0320g040.rst  
 Sequence File : C:\sequences\0320-ORO.seq



## ORO Analysis (FID)

capillary column gas chromatography  
 instrument: GC#2 HP5890 Series II Plus  
 column: Zebron ZB-5HT  
 column dimensions: 30m X 0.53mm X 0.15µm  
 carrier gas: Helium  
 oven temp prgrm: 180C/0min @ 30C/min to 220C/0.00min  
 20C/min to 360 hold 1.67  
 injection temp: 340C      detector temp: 360C      Range: 2      injection amount: 5µL

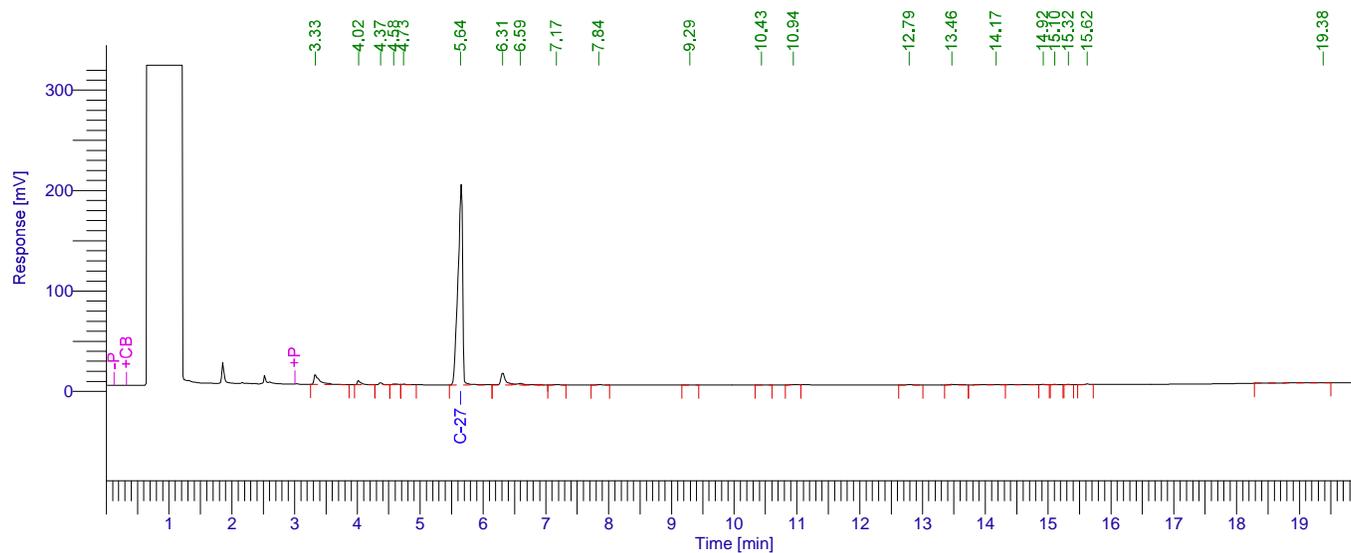
time [min]	component name	height [µV]	area [µV-s]	raw amt µg/mL	target µg/mL	% recs
5.642	C-27	197988	981689	97.87773	100.00	97.9
11.311	ORO	9214	60617	11.33498	100.00	11.3 <PQL
						109.2

Report stored in ASCII file: C:\gc#2\ORO\0320g040.TX0

Software Version : 6.3.1.0504  
 Sample Name : 1303453-006B  
 Instrument Name : 900 interface  
 Rack/Vial : 0/0  
 Sample Amount : 1.000000  
 Cycle : 41

Date : 3/22/2013 3:27:18 PM  
 Data Acquisition Time : 3/22/2013 2:13:52 PM  
 Channel : B  
 Operator : awaluser  
 Dilution Factor : 1.000000

Result File : C:\gc#2\ORO\0320g041.rst  
 Sequence File : C:\sequences\0320-ORO.seq



## ORO Analysis (FID)

capillary column gas chromatography  
 instrument: GC#2 HP5890 Series II Plus  
 column: Zebron ZB-5HT  
 column dimensions: 30m X 0.53mm X 0.15 $\mu$ m  
 carrier gas: Helium

oven temp prgm: 180C/0min @ 30C/min to 220C/0.00min  
 20C/min to 360 hold 1.67

injection temp: 340C detector temp: 360C Range: 2

injection amount: 5 $\mu$ L

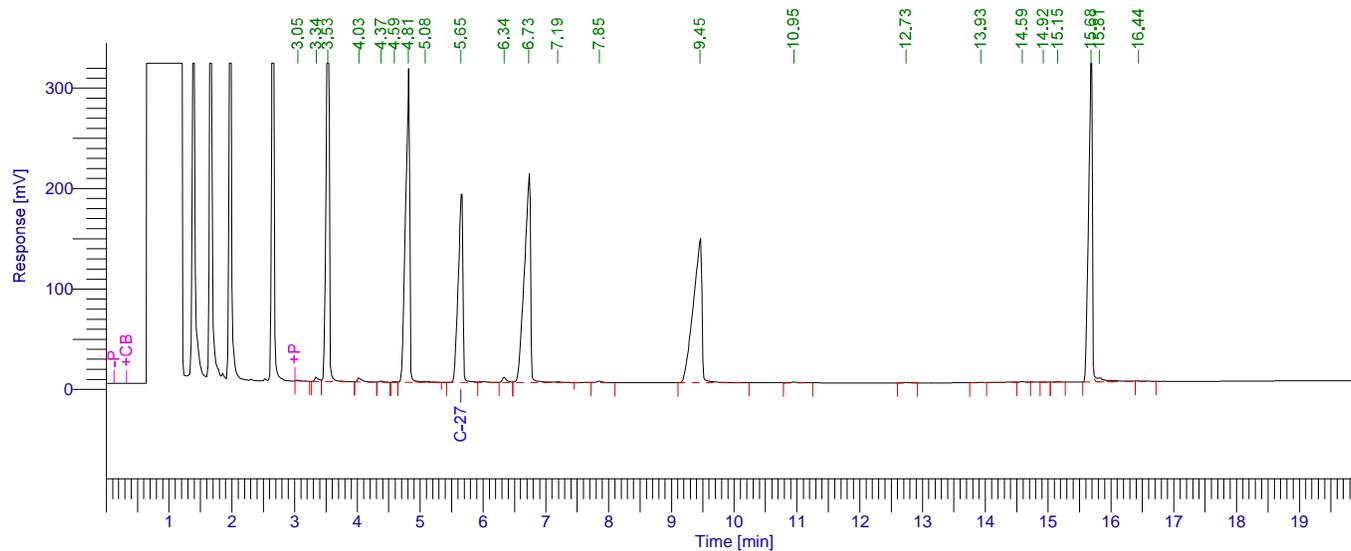
time [min]	component name	height [ $\mu$ V]	area [ $\mu$ V·s]	raw amt $\mu$ g/mL	target $\mu$ g/mL	% recs
5.644	C-27	204824	1029111	1.02e+02	100.00	102.4
11.311	ORO	5256	40825	9.45081	100.00	9.5 <PQL
						111.9

Report stored in ASCII file: C:\gc#2\ORO\0320g041.TX0

Software Version : 6.3.1.0504  
 Sample Name : LCS-24250  
 Instrument Name : 900 interface  
 Rack/Vial : 0/0  
 Sample Amount : 1.000000  
 Cycle : 31

Date : 3/22/2013 2:25:19 PM  
 Data Acquisition Time : 3/22/2013 10:16:26 AM  
 Channel : B  
 Operator : awaluser  
 Dilution Factor : 1.000000

Result File : C:\gc#2\ORO\0320g031.rst  
 Sequence File : C:\sequences\0320-ORO.seq



## ORO Analysis (FID)

capillary column gas chromatography  
 instrument: GC#2 HP5890 Series II Plus  
 column: Zebtron ZB-5HT  
 column dimensions: 30m X 0.53mm X 0.15 $\mu$ m  
 carrier gas: Helium  
 oven temp prgrm: 180C/0min @ 30C/min to 220C/0.00min  
 20C/min to 360 hold 1.67  
 injection temp: 340C      detector temp: 360C      Range: 2

injection amount: 5 $\mu$ L

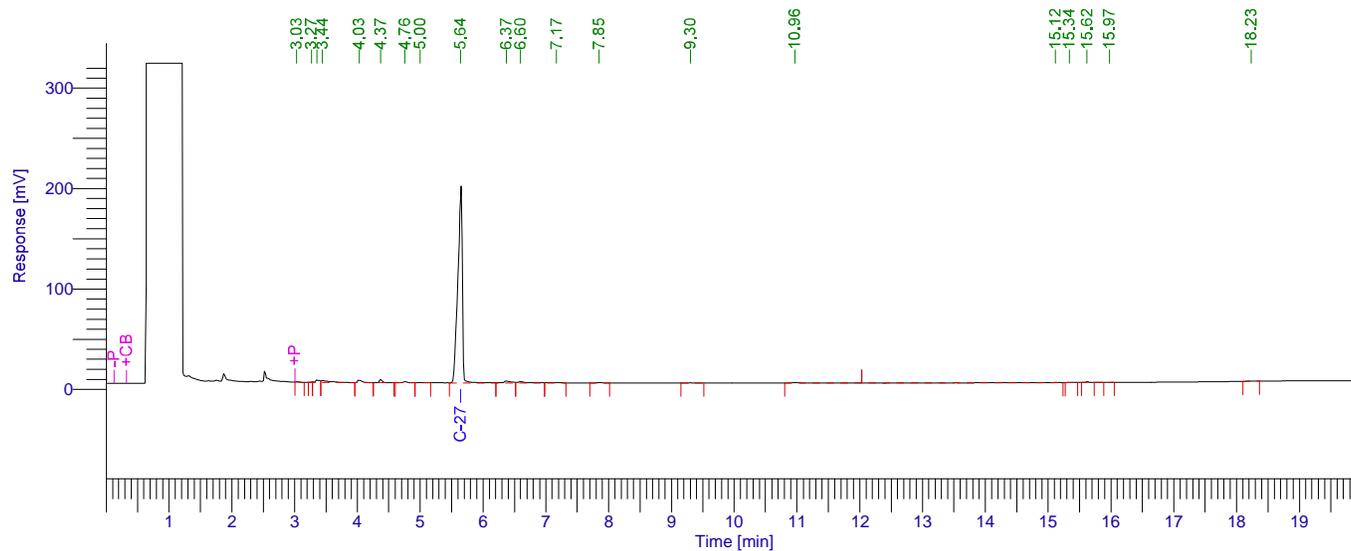
time [min]	component name	height [ $\mu$ V]	area [ $\mu$ V·s]	raw amt $\mu$ g/mL	target $\mu$ g/mL	% recs
5.650	C-27	183777	969153	96.67374	100.00	96.7
11.311	ORO	725212	4342891	4.08e+02	100.00	408.4
						505.1

Report stored in ASCII file: C:\gc#2\ORO\0320g031.TX0

Software Version : 6.3.1.0504  
 Sample Name : MB-24250  
 Instrument Name : 900 interface  
 Rack/Vial : 0/0  
 Sample Amount : 1.000000  
 Cycle : 30

Date : 3/22/2013 2:24:51 PM  
 Data Acquisition Time : 3/22/2013 9:52:38 AM  
 Channel : B  
 Operator : awaluser  
 Dilution Factor : 1.000000

Result File : C:\gc#2\ORO\0320g030.rst  
 Sequence File : C:\sequences\0320-ORO.seq



## ORO Analysis (FID)

capillary column gas chromatography  
 instrument: GC#2 HP5890 Series II Plus  
 column: Zebtron ZB-5HT  
 column dimensions: 30m X 0.53mm X 0.15µm  
 carrier gas: Helium  
 oven temp prgrm: 180C/0min @ 30C/min to 220C/0.00min  
 20C/min to 360 hold 1.67  
 injection temp: 340C      detector temp: 360C      Range: 2      injection amount: 5µL

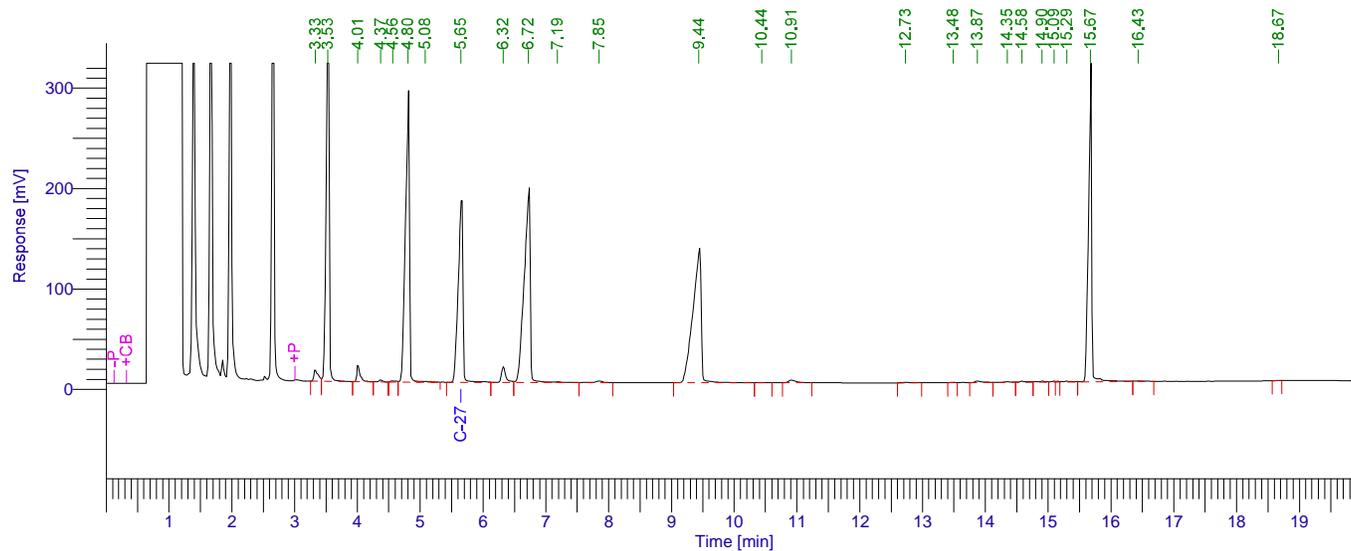
time [min]	component name	height [µV]	area [µV-s]	raw amt µg/mL	target µg/mL	% recs
5.642	C-27	195204	965801	96.35175	100.00	96.4
11.311	ORO	3662	26792	8.11465	100.00	8.1 <PQL
						104.5

Report stored in ASCII file: C:\gc#2\ORO\0320g030.TX0

Software Version : 6.3.1.0504  
 Sample Name : 1303453-002BMS  
 Instrument Name : 900 interface  
 Rack/Vial : 0/0  
 Sample Amount : 1.000000  
 Cycle : 36

Date : 3/22/2013 2:27:18 PM  
 Data Acquisition Time : 3/22/2013 12:15:06 PM  
 Channel : B  
 Operator : awaluser  
 Dilution Factor : 1.000000

Result File : C:\gc#2\ORO\0320g036.rst  
 Sequence File : C:\sequences\0320-ORO.seq



## ORO Analysis (FID)

capillary column gas chromatography  
 instrument: GC#2 HP5890 Series II Plus  
 column: Zebron ZB-5HT  
 column dimensions: 30m X 0.53mm X 0.15 $\mu$ m  
 carrier gas: Helium  
 oven temp prgrm: 180C/0min @ 30C/min to 220C/0.00min  
 20C/min to 360 hold 1.67  
 injection temp: 340C      detector temp: 360C      Range: 2      injection amount: 5 $\mu$ L

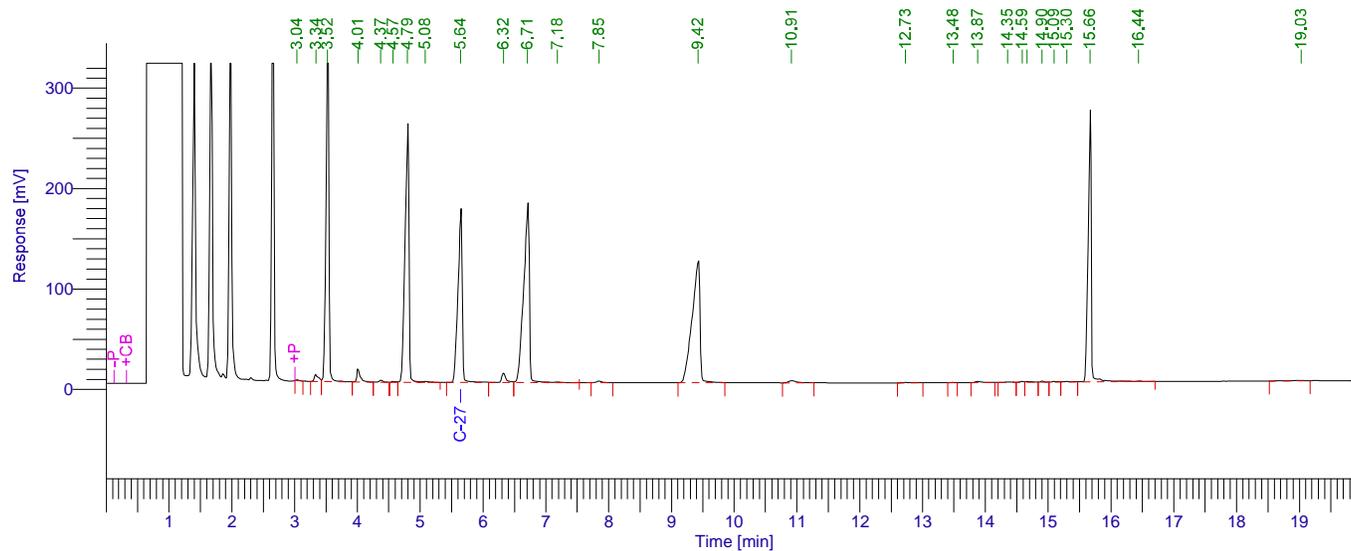
time [min]	component name	height [ $\mu$ V]	area [ $\mu$ V·s]	raw amt $\mu$ g/mL	target $\mu$ g/mL	% recs
5.650	C-27	177948	940149	93.88740	100.00	93.9
11.311	ORO	620088	3782471	3.57e+02	100.00	357.5
						451.4

Report stored in ASCII file: C:\gc#2\ORO\0320g036.TX0

Software Version : 6.3.1.0504  
 Sample Name : 1303453-002BMSD  
 Instrument Name : 900 interface  
 Rack/Vial : 0/0  
 Sample Amount : 1.000000  
 Cycle : 37

Date : 3/22/2013 2:27:40 PM  
 Data Acquisition Time : 3/22/2013 12:38:51 PM  
 Channel : B  
 Operator : awaluser  
 Dilution Factor : 1.000000

Result File : C:\gc#2\ORO\0320g037.rst  
 Sequence File : C:\sequences\0320-ORO.seq



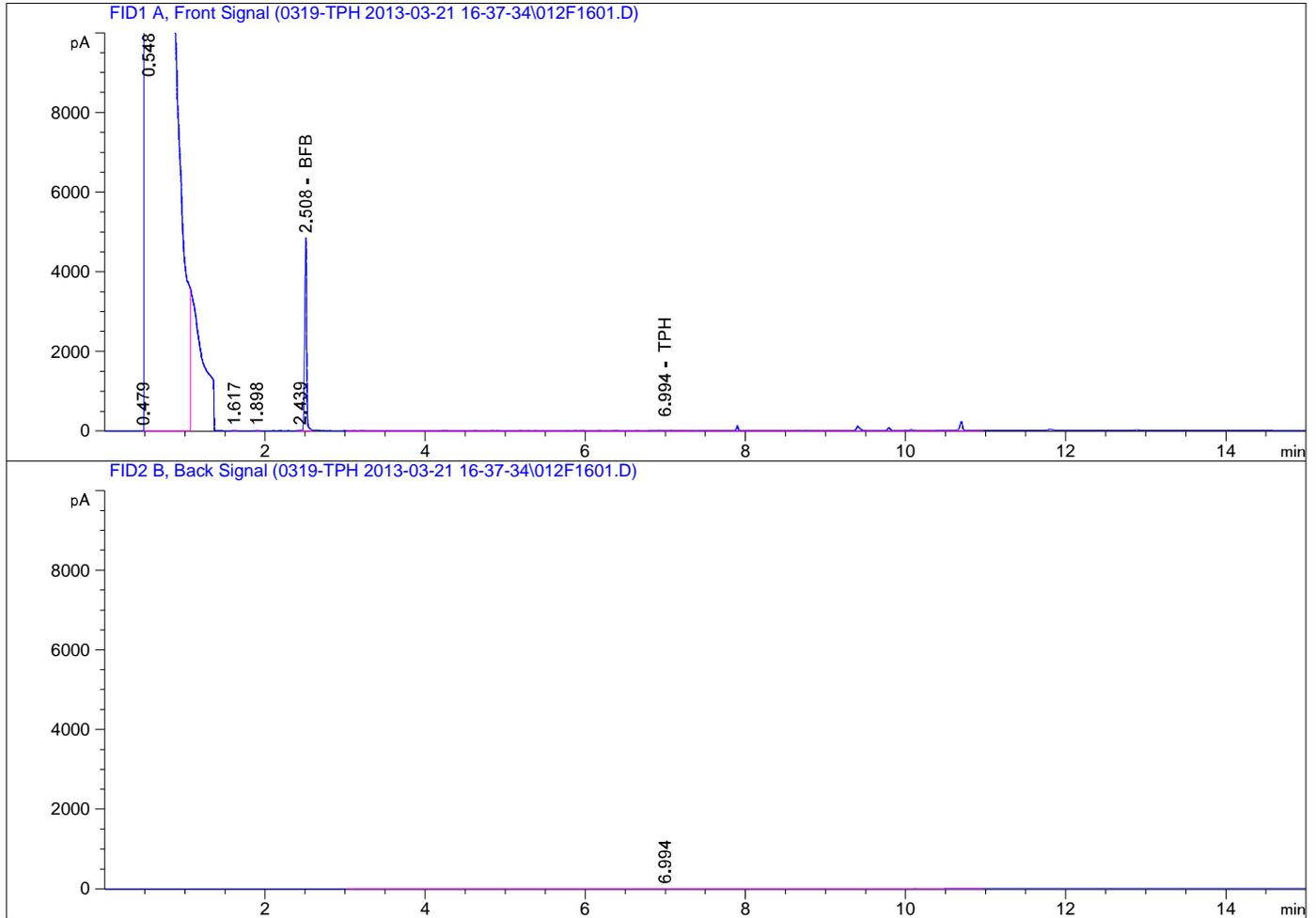
## ORO Analysis (FID)

capillary column gas chromatography  
 instrument: GC#2 HP5890 Series II Plus  
 column: Zebron ZB-5HT  
 column dimensions: 30m X 0.53mm X 0.15 $\mu$ m  
 carrier gas: Helium  
 oven temp prgm: 180C/0min @ 30C/min to 220C/0.00min  
 20C/min to 360 hold 1.67  
 injection temp: 340C      detector temp: 360C      Range: 2      injection amount: 5 $\mu$ L

time [min]	component name	height [ $\mu$ V]	area [ $\mu$ V·s]	raw amt $\mu$ g/mL	target $\mu$ g/mL	% recs
5.641	C-27	168485	812170	81.57967	100.00	81.6
11.311	ORO	583983	3284095	3.12e+02	100.00	312.0
						393.6

Report stored in ASCII file: C:\gc#2\ORO\0320g037.TX0

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Acq. Operator : Seq. Line : 16  
Acq. Instrument : GC C Location : Vial 12  
Injection Date : 3/21/2013 9:29:53 PM Inj : 1  
Inj Volume : 5 µl  
Acq. Method : C:\CHEM32\1\DATA\0319-TPH 2013-03-21 16-37-34\TPH-FRONT-1090171B.M  
Last changed : 3/14/2013 1:57:38 PM  
Analysis Method : C:\CHEM32\1\DATA\0319-TPH 2013-03-21 16-37-34\TPH-FRONT-1090171B.M (Sequence Method)  
Last changed : 3/22/2013 1:01:20 AM  
(modified after loading)  
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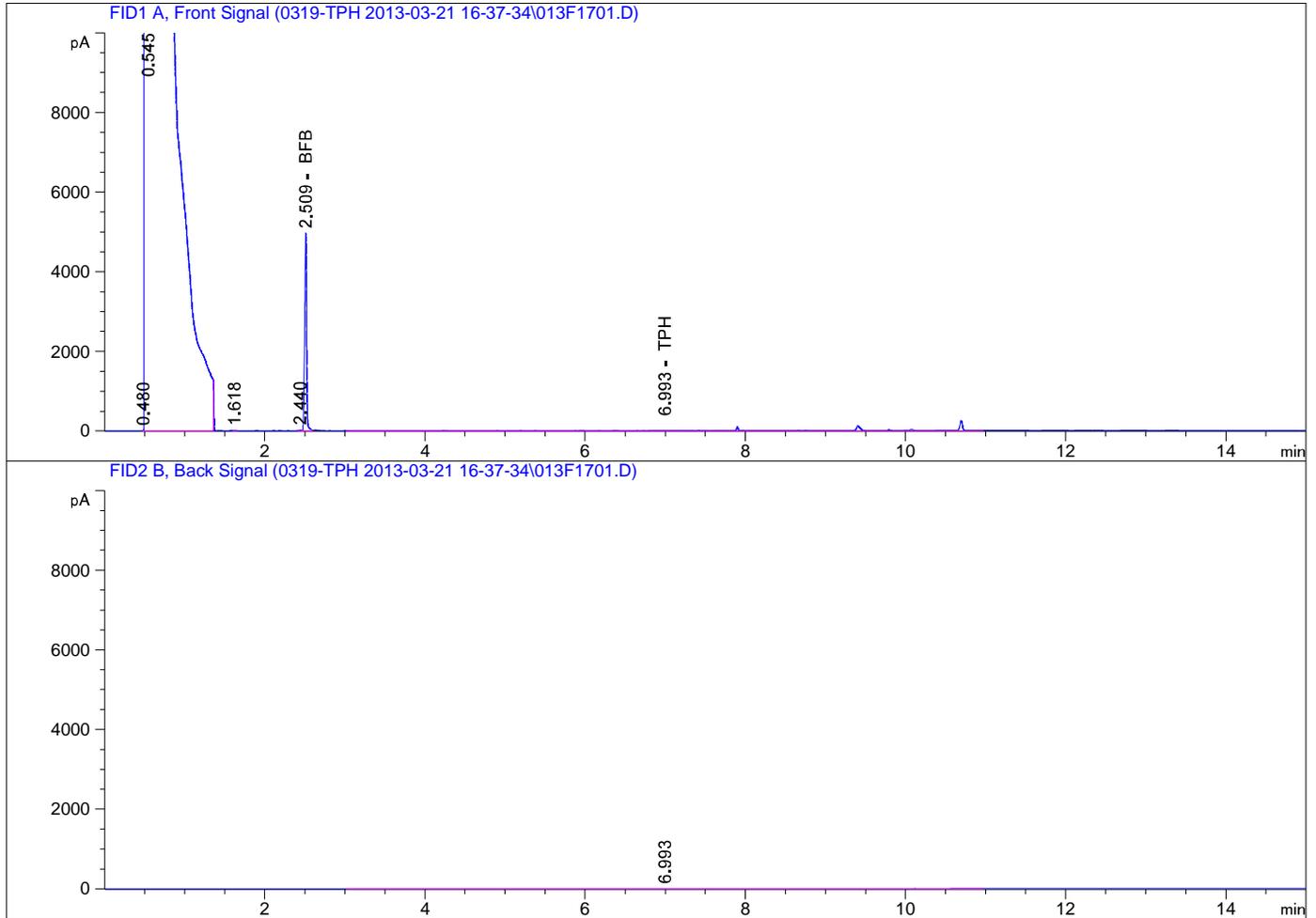
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External Standard Report  
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Sorted By : Signal  
Calib. Data Modified : 3/22/2013 1:01:20 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Do not use Multiplier & Dilution Factor with ISTDs

=====

Acq. Operator	:		Seq. Line	:	17
Acq. Instrument	:	GC C	Location	:	Vial 13
Injection Date	:	3/21/2013 9:49:16 PM	Inj	:	1
			Inj Volume	:	5 µl
Acq. Method	:	C:\CHEM32\1\DATA\0319-TPH 2013-03-21 16-37-34\TPH-FRONT-1090171B.M			
Last changed	:	3/14/2013 1:57:38 PM			
Analysis Method	:	C:\CHEM32\1\DATA\0319-TPH 2013-03-21 16-37-34\TPH-FRONT-1090171B.M (Sequence Method)			
Last changed	:	3/22/2013 1:01:20 AM (modified after loading)			

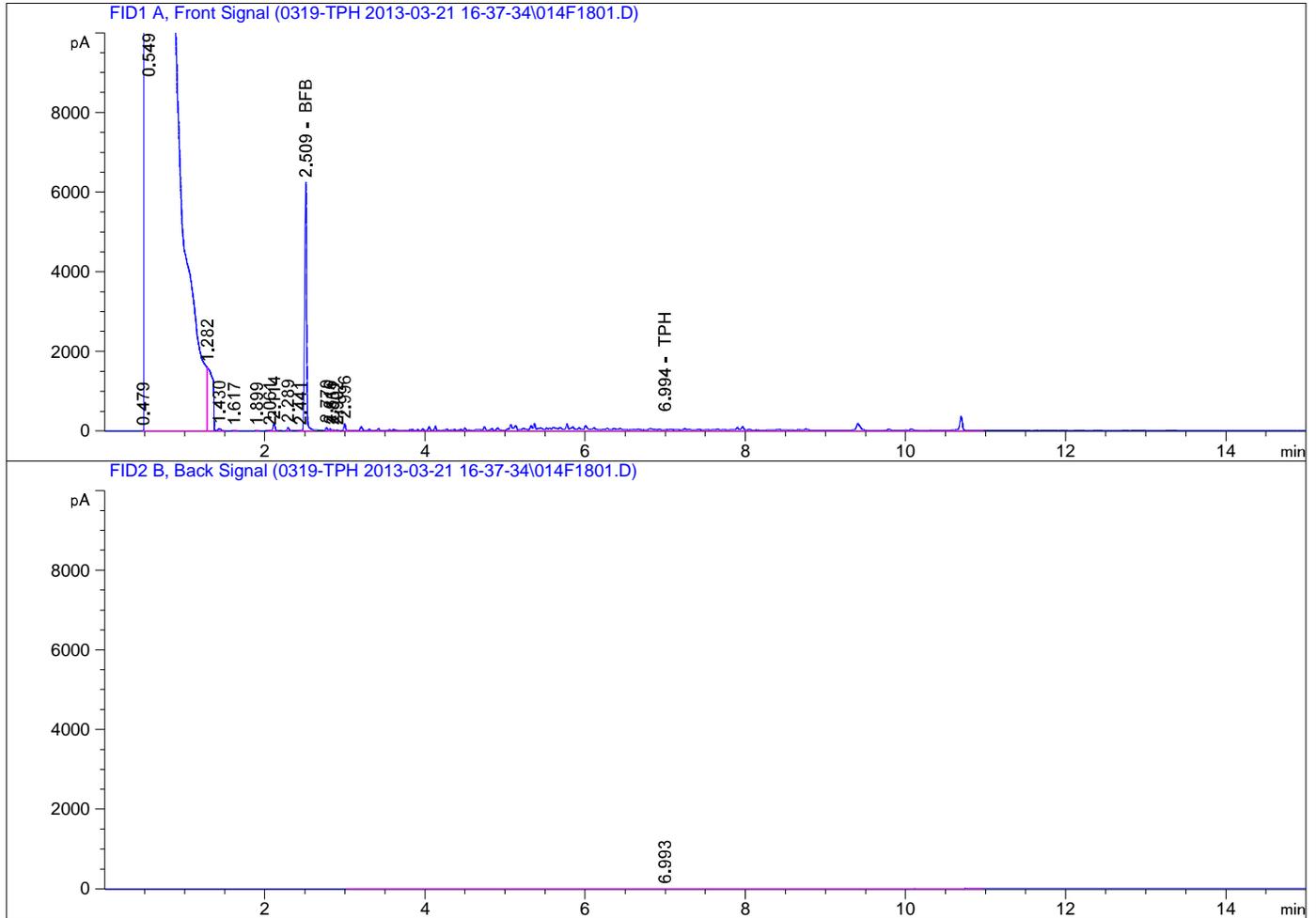
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External Standard Report

Sorted By : Signal  
Calib. Data Modified : 3/22/2013 1:01:20 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Do not use Multiplier & Dilution Factor with ISTDs

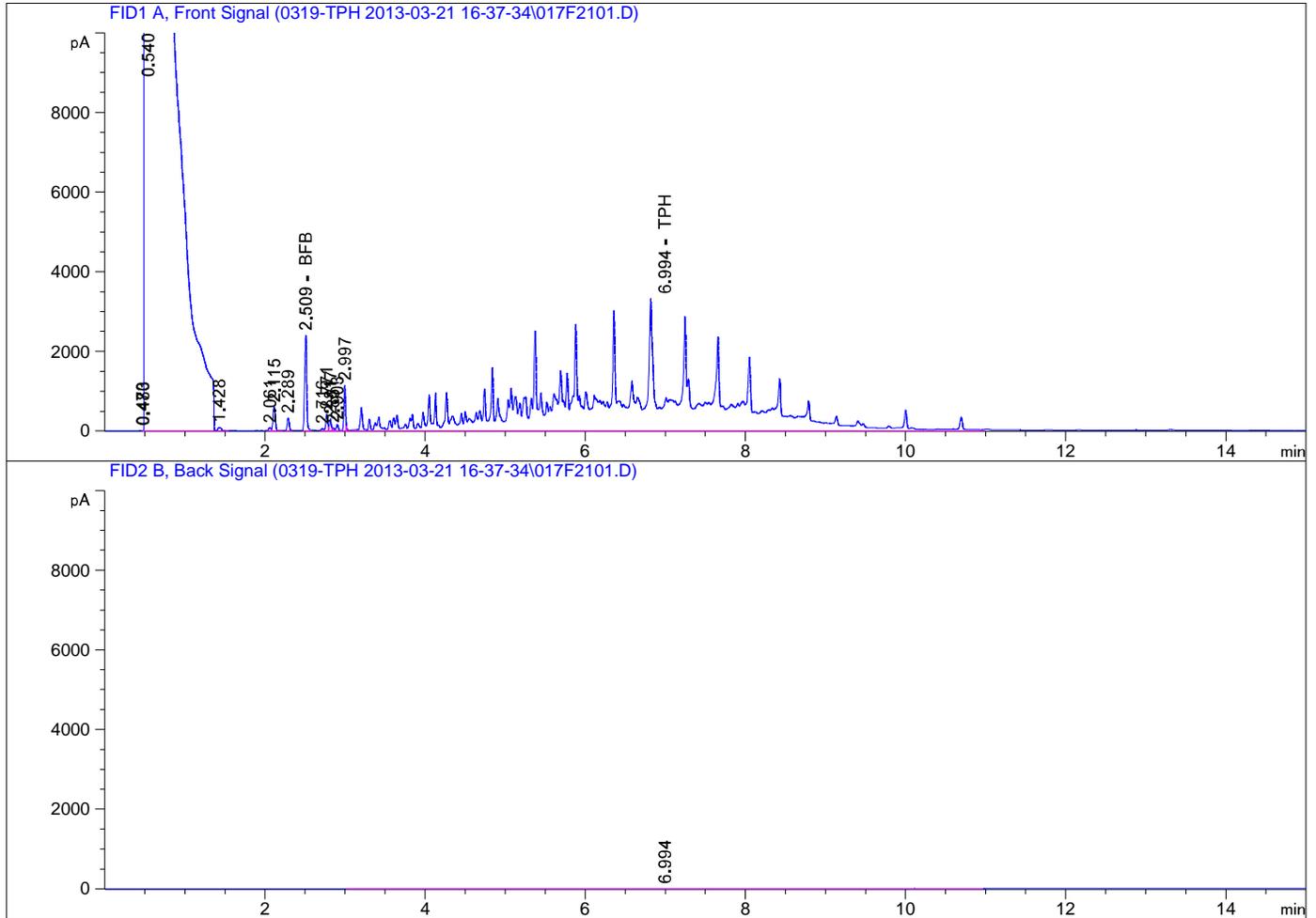
=====  
Acq. Operator : Seq. Line : 18  
Acq. Instrument : GC C Location : Vial 14  
Injection Date : 3/21/2013 10:08:37 PM Inj : 1  
Inj Volume : 5 µl  
Acq. Method : C:\CHEM32\1\DATA\0319-TPH 2013-03-21 16-37-34\TPH-FRONT-1090171B.M  
Last changed : 3/14/2013 1:57:38 PM  
Analysis Method : C:\CHEM32\1\DATA\0319-TPH 2013-03-21 16-37-34\TPH-FRONT-1090171B.M (Sequence Method)  
Last changed : 3/22/2013 1:01:20 AM  
(modified after loading)  
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=====  
External Standard Report  
=====

Sorted By : Signal  
Calib. Data Modified : 3/22/2013 1:01:20 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Do not use Multiplier & Dilution Factor with ISTDs

=====  
Acq. Operator : Seq. Line : 21  
Acq. Instrument : GC C Location : Vial 17  
Injection Date : 3/21/2013 11:06:31 PM Inj : 1  
Inj Volume : 5 µl  
Acq. Method : C:\CHEM32\1\DATA\0319-TPH 2013-03-21 16-37-34\TPH-FRONT-1090171B.M  
Last changed : 3/14/2013 1:57:38 PM  
Analysis Method : C:\CHEM32\1\DATA\0319-TPH 2013-03-21 16-37-34\TPH-FRONT-1090171B.M (Sequence Method)  
Last changed : 3/22/2013 1:01:20 AM  
(modified after loading)  
=====



=====  
External Standard Report  
=====

Sorted By : Signal  
Calib. Data Modified : 3/22/2013 1:01:20 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Do not use Multiplier & Dilution Factor with ISTDs

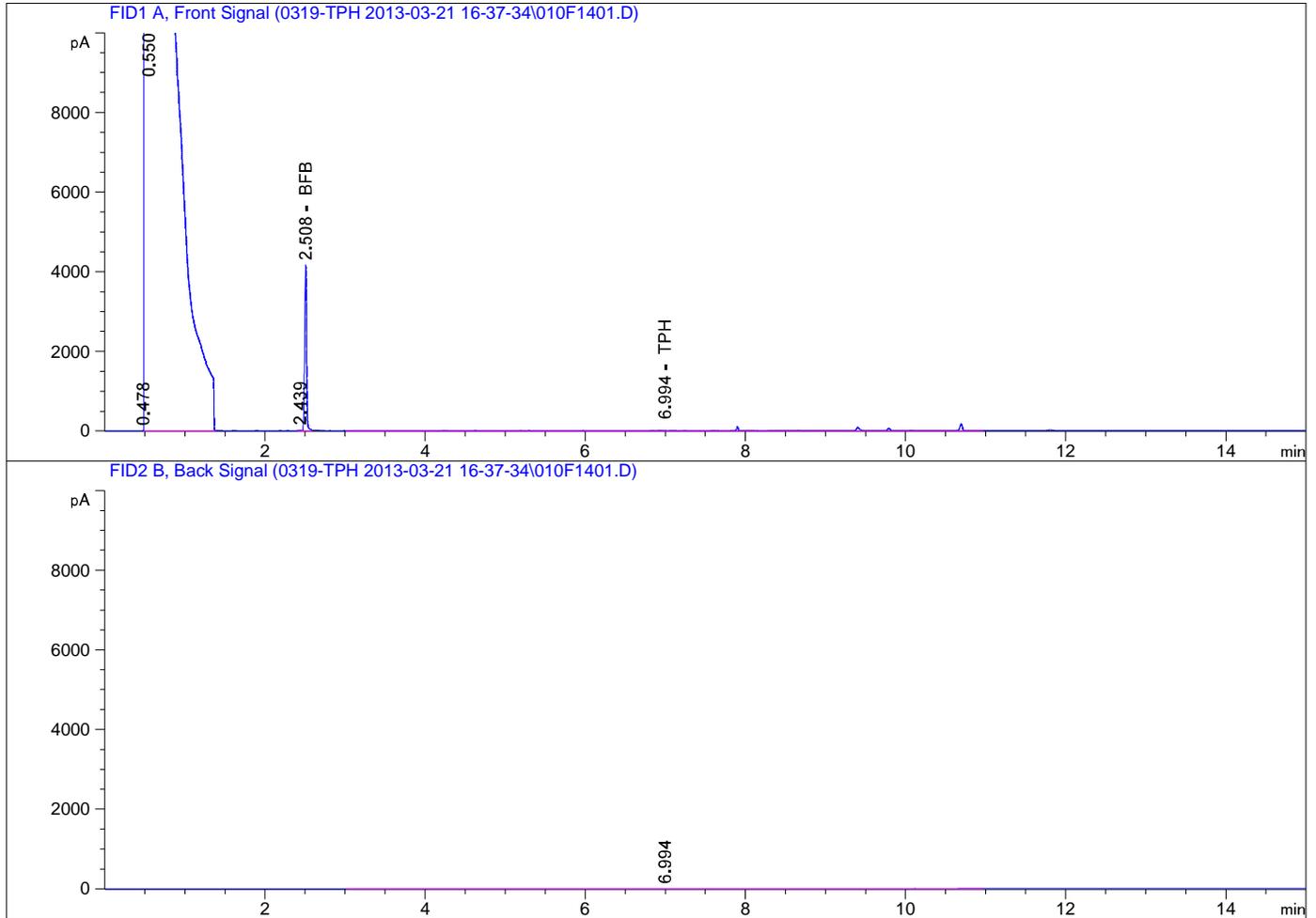




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Acq. Operator	:		Seq. Line	:	14
Acq. Instrument	:	GC C	Location	:	Vial 10
Injection Date	:	3/21/2013 8:51:12 PM	Inj	:	1
			Inj Volume	:	5 µl
Acq. Method	:	C:\CHEM32\1\DATA\0319-TPH 2013-03-21 16-37-34\TPH-FRONT-1090171B.M			
Last changed	:	3/14/2013 1:57:38 PM			
Analysis Method	:	C:\CHEM32\1\DATA\0319-TPH 2013-03-21 16-37-34\TPH-FRONT-1090171B.M (Sequence Method)			
Last changed	:	3/22/2013 1:01:20 AM (modified after loading)			

=====

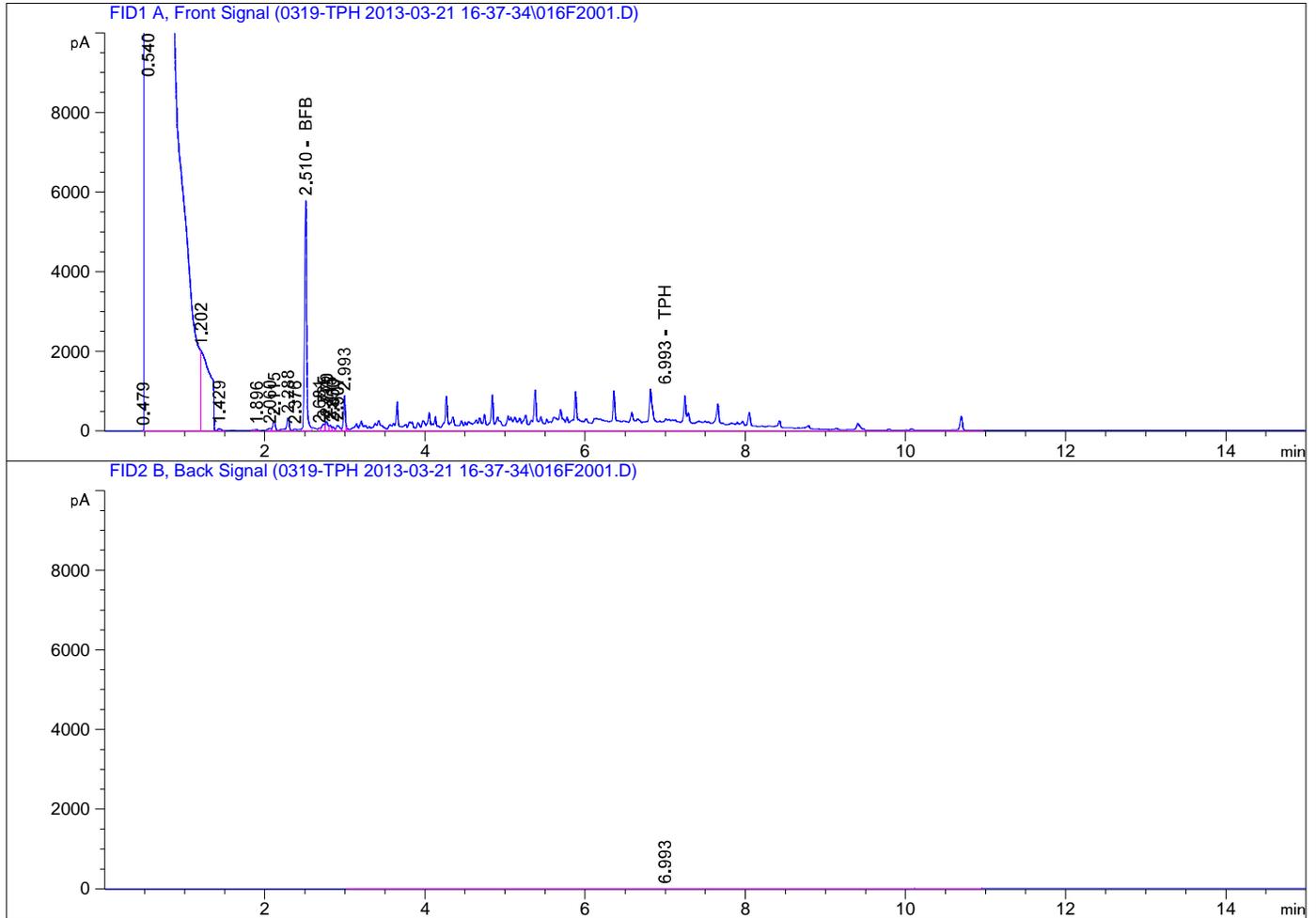


=====  
External Standard Report  
=====

Sorted By : Signal  
Calib. Data Modified : 3/22/2013 1:01:20 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Do not use Multiplier & Dilution Factor with ISTDs



=====  
Acq. Operator : Seq. Line : 20  
Acq. Instrument : GC C Location : Vial 16  
Injection Date : 3/21/2013 10:47:10 PM Inj : 1  
Inj Volume : 5 µl  
Acq. Method : C:\CHEM32\1\DATA\0319-TPH 2013-03-21 16-37-34\TPH-FRONT-1090171B.M  
Last changed : 3/14/2013 1:57:38 PM  
Analysis Method : C:\CHEM32\1\DATA\0319-TPH 2013-03-21 16-37-34\TPH-FRONT-1090171B.M (Sequence Method)  
Last changed : 3/22/2013 1:01:20 AM  
(modified after loading)  
=====



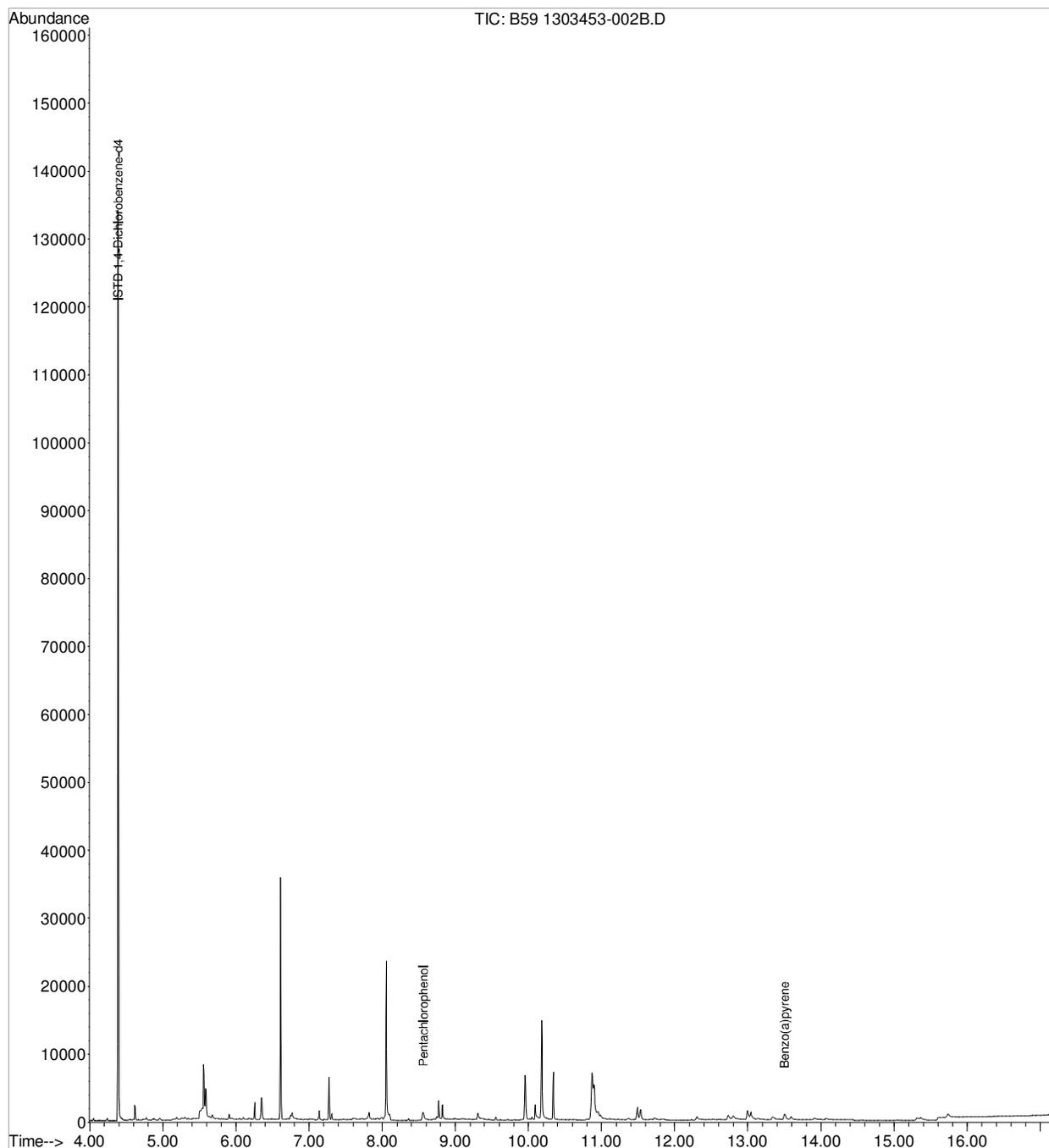
=====  
External Standard Report  
=====

Sorted By : Signal  
Calib. Data Modified : 3/22/2013 1:01:20 AM  
Multiplier: : 1.0000  
Dilution: : 1.0000  
Do not use Multiplier & Dilution Factor with ISTDs

Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\MAR 13\21MAR13-A\  
Data File : B59 1303453-002B.D  
Acq On : 21 Mar 2013 9:29 pm  
Operator : ALICIA HABERLE  
Sample : 1303453-002B  
Misc : SAMP  
ALS Vial : 19 Sample Multiplier: 1

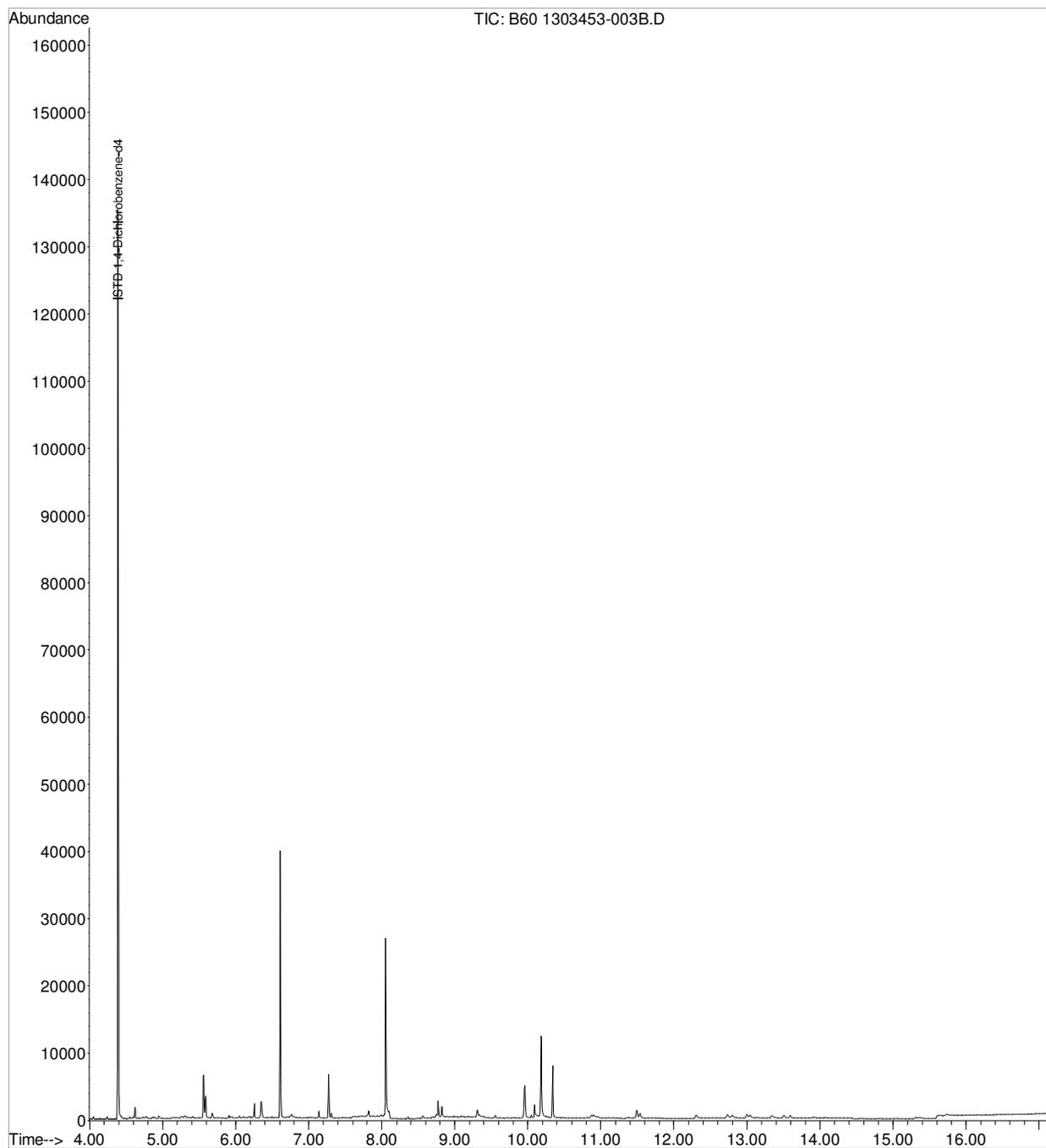
Quant Time: Mar 22 10:41:30 2013  
Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M  
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B  
QLast Update : Wed Mar 20 20:40:07 2013  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\MAR 13\21MAR13-A\  
Data File : B60 1303453-003B.D  
Acq On : 21 Mar 2013 9:56 pm  
Operator : ALICIA HABERLE  
Sample : 1303453-003B  
Misc : SAMP  
ALS Vial : 20 Sample Multiplier: 1

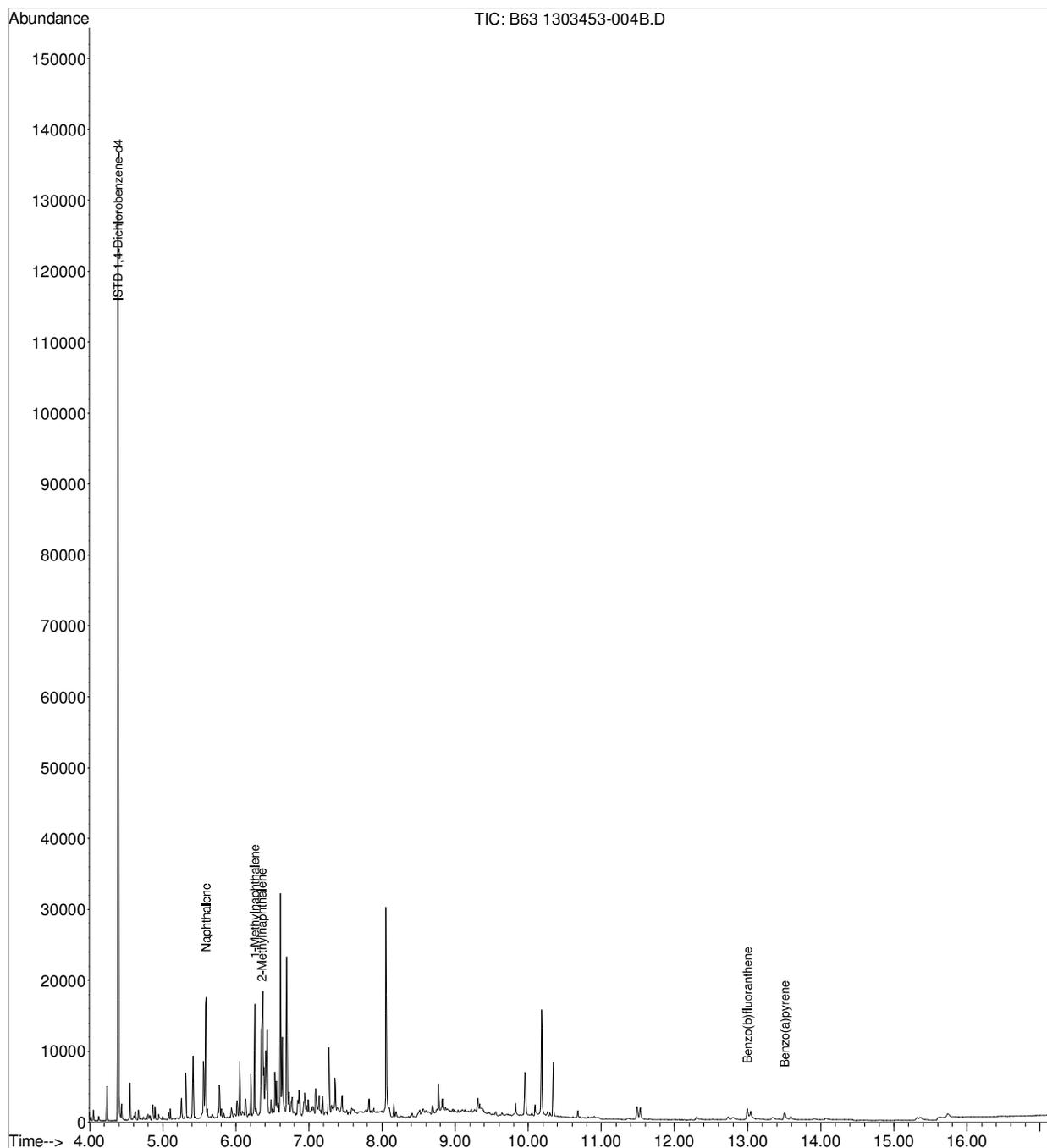
Quant Time: Mar 22 10:42:10 2013  
Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M  
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B  
QLast Update : Wed Mar 20 20:40:07 2013  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\MAR 13\21MAR13-A\  
Data File : B63 1303453-004B.D  
Acq On : 21 Mar 2013 11:15 pm  
Operator : ALICIA HABERLE  
Sample : 1303453-004B  
Misc : SAMP  
ALS Vial : 23 Sample Multiplier: 1

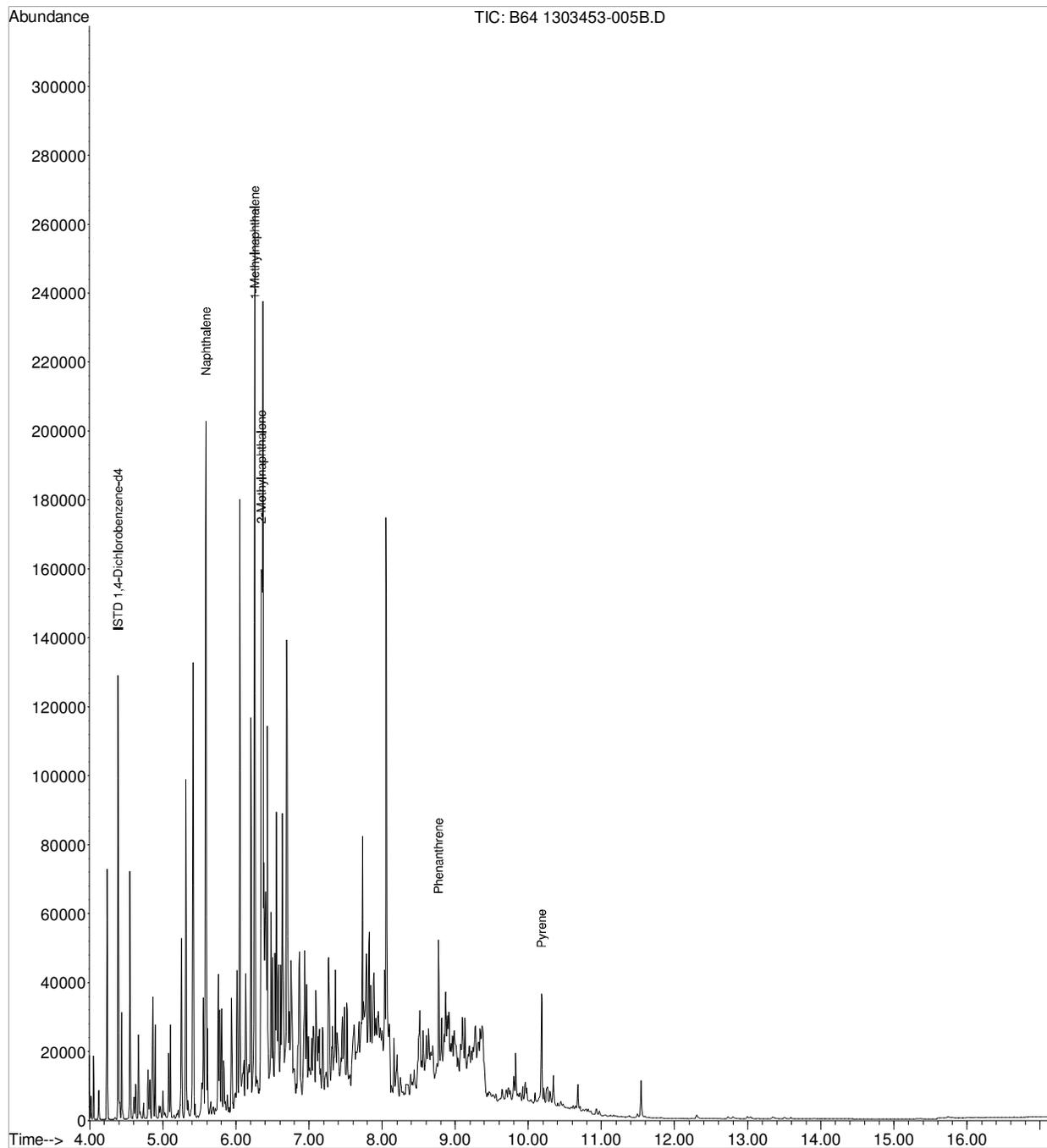
Quant Time: Mar 22 10:43:47 2013  
Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M  
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B  
QLast Update : Wed Mar 20 20:40:07 2013  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\MAR 13\21MAR13-A\  
Data File : B64 1303453-005B.D  
Acq On : 21 Mar 2013 11:42 pm  
Operator : ALICIA HABERLE  
Sample : 1303453-005B  
Misc : SAMP  
ALS Vial : 24 Sample Multiplier: 1

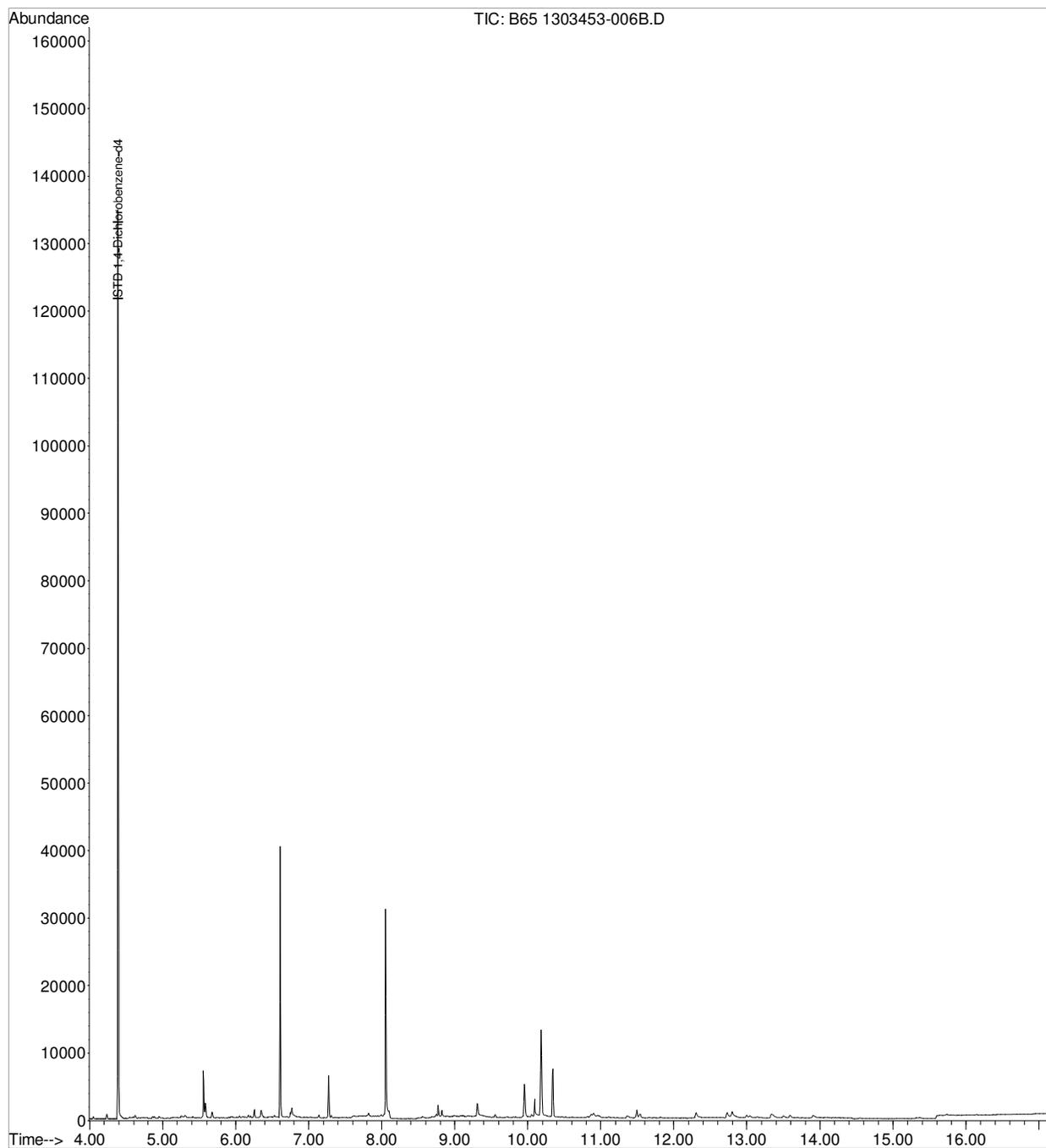
Quant Time: Mar 22 10:45:06 2013  
Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M  
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B  
QLast Update : Wed Mar 20 20:40:07 2013  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\MAR 13\21MAR13-A\  
Data File : B65 1303453-006B.D  
Acq On : 22 Mar 2013 12:09 am  
Operator : ALICIA HABERLE  
Sample : 1303453-006B  
Misc : SAMP  
ALS Vial : 25 Sample Multiplier: 1

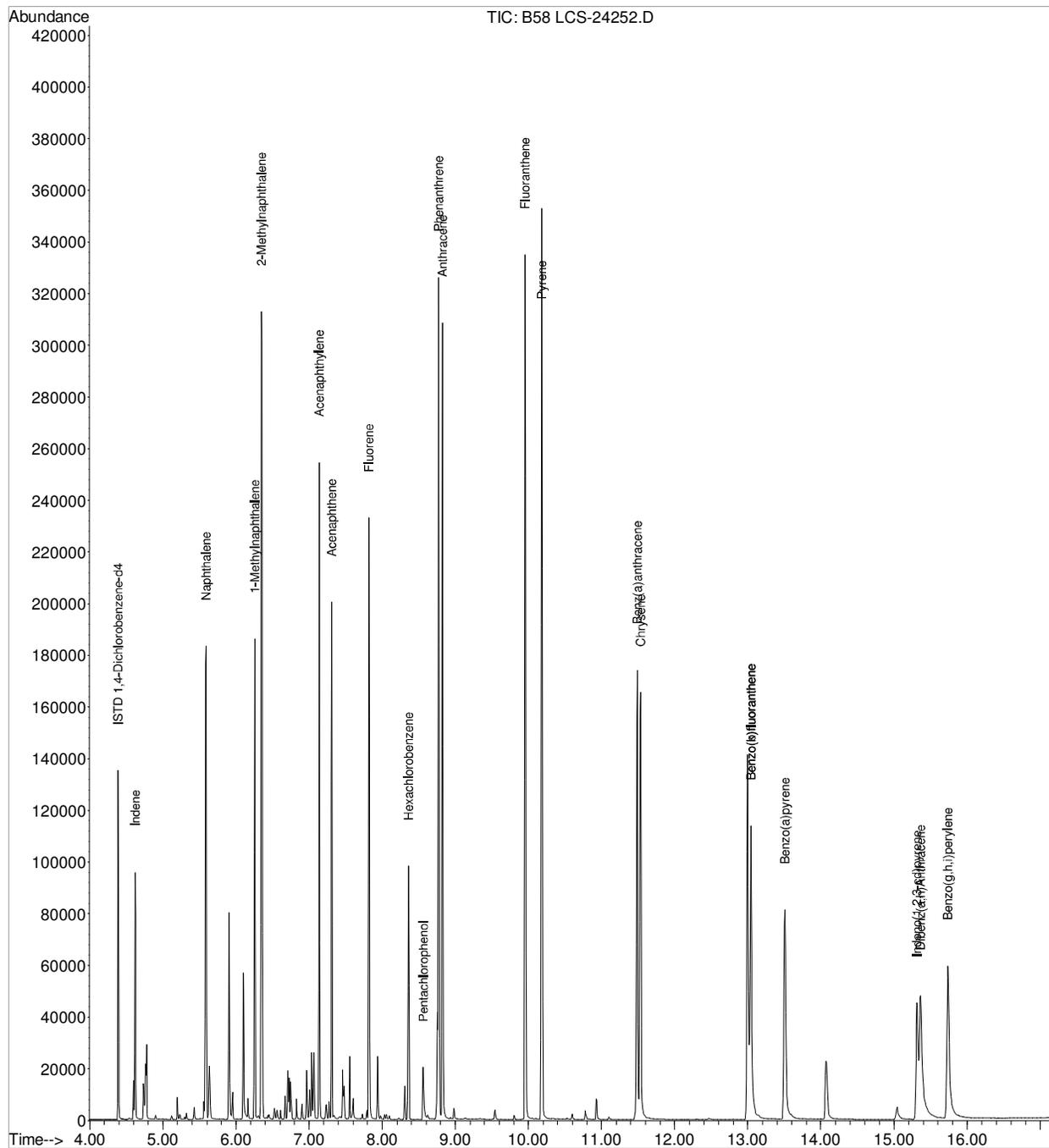
Quant Time: Mar 22 10:45:48 2013  
Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M  
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B  
QLast Update : Wed Mar 20 20:40:07 2013  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\MAR 13\21MAR13-A\  
 Data File : B58 LCS-24252.D  
 Acq On : 21 Mar 2013 9:03 pm  
 Operator : ALICIA HABERLE  
 Sample : LCS-24252  
 Misc : LCS  
 ALS Vial : 18 Sample Multiplier: 1

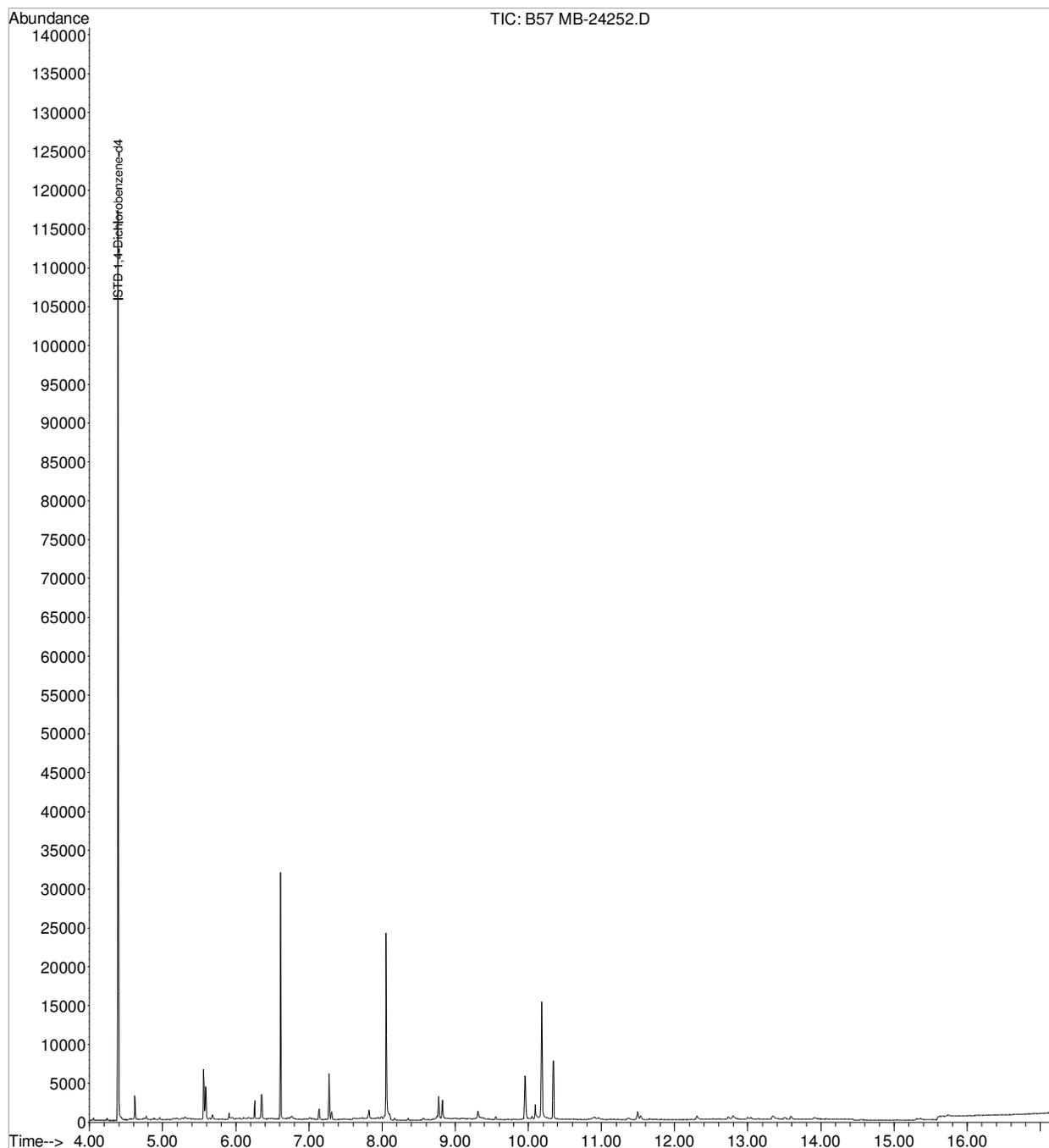
Quant Time: Mar 22 10:40:38 2013  
 Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M  
 Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B  
 QLast Update : Wed Mar 20 20:40:07 2013  
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\MAR 13\21MAR13-A\  
Data File : B57 MB-24252.D  
Acq On : 21 Mar 2013 8:36 pm  
Operator : ALICIA HABERLE  
Sample : MB-24252  
Misc : MBLK  
ALS Vial : 17 Sample Multiplier: 1

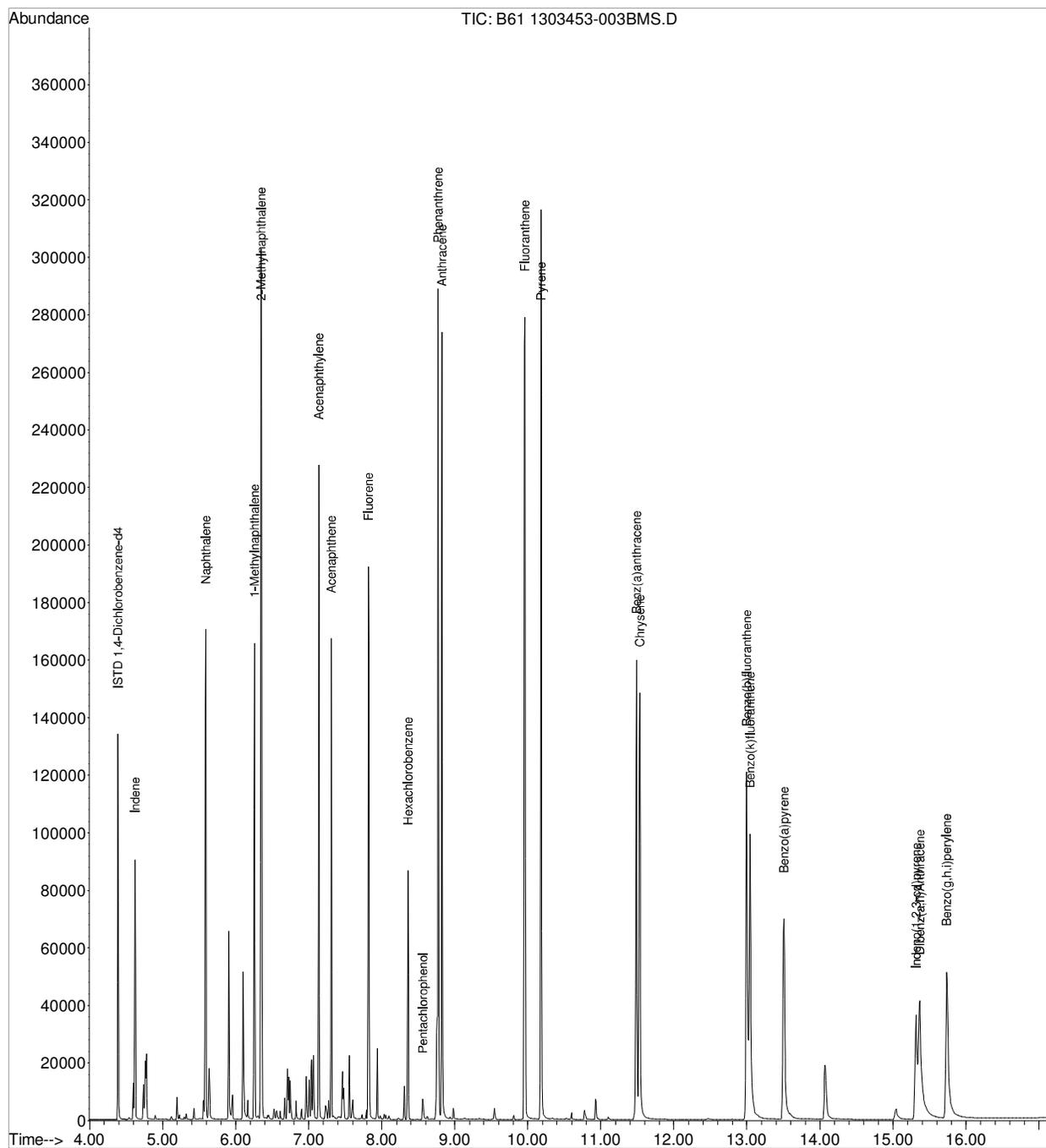
Quant Time: Mar 22 10:40:15 2013  
Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M  
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B  
QLast Update : Wed Mar 20 20:40:07 2013  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\MAR 13\21MAR13-A\  
 Data File : B61 1303453-003BMS.D  
 Acq On : 21 Mar 2013 10:22 pm  
 Operator : ALICIA HABERLE  
 Sample : 1303453-003BMS  
 Misc : MS  
 ALS Vial : 21 Sample Multiplier: 1

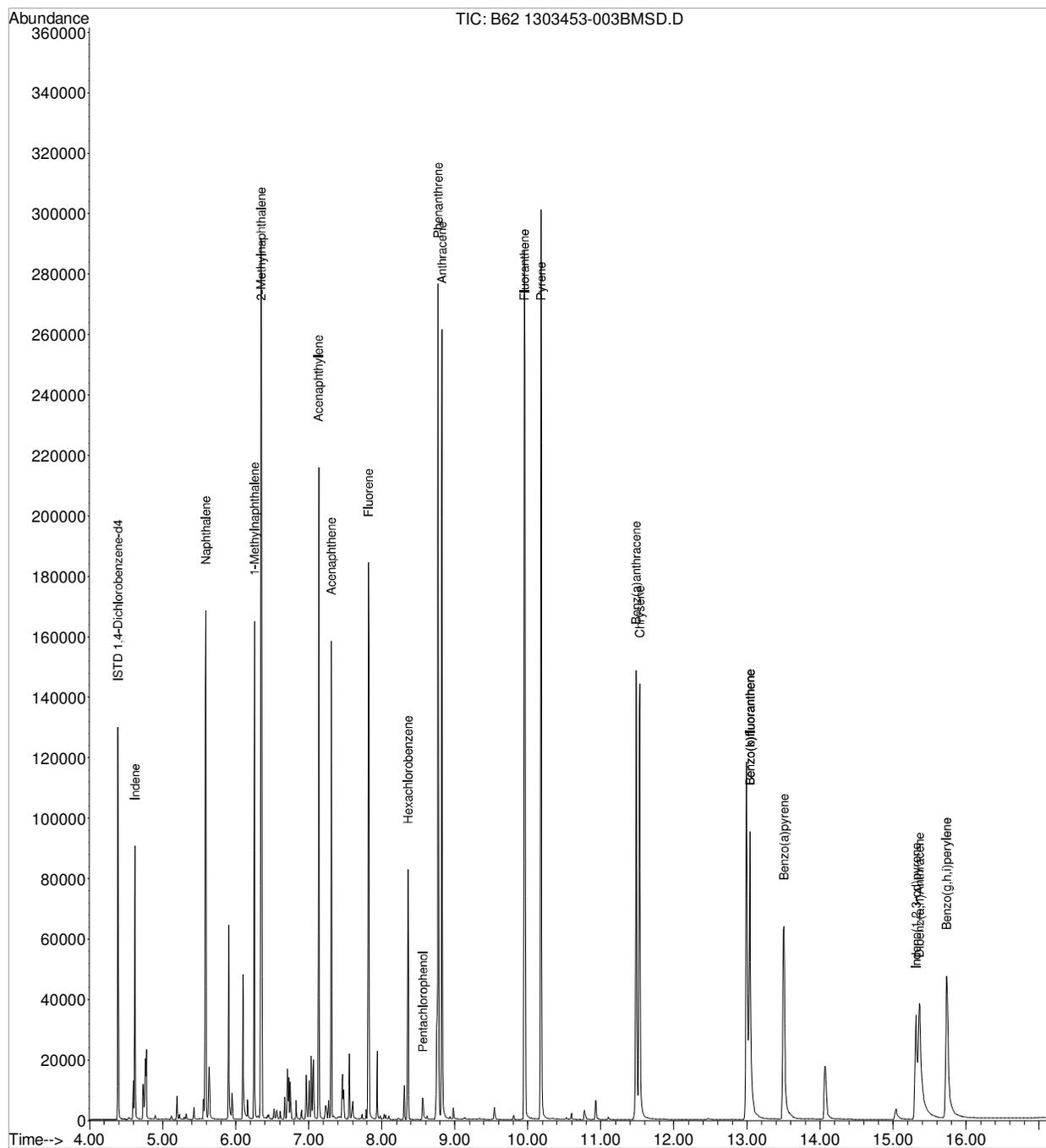
Quant Time: Mar 22 00:55:01 2013  
 Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M  
 Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B  
 QLast Update : Wed Mar 20 20:40:07 2013  
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\MAR 13\21MAR13-A\  
 Data File : B62 1303453-003BMSD.D  
 Acq On : 21 Mar 2013 10:49 pm  
 Operator : ALICIA HABERLE  
 Sample : 1303453-003BMSD  
 Misc : MSD  
 ALS Vial : 22 Sample Multiplier: 1

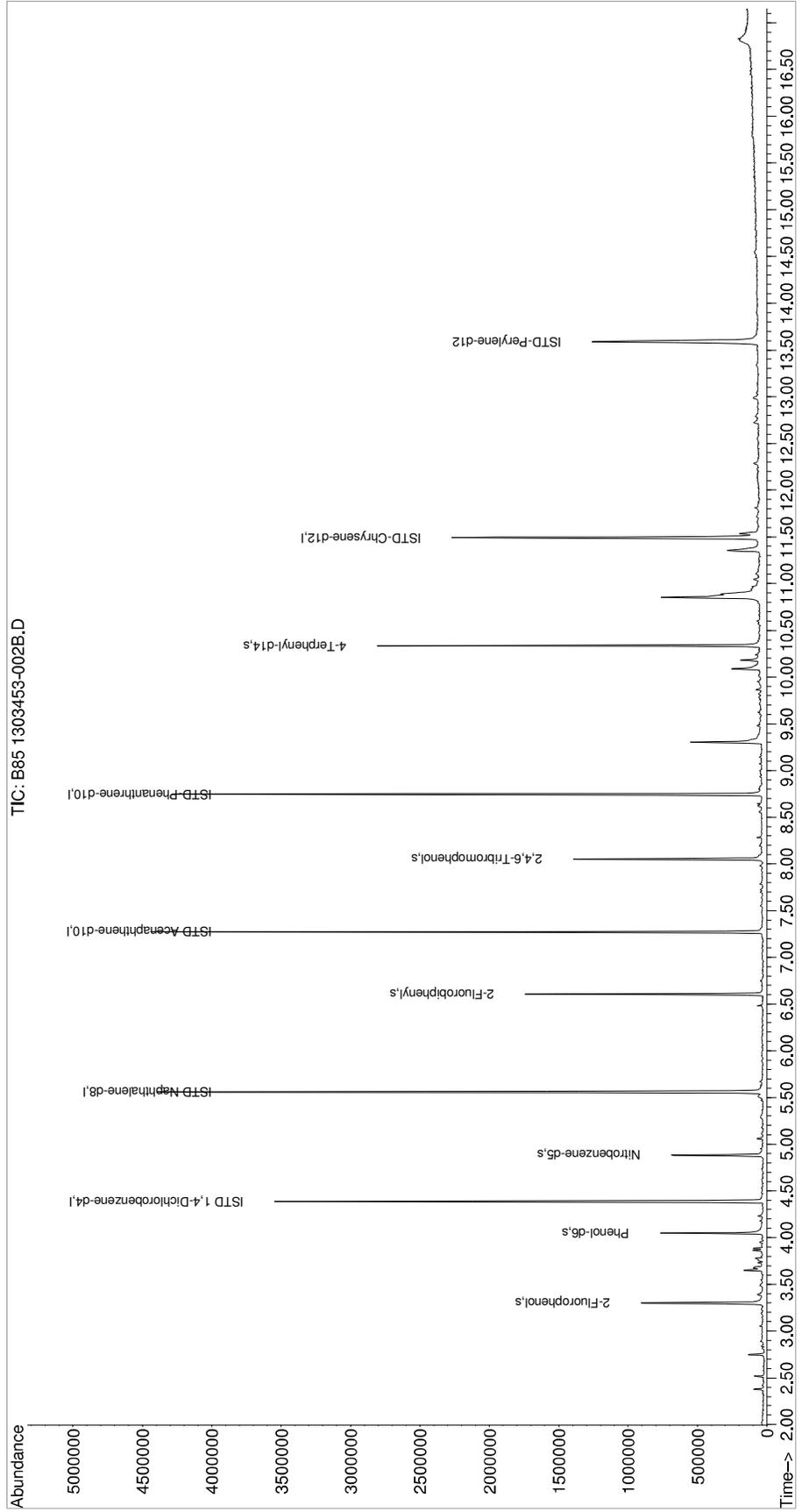
Quant Time: Mar 22 10:42:56 2013  
 Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M  
 Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B  
 QLast Update : Wed Mar 20 20:40:07 2013  
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\MAR 13\22MAR13-A\  
 Data File : B85 1303453-002B.D  
 Acq On : 22 Mar 2013 3:39 pm  
 Operator : ALICIA HABERLE  
 Sample : 1303453-002B  
 Misc : SAMP  
 ALS Vial : 45 Sample Multiplier: 1

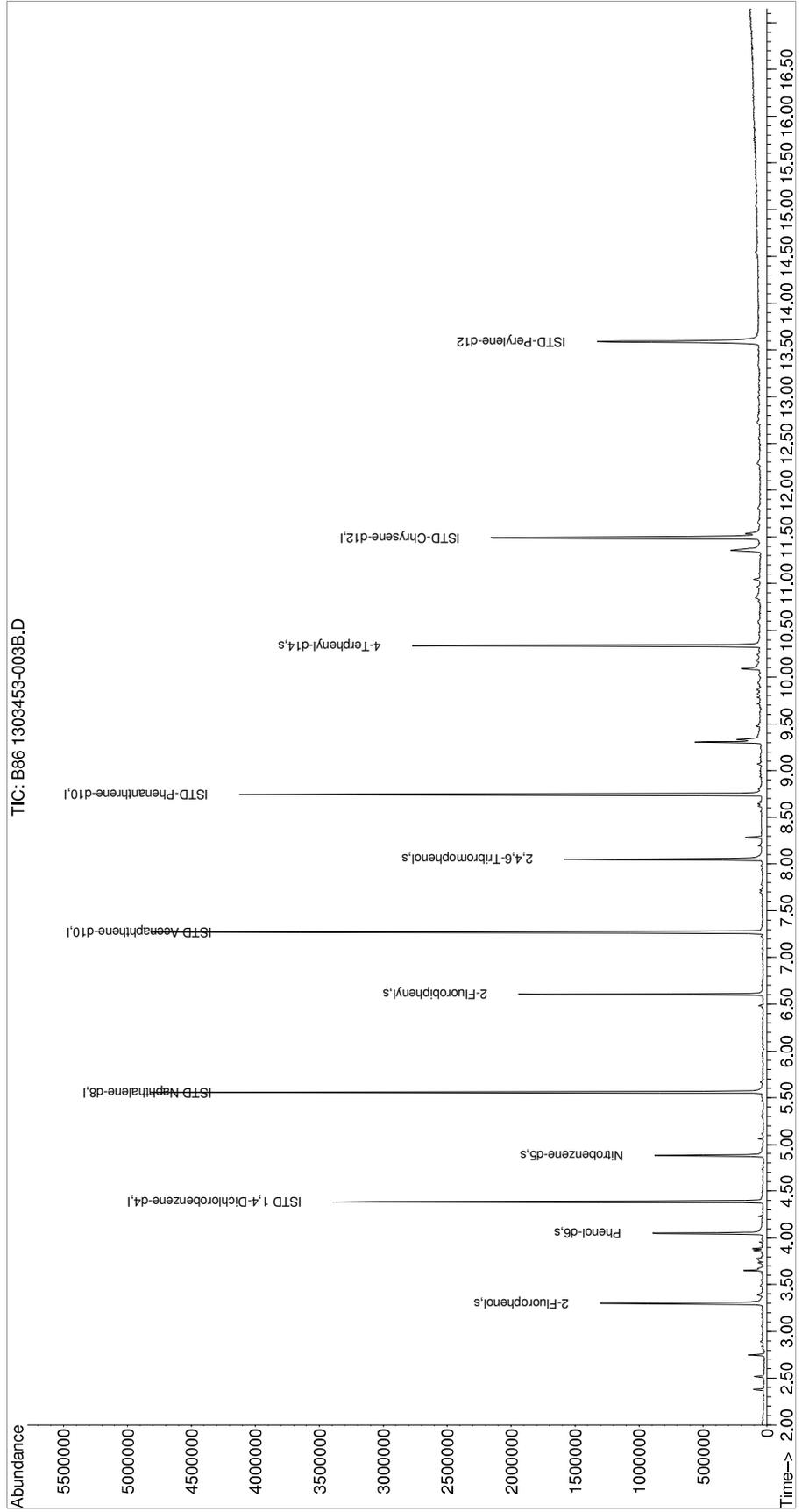
Quant Time: Mar 22 16:48:16 2013  
 Quant Method : C:\MSDCHEM\1\METHODS\QUANTFULSV 03-19-13.M  
 Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B  
 QLast Update : Fri Mar 22 13:32:35 2013  
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\MAR 13\22MAR13-A\  
Data File : B86 1303453-003B.D  
Acq On : 22 Mar 2013 4:05 pm  
Operator : ALICIA HABERLE  
Sample : 1303453-003B  
Misc : SAMP  
ALS Vial : 46 Sample Multiplier: 1

Quant Time: Mar 22 16:51:45 2013  
Quant Method : C:\MSDCHEM\1\METHODS\QUANTFULSV 03-19-13.M  
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B  
QLast Update : Tue Mar 19 19:32:24 2013  
Response via : Initial Calibration



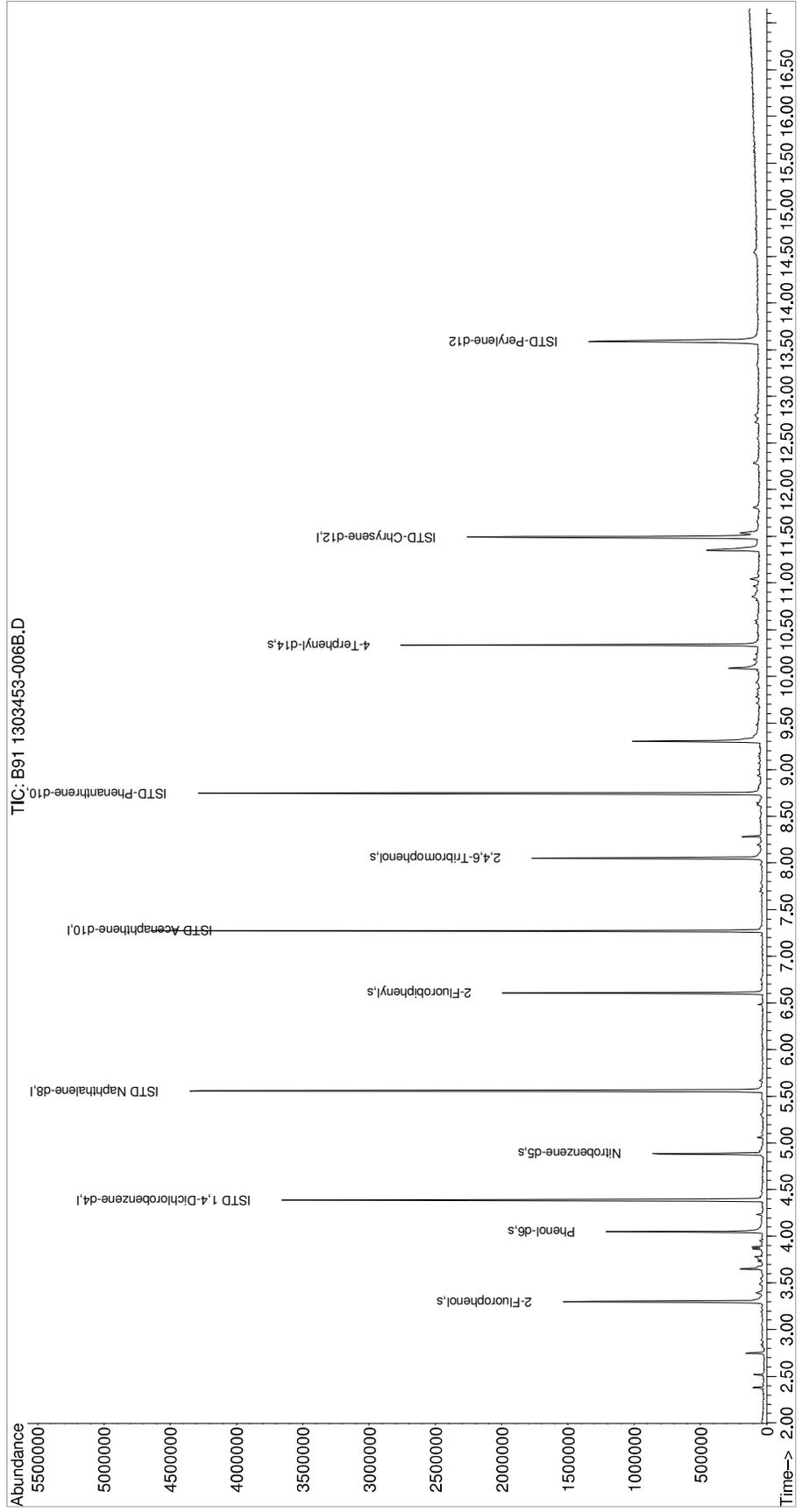




Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\MAR 13\22MAR13-A\  
Data File : B91 1303453-006B.D  
Acq On : 22 Mar 2013 6:18 pm  
Operator : ALICIA HABERLE  
Sample : 1303453-006B  
Misc : SAMP  
ALS Vial : 51 Sample Multiplier: 1

Quant Time: Mar 23 16:28:59 2013  
Quant Method : C:\MSDCHEM\1\METHODS\QUANTFULSV 03-19-13.M  
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B  
QLast Update : Sat Mar 23 15:30:07 2013  
Response via : Initial Calibration







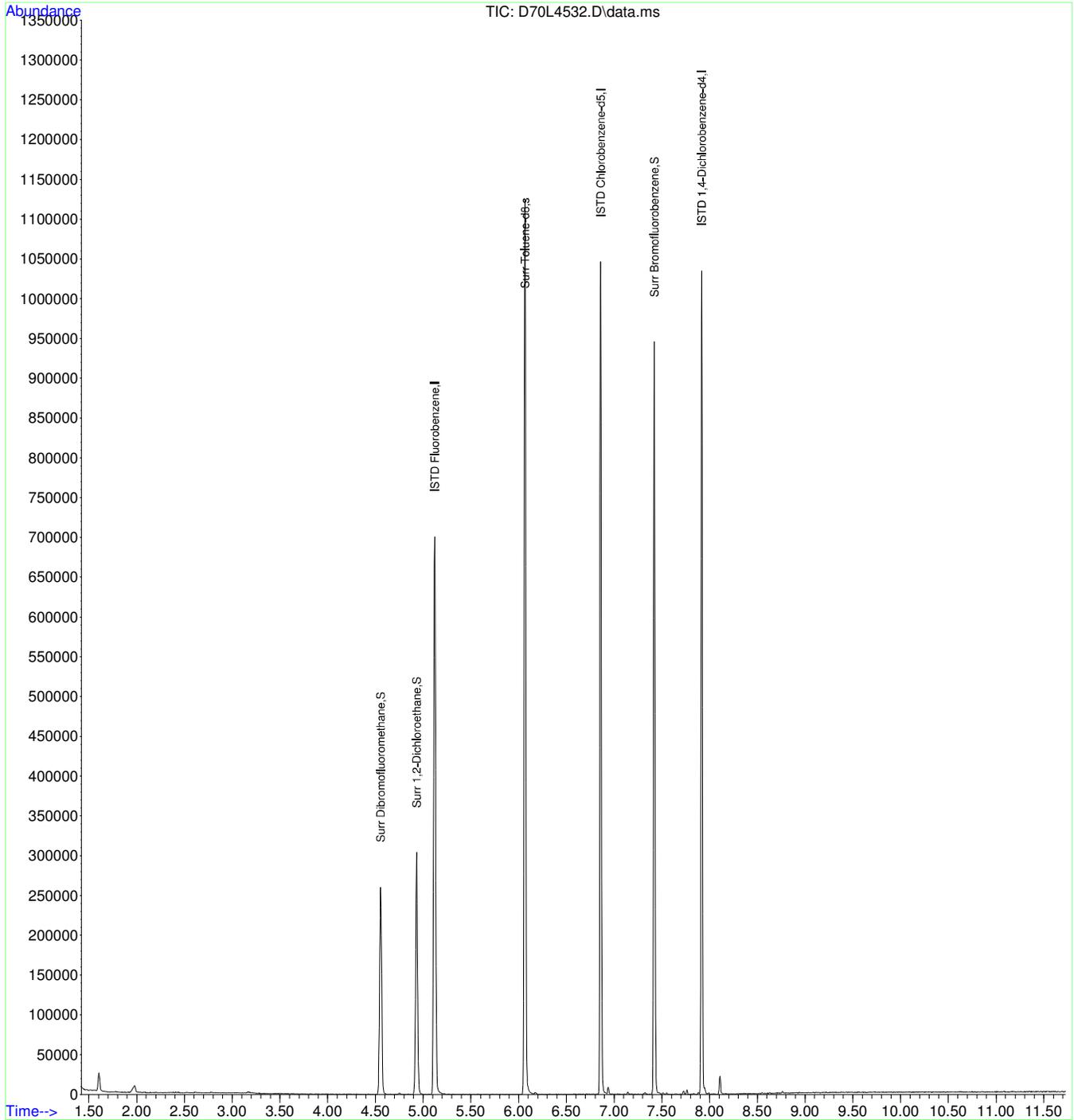




Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\MAR13-D\20MAR13\  
Data File : D70L4532.D  
Acq On : 20 Mar 2013 7:41 pm  
Operator : AAP  
Sample : 1303453-002A  
Misc : SAMP 5.0ML 1OF3 SB  
ALS Vial : 6 Sample Multiplier: 1

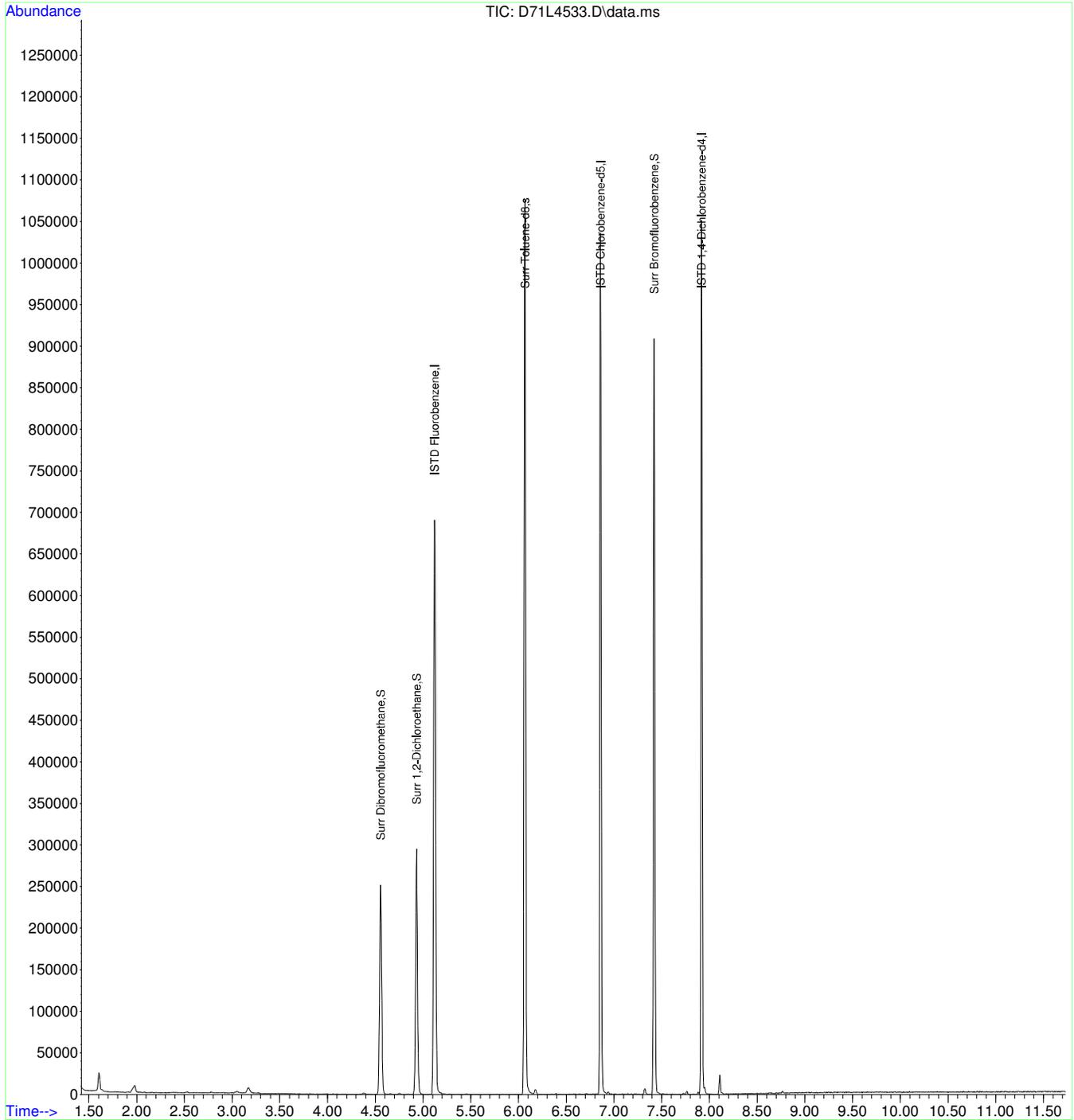
Quant Time: Mar 21 06:31:36 2013  
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW\_13.M  
Quant Title : VOA Calibration  
QLast Update : Wed Mar 13 09:17:53 2013  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\MAR13-D\20MAR13\  
Data File : D71L4533.D  
Acq On : 20 Mar 2013 8:00 pm  
Operator : AAP  
Sample : 1303453-003A  
Misc : SAMP 5.0ML 1OF3 SB  
ALS Vial : 7 Sample Multiplier: 1

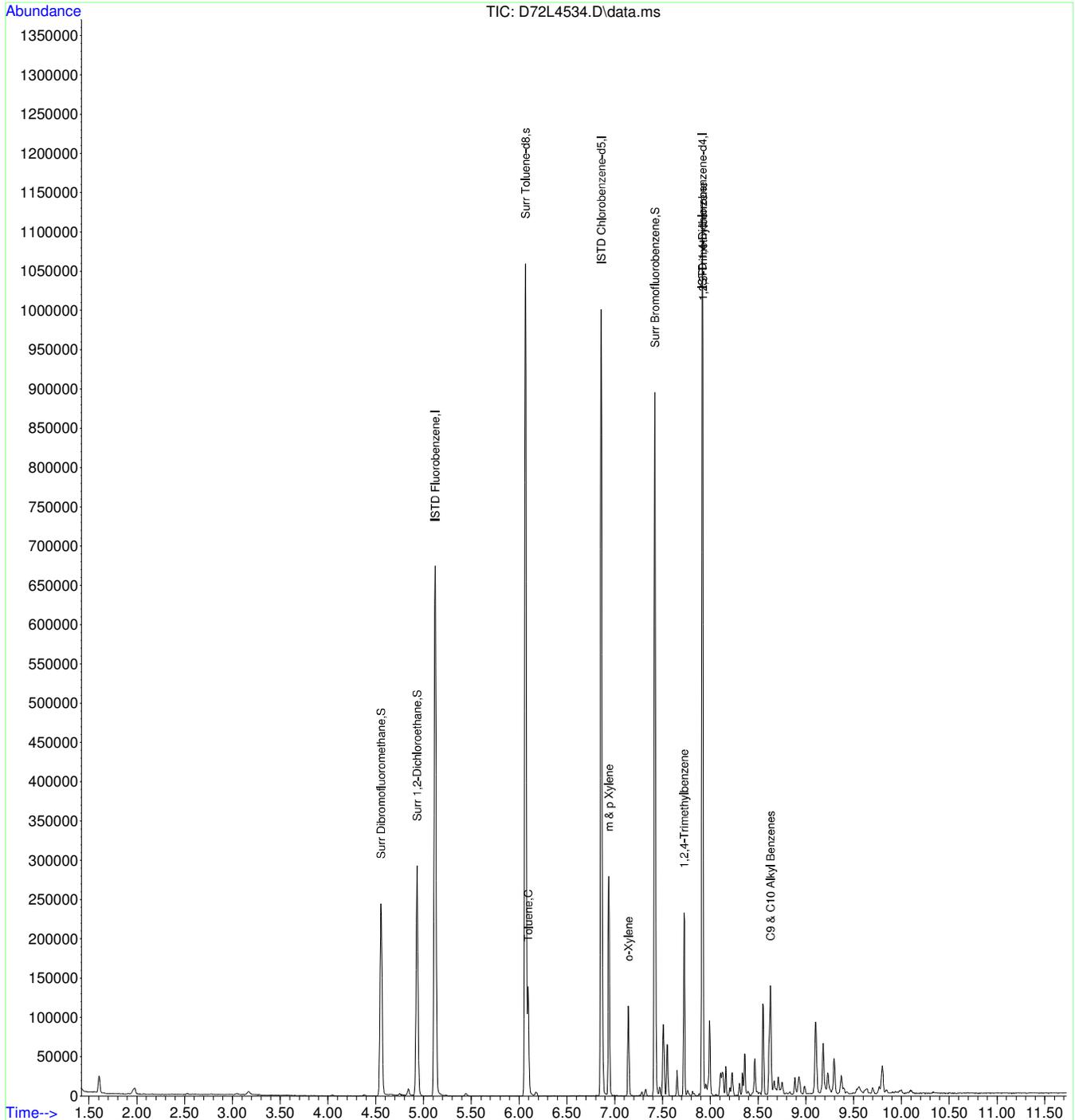
Quant Time: Mar 21 06:31:57 2013  
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW\_13.M  
Quant Title : VOA Calibration  
QLast Update : Wed Mar 13 09:17:53 2013  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\MAR13-D\20MAR13\  
Data File : D72L4534.D  
Acq On : 20 Mar 2013 8:19 pm  
Operator : AAP  
Sample : 1303453-004A  
Misc : SAMP 5.0ML 1OF3 SB  
ALS Vial : 8 Sample Multiplier: 1

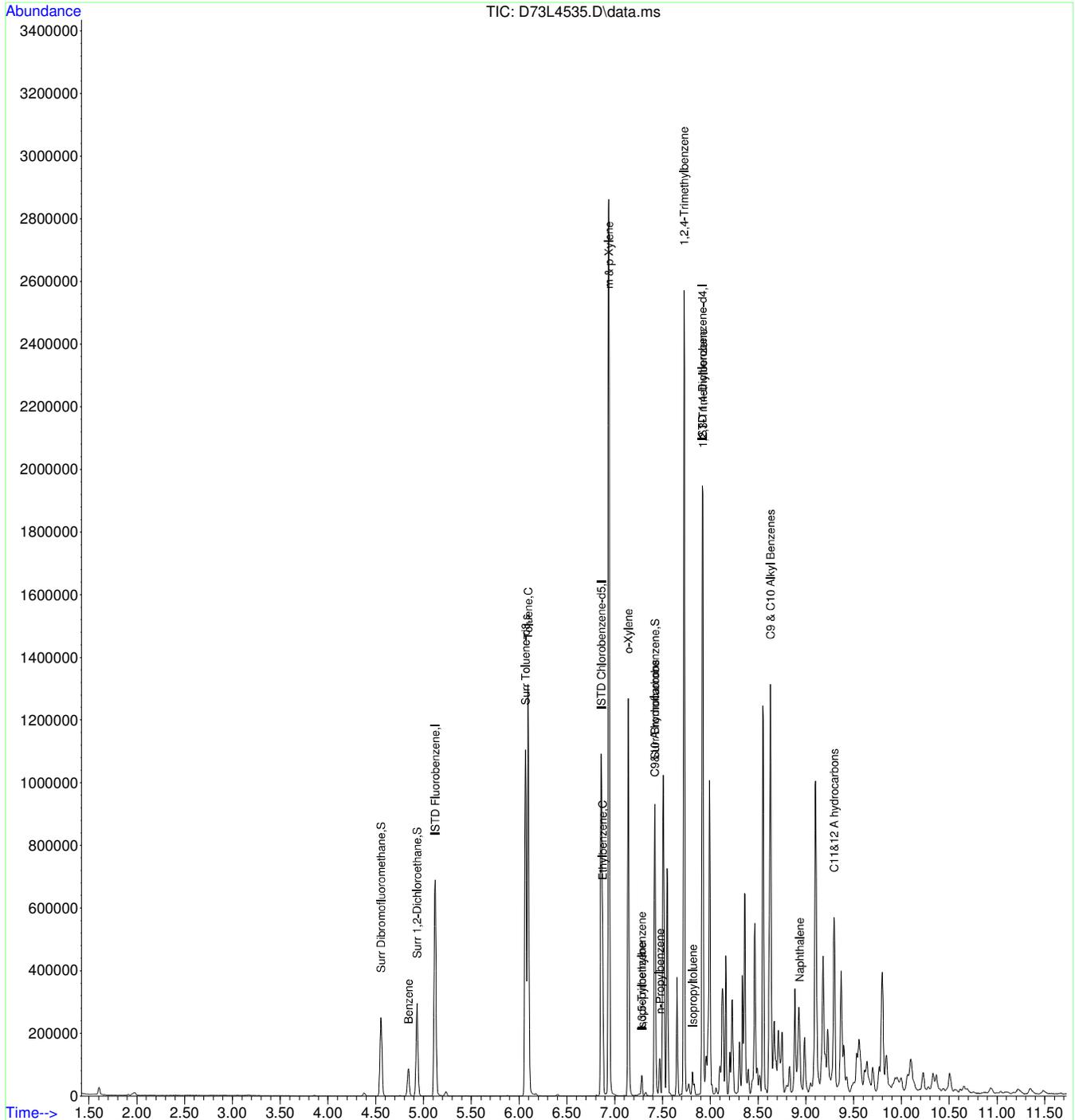
Quant Time: Mar 21 06:32:42 2013  
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW\_13.M  
Quant Title : VOA Calibration  
QLast Update : Wed Mar 13 09:17:53 2013  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\MAR13-D\20MAR13\  
Data File : D73L4535.D  
Acq On : 20 Mar 2013 8:38 pm  
Operator : AAP  
Sample : 1303453-005A  
Misc : SAMP 5.0ML 10F3 SB  
ALS Vial : 9 Sample Multiplier: 1

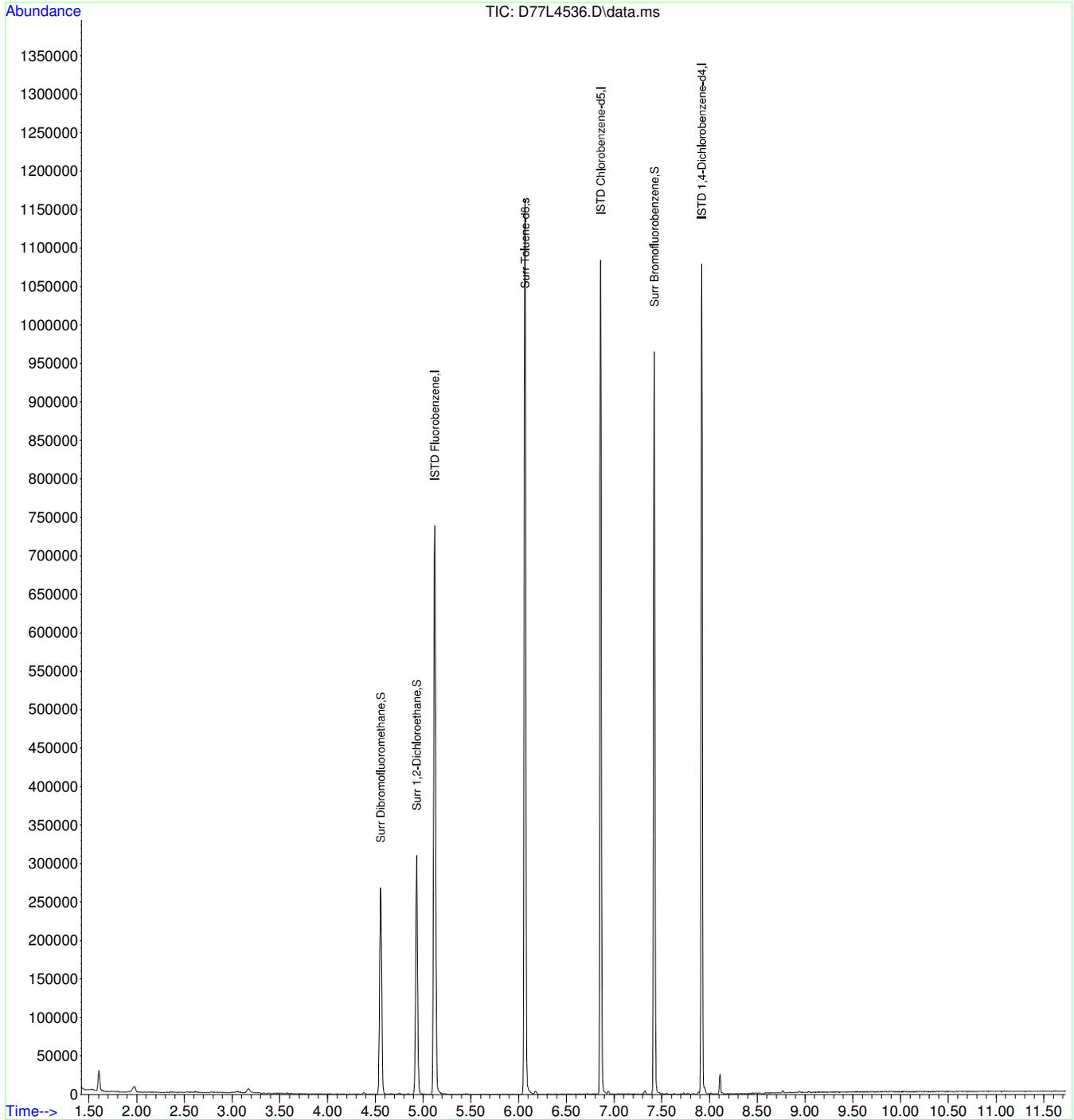
Quant Time: Mar 21 06:33:57 2013  
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW\_13.M  
Quant Title : VOA Calibration  
QLast Update : Wed Mar 13 09:17:53 2013  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\MAR13-D\20MAR13\  
Data File : D77L4536.D  
Acq On : 20 Mar 2013 9:54 pm  
Operator : AAP  
Sample : 1303453-006A  
Misc : SAMP 5.0ML 1OF3 SB  
ALS Vial : 13 Sample Multiplier: 1

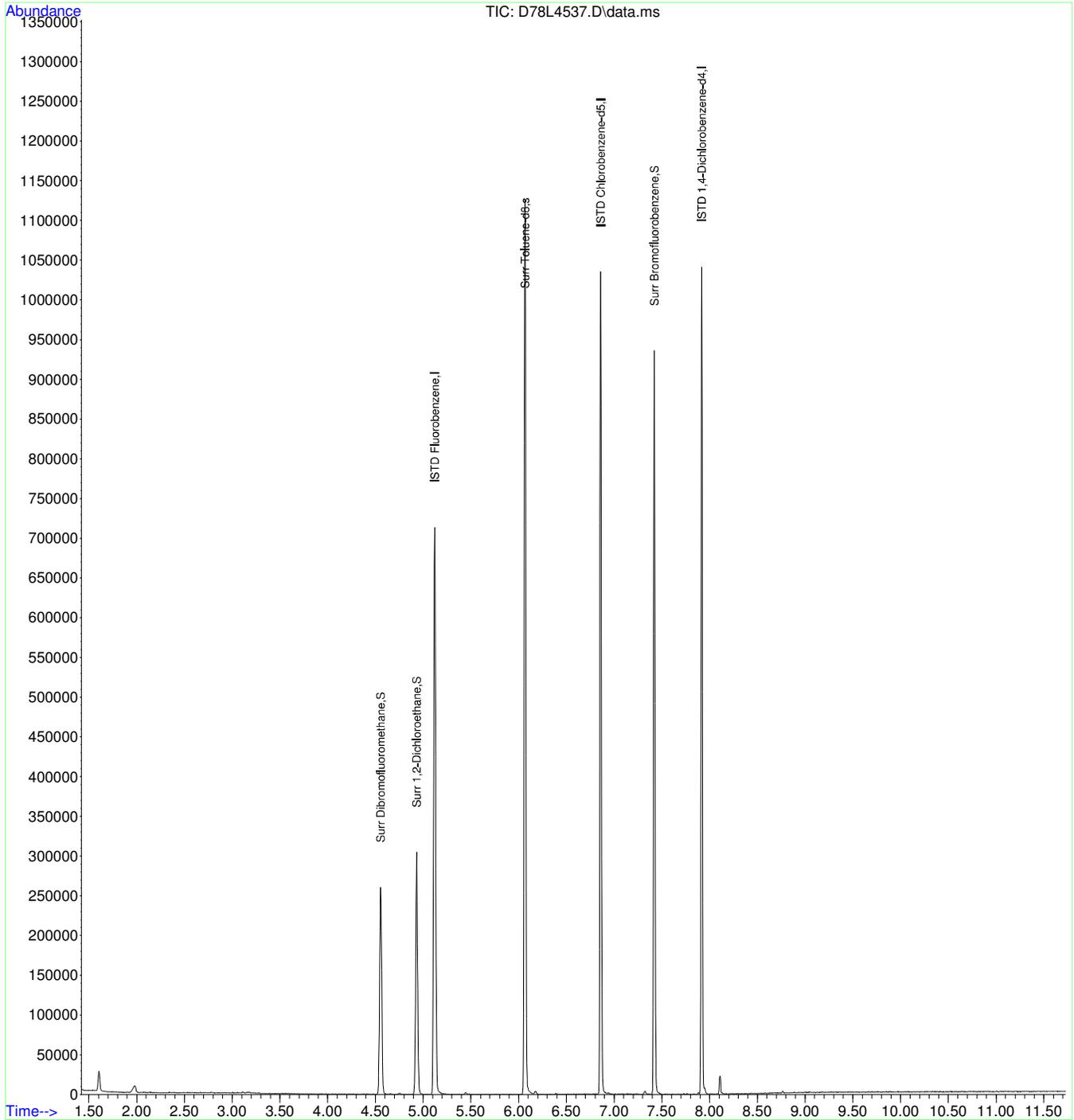
Quant Time: Mar 21 06:34:42 2013  
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW\_13.M  
Quant Title : VOA Calibration  
QLast Update : Wed Mar 13 09:17:53 2013  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\MAR13-D\20MAR13\  
Data File : D78L4537.D  
Acq On : 20 Mar 2013 10:13 pm  
Operator : AAP  
Sample : 1303453-007A  
Misc : SAMP 5.0ML 1OF3 SB  
ALS Vial : 14 Sample Multiplier: 1

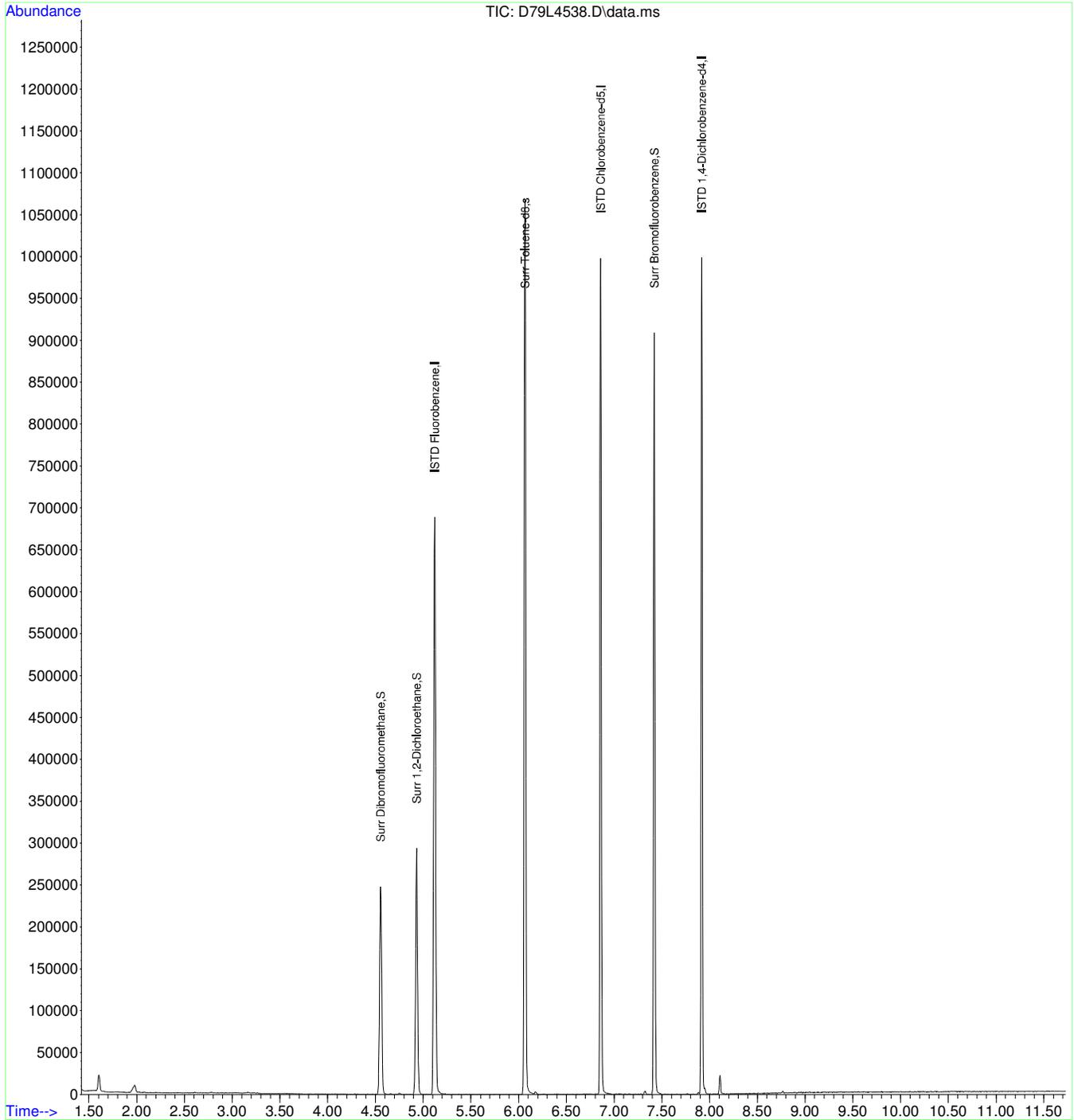
Quant Time: Mar 21 06:35:03 2013  
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW\_13.M  
Quant Title : VOA Calibration  
QLast Update : Wed Mar 13 09:17:53 2013  
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

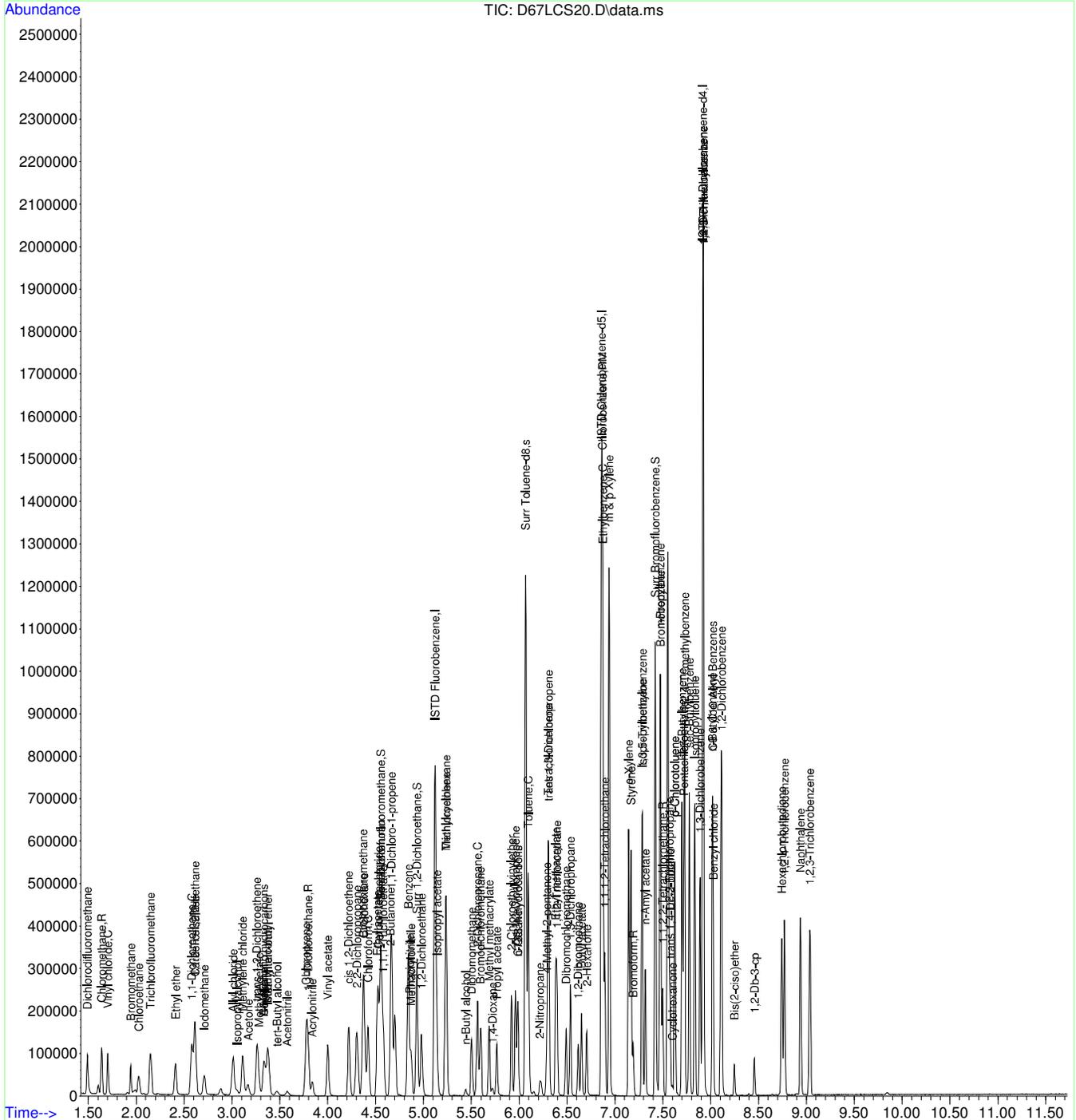
Data Path : C:\msdchem\1\data\MAR13-D\20MAR13\  
Data File : D79L4538.D  
Acq On : 20 Mar 2013 10:32 pm  
Operator : AAP  
Sample : 1303453-008A  
Misc : SAMP 5.0ML 1OF3 SB  
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Mar 21 06:35:25 2013  
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW\_13.M  
Quant Title : VOA Calibration  
QLast Update : Wed Mar 13 09:17:53 2013  
Response via : Initial Calibration



Data Path : C:\msdchem\1\data\MAR13-D\20MAR13\  
 Data File : D67LCS20.D  
 Acq On : 20 Mar 2013 6:44 pm  
 Operator : AAP  
 Sample : LCS VOC 032013B  
 Misc : LCS SEE COVERSHEET FOR ID AND AMOUNT SB  
 ALS Vial : 3 Sample Multiplier: 1

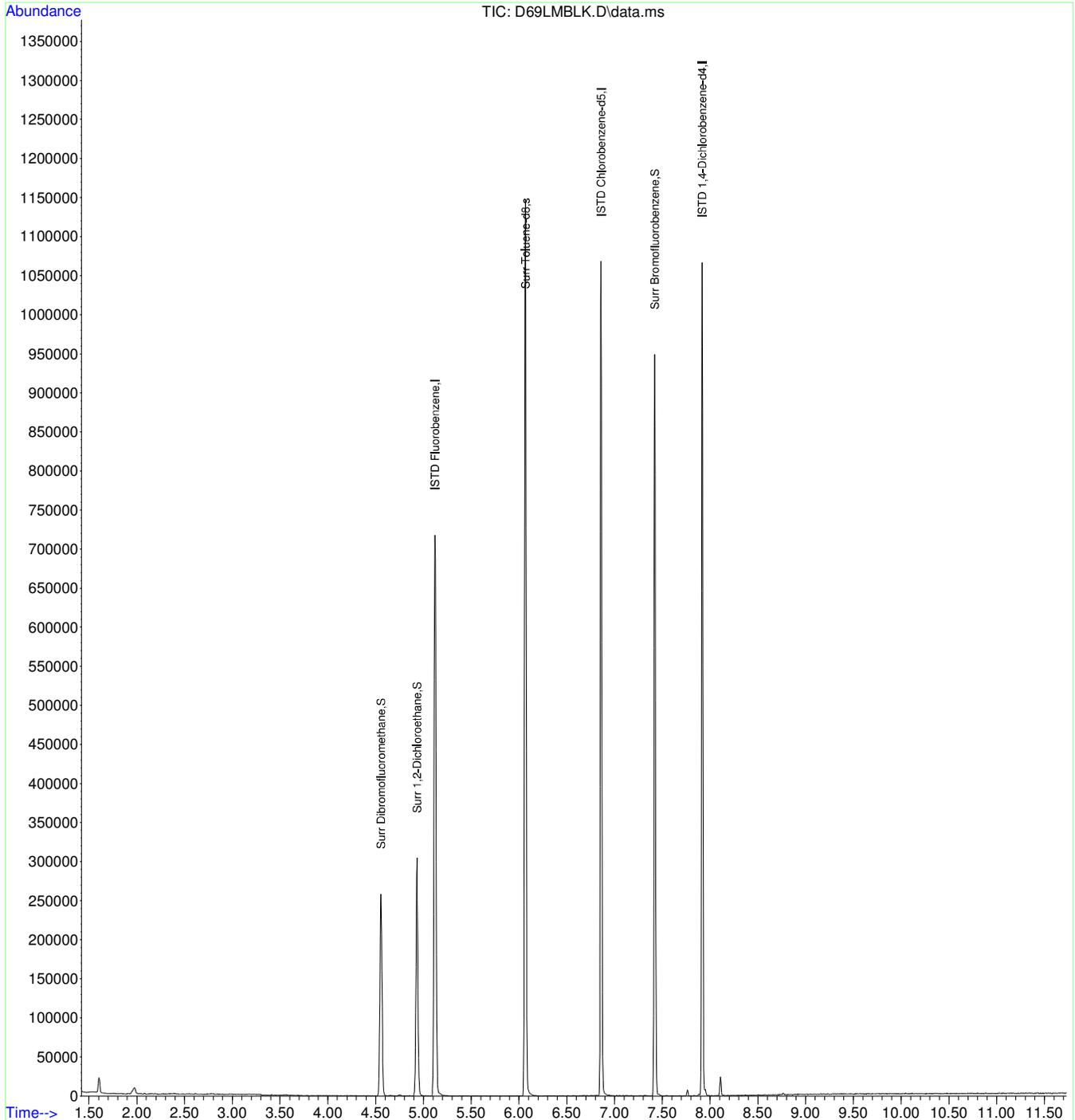
Quant Time: Mar 20 18:56:08 2013  
 Quant Method : C:\MSDCHEM\1\METHODS\DFULLW\_13.M  
 Quant Title : VOA Calibration  
 QLast Update : Wed Mar 13 09:17:53 2013  
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\MAR13-D\20MAR13\  
Data File : D69LMBLK.D  
Acq On : 20 Mar 2013 7:22 pm  
Operator : AAP  
Sample : MB VOC 032013B  
Misc : MBLK 5.0ML SB  
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Mar 21 06:30:44 2013  
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW\_13.M  
Quant Title : VOA Calibration  
QLast Update : Wed Mar 13 09:17:53 2013  
Response via : Initial Calibration

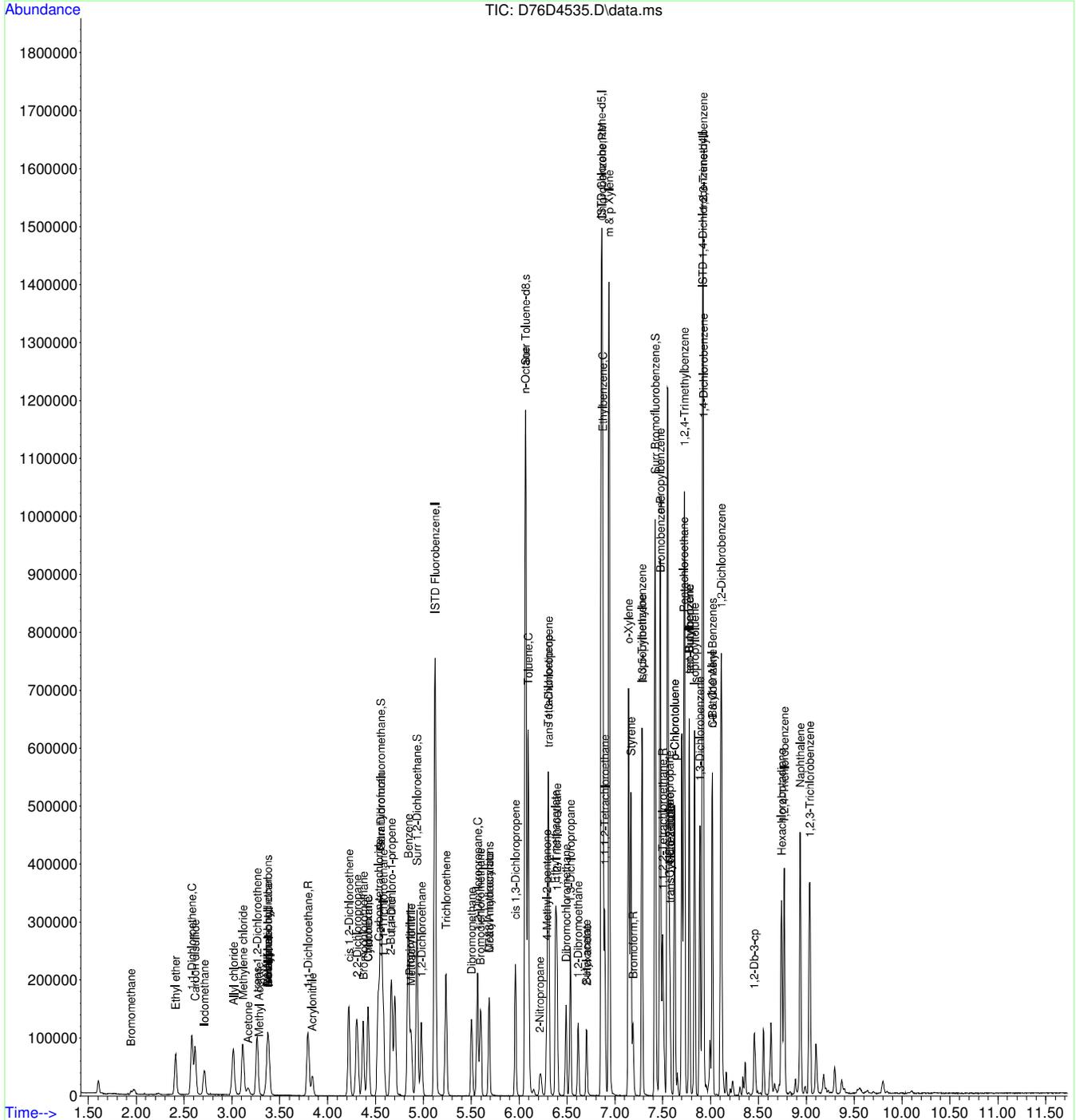




Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\MAR13-D\20MAR13\  
Data File : D76D4535.D  
Acq On : 20 Mar 2013 9:35 pm  
Operator : AAP  
Sample : 1303453-005AMSD  
Misc : MSD 5.0ML/50ML 1OF3 SB  
ALS Vial : 12 Sample Multiplier: 10

Quant Time: Mar 20 21:47:01 2013  
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW\_13.M  
Quant Title : VOA Calibration  
QLast Update : Wed Mar 13 09:17:53 2013  
Response via : Initial Calibration



# RUSH

American West Analytical Laboratories

D

## WORK ORDER Summary

Work Order: **1303453** Page 1 of 2

Client: Utah Division of Water Quality

Due Date: 3/21/2013

Client ID: UTD200

Contact: John Whitehead

Project: Willard Bay Chevron Incident

QC Level: II+

WO Type: Standard

Comments: Next Day Rush; QC 2+. Partial reports as results become available, and bill accordingly. Fill out DWQ SIM spreadsheet. Include tics on semis.;

DB

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1303453-001A	Source AB Culvert / 4920393	3/20/2013 1230h	3/20/2013 1534h	3580-ID-WASTE-O	Oil	<input type="checkbox"/>	hall - product ID	1
				8015-PRODUCT ID		<input checked="" type="checkbox"/>	hall - product ID	
1303453-001B						<input type="checkbox"/>	hold	8
1303453-002A	Drainage East of I15 / 492032	3/20/2013 1300h	3/20/2013 1534h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>				
1303453-002B				3510-ORO-PR		<input type="checkbox"/>	walkin - semi,oro,tph	6
				3510-SVOA-PR		<input type="checkbox"/>	walkin - semi,oro,tph	
				3510-TPH-PR		<input type="checkbox"/>	walkin - semi,oro,tph	
				8015-W-ORO(1L)		<input type="checkbox"/>	walkin - semi,oro,tph	
				8015-W-TPH(1L)		<input checked="" type="checkbox"/>	walkin - semi,oro,tph	
				<i>Test Group: 8015-W-TPHIL; # of Analytes: 1 / # of Surr: 1</i>				
				8270-W		<input checked="" type="checkbox"/>	walkin - semi,oro,tph	
				<i>Test Group: 8270-W-Custom; # of Analytes: 140 / # of Surr: 6</i>				
				8270-W-SIM		<input checked="" type="checkbox"/>	walkin - semi,oro,tph	
				<i>Test Group: 8270-W-PNA-SIM; # of Analytes: 19 / # of Surr:</i>				
1303453-003A	W of Main Boom / 4920396	3/20/2013 1130h	3/20/2013 1534h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>				
1303453-003B				3510-ORO-PR		<input type="checkbox"/>	walkin - semi,oro,tph	6
				3510-SVOA-PR		<input type="checkbox"/>	walkin - semi,oro,tph	
				3510-TPH-PR		<input type="checkbox"/>	walkin - semi,oro,tph	
				8015-W-ORO(1L)		<input type="checkbox"/>	walkin - semi,oro,tph	
				8015-W-TPH(1L)		<input checked="" type="checkbox"/>	walkin - semi,oro,tph	
				<i>Test Group: 8015-W-TPHIL; # of Analytes: 1 / # of Surr: 1</i>				
				8270-W		<input checked="" type="checkbox"/>	walkin - semi,oro,tph	
				<i>Test Group: 8270-W-Custom; # of Analytes: 140 / # of Surr: 6</i>				
				8270-W-SIM		<input checked="" type="checkbox"/>	walkin - semi,oro,tph	
				<i>Test Group: 8270-W-PNA-SIM; # of Analytes: 19 / # of Surr:</i>				
1303453-003C				COD-HACH8000		<input type="checkbox"/>	ww - cod	1
1303453-004A	E of Main Boom / 4920395	3/20/2013 1145h	3/20/2013 1534h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
				<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>				
1303453-004B				3510-ORO-PR		<input type="checkbox"/>	walkin - semi,oro,tph	6
				3510-SVOA-PR		<input type="checkbox"/>	walkin - semi,oro,tph	
				3510-TPH-PR		<input type="checkbox"/>	walkin - semi,oro,tph	

# WORK ORDER Summary

Work Order: **1303453** Page 2 of 2

Client: Utah Division of Water Quality

Due Date: 3/21/2013

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage				
1303453-004B	E of Main Boom / 4920395	3/20/2013 1145h	3/20/2013 1534h	8015-W-ORO(1L)	Aqueous	<input type="checkbox"/>	walkin - semi,oro,tph	6			
				8015-W-TPH(1L)		<input checked="" type="checkbox"/>	walkin - semi,oro,tph				
				<i>Test Group: 8015-W-TPH1L; # of Analytes: 1 / # of Surr: 1</i>							
				8270-W		<input checked="" type="checkbox"/>	walkin - semi,oro,tph				
				<i>Test Group: 8270-W-Custom; # of Analytes: 140 / # of Surr: 6</i>							
1303453-004C				8270-W-SIM		<input checked="" type="checkbox"/>	walkin - semi,oro,tph				
				<i>Test Group: 8270-W-PNA-SIM; # of Analytes: 19 / # of Surr:</i>							
1303453-005A	Between Weirs / 4920394	3/20/2013 1200h	3/20/2013 1534h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3			
				<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>							
1303453-005B				3510-ORO-PR		<input type="checkbox"/>	walkin - semi,oro,tph	6			
				3510-SVOA-PR		<input type="checkbox"/>	walkin - semi,oro,tph				
				3510-TPH-PR		<input type="checkbox"/>	walkin - semi,oro,tph				
				8015-W-ORO(1L)		<input type="checkbox"/>	walkin - semi,oro,tph				
				8015-W-TPH(1L)		<input checked="" type="checkbox"/>	walkin - semi,oro,tph				
				<i>Test Group: 8015-W-TPH1L; # of Analytes: 1 / # of Surr: 1</i>							
1303453-005C				8270-W		<input checked="" type="checkbox"/>	walkin - semi,oro,tph				
				<i>Test Group: 8270-W-Custom; # of Analytes: 140 / # of Surr: 6</i>							
				8270-W-SIM		<input checked="" type="checkbox"/>	walkin - semi,oro,tph				
				<i>Test Group: 8270-W-PNA-SIM; # of Analytes: 19 / # of Surr:</i>							
1303453-006A	W. Bay South Marina / 4920495	3/20/2013 1100h	3/20/2013 1534h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3			
				<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>							
1303453-006B				3510-ORO-PR		<input type="checkbox"/>	walkin - semi,oro,tph	6			
				3510-SVOA-PR		<input type="checkbox"/>	walkin - semi,oro,tph				
				3510-TPH-PR		<input type="checkbox"/>	walkin - semi,oro,tph				
				8015-W-ORO(1L)		<input type="checkbox"/>	walkin - semi,oro,tph				
				8015-W-TPH(1L)		<input checked="" type="checkbox"/>	walkin - semi,oro,tph				
				<i>Test Group: 8015-W-TPH1L; # of Analytes: 1 / # of Surr: 1</i>							
1303453-007A	Field Blank	3/20/2013 1000h	3/20/2013 1534h	8270-W		<input checked="" type="checkbox"/>	walkin - semi,oro,tph				
				<i>Test Group: 8270-W-Custom; # of Analytes: 140 / # of Surr: 6</i>							
				8270-W-SIM		<input checked="" type="checkbox"/>	walkin - semi,oro,tph				
				<i>Test Group: 8270-W-PNA-SIM; # of Analytes: 19 / # of Surr:</i>							
1303453-007A	Field Blank	3/20/2013 1000h	3/20/2013 1534h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3			
				<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>							
1303453-008A	Trip Blank	3/20/2013 0700h	3/20/2013 1534h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3			
				<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>							



Sample Set: 1303453

Preservation Check Sheet

Sample Set Extension and pH

Bottle Type	Preservative	All OK	Except														
				-003	-004	-005											
Ammonia	pH <2 H <sub>2</sub> SO <sub>4</sub>																
COD	pH <2 H <sub>2</sub> SO <sub>4</sub>			yes	yes	yes											
Cyanide	PH >12 NaOH																
Metals	pH <2 HNO <sub>3</sub>																
NO <sub>2</sub> & NO <sub>3</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>																
Nutrients	pH <2 H <sub>2</sub> SO <sub>4</sub>																
O & G	pH <2 HCL																
Phenols	pH <2 H <sub>2</sub> SO <sub>4</sub>																
Sulfide	pH > 9NaOH, Zn Acetate																
TKN	pH <2 H <sub>2</sub> SO <sub>4</sub>																
TOC	pH <2 H <sub>3</sub> PO <sub>4</sub>																
TOX	pH <2 H <sub>2</sub> SO <sub>4</sub>																
T PO <sub>4</sub>	pH <2 H <sub>2</sub> SO <sub>4</sub>																
TPH	pH <2 HCL																

DB 3/20/13

- Procedure:
- 1) Pour a small amount of sample in the sample lid
  - 2) Pour sample from Lid gently over wide range pH paper
  - 3) **Do Not** dip the pH paper in the sample bottle or lid
  - 4) If sample is not preserved properly list its extension and receiving pH in the appropriate column above
  - 5) Flag COC, notify client if requested
  - 6) Place client conversation on COC
  - 7) Samples may be adjusted

Frequency: All samples requiring preservation