463 West 3600 South
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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

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: 1305279

American West Analytical Laboratories received 17 sample(s) on 5/10/2013 for the analyses presented in the following report.

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.

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: Jose G. Rocha

Digitally signed by Jose G. Rocha
DN: cn=Jose G. Rocha, o=American West Analytical Laboratories, ou=Quality Assurance Officer, email=jose@awal-labs.com, c=US
Date: 2013.05.17 16:30:32 -06'00'

Laboratory Director or designee

All analyses applicable to the CWA, SDWA, and RCRA are performed in accordance to NELAC protocols. Pertinent sampling information is located on the attached COC. This report is provided for the exclusive use of the addressee. Privileges of subsequent use of the name of this company or any member of its staff, or reproduction of this report in connection with the advertisement, promotion or sale of any product or process, or in connection with the re-publication of this report for any purpose other than for the addressee will be granted only on contact. This company accepts no responsibility except for the due performance of inspection and/or analysis in good faith and according to the rules of the trade and of science.

Semivolatile Case Narrative

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Client:	Utah Division of Water Quality
Contact:	Chris Bittner
Project:	MP 44.9
Lab Set ID:	1305279

Sample Receipt Information:

Date of Receipt:	5/10/2013
Date of Collection:	5/10/2013
Sample Condition:	Intact
C-O-C Discrepancies:	None
Method:	SW-846 8270D/3546 (Solid) SW-846 8270D/3510C (Aqueous)
Analysis:	Semivolatile Organics

General Set Comments: No target analytes were observed above their reporting limits.

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, LCSD, MS, MSD, RPD, and Surrogates:

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

Laboratory Control Sample / Laboratory Control Sample Duplicate (LCS/LCSD): All LCS and LCSD 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**.**

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1305279-001A
Client Sample ID: S1-WP-01
Collection Date: 5/10/2013 1525h
Received Date: 5/10/2013 1740h

Analytical Results SVOA PNA SIM List by GC/MS Method 8270D/3546

Analyzed: 5/14/2013 2130h **Extracted:** 5/13/2013 950h
Units: µg/kg-dry **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	27.0	< 27.0	
2-Methylnaphthalene	91-57-6	27.0	< 27.0	
Acenaphthene	83-32-9	27.0	< 27.0	
Acenaphthylene	208-96-8	27.0	< 27.0	
Anthracene	120-12-7	27.0	< 27.0	
Benz(a)anthracene	56-55-3	27.0	< 27.0	
Benzo(a)pyrene	50-32-8	27.0	< 27.0	
Benzo(b)fluoranthene	205-99-2	27.0	< 27.0	
Benzo(g,h,i)perylene	191-24-2	27.0	< 27.0	
Benzo(k)fluoranthene	207-08-9	27.0	< 27.0	
Chrysene	218-01-9	27.0	< 27.0	
Dibenz(a,h)anthracene	53-70-3	27.0	< 27.0	
Fluoranthene	206-44-0	27.0	< 27.0	
Fluorene	86-73-7	27.0	< 27.0	
Indene	95-13-6	27.0	< 27.0	
Indeno(1,2,3-cd)pyrene	193-39-5	27.0	< 27.0	
Naphthalene	91-20-3	27.0	< 27.0	
Phenanthrene	85-01-8	27.0	< 27.0	
Pyrene	129-00-0	27.0	< 27.0	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1305279-002A
Client Sample ID: S1-WP-04
Collection Date: 5/10/2013 1530h
Received Date: 5/10/2013 1740h

Analytical Results SVOA PNA SIM List by GC/MS Method 8270D/3546

Analyzed: 5/14/2013 2158h **Extracted:** 5/13/2013 950h
Units: µg/kg-dry **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	29.6	< 29.6	
2-Methylnaphthalene	91-57-6	29.6	< 29.6	
Acenaphthene	83-32-9	29.6	< 29.6	
Acenaphthylene	208-96-8	29.6	< 29.6	
Anthracene	120-12-7	29.6	< 29.6	
Benz(a)anthracene	56-55-3	29.6	< 29.6	
Benzo(a)pyrene	50-32-8	29.6	< 29.6	
Benzo(b)fluoranthene	205-99-2	29.6	< 29.6	
Benzo(g,h,i)perylene	191-24-2	29.6	< 29.6	
Benzo(k)fluoranthene	207-08-9	29.6	< 29.6	
Chrysene	218-01-9	29.6	< 29.6	
Dibenz(a,h)anthracene	53-70-3	29.6	< 29.6	
Fluoranthene	206-44-0	29.6	< 29.6	
Fluorene	86-73-7	29.6	< 29.6	
Indene	95-13-6	29.6	< 29.6	
Indeno(1,2,3-cd)pyrene	193-39-5	29.6	< 29.6	
Naphthalene	91-20-3	29.6	< 29.6	
Phenanthrene	85-01-8	29.6	< 29.6	
Pyrene	129-00-0	29.6	< 29.6	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1305279-003A
Client Sample ID: S1-WP-03
Collection Date: 5/10/2013 1540h
Received Date: 5/10/2013 1740h

Analytical Results SVOA PNA SIM List by GC/MS Method 8270D/3546

Analyzed: 5/15/2013 1009h **Extracted:** 5/13/2013 950h
Units: µg/kg-dry **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	34.6	< 34.6	
2-Methylnaphthalene	91-57-6	34.6	< 34.6	
Acenaphthene	83-32-9	34.6	< 34.6	
Acenaphthylene	208-96-8	34.6	< 34.6	
Anthracene	120-12-7	34.6	< 34.6	
Benz(a)anthracene	56-55-3	34.6	< 34.6	
Benzo(a)pyrene	50-32-8	34.6	< 34.6	
Benzo(b)fluoranthene	205-99-2	34.6	< 34.6	
Benzo(g,h,i)perylene	191-24-2	34.6	< 34.6	
Benzo(k)fluoranthene	207-08-9	34.6	< 34.6	
Chrysene	218-01-9	34.6	< 34.6	
Dibenz(a,h)anthracene	53-70-3	34.6	< 34.6	
Fluoranthene	206-44-0	34.6	< 34.6	
Fluorene	86-73-7	34.6	< 34.6	
Indene	95-13-6	34.6	< 34.6	
Indeno(1,2,3-cd)pyrene	193-39-5	34.6	< 34.6	
Naphthalene	91-20-3	34.6	< 34.6	
Phenanthrene	85-01-8	34.6	< 34.6	
Pyrene	129-00-0	34.6	< 34.6	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1305279-004A
Client Sample ID: S1-WP-05
Collection Date: 5/10/2013 1543h
Received Date: 5/10/2013 1740h

Analytical Results SVOA PNA SIM List by GC/MS Method 8270D/3546

Analyzed: 5/15/2013 1036h **Extracted:** 5/13/2013 950h
Units: µg/kg-dry **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	21.7	< 21.7	
2-Methylnaphthalene	91-57-6	21.7	< 21.7	
Acenaphthene	83-32-9	21.7	< 21.7	
Acenaphthylene	208-96-8	21.7	< 21.7	
Anthracene	120-12-7	21.7	< 21.7	
Benz(a)anthracene	56-55-3	21.7	< 21.7	
Benzo(a)pyrene	50-32-8	21.7	< 21.7	
Benzo(b)fluoranthene	205-99-2	21.7	< 21.7	
Benzo(g,h,i)perylene	191-24-2	21.7	< 21.7	
Benzo(k)fluoranthene	207-08-9	21.7	< 21.7	
Chrysene	218-01-9	21.7	< 21.7	
Dibenz(a,h)anthracene	53-70-3	21.7	< 21.7	
Fluoranthene	206-44-0	21.7	< 21.7	
Fluorene	86-73-7	21.7	< 21.7	
Indene	95-13-6	21.7	< 21.7	
Indeno(1,2,3-cd)pyrene	193-39-5	21.7	< 21.7	
Naphthalene	91-20-3	21.7	< 21.7	
Phenanthrene	85-01-8	21.7	< 21.7	
Pyrene	129-00-0	21.7	< 21.7	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1305279-005A
Client Sample ID: S1-WP-02
Collection Date: 5/10/2013 1546h
Received Date: 5/10/2013 1740h

Analytical Results SVOA PNA SIM List by GC/MS Method 8270D/3546

Analyzed: 5/15/2013 1103h **Extracted:** 5/13/2013 950h
Units: µg/kg-dry **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	31.1	< 31.1	
2-Methylnaphthalene	91-57-6	31.1	< 31.1	
Acenaphthene	83-32-9	31.1	< 31.1	
Acenaphthylene	208-96-8	31.1	< 31.1	
Anthracene	120-12-7	31.1	< 31.1	
Benz(a)anthracene	56-55-3	31.1	< 31.1	
Benzo(a)pyrene	50-32-8	31.1	< 31.1	
Benzo(b)fluoranthene	205-99-2	31.1	< 31.1	
Benzo(g,h,i)perylene	191-24-2	31.1	< 31.1	
Benzo(k)fluoranthene	207-08-9	31.1	< 31.1	
Chrysene	218-01-9	31.1	< 31.1	
Dibenz(a,h)anthracene	53-70-3	31.1	< 31.1	
Fluoranthene	206-44-0	31.1	< 31.1	
Fluorene	86-73-7	31.1	< 31.1	
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Indeno(1,2,3-cd)pyrene	193-39-5	31.1	< 31.1	
Naphthalene	91-20-3	31.1	< 31.1	
Phenanthrene	85-01-8	31.1	< 31.1	
Pyrene	129-00-0	31.1	< 31.1	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1305279-006A
Client Sample ID: S2-CF-03
Collection Date: 5/10/2013 1553h
Received Date: 5/10/2013 1740h

Analytical Results SVOA PNA SIM List by GC/MS Method 8270D/3546

Analyzed: 5/15/2013 1130h **Extracted:** 5/13/2013 950h
Units: µg/kg-dry **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	30.1	< 30.1	
2-Methylnaphthalene	91-57-6	30.1	< 30.1	
Acenaphthene	83-32-9	30.1	< 30.1	
Acenaphthylene	208-96-8	30.1	< 30.1	
Anthracene	120-12-7	30.1	< 30.1	
Benz(a)anthracene	56-55-3	30.1	< 30.1	
Benzo(a)pyrene	50-32-8	30.1	< 30.1	
Benzo(b)fluoranthene	205-99-2	30.1	< 30.1	
Benzo(g,h,i)perylene	191-24-2	30.1	< 30.1	
Benzo(k)fluoranthene	207-08-9	30.1	< 30.1	
Chrysene	218-01-9	30.1	< 30.1	
Dibenz(a,h)anthracene	53-70-3	30.1	< 30.1	
Fluoranthene	206-44-0	30.1	< 30.1	
Fluorene	86-73-7	30.1	< 30.1	
Indene	95-13-6	30.1	< 30.1	
Indeno(1,2,3-cd)pyrene	193-39-5	30.1	< 30.1	
Naphthalene	91-20-3	30.1	< 30.1	
Phenanthrene	85-01-8	30.1	< 30.1	
Pyrene	129-00-0	30.1	< 30.1	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1305279-007A
Client Sample ID: S2-CF-02
Collection Date: 5/10/2013 1557h
Received Date: 5/10/2013 1740h

Analytical Results SVOA PNA SIM List by GC/MS Method 8270D/3546

Analyzed: 5/15/2013 1157h **Extracted:** 5/13/2013 950h
Units: µg/kg-dry **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	37.3	< 37.3	
2-Methylnaphthalene	91-57-6	37.3	< 37.3	
Acenaphthene	83-32-9	37.3	< 37.3	
Acenaphthylene	208-96-8	37.3	< 37.3	
Anthracene	120-12-7	37.3	< 37.3	
Benz(a)anthracene	56-55-3	37.3	< 37.3	
Benzo(a)pyrene	50-32-8	37.3	< 37.3	
Benzo(b)fluoranthene	205-99-2	37.3	< 37.3	
Benzo(g,h,i)perylene	191-24-2	37.3	< 37.3	
Benzo(k)fluoranthene	207-08-9	37.3	< 37.3	
Chrysene	218-01-9	37.3	< 37.3	
Dibenz(a,h)anthracene	53-70-3	37.3	< 37.3	
Fluoranthene	206-44-0	37.3	< 37.3	
Fluorene	86-73-7	37.3	< 37.3	
Indene	95-13-6	37.3	< 37.3	
Indeno(1,2,3-cd)pyrene	193-39-5	37.3	< 37.3	
Naphthalene	91-20-3	37.3	< 37.3	
Phenanthrene	85-01-8	37.3	< 37.3	
Pyrene	129-00-0	37.3	< 37.3	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1305279-008A
Client Sample ID: S2-CF-06
Collection Date: 5/10/2013 1559h
Received Date: 5/10/2013 1740h

Analytical Results SVOA PNA SIM List by GC/MS Method 8270D/3546

Analyzed: 5/15/2013 1224h **Extracted:** 5/13/2013 950h
Units: µg/kg-dry **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	35.2	< 35.2	
2-Methylnaphthalene	91-57-6	35.2	< 35.2	
Acenaphthene	83-32-9	35.2	< 35.2	
Acenaphthylene	208-96-8	35.2	< 35.2	
Anthracene	120-12-7	35.2	< 35.2	
Benz(a)anthracene	56-55-3	35.2	< 35.2	
Benzo(a)pyrene	50-32-8	35.2	< 35.2	
Benzo(b)fluoranthene	205-99-2	35.2	< 35.2	
Benzo(g,h,i)perylene	191-24-2	35.2	< 35.2	
Benzo(k)fluoranthene	207-08-9	35.2	< 35.2	
Chrysene	218-01-9	35.2	< 35.2	
Dibenz(a,h)anthracene	53-70-3	35.2	< 35.2	
Fluoranthene	206-44-0	35.2	< 35.2	
Fluorene	86-73-7	35.2	< 35.2	
Indene	95-13-6	35.2	< 35.2	
Indeno(1,2,3-cd)pyrene	193-39-5	35.2	< 35.2	
Naphthalene	91-20-3	35.2	< 35.2	
Phenanthrene	85-01-8	35.2	< 35.2	
Pyrene	129-00-0	35.2	< 35.2	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1305279-009A
Client Sample ID: S1-CF-04
Collection Date: 5/10/2013 1601h
Received Date: 5/10/2013 1740h

Analytical Results SVOA PNA SIM List by GC/MS Method 8270D/3546

Analyzed: 5/15/2013 1251h **Extracted:** 5/13/2013 950h
Units: µg/kg-dry **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	34.4	< 34.4	
2-Methylnaphthalene	91-57-6	34.4	< 34.4	
Acenaphthene	83-32-9	34.4	< 34.4	
Acenaphthylene	208-96-8	34.4	< 34.4	
Anthracene	120-12-7	34.4	< 34.4	
Benz(a)anthracene	56-55-3	34.4	< 34.4	
Benzo(a)pyrene	50-32-8	34.4	< 34.4	
Benzo(b)fluoranthene	205-99-2	34.4	< 34.4	
Benzo(g,h,i)perylene	191-24-2	34.4	< 34.4	
Benzo(k)fluoranthene	207-08-9	34.4	< 34.4	
Chrysene	218-01-9	34.4	< 34.4	
Dibenz(a,h)anthracene	53-70-3	34.4	< 34.4	
Fluoranthene	206-44-0	34.4	< 34.4	
Fluorene	86-73-7	34.4	< 34.4	
Indene	95-13-6	34.4	< 34.4	
Indeno(1,2,3-cd)pyrene	193-39-5	34.4	< 34.4	
Naphthalene	91-20-3	34.4	< 34.4	
Phenanthrene	85-01-8	34.4	< 34.4	
Pyrene	129-00-0	34.4	< 34.4	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1305279-010A
Client Sample ID: S1-CF-01
Collection Date: 5/10/2013 1603h
Received Date: 5/10/2013 1740h

Analytical Results SVOA PNA SIM List by GC/MS Method 8270D/3546

Analyzed: 5/15/2013 1318h **Extracted:** 5/13/2013 950h
Units: µg/kg-dry **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	37.8	< 37.8	
2-Methylnaphthalene	91-57-6	37.8	< 37.8	
Acenaphthene	83-32-9	37.8	< 37.8	
Acenaphthylene	208-96-8	37.8	< 37.8	
Anthracene	120-12-7	37.8	< 37.8	
Benz(a)anthracene	56-55-3	37.8	< 37.8	
Benzo(a)pyrene	50-32-8	37.8	< 37.8	
Benzo(b)fluoranthene	205-99-2	37.8	< 37.8	
Benzo(g,h,i)perylene	191-24-2	37.8	< 37.8	
Benzo(k)fluoranthene	207-08-9	37.8	< 37.8	
Chrysene	218-01-9	37.8	< 37.8	
Dibenz(a,h)anthracene	53-70-3	37.8	< 37.8	
Fluoranthene	206-44-0	37.8	< 37.8	
Fluorene	86-73-7	37.8	< 37.8	
Indene	95-13-6	37.8	< 37.8	
Indeno(1,2,3-cd)pyrene	193-39-5	37.8	< 37.8	
Naphthalene	91-20-3	37.8	< 37.8	
Phenanthrene	85-01-8	37.8	< 37.8	
Pyrene	129-00-0	37.8	< 37.8	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1305279-011A
Client Sample ID: S2-CF-05
Collection Date: 5/10/2013 1607h
Received Date: 5/10/2013 1740h

Analytical Results SVOA PNA SIM List by GC/MS Method 8270D/3546

Analyzed: 5/15/2013 1346h **Extracted:** 5/13/2013 950h
Units: µg/kg-dry **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	36.2	< 36.2	
2-Methylnaphthalene	91-57-6	36.2	< 36.2	
Acenaphthene	83-32-9	36.2	< 36.2	
Acenaphthylene	208-96-8	36.2	< 36.2	
Anthracene	120-12-7	36.2	< 36.2	
Benz(a)anthracene	56-55-3	36.2	< 36.2	
Benzo(a)pyrene	50-32-8	36.2	< 36.2	
Benzo(b)fluoranthene	205-99-2	36.2	< 36.2	
Benzo(g,h,i)perylene	191-24-2	36.2	< 36.2	
Benzo(k)fluoranthene	207-08-9	36.2	< 36.2	
Chrysene	218-01-9	36.2	< 36.2	
Dibenz(a,h)anthracene	53-70-3	36.2	< 36.2	
Fluoranthene	206-44-0	36.2	< 36.2	
Fluorene	86-73-7	36.2	< 36.2	
Indene	95-13-6	36.2	< 36.2	
Indeno(1,2,3-cd)pyrene	193-39-5	36.2	< 36.2	
Naphthalene	91-20-3	36.2	< 36.2	
Phenanthrene	85-01-8	36.2	< 36.2	
Pyrene	129-00-0	36.2	< 36.2	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1305279-012A
Client Sample ID: S1-GS-01
Collection Date: 5/10/2013 1609h
Received Date: 5/10/2013 1740h

Analytical Results SVOA PNA SIM List by GC/MS Method 8270D/3546

Analyzed: 5/15/2013 1413h **Extracted:** 5/13/2013 950h
Units: µg/kg-dry **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	29.6	< 29.6	
2-Methylnaphthalene	91-57-6	29.6	< 29.6	
Acenaphthene	83-32-9	29.6	< 29.6	
Acenaphthylene	208-96-8	29.6	< 29.6	
Anthracene	120-12-7	29.6	< 29.6	
Benz(a)anthracene	56-55-3	29.6	< 29.6	
Benzo(a)pyrene	50-32-8	29.6	< 29.6	
Benzo(b)fluoranthene	205-99-2	29.6	< 29.6	
Benzo(g,h,i)perylene	191-24-2	29.6	< 29.6	
Benzo(k)fluoranthene	207-08-9	29.6	< 29.6	
Chrysene	218-01-9	29.6	< 29.6	
Dibenz(a,h)anthracene	53-70-3	29.6	< 29.6	
Fluoranthene	206-44-0	29.6	< 29.6	
Fluorene	86-73-7	29.6	< 29.6	
Indene	95-13-6	29.6	< 29.6	
Indeno(1,2,3-cd)pyrene	193-39-5	29.6	< 29.6	
Naphthalene	91-20-3	29.6	< 29.6	
Phenanthrene	85-01-8	29.6	< 29.6	
Pyrene	129-00-0	29.6	< 29.6	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1305279-013A
Client Sample ID: S2-GS-02
Collection Date: 5/10/2013 1613h
Received Date: 5/10/2013 1740h

Analytical Results SVOA PNA SIM List by GC/MS Method 8270D/3546

Analyzed: 5/15/2013 1441h **Extracted:** 5/13/2013 950h
Units: µg/kg-dry **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	24.2	< 24.2	
2-Methylnaphthalene	91-57-6	24.2	< 24.2	
Acenaphthene	83-32-9	24.2	< 24.2	
Acenaphthylene	208-96-8	24.2	< 24.2	
Anthracene	120-12-7	24.2	< 24.2	
Benz(a)anthracene	56-55-3	24.2	< 24.2	
Benzo(a)pyrene	50-32-8	24.2	< 24.2	
Benzo(b)fluoranthene	205-99-2	24.2	< 24.2	
Benzo(g,h,i)perylene	191-24-2	24.2	< 24.2	
Benzo(k)fluoranthene	207-08-9	24.2	< 24.2	
Chrysene	218-01-9	24.2	< 24.2	
Dibenz(a,h)anthracene	53-70-3	24.2	< 24.2	
Fluoranthene	206-44-0	24.2	< 24.2	
Fluorene	86-73-7	24.2	< 24.2	
Indene	95-13-6	24.2	< 24.2	
Indeno(1,2,3-cd)pyrene	193-39-5	24.2	< 24.2	
Naphthalene	91-20-3	24.2	< 24.2	
Phenanthrene	85-01-8	24.2	< 24.2	
Pyrene	129-00-0	24.2	< 24.2	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1305279-014A
Client Sample ID: S3-GS-04
Collection Date: 5/10/2013 1616h
Received Date: 5/10/2013 1740h

Analytical Results SVOA PNA SIM List by GC/MS Method 8270D/3546

Analyzed: 5/15/2013 1508h **Extracted:** 5/13/2013 950h
Units: µg/kg-dry **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	30.9	< 30.9	
2-Methylnaphthalene	91-57-6	30.9	< 30.9	
Acenaphthene	83-32-9	30.9	< 30.9	
Acenaphthylene	208-96-8	30.9	< 30.9	
Anthracene	120-12-7	30.9	< 30.9	
Benz(a)anthracene	56-55-3	30.9	< 30.9	
Benzo(a)pyrene	50-32-8	30.9	< 30.9	
Benzo(b)fluoranthene	205-99-2	30.9	< 30.9	
Benzo(g,h,i)perylene	191-24-2	30.9	< 30.9	
Benzo(k)fluoranthene	207-08-9	30.9	< 30.9	
Chrysene	218-01-9	30.9	< 30.9	
Dibenz(a,h)anthracene	53-70-3	30.9	< 30.9	
Fluoranthene	206-44-0	30.9	< 30.9	
Fluorene	86-73-7	30.9	< 30.9	
Indene	95-13-6	30.9	< 30.9	
Indeno(1,2,3-cd)pyrene	193-39-5	30.9	< 30.9	
Naphthalene	91-20-3	30.9	< 30.9	
Phenanthrene	85-01-8	30.9	< 30.9	
Pyrene	129-00-0	30.9	< 30.9	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1305279-015A
Client Sample ID: S3-GS-03
Collection Date: 5/10/2013 1619h
Received Date: 5/10/2013 1740h

Analytical Results SVOA PNA SIM List by GC/MS Method 8270D/3546

Analyzed: 5/15/2013 1536h **Extracted:** 5/13/2013 950h
Units: µg/kg-dry **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	25.7	< 25.7	
2-Methylnaphthalene	91-57-6	25.7	< 25.7	
Acenaphthene	83-32-9	25.7	< 25.7	
Acenaphthylene	208-96-8	25.7	< 25.7	
Anthracene	120-12-7	25.7	< 25.7	
Benz(a)anthracene	56-55-3	25.7	< 25.7	
Benzo(a)pyrene	50-32-8	25.7	< 25.7	
Benzo(b)fluoranthene	205-99-2	25.7	< 25.7	
Benzo(g,h,i)perylene	191-24-2	25.7	< 25.7	
Benzo(k)fluoranthene	207-08-9	25.7	< 25.7	
Chrysene	218-01-9	25.7	< 25.7	
Dibenz(a,h)anthracene	53-70-3	25.7	< 25.7	
Fluoranthene	206-44-0	25.7	< 25.7	
Fluorene	86-73-7	25.7	< 25.7	
Indene	95-13-6	25.7	< 25.7	
Indeno(1,2,3-cd)pyrene	193-39-5	25.7	< 25.7	
Naphthalene	91-20-3	25.7	< 25.7	
Phenanthrene	85-01-8	25.7	< 25.7	
Pyrene	129-00-0	25.7	< 25.7	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1305279-016A
Client Sample ID: S3-GS-05
Collection Date: 5/10/2013 1622h
Received Date: 5/10/2013 1740h

Analytical Results SVOA PNA SIM List by GC/MS Method 8270D/3546

Analyzed: 5/15/2013 1603h **Extracted:** 5/13/2013 950h
Units: µg/kg-dry **Dilution Factor:** 1 **Method:** SW8270D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	22.5	< 22.5	
2-Methylnaphthalene	91-57-6	22.5	< 22.5	
Acenaphthene	83-32-9	22.5	< 22.5	
Acenaphthylene	208-96-8	22.5	< 22.5	
Anthracene	120-12-7	22.5	< 22.5	
Benz(a)anthracene	56-55-3	22.5	< 22.5	
Benzo(a)pyrene	50-32-8	22.5	< 22.5	
Benzo(b)fluoranthene	205-99-2	22.5	< 22.5	
Benzo(g,h,i)perylene	191-24-2	22.5	< 22.5	
Benzo(k)fluoranthene	207-08-9	22.5	< 22.5	
Chrysene	218-01-9	22.5	< 22.5	
Dibenz(a,h)anthracene	53-70-3	22.5	< 22.5	
Fluoranthene	206-44-0	22.5	< 22.5	
Fluorene	86-73-7	22.5	< 22.5	
Indene	95-13-6	22.5	< 22.5	
Indeno(1,2,3-cd)pyrene	193-39-5	22.5	< 22.5	
Naphthalene	91-20-3	22.5	< 22.5	
Phenanthrene	85-01-8	22.5	< 22.5	
Pyrene	129-00-0	22.5	< 22.5	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.

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ORGANIC ANALYTICAL REPORT

Client: Utah Division of Water Quality **Contact:** Chris Bittner
Project: MP 44.9
Lab Sample ID: 1305279-017A
Client Sample ID: EB-01
Collection Date: 5/10/2013 1630h
Received Date: 5/10/2013 1740h

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

Analyzed: 5/13/2013 1330h **Extracted:** 5/13/2013 822h
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	

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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: 1305279
Project: MP 44.9

Contact: Chris Bittner
Dept: MSSV
QC Type: LCS

Analyte		Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID:	**LCS-25387**	Date Analyzed:	05/14/2013 2103h											
Test Code:	8270-S-SIM-3546	Date Prepared:	05/13/2013 950h											
Acenaphthene		4,490	µg/kg	SW8270D	134	134	5,333	0	84.3	10 - 150				
Benzo(a)pyrene		4,590	µg/kg	SW8270D	134	134	5,333	0	86.0	38 - 194				
Pyrene		4,560	µg/kg	SW8270D	134	134	5,333	0	85.5	22 - 167				
Lab Sample ID:	**LCS-25386**	Date Analyzed:	05/13/2013 1236h											
Test Code:	8270-W-SIM	Date Prepared:	05/13/2013 822h											
Acenaphthene		49.0	µg/L	SW8270D	2.00	2.00	80.00	0	61.3	23 - 159				
Benzo(a)pyrene		25.2	µg/L	SW8270D	2.00	2.00	80.00	0	31.5	26 - 223				
Pyrene		46.0	µg/L	SW8270D	2.00	2.00	80.00	0	57.5	28 - 204				

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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: 1305279
Project: MP 44.9

Contact: Chris Bittner
Dept: MSSV
QC Type: LCSD

Analyte		Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID:	**LCSD-25386**	Date Analyzed:	05/13/2013 1303h											
Test Code:	8270-W-SIM	Date Prepared:	05/13/2013 822h											
Acenaphthene		50.0	µg/L	SW8270D	2.00	2.00	80.00	0	62.5	23 - 159	49	2.02	25	
Benzo(a)pyrene		24.8	µg/L	SW8270D	2.00	2.00	80.00	0	31.0	26 - 223	25.2	1.60	25	
Pyrene		44.8	µg/L	SW8270D	2.00	2.00	80.00	0	56.0	28 - 204	46	2.64	25	

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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: 1305279
Project: MP 44.9

Contact: Chris Bittner
Dept: MSSV
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-25387	Date Analyzed:	05/14/2013 2036h											
Test Code: 8270-S-SIM-3546	Date Prepared:	05/13/2013 950h											
1-Methylnaphthalene	< 6.70	µg/kg	SW8270D	6.70	6.70								
2-Methylnaphthalene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Acenaphthene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Acenaphthylene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Anthracene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Benz(a)anthracene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Benzo(a)pyrene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Benzo(b)fluoranthene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Benzo(g,h,i)perylene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Benzo(k)fluoranthene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Chrysene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Dibenz(a,h)anthracene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Fluoranthene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Fluorene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Indene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Indeno(1,2,3-cd)pyrene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Naphthalene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Phenanthrene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Pyrene	< 6.70	µg/kg	SW8270D	6.70	6.70								
Lab Sample ID: MB-25386	Date Analyzed:	05/13/2013 1210h											
Test Code: 8270-W-SIM	Date Prepared:	05/13/2013 822h											
1-Methylnaphthalene	< 0.100	µg/L	SW8270D	0.100	0.100								
2-Methylnaphthalene	< 0.100	µg/L	SW8270D	0.100	0.100								
Acenaphthene	< 0.100	µg/L	SW8270D	0.100	0.100								
Acenaphthylene	< 0.100	µg/L	SW8270D	0.100	0.100								
Anthracene	< 0.100	µg/L	SW8270D	0.100	0.100								
Benz(a)anthracene	< 0.100	µg/L	SW8270D	0.100	0.100								
Benzo(a)pyrene	< 0.100	µg/L	SW8270D	0.100	0.100								

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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: 1305279
Project: MP 44.9

Contact: Chris Bittner
Dept: MSSV
QC Type: MBLK

Analyte	Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID: MB-25386	Date Analyzed:	05/13/2013 1210h											
Test Code: 8270-W-SIM	Date Prepared:	05/13/2013 822h											
Benzo(b)fluoranthene	< 0.100	µg/L	SW8270D	0.100	0.100								
Benzo(g,h,i)perylene	< 0.100	µg/L	SW8270D	0.100	0.100								
Benzo(k)fluoranthene	< 0.100	µg/L	SW8270D	0.100	0.100								
Chrysene	< 0.100	µg/L	SW8270D	0.100	0.100								
Dibenz(a,h)anthracene	< 0.100	µg/L	SW8270D	0.100	0.100								
Fluoranthene	< 0.100	µg/L	SW8270D	0.100	0.100								
Fluorene	< 0.100	µg/L	SW8270D	0.100	0.100								
Indene	< 0.100	µg/L	SW8270D	0.100	0.100								
Indeno(1,2,3-cd)pyrene	< 0.100	µg/L	SW8270D	0.100	0.100								
Naphthalene	< 0.100	µg/L	SW8270D	0.100	0.100								
Phenanthrene	< 0.100	µg/L	SW8270D	0.100	0.100								
Pyrene	< 0.100	µg/L	SW8270D	0.100	0.100								

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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: 1305279
Project: MP 44.9

Contact: Chris Bittner
Dept: MSSV
QC Type: MS

Analyte		Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID:	**1305279-002AMS**	Date Analyzed:	05/14/2013 2225h											
Test Code:	8270-S-SIM-3546	Date Prepared:	05/13/2013 950h											
Acenaphthene		21,200	µg/kg-dry	SW8270D	596	596	23,700	0	89.3	31 - 113				
Benzo(a)pyrene		23,100	µg/kg-dry	SW8270D	596	596	23,700	0	97.5	38 - 169				
Pyrene		22,000	µg/kg-dry	SW8270D	596	596	23,700	0	92.8	31 - 150				

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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: 1305279
Project: MP 44.9

Contact: Chris Bittner
Dept: MSSV
QC Type: MSD

Analyte		Result	Units	Method	MDL	Reporting Limit	Amount Spiked	Spike Ref. Amount	%REC	Limits	RPD Ref. Amt	% RPD	RPD Limit	Qual
Lab Sample ID:	**1305279-002AMSD**	Date Analyzed:	05/14/2013 2252h											
Test Code:	8270-S-SIM-3546	Date Prepared:	05/13/2013 950h											
Acenaphthene		20,600	µg/kg-dry	SW8270D	594	594	23,640	0	87.0	31 - 113	21200	2.82	35	
Benzo(a)pyrene		20,600	µg/kg-dry	SW8270D	594	594	23,640	0	87.3	38 - 169	23100	11.4	35	
Pyrene		20,000	µg/kg-dry	SW8270D	594	594	23,640	0	84.8	31 - 150	22000	9.28	35	

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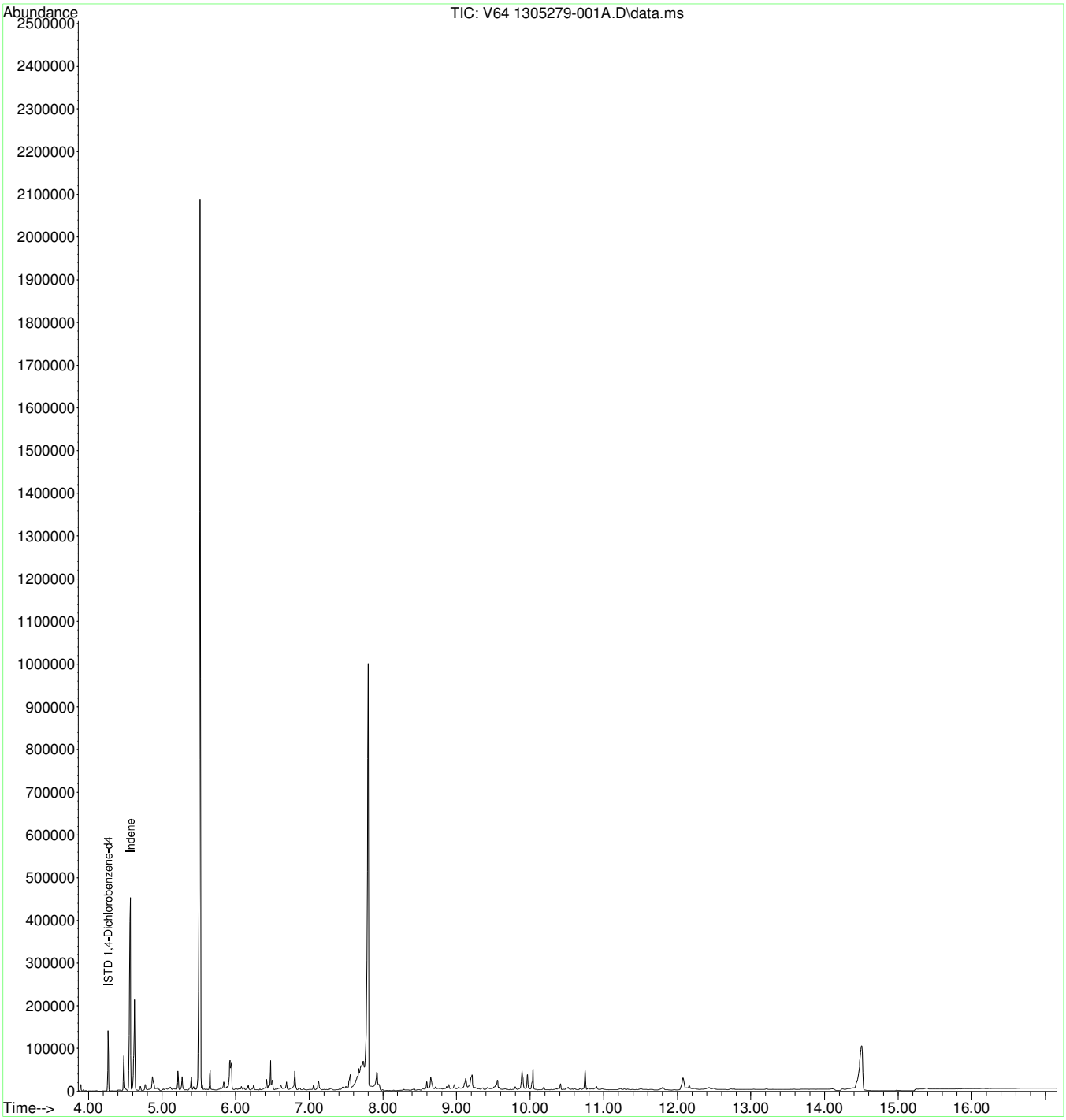
Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\14MAY13-A\
Data File : V64 1305279-001A.D
Acq On : 14 May 2013 9:30 pm
Operator : ALICIA HABERLE
Sample : 1305279-001A
Misc : SAMP
ALS Vial : 16 Sample Multiplier: 1

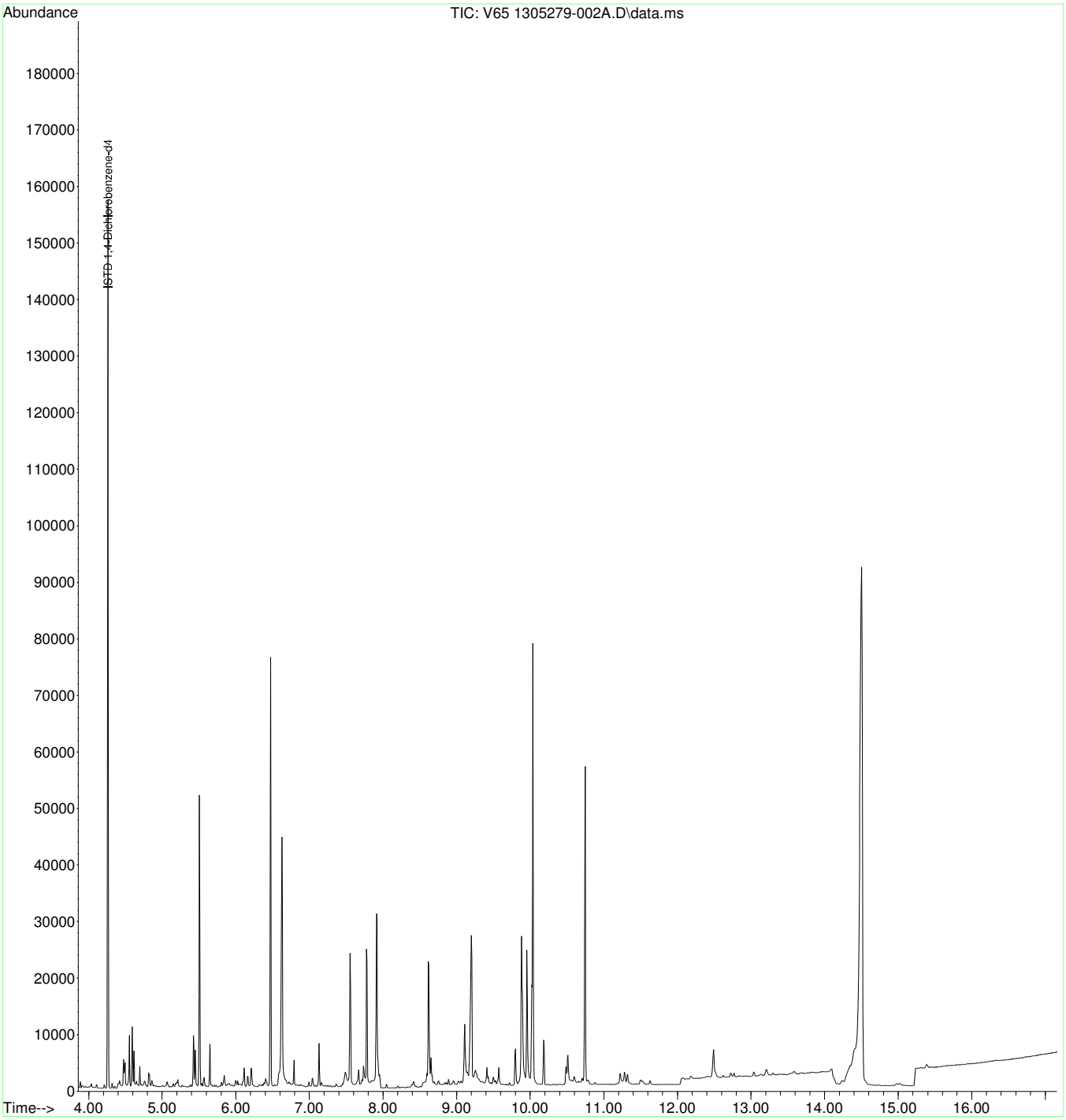
Quant Time: May 15 14:15:50 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\14MAY13-A\
Data File : V65 1305279-002A.D
Acq On : 14 May 2013 9:58 pm
Operator : ALICIA HABERLE
Sample : 1305279-002A
Misc : SAMP
ALS Vial : 17 Sample Multiplier: 1

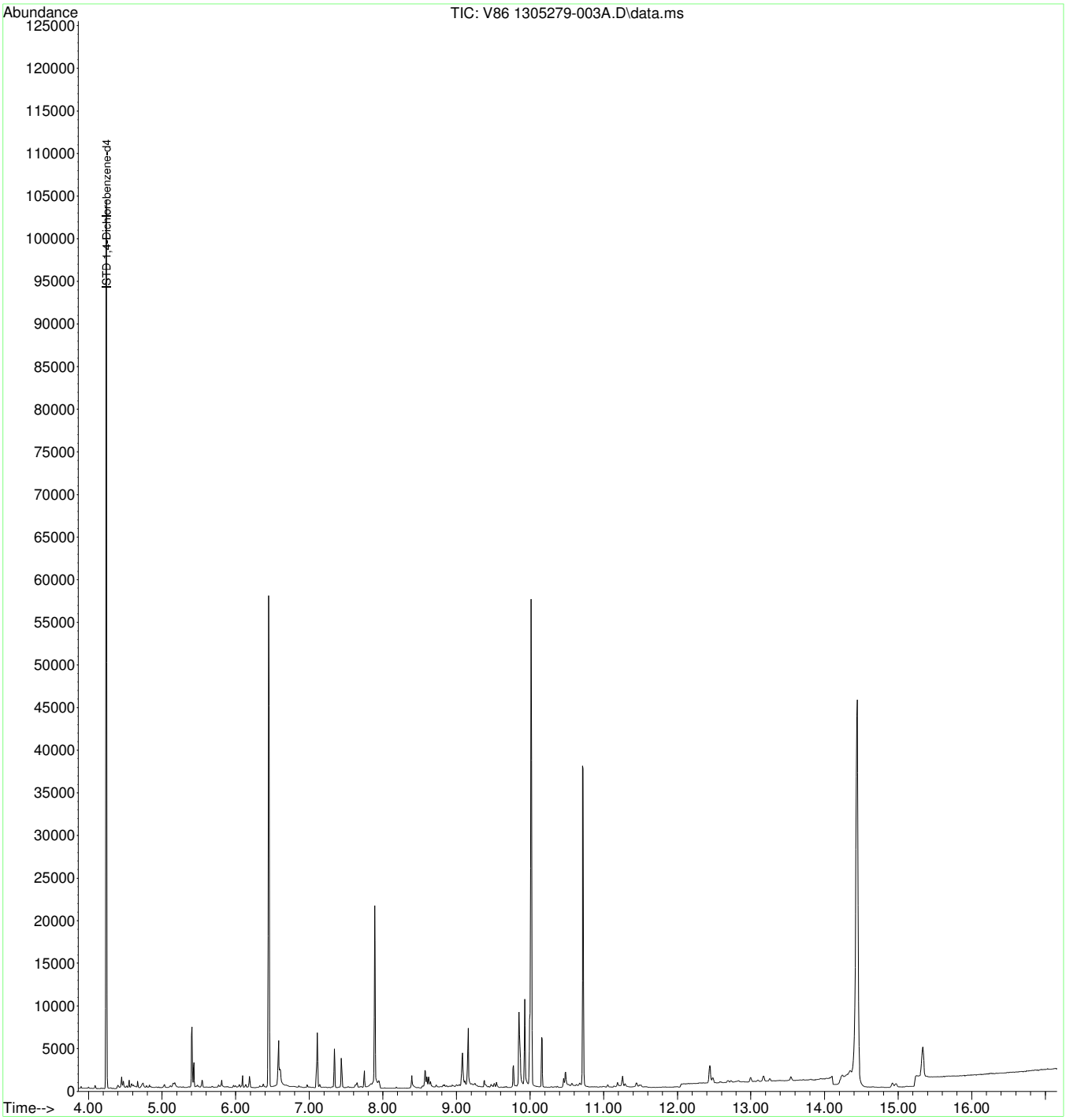
Quant Time: May 15 14:16:23 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\15MAY13-A\
Data File : V86 1305279-003A.D
Acq On : 15 May 2013 10:09 am
Operator : ALICIA HABERLE
Sample : 1305279-003A
Misc : SAMP
ALS Vial : 5 Sample Multiplier: 1

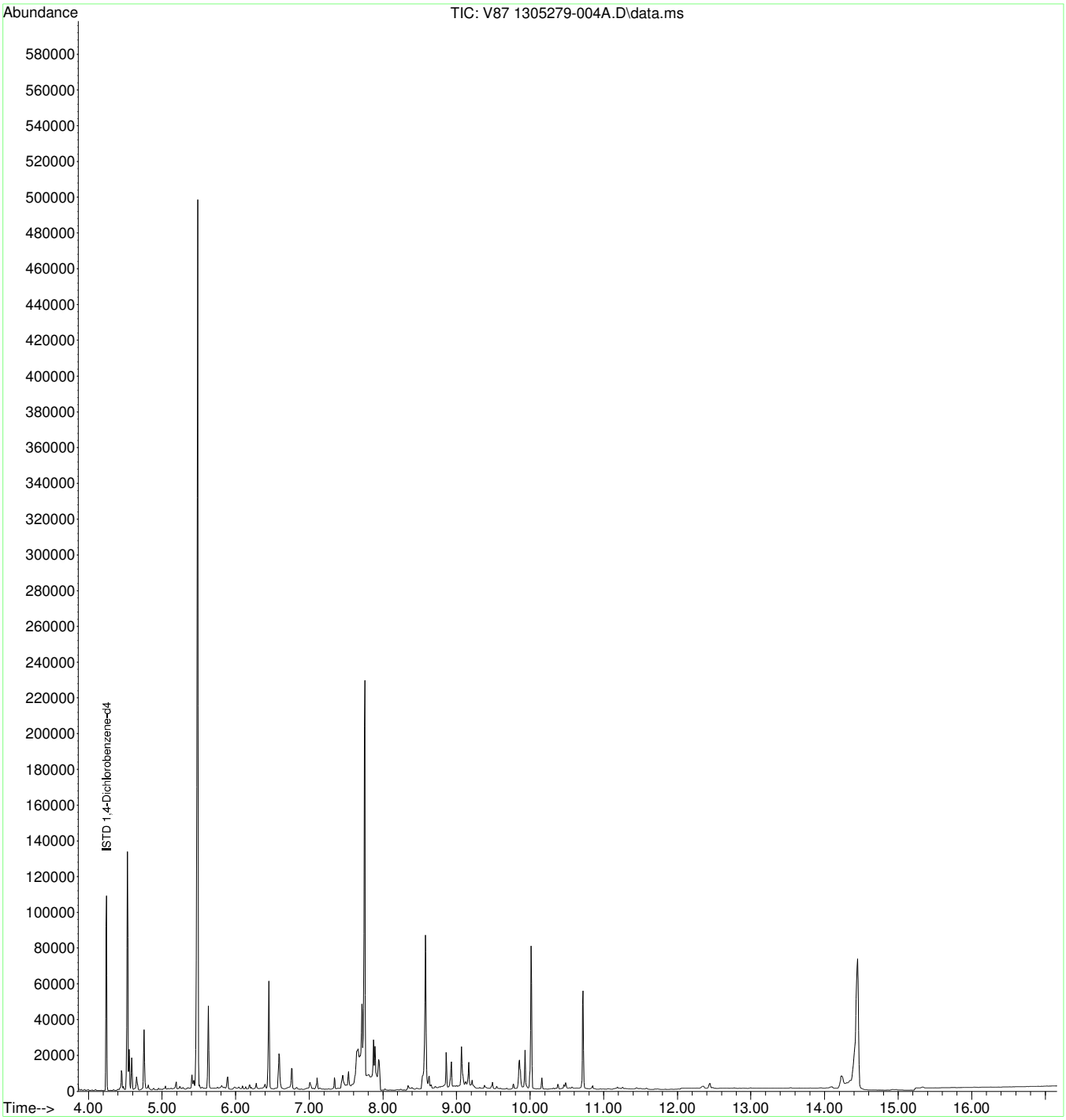
Quant Time: May 15 14:32:34 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\15MAY13-A\
Data File : V87 1305279-004A.D
Acq On : 15 May 2013 10:36 am
Operator : ALICIA HABERLE
Sample : 1305279-004A
Misc : SAMP
ALS Vial : 6 Sample Multiplier: 1

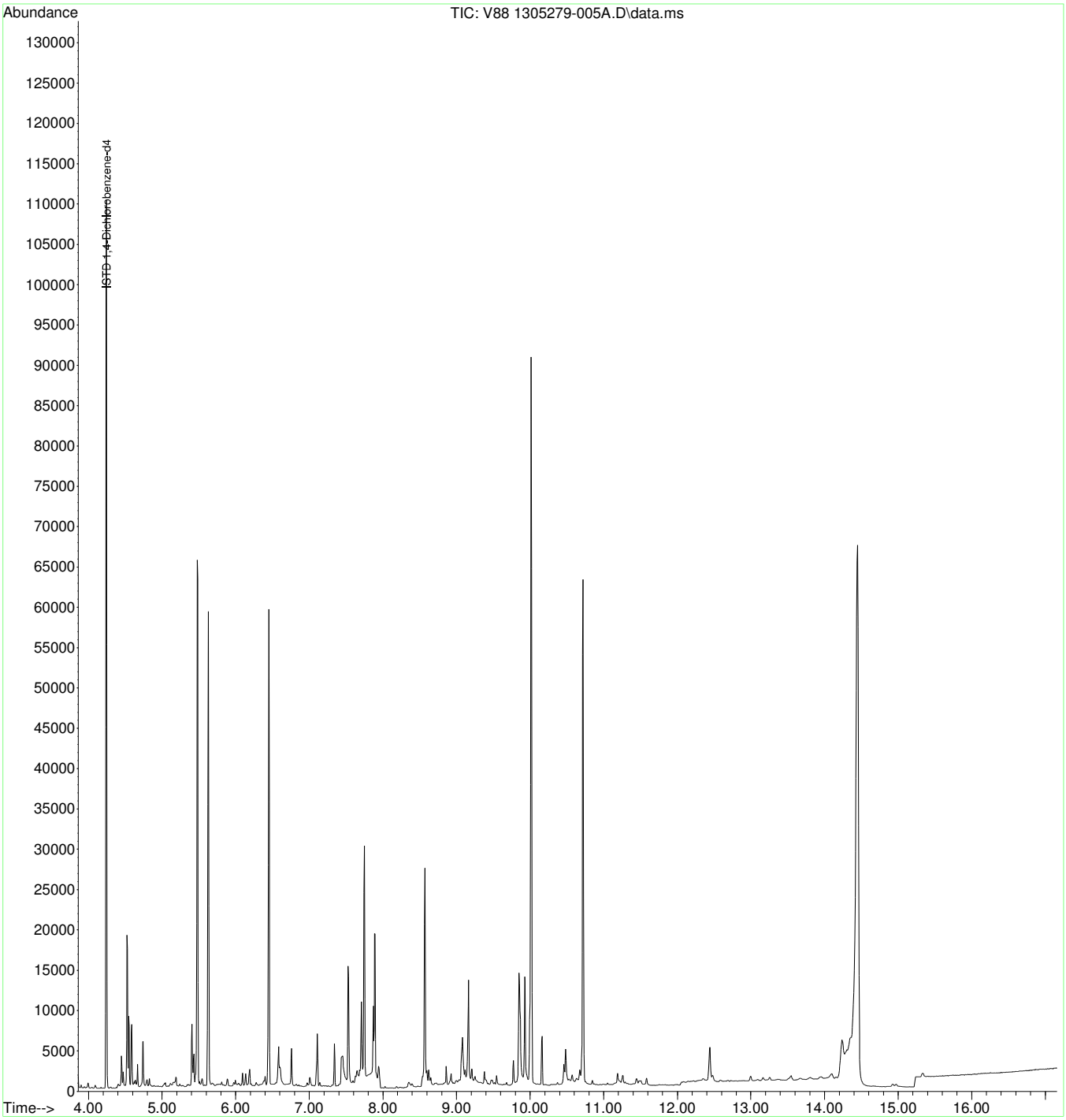
Quant Time: May 15 14:33:58 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\15MAY13-A\
Data File : V88 1305279-005A.D
Acq On : 15 May 2013 11:03 am
Operator : ALICIA HABERLE
Sample : 1305279-005A
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

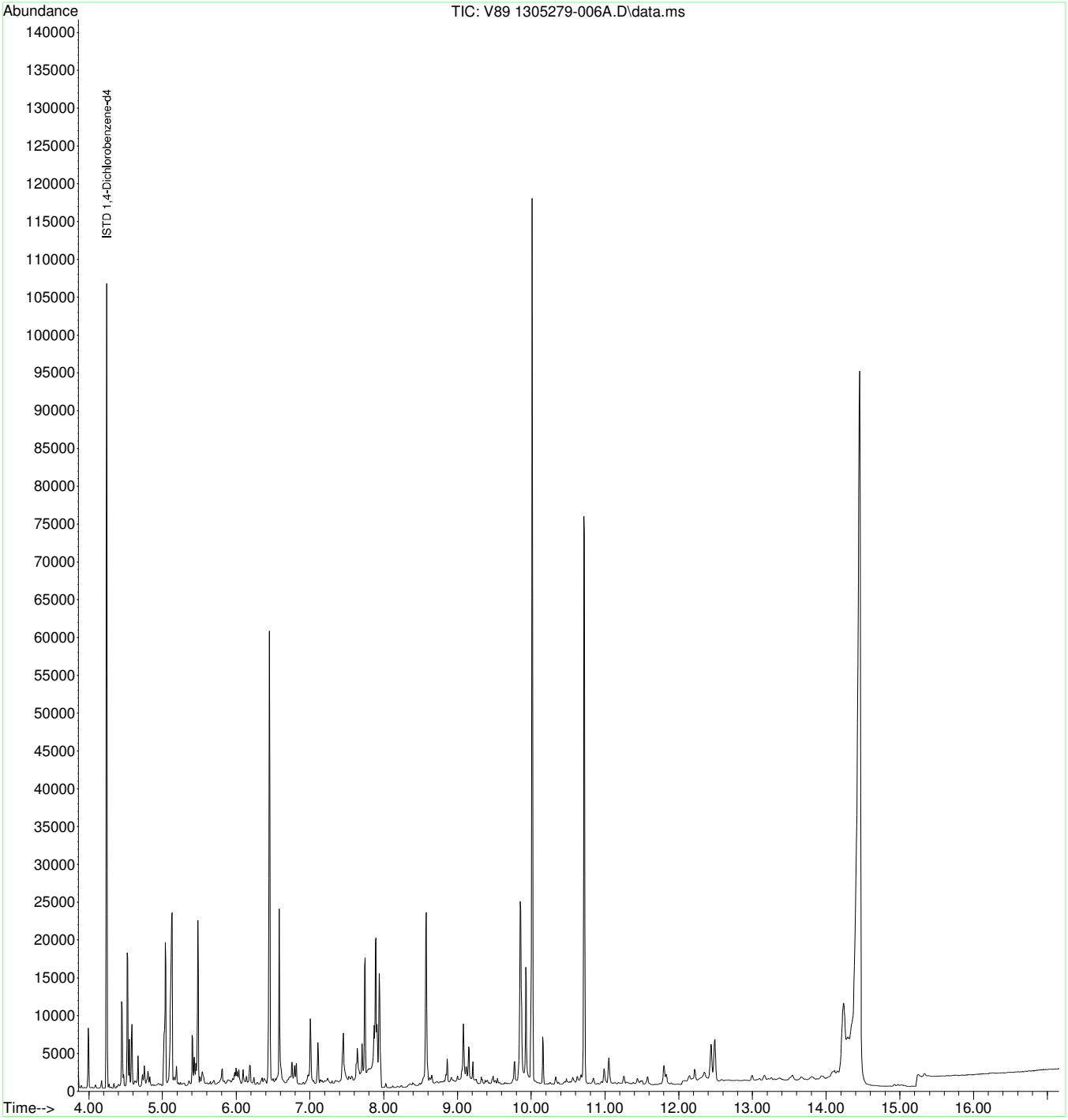
Quant Time: May 15 14:36:01 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\15MAY13-A\
Data File : V89 1305279-006A.D
Acq On : 15 May 2013 11:30 am
Operator : ALICIA HABERLE
Sample : 1305279-006A
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

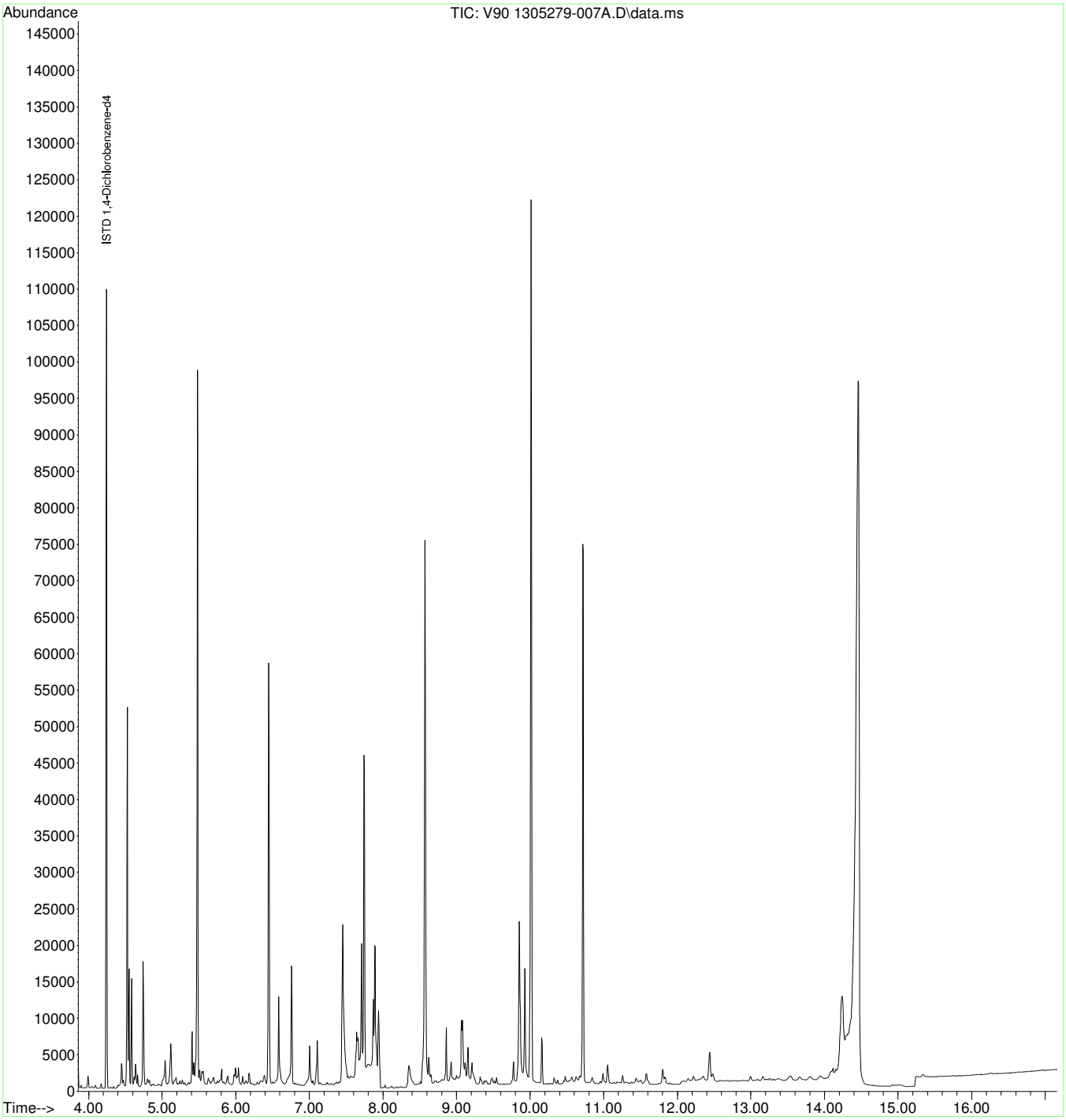
Quant Time: May 15 14:36:37 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\15MAY13-A\
Data File : V90 1305279-007A.D
Acq On : 15 May 2013 11:57 am
Operator : ALICIA HABERLE
Sample : 1305279-007A
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

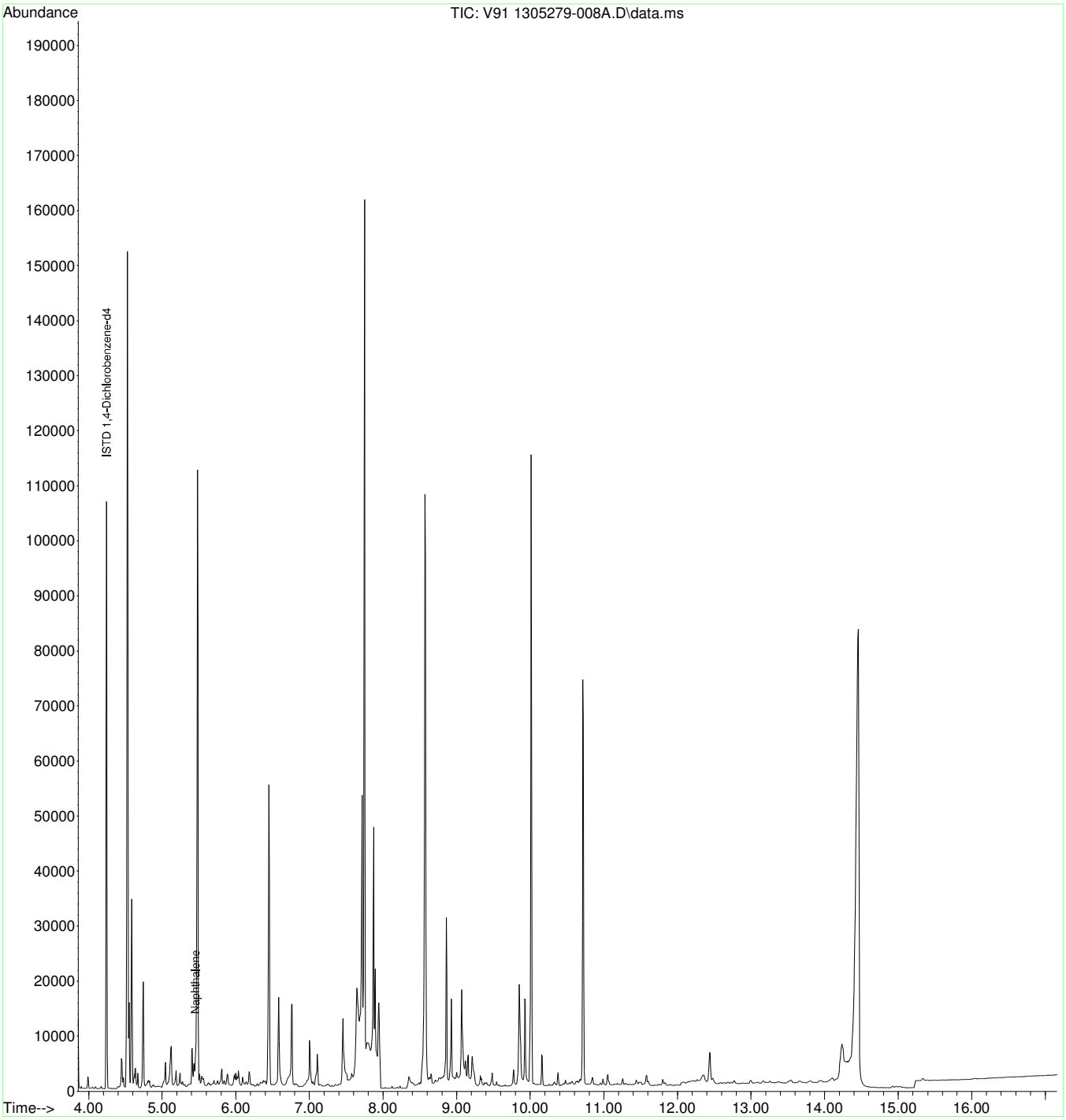
Quant Time: May 15 14:37:24 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\15MAY13-A\
Data File : V91 1305279-008A.D
Acq On : 15 May 2013 12:24 pm
Operator : ALICIA HABERLE
Sample : 1305279-008A
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

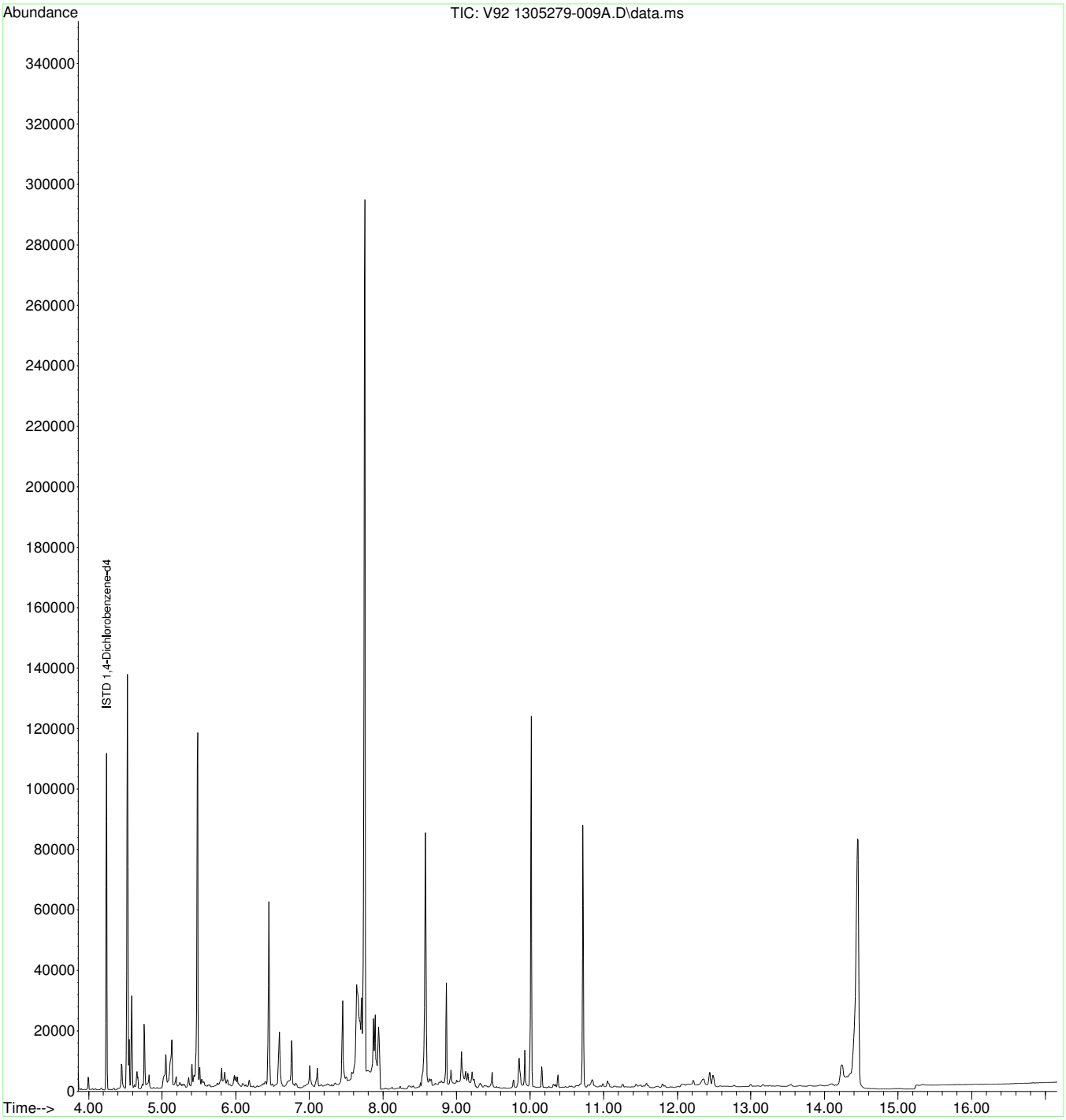
Quant Time: May 15 14:38:42 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\15MAY13-A\
Data File : V92 1305279-009A.D
Acq On : 15 May 2013 12:51 pm
Operator : ALICIA HABERLE
Sample : 1305279-009A
Misc : SAMP
ALS Vial : 11 Sample Multiplier: 1

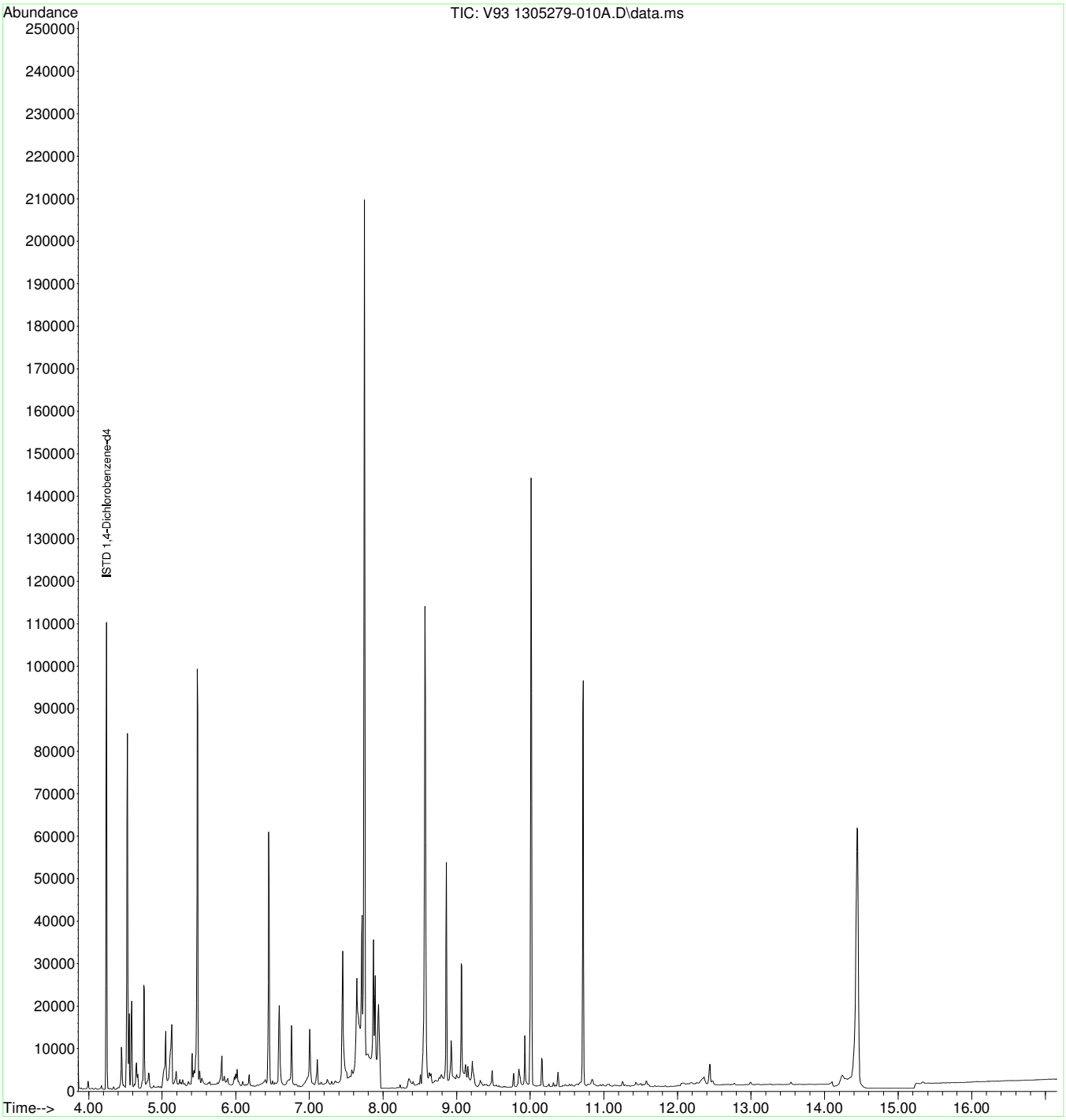
Quant Time: May 15 14:39:13 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\15MAY13-A\
Data File : V93 1305279-010A.D
Acq On : 15 May 2013 1:18 pm
Operator : ALICIA HABERLE
Sample : 1305279-010A
Misc : SAMP
ALS Vial : 12 Sample Multiplier: 1

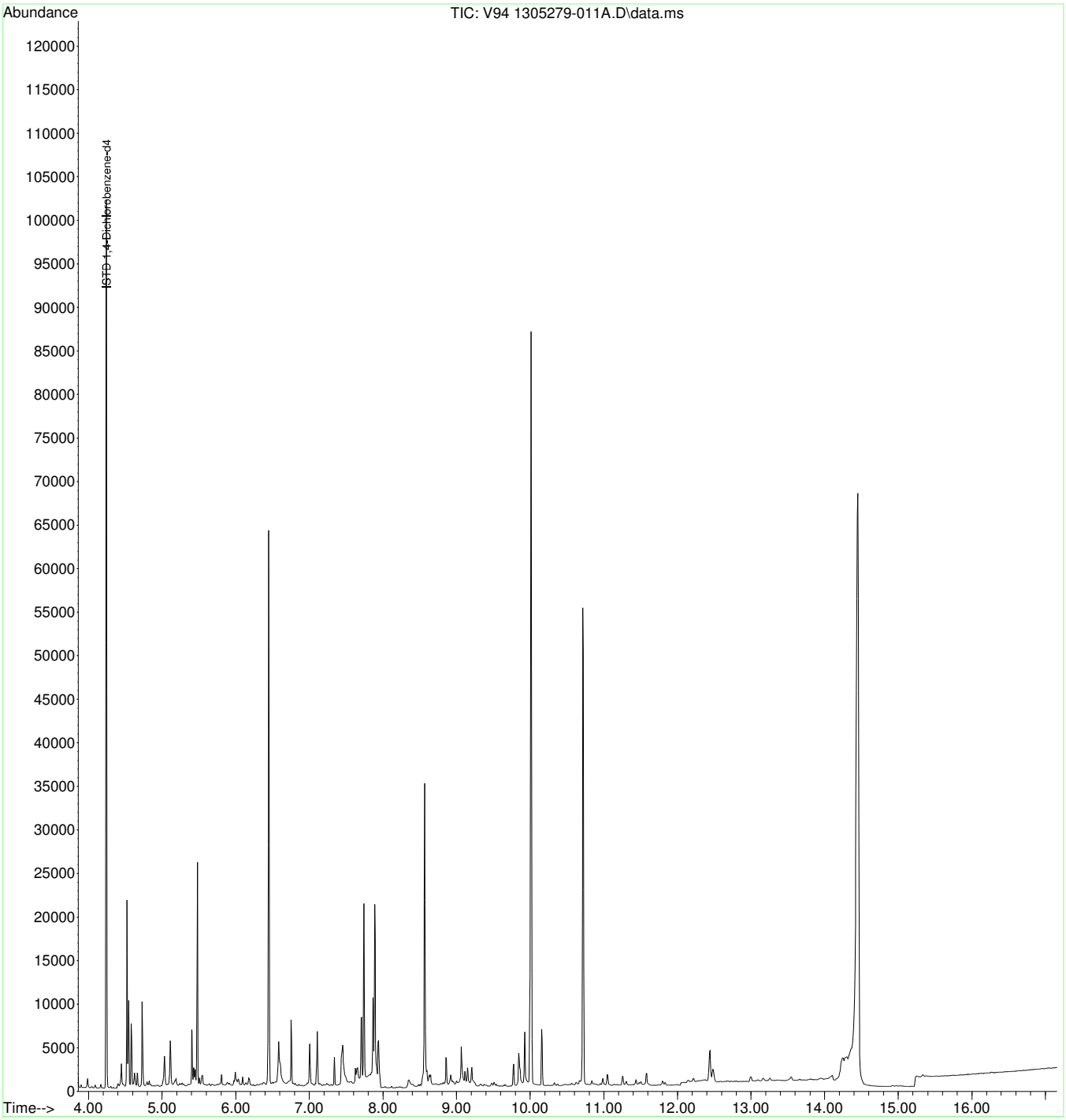
Quant Time: May 15 14:39:47 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\15MAY13-A\
Data File : V94 1305279-011A.D
Acq On : 15 May 2013 1:46 pm
Operator : ALICIA HABERLE
Sample : 1305279-011A
Misc : SAMP
ALS Vial : 13 Sample Multiplier: 1

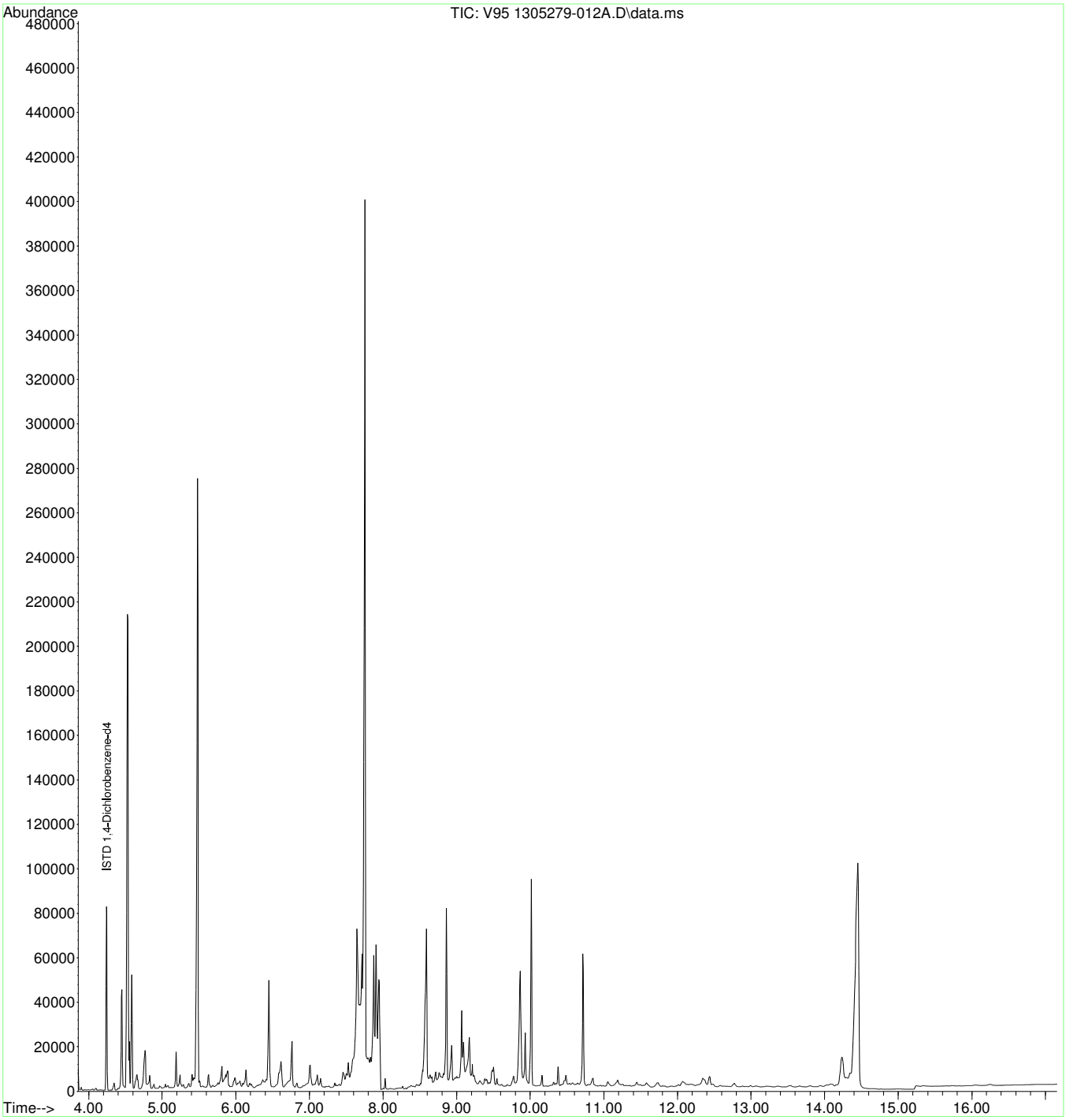
Quant Time: May 15 14:40:39 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\15MAY13-A\
Data File : V95 1305279-012A.D
Acq On : 15 May 2013 2:13 pm
Operator : ALICIA HABERLE
Sample : 1305279-012A
Misc : SAMP
ALS Vial : 14 Sample Multiplier: 1

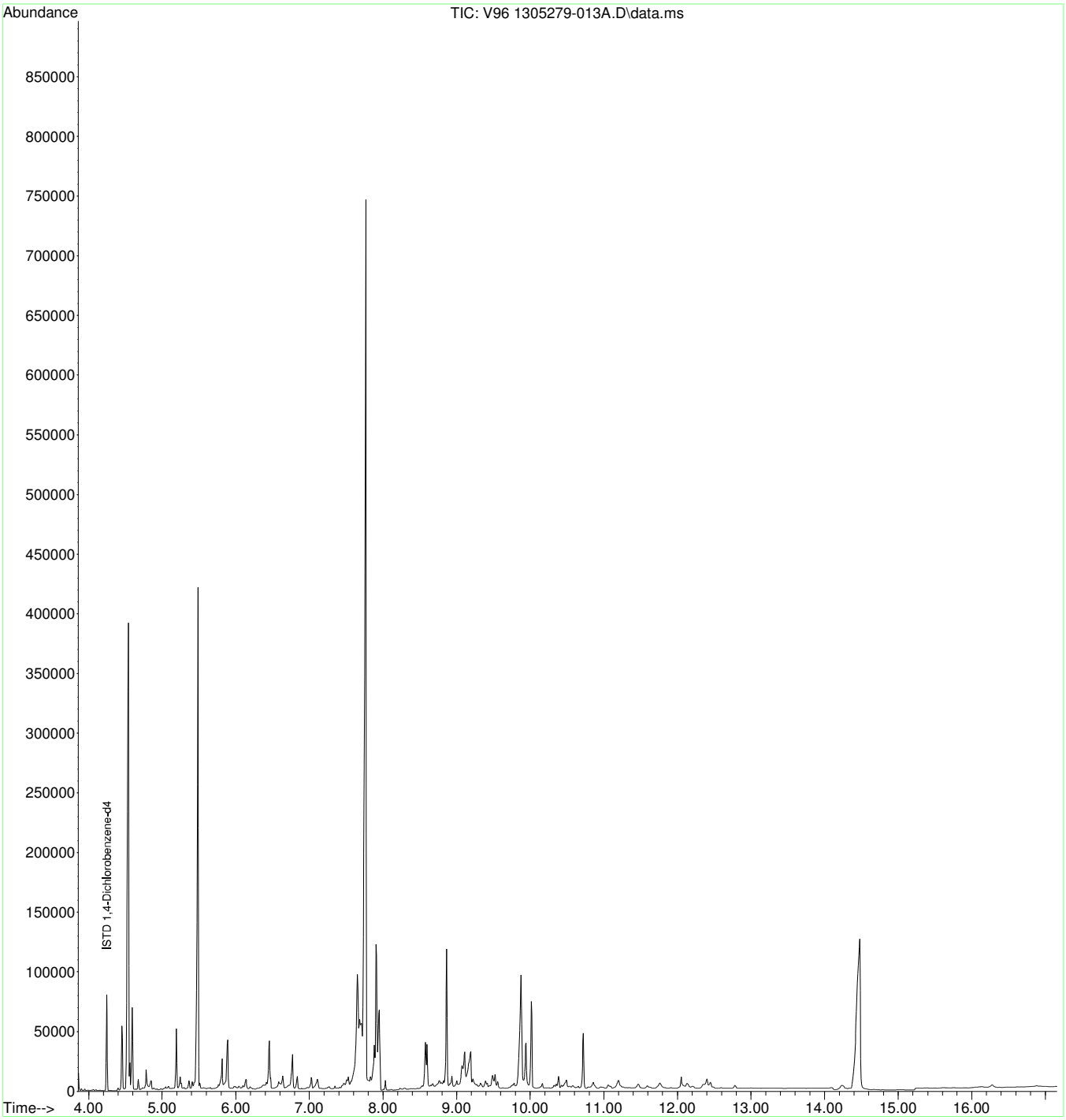
Quant Time: May 15 14:41:21 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\15MAY13-A\
Data File : V96 1305279-013A.D
Acq On : 15 May 2013 2:41 pm
Operator : ALICIA HABERLE
Sample : 1305279-013A
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

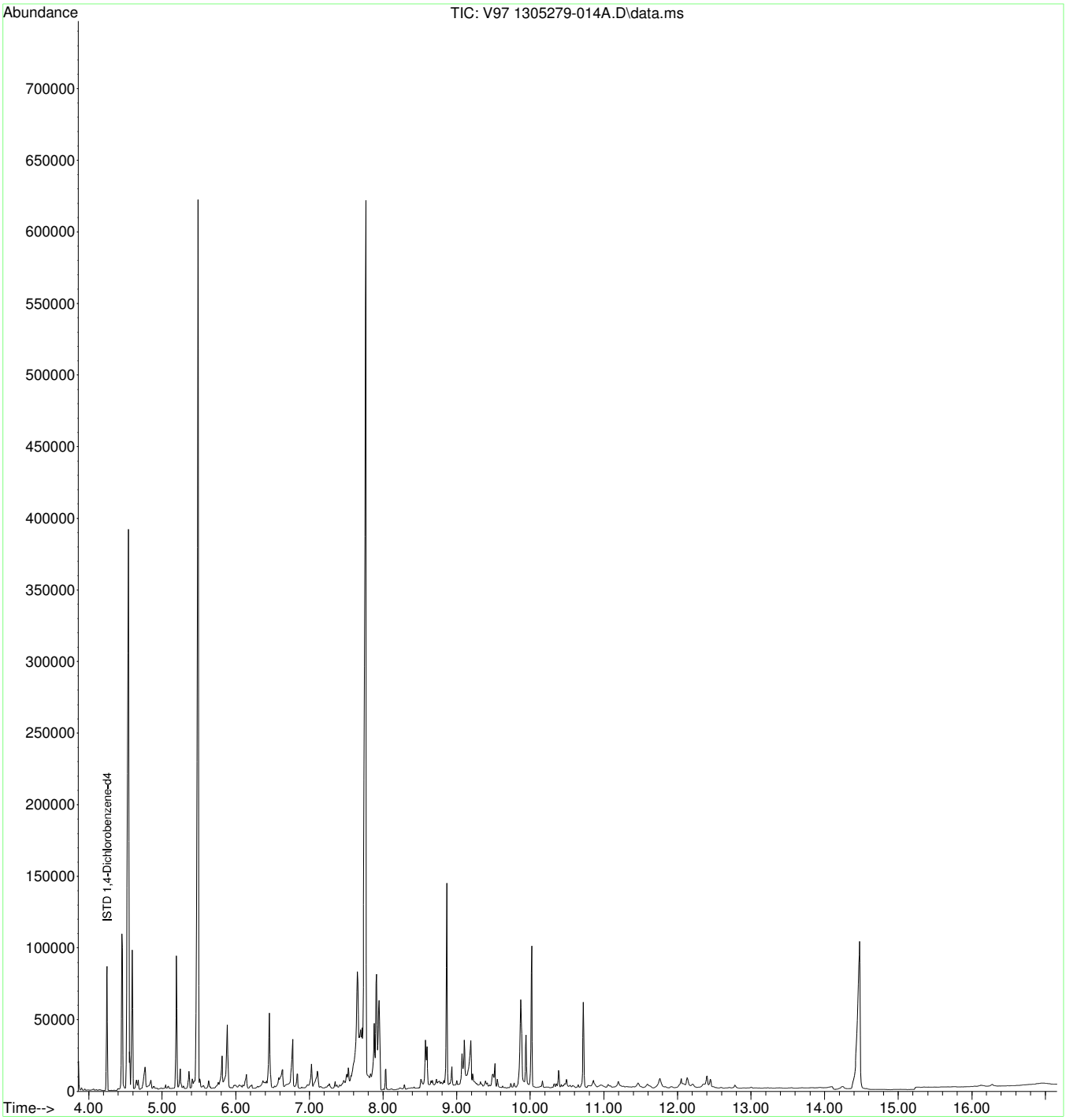
Quant Time: May 15 15:42:35 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\15MAY13-A\
Data File : V97 1305279-014A.D
Acq On : 15 May 2013 3:08 pm
Operator : ALICIA HABERLE
Sample : 1305279-014A
Misc : SAMP
ALS Vial : 16 Sample Multiplier: 1

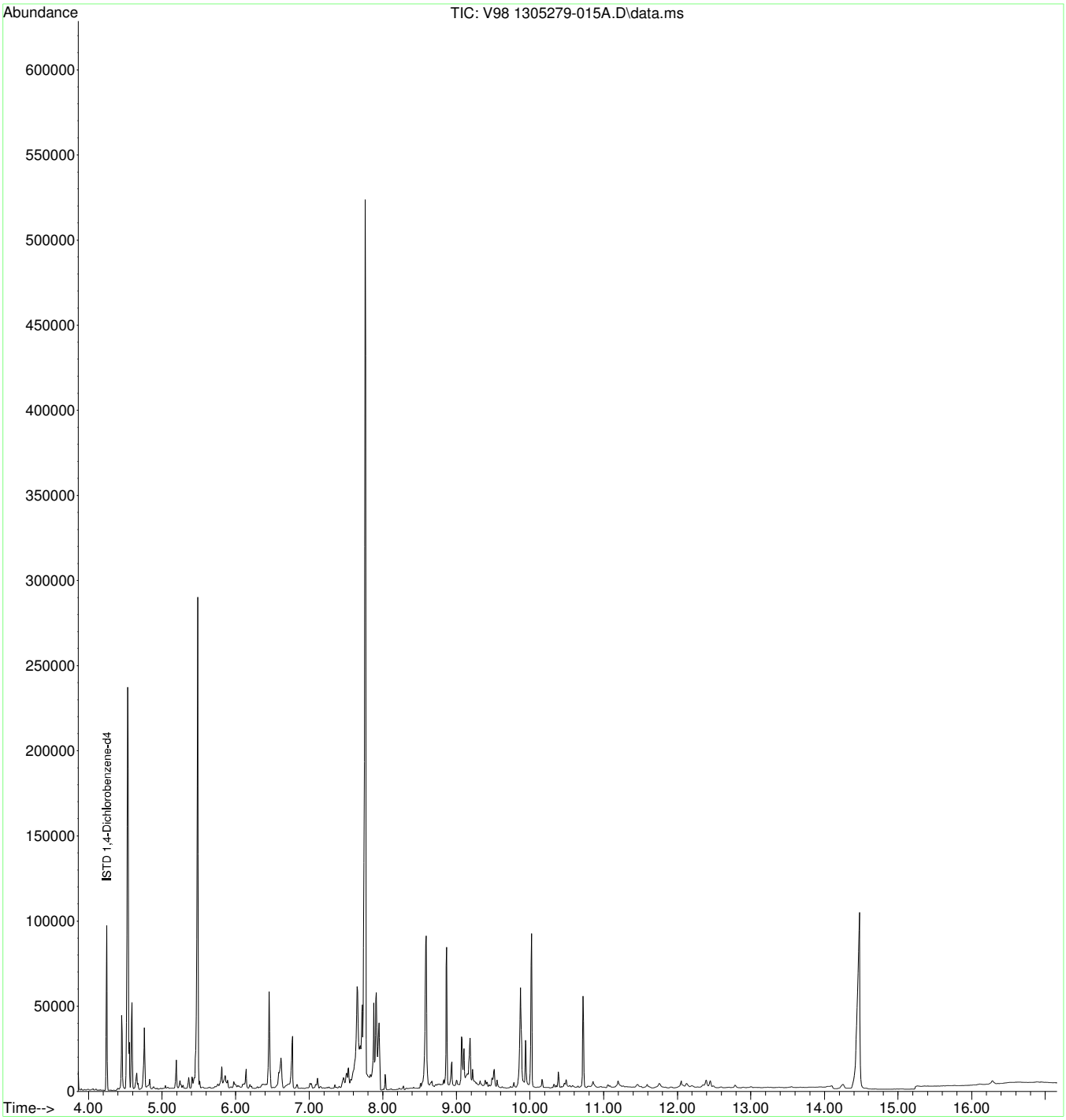
Quant Time: May 15 15:43:26 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\15MAY13-A\
Data File : V98 1305279-015A.D
Acq On : 15 May 2013 3:36 pm
Operator : ALICIA HABERLE
Sample : 1305279-015A
Misc : SAMP
ALS Vial : 17 Sample Multiplier: 1

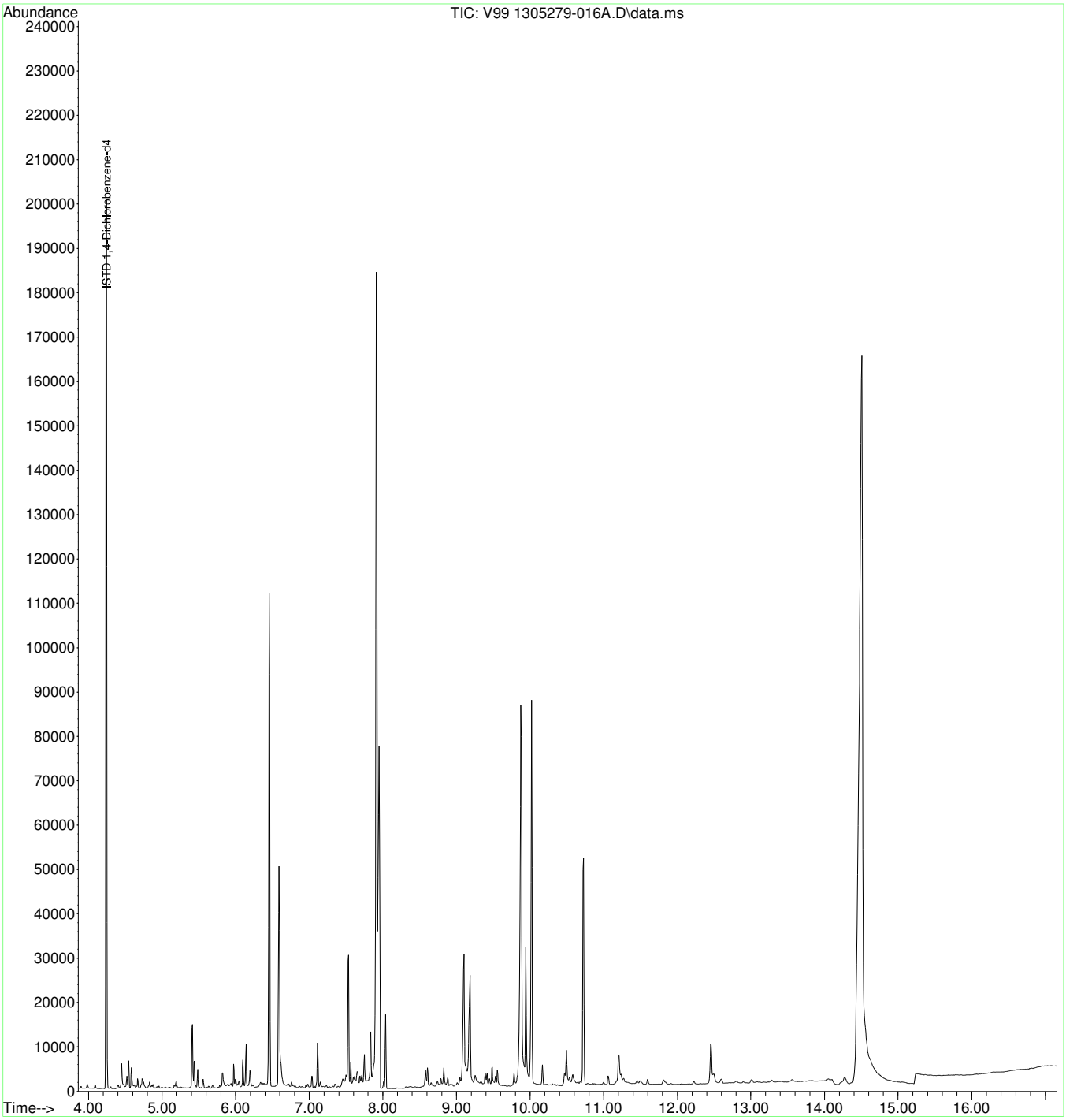
Quant Time: May 15 16:31:40 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\15MAY13-A\
Data File : V99 1305279-016A.D
Acq On : 15 May 2013 4:03 pm
Operator : ALICIA HABERLE
Sample : 1305279-016A
Misc : SAMP
ALS Vial : 18 Sample Multiplier: 1

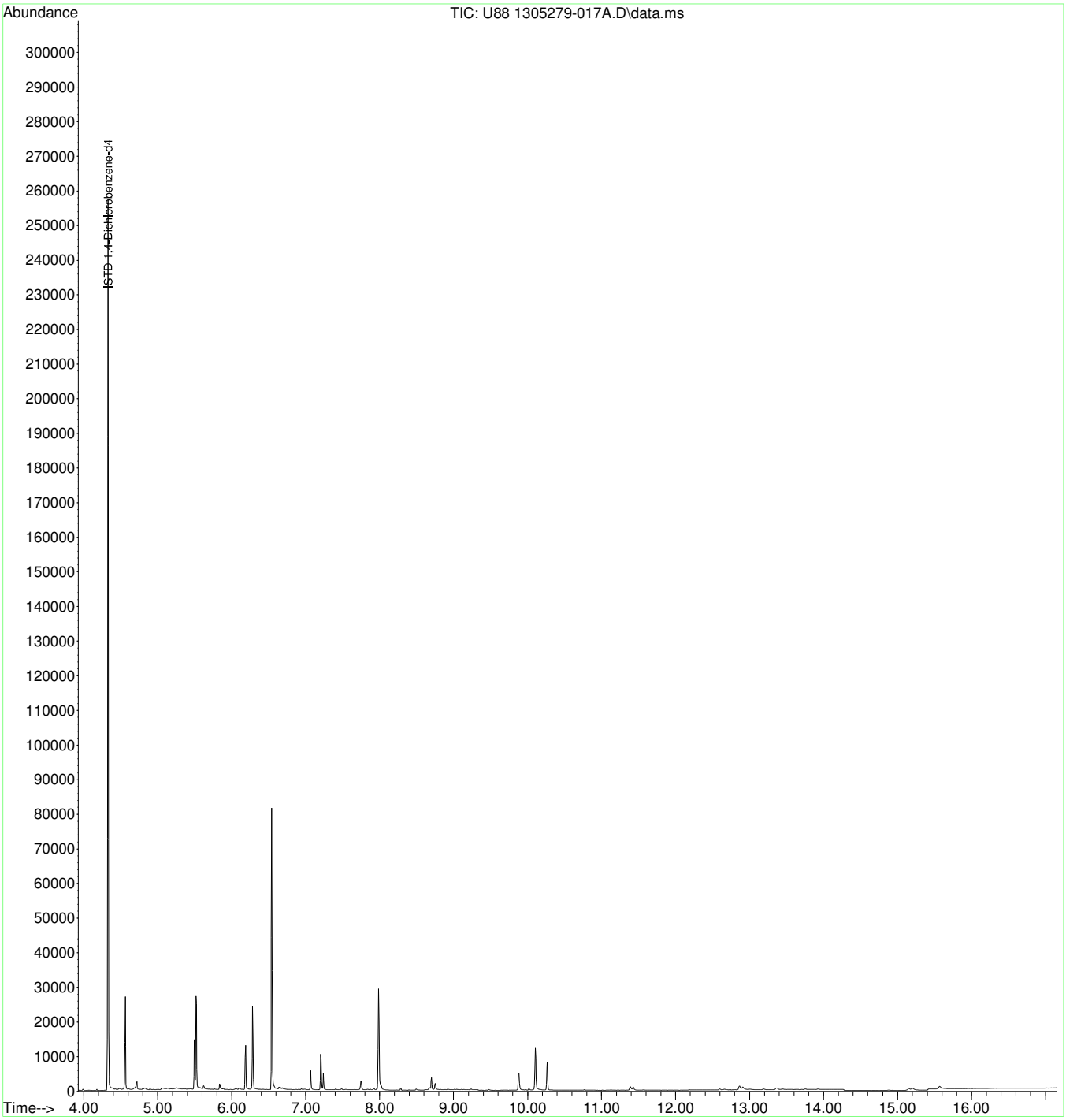
Quant Time: May 15 16:32:00 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDChem\1\DATA\MAY 13\13MAY13-A\
Data File : U88 1305279-017A.D
Acq On : 13 May 2013 1:30 pm
Operator : ALICIA HABERLE
Sample : 1305279-017A
Misc : SAMP
ALS Vial : 14 Sample Multiplier: 1

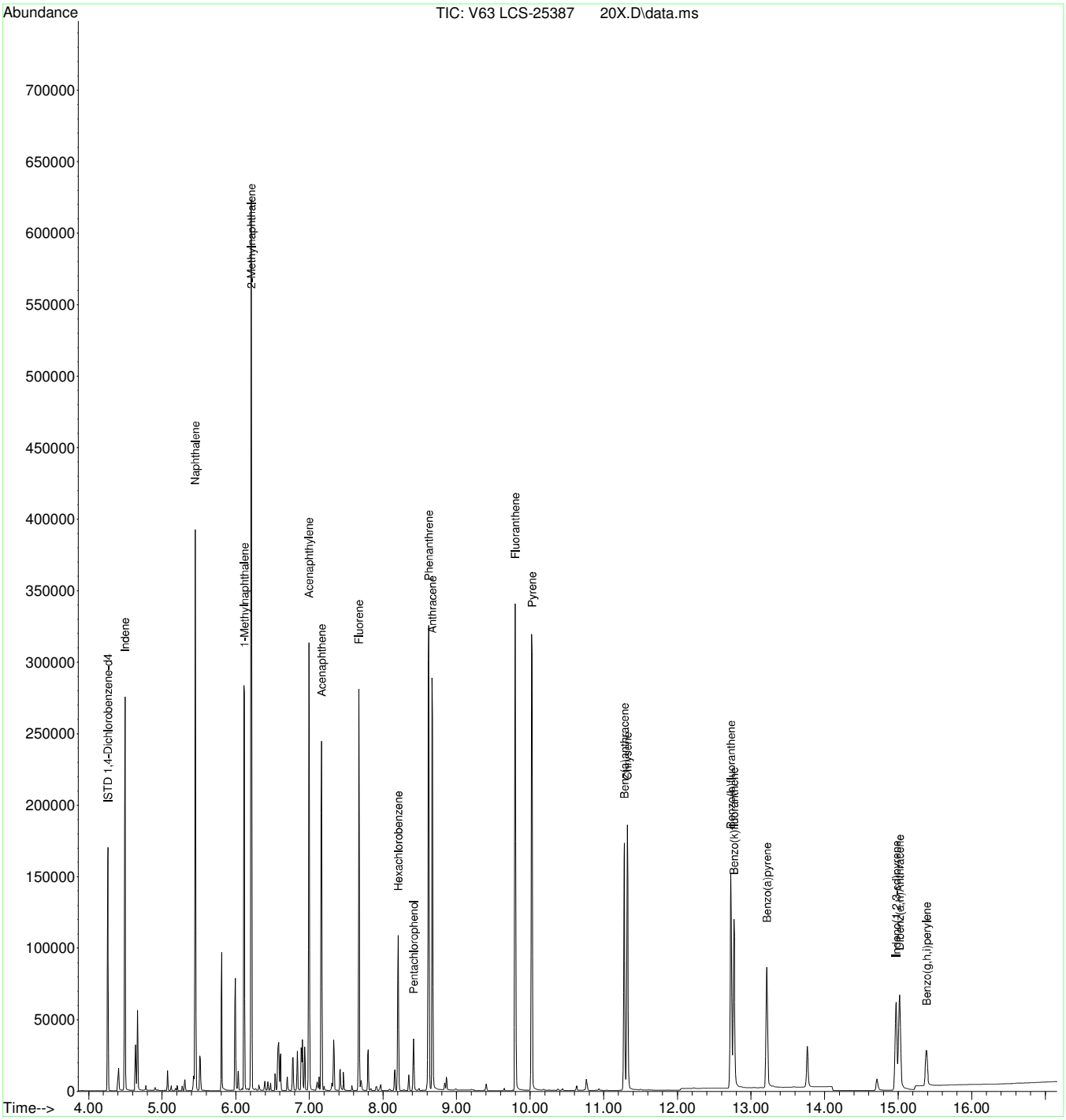
Quant Time: May 13 15:59:46 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Thu May 09 17:37:10 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\14MAY13-A\
Data File : V63 LCS-25387 20X.D
Acq On : 14 May 2013 9:03 pm
Operator : ALICIA HABERLE
Sample : LCS-25387
Misc : LCS
ALS Vial : 15 Sample Multiplier: 1

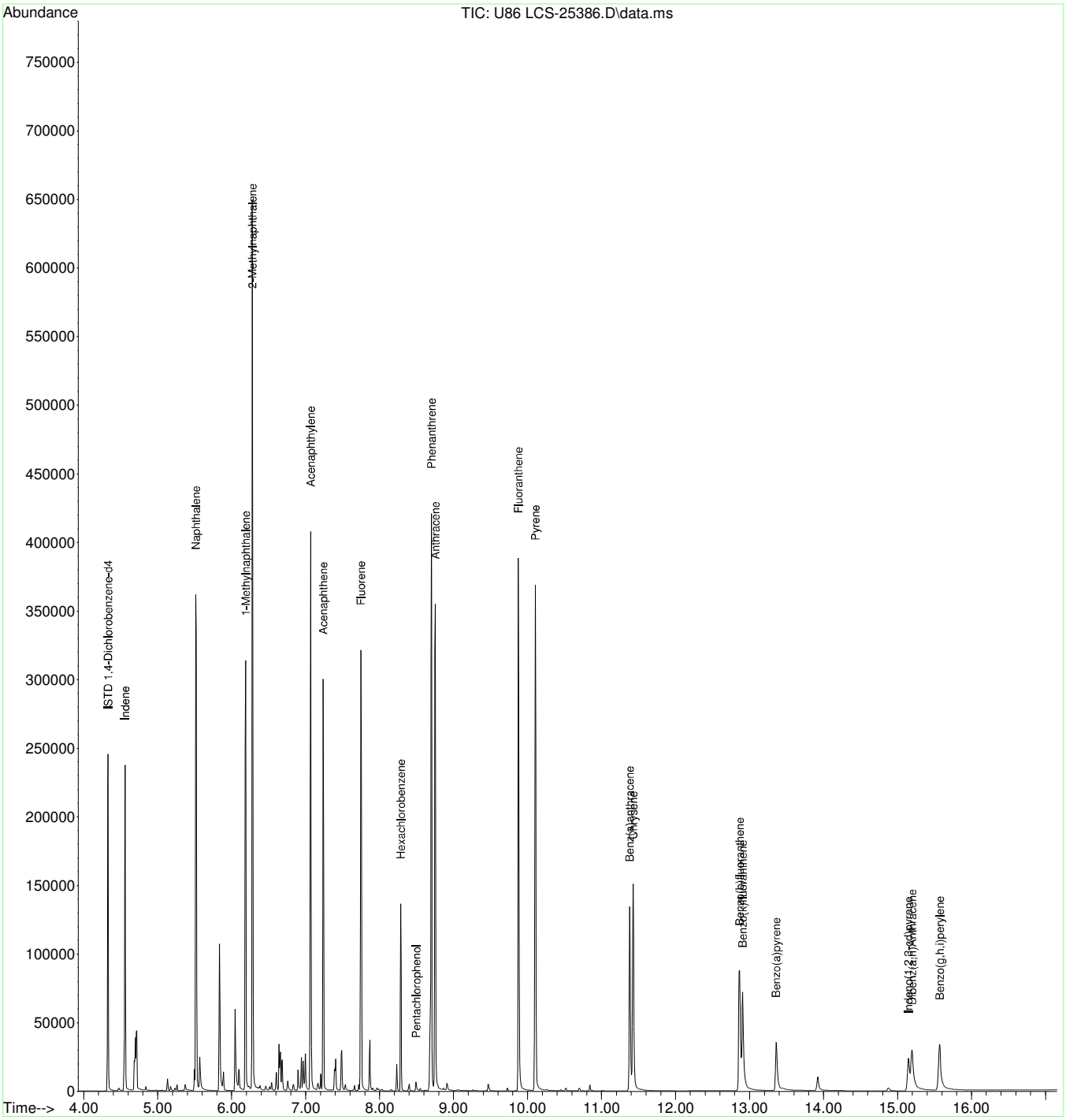
Quant Time: May 15 14:14:09 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDChem\1\DATA\MAY 13\13MAY13-A\
Data File : U86 LCS-25386.D
Acq On : 13 May 2013 12:36 pm
Operator : ALICIA HABERLE
Sample : LCS-25386
Misc : LCS
ALS Vial : 12 Sample Multiplier: 1

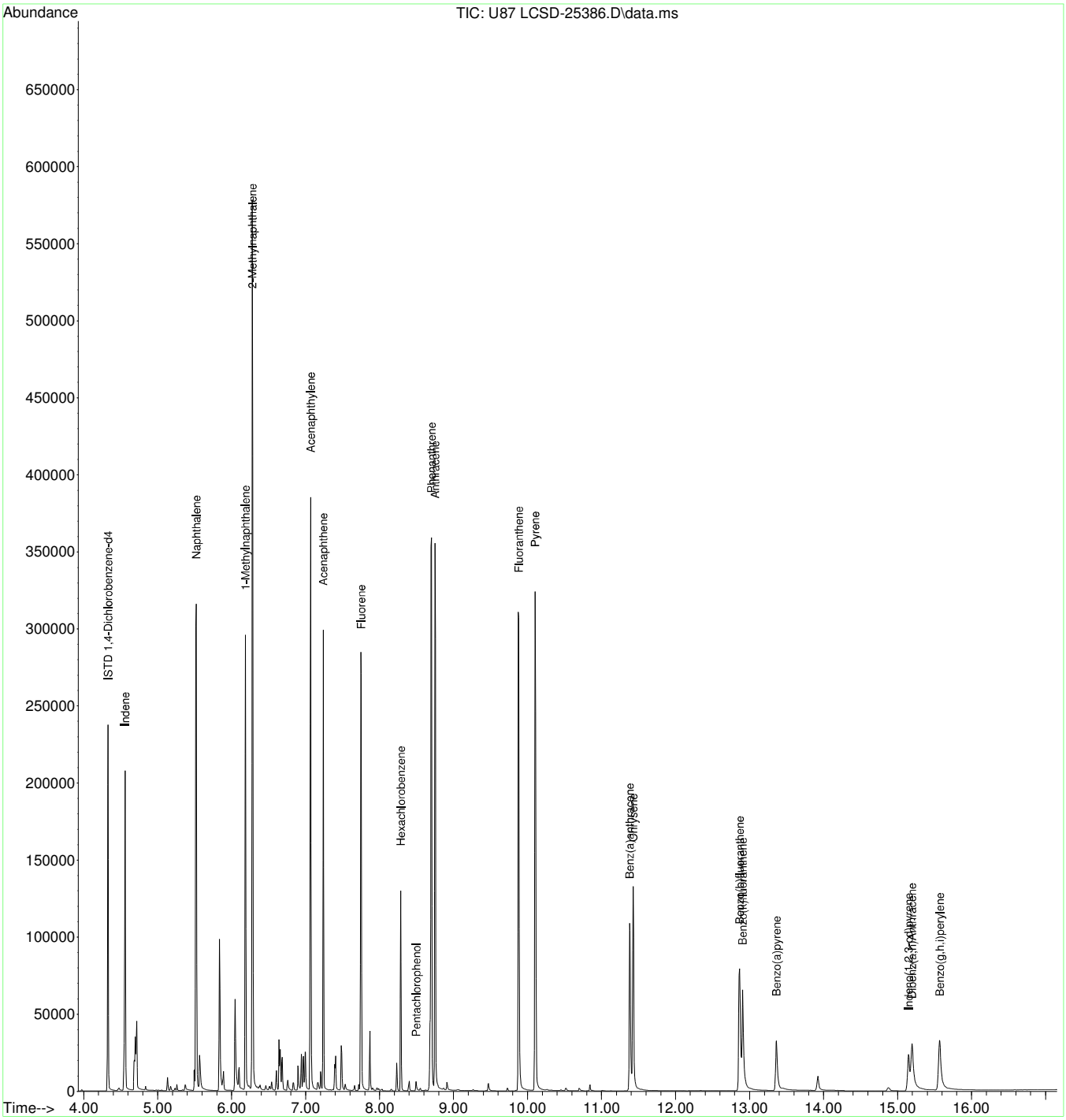
Quant Time: May 13 12:55:31 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Thu May 09 17:37:10 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDChem\1\DATA\MAY 13\13MAY13-A\
Data File : U87 LCSD-25386.D
Acq On : 13 May 2013 1:03 pm
Operator : ALICIA HABERLE
Sample : LCSD-25386
Misc : LCSD
ALS Vial : 13 Sample Multiplier: 1

Quant Time: May 13 15:52:47 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Thu May 09 17:37:10 2013
Response via : Initial Calibration

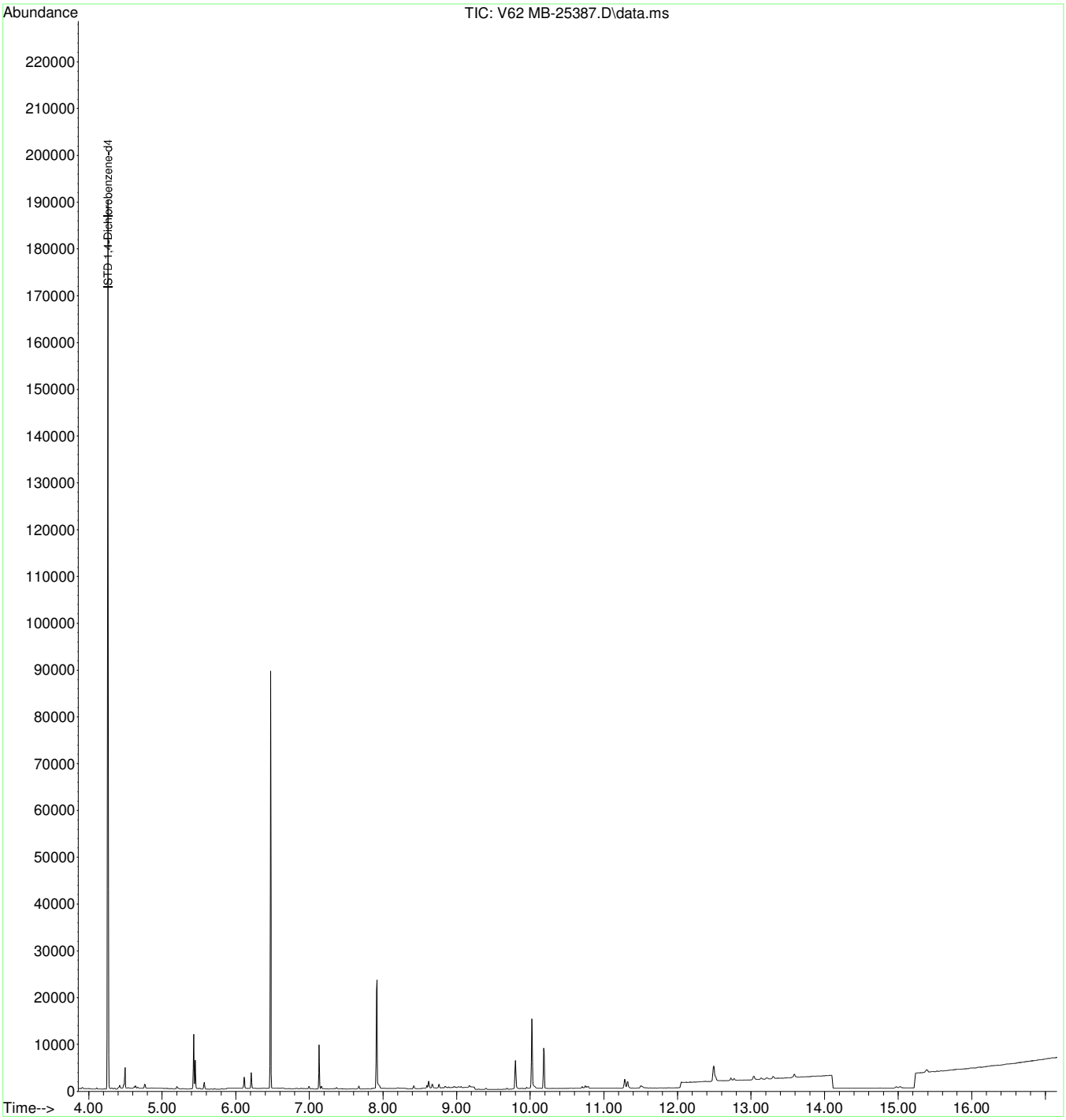


PAH GWM QUA...05-09-2013.M Mon May 13 16:00:29 2013 Page: 2

Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\14MAY13-A\
Data File : V62 MB-25387.D
Acq On : 14 May 2013 8:36 pm
Operator : ALICIA HABERLE
Sample : MB-25387
Misc : MBLK
ALS Vial : 14 Sample Multiplier: 1

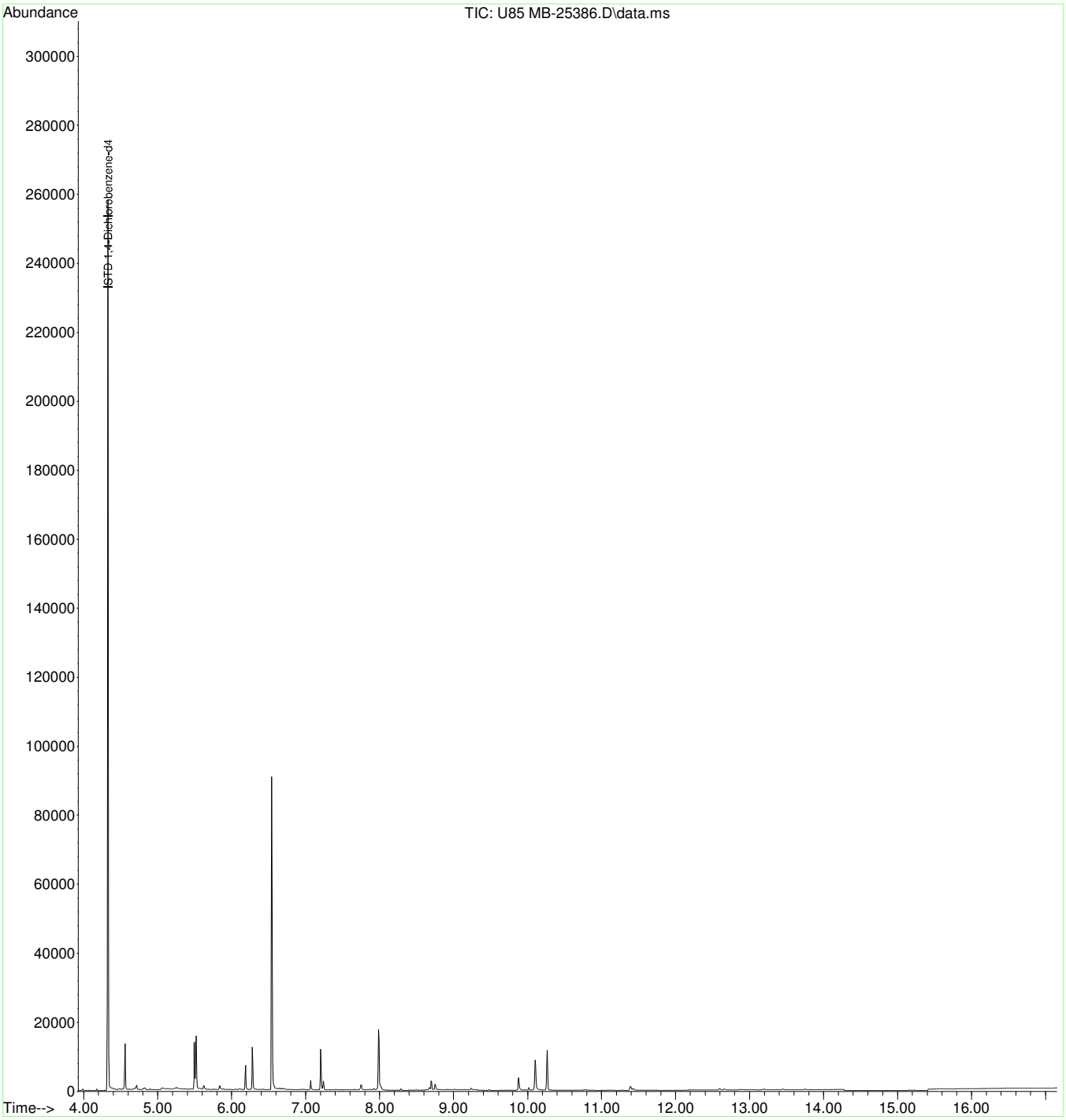
Quant Time: May 15 14:13:28 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Z:\MSDChem\1\DATA\MAY 13\13MAY13-A\
Data File : U85 MB-25386.D
Acq On : 13 May 2013 12:10 pm
Operator : ALICIA HABERLE
Sample : MB-25386
Misc : MBLK
ALS Vial : 11 Sample Multiplier: 1

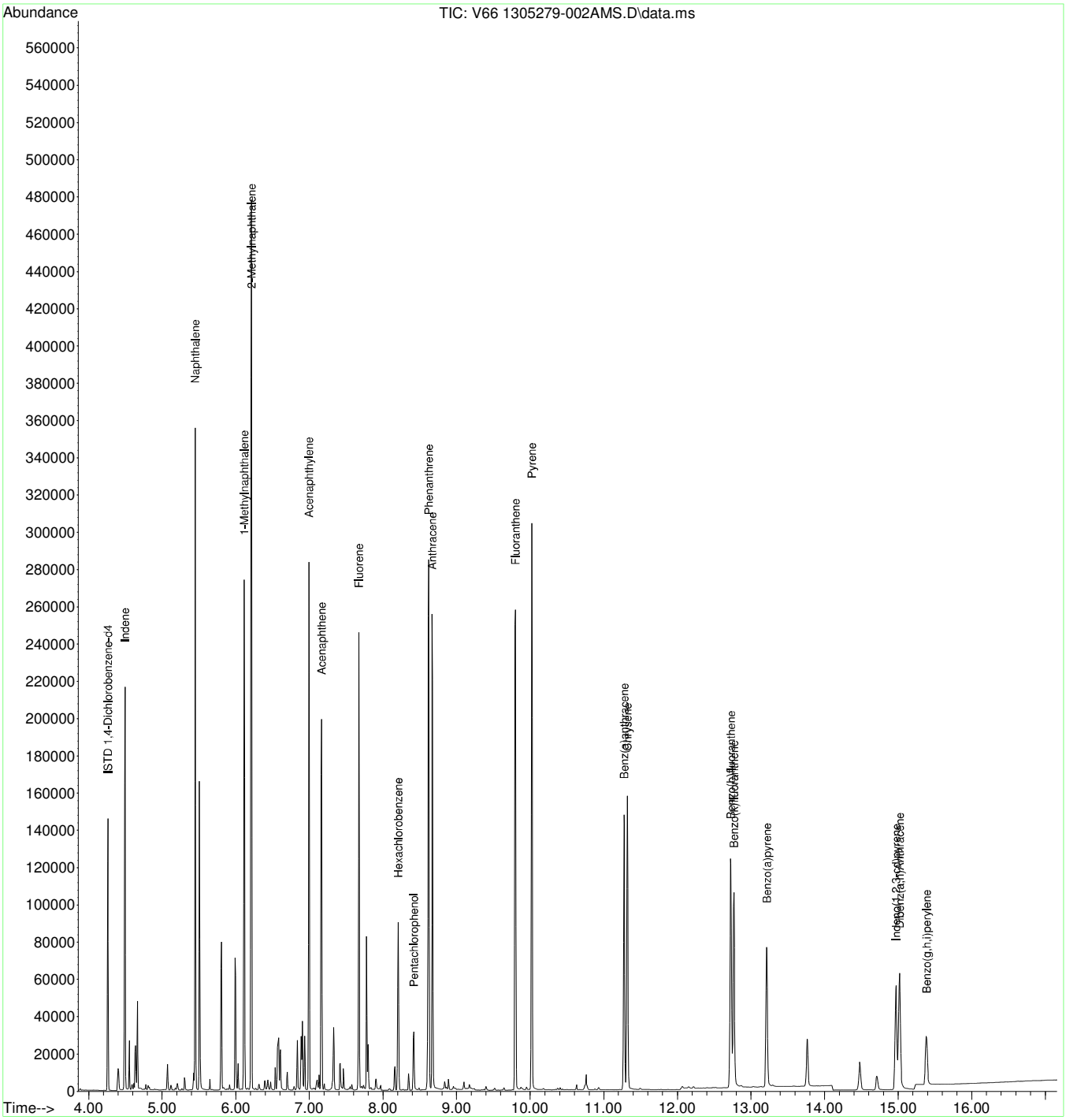
Quant Time: May 13 15:57:56 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Thu May 09 17:37:10 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : Y:\MSDChem\1\DATA\MAY 13\14MAY13-A\
Data File : V66 1305279-002AMS.D
Acq On : 14 May 2013 10:25 pm
Operator : ALICIA HABERLE
Sample : 1305279-002AMS
Misc : MS
ALS Vial : 18 Sample Multiplier: 1

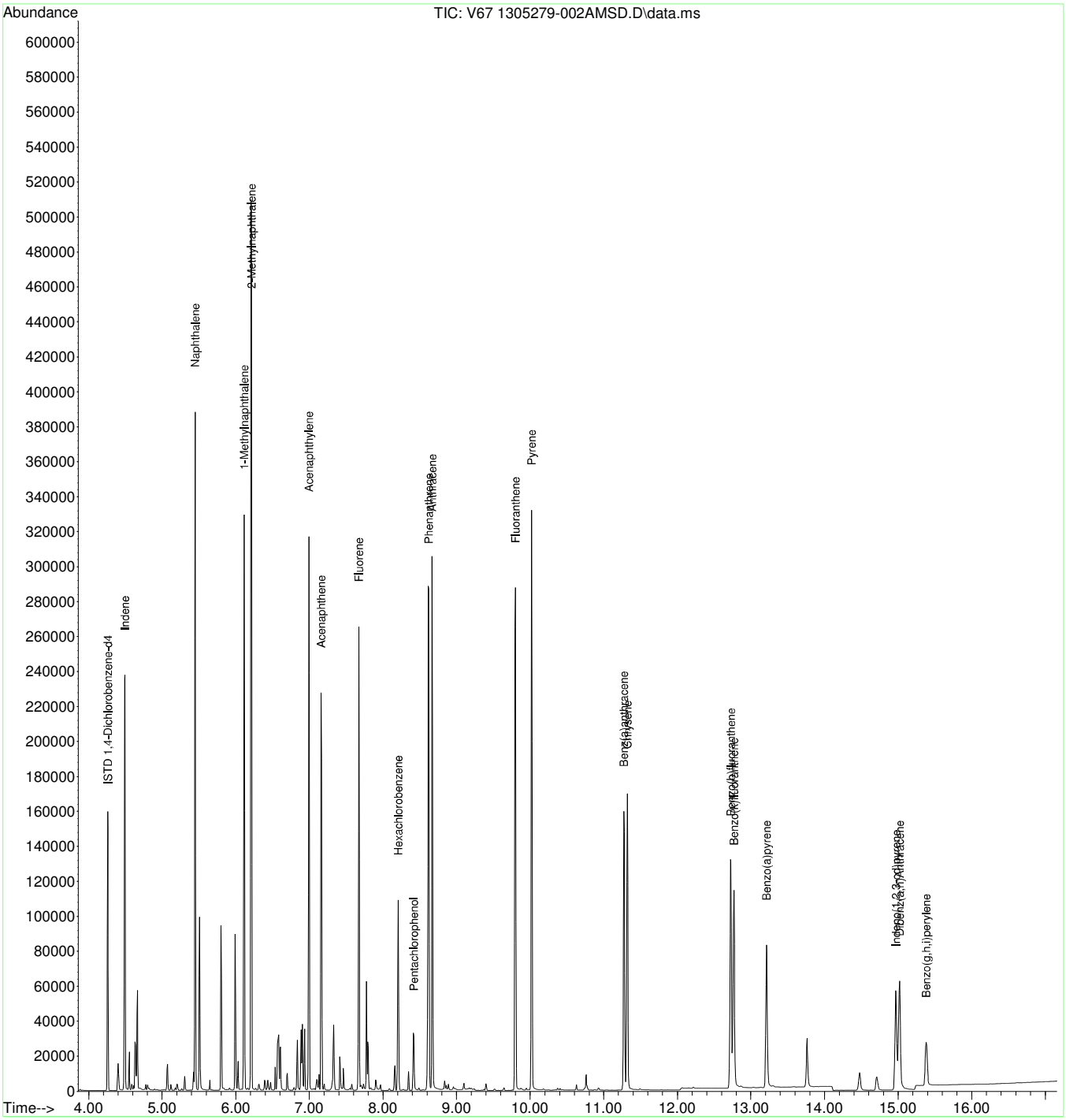
Quant Time: May 15 14:16:43 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

```
Data Path : Y:\MSDChem\1\DATA\MAY 13\14MAY13-A\
Data File : V67 1305279-002AMSD.D
Acq On    : 14 May 2013  10:52 pm
Operator  : ALICIA HABERLE
Sample    : 1305279-002AMSD
Misc      : MSD
ALS Vial  : 19   Sample Multiplier: 1

Quant Time: May 15 14:21:09 2013
Quant Method : M:\SVOAB\SVOA 5973-B\METHODS\PAH GWM QUANT SIM 05-09-2013.M
Quant Title  : Semi-Volatile Compounds HP-GCMS 5973-B
QLast Update : Tue May 14 13:31:31 2013
Response via : Initial Calibration
```



American West Analytical Laboratories

D

WORK ORDER Summary

Work Order: **1305279**

Client: Utah Division of Water Quality — Due Date: 5/24/2013

Client ID: UTD200 — **Contact:** Chris Bittner

Project: **MP 44.9** — **QC Level:** III — WO Type: Standard

Comments: QC 3. Report out TIC's. Send partial reports as results become available. Bill accordingly. Use sample #2 for MS/MSD.;

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1305279-001A	**S1-WP-01**	5/10/2013 1525h	5/10/2013 1740h	**3546-SVOA-PR**	Solid	☐	Hall-Semi	1
				8270-S-SIM-3546		☑	Hall-Semi	
				Test Group: 8270-S-PNA-SIM-3546; # of Analytes: 19 / # of Surr:				
				PMOIST		☐	Hall-Semi	
1305279-002A	**S1-WP-04**	5/10/2013 1530h	5/10/2013 1740h	**3546-SVOA-PR**	Solid	☐	Hall-Semi	1
				8270-S-SIM-3546		☑	Hall-Semi	
				Test Group: 8270-S-PNA-SIM-3546; # of Analytes: 19 / # of Surr:				
				PMOIST		☐	Hall-Semi	
1305279-003A	**S1-WP-03**	5/10/2013 1540h	5/10/2013 1740h	**3546-SVOA-PR**	Solid	☐	Hall-Semi	1
				8270-S-SIM-3546		☑	Hall-Semi	
				Test Group: 8270-S-PNA-SIM-3546; # of Analytes: 19 / # of Surr:				
				PMOIST		☐	Hall-Semi	
1305279-004A	**S1-WP-05**	5/10/2013 1543h	5/10/2013 1740h	**3546-SVOA-PR**	Solid	☐	Hall-Semi	1
				8270-S-SIM-3546		☑	Hall-Semi	
				Test Group: 8270-S-PNA-SIM-3546; # of Analytes: 19 / # of Surr:				
				PMOIST		☐	Hall-Semi	
1305279-005A	**S1-WP-02**	5/10/2013 1546h	5/10/2013 1740h	**3546-SVOA-PR**	Solid	☐	Hall-Semi	1
				8270-S-SIM-3546		☑	Hall-Semi	
				Test Group: 8270-S-PNA-SIM-3546; # of Analytes: 19 / # of Surr:				
				PMOIST		☐	Hall-Semi	
1305279-006A	**S2-CF-03**	5/10/2013 1553h	5/10/2013 1740h	**3546-SVOA-PR**	Solid	☐	Hall-Semi	1
				8270-S-SIM-3546		☑	Hall-Semi	
				Test Group: 8270-S-PNA-SIM-3546; # of Analytes: 19 / # of Surr:				
				PMOIST		☐	Hall-Semi	
1305279-007A	**S2-CF-02**	5/10/2013 1557h	5/10/2013 1740h	**3546-SVOA-PR**	Solid	☐	Hall-Semi	1
				8270-S-SIM-3546		☑	Hall-Semi	
				Test Group: 8270-S-PNA-SIM-3546; # of Analytes: 19 / # of Surr:				
				PMOIST		☐	Hall-Semi	
1305279-008A	**S2-CF-06**	5/10/2013 1559h	5/10/2013 1740h	**3546-SVOA-PR**	Solid	☐	Hall-Semi	1
				8270-S-SIM-3546		☑	Hall-Semi	
				Test Group: 8270-S-PNA-SIM-3546; # of Analytes: 19 / # of Surr:				
				PMOIST		☐	Hall-Semi	
1305279-009A	**S1-CF-04**	5/10/2013 1601h	5/10/2013 1740h	**3546-SVOA-PR**	Solid	☐	Hall-Semi	1

Printed: 5/13/2013 FOR LABORATORY USE ONLY [fill out on page 1]: %M ☑ RT ☑ CN ☑ TAT ☑ QC ☑ HOK_____ HOK_____ HOK_____ COC Emailed_____

WORK ORDER Summary

Work Order: **1305279**

Client: Utah Division of Water Quality

Due Date: 5/24/2013

Sample ID	Client Sample ID	Collected Date	Received Date	Test Code	Matrix	Sel	Storage	
1305279-009A	**S1-CF-04**	5/10/2013 1601h	5/10/2013 1740h	**8270-S-SIM-3546**	Solid	☑	Hall-Semi	1
				Test Group: 8270-S-PNA-SIM-3546; # of Analytes: 19 / # of Surr:				
				PMOIST		☐	Hall-Semi	
1305279-010A	**S1-CF-01**	5/10/2013 1603h	5/10/2013 1740h	**3546-SVOA-PR**	Solid	☐	Hall-Semi	1
				8270-S-SIM-3546		☑	Hall-Semi	
				Test Group: 8270-S-PNA-SIM-3546; # of Analytes: 19 / # of Surr:				
				PMOIST		☐	Hall-Semi	
1305279-011A	**S2-CF-05**	5/10/2013 1607h	5/10/2013 1740h	**3546-SVOA-PR**	Solid	☐	Hall-Semi	1
				8270-S-SIM-3546		☑	Hall-Semi	
				Test Group: 8270-S-PNA-SIM-3546; # of Analytes: 19 / # of Surr:				
				PMOIST		☐	Hall-Semi	
1305279-012A	**S1-GS-01**	5/10/2013 1609h	5/10/2013 1740h	**3546-SVOA-PR**	Solid	☐	Hall-Semi	1
				8270-S-SIM-3546		☑	Hall-Semi	
				Test Group: 8270-S-PNA-SIM-3546; # of Analytes: 19 / # of Surr:				
				PMOIST		☐	Hall-Semi	
1305279-013A	**S2-GS-02**	5/10/2013 1613h	5/10/2013 1740h	**3546-SVOA-PR**	Solid	☐	Hall-Semi	1
				8270-S-SIM-3546		☑	Hall-Semi	
				Test Group: 8270-S-PNA-SIM-3546; # of Analytes: 19 / # of Surr:				
				PMOIST		☐	Hall-Semi	
1305279-014A	**S3-GS-04**	5/10/2013 1616h	5/10/2013 1740h	**3546-SVOA-PR**	Solid	☐	Hall-Semi	1
				8270-S-SIM-3546		☑	Hall-Semi	
				Test Group: 8270-S-PNA-SIM-3546; # of Analytes: 19 / # of Surr:				
				PMOIST		☐	Hall-Semi	
1305279-015A	**S3-GS-03**	5/10/2013 1619h	5/10/2013 1740h	**3546-SVOA-PR**	Solid	☐	Hall-Semi	1
				8270-S-SIM-3546		☑	Hall-Semi	
				Test Group: 8270-S-PNA-SIM-3546; # of Analytes: 19 / # of Surr:				
				PMOIST		☐	Hall-Semi	
1305279-016A	**S3-GS-05**	5/10/2013 1622h	5/10/2013 1740h	**3546-SVOA-PR**	Solid	☐	Hall-Semi	1
				8270-S-SIM-3546		☑	Hall-Semi	
				Test Group: 8270-S-PNA-SIM-3546; # of Analytes: 19 / # of Surr:				
				PMOIST		☐	Hall-Semi	
1305279-017A	**EB-01**	5/10/2013 1630h	5/10/2013 1740h	**3510-SVOA-PR**	Aqueous	☐	Walkin-Semi	2
				8270-W-SIM		☑	Walkin-Semi	
				Test Group: 8270-W-PNA-SIM; # of Analytes: 19 / # of Surr:				

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American West Analytical Laboratories

Chain of Custody

Lab Sample Set # 1305279

Client: **Utah Division of Water Quality**
Address: **195 N. 1950 W.**
Salt Lake City, UT 84115
Project Name: **MP 44.9**
PO#:

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

QC Level: **3**
Turn Around Time
STANDARD

	Sample ID:		Date Sampled	Time	# of Containers	Sample Matrix	PNA SVOC - SIM (8270D)													Comments
1	**S1-WP-01**		5/10/2013	1525	1	S	X													
2	**S1-WP-04**		5/10/2013	1530	1	S	X													MS/MSD
3	**S1-WP-03**		5/10/2013	1540	1	S	X													
4	**S1-WP-05**		5/10/2013	1543	1	S	X													
5	**S1-WP-02**		5/10/2013	1546	1	S	X													
6	**S2-CF-03**		5/10/2013	1553	1	S	X													
7	**S2-CF-02**		5/10/2013	1557	1	S	X													
8	**S2-CF-06**		5/10/2013	1559	1	S	X													
9	**S1-CF-04**		5/10/2013	1601	1	S	X													
10	**S1-CF-01**		5/10/2013	1603	1	S	X													
11	**S2-CF-05**		5/10/2013	1607	1	S	X													
12	**S1-GS-01**		5/10/2013	1609	1	S	X													
13	**S2-GS-02**		5/10/2013	1613	1	S	X													
14	**S3-GS-04**		5/10/2013	1616	1	S	X													
15	**S3-GS-03**		5/10/2013	1619	1	S	X													
16	**S3-GS-05**		5/10/2013	1622	1	S	X													
17	**EB-01**		5/10/2013	1630	2	W	X													
18																				
19																				
20																				

Laboratory Use Only

Samples Were:
1 Shipped or Hand delivered
2 Ambient or Chilled
3 Temperature 6.7
4 Received Broken/Leaking (Improperly Sealed) Y N
5 Properly Preserved Y N
6 Received Within Holding Times Y N

COC Tape Was:
1 Present on Outer Package Y N NA
2 Unbroken on Outer Package Y N NA
3 Present on Sample Y N NA
4 Unbroken on Sample Y N NA

Discrepancies Between Sample Labels and COC Record? Y N

Special Instructions: **Solid matrix samples are fish tissues; WP = Wiper, CF = Catfish, GS = Gizzard Shad**

Relinquished by: *Signature*	Date: 5/10/13	Received by: *Signature*	Date: 5/10/13
Print Name Kim Whitlock	Time: 1740	*Print Name* Amber Cluff	Time: 17:40
Relinquished by: *Signature*	Date:	Received by: *Signature*	Date:
Print Name	Time:	*Print Name*	Time: