



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

RE: MP 44.9

Dear Chris Bittner:

Lab Set ID: 1304516

463 West 3600 South
Salt Lake City, UT 84115

American West Analytical Laboratories received 8 sample(s) on 4/18/2013 for the analyses presented in the following report.

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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



TPH (DRO) Case Narrative

Client: Utah Division of Water Quality
Contact: Chris Bittner
Project: MP 44.9
Lab Set ID: 1304516

463 West 3600 South
Salt Lake City, UT 84115

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Sample Receipt Information:

Date of Receipt: 4/18/2013
Date of Collection: 4/18/2013
Sample Condition: Intact
C-O-C Discrepancies: None
Method: SW-846 8015D /3510C
Analysis: Total Petroleum Hydrocarbon (DRO - C10-28)

General Set Comments: Multiple samples 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: Chris Bittner
Project: MP 44.9
Lab Set ID: 1304516

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Kyle F. Gross
 Laboratory Director

Jose Rocha
 QA Officer

Sample Receipt Information:

Date of Receipt: 4/18/2013
Date of Collection: 4/18/2013
Sample Condition: Intact
C-O-C Discrepancies: None
Method: SW-846 8270D/3510C
Analysis: Semivolatile Organics

General Set Comments: Bis(2-ethylhexyl) phthalate was observed above its reporting limit on 1304516-008B. 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 (LCS): 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, with the following exception:

Sample ID	Analyte	QC	Explanation
1304516-002B	Benzo(a)pyrene	MS/MSD	Sample matrix interference
1304516-002B	Pentachlorophenol	RPD	Sample non-homogeneity or matrix interference

Surrogates: All surrogate recoveries were within established limits, with the following exception: On sample 1304516-001B, Phenol-d6 was outside of the control limit and the reanalysis indicated sample matrix interference.

Corrective Action: None required.



Volatile Case Narrative

Client: Utah Division of Water Quality
Contact: Chris Bittner
Project: MP 44.9
Lab Set ID: 1304516

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Sample Receipt Information:

Date of Receipt: 4/18/2013
Date of Collection: 4/18/2013
Sample Condition: Intact
C-O-C Discrepancies: None
Method: SW-846 8260C/5030C
Analysis: Volatile Organic Compounds

General Set Comments: Multiple 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.



ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1304516-001C
Client Sample ID: East of I-15 / 4920392
Collection Date: 4/18/2013 950h
Received Date: 4/18/2013 1230h

Analytical Results

TPH-DRO (C10-C28) by GC/FID Method 8015D/3510C

Analyzed: 4/19/2013 909h **Extracted:** 4/18/2013 1736h
Units: mg/L **Dilution Factor:** 1 **Method:** SW8015D

463 West 3600 South
Salt Lake City, UT 84115

Compound	CAS Number	Reporting Limit	Analytical Result	Qual		
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	0.556	< 0.556			
Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 4-Bromofluorobenzene	460-00-4	0.221	0.4444	49.7	10-190	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer



ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1304516-002C
Client Sample ID: S. Marina / 4920495
Collection Date: 4/18/2013 1010h
Received Date: 4/18/2013 1230h

Analytical Results

TPH-DRO (C10-C28) by GC/FID Method 8015D/3510C

Analyzed: 4/19/2013 1007h **Extracted:** 4/18/2013 1736h
Units: mg/L **Dilution Factor:** 1 **Method:** SW8015D

463 West 3600 South
Salt Lake City, UT 84115

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	0.500	< 0.500	

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Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 4-Bromofluorobenzene	460-00-4	0.201	0.4000	50.3	10-190	

web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer



ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1304516-008C
Client Sample ID: Below Weirs ab Res / 4920401
Collection Date: 4/18/2013 1100h
Received Date: 4/18/2013 1230h

Analytical Results

TPH-DRO (C10-C28) by GC/FID Method 8015D/3510C

Analyzed: 4/19/2013 1124h **Extracted:** 4/18/2013 1736h
Units: mg/L **Dilution Factor:** 1 **Method:** SW8015D

463 West 3600 South
Salt Lake City, UT 84115

Compound	CAS Number	Reporting Limit	Analytical Result	Qual		
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	0.556	0.923			
Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 4-Bromofluorobenzene	460-00-4	0.207	0.4444	46.5	10-190	

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Laboratory Director

Jose Rocha
QA Officer



ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1304516-001B
Client Sample ID: East of I-15 / 4920392
Collection Date: 4/18/2013 950h
Received Date: 4/18/2013 1230h

Analytical Results

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

Analyzed: 4/22/2013 1222h **Extracted:** 4/19/2013 815h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

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Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	0.105	< 0.105	
2-Methylnaphthalene	91-57-6	0.105	< 0.105	
Acenaphthene	83-32-9	0.105	< 0.105	
Acenaphthylene	208-96-8	0.105	< 0.105	
Anthracene	120-12-7	0.105	< 0.105	
Benz(a)anthracene	56-55-3	0.105	< 0.105	
Benzo(a)pyrene	50-32-8	0.105	< 0.105	
Benzo(b)fluoranthene	205-99-2	0.105	< 0.105	
Benzo(g,h,i)perylene	191-24-2	0.105	< 0.105	
Benzo(k)fluoranthene	207-08-9	0.105	< 0.105	
Chrysene	218-01-9	0.105	< 0.105	
Dibenz(a,h)anthracene	53-70-3	0.105	< 0.105	
Fluoranthene	206-44-0	0.105	< 0.105	
Fluorene	86-73-7	0.105	< 0.105	
Indene	95-13-6	0.105	< 0.105	
Indeno(1,2,3-cd)pyrene	193-39-5	0.105	< 0.105	
Naphthalene	91-20-3	0.105	< 0.105	
Phenanthrene	85-01-8	0.105	< 0.105	
Pyrene	129-00-0	0.105	< 0.105	



ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality

Contact: Chris Bittner

Project: MP 44.9

Lab Sample ID: 1304516-002B

Client Sample ID: S. Marina / 4920495

Collection Date: 4/18/2013 1010h

Received Date: 4/18/2013 1230h

Analytical Results

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

Analyzed: 4/22/2013 1248h

Extracted: 4/19/2013 815h

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	< 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

Contact: Chris Bittner

Project: MP 44.9

Lab Sample ID: 1304516-003B

Client Sample ID: East of Boom / 4920395

Collection Date: 4/18/2013 1110h

Received Date: 4/18/2013 1230h

Analytical Results

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

Analyzed: 4/22/2013 1407h

Extracted: 4/19/2013 815h

Units: µg/L

Dilution Factor: 1

Method: SW8270D

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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

Contact: Chris Bittner

Project: MP 44.9

Lab Sample ID: 1304516-004B

Client Sample ID: Duplicate / 4920401

Collection Date: 4/18/2013 1100h

Received Date: 4/18/2013 1230h

Analytical Results

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

Analyzed: 4/22/2013 1434h

Extracted: 4/19/2013 815h

Units: µg/L

Dilution Factor: 1

Method: SW8270D

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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: MP 44.9
Lab Sample ID: 1304516-007B
Client Sample ID: East of Boom #3 / 4920402
Collection Date: 4/18/2013 1050h
Received Date: 4/18/2013 1230h

Contact: Chris Bittner

Analytical Results

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

Analyzed: 4/22/2013 1500h **Extracted:** 4/19/2013 815h
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	0.105	< 0.105	
2-Methylnaphthalene	91-57-6	0.105	< 0.105	
Acenaphthene	83-32-9	0.105	< 0.105	
Acenaphthylene	208-96-8	0.105	< 0.105	
Anthracene	120-12-7	0.105	< 0.105	
Benz(a)anthracene	56-55-3	0.105	< 0.105	
Benzo(a)pyrene	50-32-8	0.105	< 0.105	
Benzo(b)fluoranthene	205-99-2	0.105	< 0.105	
Benzo(g,h,i)perylene	191-24-2	0.105	< 0.105	
Benzo(k)fluoranthene	207-08-9	0.105	< 0.105	
Chrysene	218-01-9	0.105	< 0.105	
Dibenz(a,h)anthracene	53-70-3	0.105	< 0.105	
Fluoranthene	206-44-0	0.105	< 0.105	
Fluorene	86-73-7	0.105	< 0.105	
Indene	95-13-6	0.105	< 0.105	
Indeno(1,2,3-cd)pyrene	193-39-5	0.105	< 0.105	
Naphthalene	91-20-3	0.105	< 0.105	
Phenanthrene	85-01-8	0.105	< 0.105	
Pyrene	129-00-0	0.105	< 0.105	



ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality
Project: MP 44.9
Lab Sample ID: 1304516-008B
Client Sample ID: Below Weirs ab Res / 4920401
Collection Date: 4/18/2013 1100h
Received Date: 4/18/2013 1230h

Contact: Chris Bittner

Analytical Results

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

Analyzed: 4/22/2013 1526h **Extracted:** 4/19/2013 815h
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	< 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

Contact: Chris Bittner

Project: MP 44.9

Lab Sample ID: 1304516-001B

Client Sample ID: East of I-15 / 4920392

Collection Date: 4/18/2013 950h

Received Date: 4/18/2013 1230h

Analytical Results

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

Analyzed: 4/22/2013 1950h

Extracted: 4/19/2013 815h

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	10.5	< 10.5	
1,2,4,5-Tetrachlorobenzene	95-94-3	10.5	< 10.5	
1,2,4-Trichlorobenzene	120-82-1	10.5	< 10.5	
1,2-Dichlorobenzene	95-50-1	10.5	< 10.5	
1,3,5-Trinitrobenzene	99-35-4	10.5	< 10.5	
1,3-Dichlorobenzene	541-73-1	10.5	< 10.5	
1,3-Dinitrobenzene	99-65-0	10.5	< 10.5	
1,4-Dichlorobenzene	106-46-7	10.5	< 10.5	
1,4-Dinitrobenzene	100-25-4	10.5	< 10.5	
1,4-Naphthoquinone	130-15-4	10.5	< 10.5	
1,4-Phenylenediamine	106-50-3	10.5	< 10.5	
1-Chloronaphthalene	90-13-1	10.5	< 10.5	
1-Methylnaphthalene	90-12-0	10.5	< 10.5	
1-Naphthylamine	134-32-7	10.5	< 10.5	
2,3,4,6-Tetrachlorophenol	58-90-2	10.5	< 10.5	
2,4,5-Trichlorophenol	95-95-4	10.5	< 10.5	
2,4,6-Trichlorophenol	88-06-2	10.5	< 10.5	
2,4-Dichlorophenol	120-83-2	10.5	< 10.5	
2,4-Dimethylphenol	105-67-9	10.5	< 10.5	
2,4-Dinitrophenol	51-28-5	10.5	< 10.5	
2,4-Dinitrotoluene	121-14-2	10.5	< 10.5	
2,6-Dichlorophenol	87-65-0	10.5	< 10.5	
2,6-Dinitrotoluene	606-20-2	10.5	< 10.5	
2-Acetylaminofluorene	53-96-3	10.5	< 10.5	
2-Chloronaphthalene	91-58-7	10.5	< 10.5	
2-Chlorophenol	95-57-8	10.5	< 10.5	
2-Methylnaphthalene	91-57-6	10.5	< 10.5	
2-Methylphenol	95-48-7	10.5	< 10.5	
2-Naphthylamine	91-59-8	10.5	< 10.5	
2-Nitroaniline	88-74-4	10.5	< 10.5	



Lab Sample ID: 1304516-001B

Client Sample ID: East of I-15 / 4920392

Analyzed: 4/22/2013 1950h

Extracted: 4/19/2013 815h

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	10.5	< 10.5	
2-Picoline	109-06-8	10.5	< 10.5	
3&4-Methylphenol		10.5	< 10.5	
3,3'-Dichlorobenzidine	91-94-1	10.5	< 10.5	
3,3'-Dimethylbenzidine	119-93-7	10.5	< 10.5	
3-Methylcholanthrene	56-49-5	10.5	< 10.5	
3-Nitroaniline	99-09-2	10.5	< 10.5	
4,6-Dinitro-2-methylphenol	534-52-1	10.5	< 10.5	
4-Aminobiphenyl	92-67-1	10.5	< 10.5	
4-Bromophenyl phenyl ether	101-55-3	10.5	< 10.5	
4-Chloro-3-methylphenol	59-50-7	10.5	< 10.5	
4-Chloroaniline	106-47-8	10.5	< 10.5	
4-Chlorophenyl phenyl ether	7005-72-3	10.5	< 10.5	
4-Nitroaniline	100-01-6	10.5	< 10.5	
4-Nitrophenol	100-02-7	10.5	< 10.5	
5-Nitro-o-toluidine	99-55-8	10.5	< 10.5	
7,12-Dimethylbenz(a)anthracene	57-97-6	10.5	< 10.5	
a,a-Dimethylphenethylamine	122-09-8	10.5	< 10.5	
Acenaphthene	83-32-9	10.5	< 10.5	
Acenaphthylene	208-96-8	10.5	< 10.5	
Acetophenone	98-86-2	10.5	< 10.5	
alpha-Terpineol	98-55-5	10.5	< 10.5	
Aniline	62-53-3	10.5	< 10.5	
Anthracene	120-12-7	10.5	< 10.5	
Aramite	140-57-8	10.5	< 10.5	
Atrazine	1912-24-9	10.5	< 10.5	
Azobenzene	103-33-3	10.5	< 10.5	
Benz(a)anthracene	56-55-3	10.5	< 10.5	
Benzaldehyde	100-52-7	10.5	< 10.5	
Benzidine	92-87-5	10.5	< 10.5	
Benzo(a)pyrene	50-32-8	10.5	< 10.5	
Benzo(b)fluoranthene	205-99-2	10.5	< 10.5	
Benzo(g,h,i)perylene	191-24-2	10.5	< 10.5	
Benzo(k)fluoranthene	207-08-9	10.5	< 10.5	
Benzoic acid	65-85-0	21.1	< 21.1	
Benzyl alcohol	100-51-6	10.5	< 10.5	
Bis(2-chloroethoxy)methane	111-91-1	10.5	< 10.5	



Lab Sample ID: 1304516-001B

Client Sample ID: East of I-15 / 4920392

Analyzed: 4/22/2013 1950h

Extracted: 4/19/2013 815h

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	10.5	< 10.5	
Bis(2-chloroisopropyl) ether	108-60-1	10.5	< 10.5	
Bis(2-ethylhexyl) phthalate	117-81-7	10.5	< 10.5	
bis(2-ethylhexyl)adipate	103-23-1	10.5	< 10.5	
Butyl benzyl phthalate	85-68-7	10.5	< 10.5	
Caprolactam	105-60-2	10.5	< 10.5	
Carbazole	86-74-8	10.5	< 10.5	
Chlorobenzilate	510-15-6	10.5	< 10.5	
Chrysene	218-01-9	10.5	< 10.5	
Di-n-butyl phthalate	84-74-2	10.5	< 10.5	
Di-n-octyl phthalate	117-84-0	10.5	< 10.5	
Diallate (cis or trans)	2303-16-4	10.5	< 10.5	
Dibenz(a,h)anthracene	53-70-3	10.5	< 10.5	
Dibenzofuran	132-64-9	10.5	< 10.5	
Diethyl phthalate	84-66-2	10.5	< 10.5	
Dimethoate	60-51-5	10.5	< 10.5	
Dimethyl phthalate	131-11-3	10.5	< 10.5	
Dimethylaminoazobenzene	60-11-7	10.5	< 10.5	
Dinoseb	88-85-7	10.5	< 10.5	
Diphenylamine	122-39-4	10.5	< 10.5	
Disulfoton	298-04-4	10.5	< 10.5	
Ethyl methanesulfonate	62-50-0	10.5	< 10.5	
Famphur	52-85-7	10.5	< 10.5	
Fluoranthene	206-44-0	10.5	< 10.5	
Fluorene	86-73-7	10.5	< 10.5	
Hexachlorobenzene	118-74-1	10.5	< 10.5	
Hexachlorobutadiene	87-68-3	10.5	< 10.5	
Hexachlorocyclopentadiene	77-47-4	10.5	< 10.5	
Hexachloroethane	67-72-1	10.5	< 10.5	
Hexachlorophene	70-30-4	10.5	< 10.5	
Hexachloropropene	1888-71-7	10.5	< 10.5	
Indene	95-13-6	10.5	< 10.5	
Indeno(1,2,3-cd)pyrene	193-39-5	10.5	< 10.5	
Isodrin	465-73-6	10.5	< 10.5	
Isophorone	78-59-1	10.5	< 10.5	
Isosafrole	120-58-1	10.5	< 10.5	
Kepone	143-50-0	10.5	< 10.5	



Lab Sample ID: 1304516-001B

Client Sample ID: East of I-15 / 4920392

Analyzed: 4/22/2013 1950h

Extracted: 4/19/2013 815h

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
Methapyrilene	91-80-5	10.5	< 10.5	
Methyl methanesulfonate	66-27-3	10.5	< 10.5	
n-Decane	124-18-5	10.5	< 10.5	
N-Nitrosodi-n-butylamine	924-16-3	10.5	< 10.5	
N-Nitrosodiethylamine	55-18-5	10.5	< 10.5	
N-Nitrosodimethylamine	62-75-9	10.5	< 10.5	
N-Nitrosodiphenylamine	86-30-6	10.5	< 10.5	
N-Nitrosodi-n-propylamine	621-64-7	10.5	< 10.5	
N-Nitrosomethylethylamine	10595-95-6	10.5	< 10.5	
N-Nitrosomorpholine	59-89-2	10.5	< 10.5	
N-Nitrosopiperidine	100-75-4	10.5	< 10.5	
N-Nitrosopyrrolidine	930-55-2	10.5	< 10.5	
n-Octadecane	593-45-3	10.5	< 10.5	
Naphthalene	91-20-3	10.5	< 10.5	
Nitrobenzene	98-95-3	10.5	< 10.5	
Nitroquinoline-1-oxide	56-57-5	10.5	< 10.5	
O,O,O-Triethyl phosphorothioate	126-68-1	10.5	< 10.5	
o-Toluidine	95-53-4	10.5	< 10.5	
Parathion	56-38-2	10.5	< 10.5	
Methyl parathion	298-00-0	10.5	< 10.5	
Pentachlorobenzene	608-93-5	10.5	< 10.5	
Pentachloronitrobenzene	82-68-8	10.5	< 10.5	
Pentachlorophenol	87-86-5	10.5	< 10.5	
Phenacetin	62-44-2	10.5	< 10.5	
Phenanthrene	85-01-8	10.5	< 10.5	
Phenol	108-95-2	10.5	< 10.5	
Phorate	298-02-2	10.5	< 10.5	
Pronamide	23950-58-5	10.5	< 10.5	
Pyrene	129-00-0	10.5	< 10.5	
Pyridine	110-86-1	10.5	< 10.5	
Quinoline	91-22-5	10.5	< 10.5	
Safrole	94-59-7	10.5	< 10.5	
Tetraethyl dithiopyrophosphate	3689-24-5	10.5	< 10.5	
Thionazin	297-97-2	10.5	< 10.5	



Lab Sample ID: 1304516-001B

Client Sample ID: East of I-15 / 4920392

Analyzed: 4/22/2013 1950h

Extracted: 4/19/2013 815h

Units: µg/L

Dilution Factor: 1

Method: SW8270D

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 2,4,6-Tribromophenol	118-79-6	27.6	84.21	32.7	14-159	
Surr: 2-Fluorobiphenyl	321-60-8	15.9	42.11	37.7	10-124	
Surr: 2-Fluorophenol	367-12-4	9.57	84.21	11.4	10-106	
Surr: Nitrobenzene-d5	4165-60-0	14.4	42.11	34.3	10-180	
Surr: Phenol-d6	13127-88-3	6.52	84.21	7.74	10-122	S
Surr: Terphenyl-d14	1718-51-0	36.0	42.11	85.4	10-221	

S - Surrogate recoveries outside the control limits. Reanalysis yielded similar results indicating matrix interference. There was no additional sample remaining for re-extraction.

This sample was analyzed for TICs and no unknown peaks were detected.

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality

Contact: Chris Bittner

Project: MP 44.9

Lab Sample ID: 1304516-002B

Client Sample ID: S. Marina / 4920495

Collection Date: 4/18/2013 1010h

Received Date: 4/18/2013 1230h

Analytical Results

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

Analyzed: 4/22/2013 2016h

Extracted: 4/19/2013 815h

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: 1304516-002B
Client Sample ID: S. Marina / 4920495

Analyzed: 4/22/2013 2016h **Extracted:** 4/19/2013 815h
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: 1304516-002B
Client Sample ID: S. Marina / 4920495

Analyzed: 4/22/2013 2016h **Extracted:** 4/19/2013 815h
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: 1304516-002B
Client Sample ID: S. Marina / 4920495

Analyzed: 4/22/2013 2016h **Extracted:** 4/19/2013 815h
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	



Lab Sample ID: 1304516-002B

Client Sample ID: S. Marina / 4920495

Analyzed: 4/22/2013 2016h

Extracted: 4/19/2013 815h

Units: µg/L

Dilution Factor: 1

Method: SW8270D

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 2,4,6-Tribromophenol	118-79-6	50.7	80.00	63.4	14-159	
Surr: 2-Fluorobiphenyl	321-60-8	13.5	40.00	33.7	10-124	
Surr: 2-Fluorophenol	367-12-4	20.4	80.00	25.5	10-106	
Surr: Nitrobenzene-d5	4165-60-0	12.2	40.00	30.5	10-180	
Surr: Phenol-d6	13127-88-3	14.2	80.00	17.8	10-122	
Surr: Terphenyl-d14	1718-51-0	35.1	40.00	87.8	10-221	

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

@ - High RPD due to suspected sample non-homogeneity or matrix interference.

This sample was analyzed for TICs and no unknown peaks were detected.

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Kyle F. Gross

Laboratory Director

Jose Rocha

QA Officer



ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality

Contact: Chris Bittner

Project: MP 44.9

Lab Sample ID: 1304516-003B

Client Sample ID: East of Boom / 4920395

Collection Date: 4/18/2013 1110h

Received Date: 4/18/2013 1230h

Analytical Results

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

Analyzed: 4/22/2013 2136h

Extracted: 4/19/2013 815h

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: 1304516-003B

Client Sample ID: East of Boom / 4920395

Analyzed: 4/22/2013 2136h

Extracted: 4/19/2013 815h

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: 1304516-003B

Client Sample ID: East of Boom / 4920395

Analyzed: 4/22/2013 2136h

Extracted: 4/19/2013 815h

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: 1304516-003B

Client Sample ID: East of Boom / 4920395

Analyzed: 4/22/2013 2136h

Extracted: 4/19/2013 815h

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
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 aci...	004376-20-9		4.50	JN
TIC: n-Hexadecanoic acid	000057-10-3		4.67	JN
TIC: Thiophene, tetraphenyl-	001884-68-0		9.63	JN



Lab Sample ID: 1304516-003B

Client Sample ID: East of Boom / 4920395

Analyzed: 4/22/2013 2136h

Extracted: 4/19/2013 815h

Units: µg/L

Dilution Factor: 1

Method: SW8270D

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 2,4,6-Tribromophenol	118-79-6	62.7	80.00	78.3	14-159	
Surr: 2-Fluorobiphenyl	321-60-8	18.3	40.00	45.8	10-124	
Surr: 2-Fluorophenol	367-12-4	28.5	80.00	35.7	10-106	
Surr: Nitrobenzene-d5	4165-60-0	17.0	40.00	42.6	10-180	
Surr: Phenol-d6	13127-88-3	20.3	80.00	25.4	10-122	
Surr: Terphenyl-d14	1718-51-0	32.8	40.00	82.1	10-221	

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: MP 44.9
Lab Sample ID: 1304516-004B
Client Sample ID: Duplicate / 4920401
Collection Date: 4/18/2013 1100h
Received Date: 4/18/2013 1230h

Contact: Chris Bittner

Analytical Results

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

Analyzed: 4/22/2013 2202h

Extracted: 4/19/2013 815h

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: 1304516-004B
Client Sample ID: Duplicate / 4920401

Analyzed: 4/22/2013 2202h **Extracted:** 4/19/2013 815h
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: 1304516-004B
Client Sample ID: Duplicate / 4920401

Analyzed: 4/22/2013 2202h **Extracted:** 4/19/2013 815h
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: 1304516-004B
Client Sample ID: Duplicate / 4920401

Analyzed: 4/22/2013 2202h **Extracted:** 4/19/2013 815h
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
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(2H)-Naphthalenone, 3,4-di...	000529-34-0		6.05	JN
TIC: 1(2H)-Naphthalenone, 3,4-dihyd	005037-63-8		6.50	JN
TIC: 1(2H)-Naphthalenone, 3,4-dihydr	006939-35-1		21.2	JN



Lab Sample ID: 1304516-004B
Client Sample ID: Duplicate / 4920401

Analyzed: 4/22/2013 2202h **Extracted:** 4/19/2013 815h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
TIC: 1(2H)-Naphthalenone, 3,4-dihydro...	014944-23-1		6.62	JN
TIC: 1(2H)-Naphthalenone, 8-ethyl-3,4...	051015-33-9		6.57	JN
TIC: 2-Ethyl-1-H-indene	017059-50-6		6.27	JN
TIC: 5,8-Dimethyl-1,2,3,4-tetra...	032820-12-5		6.48	JN
TIC: Benzo[b]thiophene, 2-ethyl-...	016587-51-2		7.75	JN
TIC: Naphthalene, 1,2,3,4-tetra...	000483-77-2		5.73	JN
TIC: syn-Tricyclo[5.1.0.0(2,4)]o...	1000161-99-5		11.3	JN

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 2,4,6-Tribromophenol	118-79-6	61.9	80.00	77.4	14-159	
Surr: 2-Fluorobiphenyl	321-60-8	14.2	40.00	35.4	10-124	
Surr: 2-Fluorophenol	367-12-4	19.7	80.00	24.6	10-106	
Surr: Nitrobenzene-d5	4165-60-0	11.6	40.00	29.1	10-180	
Surr: Phenol-d6	13127-88-3	14.6	80.00	18.2	10-122	
Surr: Terphenyl-d14	1718-51-0	35.9	40.00	89.7	10-221	

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: MP 44.9
Lab Sample ID: 1304516-007B
Client Sample ID: East of Boom #3 / 4920402
Collection Date: 4/18/2013 1050h
Received Date: 4/18/2013 1230h

Contact: Chris Bittner

Analytical Results

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

Analyzed: 4/22/2013 2228h **Extracted:** 4/19/2013 815h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

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Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1'-Biphenyl	92-52-4	10.5	< 10.5	
1,2,4,5-Tetrachlorobenzene	95-94-3	10.5	< 10.5	
1,2,4-Trichlorobenzene	120-82-1	10.5	< 10.5	
1,2-Dichlorobenzene	95-50-1	10.5	< 10.5	
1,3,5-Trinitrobenzene	99-35-4	10.5	< 10.5	
1,3-Dichlorobenzene	541-73-1	10.5	< 10.5	
1,3-Dinitrobenzene	99-65-0	10.5	< 10.5	
1,4-Dichlorobenzene	106-46-7	10.5	< 10.5	
1,4-Dinitrobenzene	100-25-4	10.5	< 10.5	
1,4-Naphthoquinone	130-15-4	10.5	< 10.5	
1,4-Phenylenediamine	106-50-3	10.5	< 10.5	
1-Chloronaphthalene	90-13-1	10.5	< 10.5	
1-Methylnaphthalene	90-12-0	10.5	< 10.5	
1-Naphthylamine	134-32-7	10.5	< 10.5	
2,3,4,6-Tetrachlorophenol	58-90-2	10.5	< 10.5	
2,4,5-Trichlorophenol	95-95-4	10.5	< 10.5	
2,4,6-Trichlorophenol	88-06-2	10.5	< 10.5	
2,4-Dichlorophenol	120-83-2	10.5	< 10.5	
2,4-Dimethylphenol	105-67-9	10.5	< 10.5	
2,4-Dinitrophenol	51-28-5	10.5	< 10.5	
2,4-Dinitrotoluene	121-14-2	10.5	< 10.5	
2,6-Dichlorophenol	87-65-0	10.5	< 10.5	
2,6-Dinitrotoluene	606-20-2	10.5	< 10.5	
2-Acetylaminofluorene	53-96-3	10.5	< 10.5	
2-Chloronaphthalene	91-58-7	10.5	< 10.5	
2-Chlorophenol	95-57-8	10.5	< 10.5	
2-Methylnaphthalene	91-57-6	10.5	< 10.5	
2-Methylphenol	95-48-7	10.5	< 10.5	
2-Naphthylamine	91-59-8	10.5	< 10.5	
2-Nitroaniline	88-74-4	10.5	< 10.5	



Lab Sample ID: 1304516-007B
Client Sample ID: East of Boom #3 / 4920402

Analyzed: 4/22/2013 2228h **Extracted:** 4/19/2013 815h
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	10.5	< 10.5	
2-Picoline	109-06-8	10.5	< 10.5	
3&4-Methylphenol		10.5	< 10.5	
3,3'-Dichlorobenzidine	91-94-1	10.5	< 10.5	
3,3'-Dimethylbenzidine	119-93-7	10.5	< 10.5	
3-Methylcholanthrene	56-49-5	10.5	< 10.5	
3-Nitroaniline	99-09-2	10.5	< 10.5	
4,6-Dinitro-2-methylphenol	534-52-1	10.5	< 10.5	
4-Aminobiphenyl	92-67-1	10.5	< 10.5	
4-Bromophenyl phenyl ether	101-55-3	10.5	< 10.5	
4-Chloro-3-methylphenol	59-50-7	10.5	< 10.5	
4-Chloroaniline	106-47-8	10.5	< 10.5	
4-Chlorophenyl phenyl ether	7005-72-3	10.5	< 10.5	
4-Nitroaniline	100-01-6	10.5	< 10.5	
4-Nitrophenol	100-02-7	10.5	< 10.5	
5-Nitro-o-toluidine	99-55-8	10.5	< 10.5	
7,12-Dimethylbenz(a)anthracene	57-97-6	10.5	< 10.5	
a,a-Dimethylphenethylamine	122-09-8	10.5	< 10.5	
Acenaphthene	83-32-9	10.5	< 10.5	
Acenaphthylene	208-96-8	10.5	< 10.5	
Acetophenone	98-86-2	10.5	< 10.5	
alpha-Terpineol	98-55-5	10.5	< 10.5	
Aniline	62-53-3	10.5	< 10.5	
Anthracene	120-12-7	10.5	< 10.5	
Aramite	140-57-8	10.5	< 10.5	
Atrazine	1912-24-9	10.5	< 10.5	
Azobenzene	103-33-3	10.5	< 10.5	
Benz(a)anthracene	56-55-3	10.5	< 10.5	
Benzaldehyde	100-52-7	10.5	< 10.5	
Benzidine	92-87-5	10.5	< 10.5	
Benzo(a)pyrene	50-32-8	10.5	< 10.5	
Benzo(b)fluoranthene	205-99-2	10.5	< 10.5	
Benzo(g,h,i)perylene	191-24-2	10.5	< 10.5	
Benzo(k)fluoranthene	207-08-9	10.5	< 10.5	
Benzoic acid	65-85-0	21.1	< 21.1	
Benzyl alcohol	100-51-6	10.5	< 10.5	
Bis(2-chloroethoxy)methane	111-91-1	10.5	< 10.5	



Lab Sample ID: 1304516-007B

Client Sample ID: East of Boom #3 / 4920402

Analyzed: 4/22/2013 2228h

Extracted: 4/19/2013 815h

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	10.5	< 10.5	
Bis(2-chloroisopropyl) ether	108-60-1	10.5	< 10.5	
Bis(2-ethylhexyl) phthalate	117-81-7	10.5	< 10.5	
bis(2-ethylhexyl)adipate	103-23-1	10.5	< 10.5	
Butyl benzyl phthalate	85-68-7	10.5	< 10.5	
Caprolactam	105-60-2	10.5	< 10.5	
Carbazole	86-74-8	10.5	< 10.5	
Chlorobenzilate	510-15-6	10.5	< 10.5	
Chrysene	218-01-9	10.5	< 10.5	
Di-n-butyl phthalate	84-74-2	10.5	< 10.5	
Di-n-octyl phthalate	117-84-0	10.5	< 10.5	
Diallate (cis or trans)	2303-16-4	10.5	< 10.5	
Dibenz(a,h)anthracene	53-70-3	10.5	< 10.5	
Dibenzofuran	132-64-9	10.5	< 10.5	
Diethyl phthalate	84-66-2	10.5	< 10.5	
Dimethoate	60-51-5	10.5	< 10.5	
Dimethyl phthalate	131-11-3	10.5	< 10.5	
Dimethylaminoazobenzene	60-11-7	10.5	< 10.5	
Dinoseb	88-85-7	10.5	< 10.5	
Diphenylamine	122-39-4	10.5	< 10.5	
Disulfoton	298-04-4	10.5	< 10.5	
Ethyl methanesulfonate	62-50-0	10.5	< 10.5	
Famphur	52-85-7	10.5	< 10.5	
Fluoranthene	206-44-0	10.5	< 10.5	
Fluorene	86-73-7	10.5	< 10.5	
Hexachlorobenzene	118-74-1	10.5	< 10.5	
Hexachlorobutadiene	87-68-3	10.5	< 10.5	
Hexachlorocyclopentadiene	77-47-4	10.5	< 10.5	
Hexachloroethane	67-72-1	10.5	< 10.5	
Hexachlorophene	70-30-4	10.5	< 10.5	
Hexachloropropene	1888-71-7	10.5	< 10.5	
Indene	95-13-6	10.5	< 10.5	
Indeno(1,2,3-cd)pyrene	193-39-5	10.5	< 10.5	
Isodrin	465-73-6	10.5	< 10.5	
Isophorone	78-59-1	10.5	< 10.5	
Isosafrole	120-58-1	10.5	< 10.5	
Kepone	143-50-0	10.5	< 10.5	



Lab Sample ID: 1304516-007B

Client Sample ID: East of Boom #3 / 4920402

Analyzed: 4/22/2013 2228h

Extracted: 4/19/2013 815h

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	10.5	< 10.5	
Methyl methanesulfonate	66-27-3	10.5	< 10.5	
n-Decane	124-18-5	10.5	< 10.5	
N-Nitrosodi-n-butylamine	924-16-3	10.5	< 10.5	
N-Nitrosodiethylamine	55-18-5	10.5	< 10.5	
N-Nitrosodimethylamine	62-75-9	10.5	< 10.5	
N-Nitrosodiphenylamine	86-30-6	10.5	< 10.5	
N-Nitrosodi-n-propylamine	621-64-7	10.5	< 10.5	
N-Nitrosomethylethylamine	10595-95-6	10.5	< 10.5	
N-Nitrosomorpholine	59-89-2	10.5	< 10.5	
N-Nitrosopiperidine	100-75-4	10.5	< 10.5	
N-Nitrosopyrrolidine	930-55-2	10.5	< 10.5	
n-Octadecane	593-45-3	10.5	< 10.5	
Naphthalene	91-20-3	10.5	< 10.5	
Nitrobenzene	98-95-3	10.5	< 10.5	
Nitroquinoline-1-oxide	56-57-5	10.5	< 10.5	
O,O,O-Triethyl phosphorothioate	126-68-1	10.5	< 10.5	
o-Toluidine	95-53-4	10.5	< 10.5	
Parathion	56-38-2	10.5	< 10.5	
Methyl parathion	298-00-0	10.5	< 10.5	
Pentachlorobenzene	608-93-5	10.5	< 10.5	
Pentachloronitrobenzene	82-68-8	10.5	< 10.5	
Pentachlorophenol	87-86-5	10.5	< 10.5	
Phenacetin	62-44-2	10.5	< 10.5	
Phenanthrene	85-01-8	10.5	< 10.5	
Phenol	108-95-2	10.5	< 10.5	
Phorate	298-02-2	10.5	< 10.5	
Pronamide	23950-58-5	10.5	< 10.5	
Pyrene	129-00-0	10.5	< 10.5	
Pyridine	110-86-1	10.5	< 10.5	
Quinoline	91-22-5	10.5	< 10.5	
Safrole	94-59-7	10.5	< 10.5	
Tetraethyl dithiopyrophosphate	3689-24-5	10.5	< 10.5	
Thionazin	297-97-2	10.5	< 10.5	
TIC: Hexane, 3,3,4-trimethyl-	016747-31-2		4.39	JN



Lab Sample ID: 1304516-007B

Client Sample ID: East of Boom #3 / 4920402

Analyzed: 4/22/2013 2228h

Extracted: 4/19/2013 815h

Units: µg/L

Dilution Factor: 1

Method: SW8270D

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 2,4,6-Tribromophenol	118-79-6	68.6	84.21	81.5	14-159	
Surr: 2-Fluorobiphenyl	321-60-8	21.0	42.11	49.9	10-124	
Surr: 2-Fluorophenol	367-12-4	34.5	84.21	41.0	10-106	
Surr: Nitrobenzene-d5	4165-60-0	19.1	42.11	45.4	10-180	
Surr: Phenol-d6	13127-88-3	24.6	84.21	29.3	10-122	
Surr: Terphenyl-d14	1718-51-0	37.4	42.11	88.8	10-221	

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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Laboratory Director

Jose Rocha

QA Officer



ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality
Project: MP 44.9
Lab Sample ID: 1304516-008B
Client Sample ID: Below Weirs ab Res / 4920401
Collection Date: 4/18/2013 1100h
Received Date: 4/18/2013 1230h

Contact: Chris Bittner

Analytical Results

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

Analyzed: 4/22/2013 2255h **Extracted:** 4/19/2013 815h
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: 1304516-008B

Client Sample ID: Below Weirs ab Res / 4920401

Analyzed: 4/22/2013 2255h

Extracted: 4/19/2013 815h

Units: µg/L

Dilution Factor: 1

Method: SW8270D

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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: 1304516-008B

Client Sample ID: Below Weirs ab Res / 4920401

Analyzed: 4/22/2013 2255h

Extracted: 4/19/2013 815h

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	10.8	
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: 1304516-008B

Client Sample ID: Below Weirs ab Res / 4920401

Analyzed: 4/22/2013 2255h

Extracted: 4/19/2013 815h

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	< 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(2H)-Naphthalenone, 3,4-di...	000529-34-0		7.65	JN
TIC: 1(2H)-Naphthalenone, 3,4-dihyd	032281-65-5		8.10	JN
TIC: 1(2H)-Naphthalenone, 3,4-dihydr	006939-35-1		6.30	JN



Lab Sample ID: 1304516-008B
Client Sample ID: Below Weirs ab Res / 4920401

Analyzed: 4/22/2013 2255h **Extracted:** 4/19/2013 815h
Units: µg/L **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
TIC: 1(2H)-Naphthalenone, 3,4-dihydro...	014944-23-1		8.37	JN
TIC: 1(2H)-Naphthalenone, 5-ethy...	051015-31-7		6.79	JN
TIC: 5,8-Dimethyl-1,2,3,4-tetra...	032820-12-5		6.50	JN
TIC: 5-Methyl-2-indolecarboxylic...	010241-97-1		12.0	JN
TIC: Carbostyryl, 8-hydroxy-	015450-76-7		10.3	JN
TIC: Naphthalene, 1,2,3,4-tetra...	000483-77-2		6.30	JN
TIC: Naphthalene, 1,2-dihydro-3-...	002717-44-4		5.45	JN

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 2,4,6-Tribromophenol	118-79-6	58.6	80.00	73.3	14-159	
Surr: 2-Fluorobiphenyl	321-60-8	21.3	40.00	53.3	10-124	
Surr: 2-Fluorophenol	367-12-4	23.1	80.00	28.8	10-106	
Surr: Nitrobenzene-d5	4165-60-0	18.8	40.00	47.1	10-180	
Surr: Phenol-d6	13127-88-3	17.2	80.00	21.5	10-122	
Surr: Terphenyl-d14	1718-51-0	35.4	40.00	88.4	10-221	

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 **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1304516-001A
Client Sample ID: East of I-15 / 4920392
Collection Date: 4/18/2013 950h
Received Date: 4/18/2013 1230h

Analytical Results

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

Analyzed: 4/19/2013 724h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

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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: 1304516-001A
Client Sample ID: East of I-15 / 4920392

Analyzed: 4/19/2013 724h

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: 1304516-001A
Client Sample ID: East of I-15 / 4920392

Analyzed: 4/19/2013 724h

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

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Jose Rocha
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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: 1304516-001A
Client Sample ID: East of I-15 / 4920392

Analyzed: 4/19/2013 724h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	56.4	50.00	113	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	52.7	50.00	105	80-128	
Surr: Dibromofluoromethane	1868-53-7	54.8	50.00	110	80-124	
Surr: Toluene-d8	2037-26-5	50.4	50.00	101	77-129	

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality
Project: MP 44.9
Lab Sample ID: 1304516-002A
Client Sample ID: S. Marina / 4920495
Collection Date: 4/18/2013 1010h
Received Date: 4/18/2013 1230h

Contact: Chris Bittner

Analytical Results

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

Analyzed: 4/19/2013 937h

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: 1304516-002A
Client Sample ID: S. Marina / 4920495

Analyzed: 4/19/2013 937h

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: 1304516-002A
Client Sample ID: S. Marina / 4920495

Analyzed: 4/19/2013 937h

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: 1304516-002A

Client Sample ID: S. Marina / 4920495

Analyzed: 4/19/2013 937h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	56.6	50.00	113	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	54.1	50.00	108	80-128	
Surr: Dibromofluoromethane	1868-53-7	55.1	50.00	110	80-124	
Surr: Toluene-d8	2037-26-5	50.2	50.00	100	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: MP 44.9
Lab Sample ID: 1304516-003A
Client Sample ID: East of Boom / 4920395
Collection Date: 4/18/2013 1110h
Received Date: 4/18/2013 1230h

Contact: Chris Bittner

Analytical Results

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

Analyzed: 4/19/2013 956h

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	< 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: 1304516-003A
Client Sample ID: East of Boom / 4920395

Analyzed: 4/19/2013 956h

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: 1304516-003A
Client Sample ID: East of Boom / 4920395

Analyzed: 4/19/2013 956h

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: 1304516-003A

Client Sample ID: East of Boom / 4920395

Analyzed: 4/19/2013 956h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	57.5	50.00	115	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	53.8	50.00	108	80-128	
Surr: Dibromofluoromethane	1868-53-7	54.8	50.00	110	80-124	
Surr: Toluene-d8	2037-26-5	50.3	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: MP 44.9
Lab Sample ID: 1304516-004A
Client Sample ID: Duplicate / 4920401
Collection Date: 4/18/2013 1100h
Received Date: 4/18/2013 1230h

Contact: Chris Bittner

Analytical Results

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

Analyzed: 4/19/2013 1015h

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	3.04	
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: 1304516-004A
Client Sample ID: Duplicate / 4920401

Analyzed: 4/19/2013 1015h

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
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: 1304516-004A
Client Sample ID: Duplicate / 4920401

Analyzed: 4/19/2013 1015h

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: 1304516-004A
Client Sample ID: Duplicate / 4920401

Analyzed: 4/19/2013 1015h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	58.3	50.00	117	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	50.9	50.00	102	80-128	
Surr: Dibromofluoromethane	1868-53-7	56.9	50.00	114	80-124	
Surr: Toluene-d8	2037-26-5	50.9	50.00	102	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: MP 44.9
Lab Sample ID: 1304516-005A
Client Sample ID: Field Blank
Collection Date: 4/18/2013 1040h
Received Date: 4/18/2013 1230h

Contact: Chris Bittner

Analytical Results

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

Analyzed: 4/19/2013 1034h

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: 1304516-005A

Client Sample ID: Field Blank

Analyzed: 4/19/2013 1034h

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
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	10.4	
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: 1304516-005A

Client Sample ID: Field Blank

Analyzed: 4/19/2013 1034h

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: 1304516-005A

Client Sample ID: Field Blank

Analyzed: 4/19/2013 1034h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	56.3	50.00	113	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	54.7	50.00	109	80-128	
Surr: Dibromofluoromethane	1868-53-7	55.2	50.00	110	80-124	
Surr: Toluene-d8	2037-26-5	51.3	50.00	103	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: MP 44.9
Lab Sample ID: 1304516-006A
Client Sample ID: Trip Blank
Collection Date: 4/18/2013
Received Date: 4/18/2013 1230h

Contact: Chris Bittner

Analytical Results

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

Analyzed: 4/19/2013 1053h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

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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: 1304516-006A

Client Sample ID: Trip Blank

Analyzed: 4/19/2013 1053h

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: 1304516-006A

Client Sample ID: Trip Blank

Analyzed: 4/19/2013 1053h

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
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: 1304516-006A

Client Sample ID: Trip Blank

Analyzed: 4/19/2013 1053h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	54.8	50.00	110	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	50.2	50.00	100	80-128	
Surr: Dibromofluoromethane	1868-53-7	53.8	50.00	108	80-124	
Surr: Toluene-d8	2037-26-5	48.2	50.00	96.3	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: MP 44.9
Lab Sample ID: 1304516-007A
Client Sample ID: East of Boom #3 / 4920402
Collection Date: 4/18/2013 1050h
Received Date: 4/18/2013 1230h

Contact: Chris Bittner

Analytical Results

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

Analyzed: 4/19/2013 1112h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

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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: 1304516-007A
Client Sample ID: East of Boom #3 / 4920402

Analyzed: 4/19/2013 1112h

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
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: 1304516-007A
Client Sample ID: East of Boom #3 / 4920402

Analyzed: 4/19/2013 1112h

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: 1304516-007A

Client Sample ID: East of Boom #3 / 4920402

Analyzed: 4/19/2013 1112h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	57.6	50.00	115	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	51.3	50.00	103	80-128	
Surr: Dibromofluoromethane	1868-53-7	55.2	50.00	110	80-124	
Surr: Toluene-d8	2037-26-5	49.9	50.00	99.8	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: MP 44.9
Lab Sample ID: 1304516-008A
Client Sample ID: Below Weirs ab Res / 4920401
Collection Date: 4/18/2013 1100h
Received Date: 4/18/2013 1230h

Contact: Chris Bittner

Analytical Results

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

Analyzed: 4/19/2013 1131h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

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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	2.95	
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: 1304516-008A

Client Sample ID: Below Weirs ab Res / 4920401

Analyzed: 4/19/2013 1131h

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: 1304516-008A
Client Sample ID: Below Weirs ab Res / 4920401

Analyzed: 4/19/2013 1131h

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: 1304516-008A

Client Sample ID: Below Weirs ab Res / 4920401

Analyzed: 4/19/2013 1131h

Units: µg/L

Dilution Factor: 1

Method: SW8260C

Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	57.8	50.00	116	72-151	
Surr: 4-Bromofluorobenzene	460-00-4	47.5	50.00	95.0	80-128	
Surr: Dibromofluoromethane	1868-53-7	55.8	50.00	112	80-124	
Surr: Toluene-d8	2037-26-5	49.0	50.00	98.1	77-129	

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Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1304516
Project: MP 44.9

Contact: Chris Bittner
Dept: GC
QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-24912	Diesel Range Organics (DRO) (C10-C28)	mg/L	SW8015D	1.48	2.000	0	74.2	48-118				4/19/2013 850h
LCS-24912	Surr: 4-Bromofluorobenzene	%REC	SW8015D	0.202	0.4000		50.6	18-95				4/19/2013 850h



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Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1304516
Project: MP 44.9

Contact: Chris Bittner
Dept: GC
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-24912	Diesel Range Organics (DRO) (C10-C28)	mg/L	SW8015D	< 0.500				-				4/19/2013 830h
MB-24912	Surr: 4-Bromofluorobenzene	%REC	SW8015D	0.141	0.4000		35.3	18-95				4/19/2013 830h



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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: 1304516
Project: MP 44.9

Contact: Chris Bittner
Dept: GC
QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1304516-001CMS	Diesel Range Organics (DRO) (C10-C28)	mg/L	SW8015D	1.68	2.222	0	75.7	60-161				4/19/2013 928h
1304516-001CMS	Surr: 4-Bromofluorobenzene	%REC	SW8015D	0.240	0.4444		53.9	10-190				4/19/2013 928h



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QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1304516
Project: MP 44.9

Contact: Chris Bittner
Dept: GC
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1304516-001CMSD	Diesel Range Organics (DRO) (C10-C28)	mg/L	SW8015D	1.80	2.222	0	81.0	60-161	6.66	25		4/19/2013 947h
1304516-001CMSD	Surr: 4-Bromofluorobenzene	%REC	SW8015D	0.266	0.4444		59.9	10-190				4/19/2013 947h



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QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1304516
Project: MP 44.9

Contact: Chris Bittner
Dept: MSSV
QC Type: LCS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
LCS-24917	1,2,4-Trichlorobenzene	µg/L	SW8270D	27.1	80.00	0	33.8	10-104				4/22/2013 1804h
LCS-24917	1,4-Dichlorobenzene	µg/L	SW8270D	19.9	80.00	0	24.9	10-118				4/22/2013 1804h
LCS-24917	2,4,6-Trichlorophenol	µg/L	SW8270D	62.4	80.00	0	78.0	17-119				4/22/2013 1804h
LCS-24917	2,4-Dimethylphenol	µg/L	SW8270D	49.8	80.00	0	62.3	10-131				4/22/2013 1804h
LCS-24917	2,4-Dinitrotoluene	µg/L	SW8270D	63.2	80.00	0	78.9	42-219				4/22/2013 1804h
LCS-24917	2-Chloronaphthalene	µg/L	SW8270D	47.9	80.00	0	59.9	23-126				4/22/2013 1804h
LCS-24917	2-Chlorophenol	µg/L	SW8270D	44.3	80.00	0	55.4	15-128				4/22/2013 1804h
LCS-24917	4,6-Dinitro-2-methylphenol	µg/L	SW8270D	69.7	80.00	0	87.1	30-198				4/22/2013 1804h
LCS-24917	4-Chloro-3-methylphenol	µg/L	SW8270D	63.0	80.00	0	78.7	29-148				4/22/2013 1804h
LCS-24917	4-Nitrophenol	µg/L	SW8270D	32.5	80.00	0	40.6	10-157				4/22/2013 1804h
LCS-24917	Acenaphthene	µg/L	SW8270D	53.8	80.00	0	67.2	20-116				4/22/2013 1804h
LCS-24917	Benzo(a)pyrene	µg/L	SW8270D	163	80.00	0	203	10-221				4/22/2013 1804h
LCS-24917	N-Nitrosodi-n-propylamine	µg/L	SW8270D	41.1	80.00	0	51.4	20-148				4/22/2013 1804h
LCS-24917	Pentachlorophenol	µg/L	SW8270D	68.0	80.00	0	85.0	21-153				4/22/2013 1804h
LCS-24917	Phenol	µg/L	SW8270D	31.6	80.00	0	39.5	10-131				4/22/2013 1804h
LCS-24917	Pyrene	µg/L	SW8270D	84.8	80.00	0	106	37-150				4/22/2013 1804h
LCS-24917	Surr: 2,4,6-Tribromophenol	%REC	SW8270D	72.6	80.00		90.7	10-165				4/22/2013 1804h
LCS-24917	Surr: 2-Fluorobiphenyl	%REC	SW8270D	23.0	40.00		57.4	10-118				4/22/2013 1804h
LCS-24917	Surr: 2-Fluorophenol	%REC	SW8270D	29.6	80.00		37.0	10-121				4/22/2013 1804h
LCS-24917	Surr: Nitrobenzene-d5	%REC	SW8270D	20.4	40.00		50.9	10-127				4/22/2013 1804h
LCS-24917	Surr: Phenol-d6	%REC	SW8270D	23.0	80.00		28.8	10-124				4/22/2013 1804h
LCS-24917	Surr: Terphenyl-d14	%REC	SW8270D	43.2	40.00		108	51-221				4/22/2013 1804h
LCS-24917	Acenaphthene	µg/L	SW8270D	55.0	80.00	0	68.8	23-159				4/22/2013 1156h
LCS-24917	Benzo(a)pyrene	µg/L	SW8270D	85.0	80.00	0	106	26-223				4/22/2013 1156h
LCS-24917	Pentachlorophenol	µg/L	SW8270D	123	80.00	0	154	10-249				4/22/2013 1156h
LCS-24917	Pyrene	µg/L	SW8270D	75.0	80.00	0	93.8	28-204				4/22/2013 1156h



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Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1304516
Project: MP 44.9

Contact: Chris Bittner
Dept: MSSV
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-24917	1,1'-Biphenyl	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	1,2,4,5-Tetrachlorobenzene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	1,2,4-Trichlorobenzene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	1,2-Dichlorobenzene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	1,3,5-Trinitrobenzene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	1,3-Dichlorobenzene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	1,3-Dinitrobenzene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	1,4-Dichlorobenzene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	1,4-Dinitrobenzene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	1,4-Naphthoquinone	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	1,4-Phenylenediamine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	1-Chloronaphthalene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	1-Methylnaphthalene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	1-Naphthylamine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	2,3,4,6-Tetrachlorophenol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	2,4,5-Trichlorophenol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	2,4,6-Trichlorophenol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	2,4-Dichlorophenol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	2,4-Dimethylphenol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	2,4-Dinitrophenol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	2,4-Dinitrotoluene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	2,6-Dichlorophenol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	2,6-Dinitrotoluene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	2-Acetylaminofluorene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	2-Chloronaphthalene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	2-Chlorophenol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	2-Methylnaphthalene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h

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Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1304516
Project: MP 44.9

Contact: Chris Bittner
Dept: MSSV
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-24917	2-Methylphenol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	2-Naphthylamine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	2-Nitroaniline	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	2-Nitrophenol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	2-Picoline	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	3&4-Methylphenol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	3,3'-Dichlorobenzidine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	3,3'-Dimethylbenzidine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	3-Methylcholanthrene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	3-Nitroaniline	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	4,6-Dinitro-2-methylphenol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	4-Aminobiphenyl	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	4-Bromophenyl phenyl ether	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	4-Chloro-3-methylphenol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	4-Chloroaniline	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	4-Chlorophenyl phenyl ether	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	4-Nitroaniline	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	4-Nitrophenol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	5-Nitro-o-toluidine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	7,12-Dimethylbenz(a)anthracene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	a,a-Dimethylphenethylamine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Acenaphthene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Acenaphthylene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Acetophenone	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	alpha-Terpineol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Aniline	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Anthracene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h

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Laboratory Director

Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1304516
Project: MP 44.9

Contact: Chris Bittner
Dept: MSSV
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-24917	Aramite	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Atrazine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Azobenzene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Benz(a)anthracene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Benzaldehyde	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Benzidine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Benzo(a)pyrene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Benzo(b)fluoranthene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Benzo(g,h,i)perylene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Benzo(k)fluoranthene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Benzoic acid	µg/L	SW8270D	< 20.0				-				4/22/2013 1738h
MB-24917	Benzyl alcohol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Bis(2-chloroethoxy)methane	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Bis(2-chloroethyl) ether	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Bis(2-chloroisopropyl) ether	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Bis(2-ethylhexyl) phthalate	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	bis(2-ethylhexyl)adipate	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Butyl benzyl phthalate	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Caprolactam	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Carbazole	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Chlorobenzilate	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Chrysene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Diallate (cis or trans)	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Dibenz(a,h)anthracene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Dibenzofuran	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Diethyl phthalate	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Dimethoate	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h

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QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1304516
Project: MP 44.9

Contact: Chris Bittner
Dept: MSSV
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-24917	Dimethyl phthalate	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Dimethylaminoazobenzene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Di-n-butyl phthalate	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Di-n-octyl phthalate	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Dinoseb	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Diphenylamine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Disulfoton	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Ethyl methanesulfonate	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Famphur	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Fluoranthene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Fluorene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Hexachlorobenzene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Hexachlorobutadiene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Hexachlorocyclopentadiene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Hexachloroethane	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Hexachlorophene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Hexachloropropene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Indene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Indeno(1,2,3-cd)pyrene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Isodrin	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Isophorone	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Isosafrole	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Kepone	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Methapyrilene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Methyl methanesulfonate	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Naphthalene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	n-Decane	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h

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QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1304516
Project: MP 44.9

Contact: Chris Bittner
Dept: MSSV
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-24917	Nitrobenzene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Nitroquinoline-1-oxide	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	N-Nitrosodiethylamine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	N-Nitrosodimethylamine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	N-Nitrosodi-n-butylamine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	N-Nitrosodiphenylamine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	N-Nitrosodi-n-propylamine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	N-Nitrosomethylethylamine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	N-Nitrosomorpholine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	N-Nitrosopiperidine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	N-Nitrosopyrrolidine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	n-Octadecane	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	O,O,O-Triethyl phosphorothioate	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	o-Toluidine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Parathion	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Methyl parathion	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Pentachlorobenzene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Pentachloronitrobenzene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Pentachlorophenol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Phenacetin	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Phenanthrene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Phenol	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Phorate	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Pronamide	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Pyrene	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Pyridine	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Quinoline	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h

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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: 1304516
Project: MP 44.9

Contact: Chris Bittner
Dept: MSSV
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-24917	Safrole	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Tetraethyl dithiopyrophosphate	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Thionazin	µg/L	SW8270D	< 10.0				-				4/22/2013 1738h
MB-24917	Surr: 2,4,6-Tribromophenol	%REC	SW8270D	59.7	80.00		74.6	10-165				4/22/2013 1738h
MB-24917	Surr: 2-Fluorobiphenyl	%REC	SW8270D	18.3	40.00		45.8	10-118				4/22/2013 1738h
MB-24917	Surr: 2-Fluorophenol	%REC	SW8270D	33.5	80.00		41.8	10-121				4/22/2013 1738h
MB-24917	Surr: Nitrobenzene-d5	%REC	SW8270D	18.2	40.00		45.4	10-127				4/22/2013 1738h
MB-24917	Surr: Phenol-d6	%REC	SW8270D	24.2	80.00		30.2	10-124				4/22/2013 1738h
MB-24917	Surr: Terphenyl-d14	%REC	SW8270D	38.3	40.00		95.8	51-221				4/22/2013 1738h
MB-24917	1-Methylnaphthalene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h
MB-24917	2-Methylnaphthalene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h
MB-24917	Acenaphthene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h
MB-24917	Acenaphthylene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h
MB-24917	Anthracene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h
MB-24917	Benz(a)anthracene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h
MB-24917	Benzo(a)pyrene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h
MB-24917	Benzo(b)fluoranthene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h
MB-24917	Benzo(g,h,i)perylene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h
MB-24917	Benzo(k)fluoranthene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h
MB-24917	Chrysene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h
MB-24917	Dibenz(a,h)anthracene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h
MB-24917	Fluoranthene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h
MB-24917	Fluorene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h
MB-24917	Hexachlorobenzene	µg/L	SW8270D	< 1.00				-				4/22/2013 1129h
MB-24917	Indene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h
MB-24917	Indeno(1,2,3-cd)pyrene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h
MB-24917	Naphthalene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h

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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: 1304516
Project: MP 44.9

Contact: Chris Bittner
Dept: MSSV
QC Type: MBLK

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
MB-24917	Pentachlorophenol	µg/L	SW8270D	< 1.00				-				4/22/2013 1129h
MB-24917	Phenanthrene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h
MB-24917	Pyrene	µg/L	SW8270D	< 0.100				-				4/22/2013 1129h



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Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1304516
Project: MP 44.9

Contact: Chris Bittner
Dept: MSSV
QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1304516-002BMS	1,2,4-Trichlorobenzene	µg/L	SW8270D	28.6	80.00	0	35.7	20-107				4/22/2013 2043h
1304516-002BMS	1,4-Dichlorobenzene	µg/L	SW8270D	21.6	80.00	0	27.0	11-90				4/22/2013 2043h
1304516-002BMS	2,4,6-Trichlorophenol	µg/L	SW8270D	63.6	80.00	0	79.4	10-223				4/22/2013 2043h
1304516-002BMS	2,4-Dimethylphenol	µg/L	SW8270D	54.6	80.00	0	68.2	10-176				4/22/2013 2043h
1304516-002BMS	2,4-Dinitrotoluene	µg/L	SW8270D	61.9	80.00	0	77.4	21-191				4/22/2013 2043h
1304516-002BMS	2-Chloronaphthalene	µg/L	SW8270D	46.3	80.00	0	57.8	12-132				4/22/2013 2043h
1304516-002BMS	2-Chlorophenol	µg/L	SW8270D	48.3	80.00	0	60.3	20-107				4/22/2013 2043h
1304516-002BMS	4,6-Dinitro-2-methylphenol	µg/L	SW8270D	66.7	80.00	0	83.4	20-250				4/22/2013 2043h
1304516-002BMS	4-Chloro-3-methylphenol	µg/L	SW8270D	63.9	80.00	0	79.9	10-136				4/22/2013 2043h
1304516-002BMS	4-Nitrophenol	µg/L	SW8270D	28.3	80.00	0	35.4	10-135				4/22/2013 2043h
1304516-002BMS	Acenaphthene	µg/L	SW8270D	52.2	80.00	0	65.2	21-113				4/22/2013 2043h
1304516-002BMS	Benzo(a)pyrene	µg/L	SW8270D	145	80.00	0	181	15-169			1	4/22/2013 2043h
1304516-002BMS	N-Nitrosodi-n-propylamine	µg/L	SW8270D	40.7	80.00	0	50.9	10-133				4/22/2013 2043h
1304516-002BMS	Pentachlorophenol	µg/L	SW8270D	34.2	80.00	0	42.7	10-131				4/22/2013 2043h
1304516-002BMS	Phenol	µg/L	SW8270D	34.3	80.00	0	42.9	10-71				4/22/2013 2043h
1304516-002BMS	Pyrene	µg/L	SW8270D	78.8	80.00	0	98.4	23-150				4/22/2013 2043h
1304516-002BMS	Surr: 2,4,6-Tribromophenol	%REC	SW8270D	62.2	80.00		77.8	14-159				4/22/2013 2043h
1304516-002BMS	Surr: 2-Fluorobiphenyl	%REC	SW8270D	23.2	40.00		57.9	10-124				4/22/2013 2043h
1304516-002BMS	Surr: 2-Fluorophenol	%REC	SW8270D	32.4	80.00		40.5	10-106				4/22/2013 2043h
1304516-002BMS	Surr: Nitrobenzene-d5	%REC	SW8270D	20.0	40.00		50.1	10-180				4/22/2013 2043h
1304516-002BMS	Surr: Phenol-d6	%REC	SW8270D	25.4	80.00		31.8	10-122				4/22/2013 2043h
1304516-002BMS	Surr: Terphenyl-d14	%REC	SW8270D	37.6	40.00		94.0	10-221				4/22/2013 2043h
1304516-002BMS	Acenaphthene	µg/L	SW8270D	52.6	80.00	0	65.8	21-113				4/22/2013 1315h
1304516-002BMS	Benzo(a)pyrene	µg/L	SW8270D	76.8	80.00	0	96.0	15-169				4/22/2013 1315h
1304516-002BMS	Pentachlorophenol	µg/L	SW8270D	89.2	80.00	0	112	10-249				4/22/2013 1315h
1304516-002BMS	Pyrene	µg/L	SW8270D	66.6	80.00	0	83.3	23-150				4/22/2013 1315h

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



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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: 1304516
Project: MP 44.9

Contact: Chris Bittner
Dept: MSSV
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1304516-002BMSD	1,2,4-Trichlorobenzene	µg/L	SW8270D	34.9	84.21	0	41.5	20-107	19.9	25		4/22/2013 2109h
1304516-002BMSD	1,4-Dichlorobenzene	µg/L	SW8270D	25.9	84.21	0	30.7	11-90	17.8	25		4/22/2013 2109h
1304516-002BMSD	2,4,6-Trichlorophenol	µg/L	SW8270D	71.8	84.21	0	85.2	10-223	12.1	25		4/22/2013 2109h
1304516-002BMSD	2,4-Dimethylphenol	µg/L	SW8270D	63.2	84.21	0	75.1	10-176	14.7	25		4/22/2013 2109h
1304516-002BMSD	2,4-Dinitrotoluene	µg/L	SW8270D	64.7	84.21	0	76.9	21-191	4.45	25		4/22/2013 2109h
1304516-002BMSD	2-Chloronaphthalene	µg/L	SW8270D	51.0	84.21	0	60.6	12-132	9.77	25		4/22/2013 2109h
1304516-002BMSD	2-Chlorophenol	µg/L	SW8270D	55.1	84.21	0	65.5	20-107	13.3	25		4/22/2013 2109h
1304516-002BMSD	4,6-Dinitro-2-methylphenol	µg/L	SW8270D	72.7	84.21	0	86.4	20-250	8.62	25		4/22/2013 2109h
1304516-002BMSD	4-Chloro-3-methylphenol	µg/L	SW8270D	74.0	84.21	0	87.9	10-136	14.7	25		4/22/2013 2109h
1304516-002BMSD	4-Nitrophenol	µg/L	SW8270D	30.7	84.21	0	36.5	10-135	8.22	25		4/22/2013 2109h
1304516-002BMSD	Acenaphthene	µg/L	SW8270D	57.4	84.21	0	68.2	21-113	9.58	25		4/22/2013 2109h
1304516-002BMSD	Benzo(a)pyrene	µg/L	SW8270D	167	84.21	0	199	15-169	14.4	25	¹	4/22/2013 2109h
1304516-002BMSD	N-Nitrosodi-n-propylamine	µg/L	SW8270D	47.2	84.21	0	56.1	10-133	14.8	25		4/22/2013 2109h
1304516-002BMSD	Pentachlorophenol	µg/L	SW8270D	44.0	84.21	0	52.3	10-131	25.2	25	@	4/22/2013 2109h
1304516-002BMSD	Phenol	µg/L	SW8270D	38.3	84.21	0	45.5	10-71	11	25		4/22/2013 2109h
1304516-002BMSD	Pyrene	µg/L	SW8270D	86.9	84.21	0	103	23-150	9.86	25		4/22/2013 2109h
1304516-002BMSD	Surr: 2,4,6-Tribromophenol	%REC	SW8270D	67.6	84.21		80.2	14-159				4/22/2013 2109h
1304516-002BMSD	Surr: 2-Fluorobiphenyl	%REC	SW8270D	25.6	42.11		60.9	10-124				4/22/2013 2109h
1304516-002BMSD	Surr: 2-Fluorophenol	%REC	SW8270D	34.2	84.21		40.6	10-106				4/22/2013 2109h
1304516-002BMSD	Surr: Nitrobenzene-d5	%REC	SW8270D	24.2	42.11		57.5	10-180				4/22/2013 2109h
1304516-002BMSD	Surr: Phenol-d6	%REC	SW8270D	28.1	84.21		33.4	10-122				4/22/2013 2109h
1304516-002BMSD	Surr: Terphenyl-d14	%REC	SW8270D	42.9	42.11		102	10-221				4/22/2013 2109h
1304516-002BMSD	Acenaphthene	µg/L	SW8270D	58.3	84.21	0	69.3	21-113	10.3	25		4/22/2013 1341h
1304516-002BMSD	Benzo(a)pyrene	µg/L	SW8270D	85.9	84.21	0	102	15-169	11.2	25		4/22/2013 1341h
1304516-002BMSD	Pentachlorophenol	µg/L	SW8270D	105	84.21	0	125	10-249	16.7	25		4/22/2013 1341h
1304516-002BMSD	Pyrene	µg/L	SW8270D	80.2	84.21	0	95.2	23-150	18.5	25		4/22/2013 1341h

@ - High RPD due to suspected sample non-homogeneity or matrix interference.

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

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Kyle F. Gross
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Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1304516
Project: MP 44.9

Contact: Chris Bittner
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 041913A	1,1,1-Trichloroethane	µg/L	SW8260C	19.4	20.00	0	96.9	59-156				4/19/2013 627h
LCS VOC 041913A	1,1-Dichloroethene	µg/L	SW8260C	17.5	20.00	0	87.5	46-171				4/19/2013 627h
LCS VOC 041913A	1,2-Dichlorobenzene	µg/L	SW8260C	19.5	20.00	0	97.3	67-135				4/19/2013 627h
LCS VOC 041913A	1,2-Dichloroethane	µg/L	SW8260C	21.7	20.00	0	109	60-137				4/19/2013 627h
LCS VOC 041913A	1,2-Dichloropropane	µg/L	SW8260C	18.6	20.00	0	93.0	59-135				4/19/2013 627h
LCS VOC 041913A	Benzene	µg/L	SW8260C	17.6	20.00	0	88.2	62-127				4/19/2013 627h
LCS VOC 041913A	Chlorobenzene	µg/L	SW8260C	18.2	20.00	0	90.8	63-140				4/19/2013 627h
LCS VOC 041913A	Chloroform	µg/L	SW8260C	18.7	20.00	0	93.6	67-132				4/19/2013 627h
LCS VOC 041913A	Ethylbenzene	µg/L	SW8260C	17.9	20.00	0	89.5	55-133				4/19/2013 627h
LCS VOC 041913A	Isopropylbenzene	µg/L	SW8260C	32.2	20.00	0	161	60-162				4/19/2013 627h
LCS VOC 041913A	Methyl tert-butyl ether	µg/L	SW8260C	20.8	20.00	0	104	37-189				4/19/2013 627h
LCS VOC 041913A	Methylene chloride	µg/L	SW8260C	17.6	20.00	0	88.2	32-185				4/19/2013 627h
LCS VOC 041913A	Naphthalene	µg/L	SW8260C	19.0	20.00	0	94.8	28-136				4/19/2013 627h
LCS VOC 041913A	Tetrahydrofuran	µg/L	SW8260C	13.4	20.00	0	67.2	43-146				4/19/2013 627h
LCS VOC 041913A	Toluene	µg/L	SW8260C	17.7	20.00	0	88.6	64-129				4/19/2013 627h
LCS VOC 041913A	Trichloroethene	µg/L	SW8260C	18.8	20.00	0	94.1	54-152				4/19/2013 627h
LCS VOC 041913A	Xylenes, Total	µg/L	SW8260C	54.7	60.00	0	91.1	52-134				4/19/2013 627h
LCS VOC 041913A	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	58.1	50.00		116	76-138				4/19/2013 627h
LCS VOC 041913A	Surr: 4-Bromofluorobenzene	%REC	SW8260C	49.9	50.00		99.9	77-121				4/19/2013 627h
LCS VOC 041913A	Surr: Dibromofluoromethane	%REC	SW8260C	54.0	50.00		108	67-128				4/19/2013 627h
LCS VOC 041913A	Surr: Toluene-d8	%REC	SW8260C	49.2	50.00		98.3	81-135				4/19/2013 627h



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Jose Rocha
QA Officer

QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1304516
Project: MP 44.9

Contact: Chris Bittner
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 041913A	1,1,1,2-Tetrachloroethane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,1,1-Trichloroethane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,1,1,2,2-Tetrachloroethane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,1,2-Trichloro-1,2,2-trifluoroethane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,1,2-Trichloroethane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,1-Dichloropropene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,1-Dichloroethane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,1-Dichloroethene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,2,3-Trichlorobenzene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,2,3-Trichloropropane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,2,3-Trimethylbenzene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,2,4-Trichlorobenzene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,2,4-Trimethylbenzene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,2-Dibromo-3-chloropropane	µg/L	SW8260C	< 5.00				-				4/19/2013 705h
MB VOC 041913A	1,2-Dibromoethane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,2-Dichlorobenzene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,2-Dichloroethane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,2-Dichloropropane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,3,5-Trimethylbenzene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,3-Dichlorobenzene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,3-Dichloropropane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,4-Dichlorobenzene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	1,4-Dioxane	µg/L	SW8260C	< 50.0				-				4/19/2013 705h
MB VOC 041913A	2,2-Dichloropropane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	2-Butanone	µg/L	SW8260C	< 10.0				-				4/19/2013 705h
MB VOC 041913A	2-Chloroethyl vinyl ether	µg/L	SW8260C	< 5.00				-				4/19/2013 705h

Report Date: 4/23/2013 Page 94 of 141



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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: 1304516
Project: MP 44.9

Contact: Chris Bittner
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 041913A	2-Chlorotoluene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	2-Hexanone	µg/L	SW8260C	< 5.00				-				4/19/2013 705h
MB VOC 041913A	2-Nitropropane	µg/L	SW8260C	< 5.00				-				4/19/2013 705h
MB VOC 041913A	4-Chlorotoluene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	4-Isopropyltoluene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	4-Methyl-2-pentanone	µg/L	SW8260C	< 5.00				-				4/19/2013 705h
MB VOC 041913A	Acetone	µg/L	SW8260C	< 10.0				-				4/19/2013 705h
MB VOC 041913A	Acetonitrile	µg/L	SW8260C	< 5.00				-				4/19/2013 705h
MB VOC 041913A	Acrolein	µg/L	SW8260C	< 5.00				-				4/19/2013 705h
MB VOC 041913A	Acrylonitrile	µg/L	SW8260C	< 10.0				-				4/19/2013 705h
MB VOC 041913A	Allyl chloride	µg/L	SW8260C	< 5.00				-				4/19/2013 705h
MB VOC 041913A	Benzene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Benzyl chloride	µg/L	SW8260C	< 5.00				-				4/19/2013 705h
MB VOC 041913A	Bis(2-chloroisopropyl) ether	µg/L	SW8260C	< 5.00				-				4/19/2013 705h
MB VOC 041913A	Bromobenzene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Bromochloromethane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Bromodichloromethane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Bromoform	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Bromomethane	µg/L	SW8260C	< 5.00				-				4/19/2013 705h
MB VOC 041913A	Butyl acetate	µg/L	SW8260C	< 10.0				-				4/19/2013 705h
MB VOC 041913A	Carbon disulfide	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Carbon tetrachloride	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Chlorobenzene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Chloroethane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Chloroform	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Chloromethane	µg/L	SW8260C	< 3.00				-				4/19/2013 705h
MB VOC 041913A	Chloroprene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h

Report Date: 4/23/2013 Page 95 of 141



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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: 1304516

Project: MP 44.9

Contact: Chris Bittner

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 041913A	cis-1,2-Dichloroethene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	cis-1,3-Dichloropropene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Cyclohexane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Cyclohexanone	µg/L	SW8260C	< 50.0				-				4/19/2013 705h
MB VOC 041913A	Dibromochloromethane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Dibromomethane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Dichlorodifluoromethane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Ethyl acetate	µg/L	SW8260C	< 10.0				-				4/19/2013 705h
MB VOC 041913A	Ethyl ether	µg/L	SW8260C	< 10.0				-				4/19/2013 705h
MB VOC 041913A	Ethyl methacrylate	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Ethylbenzene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Hexachlorobutadiene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Iodomethane	µg/L	SW8260C	< 5.00				-				4/19/2013 705h
MB VOC 041913A	Isobutyl alcohol	µg/L	SW8260C	< 100				-				4/19/2013 705h
MB VOC 041913A	Isopropyl acetate	µg/L	SW8260C	< 10.0				-				4/19/2013 705h
MB VOC 041913A	Isopropyl alcohol	µg/L	SW8260C	< 40.0				-				4/19/2013 705h
MB VOC 041913A	Isopropylbenzene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	m,p-Xylene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Methacrylonitrile	µg/L	SW8260C	< 5.00				-				4/19/2013 705h
MB VOC 041913A	Methyl Acetate	µg/L	SW8260C	< 5.00				-				4/19/2013 705h
MB VOC 041913A	Methyl methacrylate	µg/L	SW8260C	< 5.00				-				4/19/2013 705h
MB VOC 041913A	Methyl tert-butyl ether	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Methylcyclohexane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Methylene chloride	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	n-Amyl acetate	µg/L	SW8260C	< 10.0				-				4/19/2013 705h
MB VOC 041913A	Naphthalene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	n-Butyl alcohol	µg/L	SW8260C	< 100				-				4/19/2013 705h

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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: 1304516
Project: MP 44.9

Contact: Chris Bittner
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 041913A	n-Butylbenzene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	n-Hexane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	n-Octane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	n-Propylbenzene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	o-Xylene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Pentachloroethane	µg/L	SW8260C	< 5.00				-				4/19/2013 705h
MB VOC 041913A	Propionitrile	µg/L	SW8260C	< 25.0				-				4/19/2013 705h
MB VOC 041913A	Propyl acetate	µg/L	SW8260C	< 10.0				-				4/19/2013 705h
MB VOC 041913A	sec-Butylbenzene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Styrene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	tert-Butyl alcohol	µg/L	SW8260C	< 20.0				-				4/19/2013 705h
MB VOC 041913A	tert-Butylbenzene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Tetrachloroethene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Tetrahydrofuran	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Toluene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	trans-1,2-Dichloroethene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	trans-1,3-Dichloropropene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	trans-1,4-Dichloro-2-butene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Trichloroethene	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Trichlorofluoromethane	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Vinyl acetate	µg/L	SW8260C	< 10.0				-				4/19/2013 705h
MB VOC 041913A	Vinyl chloride	µg/L	SW8260C	< 1.00				-				4/19/2013 705h
MB VOC 041913A	Xylenes, Total	µg/L	SW8260C	< 2.00				-				4/19/2013 705h
MB VOC 041913A	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	55.3	50.00		111	76-138				4/19/2013 705h
MB VOC 041913A	Surr: 4-Bromofluorobenzene	%REC	SW8260C	52.1	50.00		104	77-121				4/19/2013 705h
MB VOC 041913A	Surr: Dibromofluoromethane	%REC	SW8260C	54.4	50.00		109	67-128				4/19/2013 705h
MB VOC 041913A	Surr: Toluene-d8	%REC	SW8260C	50.4	50.00		101	81-135				4/19/2013 705h



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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: 1304516
Project: MP 44.9

Contact: Chris Bittner
Dept: MSVOA
QC Type: MS

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1304516-001AMS	1,1,1-Trichloroethane	µg/L	SW8260C	22.5	20.00	0	112	67-147				4/19/2013 821h
1304516-001AMS	1,1-Dichloroethene	µg/L	SW8260C	19.8	20.00	0	98.8	51-152				4/19/2013 821h
1304516-001AMS	1,2-Dichlorobenzene	µg/L	SW8260C	20.0	20.00	0	99.8	70-130				4/19/2013 821h
1304516-001AMS	1,2-Dichloroethane	µg/L	SW8260C	21.1	20.00	0	106	39-162				4/19/2013 821h
1304516-001AMS	1,2-Dichloropropane	µg/L	SW8260C	19.5	20.00	0	97.5	59-135				4/19/2013 821h
1304516-001AMS	Benzene	µg/L	SW8260C	19.8	20.00	0	99.0	66-145				4/19/2013 821h
1304516-001AMS	Chlorobenzene	µg/L	SW8260C	19.7	20.00	0	98.3	63-140				4/19/2013 821h
1304516-001AMS	Chloroform	µg/L	SW8260C	20.8	20.00	0	104	50-146				4/19/2013 821h
1304516-001AMS	Ethylbenzene	µg/L	SW8260C	19.3	20.00	0	96.3	69-133				4/19/2013 821h
1304516-001AMS	Isopropylbenzene	µg/L	SW8260C	19.5	20.00	0	97.7	60-147				4/19/2013 821h
1304516-001AMS	Methyl tert-butyl ether	µg/L	SW8260C	21.6	20.00	0	108	37-189				4/19/2013 821h
1304516-001AMS	Methylene chloride	µg/L	SW8260C	19.2	20.00	0	96.0	30-192				4/19/2013 821h
1304516-001AMS	Naphthalene	µg/L	SW8260C	17.1	20.00	0	85.3	41-131				4/19/2013 821h
1304516-001AMS	Tetrahydrofuran	µg/L	SW8260C	15.8	20.00	0	79.1	43-146				4/19/2013 821h
1304516-001AMS	Toluene	µg/L	SW8260C	19.1	20.00	0	95.4	18-192				4/19/2013 821h
1304516-001AMS	Trichloroethene	µg/L	SW8260C	19.1	20.00	0	95.5	61-153				4/19/2013 821h
1304516-001AMS	Xylenes, Total	µg/L	SW8260C	58.4	60.00	0	97.4	42-167				4/19/2013 821h
1304516-001AMS	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	55.4	50.00		111	72-151				4/19/2013 821h
1304516-001AMS	Surr: 4-Bromofluorobenzene	%REC	SW8260C	50.0	50.00		99.9	80-128				4/19/2013 821h
1304516-001AMS	Surr: Dibromofluoromethane	%REC	SW8260C	55.3	50.00		111	80-124				4/19/2013 821h
1304516-001AMS	Surr: Toluene-d8	%REC	SW8260C	48.6	50.00		97.2	77-129				4/19/2013 821h



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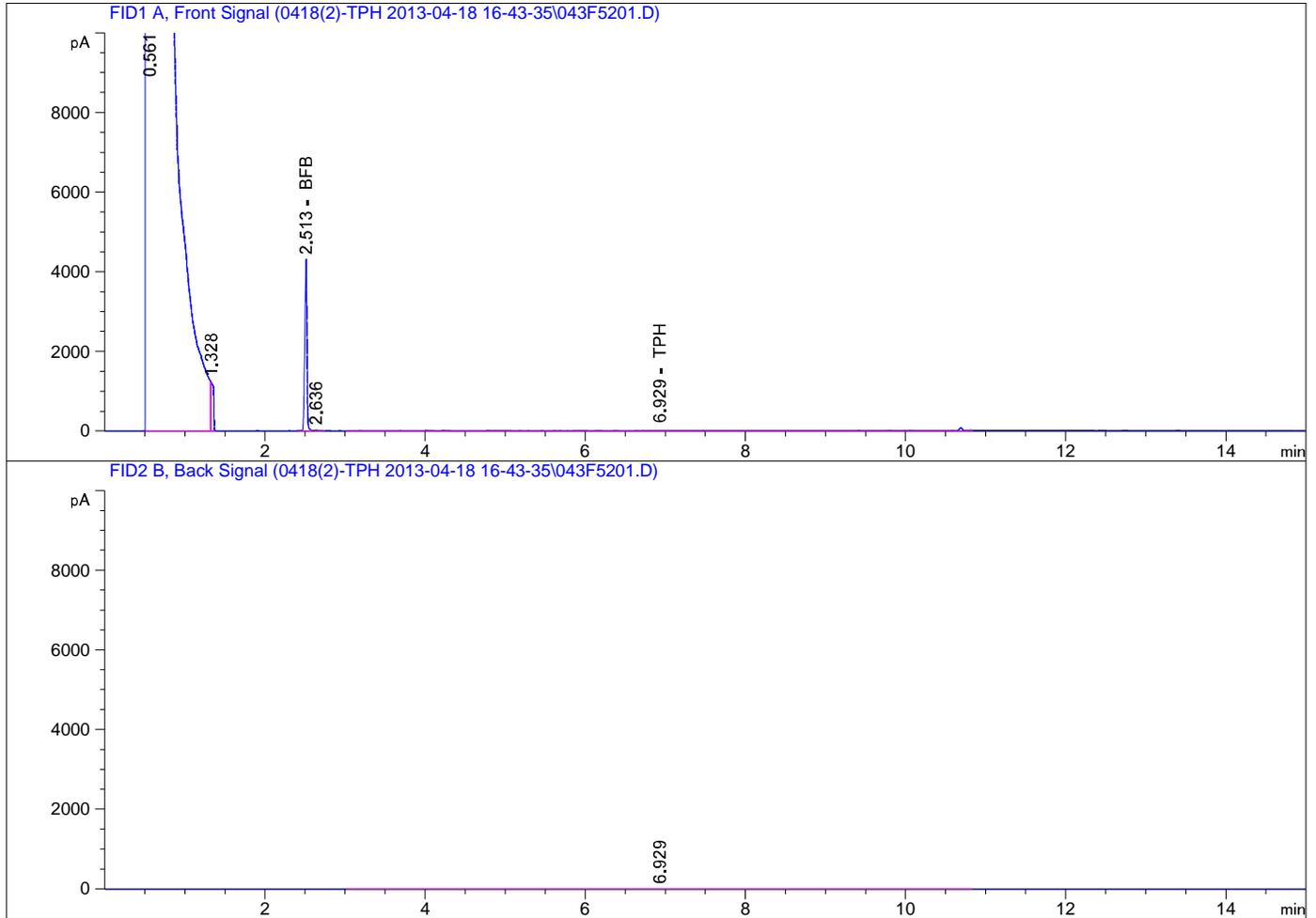
QC SUMMARY REPORT

Client: Utah Division of Water Quality
Lab Set ID: 1304516
Project: MP 44.9

Contact: Chris Bittner
Dept: MSVOA
QC Type: MSD

Sample ID	Analyte	Units	Method	Result	Amount Spiked	Original Amount	%REC	Limits	%RPD	RPD Limit	Qual	Date Analyzed
1304516-001AMSD	1,1,1-Trichloroethane	µg/L	SW8260C	23.1	20.00	0	116	67-147	2.89	25		4/19/2013 840h
1304516-001AMSD	1,1-Dichloroethene	µg/L	SW8260C	19.8	20.00	0	99.2	51-152	0.455	25		4/19/2013 840h
1304516-001AMSD	1,2-Dichlorobenzene	µg/L	SW8260C	20.4	20.00	0	102	70-130	2.23	25		4/19/2013 840h
1304516-001AMSD	1,2-Dichloroethane	µg/L	SW8260C	21.5	20.00	0	108	39-162	1.92	25		4/19/2013 840h
1304516-001AMSD	1,2-Dichloropropane	µg/L	SW8260C	19.8	20.00	0	99.0	59-135	1.58	25		4/19/2013 840h
1304516-001AMSD	Benzene	µg/L	SW8260C	20.1	20.00	0	100	66-145	1.3	25		4/19/2013 840h
1304516-001AMSD	Chlorobenzene	µg/L	SW8260C	20.1	20.00	0	100	63-140	2.16	25		4/19/2013 840h
1304516-001AMSD	Chloroform	µg/L	SW8260C	21.2	20.00	0	106	50-146	1.95	25		4/19/2013 840h
1304516-001AMSD	Ethylbenzene	µg/L	SW8260C	19.5	20.00	0	97.4	69-133	1.14	25		4/19/2013 840h
1304516-001AMSD	Isopropylbenzene	µg/L	SW8260C	19.8	20.00	0	98.8	60-147	1.07	25		4/19/2013 840h
1304516-001AMSD	Methyl tert-butyl ether	µg/L	SW8260C	22.3	20.00	0	111	37-189	2.96	25		4/19/2013 840h
1304516-001AMSD	Methylene chloride	µg/L	SW8260C	19.9	20.00	0	99.4	30-192	3.43	25		4/19/2013 840h
1304516-001AMSD	Naphthalene	µg/L	SW8260C	17.3	20.00	0	86.5	41-131	1.4	25		4/19/2013 840h
1304516-001AMSD	Tetrahydrofuran	µg/L	SW8260C	17.8	20.00	0	88.8	43-146	11.5	25		4/19/2013 840h
1304516-001AMSD	Toluene	µg/L	SW8260C	19.5	20.00	0	97.5	18-192	2.07	25		4/19/2013 840h
1304516-001AMSD	Trichloroethene	µg/L	SW8260C	19.8	20.00	0	99.0	61-153	3.65	25		4/19/2013 840h
1304516-001AMSD	Xylenes, Total	µg/L	SW8260C	60.2	60.00	0	100	42-167	3	25		4/19/2013 840h
1304516-001AMSD	Surr: 1,2-Dichloroethane-d4	%REC	SW8260C	56.0	50.00		112	72-151				4/19/2013 840h
1304516-001AMSD	Surr: 4-Bromofluorobenzene	%REC	SW8260C	50.8	50.00		102	80-128				4/19/2013 840h
1304516-001AMSD	Surr: Dibromofluoromethane	%REC	SW8260C	56.4	50.00		113	80-124				4/19/2013 840h
1304516-001AMSD	Surr: Toluene-d8	%REC	SW8260C	48.8	50.00		97.6	77-129				4/19/2013 840h

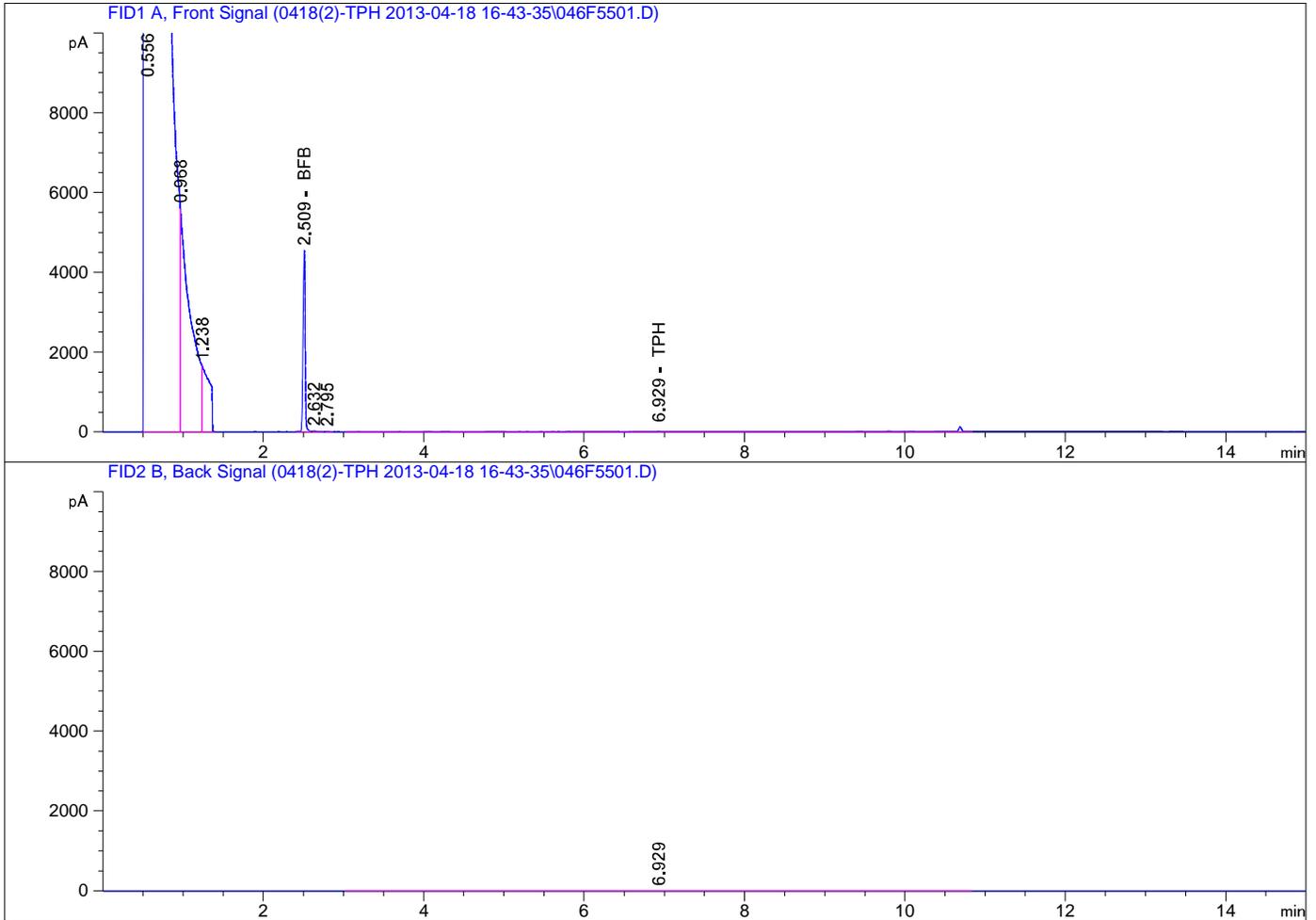
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Acq. Instrument : GC C Location : Vial 43
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Inj Volume : 5 µl
Acq. Method : C:\CHEM32\1\DATA\0418(2)-TPH 2013-04-18 16-43-35\TPH-FRONT-1090171B.M
Last changed : 4/15/2013 9:56:52 PM
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External Standard Report
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Sorted By : Signal
Calib. Data Modified : 4/15/2013 9:56:46 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

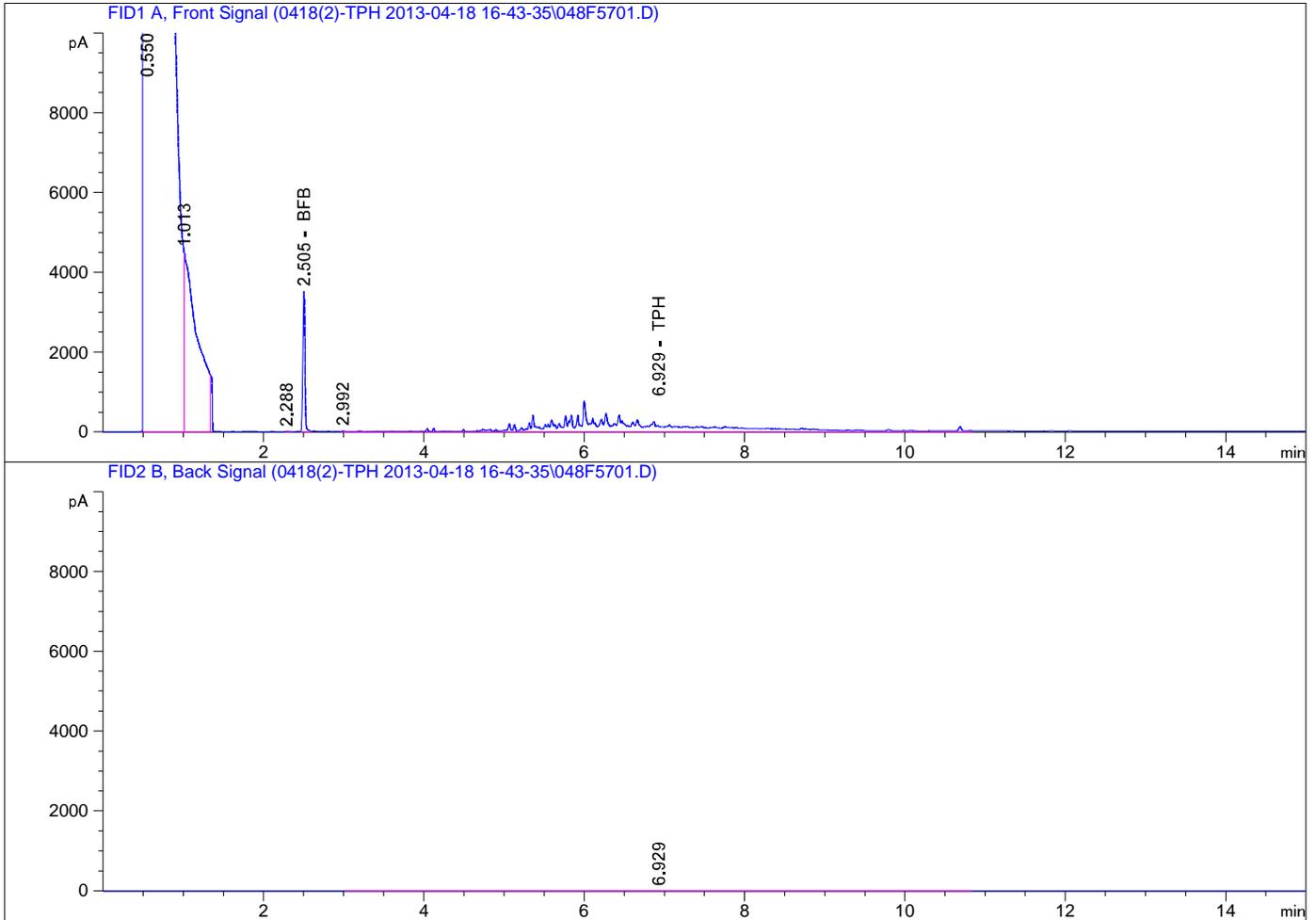
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Acq. Operator : Seq. Line : 55
Acq. Instrument : GC C Location : Vial 46
Injection Date : 4/19/2013 10:07:18 AM Inj : 1
Inj Volume : 5 µl
Acq. Method : C:\CHEM32\1\DATA\0418(2)-TPH 2013-04-18 16-43-35\TPH-FRONT-1090171B.M
Last changed : 4/15/2013 9:56:52 PM
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(modified after loading)
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External Standard Report
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Sorted By : Signal
Calib. Data Modified : 4/15/2013 9:56:46 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

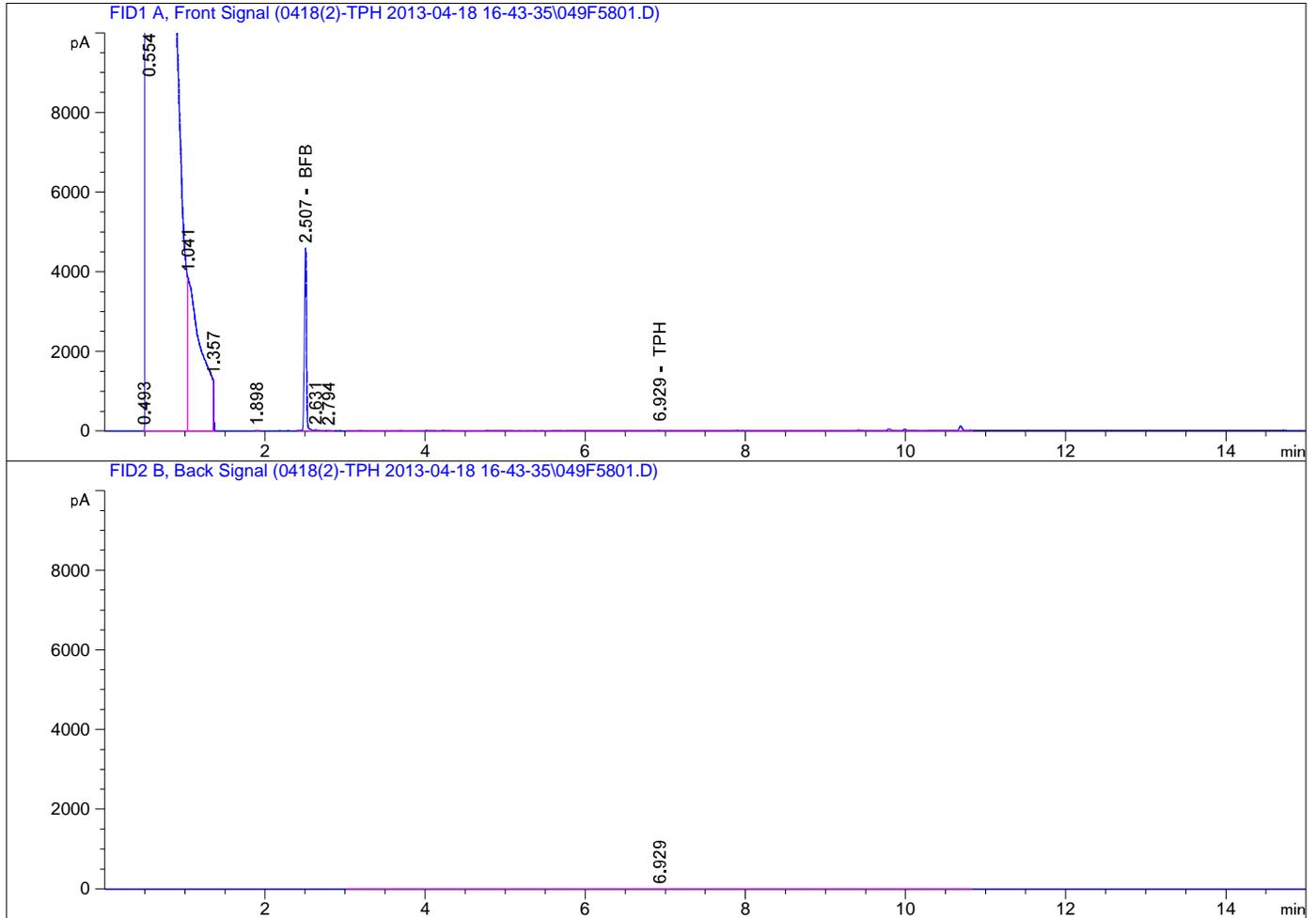
=====
Acq. Operator : Seq. Line : 57
Acq. Instrument : GC C Location : Vial 48
Injection Date : 4/19/2013 10:45:44 AM Inj : 1
Inj Volume : 5 µl
Acq. Method : C:\CHEM32\1\DATA\0418(2)-TPH 2013-04-18 16-43-35\TPH-FRONT-1090171B.M
Last changed : 4/15/2013 9:56:52 PM
Analysis Method : C:\CHEM32\1\DATA\0418(2)-TPH 2013-04-18 16-43-35\TPH-FRONT-1090171B.M (Sequence Method)
Last changed : 4/19/2013 12:48:25 PM
(modified after loading)
=====



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External Standard Report
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Sorted By : Signal
Calib. Data Modified : 4/15/2013 9:56:46 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

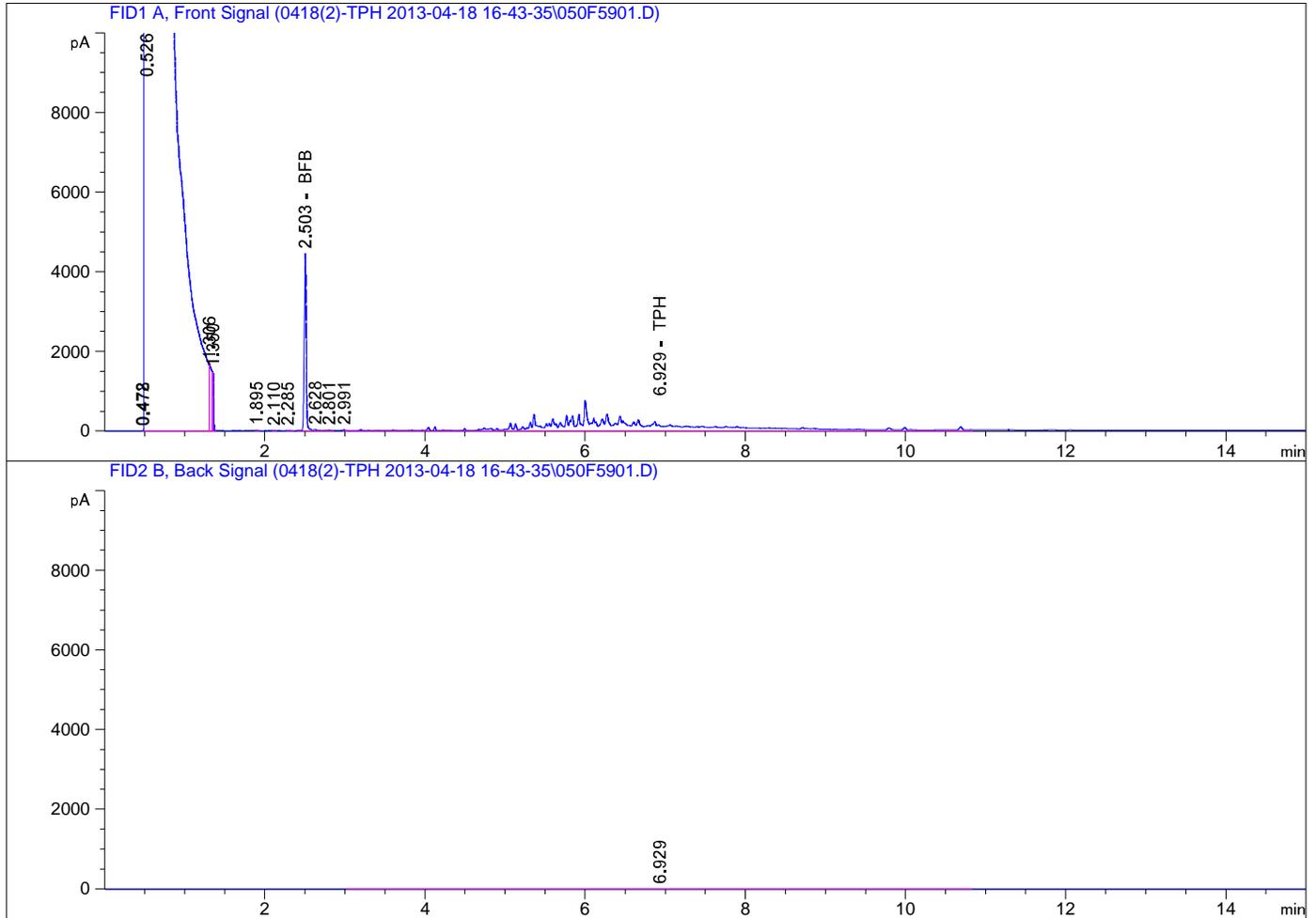
=====
Acq. Operator : Seq. Line : 58
Acq. Instrument : GC C Location : Vial 49
Injection Date : 4/19/2013 11:05:00 AM Inj : 1
Inj Volume : 5 µl
Acq. Method : C:\CHEM32\1\DATA\0418(2)-TPH 2013-04-18 16-43-35\TPH-FRONT-1090171B.M
Last changed : 4/15/2013 9:56:52 PM
Analysis Method : C:\CHEM32\1\DATA\0418(2)-TPH 2013-04-18 16-43-35\TPH-FRONT-1090171B.M (Sequence Method)
Last changed : 4/19/2013 12:48:25 PM
(modified after loading)
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External Standard Report
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Sorted By : Signal
Calib. Data Modified : 4/15/2013 9:56:46 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

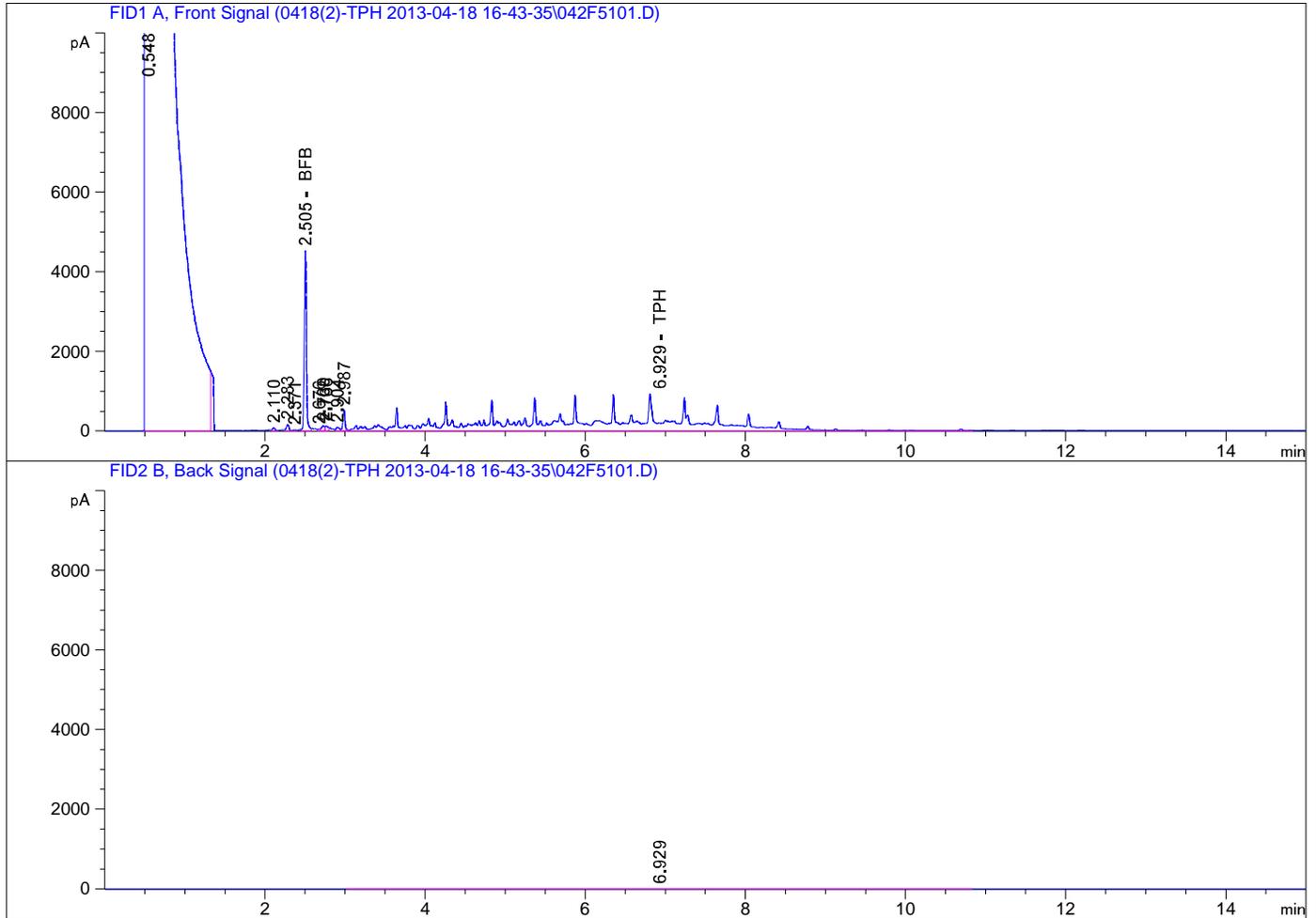
=====
Acq. Operator : Seq. Line : 59
Acq. Instrument : GC C Location : Vial 50
Injection Date : 4/19/2013 11:24:21 AM Inj : 1
Inj Volume : 5 µl
Acq. Method : C:\CHEM32\1\DATA\0418(2)-TPH 2013-04-18 16-43-35\TPH-FRONT-1090171B.M
Last changed : 4/15/2013 9:56:52 PM
Analysis Method : C:\CHEM32\1\DATA\0418(2)-TPH 2013-04-18 16-43-35\TPH-FRONT-1090171B.M (Sequence Method)
Last changed : 4/19/2013 12:48:25 PM
(modified after loading)
=====



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External Standard Report
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Sorted By : Signal
Calib. Data Modified : 4/15/2013 9:56:46 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

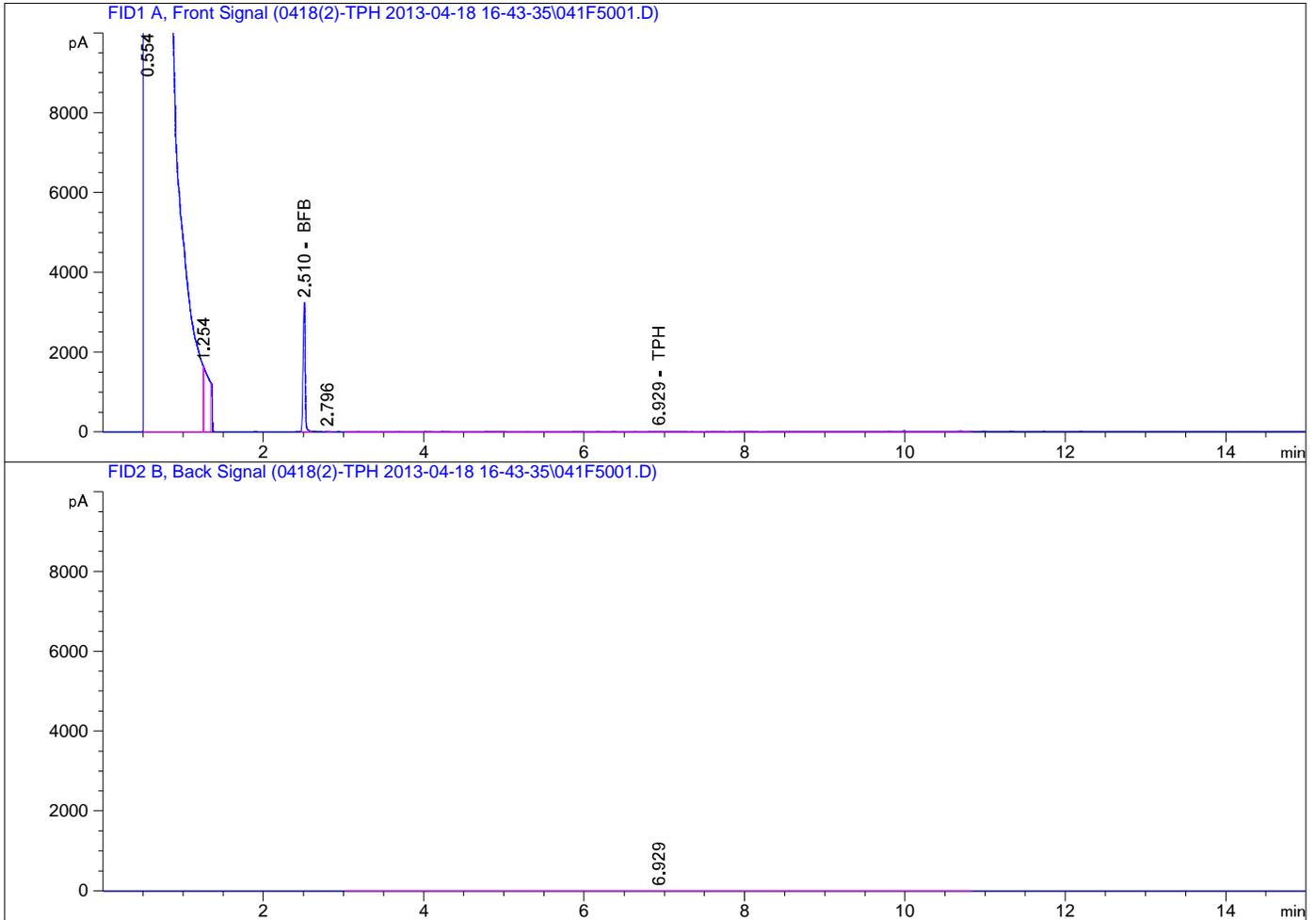
=====
Acq. Operator : Seq. Line : 51
Acq. Instrument : GC C Location : Vial 42
Injection Date : 4/19/2013 8:50:14 AM Inj : 1
Inj Volume : 5 µl
Acq. Method : C:\CHEM32\1\DATA\0418(2)-TPH 2013-04-18 16-43-35\TPH-FRONT-1090171B.M
Last changed : 4/15/2013 9:56:52 PM
Analysis Method : C:\CHEM32\1\DATA\0418(2)-TPH 2013-04-18 16-43-35\TPH-FRONT-1090171B.M (Sequence Method)
Last changed : 4/19/2013 12:48:25 PM
(modified after loading)
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External Standard Report
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Sorted By : Signal
Calib. Data Modified : 4/15/2013 9:56:46 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

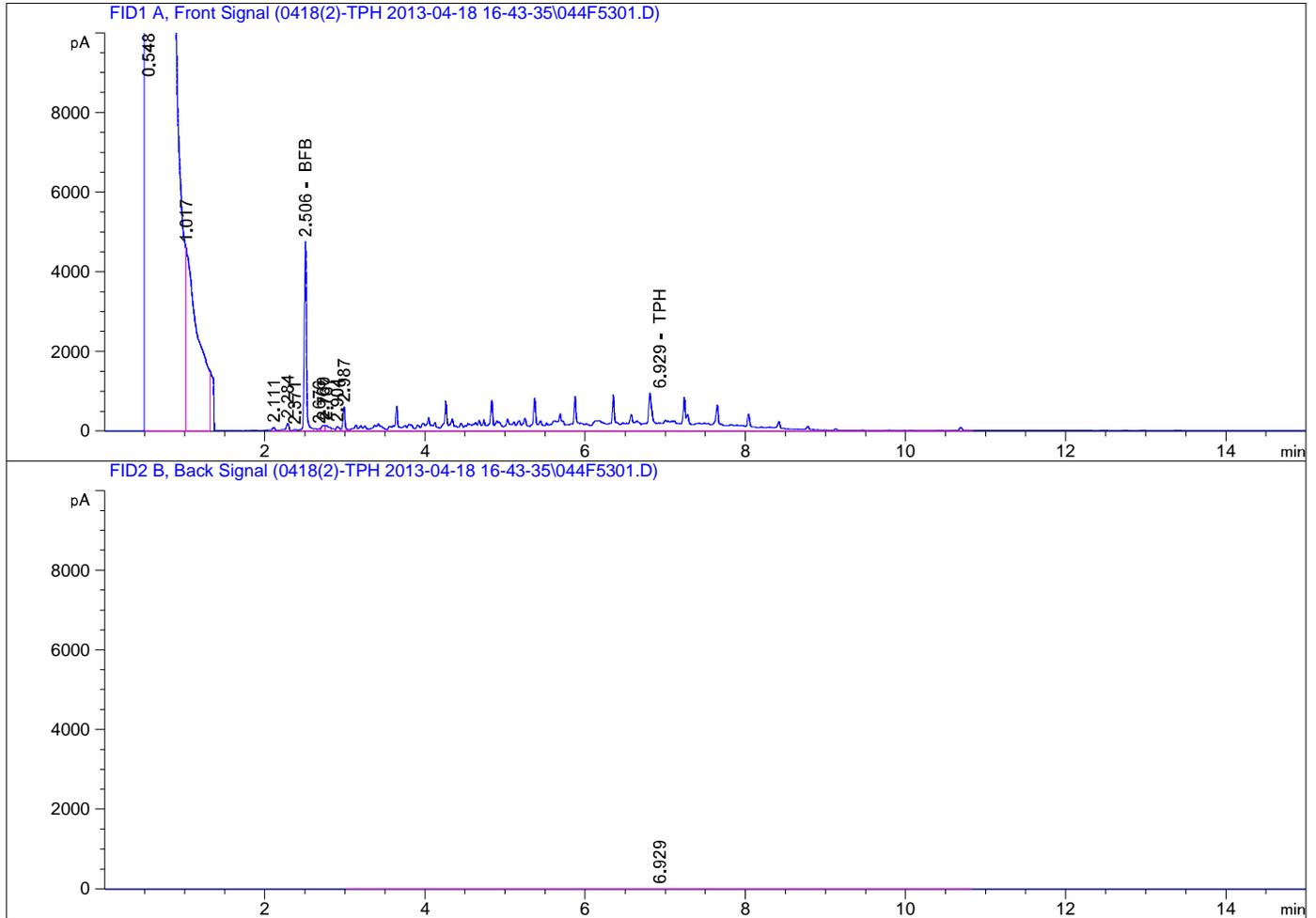
=====
Acq. Operator : Seq. Line : 50
Acq. Instrument : GC C Location : Vial 41
Injection Date : 4/19/2013 8:30:53 AM Inj : 1
Inj Volume : 5 µl
Acq. Method : C:\CHEM32\1\DATA\0418(2)-TPH 2013-04-18 16-43-35\TPH-FRONT-1090171B.M
Last changed : 4/15/2013 9:56:52 PM
Analysis Method : C:\CHEM32\1\DATA\0418(2)-TPH 2013-04-18 16-43-35\TPH-FRONT-1090171B.M (Sequence Method)
Last changed : 4/19/2013 12:48:25 PM
(modified after loading)
=====



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External Standard Report
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Sorted By : Signal
Calib. Data Modified : 4/15/2013 9:56:46 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

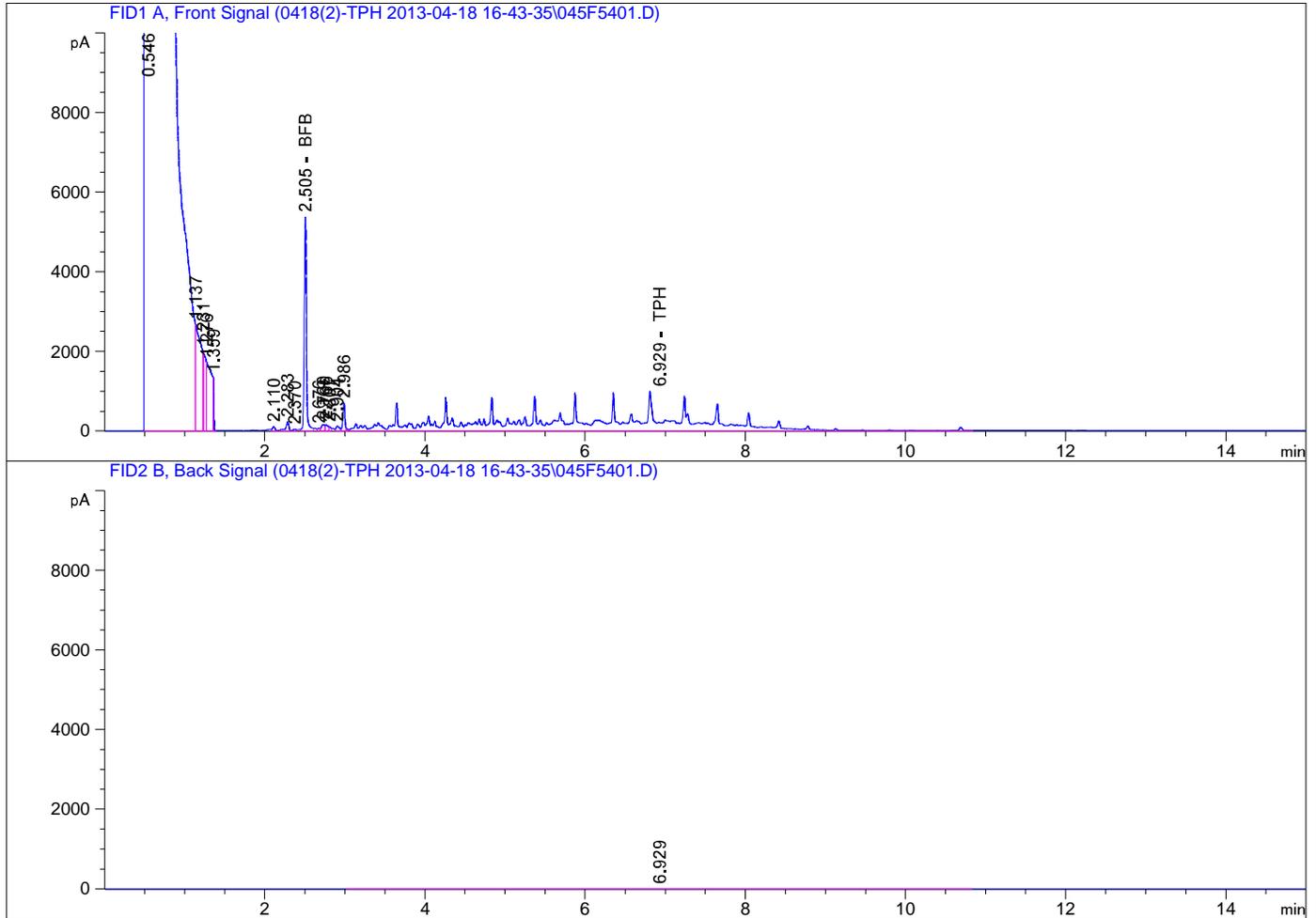
=====
Acq. Operator : Seq. Line : 53
Acq. Instrument : GC C Location : Vial 44
Injection Date : 4/19/2013 9:28:45 AM Inj : 1
Inj Volume : 5 µl
Acq. Method : C:\CHEM32\1\DATA\0418(2)-TPH 2013-04-18 16-43-35\TPH-FRONT-1090171B.M
Last changed : 4/15/2013 9:56:52 PM
Analysis Method : C:\CHEM32\1\DATA\0418(2)-TPH 2013-04-18 16-43-35\TPH-FRONT-1090171B.M (Sequence Method)
Last changed : 4/19/2013 12:48:25 PM
(modified after loading)
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External Standard Report
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Sorted By : Signal
Calib. Data Modified : 4/15/2013 9:56:46 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

=====
Acq. Operator : Seq. Line : 54
Acq. Instrument : GC C Location : Vial 45
Injection Date : 4/19/2013 9:47:57 AM Inj : 1
Inj Volume : 5 µl
Acq. Method : C:\CHEM32\1\DATA\0418(2)-TPH 2013-04-18 16-43-35\TPH-FRONT-1090171B.M
Last changed : 4/15/2013 9:56:52 PM
Analysis Method : C:\CHEM32\1\DATA\0418(2)-TPH 2013-04-18 16-43-35\TPH-FRONT-1090171B.M (Sequence Method)
Last changed : 4/19/2013 12:48:25 PM
(modified after loading)
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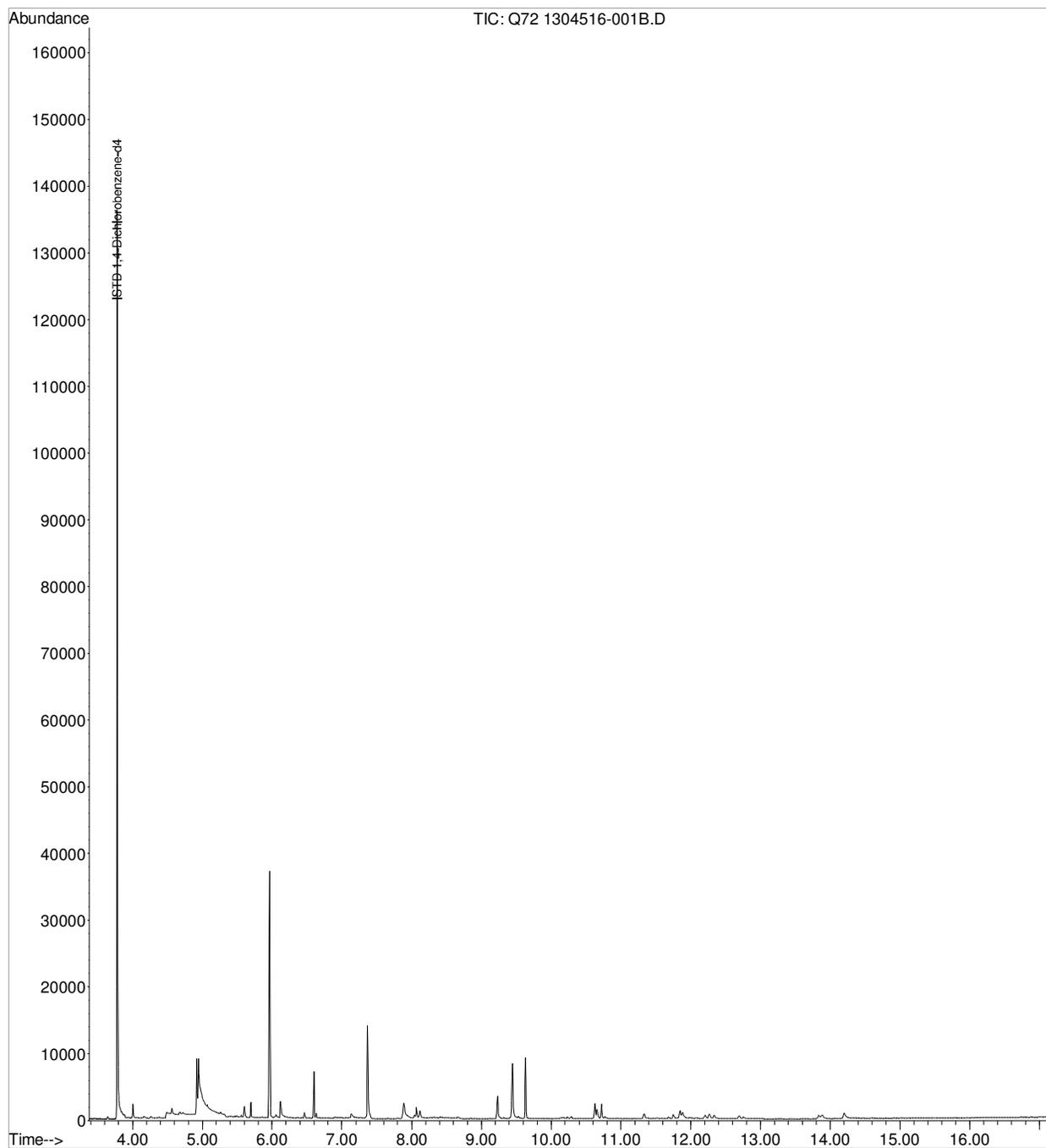
=====
External Standard Report
=====

Sorted By : Signal
Calib. Data Modified : 4/15/2013 9:56:46 PM
Multiplier: : 1.0000
Dilution: : 1.0000
Do not use Multiplier & Dilution Factor with ISTDs

Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
Data File : Q72 1304516-001B.D
Acq On : 22 Apr 2013 12:22 pm
Operator : ALICIA HABERLE
Sample : 1304516-001B
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

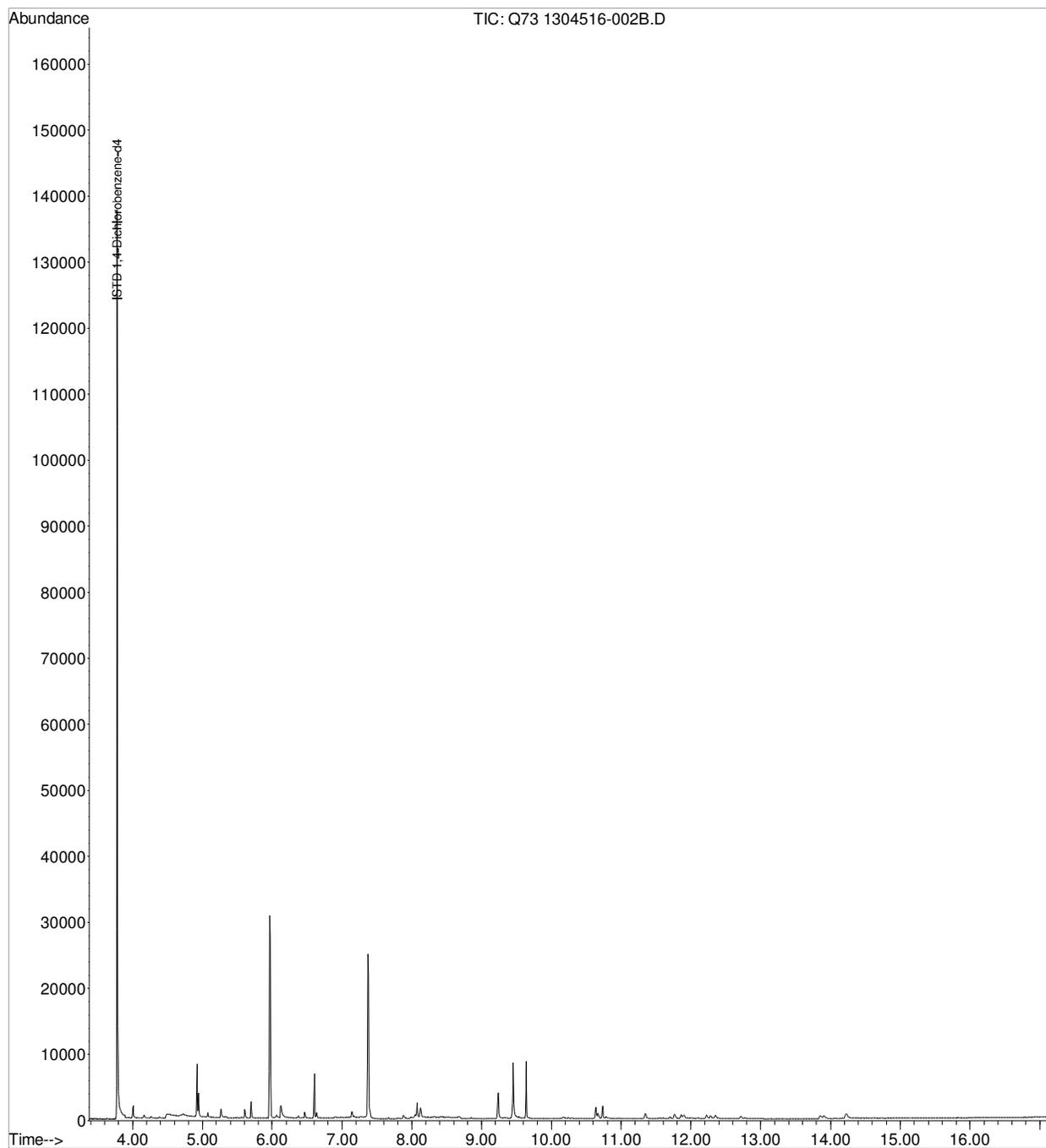
Quant Time: Apr 22 19:25:47 2013
Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Mon Apr 22 10:01:37 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
Data File : Q73 1304516-002B.D
Acq On : 22 Apr 2013 12:48 pm
Operator : ALICIA HABERLE
Sample : 1304516-002B
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

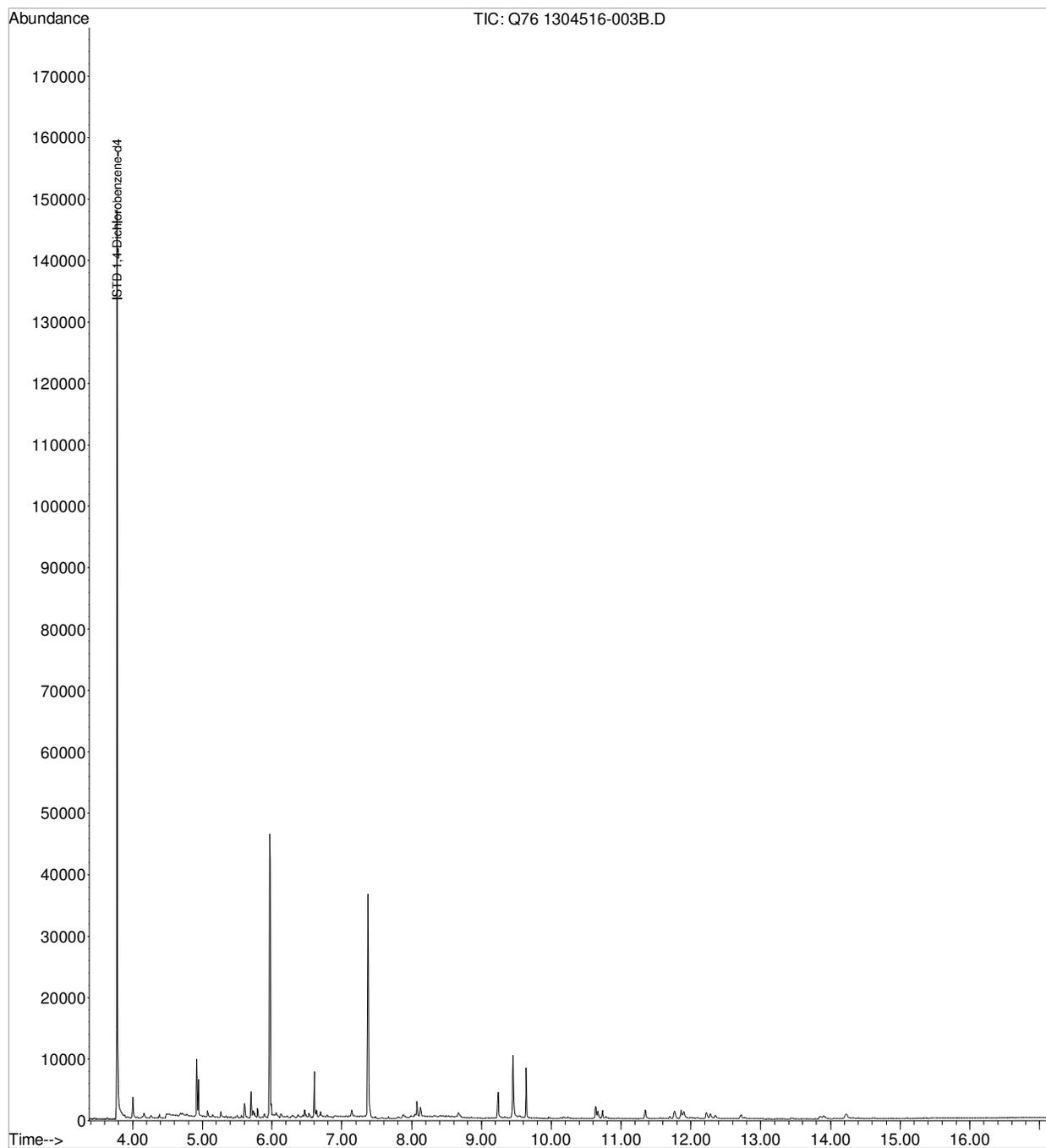
Quant Time: Apr 22 19:26:22 2013
Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Mon Apr 22 10:01:37 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
Data File : Q76 1304516-003B.D
Acq On : 22 Apr 2013 2:07 pm
Operator : ALICIA HABERLE
Sample : 1304516-003B
Misc : SAMP
ALS Vial : 11 Sample Multiplier: 1

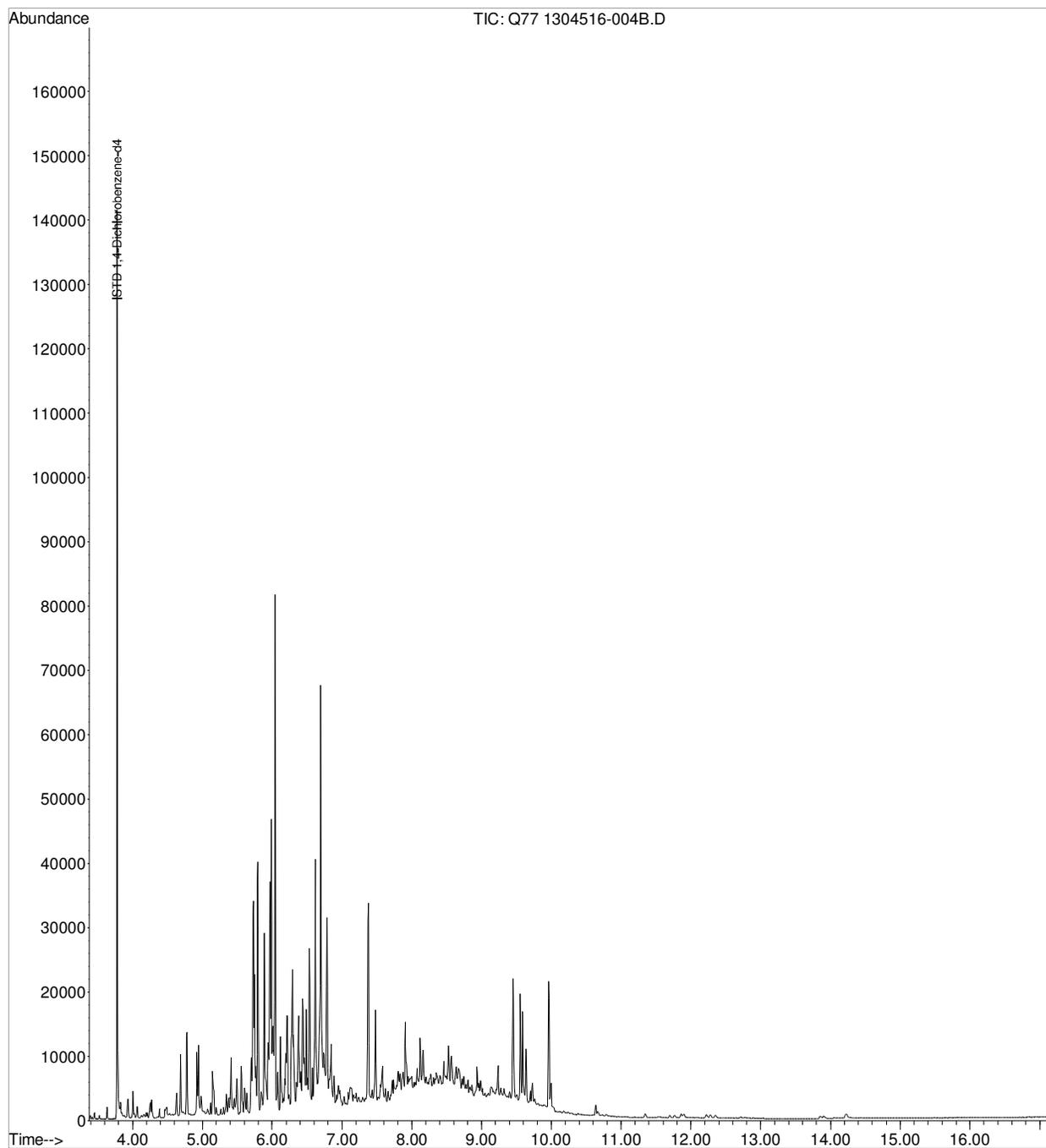
Quant Time: Apr 22 19:29:50 2013
Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Mon Apr 22 10:01:37 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
Data File : Q77 1304516-004B.D
Acq On : 22 Apr 2013 2:34 pm
Operator : ALICIA HABERLE
Sample : 1304516-004B
Misc : SAMP
ALS Vial : 12 Sample Multiplier: 1

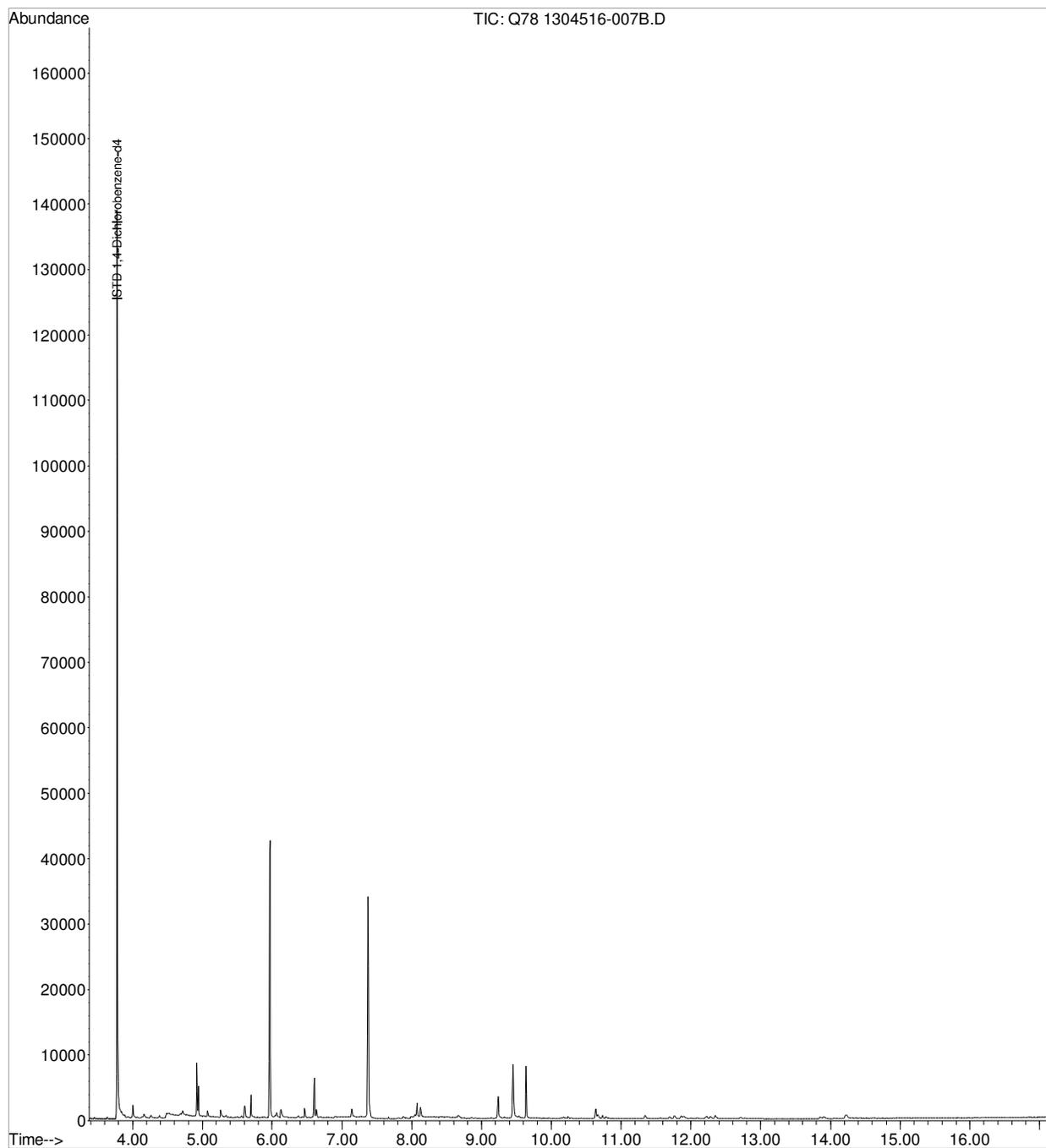
Quant Time: Apr 22 19:30:27 2013
Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Mon Apr 22 10:01:37 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
Data File : Q78 1304516-007B.D
Acq On : 22 Apr 2013 3:00 pm
Operator : ALICIA HABERLE
Sample : 1304516-007B
Misc : SAMP
ALS Vial : 13 Sample Multiplier: 1

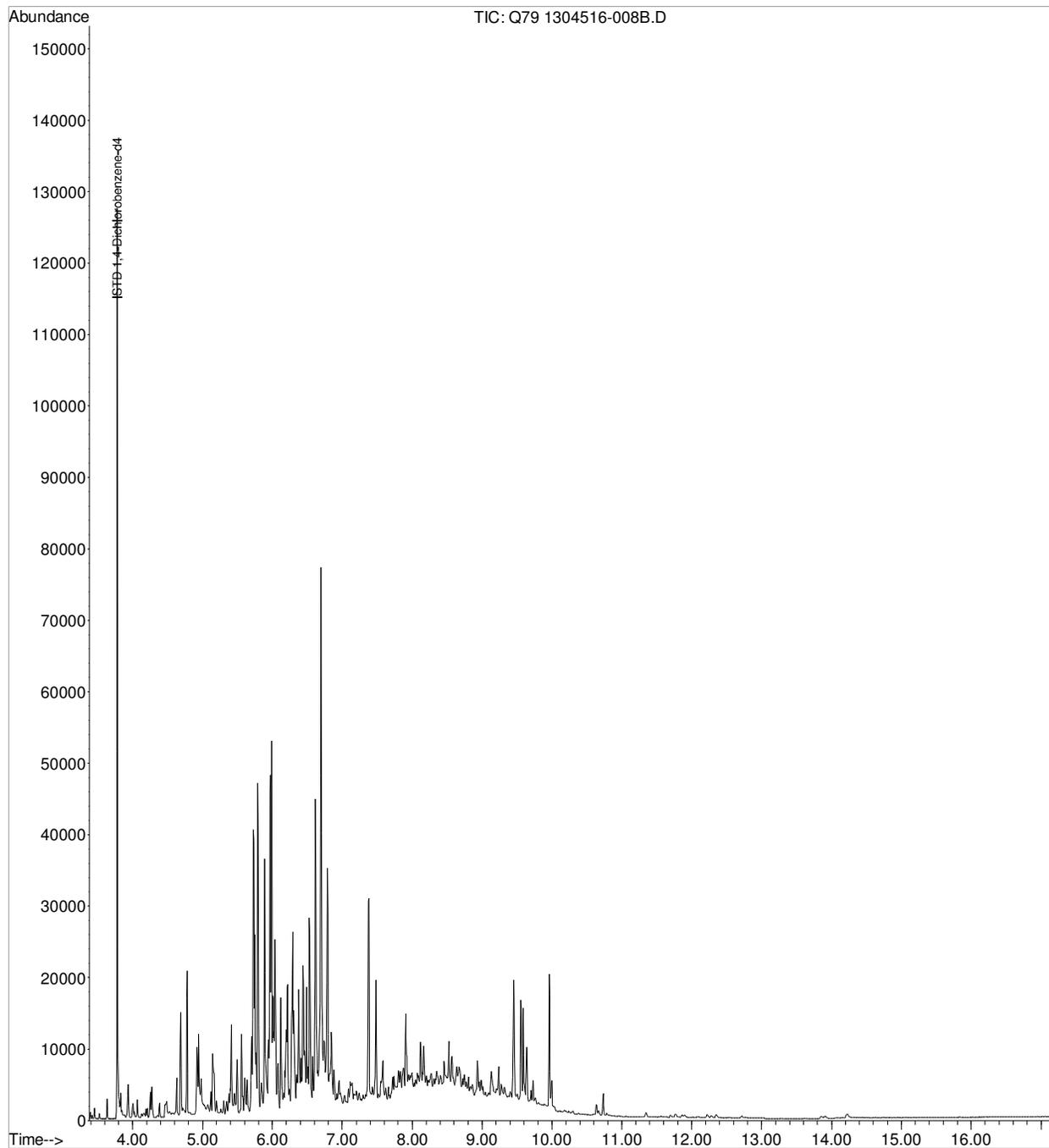
Quant Time: Apr 22 19:31:08 2013
Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Mon Apr 22 10:01:37 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
Data File : Q79 1304516-008B.D
Acq On : 22 Apr 2013 3:26 pm
Operator : ALICIA HABERLE
Sample : 1304516-008B
Misc : SAMP
ALS Vial : 14 Sample Multiplier: 1

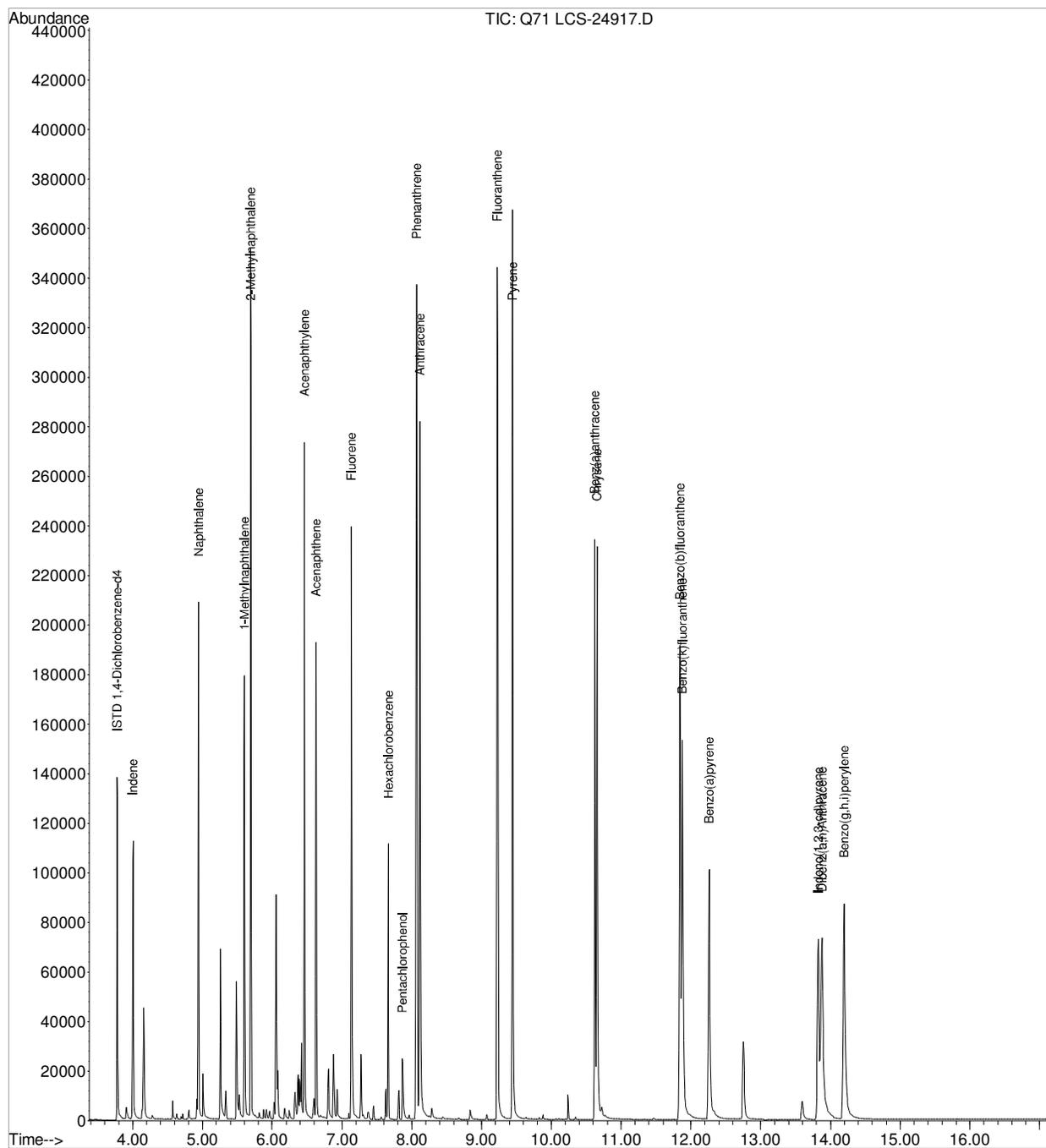
Quant Time: Apr 22 19:31:46 2013
Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Mon Apr 22 10:01:37 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
 Data File : Q71 LCS-24917.D
 Acq On : 22 Apr 2013 11:56 am
 Operator : ALICIA HABERLE
 Sample : LCS-24917
 Misc : LCS
 ALS Vial : 6 Sample Multiplier: 1

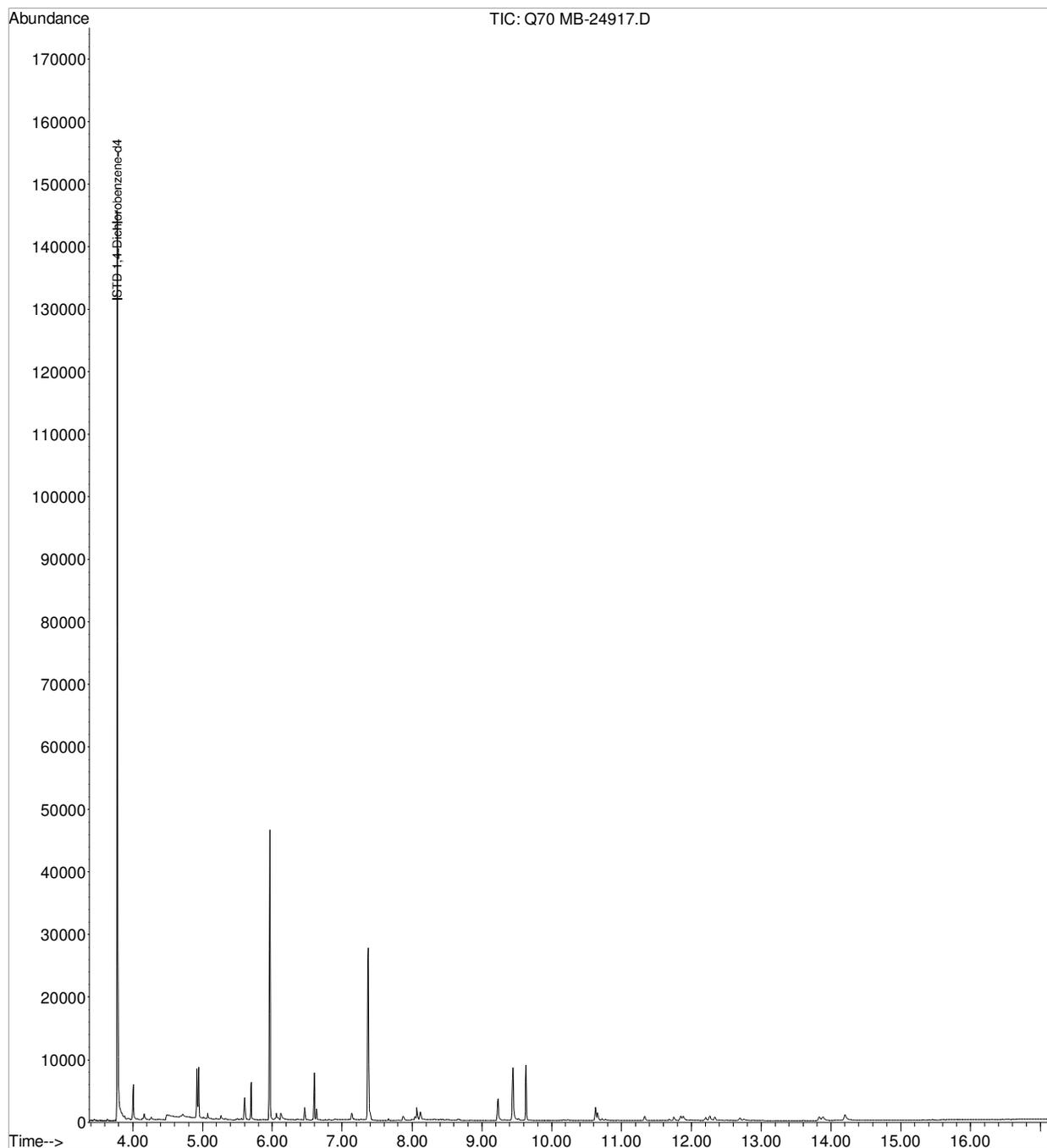
Quant Time: Apr 22 19:24:54 2013
 Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M
 Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
 QLast Update : Mon Apr 22 10:01:37 2013
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
Data File : Q70 MB-24917.D
Acq On : 22 Apr 2013 11:29 am
Operator : ALICIA HABERLE
Sample : MB-24917
Misc : MBLK
ALS Vial : 5 Sample Multiplier: 1

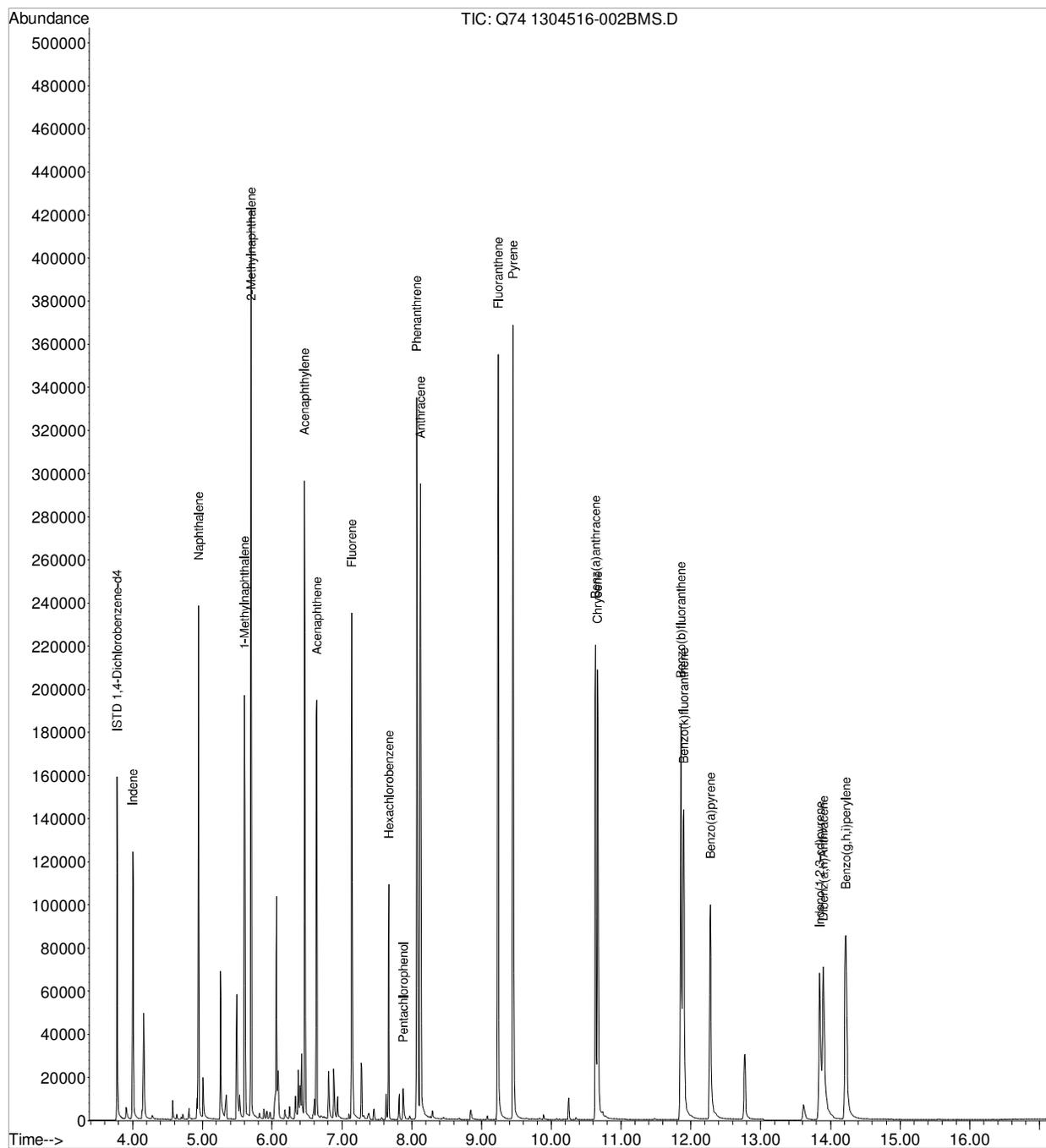
Quant Time: Apr 22 19:23:38 2013
Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Mon Apr 22 10:01:37 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
 Data File : Q74 1304516-002BMS.D
 Acq On : 22 Apr 2013 1:15 pm
 Operator : ALICIA HABERLE
 Sample : 1304516-002BMS
 Misc : MS
 ALS Vial : 9 Sample Multiplier: 1

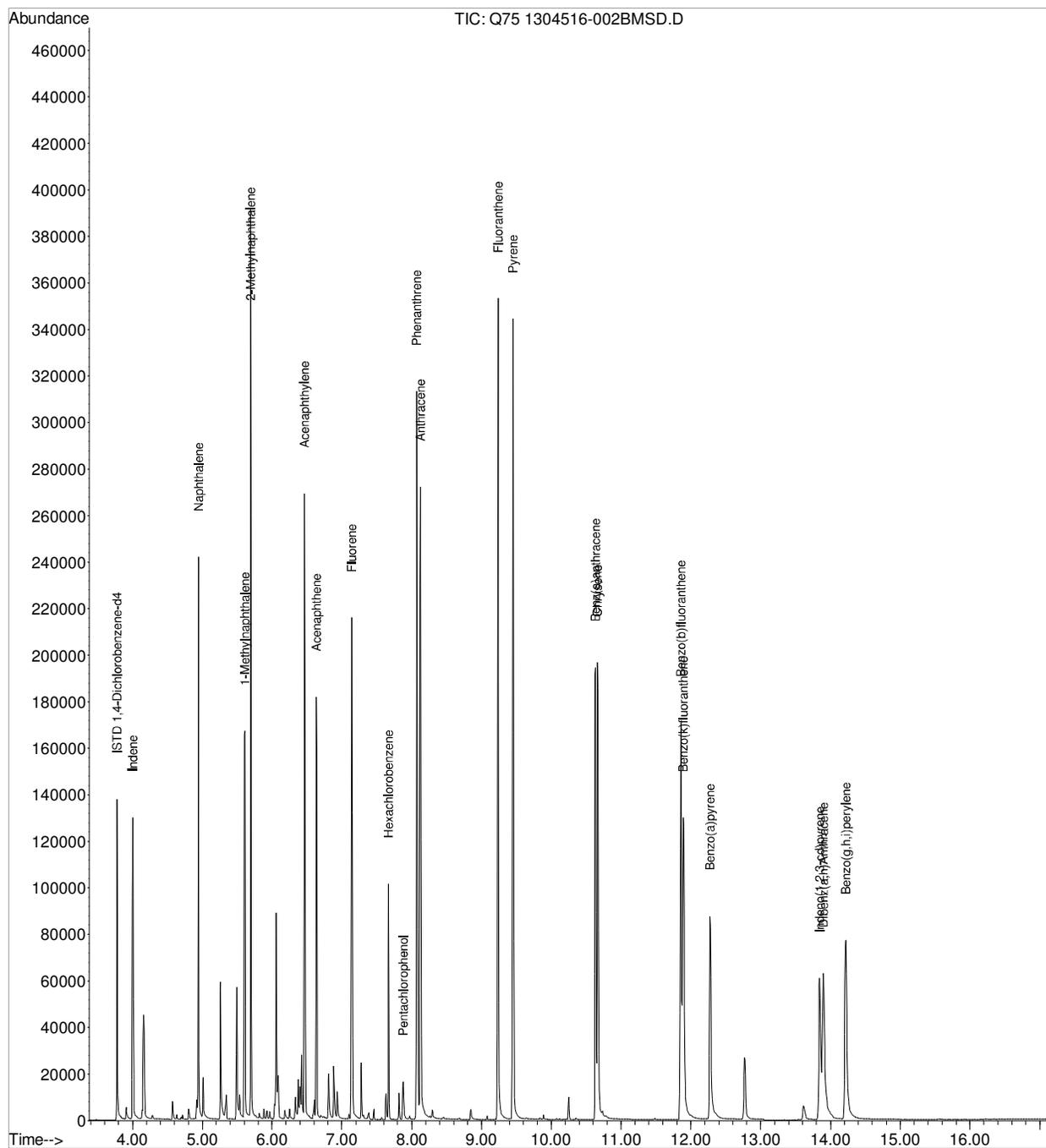
Quant Time: Apr 22 19:26:54 2013
 Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M
 Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
 QLast Update : Mon Apr 22 10:01:37 2013
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
 Data File : Q75 1304516-002BMSD.D
 Acq On : 22 Apr 2013 1:41 pm
 Operator : ALICIA HABERLE
 Sample : 1304516-002BMSD
 Misc : MSD
 ALS Vial : 10 Sample Multiplier: 1

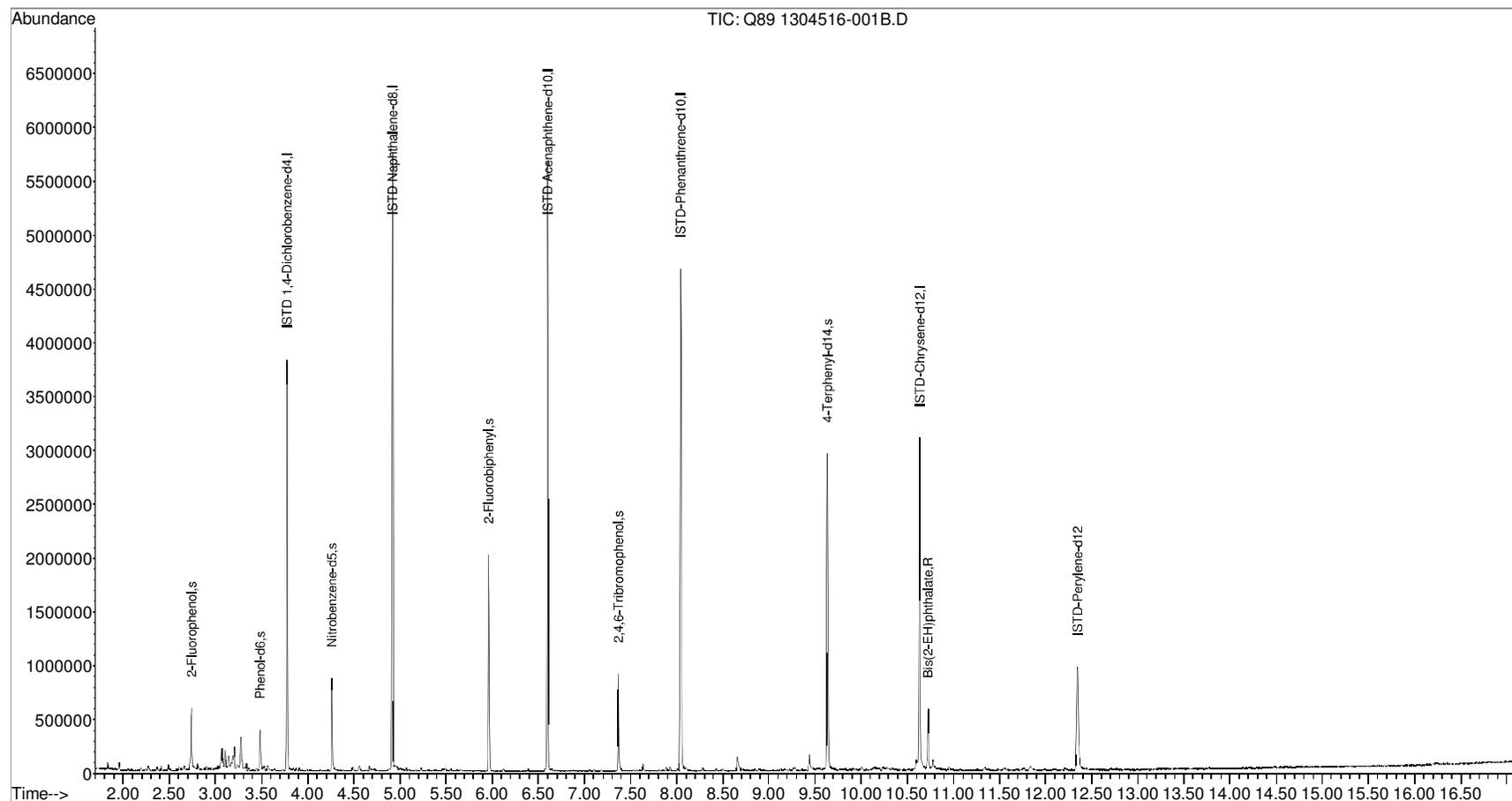
Quant Time: Apr 22 19:27:23 2013
 Quant Method : C:\MSDCHEM\1\METHODS\PAH GWM QUANT SIM 03-20-2013.M
 Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
 QLast Update : Mon Apr 22 10:01:37 2013
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
 Data File : Q89 1304516-001B.D
 Acq On : 22 Apr 2013 7:50 pm
 Operator : ALICIA HABERLE
 Sample : 1304516-001B
 Misc : SAMP
 ALS Vial : 10 Sample Multiplier: 1

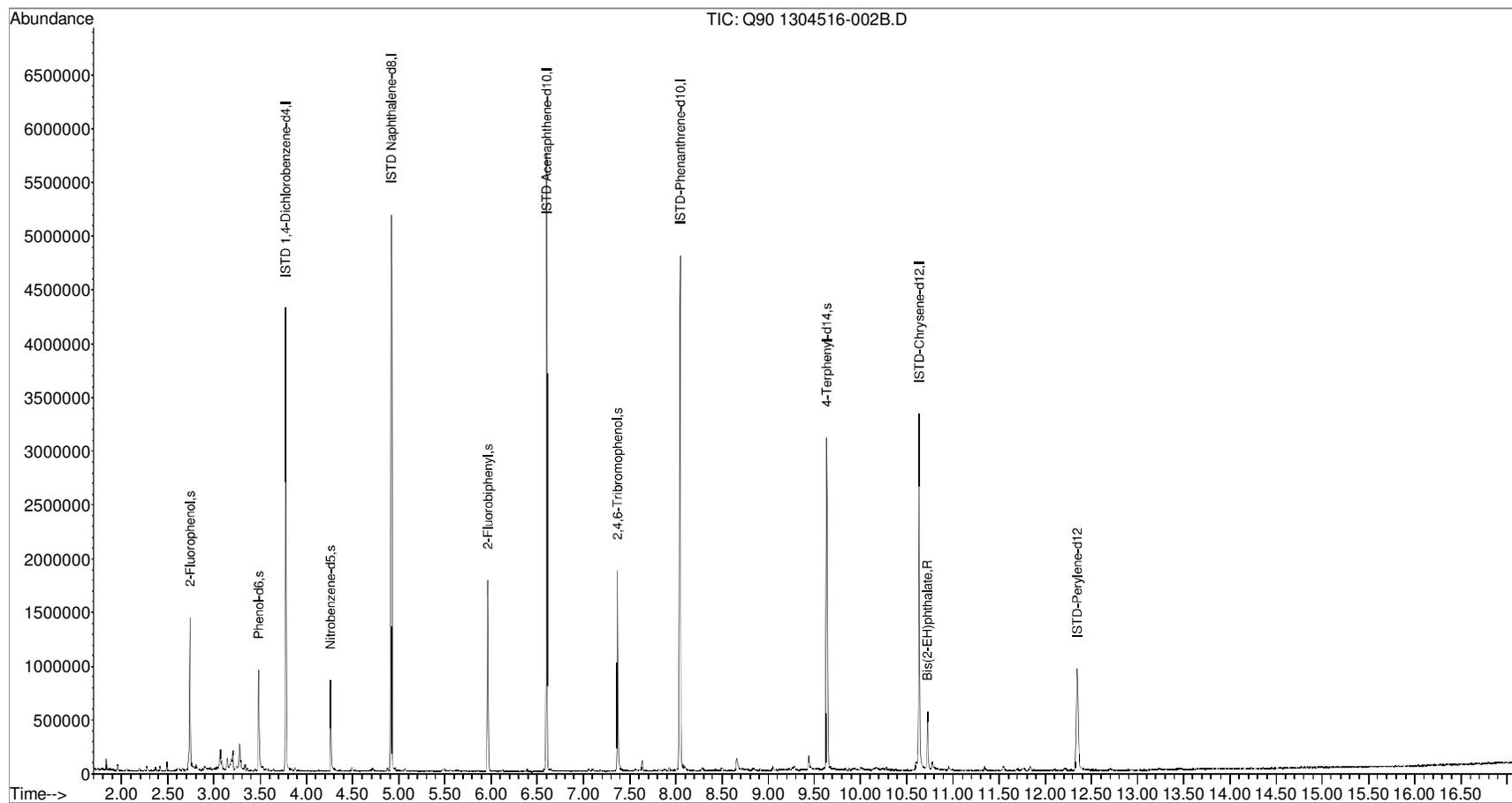
Quant Time: Apr 23 06:56:09 2013
 Quant Method : C:\MSDCHEM\1\METHODS\QUANTFULLSV 03-19-13.M
 Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
 QLast Update : Mon Apr 22 17:33:51 2013
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
 Data File : Q90 1304516-002B.D
 Acq On : 22 Apr 2013 8:16 pm
 Operator : ALICIA HABERLE
 Sample : 1304516-002B
 Misc : SAMP
 ALS Vial : 11 Sample Multiplier: 1

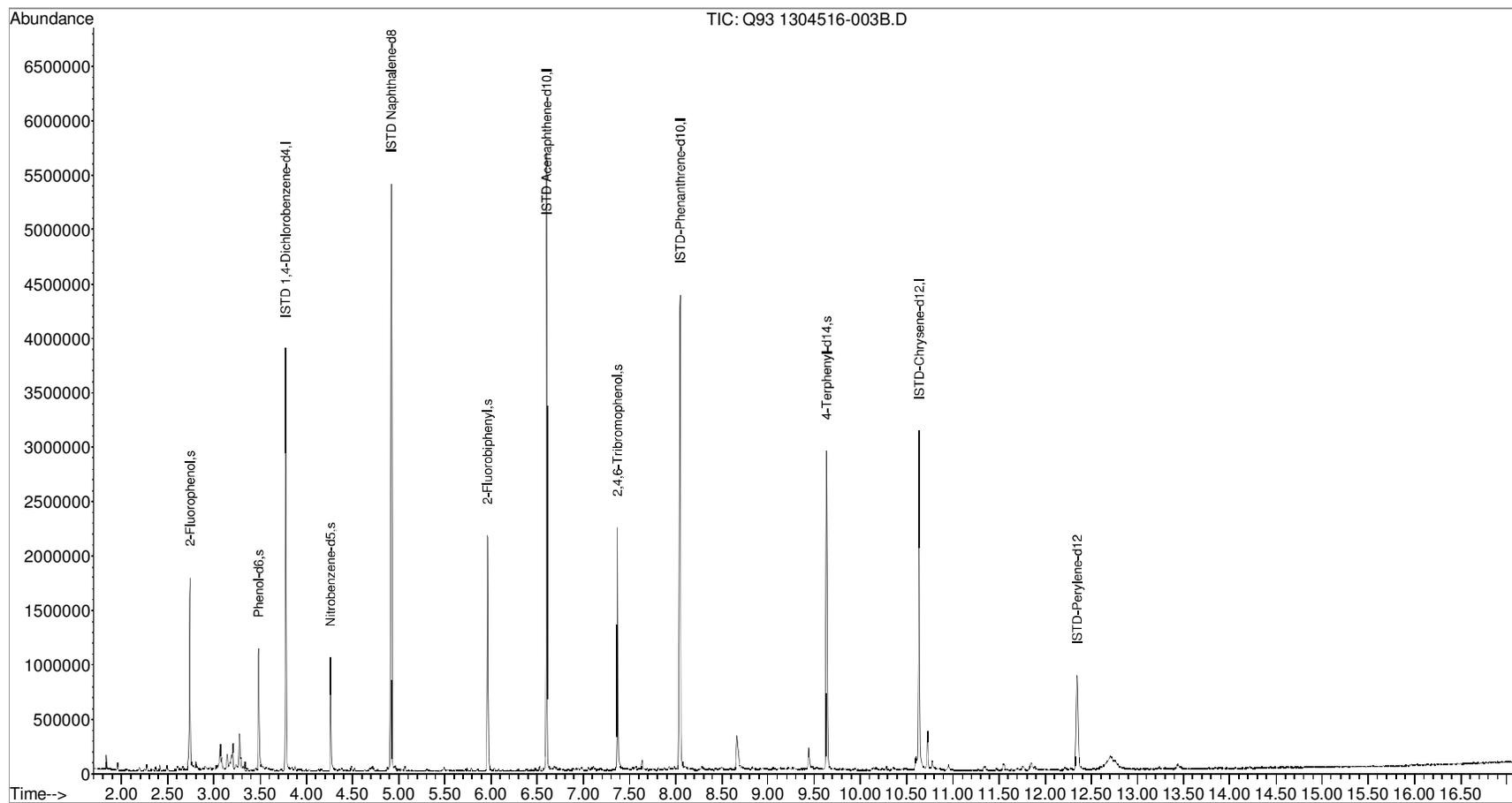
Quant Time: Apr 23 06:56:34 2013
 Quant Method : C:\MSDCHEM\1\METHODS\QUANTFULLSV 03-19-13.M
 Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
 QLast Update : Mon Apr 22 17:33:51 2013
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
Data File : Q93 1304516-003B.D
Acq On : 22 Apr 2013 9:36 pm
Operator : ALICIA HABERLE
Sample : 1304516-003B
Misc : SAMP
ALS Vial : 14 Sample Multiplier: 1

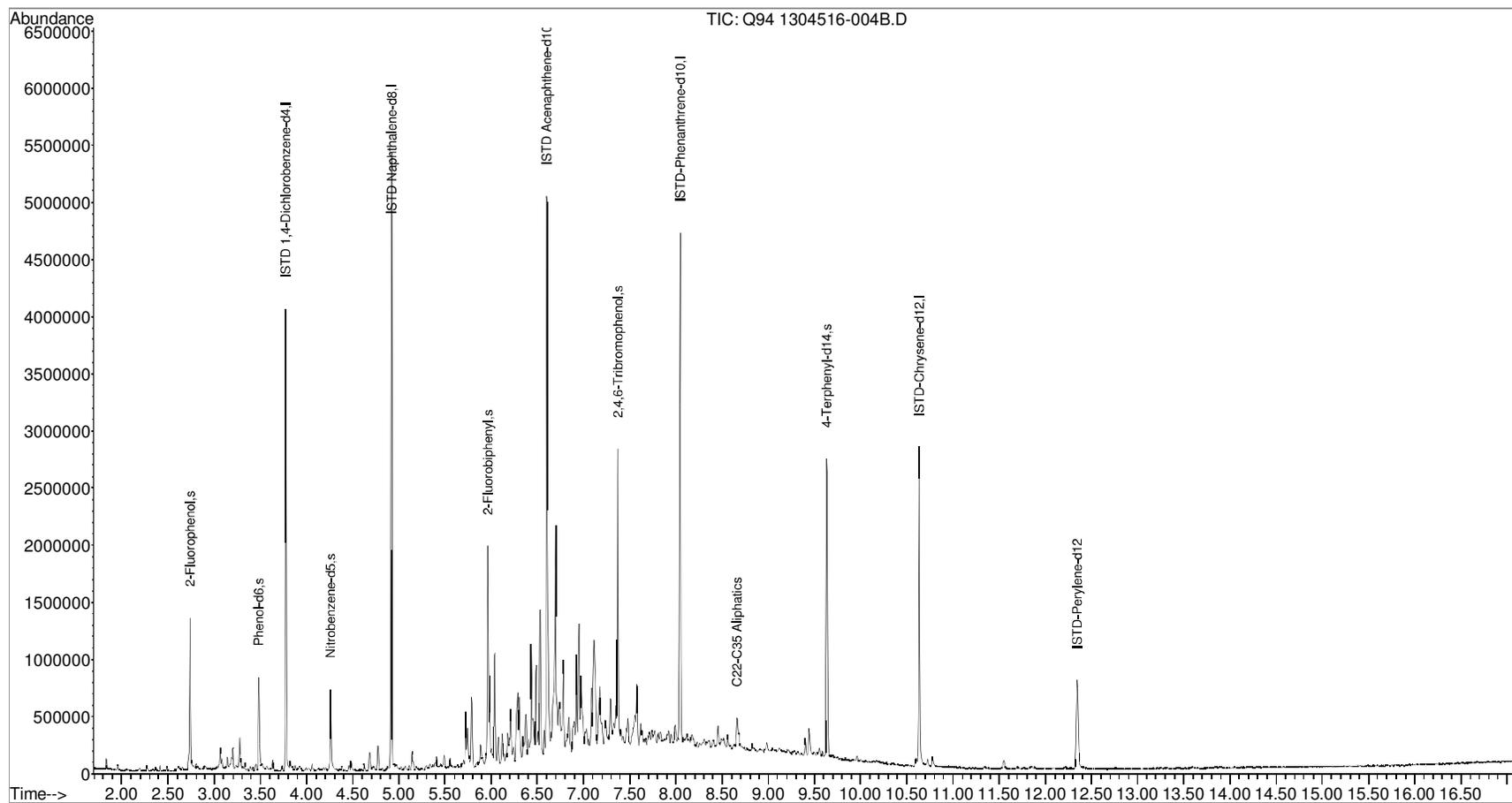
Quant Time: Apr 23 06:58:17 2013
Quant Method : C:\MSDCHEM\1\METHODS\QUANTFULLSV 03-19-13.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Mon Apr 22 17:33:51 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
Data File : Q94 1304516-004B.D
Acq On : 22 Apr 2013 10:02 pm
Operator : ALICIA HABERLE
Sample : 1304516-004B
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

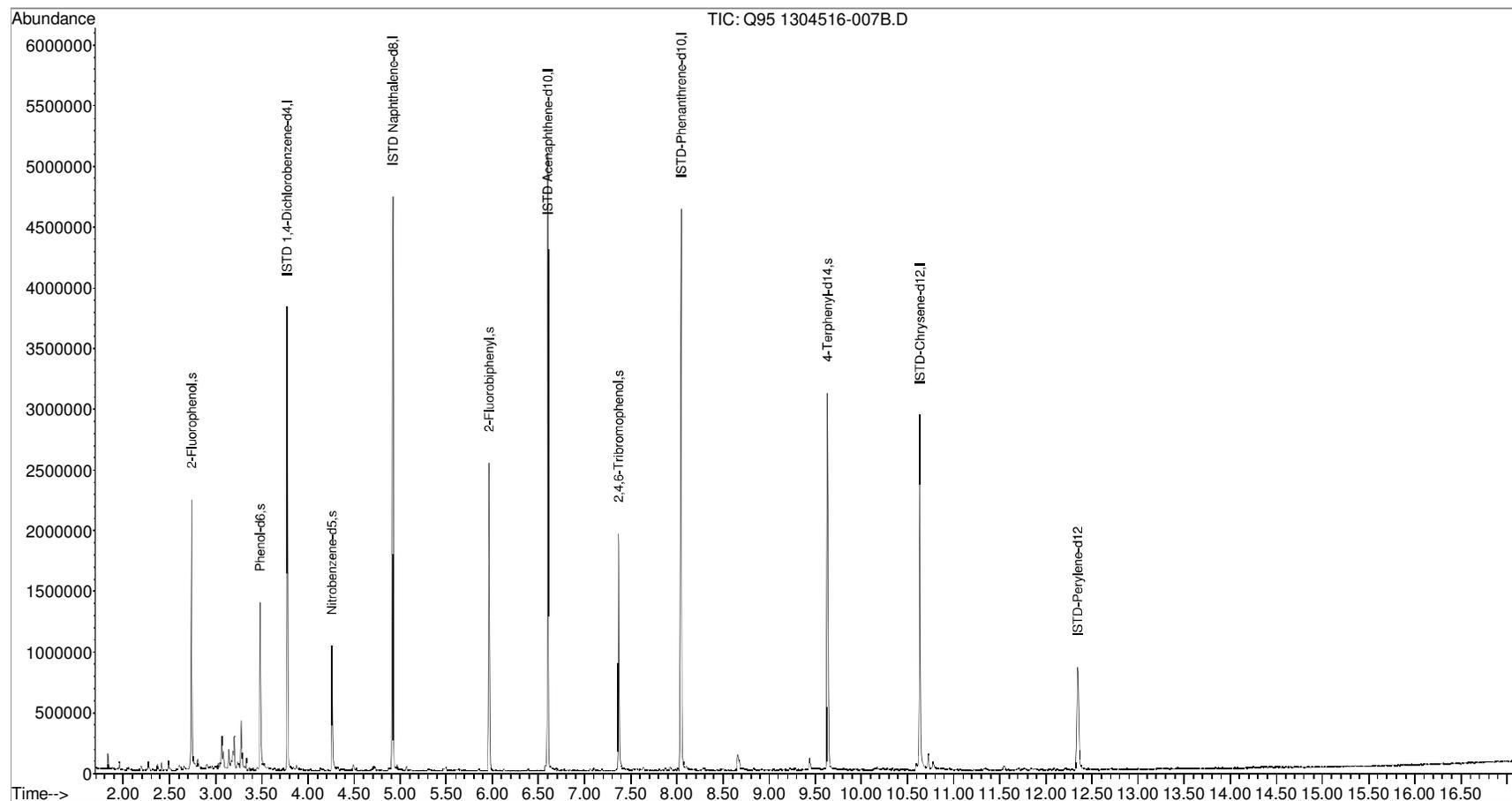
Quant Time: Apr 23 06:59:00 2013
Quant Method : C:\MSDCHEM\1\METHODS\QUANTFULLSV 03-19-13.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Mon Apr 22 17:33:51 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
Data File : Q95 1304516-007B.D
Acq On : 22 Apr 2013 10:28 pm
Operator : ALICIA HABERLE
Sample : 1304516-007B
Misc : SAMP
ALS Vial : 16 Sample Multiplier: 1

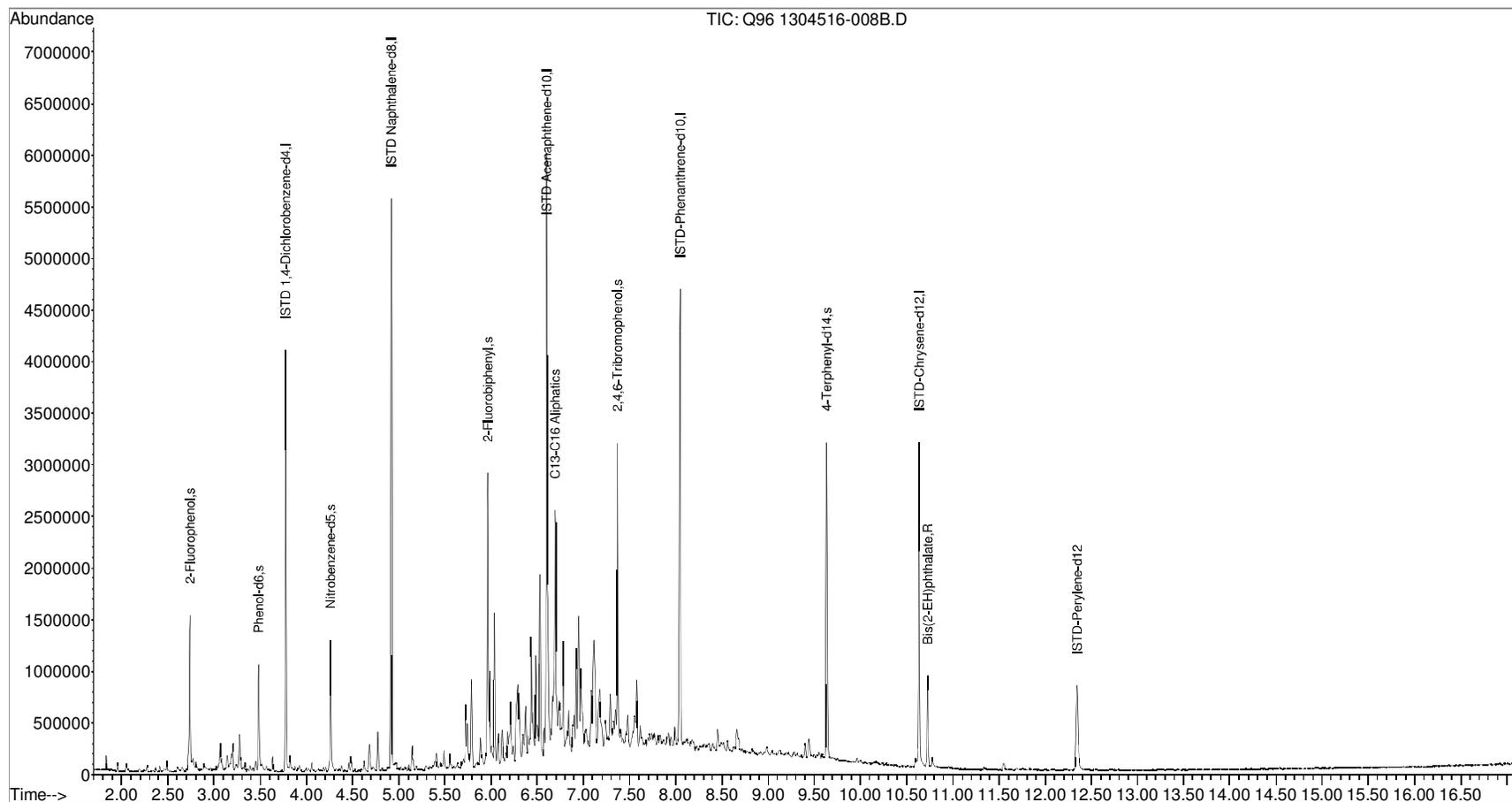
Quant Time: Apr 23 06:59:21 2013
Quant Method : C:\MSDCHEM\1\METHODS\QUANTFULLSV 03-19-13.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Mon Apr 22 17:33:51 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
 Data File : Q96 1304516-008B.D
 Acq On : 22 Apr 2013 10:55 pm
 Operator : ALICIA HABERLE
 Sample : 1304516-008B
 Misc : SAMP
 ALS Vial : 17 Sample Multiplier: 1

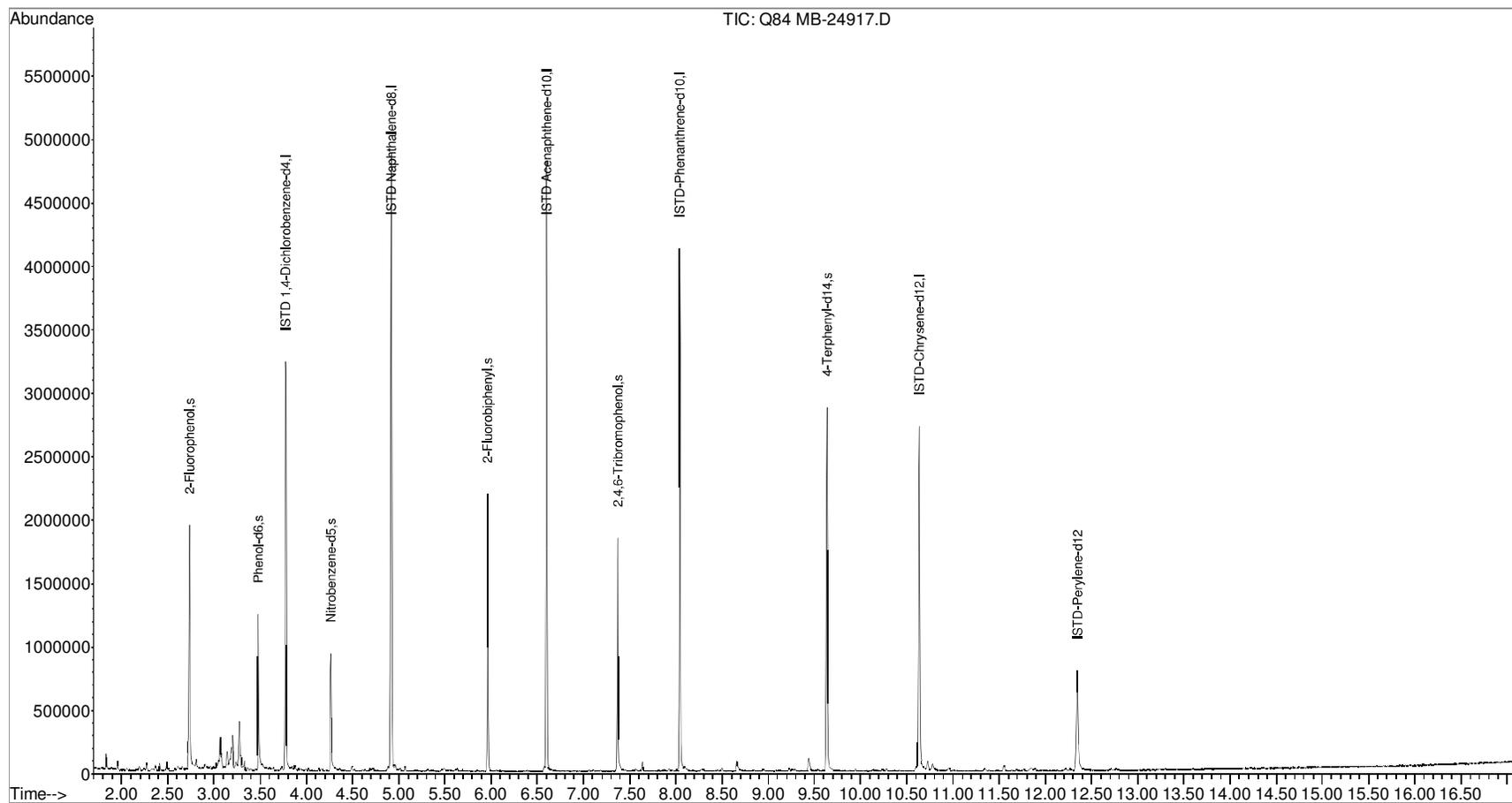
Quant Time: Apr 23 07:00:01 2013
 Quant Method : C:\MSDCHEM\1\METHODS\QUANTFULLSV 03-19-13.M
 Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
 QLast Update : Mon Apr 22 17:33:51 2013
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
 Data File : Q84 MB-24917.D
 Acq On : 22 Apr 2013 5:38 pm
 Operator : ALICIA HABERLE
 Sample : MB-24917
 Misc : MBLK
 ALS Vial : 5 Sample Multiplier: 1

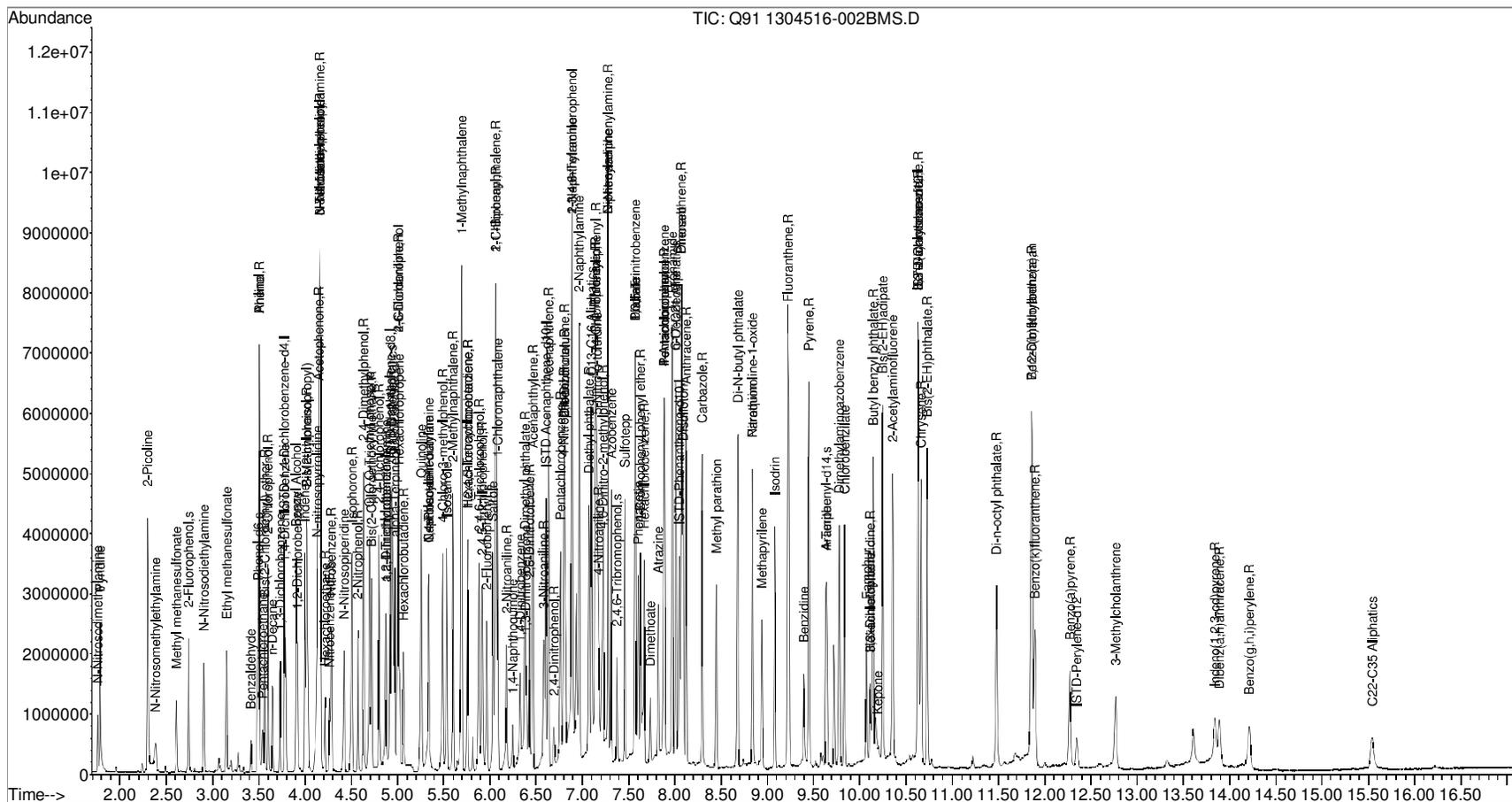
Quant Time: Apr 23 06:43:46 2013
 Quant Method : C:\MSDCHEM\1\METHODS\QUANTFULLSV 03-19-13.M
 Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
 QLast Update : Mon Apr 22 17:33:51 2013
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDCHEM\1\DATA\APR 13\22APR13-A\
 Data File : Q91 1304516-002BMS.D
 Acq On : 22 Apr 2013 8:43 pm
 Operator : ALICIA HABERLE
 Sample : 1304516-002BMS
 Misc : MS
 ALS Vial : 12 Sample Multiplier: 1

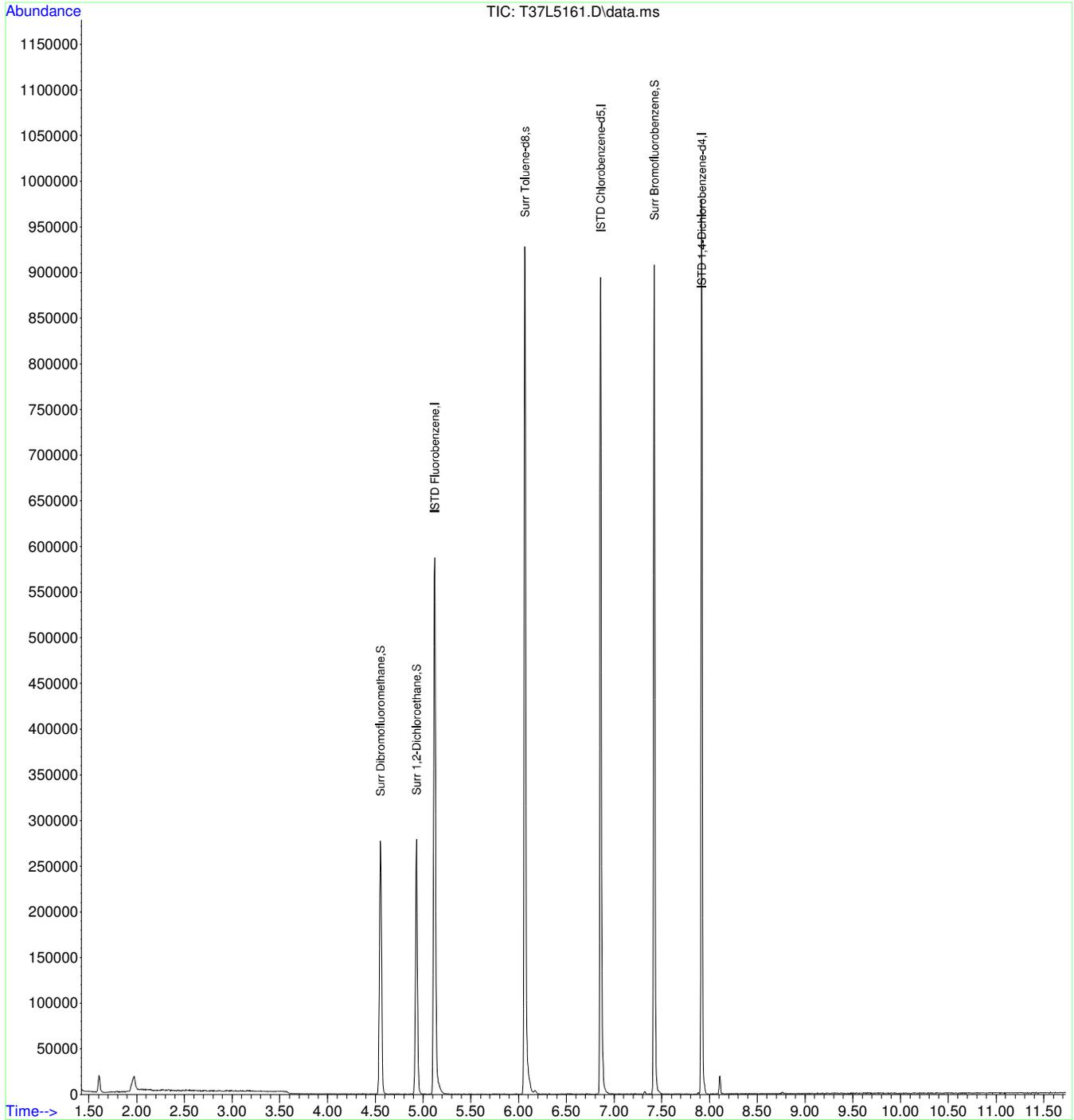
Quant Time: Apr 23 06:57:25 2013
 Quant Method : C:\MSDCHEM\1\METHODS\QUANTFULLSV 03-19-13.M
 Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
 QLast Update : Mon Apr 22 17:33:51 2013
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\APR13-D\19APR13\
Data File : T37L5161.D
Acq On : 19 Apr 2013 7:24 am
Operator : AAP
Sample : 1304516-001A
Misc : SAMP 5.0ML 10F3 JO
ALS Vial : 6 Sample Multiplier: 1

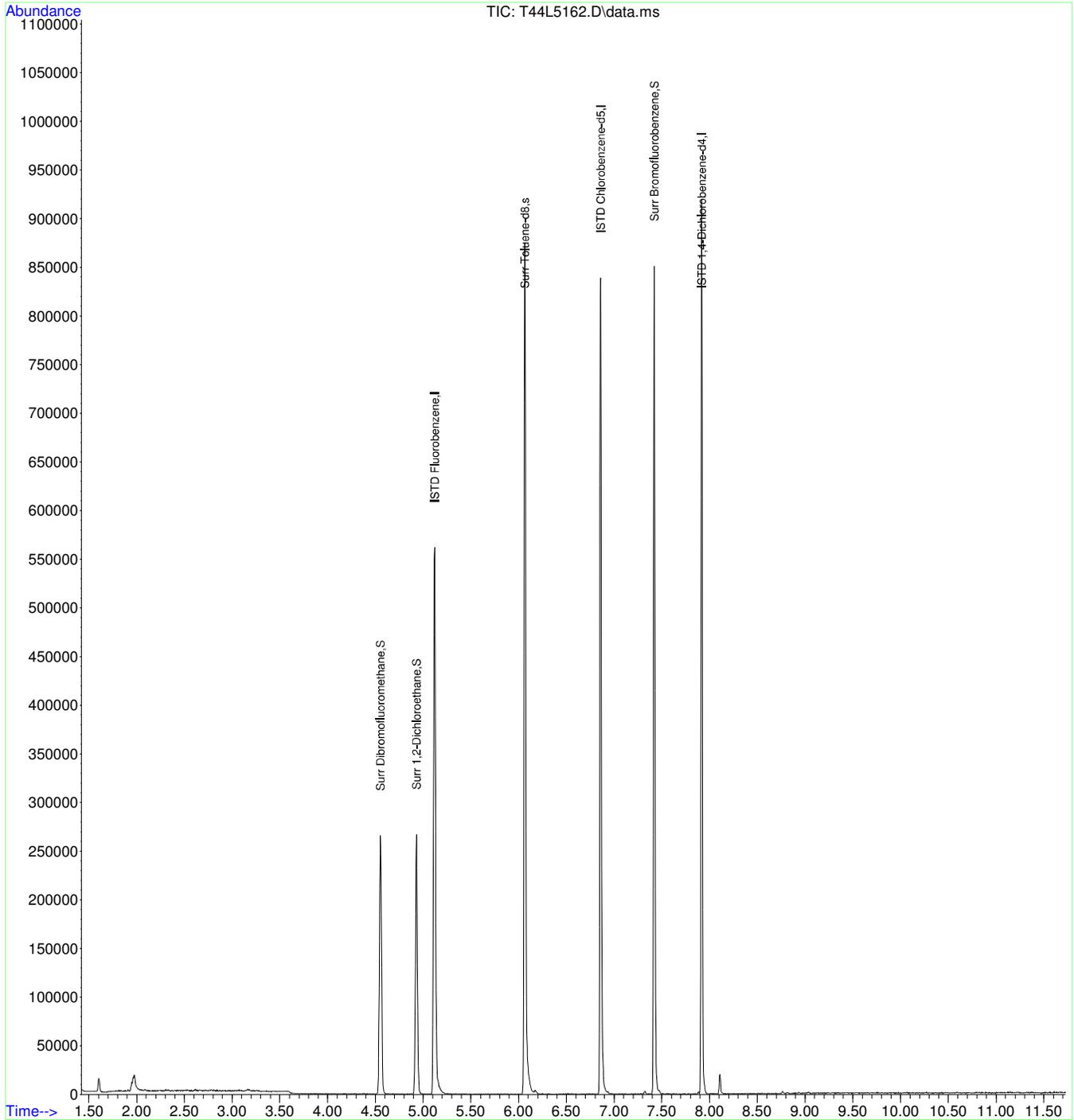
Quant Time: Apr 19 08:52:20 2013
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW_18.M
Quant Title : VOA Calibration
QLast Update : Thu Apr 11 15:41:59 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\APR13-D\19APR13\
Data File : T44L5162.D
Acq On : 19 Apr 2013 9:37 am
Operator : AAP
Sample : 1304516-002A
Misc : SAMP 5.0ML 10F3 JO
ALS Vial : 13 Sample Multiplier: 1

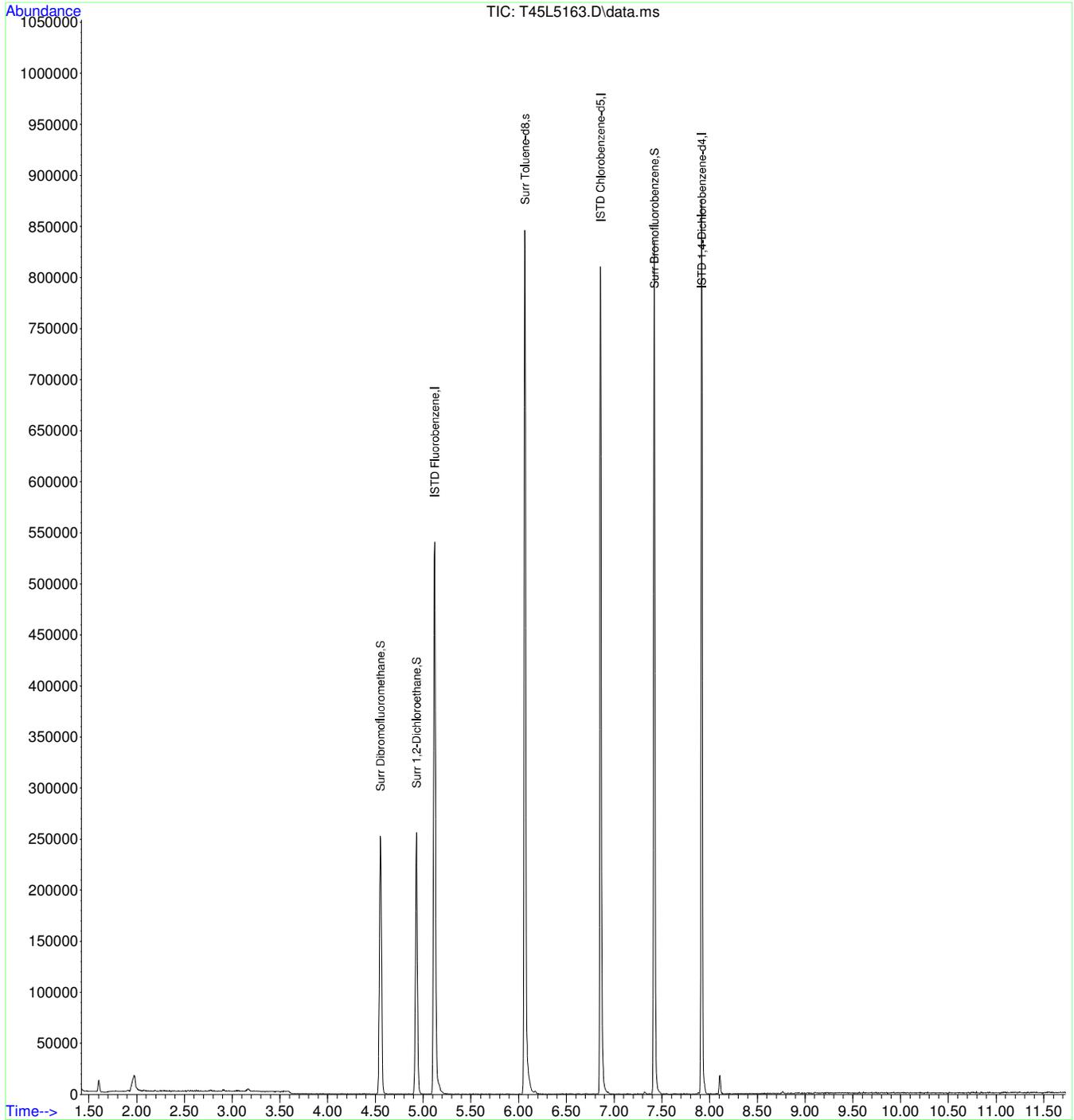
Quant Time: Apr 22 10:21:40 2013
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW_18.M
Quant Title : VOA Calibration
QLast Update : Thu Apr 11 15:41:59 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\APR13-D\19APR13\
Data File : T45L5163.D
Acq On : 19 Apr 2013 9:56 am
Operator : AAP
Sample : 1304516-003A
Misc : SAMP 5.0ML 10F3 JO
ALS Vial : 14 Sample Multiplier: 1

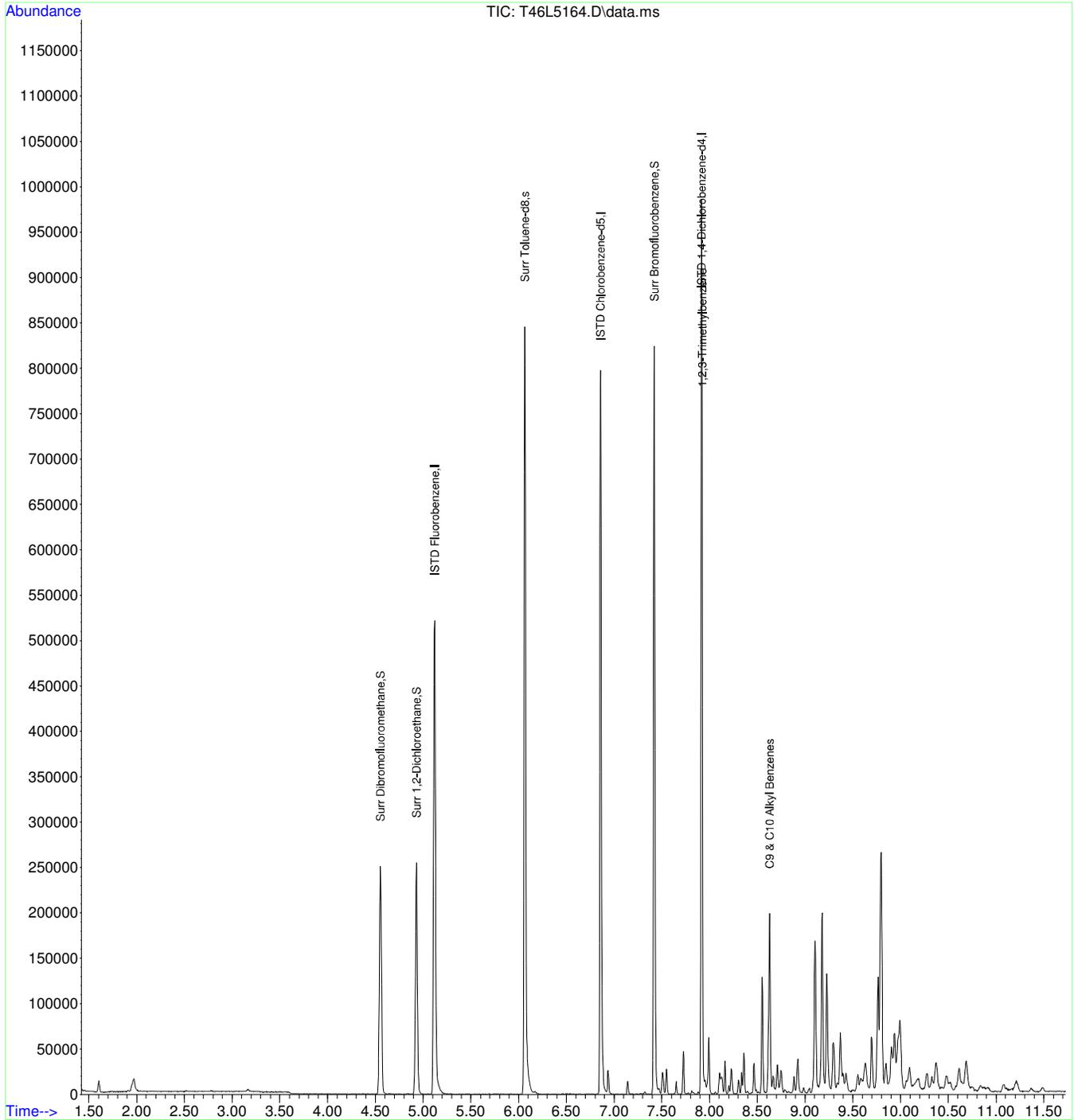
Quant Time: Apr 22 10:22:02 2013
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW_18.M
Quant Title : VOA Calibration
QLast Update : Thu Apr 11 15:41:59 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\APR13-D\19APR13\
Data File : T46L5164.D
Acq On : 19 Apr 2013 10:15 am
Operator : AAP
Sample : 1304516-004A
Misc : SAMP 5.0ML 10F3 JO
ALS Vial : 15 Sample Multiplier: 1

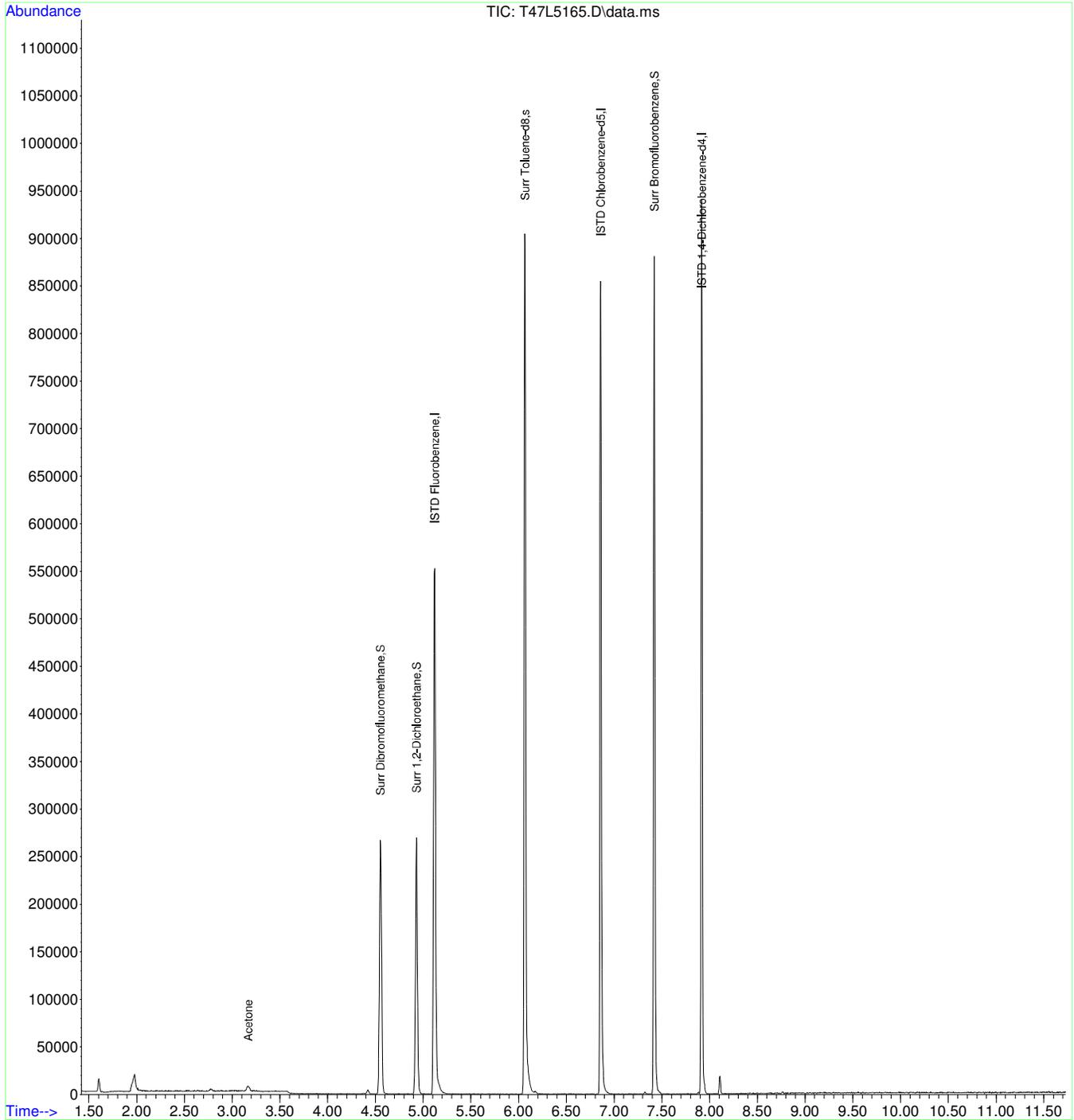
Quant Time: Apr 22 10:22:35 2013
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW_18.M
Quant Title : VOA Calibration
QLast Update : Thu Apr 11 15:41:59 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\APR13-D\19APR13\
Data File : T47L5165.D
Acq On : 19 Apr 2013 10:34 am
Operator : AAP
Sample : 1304516-005A
Misc : SAMP 5.0ML 10F3 JO
ALS Vial : 16 Sample Multiplier: 1

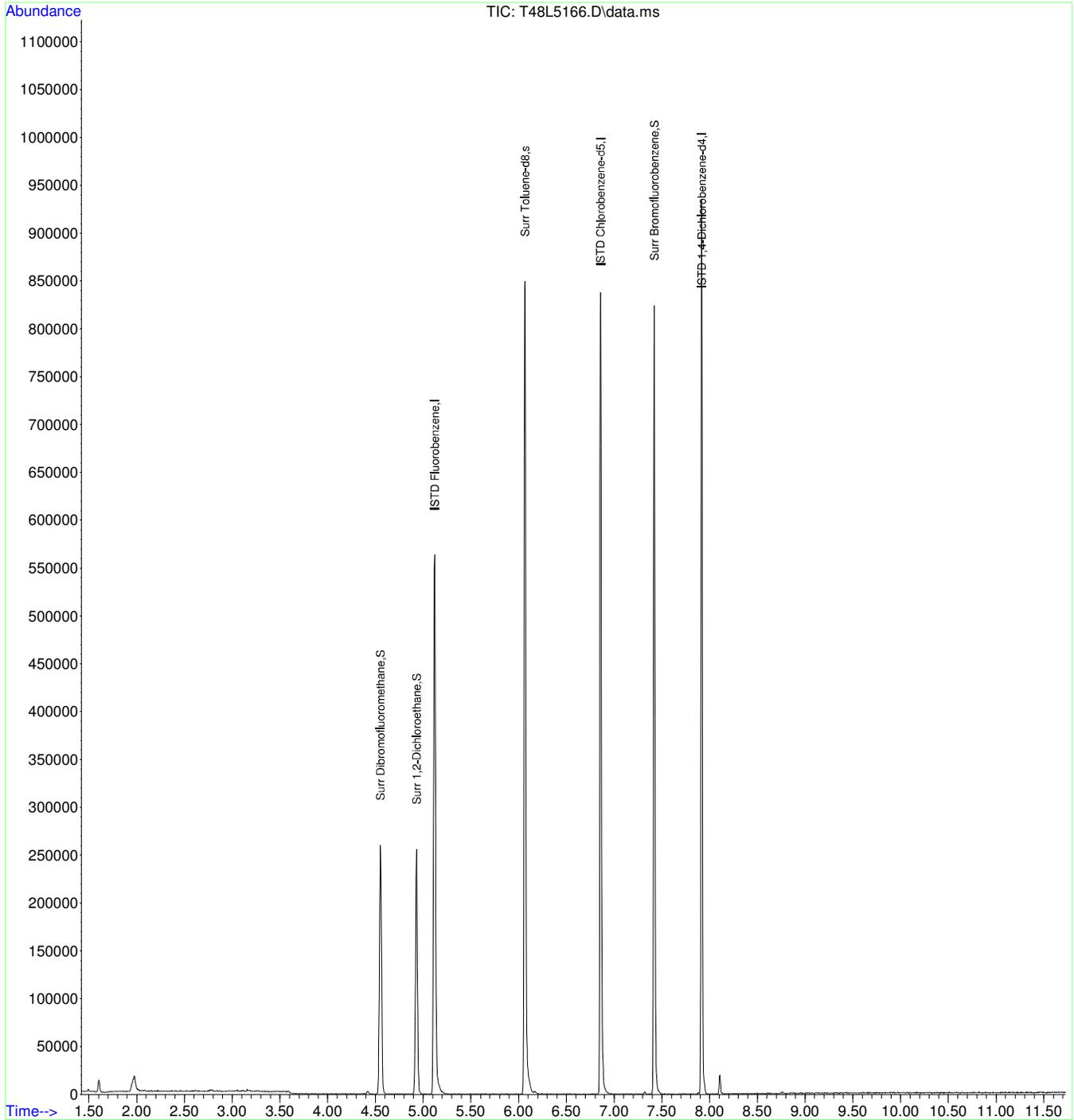
Quant Time: Apr 22 10:23:05 2013
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW_18.M
Quant Title : VOA Calibration
QLast Update : Thu Apr 11 15:41:59 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\APR13-D\19APR13\
Data File : T48L5166.D
Acq On : 19 Apr 2013 10:53 am
Operator : AAP
Sample : 1304516-006A
Misc : SAMP 5.0ML 10F3 JO
ALS Vial : 17 Sample Multiplier: 1

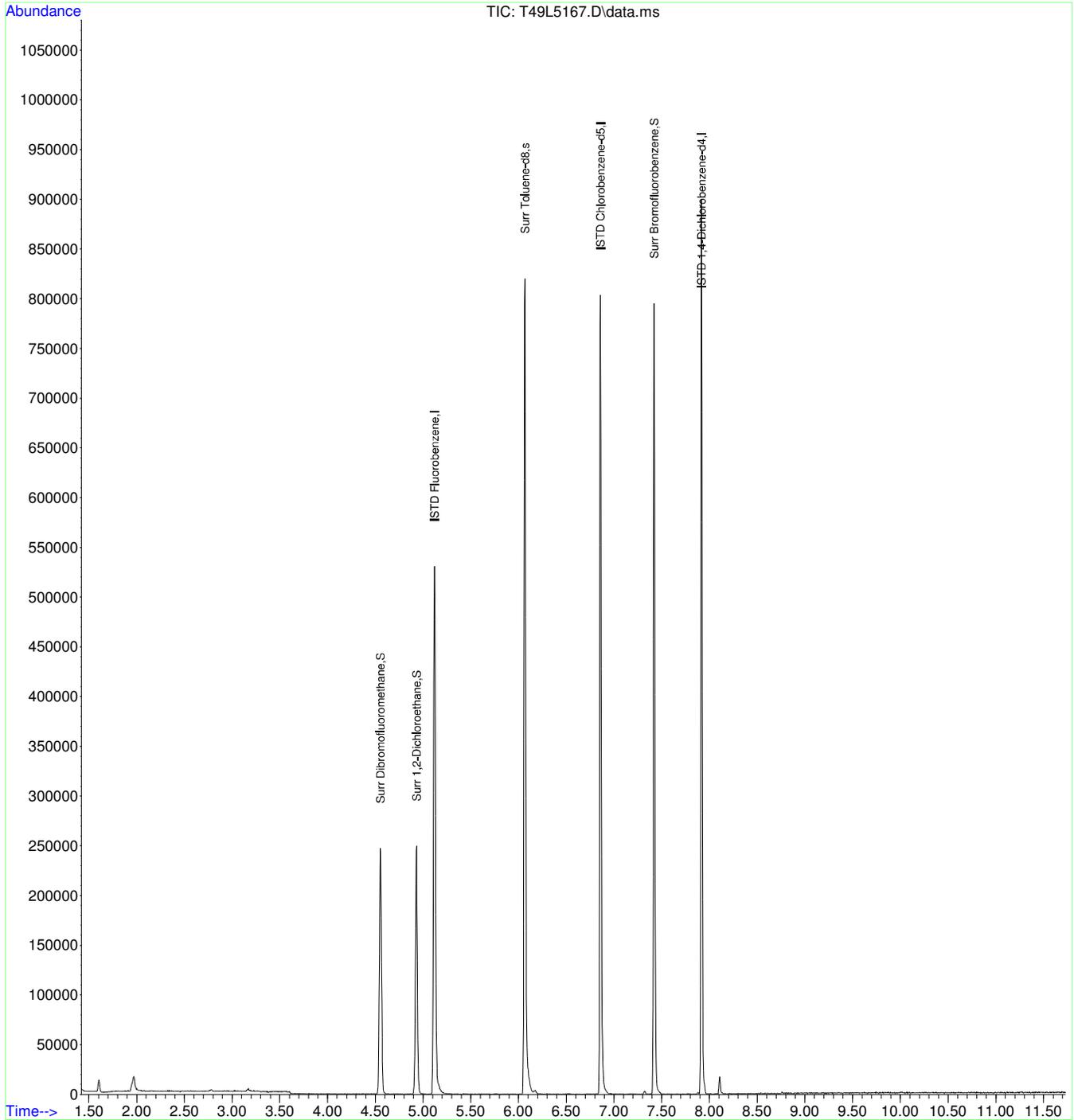
Quant Time: Apr 22 10:23:26 2013
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW_18.M
Quant Title : VOA Calibration
QLast Update : Thu Apr 11 15:41:59 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\APR13-D\19APR13\
Data File : T49L5167.D
Acq On : 19 Apr 2013 11:12 am
Operator : AAP
Sample : 1304516-007A
Misc : SAMP 5.0ML 10F3 JO
ALS Vial : 18 Sample Multiplier: 1

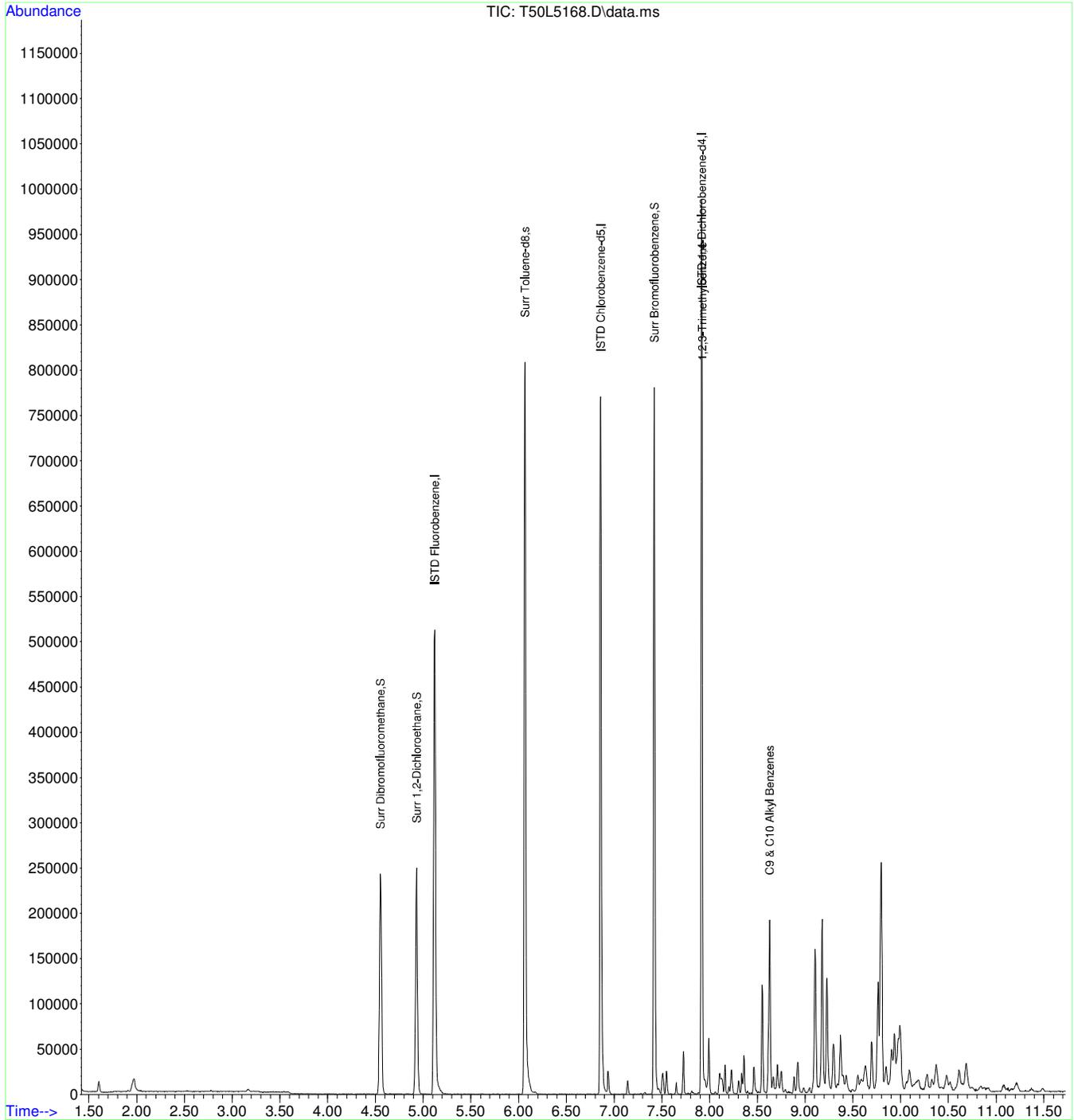
Quant Time: Apr 22 10:23:45 2013
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW_18.M
Quant Title : VOA Calibration
QLast Update : Thu Apr 11 15:41:59 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\APR13-D\19APR13\
Data File : T50L5168.D
Acq On : 19 Apr 2013 11:31 am
Operator : AAP
Sample : 1304516-008A
Misc : SAMP 5.0ML 10F3 JO
ALS Vial : 19 Sample Multiplier: 1

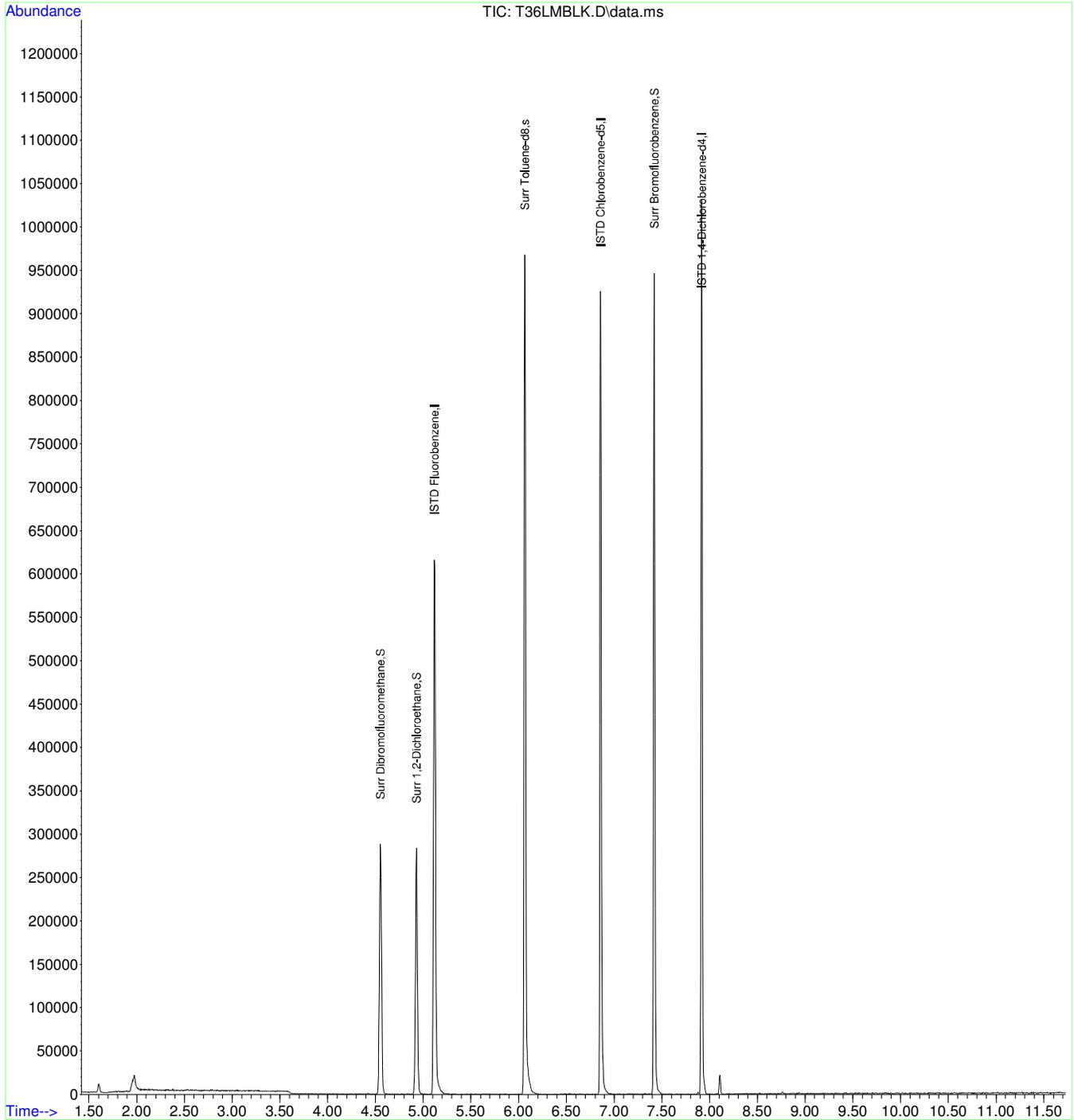
Quant Time: Apr 22 10:50:32 2013
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW_18.M
Quant Title : VOA Calibration
QLast Update : Thu Apr 11 15:41:59 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\APR13-D\19APR13\
Data File : T36LMBLK.D
Acq On : 19 Apr 2013 7:05 am
Operator : AAP
Sample : MB VOC 041913A
Misc : MBLK 5.0ML JO
ALS Vial : 5 Sample Multiplier: 1

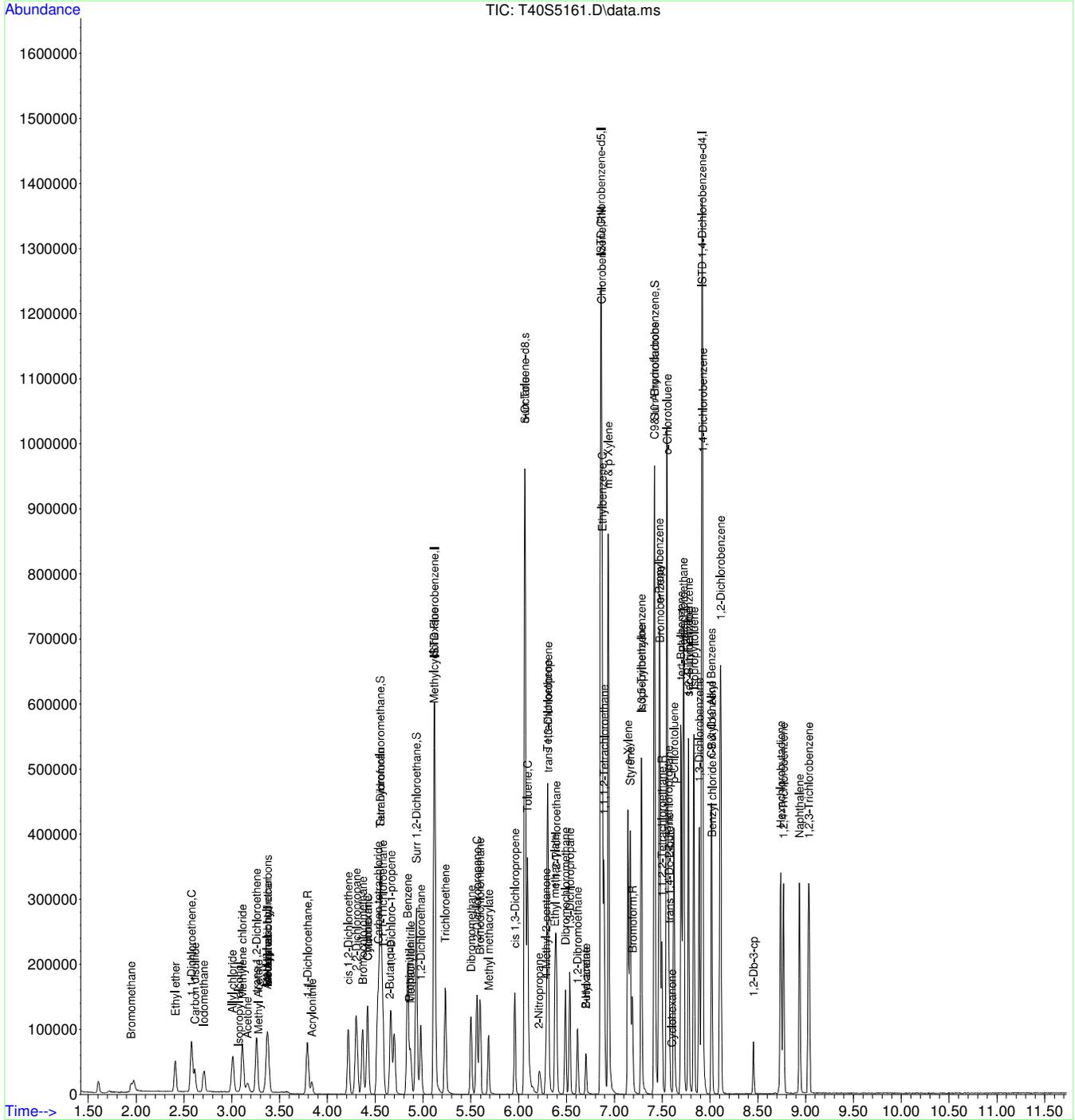
Quant Time: Apr 19 08:51:22 2013
Quant Method : C:\MSDCHEM\1\METHODS\DFULLW_18.M
Quant Title : VOA Calibration
QLast Update : Thu Apr 11 15:41:59 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\APR13-D\19APR13\
 Data File : T40S5161.D
 Acq On : 19 Apr 2013 8:21 am
 Operator : AAP
 Sample : 1304516-001AMS
 Misc : MS 5.0ML 2OF3 JO
 ALS Vial : 9 Sample Multiplier: 1

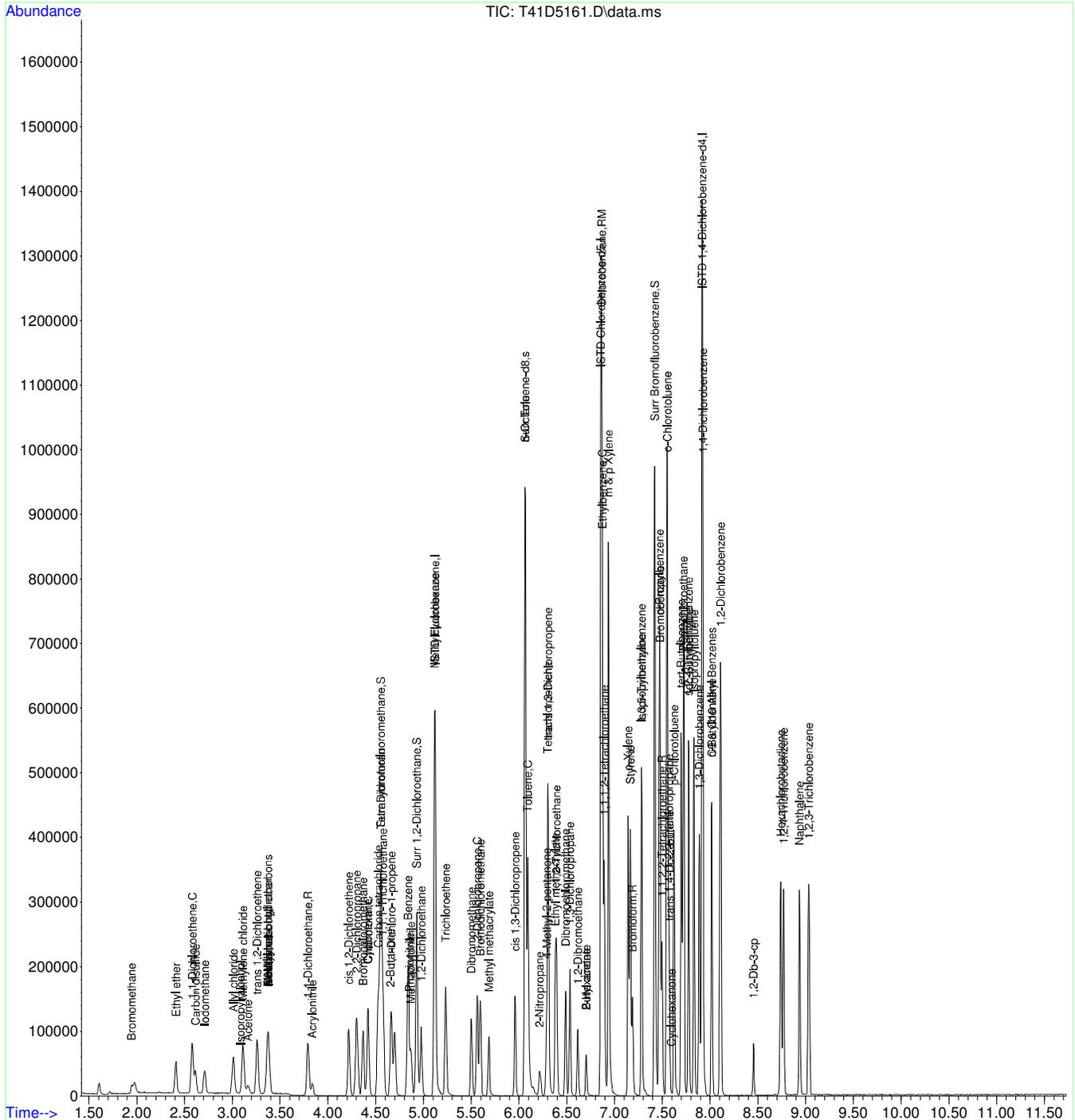
Quant Time: Apr 19 08:33:38 2013
 Quant Method : C:\MSDCHEM\1\METHODS\DFULLW_18.M
 Quant Title : VOA Calibration
 QLast Update : Thu Apr 11 15:41:59 2013
 Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\APR13-D\19APR13\
 Data File : T41D5161.D
 Acq On : 19 Apr 2013 8:40 am
 Operator : AAP
 Sample : 1304516-001AMSD
 Misc : MSD 5.0ML 30F3 JO
 ALS Vial : 10 Sample Multiplier: 1

Quant Time: Apr 19 08:52:36 2013
 Quant Method : C:\MSDCHEM\1\METHODS\DFULLW_18.M
 Quant Title : VOA Calibration
 QLast Update : Thu Apr 11 15:41:59 2013
 Response via : Initial Calibration



WORK ORDER Summary

Work Order: **1304516** Page 1 of 2

Client: Utah Division of Water Quality

Due Date: 4/22/2013

Client ID: UTD200

Contact: Chris Bittner

Project: MP 44.9

QC Level: III

WO Type: Standard

Comments: 2 Day Rush; QC 3. Include TICs on SVOC only. Send partial reports as results become available. Bill accordingly.;

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage			
1304516-001A	East of I-15 / 4920392	4/18/2013 0950h	4/18/2013 1230h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3		
<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>										
1304516-001B				3510-SVOA-PR		<input type="checkbox"/>	Walkin-Semi	2		
				8270-W		<input checked="" type="checkbox"/>	Walkin-Semi			
<i>Test Group: 8270-W-Custom; # of Analytes: 138 / # of Surr: 6</i>										
				8270-W-SIM		<input checked="" type="checkbox"/>	Walkin-Semi			
<i>Test Group: 8270-W-PNA-SIM; # of Analytes: 19 / # of Surr:</i>										
1304516-001C				3510-TPH-PR		<input type="checkbox"/>	Walkin-TPH (Liters)			
				8015-W-TPH(1L)		<input checked="" type="checkbox"/>	Walkin-TPH (Liters)			
<i>Test Group: 8015-W-TPH1L; # of Analytes: 1 / # of Surr: 1</i>										
1304516-002A	S. Marina / 4920495	4/18/2013 1010h	4/18/2013 1230h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3		
<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>										
1304516-002B				3510-SVOA-PR		<input type="checkbox"/>	Walkin-Semi	2		
				8270-W		<input checked="" type="checkbox"/>	Walkin-Semi			
<i>Test Group: 8270-W-Custom; # of Analytes: 138 / # of Surr: 6</i>										
				8270-W-SIM		<input checked="" type="checkbox"/>	Walkin-Semi			
<i>Test Group: 8270-W-PNA-SIM; # of Analytes: 19 / # of Surr:</i>										
1304516-002C				3510-TPH-PR		<input type="checkbox"/>	Walkin-TPH (Liters)			
				8015-W-TPH(1L)		<input checked="" type="checkbox"/>	Walkin-TPH (Liters)			
<i>Test Group: 8015-W-TPH1L; # of Analytes: 1 / # of Surr: 1</i>										
1304516-003A	East of Boom / 4920395	4/18/2013 1110h	4/18/2013 1230h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3		
<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>										
1304516-003B				3510-SVOA-PR		<input type="checkbox"/>	Walkin-Semi	2		
				8270-W		<input checked="" type="checkbox"/>	Walkin-Semi			
<i>Test Group: 8270-W-Custom; # of Analytes: 138 / # of Surr: 6</i>										
				8270-W-SIM		<input checked="" type="checkbox"/>	Walkin-Semi			
<i>Test Group: 8270-W-PNA-SIM; # of Analytes: 19 / # of Surr:</i>										
1304516-003C				3510-TPH-PR		<input type="checkbox"/>	Walkin-TPH (Liters)			
				8015-W-TPH(1L)		<input checked="" type="checkbox"/>	Walkin-TPH (Liters)			
<i>Test Group: 8015-W-TPH1L; # of Analytes: 1 / # of Surr: 1</i>										
1304516-004A	Duplicate / 4920401	4/18/2013 1100h	4/18/2013 1230h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3		
<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>										
1304516-004B				3510-SVOA-PR		<input type="checkbox"/>	Walkin-Semi	2		

WORK ORDER Summary

Work Order: **1304516** Page 2 of 2

Client: Utah Division of Water Quality

Due Date: 4/22/2013

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1304516-004B	Duplicate / 4920401	4/18/2013 1100h	4/18/2013 1230h	8270-W	Aqueous	<input checked="" type="checkbox"/>	Walkin-Semi	2
<i>Test Group: 8270-W-Custom; # of Analytes: 138 / # of Surr: 6</i>								
				8270-W-SIM		<input checked="" type="checkbox"/>	Walkin-Semi	
				<i>Test Group: 8270-W-PNA-SIM; # of Analytes: 19 / # of Surr:</i>				
1304516-004C				3510-TPH-PR		<input type="checkbox"/>	Walkin-TPH (Liters)	
				8015-W-TPH(1L)		<input checked="" type="checkbox"/>	Walkin-TPH (Liters)	
<i>Test Group: 8015-W-TPHIL; # of Analytes: 1 / # of Surr: 1</i>								
1304516-005A	Field Blank	4/18/2013 1040h	4/18/2013 1230h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>								
1304516-006A	Trip Blank	4/18/2013	4/18/2013 1230h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>								
1304516-007A	East of Boom #3 / 4920402	4/18/2013 1050h	4/18/2013 1230h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>								
1304516-007B				3510-SVOA-PR		<input type="checkbox"/>	Walkin-Semi	2
				8270-W		<input checked="" type="checkbox"/>	Walkin-Semi	
<i>Test Group: 8270-W-Custom; # of Analytes: 138 / # of Surr: 6</i>								
				8270-W-SIM		<input checked="" type="checkbox"/>	Walkin-Semi	
<i>Test Group: 8270-W-PNA-SIM; # of Analytes: 19 / # of Surr:</i>								
1304516-007C				3510-TPH-PR		<input type="checkbox"/>	Walkin-TPH (Liters)	
				8015-W-TPH(1L)		<input checked="" type="checkbox"/>	Walkin-TPH (Liters)	
<i>Test Group: 8015-W-TPHIL; # of Analytes: 1 / # of Surr: 1</i>								
1304516-008A	Below Weirs ab Res / 4920401	4/18/2013 1100h	4/18/2013 1230h	8260-W	Aqueous	<input checked="" type="checkbox"/>	VOCFridge	3
<i>Test Group: 8260-W-Full; # of Analytes: 103 / # of Surr: 4</i>								
1304516-008B				3510-SVOA-PR		<input type="checkbox"/>	Walkin-Semi	2
				8270-W		<input checked="" type="checkbox"/>	Walkin-Semi	
<i>Test Group: 8270-W-Custom; # of Analytes: 138 / # of Surr: 6</i>								
				8270-W-SIM		<input checked="" type="checkbox"/>	Walkin-Semi	
<i>Test Group: 8270-W-PNA-SIM; # of Analytes: 19 / # of Surr:</i>								
1304516-008C				3510-TPH-PR		<input type="checkbox"/>	Walkin-TPH (Liters)	
				8015-W-TPH(1L)		<input checked="" type="checkbox"/>	Walkin-TPH (Liters)	
<i>Test Group: 8015-W-TPHIL; # of Analytes: 1 / # of Surr: 1</i>								

American West Analytical Laboratories

Chain of Custody

Lab Sample Set # 1304514

Client: **Utah Division of Water Quality**
 Address: **195 N. 1950 W.**
Salt Lake City, UT 84115

Contact: **Chris Bittner**
 Phone: **(801) 536-3600**
 Fax :
 Email: **cbittner@utah.gov**

Page 1 of 1

Project Name: **MP 44.9**
 PO#:

QC Level: **3**
 Turn Around Time
2 DAY RUSH

Sample ID:	Date Sampled	Time	# of Containers	Sample Matrix	VOC's (8260C)	Full SVOC - w/ TICs (8270D)	PNA SVOC - SIM (8270D)	DRO (8015D)																Laboratory Use Only		
																								Comments		
1 East of I-15	4920392	4/18/2013	09:50	7	W	X	X	X	X																1 Shipped <input checked="" type="checkbox"/> Hand Delivered	
2 S. Marina	4920495	4/18/2013	10:10	7	W	X	X	X	X																2 Ambient or <input checked="" type="checkbox"/> <i>on ice</i>	
3 East of Boom	4920395	4/18/2013	11:10	7	W	X	X	X	X																3 Temperature <u>13</u>	
4 Between Weirs	4920894	4/18/2013	NO FLOW	7	W	X	X	X	X																4 Received Broken/Leaking (Improperly Sealed) <input type="checkbox"/> Y <input checked="" type="checkbox"/> N	
5 Duplicate	4920401	4/18/2013	11:00	7	W	X	X	X	X																5 Properly Preserved <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
6 Field Blank		4/18/2013	10:40	3	W	X																			6 Received Within Holding Times <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
7 Trip Blank		4/18/2013		3	W	X																				
8 French Drain South	4920898	4/18/2013	NO FLOW	7	W	X	X	X	X																	
9 French Drain North	4920899	4/18/2013	NO FLOW	7	W	X	X	X	X																	
10 East of Boom #3	4920402	4/18/2013	10:50	7	W	X	X	X	X																	
11 Below Weirs ab Res.	4920401	4/18/2013	11:00	7	W	X	X	X	X																	
12																										
13																										
14																										
15																										
16																										
17																										
18																										
19																										
20																										

Special Instructions: **Release results as they become available**

Relinquished by: Signature <i>[Signature]</i>	Date:	Received by: Signature <i>[Signature]</i>	Date: <u>4/18/13</u>
Print Name SUZAN TATIR	Time:	Print Name Amber Cliff	Time: <u>12:30</u>
Relinquished by: Signature	Date:	Received by: Signature	Date:
Print Name	Time:	Print Name	Time: