American West
ANALYTICAL LABORATORIES

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Galen Williams
EarthFax Engineering
7324 So. Union Park Ave., # 100
Midvale, UT 84047
TEL: (801) 561-1555

RE: Red Butte

Dear Galen Williams: Lab Set ID: 1108511

American West Analytical Laboratories received 24 sample(s) on 8/25/2011 for the analyses presented in the following report.

All analyses were performed in accordance to The NELAC Institute protocols unless noted otherwise. American West Analytical Laboratories is certified by The NELAC Institute in Utah and Texas; and is state certified in Colorado, Idaho, and Missouri. Certification document is 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: Kyle F. Gross
Digitally signed by Kyle F. Gross
DN: cn=Kyle F. Gross, o=AWAL, ou=AWAL, email=kyle@awal-labs.com, c=US
Date: 2011.09.08 08:30:04 -06'00'

Laboratory Director or designee

INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-002
Client Sample ID: Parleys Cr. Below 1300 E. - Bed
Collection Date: 8/25/2011 0720h
Received Date: 8/25/2011 1345h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Percent Moisture	wt%		8/25/2011 1805h	SM2540B	0.0100	**15.0**	
Total Solids	%		8/25/2011 1805h	SM2540B	0.0100	**85.0**	

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Laboratory Director

Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-003
Client Sample ID: Parleys Cr. Below 1300 E. - Bank
Collection Date: 8/25/2011 0720h
Received Date: 8/25/2011 1345h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Percent Moisture	wt%		8/25/2011 1805h	SM2540B	0.0100	**28.2**	
Total Solids	%		8/25/2011 1805h	SM2540B	0.0100	**71.8**	

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Jose Rocha
QA Officer

INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-005
Client Sample ID: Parleys Cr. Below 1700 E. - Bed
Collection Date: 8/25/2011 0820h
Received Date: 8/25/2011 1345h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Percent Moisture	wt%		8/25/2011 1805h	SM2540B	0.0100	**15.0**	
Total Solids	%		8/25/2011 1805h	SM2540B	0.0100	**85.0**	

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INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-006
Client Sample ID: Parleys Cr. Below 1700 E. - Bank
Collection Date: 8/25/2011 0820h
Received Date: 8/25/2011 1345h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Percent Moisture	wt%		8/25/2011 1805h	SM2540B	0.0100	**32.2**	
Total Solids	%		8/25/2011 1805h	SM2540B	0.0100	**67.8**	

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INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-008
Client Sample ID: Parleys Cr. Above 2000 E. - Bed
Collection Date: 8/25/2011 0900h
Received Date: 8/25/2011 1345h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Percent Moisture	wt%		8/25/2011 1805h	SM2540B	0.0100	**32.2**	
Total Solids	%		8/25/2011 1805h	SM2540B	0.0100	**67.8**	

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Laboratory Director

Jose Rocha
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INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-009
Client Sample ID: Parleys Cr. Above 2000 E. - Bank
Collection Date: 8/25/2011 0900h
Received Date: 8/25/2011 1345h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Percent Moisture	wt%		8/25/2011 1805h	SM2540B	0.0100	**12.5**	
Total Solids	%		8/25/2011 1805h	SM2540B	0.0100	**87.5**	

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INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-011
Client Sample ID: Parleys Cr. Above I-215 - Bed
Collection Date: 8/25/2011 0950h
Received Date: 8/25/2011 1345h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Percent Moisture	wt%		8/25/2011 1805h	SM2540B	0.0100	**21.6**	
Total Solids	%		8/25/2011 1805h	SM2540B	0.0100	**78.4**	

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INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-012
Client Sample ID: Parleys Cr. Above I-215 - Bank
Collection Date: 8/25/2011 0950h
Received Date: 8/25/2011 1345h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Percent Moisture	wt%		8/25/2011 1805h	SM2540B	0.0100	**24.8**	
Total Solids	%		8/25/2011 1805h	SM2540B	0.0100	**75.2**	

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Jose Rocha
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INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-014
Client Sample ID: Emigration Cr. Above 1300 E. - Bed
Collection Date: 8/25/2011 1045h
Received Date: 8/25/2011 1345h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Percent Moisture	wt%		8/25/2011 1805h	SM2540B	0.0100	**25.2**	
Total Solids	%		8/25/2011 1805h	SM2540B	0.0100	**74.8**	

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INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-015
Client Sample ID: Emigration Cr. Above 1300 E. - Bank
Collection Date: 8/25/2011 1045h
Received Date: 8/25/2011 1345h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Percent Moisture	wt%		8/25/2011 1805h	SM2540B	0.0100	**17.9**	
Total Solids	%		8/25/2011 1805h	SM2540B	0.0100	**82.1**	

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INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-017
Client Sample ID: Emigration Cr. Above 1900 E. - Bed
Collection Date: 8/25/2011 1135h
Received Date: 8/25/2011 1345h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Percent Moisture	wt%		8/25/2011 1805h	SM2540B	0.0100	**29.1**	
Total Solids	%		8/25/2011 1805h	SM2540B	0.0100	**70.9**	

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INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-018
Client Sample ID: Emigration Cr. Above 1900 E. - Bank
Collection Date: 8/25/2011 1135h
Received Date: 8/25/2011 1345h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Percent Moisture	wt%		8/25/2011 1805h	SM2540B	0.0100	**7.14**	
Total Solids	%		8/25/2011 1805h	SM2540B	0.0100	**92.9**	

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INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-020
Client Sample ID: Emigration Cr. Above 2100 E. - Bed
Collection Date: 8/25/2011 1215h
Received Date: 8/25/2011 1345h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Percent Moisture	wt%		8/25/2011 1805h	SM2540B	0.0100	**20.6**	
Total Solids	%		8/25/2011 1805h	SM2540B	0.0100	**79.4**	

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INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-021
Client Sample ID: Emigration Cr. Above 2100 E. - Bank
Collection Date: 8/25/2011 1215h
Received Date: 8/25/2011 1345h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Percent Moisture	wt%		8/25/2011 1805h	SM2540B	0.0100	**17.9**	
Total Solids	%		8/25/2011 1805h	SM2540B	0.0100	**82.1**	

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Jose Rocha
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INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-023
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bed
Collection Date: 8/25/2011 1300h
Received Date: 8/25/2011 1345h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Percent Moisture	wt%		8/25/2011 1805h	SM2540B	0.0100	**27.5**	
Total Solids	%		8/25/2011 1805h	SM2540B	0.0100	**72.5**	

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INORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-024
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bank
Collection Date: 8/25/2011 1300h
Received Date: 8/25/2011 1345h

Analytical Results

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
Percent Moisture	wt%		8/25/2011 1805h	SM2540B	0.0100	**17.8**	
Total Solids	%		8/25/2011 1805h	SM2540B	0.0100	**82.2**	

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Laboratory Director

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-001B
Client Sample ID: Parleys Cr. Below 1300 E.
Collection Date: 8/25/2011 0720h
Received Date: 8/25/2011 1345h **Method:** SW8015D

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

Analyzed: 8/30/2011 0401h **Extracted:** 8/26/2011 1232h
Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		0.500	< 0.500	
Surr: C27		10-200	**52.4**	

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Laboratory Director

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-002A
Client Sample ID: Parleys Cr. Below 1300 E. - Bed
Collection Date: 8/25/2011 0720h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-ORO (C28-C36) by GC/FID Method 8015D/3546

Analyzed: 8/30/2011 1505h **Extracted:** 8/26/2011 1214h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		23.5	**52.0**	
Surr: C27		10-200	**76.2**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-003A
Client Sample ID: Parleys Cr. Below 1300 E. - Bank
Collection Date: 8/25/2011 0720h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-ORO (C28-C36) by GC/FID Method 8015D/3546

Analyzed: 8/30/2011 1529h **Extracted:** 8/26/2011 1214h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		27.9	**140**	
Surr: C27		10-200	**78.1**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-004B
Client Sample ID: Parleys Cr. Below 1700 E.
Collection Date: 8/25/2011 0820h
Received Date: 8/25/2011 1345h **Method:** SW8015D

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

Analyzed: 8/30/2011 0512h **Extracted:** 8/26/2011 1232h
Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		0.500	< 0.500	
Surr: C27		10-200	**49.5**	

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Kyle F. Gross
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Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-005A
Client Sample ID: Parleys Cr. Below 1700 E. - Bed
Collection Date: 8/25/2011 0820h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-ORO (C28-C36) by GC/FID Method 8015D/3546

Analyzed: 8/30/2011 1552h **Extracted:** 8/26/2011 1214h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		23.5	< 23.5	
Surr: C27		10-200	**70.7**	

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Jose Rocha
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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-006A
Client Sample ID: Parleys Cr. Below 1700 E. - Bank
Collection Date: 8/25/2011 0820h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-ORO (C28-C36) by GC/FID Method 8015D/3546

Analyzed: 8/30/2011 1616h **Extracted:** 8/26/2011 1214h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		29.5	**131**	
Surr: C27		10-200	**78.6**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-007B
Client Sample ID: Parleys Cr. Above 2000 E.
Collection Date: 8/25/2011 0900h
Received Date: 8/25/2011 1345h **Method:** SW8015D

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

Analyzed: 8/30/2011 0536h **Extracted:** 8/26/2011 1232h
Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		0.500	< 0.500	
Surr: C27		10-200	**53.9**	

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Kyle F. Gross
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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-008A
Client Sample ID: Parleys Cr. Above 2000 E. - Bed
Collection Date: 8/25/2011 0900h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-ORO (C28-C36) by GC/FID Method 8015D/3546

Analyzed: 8/30/2011 1640h **Extracted:** 8/26/2011 1214h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		29.5	**83.3**	
Surr: C27		10-200	**76.2**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-009A
Client Sample ID: Parleys Cr. Above 2000 E. - Bank
Collection Date: 8/25/2011 0900h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-ORO (C28-C36) by GC/FID Method 8015D/3546

Analyzed: 8/30/2011 1704h **Extracted:** 8/26/2011 1214h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		22.9	**42.9**	
Surr: C27		10-200	**77.1**	

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Jose Rocha
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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-010B
Client Sample ID: Parleys Cr. Above I-215
Collection Date: 8/25/2011 0950h
Received Date: 8/25/2011 1345h **Method:** SW8015D

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

Analyzed: 8/30/2011 0600h **Extracted:** 8/26/2011 1232h
Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		0.500	< 0.500	
Surr: C27		10-200	**51.0**	

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Laboratory Director

Jose Rocha
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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-011A
Client Sample ID: Parleys Cr. Above I-215 - Bed
Collection Date: 8/25/2011 0950h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-ORO (C28-C36) by GC/FID Method 8015D/3546

Analyzed: 8/30/2011 1728h **Extracted:** 8/26/2011 1214h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		25.5	< 25.5	
Surr: C27		10-200	**69.9**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-012A
Client Sample ID: Parleys Cr. Above I-215 - Bank
Collection Date: 8/25/2011 0950h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-ORO (C28-C36) by GC/FID Method 8015D/3546

Analyzed: 8/30/2011 1751h **Extracted:** 8/26/2011 1214h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		26.6	**75.6**	
Surr: C27		10-200	**82.5**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-013B
Client Sample ID: Emigration Cr. Above 1300 E.
Collection Date: 8/25/2011 1045h
Received Date: 8/25/2011 1345h **Method:** SW8015D

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

Analyzed: 8/30/2011 0623h **Extracted:** 8/26/2011 1232h
Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		0.500	< 0.500	
Surr: C27		10-200	**54.2**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-014A
Client Sample ID: Emigration Cr. Above 1300 E. - Bed
Collection Date: 8/25/2011 1045h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-ORO (C28-C36) by GC/FID Method 8015D/3546

Analyzed: 8/30/2011 1815h **Extracted:** 8/26/2011 1214h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		26.7	< 26.7	
Surr: C27		10-200	**76.0**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-015A
Client Sample ID: Emigration Cr. Above 1300 E. - Bank
Collection Date: 8/25/2011 1045h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-ORO (C28-C36) by GC/FID Method 8015D/3546

Analyzed: 8/30/2011 2037h **Extracted:** 8/26/2011 1214h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		24.4	**66.6**	
Surr: C27		10-200	**79.8**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-016B
Client Sample ID: Emigration Cr. Above 1900 E.
Collection Date: 8/25/2011 1135h
Received Date: 8/25/2011 1345h **Method:** SW8015D

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

Analyzed: 8/30/2011 0647h **Extracted:** 8/26/2011 1232h
Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		0.500	< 0.500	
Surr: C27		10-200	**52.5**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-017A
Client Sample ID: Emigration Cr. Above 1900 E. - Bed
Collection Date: 8/25/2011 1135h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-ORO (C28-C36) by GC/FID Method 8015D/3546

Analyzed: 8/30/2011 2101h **Extracted:** 8/26/2011 1214h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		28.2	**113**	
Surr: C27		10-200	**80.1**	

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Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-018A
Client Sample ID: Emigration Cr. Above 1900 E. - Bank
Collection Date: 8/25/2011 1135h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-ORO (C28-C36) by GC/FID Method 8015D/3546

Analyzed: 8/30/2011 2124h **Extracted:** 8/26/2011 1214h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		21.5	**99.3**	
Surr: C27		10-200	**82.7**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-019B
Client Sample ID: Emigration Cr. Above 2100 E.
Collection Date: 8/25/2011 1215h
Received Date: 8/25/2011 1345h **Method:** SW8015D

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

Analyzed: 8/30/2011 0711h **Extracted:** 8/26/2011 1232h
Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		0.500	< 0.500	
Surr: C27		10-200	**54.0**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-020A
Client Sample ID: Emigration Cr. Above 2100 E. - Bed
Collection Date: 8/25/2011 1215h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-ORO (C28-C36) by GC/FID Method 8015D/3546

Analyzed: 8/30/2011 2148h **Extracted:** 8/26/2011 1214h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		25.2	**57.1**	
Surr: C27		10-200	**76.9**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-021A
Client Sample ID: Emigration Cr. Above 2100 E. - Bank
Collection Date: 8/25/2011 1215h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-ORO (C28-C36) by GC/FID Method 8015D/3546

Analyzed: 8/30/2011 2212h **Extracted:** 8/26/2011 1214h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		24.4	**80.0**	
Surr: C27		10-200	**83.5**	

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Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-022B
Client Sample ID: Emigration Cr. @ Donner Hill Marker
Collection Date: 8/25/2011 1300h
Received Date: 8/25/2011 1345h **Method:** SW8015D

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

Analyzed: 8/30/2011 0735h **Extracted:** 8/26/2011 1232h
Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		0.500	< 0.500	
Surr: C27		10-200	**54.4**	

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Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-023A
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bed
Collection Date: 8/25/2011 1300h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-ORO (C28-C36) by GC/FID Method 8015D/3546

Analyzed: 8/30/2011 2347h **Extracted:** 8/29/2011 1526h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		27.6	< 27.6	
Surr: C27		10-200	**74.3**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-024A
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bank
Collection Date: 8/25/2011 1300h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-ORO (C28-C36) by GC/FID Method 8015D/3546

Analyzed: 8/31/2011 0058h **Extracted:** 8/29/2011 1526h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Oil Range Organics (ORO) (C28-C36)		24.3	**26.3**	
Surr: C27		10-200	**78.0**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-001A
Client Sample ID: Parleys Cr. Below 1300 E.
Collection Date: 8/25/2011 0720h
Received Date: 8/25/2011 1345h **Method:** SW8015D

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

Analyzed: 8/27/2011 1756h **Extracted:** 8/27/2011 1031h
Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	0.500	< 0.500	
Surr: 4-Bromofluorobenzene	460-00-4	10-190	**43.7**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-002A
Client Sample ID: Parleys Cr. Below 1300 E. - Bed
Collection Date: 8/25/2011 0720h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/5/2011 1119h **Extracted:** 8/29/2011 1048h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	23.5	**86.5**	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	**60.3**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-003A
Client Sample ID: Parleys Cr. Below 1300 E. - Bank
Collection Date: 8/25/2011 0720h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/5/2011 1335h **Extracted:** 8/29/2011 1048h
Units: mg/kg-dry
Dilution Factor: 2

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	55.7	**285**	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	**78.2**	

The reporting limits were raised due to high analyte concentrations.

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-004A
Client Sample ID: Parleys Cr. Below 1700 E.
Collection Date: 8/25/2011 0820h
Received Date: 8/25/2011 1345h **Method:** SW8015D

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

Analyzed: 8/29/2011 1015h **Extracted:** 8/28/2011 1146h
Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	0.500	< 0.500	
Surr: 4-Bromofluorobenzene	460-00-4	10-190	**61.1**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-005A
Client Sample ID: Parleys Cr. Below 1700 E. - Bed
Collection Date: 8/25/2011 0820h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/5/2011 1533h **Extracted:** 8/29/2011 1048h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	23.5	**44.5**	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	**51.7**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-006A
Client Sample ID: Parleys Cr. Below 1700 E. - Bank
Collection Date: 8/25/2011 0820h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/5/2011 1631h **Extracted:** 8/29/2011 1048h
Units: mg/kg-dry
Dilution Factor: 2

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	59.0	**268**	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	**68.0**	

The reporting limits were raised due to high analyte concentrations.

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-007A
Client Sample ID: Parleys Cr. Above 2000 E.
Collection Date: 8/25/2011 0900h
Received Date: 8/25/2011 1345h **Method:** SW8015D

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

Analyzed: 8/29/2011 1035h **Extracted:** 8/28/2011 1146h
Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	0.500	< 0.500	
Surr: 4-Bromofluorobenzene	460-00-4	10-190	**54.5**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-008A
Client Sample ID: Parleys Cr. Above 2000 E. - Bed
Collection Date: 8/25/2011 0900h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/5/2011 1730h **Extracted:** 8/29/2011 1048h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	29.5	**134**	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	**55.7**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-009A
Client Sample ID: Parleys Cr. Above 2000 E. - Bank
Collection Date: 8/25/2011 0900h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/5/2011 1829h **Extracted:** 8/29/2011 1048h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	22.9	**71.2**	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	**54.1**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-010A
Client Sample ID: Parleys Cr. Above I-215
Collection Date: 8/25/2011 0950h
Received Date: 8/25/2011 1345h **Method:** SW8015D

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

Analyzed: 8/29/2011 1055h **Extracted:** 8/28/2011 1146h
Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	0.500	< 0.500	
Surr: 4-Bromofluorobenzene	460-00-4	10-190	**45.8**	

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Jose Rocha
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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-011A
Client Sample ID: Parleys Cr. Above I-215 - Bed
Collection Date: 8/25/2011 0950h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/5/2011 2026h **Extracted:** 8/29/2011 1048h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	25.5	**105**	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	**65.4**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-012A
Client Sample ID: Parleys Cr. Above I-215 - Bank
Collection Date: 8/25/2011 0950h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/5/2011 2125h **Extracted:** 8/29/2011 1048h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	26.6	**121**	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	**55.8**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-013A
Client Sample ID: Emigration Cr. Above 1300 E.
Collection Date: 8/25/2011 1045h
Received Date: 8/25/2011 1345h **Method:** SW8015D

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

Analyzed: 8/29/2011 1114h **Extracted:** 8/28/2011 1146h
Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	0.500	< 0.500	
Surr: 4-Bromofluorobenzene	460-00-4	10-190	**45.5**	

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Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-014A
Client Sample ID: Emigration Cr. Above 1300 E. - Bed
Collection Date: 8/25/2011 1045h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/5/2011 2224h **Extracted:** 8/29/2011 1048h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	26.7	**86.1**	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	**66.7**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-015A
Client Sample ID: Emigration Cr. Above 1300 E. - Bank
Collection Date: 8/25/2011 1045h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/5/2011 2323h **Extracted:** 8/29/2011 1048h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	24.4	**101**	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	**69.0**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-016A
Client Sample ID: Emigration Cr. Above 1900 E.
Collection Date: 8/25/2011 1135h
Received Date: 8/25/2011 1345h **Method:** SW8015D

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

Analyzed: 8/29/2011 1134h **Extracted:** 8/28/2011 1146h
Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	0.500	< 0.500	
Surr: 4-Bromofluorobenzene	460-00-4	10-190	**50.4**	

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Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-017A
Client Sample ID: Emigration Cr. Above 1900 E. - Bed
Collection Date: 8/25/2011 1135h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/6/2011 0926h **Extracted:** 8/29/2011 1048h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	28.2	**87.2**	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	**61.8**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-018A
Client Sample ID: Emigration Cr. Above 1900 E. - Bank
Collection Date: 8/25/2011 1135h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/6/2011 1024h **Extracted:** 8/29/2011 1048h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	21.5	**95.1**	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	**66.7**	

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Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-019A
Client Sample ID: Emigration Cr. Above 2100 E.
Collection Date: 8/25/2011 1215h
Received Date: 8/25/2011 1345h **Method:** SW8015D

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

Analyzed: 8/29/2011 1154h **Extracted:** 8/28/2011 1146h
Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	0.500	< 0.500	
Surr: 4-Bromofluorobenzene	460-00-4	10-190	**47.2**	

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Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-020A
Client Sample ID: Emigration Cr. Above 2100 E. - Bed
Collection Date: 8/25/2011 1215h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/6/2011 1123h **Extracted:** 8/29/2011 1048h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	25.2	**75.0**	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	**58.5**	

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Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-021A
Client Sample ID: Emigration Cr. Above 2100 E. - Bank
Collection Date: 8/25/2011 1215h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/6/2011 1320h **Extracted:** 8/29/2011 1048h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	24.4	**103**	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	**66.8**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-022A
Client Sample ID: Emigration Cr. @ Donner Hill Marker
Collection Date: 8/25/2011 1300h
Received Date: 8/25/2011 1345h **Method:** SW8015D

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

Analyzed: 8/29/2011 1213h **Extracted:** 8/28/2011 1146h
Units: mg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	0.500	< 0.500	
Surr: 4-Bromofluorobenzene	460-00-4	10-190	**45.2**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-023A
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bed
Collection Date: 8/25/2011 1300h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/6/2011 1419h **Extracted:** 8/29/2011 1048h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	27.6	**76.4**	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	**64.5**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-024A
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bank
Collection Date: 8/25/2011 1300h
Received Date: 8/25/2011 1345h **Method:** SW8015D

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/6/2011 1518h **Extracted:** 8/29/2011 1048h
Units: mg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	24.3	**69.6**	
Surr: 4-Bromofluorobenzene	460-00-4	10-122	**53.8**	

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-001C
Client Sample ID: Parleys Cr. Below 1300 E.
Collection Date: 8/25/2011 0720h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/3/2011 0337h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

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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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-002C
Client Sample ID: Parleys Cr. Below 1300 E. - Bed
Collection Date: 8/25/2011 0720h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/3/2011 1909h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	11.8	< 11.8	
2-Methylnaphthalene	91-57-6	11.8	< 11.8	
Acenaphthene	83-32-9	11.8	< 11.8	
Acenaphthylene	208-96-8	11.8	< 11.8	
Anthracene	120-12-7	11.8	< 11.8	
Benz(a)anthracene	56-55-3	11.8	< 11.8	
Benzo(a)pyrene	50-32-8	11.8	< 11.8	
Benzo(b)fluoranthene	205-99-2	11.8	< 11.8	
Benzo(g,h,i)perylene	191-24-2	11.8	< 11.8	
Benzo(k)fluoranthene	207-08-9	11.8	< 11.8	
Chrysene	218-01-9	11.8	< 11.8	
Dibenz(a,h)anthracene	53-70-3	11.8	< 11.8	
Fluoranthene	206-44-0	11.8	**29.8**	
Fluorene	86-73-7	11.8	< 11.8	
Indene	95-13-6	11.8	< 11.8	
Indeno(1,2,3-cd)pyrene	193-39-5	11.8	< 11.8	
Naphthalene	91-20-3	11.8	< 11.8	
Phenanthrene	85-01-8	11.8	**24.3**	
Pyrene	129-00-0	11.8	**42.4**	

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

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-003C
Client Sample ID: Parleys Cr. Below 1300 E. - Bank
Collection Date: 8/25/2011 0720h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/3/2011 1935h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	13.9	< 13.9	
2-Methylnaphthalene	91-57-6	13.9	< 13.9	
Acenaphthene	83-32-9	13.9	< 13.9	
Acenaphthylene	208-96-8	13.9	< 13.9	
Anthracene	120-12-7	13.9	< 13.9	
Benz(a)anthracene	56-55-3	13.9	< 13.9	
Benzo(a)pyrene	50-32-8	13.9	< 13.9	
Benzo(b)fluoranthene	205-99-2	13.9	< 13.9	
Benzo(g,h,i)perylene	191-24-2	13.9	< 13.9	
Benzo(k)fluoranthene	207-08-9	13.9	< 13.9	
Chrysene	218-01-9	13.9	< 13.9	
Dibenz(a,h)anthracene	53-70-3	13.9	< 13.9	
Fluoranthene	206-44-0	13.9	< 13.9	
Fluorene	86-73-7	13.9	< 13.9	
Indene	95-13-6	13.9	< 13.9	
Indeno(1,2,3-cd)pyrene	193-39-5	13.9	< 13.9	
Naphthalene	91-20-3	13.9	< 13.9	
Phenanthrene	85-01-8	13.9	< 13.9	
Pyrene	129-00-0	13.9	< 13.9	

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

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-004C
Client Sample ID: Parleys Cr. Below 1700 E.
Collection Date: 8/25/2011 0820h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/3/2011 0403h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

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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QA Officer

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-005C
Client Sample ID: Parleys Cr. Below 1700 E. - Bed
Collection Date: 8/25/2011 0820h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/3/2011 2000h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	11.8	< 11.8	
2-Methylnaphthalene	91-57-6	11.8	< 11.8	
Acenaphthene	83-32-9	11.8	< 11.8	
Acenaphthylene	208-96-8	11.8	< 11.8	
Anthracene	120-12-7	11.8	< 11.8	
Benz(a)anthracene	56-55-3	11.8	**30.6**	
Benzo(a)pyrene	50-32-8	11.8	< 11.8	
Benzo(b)fluoranthene	205-99-2	11.8	**28.2**	
Benzo(g,h,i)perylene	191-24-2	11.8	< 11.8	
Benzo(k)fluoranthene	207-08-9	11.8	< 11.8	
Chrysene	218-01-9	11.8	**35.3**	
Dibenz(a,h)anthracene	53-70-3	11.8	< 11.8	
Fluoranthene	206-44-0	11.8	**73.7**	
Fluorene	86-73-7	11.8	< 11.8	
Indene	95-13-6	11.8	< 11.8	
Indeno(1,2,3-cd)pyrene	193-39-5	11.8	< 11.8	
Naphthalene	91-20-3	11.8	< 11.8	
Phenanthrene	85-01-8	11.8	**50.2**	
Pyrene	129-00-0	11.8	**75.3**	

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

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Kyle F. Gross
Laboratory Director
Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-006C
Client Sample ID: Parleys Cr. Below 1700 E. - Bank
Collection Date: 8/25/2011 0820h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/6/2011 1618h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	14.8	< 14.8	
2-Methylnaphthalene	91-57-6	14.8	< 14.8	
Acenaphthene	83-32-9	14.8	< 14.8	
Acenaphthylene	208-96-8	14.8	< 14.8	
Anthracene	120-12-7	14.8	< 14.8	
Benz(a)anthracene	56-55-3	14.8	< 14.8	
Benzo(a)pyrene	50-32-8	14.8	< 14.8	
Benzo(b)fluoranthene	205-99-2	14.8	< 14.8	
Benzo(g,h,i)perylene	191-24-2	14.8	< 14.8	
Benzo(k)fluoranthene	207-08-9	14.8	< 14.8	
Chrysene	218-01-9	14.8	< 14.8	
Dibenz(a,h)anthracene	53-70-3	14.8	< 14.8	
Fluoranthene	206-44-0	14.8	< 14.8	
Fluorene	86-73-7	14.8	< 14.8	
Indene	95-13-6	14.8	< 14.8	
Indeno(1,2,3-cd)pyrene	193-39-5	14.8	< 14.8	
Naphthalene	91-20-3	14.8	< 14.8	
Phenanthrene	85-01-8	14.8	< 14.8	
Pyrene	129-00-0	14.8	< 14.8	

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

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-007C
Client Sample ID: Parleys Cr. Above 2000 E.
Collection Date: 8/25/2011 0900h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/3/2011 0429h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

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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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-008C
Client Sample ID: Parleys Cr. Above 2000 E. - Bed
Collection Date: 8/25/2011 0900h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/6/2011 1644h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	14.7	< 14.7	
2-Methylnaphthalene	91-57-6	14.7	< 14.7	
Acenaphthene	83-32-9	14.7	< 14.7	
Acenaphthylene	208-96-8	14.7	< 14.7	
Anthracene	120-12-7	14.7	< 14.7	
Benz(a)anthracene	56-55-3	14.7	**79.6**	
Benzo(a)pyrene	50-32-8	14.7	**50.1**	
Benzo(b)fluoranthene	205-99-2	14.7	**95.3**	
Benzo(g,h,i)perylene	191-24-2	14.7	< 14.7	
Benzo(k)fluoranthene	207-08-9	14.7	< 14.7	
Chrysene	218-01-9	14.7	**84.5**	
Dibenz(a,h)anthracene	53-70-3	14.7	< 14.7	
Fluoranthene	206-44-0	14.7	**186**	
Fluorene	86-73-7	14.7	< 14.7	
Indene	95-13-6	14.7	< 14.7	
Indeno(1,2,3-cd)pyrene	193-39-5	14.7	< 14.7	
Naphthalene	91-20-3	14.7	< 14.7	
Phenanthrene	85-01-8	14.7	**93.4**	
Pyrene	129-00-0	14.7	**170**	

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

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-009C
Client Sample ID: Parleys Cr. Above 2000 E. - Bank
Collection Date: 8/25/2011 0900h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/6/2011 1711h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	11.4	< 11.4	
2-Methylnaphthalene	91-57-6	11.4	< 11.4	
Acenaphthene	83-32-9	11.4	< 11.4	
Acenaphthylene	208-96-8	11.4	< 11.4	
Anthracene	120-12-7	11.4	< 11.4	
Benz(a)anthracene	56-55-3	11.4	< 11.4	
Benzo(a)pyrene	50-32-8	11.4	< 11.4	
Benzo(b)fluoranthene	205-99-2	11.4	< 11.4	
Benzo(g,h,i)perylene	191-24-2	11.4	< 11.4	
Benzo(k)fluoranthene	207-08-9	11.4	< 11.4	
Chrysene	218-01-9	11.4	< 11.4	
Dibenz(a,h)anthracene	53-70-3	11.4	< 11.4	
Fluoranthene	206-44-0	11.4	< 11.4	
Fluorene	86-73-7	11.4	< 11.4	
Indene	95-13-6	11.4	< 11.4	
Indeno(1,2,3-cd)pyrene	193-39-5	11.4	< 11.4	
Naphthalene	91-20-3	11.4	< 11.4	
Phenanthrene	85-01-8	11.4	< 11.4	
Pyrene	129-00-0	11.4	< 11.4	

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

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-010C
Client Sample ID: Parleys Cr. Above I-215
Collection Date: 8/25/2011 0950h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/3/2011 0454h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

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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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-011C
Client Sample ID: Parleys Cr. Above I-215 - Bed
Collection Date: 8/25/2011 0950h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/6/2011 1737h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	12.8	< 12.8	
2-Methylnaphthalene	91-57-6	12.8	< 12.8	
Acenaphthene	83-32-9	12.8	< 12.8	
Acenaphthylene	208-96-8	12.8	< 12.8	
Anthracene	120-12-7	12.8	< 12.8	
Benz(a)anthracene	56-55-3	12.8	**51.9**	
Benzo(a)pyrene	50-32-8	12.8	**30.6**	
Benzo(b)fluoranthene	205-99-2	12.8	**47.6**	
Benzo(g,h,i)perylene	191-24-2	12.8	< 12.8	
Benzo(k)fluoranthene	207-08-9	12.8	< 12.8	
Chrysene	218-01-9	12.8	**42.5**	
Dibenz(a,h)anthracene	53-70-3	12.8	< 12.8	
Fluoranthene	206-44-0	12.8	**107**	
Fluorene	86-73-7	12.8	< 12.8	
Indene	95-13-6	12.8	< 12.8	
Indeno(1,2,3-cd)pyrene	193-39-5	12.8	< 12.8	
Naphthalene	91-20-3	12.8	< 12.8	
Phenanthrene	85-01-8	12.8	**91.0**	
Pyrene	129-00-0	12.8	**87.6**	

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

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-012C
Client Sample ID: Parleys Cr. Above I-215 - Bank
Collection Date: 8/25/2011 0950h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/6/2011 1803h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	13.3	< 13.3	
2-Methylnaphthalene	91-57-6	13.3	< 13.3	
Acenaphthene	83-32-9	13.3	< 13.3	
Acenaphthylene	208-96-8	13.3	< 13.3	
Anthracene	120-12-7	13.3	**71.8**	
Benz(a)anthracene	56-55-3	13.3	**234**	
Benzo(a)pyrene	50-32-8	13.3	**108**	
Benzo(b)fluoranthene	205-99-2	13.3	**205**	
Benzo(g,h,i)perylene	191-24-2	13.3	< 13.3	
Benzo(k)fluoranthene	207-08-9	13.3	**62.1**	
Chrysene	218-01-9	13.3	**223**	
Dibenz(a,h)anthracene	53-70-3	13.3	< 13.3	
Fluoranthene	206-44-0	13.3	**487**	
Fluorene	86-73-7	13.3	**29.3**	
Indene	95-13-6	13.3	< 13.3	
Indeno(1,2,3-cd)pyrene	193-39-5	13.3	**56.7**	
Naphthalene	91-20-3	13.3	< 13.3	
Phenanthrene	85-01-8	13.3	**371**	
Pyrene	129-00-0	13.3	**379**	

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

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-013C
Client Sample ID: Emigration Cr. Above 1300 E.
Collection Date: 8/25/2011 1045h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/3/2011 0520h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

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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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-014C
Client Sample ID: Emigration Cr. Above 1300 E. - Bed
Collection Date: 8/25/2011 1045h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/6/2011 1829h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	13.4	< 13.4	
2-Methylnaphthalene	91-57-6	13.4	< 13.4	
Acenaphthene	83-32-9	13.4	< 13.4	
Acenaphthylene	208-96-8	13.4	< 13.4	
Anthracene	120-12-7	13.4	< 13.4	
Benz(a)anthracene	56-55-3	13.4	< 13.4	
Benzo(a)pyrene	50-32-8	13.4	< 13.4	
Benzo(b)fluoranthene	205-99-2	13.4	< 13.4	
Benzo(g,h,i)perylene	191-24-2	13.4	< 13.4	
Benzo(k)fluoranthene	207-08-9	13.4	< 13.4	
Chrysene	218-01-9	13.4	< 13.4	
Dibenz(a,h)anthracene	53-70-3	13.4	< 13.4	
Fluoranthene	206-44-0	13.4	**25.8**	
Fluorene	86-73-7	13.4	< 13.4	
Indene	95-13-6	13.4	< 13.4	
Indeno(1,2,3-cd)pyrene	193-39-5	13.4	< 13.4	
Naphthalene	91-20-3	13.4	< 13.4	
Phenanthrene	85-01-8	13.4	< 13.4	
Pyrene	129-00-0	13.4	**31.2**	

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

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-015C
Client Sample ID: Emigration Cr. Above 1300 E. - Bank
Collection Date: 8/25/2011 1045h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/6/2011 1855h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	12.2	< 12.2	
2-Methylnaphthalene	91-57-6	12.2	< 12.2	
Acenaphthene	83-32-9	12.2	< 12.2	
Acenaphthylene	208-96-8	12.2	< 12.2	
Anthracene	120-12-7	12.2	< 12.2	
Benz(a)anthracene	56-55-3	12.2	< 12.2	
Benzo(a)pyrene	50-32-8	12.2	< 12.2	
Benzo(b)fluoranthene	205-99-2	12.2	< 12.2	
Benzo(g,h,i)perylene	191-24-2	12.2	< 12.2	
Benzo(k)fluoranthene	207-08-9	12.2	< 12.2	
Chrysene	218-01-9	12.2	**25.2**	
Dibenz(a,h)anthracene	53-70-3	12.2	< 12.2	
Fluoranthene	206-44-0	12.2	**46.3**	
Fluorene	86-73-7	12.2	< 12.2	
Indene	95-13-6	12.2	< 12.2	
Indeno(1,2,3-cd)pyrene	193-39-5	12.2	< 12.2	
Naphthalene	91-20-3	12.2	< 12.2	
Phenanthrene	85-01-8	12.2	**30.0**	
Pyrene	129-00-0	12.2	**47.9**	

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

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Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-016C
Client Sample ID: Emigration Cr. Above 1900 E.
Collection Date: 8/25/2011 1135h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/3/2011 0546h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

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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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-017C
Client Sample ID: Emigration Cr. Above 1900 E. - Bed
Collection Date: 8/25/2011 1135h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/6/2011 1922h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	14.1	< 14.1	
2-Methylnaphthalene	91-57-6	14.1	< 14.1	
Acenaphthene	83-32-9	14.1	< 14.1	
Acenaphthylene	208-96-8	14.1	< 14.1	
Anthracene	120-12-7	14.1	< 14.1	
Benz(a)anthracene	56-55-3	14.1	**62.0**	
Benzo(a)pyrene	50-32-8	14.1	**42.3**	
Benzo(b)fluoranthene	205-99-2	14.1	**47.9**	
Benzo(g,h,i)perylene	191-24-2	14.1	< 14.1	
Benzo(k)fluoranthene	207-08-9	14.1	< 14.1	
Chrysene	218-01-9	14.1	**67.7**	
Dibenz(a,h)anthracene	53-70-3	14.1	< 14.1	
Fluoranthene	206-44-0	14.1	**104**	
Fluorene	86-73-7	14.1	< 14.1	
Indene	95-13-6	14.1	< 14.1	
Indeno(1,2,3-cd)pyrene	193-39-5	14.1	< 14.1	
Naphthalene	91-20-3	14.1	< 14.1	
Phenanthrene	85-01-8	14.1	**47.9**	
Pyrene	129-00-0	14.1	**118**	

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

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-018C
Client Sample ID: Emigration Cr. Above 1900 E. - Bank
Collection Date: 8/25/2011 1135h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/6/2011 1948h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	10.8	< 10.8	
2-Methylnaphthalene	91-57-6	10.8	< 10.8	
Acenaphthene	83-32-9	10.8	< 10.8	
Acenaphthylene	208-96-8	10.8	< 10.8	
Anthracene	120-12-7	10.8	< 10.8	
Benz(a)anthracene	56-55-3	10.8	**25.8**	
Benzo(a)pyrene	50-32-8	10.8	< 10.8	
Benzo(b)fluoranthene	205-99-2	10.8	**27.3**	
Benzo(g,h,i)perylene	191-24-2	10.8	< 10.8	
Benzo(k)fluoranthene	207-08-9	10.8	< 10.8	
Chrysene	218-01-9	10.8	**29.4**	
Dibenz(a,h)anthracene	53-70-3	10.8	< 10.8	
Fluoranthene	206-44-0	10.8	**43.8**	
Fluorene	86-73-7	10.8	< 10.8	
Indene	95-13-6	10.8	< 10.8	
Indeno(1,2,3-cd)pyrene	193-39-5	10.8	< 10.8	
Naphthalene	91-20-3	10.8	< 10.8	
Phenanthrene	85-01-8	10.8	< 10.8	
Pyrene	129-00-0	10.8	**43.8**	

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

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-019C
Client Sample ID: Emigration Cr. Above 2100 E.
Collection Date: 8/25/2011 1215h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/3/2011 0611h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

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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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-020C
Client Sample ID: Emigration Cr. Above 2100 E. - Bed
Collection Date: 8/25/2011 1215h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/6/2011 2014h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	12.6	< 12.6	
2-Methylnaphthalene	91-57-6	12.6	< 12.6	
Acenaphthene	83-32-9	12.6	< 12.6	
Acenaphthylene	208-96-8	12.6	< 12.6	
Anthracene	120-12-7	12.6	< 12.6	
Benz(a)anthracene	56-55-3	12.6	< 12.6	
Benzo(a)pyrene	50-32-8	12.6	< 12.6	
Benzo(b)fluoranthene	205-99-2	12.6	< 12.6	
Benzo(g,h,i)perylene	191-24-2	12.6	< 12.6	
Benzo(k)fluoranthene	207-08-9	12.6	< 12.6	
Chrysene	218-01-9	12.6	< 12.6	
Dibenz(a,h)anthracene	53-70-3	12.6	< 12.6	
Fluoranthene	206-44-0	12.6	< 12.6	
Fluorene	86-73-7	12.6	< 12.6	
Indene	95-13-6	12.6	< 12.6	
Indeno(1,2,3-cd)pyrene	193-39-5	12.6	< 12.6	
Naphthalene	91-20-3	12.6	< 12.6	
Phenanthrene	85-01-8	12.6	< 12.6	
Pyrene	129-00-0	12.6	< 12.6	

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

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-021C
Client Sample ID: Emigration Cr. Above 2100 E. - Bank
Collection Date: 8/25/2011 1215h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/6/2011 2040h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	12.2	< 12.2	
2-Methylnaphthalene	91-57-6	12.2	< 12.2	
Acenaphthene	83-32-9	12.2	< 12.2	
Acenaphthylene	208-96-8	12.2	< 12.2	
Anthracene	120-12-7	12.2	< 12.2	
Benz(a)anthracene	56-55-3	12.2	**45.5**	
Benzo(a)pyrene	50-32-8	12.2	< 12.2	
Benzo(b)fluoranthene	205-99-2	12.2	**71.5**	
Benzo(g,h,i)perylene	191-24-2	12.2	< 12.2	
Benzo(k)fluoranthene	207-08-9	12.2	< 12.2	
Chrysene	218-01-9	12.2	**109**	
Dibenz(a,h)anthracene	53-70-3	12.2	< 12.2	
Fluoranthene	206-44-0	12.2	**32.5**	
Fluorene	86-73-7	12.2	< 12.2	
Indene	95-13-6	12.2	< 12.2	
Indeno(1,2,3-cd)pyrene	193-39-5	12.2	< 12.2	
Naphthalene	91-20-3	12.2	< 12.2	
Phenanthrene	85-01-8	12.2	< 12.2	
Pyrene	129-00-0	12.2	**35.7**	

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

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-022C
Client Sample ID: Emigration Cr. @ Donner Hill Marker
Collection Date: 8/25/2011 1300h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/3/2011 0637h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

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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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-023C
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bed
Collection Date: 8/25/2011 1300h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/6/2011 2106h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	13.8	< 13.8	
2-Methylnaphthalene	91-57-6	13.8	< 13.8	
Acenaphthene	83-32-9	13.8	< 13.8	
Acenaphthylene	208-96-8	13.8	< 13.8	
Anthracene	120-12-7	13.8	< 13.8	
Benz(a)anthracene	56-55-3	13.8	< 13.8	
Benzo(a)pyrene	50-32-8	13.8	< 13.8	
Benzo(b)fluoranthene	205-99-2	13.8	< 13.8	
Benzo(g,h,i)perylene	191-24-2	13.8	< 13.8	
Benzo(k)fluoranthene	207-08-9	13.8	< 13.8	
Chrysene	218-01-9	13.8	< 13.8	
Dibenz(a,h)anthracene	53-70-3	13.8	< 13.8	
Fluoranthene	206-44-0	13.8	< 13.8	
Fluorene	86-73-7	13.8	< 13.8	
Indene	95-13-6	13.8	< 13.8	
Indeno(1,2,3-cd)pyrene	193-39-5	13.8	< 13.8	
Naphthalene	91-20-3	13.8	< 13.8	
Phenanthrene	85-01-8	13.8	< 13.8	
Pyrene	129-00-0	13.8	< 13.8	

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

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-024C
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bank
Collection Date: 8/25/2011 1300h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/6/2011 2132h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1-Methylnaphthalene	90-12-0	12.2	< 12.2	
2-Methylnaphthalene	91-57-6	12.2	< 12.2	
Acenaphthene	83-32-9	12.2	< 12.2	
Acenaphthylene	208-96-8	12.2	< 12.2	
Anthracene	120-12-7	12.2	< 12.2	
Benz(a)anthracene	56-55-3	12.2	< 12.2	
Benzo(a)pyrene	50-32-8	12.2	< 12.2	
Benzo(b)fluoranthene	205-99-2	12.2	< 12.2	
Benzo(g,h,i)perylene	191-24-2	12.2	< 12.2	
Benzo(k)fluoranthene	207-08-9	12.2	< 12.2	
Chrysene	218-01-9	12.2	< 12.2	
Dibenz(a,h)anthracene	53-70-3	12.2	< 12.2	
Fluoranthene	206-44-0	12.2	< 12.2	
Fluorene	86-73-7	12.2	< 12.2	
Indene	95-13-6	12.2	< 12.2	
Indeno(1,2,3-cd)pyrene	193-39-5	12.2	< 12.2	
Naphthalene	91-20-3	12.2	< 12.2	
Phenanthrene	85-01-8	12.2	< 12.2	
Pyrene	129-00-0	12.2	< 12.2	

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

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ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-001C
Client Sample ID: Parleys Cr. Below 1300 E.
Collection Date: 8/25/2011 0720h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/1/2011 0205h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

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	20.0	< 20.0	
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	
2-Nitrophenol	88-75-5	10.0	< 10.0	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-001C
Client Sample ID: Parleys Cr. Below 1300 E.

Analyzed: 9/1/2011 0205h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	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	
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	

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Jose Rocha
QA Officer

Lab Sample ID: 1108511-001C
Client Sample ID: Parleys Cr. Below 1300 E.

Analyzed: 9/1/2011 0205h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
bis(2-ethylhexyl)adipate	103-23-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	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	
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	

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Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-001C
Client Sample ID: Parleys Cr. Below 1300 E.

Analyzed: 9/1/2011 0205h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	
Surr: 2,4,6-Tribromophenol	118-79-6	14-159	**86.2**	
Surr: 2-Fluorobiphenyl	321-60-8	10-124	**47.1**	
Surr: 2-Fluorophenol	367-12-4	10-106	**32.4**	
Surr: Nitrobenzene-d5	4165-60-0	10-180	**44.1**	
Surr: Phenol-d6	13127-88-3	10-122	**25.8**	
Surr: Terphenyl-d14	1718-51-0	10-199	**82.4**	

This sample was analyzed for TICs. Those results can be found on pages 282 to 286.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-002C
Client Sample ID: Parleys Cr. Below 1300 E. - Bed
Collection Date: 8/25/2011 0720h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/1/2011 1955h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	400	< 400	
1,2,4,5-Tetrachlorobenzene	95-94-3	400	< 400	
1,2,4-Trichlorobenzene	120-82-1	400	< 400	
1,2-Dichlorobenzene	95-50-1	400	< 400	
1,3,5-Trinitrobenzene	99-35-4	400	< 400	
1,4-Naphthoquinone	130-15-4	789	< 789	
1,3-Dichlorobenzene	541-73-1	400	< 400	
1,3-Dinitrobenzene	99-65-0	400	< 400	
1,4-Dichlorobenzene	106-46-7	400	< 400	
1,4-Phenylenediamine	106-50-3	400	< 400	
1-Chloronaphthalene	90-13-1	400	< 400	
1-Methylnaphthalene	90-12-0	400	< 400	
1-Naphthylamine	134-32-7	789	< 789	
2,3,4,6-Tetrachlorophenol	58-90-2	400	< 400	
2,4,5-Trichlorophenol	95-95-4	400	< 400	
2,4,6-Trichlorophenol	88-06-2	400	< 400	
2,4-Dichlorophenol	120-83-2	400	< 400	
2,4-Dimethylphenol	105-67-9	400	< 400	
2,4-Dinitrophenol	51-28-5	789	< 789	
2,4-Dinitrotoluene	121-14-2	400	< 400	
2,6-Dichlorophenol	87-65-0	400	< 400	
2,6-Dinitrotoluene	606-20-2	400	< 400	
2-Acetylaminofluorene	53-96-3	400	< 400	
2-Chloronaphthalene	91-58-7	400	< 400	
2-Chlorophenol	95-57-8	400	< 400	
2-Methylnaphthalene	91-57-6	400	< 400	
2-Methylphenol	95-48-7	400	< 400	
2-Naphthylamine	91-59-8	789	< 789	
2-Nitroaniline	88-74-4	400	< 400	
2-Nitrophenol	88-75-5	400	< 400	
2-Picoline	109-06-8	400	< 400	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-002C
Client Sample ID: Parleys Cr. Below 1300 E. - Bed

Analyzed: 9/1/2011 1955h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
3&4-Methylphenol		400	< 400	
3,3´-Dichlorobenzidine	91-94-1	400	< 400	
3,3´-Dimethylbenzidine	119-93-7	789	< 789	
3-Methylcholanthrene	56-49-5	400	< 400	
3-Nitroaniline	99-09-2	1,180	< 1,180	
4,6-Dinitro-2-methylphenol	534-52-1	789	< 789	
4-Aminobiphenyl	92-67-1	400	< 400	
4-Bromophenyl phenyl ether	101-55-3	400	< 400	
4-Chloro-3-methylphenol	59-50-7	400	< 400	
4-Chloroaniline	106-47-8	400	< 400	
4-Chlorophenyl phenyl ether	7005-72-3	400	< 400	
4-Nitroaniline	100-01-6	1,180	< 1,180	
4-Nitrophenol	100-02-7	789	< 789	
5-Nitro-o-toluidine	99-55-8	400	< 400	
7,12-Dimethylbenz(a)anthracene	57-97-6	400	< 400	
a,a-Dimethylphenethylamine	122-09-8	789	< 789	
Acenaphthene	83-32-9	400	< 400	
Acenaphthylene	208-96-8	400	< 400	
Acetophenone	98-86-2	400	< 400	
alpha-Terpineol	98-55-5	400	< 400	
Aniline	62-53-3	789	< 789	
Anthracene	120-12-7	400	< 400	
Aramite	140-57-8	789	< 789	
Azobenzene	103-33-3	400	< 400	
Benz(a)anthracene	56-55-3	400	< 400	
Benzidine	92-87-5	1,580	< 1,580	
Benzo(a)pyrene	50-32-8	400	< 400	
Benzo(b)fluoranthene	205-99-2	400	< 400	
Benzo(g,h,i)perylene	191-24-2	400	< 400	
Benzo(k)fluoranthene	207-08-9	400	< 400	
Benzoic acid	65-85-0	1,180	< 1,180	
Benzyl alcohol	100-51-6	400	< 400	
Bis(2-chloroethoxy)methane	111-91-1	400	< 400	
Bis(2-chloroethyl) ether	111-44-4	400	< 400	
Bis(2-chloroisopropyl) ether	108-60-1	400	< 400	
Bis(2-ethylhexyl) phthalate	117-81-7	400	< 400	
bis(2-ethylhexyl)adipate	103-23-1	789	< 789	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-002C
Client Sample ID: Parleys Cr. Below 1300 E. - Bed

Analyzed: 9/1/2011 1955h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Butyl benzyl phthalate	85-68-7	400	< 400	
Carbazole	86-74-8	400	< 400	
Chlorobenzilate	510-15-6	400	< 400	
Chrysene	218-01-9	400	< 400	
Di-n-butyl phthalate	84-74-2	400	< 400	
Di-n-octyl phthalate	117-84-0	400	**480**	
Diallate (cis or trans)	2303-16-4	400	< 400	
Dibenz(a,h)anthracene	53-70-3	400	< 400	
Dibenzofuran	132-64-9	400	< 400	
Diethyl phthalate	84-66-2	400	< 400	
Dimethoate	60-51-5	400	< 400	
Dimethyl phthalate	131-11-3	400	< 400	
Dimethylaminoazobenzene	60-11-7	400	< 400	
Dinoseb	88-85-7	789	< 789	
Diphenylamine	122-39-4	400	< 400	
Disulfoton	298-04-4	400	< 400	
Ethyl methanesulfonate	62-50-0	400	< 400	
Famphur	52-85-7	400	< 400	
Fluoranthene	206-44-0	400	< 400	
Fluorene	86-73-7	400	< 400	
Hexachlorobenzene	118-74-1	400	< 400	
Hexachlorobutadiene	87-68-3	400	< 400	
Hexachlorocyclopentadiene	77-47-4	400	< 400	
Hexachloroethane	67-72-1	400	< 400	
Hexachlorophene	70-30-4	400	< 400	
Hexachloropropene	1888-71-7	400	< 400	
Indene	95-13-6	400	< 400	
Indeno(1,2,3-cd)pyrene	193-39-5	400	< 400	
Isodrin	465-73-6	400	< 400	
Isophorone	78-59-1	400	< 400	
Isosafrole	120-58-1	400	< 400	
Kepone	143-50-0	400	< 400	
Methapyrilene	91-80-5	789	< 789	
Methyl methanesulfonate	66-27-3	400	< 400	
n-Decane	124-18-5	400	< 400	
N-Nitrosodi-n-butylamine	924-16-3	400	< 400	
N-Nitrosodiethylamine	55-18-5	400	< 400	

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Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-002C
Client Sample ID: Parleys Cr. Below 1300 E. - Bed

Analyzed: 9/1/2011 1955h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
N-Nitrosodimethylamine	62-75-9	789	< 789	
N-Nitrosodiphenylamine	86-30-6	400	< 400	
N-Nitrosodi-n-propylamine	621-64-7	400	< 400	
N-Nitrosomethylethylamine	10595-95-6	400	< 400	
N-Nitrosomorpholine	59-89-2	400	< 400	
N-Nitrosopiperidine	100-75-4	400	< 400	
N-Nitrosopyrrolidine	930-55-2	400	< 400	
n-Octadecane	593-45-3	400	< 400	
Naphthalene	91-20-3	400	< 400	
Nitrobenzene	98-95-3	400	< 400	
Nitroquinoline-1-oxide	56-57-5	789	< 789	
O,O,O-Triethyl phosphorothioate	126-68-1	400	< 400	
o-Toluidine	95-53-4	400	< 400	
Parathion	56-38-2	400	< 400	
Methyl parathion	298-00-0	400	< 400	
Pentachlorobenzene	608-93-5	400	< 400	
Pentachloronitrobenzene	82-68-8	400	< 400	
Pentachlorophenol	87-86-5	400	< 400	
Phenacetin	62-44-2	400	< 400	
Phenanthrene	85-01-8	400	< 400	
Phenol	108-95-2	400	< 400	
Phorate	298-02-2	400	< 400	
Pronamide	23950-58-5	400	< 400	
Pyrene	129-00-0	400	< 400	
Pyridine	110-86-1	789	< 789	
Quinoline	91-22-5	400	< 400	
Safrole	94-59-7	400	< 400	
Tetraethyl dithiopyrophosphate	3689-24-5	400	< 400	
Thionazin	297-97-2	400	< 400	
Surr: 2,4,6-Tribromophenol	118-79-6	10-237	**93.5**	
Surr: 2-Fluorobiphenyl	321-60-8	17-179	**82.7**	
Surr: 2-Fluorophenol	367-12-4	10-186	**73.1**	
Surr: Nitrobenzene-d5	4165-60-0	10-166	**84.2**	
Surr: Phenol-d6	13127-88-3	10-194	**79.8**	
Surr: Terphenyl-d14	1718-51-0	10-265	**117**	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.
This sample was analyzed for TICs. Those results can be found on pages 322 to 335.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-003C
Client Sample ID: Parleys Cr. Below 1300 E. - Bank
Collection Date: 8/25/2011 0720h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/1/2011 2022h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	474	< 474	
1,2,4,5-Tetrachlorobenzene	95-94-3	474	< 474	
1,2,4-Trichlorobenzene	120-82-1	474	< 474	
1,2-Dichlorobenzene	95-50-1	474	< 474	
1,3,5-Trinitrobenzene	99-35-4	474	< 474	
1,4-Naphthoquinone	130-15-4	933	< 933	
1,3-Dichlorobenzene	541-73-1	474	< 474	
1,3-Dinitrobenzene	99-65-0	474	< 474	
1,4-Dichlorobenzene	106-46-7	474	< 474	
1,4-Phenylenediamine	106-50-3	474	< 474	
1-Chloronaphthalene	90-13-1	474	< 474	
1-Methylnaphthalene	90-12-0	474	< 474	
1-Naphthylamine	134-32-7	933	< 933	
2,3,4,6-Tetrachlorophenol	58-90-2	474	< 474	
2,4,5-Trichlorophenol	95-95-4	474	< 474	
2,4,6-Trichlorophenol	88-06-2	474	< 474	
2,4-Dichlorophenol	120-83-2	474	< 474	
2,4-Dimethylphenol	105-67-9	474	< 474	
2,4-Dinitrophenol	51-28-5	933	< 933	
2,4-Dinitrotoluene	121-14-2	474	< 474	
2,6-Dichlorophenol	87-65-0	474	< 474	
2,6-Dinitrotoluene	606-20-2	474	< 474	
2-Acetylaminofluorene	53-96-3	474	< 474	
2-Chloronaphthalene	91-58-7	474	< 474	
2-Chlorophenol	95-57-8	474	< 474	
2-Methylnaphthalene	91-57-6	474	< 474	
2-Methylphenol	95-48-7	474	< 474	
2-Naphthylamine	91-59-8	933	< 933	
2-Nitroaniline	88-74-4	474	< 474	
2-Nitrophenol	88-75-5	474	< 474	
2-Picoline	109-06-8	474	< 474	

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Kyle F. Gross
Laboratory Director

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-003C
Client Sample ID: Parleys Cr. Below 1300 E. - Bank

Analyzed: 9/1/2011 2022h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
3&4-Methylphenol		474	< 474	
3,3´-Dichlorobenzidine	91-94-1	474	< 474	
3,3´-Dimethylbenzidine	119-93-7	933	< 933	
3-Methylcholanthrene	56-49-5	474	< 474	
3-Nitroaniline	99-09-2	1,390	< 1,390	
4,6-Dinitro-2-methylphenol	534-52-1	933	< 933	
4-Aminobiphenyl	92-67-1	474	< 474	
4-Bromophenyl phenyl ether	101-55-3	474	< 474	
4-Chloro-3-methylphenol	59-50-7	474	< 474	
4-Chloroaniline	106-47-8	474	< 474	
4-Chlorophenyl phenyl ether	7005-72-3	474	< 474	
4-Nitroaniline	100-01-6	1,390	< 1,390	
4-Nitrophenol	100-02-7	933	< 933	
5-Nitro-o-toluidine	99-55-8	474	< 474	
7,12-Dimethylbenz(a)anthracene	57-97-6	474	< 474	
a,a-Dimethylphenethylamine	122-09-8	933	< 933	
Acenaphthene	83-32-9	474	< 474	
Acenaphthylene	208-96-8	474	< 474	
Acetophenone	98-86-2	474	< 474	
alpha-Terpineol	98-55-5	474	< 474	
Aniline	62-53-3	933	< 933	
Anthracene	120-12-7	474	< 474	
Aramite	140-57-8	933	< 933	
Azobenzene	103-33-3	474	< 474	
Benz(a)anthracene	56-55-3	474	< 474	
Benzidine	92-87-5	1,870	< 1,870	
Benzo(a)pyrene	50-32-8	474	< 474	
Benzo(b)fluoranthene	205-99-2	474	< 474	
Benzo(g,h,i)perylene	191-24-2	474	< 474	
Benzo(k)fluoranthene	207-08-9	474	< 474	
Benzoic acid	65-85-0	1,390	< 1,390	
Benzyl alcohol	100-51-6	474	< 474	
Bis(2-chloroethoxy)methane	111-91-1	474	< 474	
Bis(2-chloroethyl) ether	111-44-4	474	< 474	
Bis(2-chloroisopropyl) ether	108-60-1	474	< 474	
Bis(2-ethylhexyl) phthalate	117-81-7	474	< 474	
bis(2-ethylhexyl)adipate	103-23-1	933	< 933	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-003C
Client Sample ID: Parleys Cr. Below 1300 E. - Bank

Analyzed: 9/1/2011 2022h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Butyl benzyl phthalate	85-68-7	474	< 474	
Carbazole	86-74-8	474	< 474	
Chlorobenzilate	510-15-6	474	< 474	
Chrysene	218-01-9	474	< 474	
Di-n-butyl phthalate	84-74-2	474	< 474	
Di-n-octyl phthalate	117-84-0	474	< 474	
Diallate (cis or trans)	2303-16-4	474	< 474	
Dibenz(a,h)anthracene	53-70-3	474	< 474	
Dibenzofuran	132-64-9	474	< 474	
Diethyl phthalate	84-66-2	474	< 474	
Dimethoate	60-51-5	474	< 474	
Dimethyl phthalate	131-11-3	474	< 474	
Dimethylaminoazobenzene	60-11-7	474	< 474	
Dinoseb	88-85-7	933	< 933	
Diphenylamine	122-39-4	474	< 474	
Disulfoton	298-04-4	474	< 474	
Ethyl methanesulfonate	62-50-0	474	< 474	
Famphur	52-85-7	474	< 474	
Fluoranthene	206-44-0	474	< 474	
Fluorene	86-73-7	474	< 474	
Hexachlorobenzene	118-74-1	474	< 474	
Hexachlorobutadiene	87-68-3	474	< 474	
Hexachlorocyclopentadiene	77-47-4	474	< 474	
Hexachloroethane	67-72-1	474	< 474	
Hexachlorophene	70-30-4	474	< 474	
Hexachloropropene	1888-71-7	474	< 474	
Indene	95-13-6	474	< 474	
Indeno(1,2,3-cd)pyrene	193-39-5	474	< 474	
Isodrin	465-73-6	474	< 474	
Isophorone	78-59-1	474	< 474	
Isosafrole	120-58-1	474	< 474	
Kepone	143-50-0	474	< 474	
Methapyrilene	91-80-5	933	< 933	
Methyl methanesulfonate	66-27-3	474	< 474	
n-Decane	124-18-5	474	< 474	
N-Nitrosodi-n-butylamine	924-16-3	474	< 474	
N-Nitrosodiethylamine	55-18-5	474	< 474	

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Jose Rocha
QA Officer

Lab Sample ID: 1108511-003C
Client Sample ID: Parleys Cr. Below 1300 E. - Bank

Analyzed: 9/1/2011 2022h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
N-Nitrosodimethylamine	62-75-9	933	< 933	
N-Nitrosodiphenylamine	86-30-6	474	< 474	
N-Nitrosodi-n-propylamine	621-64-7	474	< 474	
N-Nitrosomethylethylamine	10595-95-6	474	< 474	
N-Nitrosomorpholine	59-89-2	474	< 474	
N-Nitrosopiperidine	100-75-4	474	< 474	
N-Nitrosopyrrolidine	930-55-2	474	< 474	
n-Octadecane	593-45-3	474	< 474	
Naphthalene	91-20-3	474	< 474	
Nitrobenzene	98-95-3	474	< 474	
Nitroquinoline-1-oxide	56-57-5	933	< 933	
O,O,O-Triethyl phosphorothioate	126-68-1	474	< 474	
o-Toluidine	95-53-4	474	< 474	
Parathion	56-38-2	474	< 474	
Methyl parathion	298-00-0	474	< 474	
Pentachlorobenzene	608-93-5	474	< 474	
Pentachloronitrobenzene	82-68-8	474	< 474	
Pentachlorophenol	87-86-5	474	< 474	
Phenacetin	62-44-2	474	< 474	
Phenanthrene	85-01-8	474	< 474	
Phenol	108-95-2	474	< 474	
Phorate	298-02-2	474	< 474	
Pronamide	23950-58-5	474	< 474	
Pyrene	129-00-0	474	< 474	
Pyridine	110-86-1	933	< 933	
Quinoline	91-22-5	474	< 474	
Safrole	94-59-7	474	< 474	
Tetraethyl dithiopyrophosphate	3689-24-5	474	< 474	
Thionazin	297-97-2	474	< 474	
Surr: 2,4,6-Tribromophenol	118-79-6	10-237	**94.6**	
Surr: 2-Fluorobiphenyl	321-60-8	17-179	**87.3**	
Surr: 2-Fluorophenol	367-12-4	10-186	**77.7**	
Surr: Nitrobenzene-d5	4165-60-0	10-166	**86.4**	
Surr: Phenol-d6	13127-88-3	10-194	**84.8**	
Surr: Terphenyl-d14	1718-51-0	10-265	**131**	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.
This sample was analyzed for TICs. Those results can be found on pages 336 to 347.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-004C
Client Sample ID: Parleys Cr. Below 1700 E.
Collection Date: 8/25/2011 0820h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/1/2011 0231h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

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	20.0	< 20.0	
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	
2-Nitrophenol	88-75-5	10.0	< 10.0	

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Kyle F. Gross
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Jose Rocha
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Lab Sample ID: 1108511-004C
Client Sample ID: Parleys Cr. Below 1700 E.

Analyzed: 9/1/2011 0231h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	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	
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	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-004C
Client Sample ID: Parleys Cr. Below 1700 E.

Analyzed: 9/1/2011 0231h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
bis(2-ethylhexyl)adipate	103-23-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	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	
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	

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Jose Rocha
QA Officer

Lab Sample ID: 1108511-004C
Client Sample ID: Parleys Cr. Below 1700 E.

Analyzed: 9/1/2011 0231h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	
Surr: 2,4,6-Tribromophenol	118-79-6	14-159	**84.7**	
Surr: 2-Fluorobiphenyl	321-60-8	10-124	**49.9**	
Surr: 2-Fluorophenol	367-12-4	10-106	**36.3**	
Surr: Nitrobenzene-d5	4165-60-0	10-180	**45.1**	
Surr: Phenol-d6	13127-88-3	10-122	**29.2**	
Surr: Terphenyl-d14	1718-51-0	10-199	**80.0**	

This sample was analyzed for TICs. Those results can be found on pages 287 to 292.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-005C
Client Sample ID: Parleys Cr. Below 1700 E. - Bed
Collection Date: 8/25/2011 0820h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/2/2011 0018h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	400	< 400	
1,2,4,5-Tetrachlorobenzene	95-94-3	400	< 400	
1,2,4-Trichlorobenzene	120-82-1	400	< 400	
1,2-Dichlorobenzene	95-50-1	400	< 400	
1,3,5-Trinitrobenzene	99-35-4	400	< 400	
1,4-Naphthoquinone	130-15-4	788	< 788	
1,3-Dichlorobenzene	541-73-1	400	< 400	
1,3-Dinitrobenzene	99-65-0	400	< 400	
1,4-Dichlorobenzene	106-46-7	400	< 400	
1,4-Phenylenediamine	106-50-3	400	< 400	
1-Chloronaphthalene	90-13-1	400	< 400	
1-Methylnaphthalene	90-12-0	400	< 400	
1-Naphthylamine	134-32-7	788	< 788	
2,3,4,6-Tetrachlorophenol	58-90-2	400	< 400	
2,4,5-Trichlorophenol	95-95-4	400	< 400	
2,4,6-Trichlorophenol	88-06-2	400	< 400	
2,4-Dichlorophenol	120-83-2	400	< 400	
2,4-Dimethylphenol	105-67-9	400	< 400	
2,4-Dinitrophenol	51-28-5	788	< 788	
2,4-Dinitrotoluene	121-14-2	400	< 400	
2,6-Dichlorophenol	87-65-0	400	< 400	
2,6-Dinitrotoluene	606-20-2	400	< 400	
2-Acetylaminofluorene	53-96-3	400	< 400	
2-Chloronaphthalene	91-58-7	400	< 400	
2-Chlorophenol	95-57-8	400	< 400	
2-Methylnaphthalene	91-57-6	400	< 400	
2-Methylphenol	95-48-7	400	< 400	
2-Naphthylamine	91-59-8	788	< 788	
2-Nitroaniline	88-74-4	400	< 400	
2-Nitrophenol	88-75-5	400	< 400	
2-Picoline	109-06-8	400	< 400	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-005C
Client Sample ID: Parleys Cr. Below 1700 E. - Bed

Analyzed: 9/2/2011 0018h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
3&4-Methylphenol		400	< 400	
3,3´-Dichlorobenzidine	91-94-1	400	< 400	
3,3´-Dimethylbenzidine	119-93-7	788	< 788	
3-Methylcholanthrene	56-49-5	400	< 400	
3-Nitroaniline	99-09-2	1,180	< 1,180	
4,6-Dinitro-2-methylphenol	534-52-1	788	< 788	
4-Aminobiphenyl	92-67-1	400	< 400	
4-Bromophenyl phenyl ether	101-55-3	400	< 400	
4-Chloro-3-methylphenol	59-50-7	400	< 400	
4-Chloroaniline	106-47-8	400	< 400	
4-Chlorophenyl phenyl ether	7005-72-3	400	< 400	
4-Nitroaniline	100-01-6	1,180	< 1,180	
4-Nitrophenol	100-02-7	788	< 788	
5-Nitro-o-toluidine	99-55-8	400	< 400	
7,12-Dimethylbenz(a)anthracene	57-97-6	400	< 400	
a,a-Dimethylphenethylamine	122-09-8	788	< 788	
Acenaphthene	83-32-9	400	< 400	
Acenaphthylene	208-96-8	400	< 400	
Acetophenone	98-86-2	400	< 400	
alpha-Terpineol	98-55-5	400	< 400	
Aniline	62-53-3	788	< 788	
Anthracene	120-12-7	400	< 400	
Aramite	140-57-8	788	< 788	
Azobenzene	103-33-3	400	< 400	
Benz(a)anthracene	56-55-3	400	< 400	
Benzidine	92-87-5	1,580	< 1,580	
Benzo(a)pyrene	50-32-8	400	< 400	
Benzo(b)fluoranthene	205-99-2	400	< 400	
Benzo(g,h,i)perylene	191-24-2	400	< 400	
Benzo(k)fluoranthene	207-08-9	400	< 400	
Benzoic acid	65-85-0	1,180	< 1,180	
Benzyl alcohol	100-51-6	400	< 400	
Bis(2-chloroethoxy)methane	111-91-1	400	< 400	
Bis(2-chloroethyl) ether	111-44-4	400	< 400	
Bis(2-chloroisopropyl) ether	108-60-1	400	< 400	
Bis(2-ethylhexyl) phthalate	117-81-7	400	**2,980**	
bis(2-ethylhexyl)adipate	103-23-1	788	< 788	

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Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-005C
Client Sample ID: Parleys Cr. Below 1700 E. - Bed

Analyzed: 9/2/2011 0018h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Butyl benzyl phthalate	85-68-7	400	< 400	
Carbazole	86-74-8	400	< 400	
Chlorobenzilate	510-15-6	400	< 400	
Chrysene	218-01-9	400	< 400	
Di-n-butyl phthalate	84-74-2	400	< 400	
Di-n-octyl phthalate	117-84-0	400	< 400	
Diallate (cis or trans)	2303-16-4	400	< 400	
Dibenz(a,h)anthracene	53-70-3	400	< 400	
Dibenzofuran	132-64-9	400	< 400	
Diethyl phthalate	84-66-2	400	< 400	
Dimethoate	60-51-5	400	< 400	
Dimethyl phthalate	131-11-3	400	< 400	
Dimethylaminoazobenzene	60-11-7	400	< 400	
Dinoseb	88-85-7	788	< 788	
Diphenylamine	122-39-4	400	< 400	
Disulfoton	298-04-4	400	< 400	
Ethyl methanesulfonate	62-50-0	400	< 400	
Famphur	52-85-7	400	< 400	
Fluoranthene	206-44-0	400	< 400	
Fluorene	86-73-7	400	< 400	
Hexachlorobenzene	118-74-1	400	< 400	
Hexachlorobutadiene	87-68-3	400	< 400	
Hexachlorocyclopentadiene	77-47-4	400	< 400	
Hexachloroethane	67-72-1	400	< 400	
Hexachlorophene	70-30-4	400	< 400	
Hexachloropropene	1888-71-7	400	< 400	
Indene	95-13-6	400	< 400	
Indeno(1,2,3-cd)pyrene	193-39-5	400	< 400	
Isodrin	465-73-6	400	< 400	
Isophorone	78-59-1	400	< 400	
Isosafrole	120-58-1	400	< 400	
Kepone	143-50-0	400	< 400	
Methapyrilene	91-80-5	788	< 788	
Methyl methanesulfonate	66-27-3	400	< 400	
n-Decane	124-18-5	400	< 400	
N-Nitrosodi-n-butylamine	924-16-3	400	< 400	
N-Nitrosodiethylamine	55-18-5	400	< 400	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-005C
Client Sample ID: Parleys Cr. Below 1700 E. - Bed

Analyzed: 9/2/2011 0018h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
N-Nitrosodimethylamine	62-75-9	788	< 788	
N-Nitrosodiphenylamine	86-30-6	400	< 400	
N-Nitrosodi-n-propylamine	621-64-7	400	< 400	
N-Nitrosomethylethylamine	10595-95-6	400	< 400	
N-Nitrosomorpholine	59-89-2	400	< 400	
N-Nitrosopiperidine	100-75-4	400	< 400	
N-Nitrosopyrrolidine	930-55-2	400	< 400	
n-Octadecane	593-45-3	400	< 400	
Naphthalene	91-20-3	400	< 400	
Nitrobenzene	98-95-3	400	< 400	
Nitroquinoline-1-oxide	56-57-5	788	< 788	
O,O,O-Triethyl phosphorothioate	126-68-1	400	< 400	
o-Toluidine	95-53-4	400	< 400	
Parathion	56-38-2	400	< 400	
Methyl parathion	298-00-0	400	< 400	
Pentachlorobenzene	608-93-5	400	< 400	
Pentachloronitrobenzene	82-68-8	400	< 400	
Pentachlorophenol	87-86-5	400	< 400	
Phenacetin	62-44-2	400	< 400	
Phenanthrene	85-01-8	400	< 400	
Phenol	108-95-2	400	< 400	
Phorate	298-02-2	400	< 400	
Pronamide	23950-58-5	400	< 400	
Pyrene	129-00-0	400	< 400	
Pyridine	110-86-1	788	< 788	
Quinoline	91-22-5	400	< 400	
Safrole	94-59-7	400	< 400	
Tetraethyl dithiopyrophosphate	3689-24-5	400	< 400	
Thionazin	297-97-2	400	< 400	
Surr: 2,4,6-Tribromophenol	118-79-6	10-237	**91.9**	
Surr: 2-Fluorobiphenyl	321-60-8	17-179	**82.6**	
Surr: 2-Fluorophenol	367-12-4	10-186	**72.7**	
Surr: Nitrobenzene-d5	4165-60-0	10-166	**81.1**	
Surr: Phenol-d6	13127-88-3	10-194	**79.8**	
Surr: Terphenyl-d14	1718-51-0	10-265	**134**	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.
This sample was analyzed for TICs. Those results can be found on pages 348 to 362.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-006C
Client Sample ID: Parleys Cr. Below 1700 E. - Bank
Collection Date: 8/25/2011 0820h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/2/2011 0044h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	502	< 502	
1,2,4,5-Tetrachlorobenzene	95-94-3	502	< 502	
1,2,4-Trichlorobenzene	120-82-1	502	< 502	
1,2-Dichlorobenzene	95-50-1	502	< 502	
1,3,5-Trinitrobenzene	99-35-4	502	< 502	
1,4-Naphthoquinone	130-15-4	988	< 988	
1,3-Dichlorobenzene	541-73-1	502	< 502	
1,3-Dinitrobenzene	99-65-0	502	< 502	
1,4-Dichlorobenzene	106-46-7	502	< 502	
1,4-Phenylenediamine	106-50-3	502	< 502	
1-Chloronaphthalene	90-13-1	502	< 502	
1-Methylnaphthalene	90-12-0	502	< 502	
1-Naphthylamine	134-32-7	988	< 988	
2,3,4,6-Tetrachlorophenol	58-90-2	502	< 502	
2,4,5-Trichlorophenol	95-95-4	502	< 502	
2,4,6-Trichlorophenol	88-06-2	502	< 502	
2,4-Dichlorophenol	120-83-2	502	< 502	
2,4-Dimethylphenol	105-67-9	502	< 502	
2,4-Dinitrophenol	51-28-5	988	< 988	
2,4-Dinitrotoluene	121-14-2	502	< 502	
2,6-Dichlorophenol	87-65-0	502	< 502	
2,6-Dinitrotoluene	606-20-2	502	< 502	
2-Acetylaminofluorene	53-96-3	502	< 502	
2-Chloronaphthalene	91-58-7	502	< 502	
2-Chlorophenol	95-57-8	502	< 502	
2-Methylnaphthalene	91-57-6	502	< 502	
2-Methylphenol	95-48-7	502	< 502	
2-Naphthylamine	91-59-8	988	< 988	
2-Nitroaniline	88-74-4	502	< 502	
2-Nitrophenol	88-75-5	502	< 502	
2-Picoline	109-06-8	502	< 502	

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Lab Sample ID: 1108511-006C
Client Sample ID: Parleys Cr. Below 1700 E. - Bank

Analyzed: 9/2/2011 0044h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
3&4-Methylphenol		502	< 502	
3,3´-Dichlorobenzidine	91-94-1	502	< 502	
3,3´-Dimethylbenzidine	119-93-7	988	< 988	
3-Methylcholanthrene	56-49-5	502	< 502	
3-Nitroaniline	99-09-2	1,480	< 1,480	
4,6-Dinitro-2-methylphenol	534-52-1	988	< 988	
4-Aminobiphenyl	92-67-1	502	< 502	
4-Bromophenyl phenyl ether	101-55-3	502	< 502	
4-Chloro-3-methylphenol	59-50-7	502	< 502	
4-Chloroaniline	106-47-8	502	< 502	
4-Chlorophenyl phenyl ether	7005-72-3	502	< 502	
4-Nitroaniline	100-01-6	1,480	< 1,480	
4-Nitrophenol	100-02-7	988	< 988	
5-Nitro-o-toluidine	99-55-8	502	< 502	
7,12-Dimethylbenz(a)anthracene	57-97-6	502	< 502	
a,a-Dimethylphenethylamine	122-09-8	988	< 988	
Acenaphthene	83-32-9	502	< 502	
Acenaphthylene	208-96-8	502	< 502	
Acetophenone	98-86-2	502	< 502	
alpha-Terpineol	98-55-5	502	< 502	
Aniline	62-53-3	988	< 988	
Anthracene	120-12-7	502	< 502	
Aramite	140-57-8	988	< 988	
Azobenzene	103-33-3	502	< 502	
Benz(a)anthracene	56-55-3	502	< 502	
Benzidine	92-87-5	1,980	< 1,980	
Benzo(a)pyrene	50-32-8	502	< 502	
Benzo(b)fluoranthene	205-99-2	502	< 502	
Benzo(g,h,i)perylene	191-24-2	502	< 502	
Benzo(k)fluoranthene	207-08-9	502	< 502	
Benzoic acid	65-85-0	1,480	< 1,480	
Benzyl alcohol	100-51-6	502	< 502	
Bis(2-chloroethoxy)methane	111-91-1	502	< 502	
Bis(2-chloroethyl) ether	111-44-4	502	< 502	
Bis(2-chloroisopropyl) ether	108-60-1	502	< 502	
Bis(2-ethylhexyl) phthalate	117-81-7	502	< 502	
bis(2-ethylhexyl)adipate	103-23-1	988	**1,560**	

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Kyle F. Gross
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Jose Rocha
QA Officer

Lab Sample ID: 1108511-006C
Client Sample ID: Parleys Cr. Below 1700 E. - Bank

Analyzed: 9/2/2011 0044h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Butyl benzyl phthalate	85-68-7	502	< 502	
Carbazole	86-74-8	502	< 502	
Chlorobenzilate	510-15-6	502	< 502	
Chrysene	218-01-9	502	< 502	
Di-n-butyl phthalate	84-74-2	502	< 502	
Di-n-octyl phthalate	117-84-0	502	< 502	
Diallate (cis or trans)	2303-16-4	502	< 502	
Dibenz(a,h)anthracene	53-70-3	502	< 502	
Dibenzofuran	132-64-9	502	< 502	
Diethyl phthalate	84-66-2	502	< 502	
Dimethoate	60-51-5	502	< 502	
Dimethyl phthalate	131-11-3	502	< 502	
Dimethylaminoazobenzene	60-11-7	502	< 502	
Dinoseb	88-85-7	988	< 988	
Diphenylamine	122-39-4	502	< 502	
Disulfoton	298-04-4	502	< 502	
Ethyl methanesulfonate	62-50-0	502	< 502	
Famphur	52-85-7	502	< 502	
Fluoranthene	206-44-0	502	< 502	
Fluorene	86-73-7	502	< 502	
Hexachlorobenzene	118-74-1	502	< 502	
Hexachlorobutadiene	87-68-3	502	< 502	
Hexachlorocyclopentadiene	77-47-4	502	< 502	
Hexachloroethane	67-72-1	502	< 502	
Hexachlorophene	70-30-4	502	< 502	
Hexachloropropene	1888-71-7	502	< 502	
Indene	95-13-6	502	< 502	
Indeno(1,2,3-cd)pyrene	193-39-5	502	< 502	
Isodrin	465-73-6	502	< 502	
Isophorone	78-59-1	502	< 502	
Isosafrole	120-58-1	502	< 502	
Kepone	143-50-0	502	< 502	
Methapyrilene	91-80-5	988	< 988	
Methyl methanesulfonate	66-27-3	502	< 502	
n-Decane	124-18-5	502	< 502	
N-Nitrosodi-n-butylamine	924-16-3	502	< 502	
N-Nitrosodiethylamine	55-18-5	502	< 502	

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Jose Rocha
QA Officer

Lab Sample ID: 1108511-006C
Client Sample ID: Parleys Cr. Below 1700 E. - Bank

Analyzed: 9/2/2011 0044h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
N-Nitrosodimethylamine	62-75-9	988	< 988	
N-Nitrosodiphenylamine	86-30-6	502	< 502	
N-Nitrosodi-n-propylamine	621-64-7	502	< 502	
N-Nitrosomethylethylamine	10595-95-6	502	< 502	
N-Nitrosomorpholine	59-89-2	502	< 502	
N-Nitrosopiperidine	100-75-4	502	< 502	
N-Nitrosopyrrolidine	930-55-2	502	< 502	
n-Octadecane	593-45-3	502	< 502	
Naphthalene	91-20-3	502	< 502	
Nitrobenzene	98-95-3	502	< 502	
Nitroquinoline-1-oxide	56-57-5	988	< 988	
O,O,O-Triethyl phosphorothioate	126-68-1	502	< 502	
o-Toluidine	95-53-4	502	< 502	
Parathion	56-38-2	502	< 502	
Methyl parathion	298-00-0	502	< 502	
Pentachlorobenzene	608-93-5	502	< 502	
Pentachloronitrobenzene	82-68-8	502	< 502	
Pentachlorophenol	87-86-5	502	< 502	
Phenacetin	62-44-2	502	< 502	
Phenanthrene	85-01-8	502	< 502	
Phenol	108-95-2	502	< 502	
Phorate	298-02-2	502	< 502	
Pronamide	23950-58-5	502	< 502	
Pyrene	129-00-0	502	< 502	
Pyridine	110-86-1	988	< 988	
Quinoline	91-22-5	502	< 502	
Safrole	94-59-7	502	< 502	
Tetraethyl dithiopyrophosphate	3689-24-5	502	< 502	
Thionazin	297-97-2	502	< 502	
Surr: 2,4,6-Tribromophenol	118-79-6	10-237	**97.4**	
Surr: 2-Fluorobiphenyl	321-60-8	17-179	**78.8**	
Surr: 2-Fluorophenol	367-12-4	10-186	**73.1**	
Surr: Nitrobenzene-d5	4165-60-0	10-166	**81.9**	
Surr: Phenol-d6	13127-88-3	10-194	**81.6**	
Surr: Terphenyl-d14	1718-51-0	10-265	**125**	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.
This sample was analyzed for TICs. Those results can be found on pages 363 to 372.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-007C
Client Sample ID: Parleys Cr. Above 2000 E.
Collection Date: 8/25/2011 0900h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/1/2011 0257h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

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	20.0	< 20.0	
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	
2-Nitrophenol	88-75-5	10.0	< 10.0	

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Lab Sample ID: 1108511-007C
Client Sample ID: Parleys Cr. Above 2000 E.

Analyzed: 9/1/2011 0257h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	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	
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	

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Lab Sample ID: 1108511-007C
Client Sample ID: Parleys Cr. Above 2000 E.

Analyzed: 9/1/2011 0257h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
bis(2-ethylhexyl)adipate	103-23-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	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	
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	

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Lab Sample ID: 1108511-007C
Client Sample ID: Parleys Cr. Above 2000 E.

Analyzed: 9/1/2011 0257h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	
Surr: 2,4,6-Tribromophenol	118-79-6	14-159	**89.2**	
Surr: 2-Fluorobiphenyl	321-60-8	10-124	**43.4**	
Surr: 2-Fluorophenol	367-12-4	10-106	**32.8**	
Surr: Nitrobenzene-d5	4165-60-0	10-180	**40.7**	
Surr: Phenol-d6	13127-88-3	10-122	**27.5**	
Surr: Terphenyl-d14	1718-51-0	10-199	**81.0**	

This sample was analyzed for TICs. Those results can be found on pages 293 to 297.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-008C
Client Sample ID: Parleys Cr. Above 2000 E. - Bed
Collection Date: 8/25/2011 0900h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/2/2011 0110h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	501	< 501	
1,2,4,5-Tetrachlorobenzene	95-94-3	501	< 501	
1,2,4-Trichlorobenzene	120-82-1	501	< 501	
1,2-Dichlorobenzene	95-50-1	501	< 501	
1,3,5-Trinitrobenzene	99-35-4	501	< 501	
1,4-Naphthoquinone	130-15-4	988	< 988	
1,3-Dichlorobenzene	541-73-1	501	< 501	
1,3-Dinitrobenzene	99-65-0	501	< 501	
1,4-Dichlorobenzene	106-46-7	501	< 501	
1,4-Phenylenediamine	106-50-3	501	< 501	
1-Chloronaphthalene	90-13-1	501	< 501	
1-Methylnaphthalene	90-12-0	501	< 501	
1-Naphthylamine	134-32-7	988	< 988	
2,3,4,6-Tetrachlorophenol	58-90-2	501	< 501	
2,4,5-Trichlorophenol	95-95-4	501	< 501	
2,4,6-Trichlorophenol	88-06-2	501	< 501	
2,4-Dichlorophenol	120-83-2	501	< 501	
2,4-Dimethylphenol	105-67-9	501	< 501	
2,4-Dinitrophenol	51-28-5	988	< 988	
2,4-Dinitrotoluene	121-14-2	501	< 501	
2,6-Dichlorophenol	87-65-0	501	< 501	
2,6-Dinitrotoluene	606-20-2	501	< 501	
2-Acetylaminofluorene	53-96-3	501	< 501	
2-Chloronaphthalene	91-58-7	501	< 501	
2-Chlorophenol	95-57-8	501	< 501	
2-Methylnaphthalene	91-57-6	501	< 501	
2-Methylphenol	95-48-7	501	< 501	
2-Naphthylamine	91-59-8	988	< 988	
2-Nitroaniline	88-74-4	501	< 501	
2-Nitrophenol	88-75-5	501	< 501	
2-Picoline	109-06-8	501	< 501	

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Jose Rocha
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Lab Sample ID: 1108511-008C
Client Sample ID: Parleys Cr. Above 2000 E. - Bed

Analyzed: 9/2/2011 0110h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
3&4-Methylphenol		501	< 501	
3,3´-Dichlorobenzidine	91-94-1	501	< 501	
3,3´-Dimethylbenzidine	119-93-7	988	< 988	
3-Methylcholanthrene	56-49-5	501	< 501	
3-Nitroaniline	99-09-2	1,470	< 1,470	
4,6-Dinitro-2-methylphenol	534-52-1	988	< 988	
4-Aminobiphenyl	92-67-1	501	< 501	
4-Bromophenyl phenyl ether	101-55-3	501	< 501	
4-Chloro-3-methylphenol	59-50-7	501	< 501	
4-Chloroaniline	106-47-8	501	< 501	
4-Chlorophenyl phenyl ether	7005-72-3	501	< 501	
4-Nitroaniline	100-01-6	1,470	< 1,470	
4-Nitrophenol	100-02-7	988	< 988	
5-Nitro-o-toluidine	99-55-8	501	< 501	
7,12-Dimethylbenz(a)anthracene	57-97-6	501	< 501	
a,a-Dimethylphenethylamine	122-09-8	988	< 988	
Acenaphthene	83-32-9	501	< 501	
Acenaphthylene	208-96-8	501	< 501	
Acetophenone	98-86-2	501	< 501	
alpha-Terpineol	98-55-5	501	< 501	
Aniline	62-53-3	988	< 988	
Anthracene	120-12-7	501	< 501	
Aramite	140-57-8	988	< 988	
Azobenzene	103-33-3	501	< 501	
Benz(a)anthracene	56-55-3	501	< 501	
Benzidine	92-87-5	1,980	< 1,980	
Benzo(a)pyrene	50-32-8	501	< 501	
Benzo(b)fluoranthene	205-99-2	501	< 501	
Benzo(g,h,i)perylene	191-24-2	501	< 501	
Benzo(k)fluoranthene	207-08-9	501	< 501	
Benzoic acid	65-85-0	1,470	**1,530**	
Benzyl alcohol	100-51-6	501	< 501	
Bis(2-chloroethoxy)methane	111-91-1	501	< 501	
Bis(2-chloroethyl) ether	111-44-4	501	< 501	
Bis(2-chloroisopropyl) ether	108-60-1	501	< 501	
Bis(2-ethylhexyl) phthalate	117-81-7	501	< 501	
bis(2-ethylhexyl)adipate	103-23-1	988	< 988	

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Jose Rocha
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Lab Sample ID: 1108511-008C
Client Sample ID: Parleys Cr. Above 2000 E. - Bed

Analyzed: 9/2/2011 0110h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Butyl benzyl phthalate	85-68-7	501	< 501	
Carbazole	86-74-8	501	< 501	
Chlorobenzilate	510-15-6	501	< 501	
Chrysene	218-01-9	501	< 501	
Di-n-butyl phthalate	84-74-2	501	< 501	
Di-n-octyl phthalate	117-84-0	501	< 501	
Diallate (cis or trans)	2303-16-4	501	< 501	
Dibenz(a,h)anthracene	53-70-3	501	< 501	
Dibenzofuran	132-64-9	501	< 501	
Diethyl phthalate	84-66-2	501	< 501	
Dimethoate	60-51-5	501	< 501	
Dimethyl phthalate	131-11-3	501	< 501	
Dimethylaminoazobenzene	60-11-7	501	< 501	
Dinoseb	88-85-7	988	< 988	
Diphenylamine	122-39-4	501	< 501	
Disulfoton	298-04-4	501	< 501	
Ethyl methanesulfonate	62-50-0	501	< 501	
Famphur	52-85-7	501	< 501	
Fluoranthene	206-44-0	501	< 501	
Fluorene	86-73-7	501	< 501	
Hexachlorobenzene	118-74-1	501	< 501	
Hexachlorobutadiene	87-68-3	501	< 501	
Hexachlorocyclopentadiene	77-47-4	501	< 501	
Hexachloroethane	67-72-1	501	< 501	
Hexachlorophene	70-30-4	501	< 501	
Hexachloropropene	1888-71-7	501	< 501	
Indene	95-13-6	501	< 501	
Indeno(1,2,3-cd)pyrene	193-39-5	501	< 501	
Isodrin	465-73-6	501	< 501	
Isophorone	78-59-1	501	< 501	
Isosafrole	120-58-1	501	< 501	
Kepone	143-50-0	501	< 501	
Methapyrilene	91-80-5	988	< 988	
Methyl methanesulfonate	66-27-3	501	< 501	
n-Decane	124-18-5	501	< 501	
N-Nitrosodi-n-butylamine	924-16-3	501	< 501	
N-Nitrosodiethylamine	55-18-5	501	< 501	

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Lab Sample ID: 1108511-008C
Client Sample ID: Parleys Cr. Above 2000 E. - Bed

Analyzed: 9/2/2011 0110h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
N-Nitrosodimethylamine	62-75-9	988	< 988	
N-Nitrosodiphenylamine	86-30-6	501	< 501	
N-Nitrosodi-n-propylamine	621-64-7	501	< 501	
N-Nitrosomethylethylamine	10595-95-6	501	< 501	
N-Nitrosomorpholine	59-89-2	501	< 501	
N-Nitrosopiperidine	100-75-4	501	< 501	
N-Nitrosopyrrolidine	930-55-2	501	< 501	
n-Octadecane	593-45-3	501	< 501	
Naphthalene	91-20-3	501	< 501	
Nitrobenzene	98-95-3	501	< 501	
Nitroquinoline-1-oxide	56-57-5	988	< 988	
O,O,O-Triethyl phosphorothioate	126-68-1	501	< 501	
o-Toluidine	95-53-4	501	< 501	
Parathion	56-38-2	501	< 501	
Methyl parathion	298-00-0	501	< 501	
Pentachlorobenzene	608-93-5	501	< 501	
Pentachloronitrobenzene	82-68-8	501	< 501	
Pentachlorophenol	87-86-5	501	< 501	
Phenacetin	62-44-2	501	< 501	
Phenanthrene	85-01-8	501	< 501	
Phenol	108-95-2	501	**640**	
Phorate	298-02-2	501	< 501	
Pronamide	23950-58-5	501	< 501	
Pyrene	129-00-0	501	< 501	
Pyridine	110-86-1	988	< 988	
Quinoline	91-22-5	501	< 501	
Safrole	94-59-7	501	< 501	
Tetraethyl dithiopyrophosphate	3689-24-5	501	< 501	
Thionazin	297-97-2	501	< 501	
Surr: 2,4,6-Tribromophenol	118-79-6	10-237	**97.1**	
Surr: 2-Fluorobiphenyl	321-60-8	17-179	**85.5**	
Surr: 2-Fluorophenol	367-12-4	10-186	**75.7**	
Surr: Nitrobenzene-d5	4165-60-0	10-166	**84.4**	
Surr: Phenol-d6	13127-88-3	10-194	**83.4**	
Surr: Terphenyl-d14	1718-51-0	10-265	**125**	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.
This sample was analyzed for TICs. Those results can be found on pages 373 to 387.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-009C
Client Sample ID: Parleys Cr. Above 2000 E. - Bank
Collection Date: 8/25/2011 0900h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/2/2011 0135h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

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Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	389	< 389	
1,2,4,5-Tetrachlorobenzene	95-94-3	389	< 389	
1,2,4-Trichlorobenzene	120-82-1	389	< 389	
1,2-Dichlorobenzene	95-50-1	389	< 389	
1,3,5-Trinitrobenzene	99-35-4	389	< 389	
1,4-Naphthoquinone	130-15-4	766	< 766	
1,3-Dichlorobenzene	541-73-1	389	< 389	
1,3-Dinitrobenzene	99-65-0	389	< 389	
1,4-Dichlorobenzene	106-46-7	389	< 389	
1,4-Phenylenediamine	106-50-3	389	< 389	
1-Chloronaphthalene	90-13-1	389	< 389	
1-Methylnaphthalene	90-12-0	389	< 389	
1-Naphthylamine	134-32-7	766	< 766	
2,3,4,6-Tetrachlorophenol	58-90-2	389	< 389	
2,4,5-Trichlorophenol	95-95-4	389	< 389	
2,4,6-Trichlorophenol	88-06-2	389	< 389	
2,4-Dichlorophenol	120-83-2	389	< 389	
2,4-Dimethylphenol	105-67-9	389	< 389	
2,4-Dinitrophenol	51-28-5	766	< 766	
2,4-Dinitrotoluene	121-14-2	389	< 389	
2,6-Dichlorophenol	87-65-0	389	< 389	
2,6-Dinitrotoluene	606-20-2	389	< 389	
2-Acetylaminofluorene	53-96-3	389	< 389	
2-Chloronaphthalene	91-58-7	389	< 389	
2-Chlorophenol	95-57-8	389	< 389	
2-Methylnaphthalene	91-57-6	389	< 389	
2-Methylphenol	95-48-7	389	< 389	
2-Naphthylamine	91-59-8	766	< 766	
2-Nitroaniline	88-74-4	389	< 389	
2-Nitrophenol	88-75-5	389	< 389	
2-Picoline	109-06-8	389	< 389	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-009C
Client Sample ID: Parleys Cr. Above 2000 E. - Bank

Analyzed: 9/2/2011 0135h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
3&4-Methylphenol		389	< 389	
3,3´-Dichlorobenzidine	91-94-1	389	< 389	
3,3´-Dimethylbenzidine	119-93-7	766	< 766	
3-Methylcholanthrene	56-49-5	389	< 389	
3-Nitroaniline	99-09-2	1,140	< 1,140	
4,6-Dinitro-2-methylphenol	534-52-1	766	< 766	
4-Aminobiphenyl	92-67-1	389	< 389	
4-Bromophenyl phenyl ether	101-55-3	389	< 389	
4-Chloro-3-methylphenol	59-50-7	389	< 389	
4-Chloroaniline	106-47-8	389	< 389	
4-Chlorophenyl phenyl ether	7005-72-3	389	< 389	
4-Nitroaniline	100-01-6	1,140	< 1,140	
4-Nitrophenol	100-02-7	766	< 766	
5-Nitro-o-toluidine	99-55-8	389	< 389	
7,12-Dimethylbenz(a)anthracene	57-97-6	389	< 389	
a,a-Dimethylphenethylamine	122-09-8	766	< 766	
Acenaphthene	83-32-9	389	< 389	
Acenaphthylene	208-96-8	389	< 389	
Acetophenone	98-86-2	389	< 389	
alpha-Terpineol	98-55-5	389	< 389	
Aniline	62-53-3	766	< 766	
Anthracene	120-12-7	389	< 389	
Aramite	140-57-8	766	< 766	
Azobenzene	103-33-3	389	< 389	
Benz(a)anthracene	56-55-3	389	< 389	
Benzidine	92-87-5	1,530	< 1,530	
Benzo(a)pyrene	50-32-8	389	< 389	
Benzo(b)fluoranthene	205-99-2	389	< 389	
Benzo(g,h,i)perylene	191-24-2	389	< 389	
Benzo(k)fluoranthene	207-08-9	389	< 389	
Benzoic acid	65-85-0	1,140	< 1,140	
Benzyl alcohol	100-51-6	389	< 389	
Bis(2-chloroethoxy)methane	111-91-1	389	< 389	
Bis(2-chloroethyl) ether	111-44-4	389	< 389	
Bis(2-chloroisopropyl) ether	108-60-1	389	< 389	
Bis(2-ethylhexyl) phthalate	117-81-7	389	< 389	
bis(2-ethylhexyl)adipate	103-23-1	766	< 766	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-009C
Client Sample ID: Parleys Cr. Above 2000 E. - Bank

Analyzed: 9/2/2011 0135h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Butyl benzyl phthalate	85-68-7	389	< 389	
Carbazole	86-74-8	389	< 389	
Chlorobenzilate	510-15-6	389	< 389	
Chrysene	218-01-9	389	< 389	
Di-n-butyl phthalate	84-74-2	389	< 389	
Di-n-octyl phthalate	117-84-0	389	< 389	
Diallate (cis or trans)	2303-16-4	389	< 389	
Dibenz(a,h)anthracene	53-70-3	389	< 389	
Dibenzofuran	132-64-9	389	< 389	
Diethyl phthalate	84-66-2	389	< 389	
Dimethoate	60-51-5	389	< 389	
Dimethyl phthalate	131-11-3	389	< 389	
Dimethylaminoazobenzene	60-11-7	389	< 389	
Dinoseb	88-85-7	766	< 766	
Diphenylamine	122-39-4	389	< 389	
Disulfoton	298-04-4	389	< 389	
Ethyl methanesulfonate	62-50-0	389	< 389	
Famphur	52-85-7	389	< 389	
Fluoranthene	206-44-0	389	< 389	
Fluorene	86-73-7	389	< 389	
Hexachlorobenzene	118-74-1	389	< 389	
Hexachlorobutadiene	87-68-3	389	< 389	
Hexachlorocyclopentadiene	77-47-4	389	< 389	
Hexachloroethane	67-72-1	389	< 389	
Hexachlorophene	70-30-4	389	< 389	
Hexachloropropene	1888-71-7	389	< 389	
Indene	95-13-6	389	< 389	
Indeno(1,2,3-cd)pyrene	193-39-5	389	< 389	
Isodrin	465-73-6	389	< 389	
Isophorone	78-59-1	389	< 389	
Isosafrole	120-58-1	389	< 389	
Kepone	143-50-0	389	< 389	
Methapyrilene	91-80-5	766	< 766	
Methyl methanesulfonate	66-27-3	389	< 389	
n-Decane	124-18-5	389	< 389	
N-Nitrosodi-n-butylamine	924-16-3	389	< 389	
N-Nitrosodiethylamine	55-18-5	389	< 389	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-009C
Client Sample ID: Parleys Cr. Above 2000 E. - Bank

Analyzed: 9/2/2011 0135h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
N-Nitrosodimethylamine	62-75-9	766	< 766	
N-Nitrosodiphenylamine	86-30-6	389	< 389	
N-Nitrosodi-n-propylamine	621-64-7	389	< 389	
N-Nitrosomethylethylamine	10595-95-6	389	< 389	
N-Nitrosomorpholine	59-89-2	389	< 389	
N-Nitrosopiperidine	100-75-4	389	< 389	
N-Nitrosopyrrolidine	930-55-2	389	< 389	
n-Octadecane	593-45-3	389	< 389	
Naphthalene	91-20-3	389	< 389	
Nitrobenzene	98-95-3	389	< 389	
Nitroquinoline-1-oxide	56-57-5	766	< 766	
O,O,O-Triethyl phosphorothioate	126-68-1	389	< 389	
o-Toluidine	95-53-4	389	< 389	
Parathion	56-38-2	389	< 389	
Methyl parathion	298-00-0	389	< 389	
Pentachlorobenzene	608-93-5	389	< 389	
Pentachloronitrobenzene	82-68-8	389	< 389	
Pentachlorophenol	87-86-5	389	< 389	
Phenacetin	62-44-2	389	< 389	
Phenanthrene	85-01-8	389	< 389	
Phenol	108-95-2	389	< 389	
Phorate	298-02-2	389	< 389	
Pronamide	23950-58-5	389	< 389	
Pyrene	129-00-0	389	< 389	
Pyridine	110-86-1	766	< 766	
Quinoline	91-22-5	389	< 389	
Safrole	94-59-7	389	< 389	
Tetraethyl dithiopyrophosphate	3689-24-5	389	< 389	
Thionazin	297-97-2	389	< 389	
Surr: 2,4,6-Tribromophenol	118-79-6	10-237	**89.4**	
Surr: 2-Fluorobiphenyl	321-60-8	17-179	**77.3**	
Surr: 2-Fluorophenol	367-12-4	10-186	**69.2**	
Surr: Nitrobenzene-d5	4165-60-0	10-166	**77.0**	
Surr: Phenol-d6	13127-88-3	10-194	**77.0**	
Surr: Terphenyl-d14	1718-51-0	10-265	**112**	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.
This sample was analyzed for TICs. Those results can be found on pages 388 to 401.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-010C
Client Sample ID: Parleys Cr. Above I-215
Collection Date: 8/25/2011 0950h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/1/2011 0322h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

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	20.0	< 20.0	
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	
2-Nitrophenol	88-75-5	10.0	< 10.0	

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Kyle F. Gross
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Jose Rocha
QA Officer

Lab Sample ID: 1108511-010C
Client Sample ID: Parleys Cr. Above I-215

Analyzed: 9/1/2011 0322h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	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	
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	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-010C
Client Sample ID: Parleys Cr. Above I-215

Analyzed: 9/1/2011 0322h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
bis(2-ethylhexyl)adipate	103-23-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	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	
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	

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Jose Rocha
QA Officer

Lab Sample ID: 1108511-010C
Client Sample ID: Parleys Cr. Above I-215

Analyzed: 9/1/2011 0322h **Extracted:** 8/29/2011 0854h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	
Surr: 2,4,6-Tribromophenol	118-79-6	14-159	**89.5**	
Surr: 2-Fluorobiphenyl	321-60-8	10-124	**45.6**	
Surr: 2-Fluorophenol	367-12-4	10-106	**32.5**	
Surr: Nitrobenzene-d5	4165-60-0	10-180	**39.1**	
Surr: Phenol-d6	13127-88-3	10-122	**27.0**	
Surr: Terphenyl-d14	1718-51-0	10-199	**85.4**	

This sample was analyzed for TICs. Those results can be found on pages 298 to 301.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-011C
Client Sample ID: Parleys Cr. Above I-215 - Bed
Collection Date: 8/25/2011 0950h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/2/2011 0202h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	434	< 434	
1,2,4,5-Tetrachlorobenzene	95-94-3	434	< 434	
1,2,4-Trichlorobenzene	120-82-1	434	< 434	
1,2-Dichlorobenzene	95-50-1	434	< 434	
1,3,5-Trinitrobenzene	99-35-4	434	< 434	
1,4-Naphthoquinone	130-15-4	855	< 855	
1,3-Dichlorobenzene	541-73-1	434	< 434	
1,3-Dinitrobenzene	99-65-0	434	< 434	
1,4-Dichlorobenzene	106-46-7	434	< 434	
1,4-Phenylenediamine	106-50-3	434	< 434	
1-Chloronaphthalene	90-13-1	434	< 434	
1-Methylnaphthalene	90-12-0	434	< 434	
1-Naphthylamine	134-32-7	855	< 855	
2,3,4,6-Tetrachlorophenol	58-90-2	434	< 434	
2,4,5-Trichlorophenol	95-95-4	434	< 434	
2,4,6-Trichlorophenol	88-06-2	434	< 434	
2,4-Dichlorophenol	120-83-2	434	< 434	
2,4-Dimethylphenol	105-67-9	434	< 434	
2,4-Dinitrophenol	51-28-5	855	< 855	
2,4-Dinitrotoluene	121-14-2	434	< 434	
2,6-Dichlorophenol	87-65-0	434	< 434	
2,6-Dinitrotoluene	606-20-2	434	< 434	
2-Acetylaminofluorene	53-96-3	434	< 434	
2-Chloronaphthalene	91-58-7	434	< 434	
2-Chlorophenol	95-57-8	434	< 434	
2-Methylnaphthalene	91-57-6	434	< 434	
2-Methylphenol	95-48-7	434	< 434	
2-Naphthylamine	91-59-8	855	< 855	
2-Nitroaniline	88-74-4	434	< 434	
2-Nitrophenol	88-75-5	434	< 434	
2-Picoline	109-06-8	434	< 434	

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Kyle F. Gross
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Jose Rocha
QA Officer

Lab Sample ID: 1108511-011C
Client Sample ID: Parleys Cr. Above I-215 - Bed

Analyzed: 9/2/2011 0202h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
3&4-Methylphenol		434	< 434	
3,3´-Dichlorobenzidine	91-94-1	434	< 434	
3,3´-Dimethylbenzidine	119-93-7	855	< 855	
3-Methylcholanthrene	56-49-5	434	< 434	
3-Nitroaniline	99-09-2	1,280	< 1,280	
4,6-Dinitro-2-methylphenol	534-52-1	855	< 855	
4-Aminobiphenyl	92-67-1	434	< 434	
4-Bromophenyl phenyl ether	101-55-3	434	< 434	
4-Chloro-3-methylphenol	59-50-7	434	< 434	
4-Chloroaniline	106-47-8	434	< 434	
4-Chlorophenyl phenyl ether	7005-72-3	434	< 434	
4-Nitroaniline	100-01-6	1,280	< 1,280	
4-Nitrophenol	100-02-7	855	< 855	
5-Nitro-o-toluidine	99-55-8	434	< 434	
7,12-Dimethylbenz(a)anthracene	57-97-6	434	< 434	
a,a-Dimethylphenethylamine	122-09-8	855	< 855	
Acenaphthene	83-32-9	434	< 434	
Acenaphthylene	208-96-8	434	< 434	
Acetophenone	98-86-2	434	< 434	
alpha-Terpineol	98-55-5	434	< 434	
Aniline	62-53-3	855	< 855	
Anthracene	120-12-7	434	< 434	
Aramite	140-57-8	855	< 855	
Azobenzene	103-33-3	434	< 434	
Benz(a)anthracene	56-55-3	434	< 434	
Benzidine	92-87-5	1,710	< 1,710	
Benzo(a)pyrene	50-32-8	434	< 434	
Benzo(b)fluoranthene	205-99-2	434	< 434	
Benzo(g,h,i)perylene	191-24-2	434	< 434	
Benzo(k)fluoranthene	207-08-9	434	< 434	
Benzoic acid	65-85-0	1,280	< 1,280	
Benzyl alcohol	100-51-6	434	< 434	
Bis(2-chloroethoxy)methane	111-91-1	434	< 434	
Bis(2-chloroethyl) ether	111-44-4	434	< 434	
Bis(2-chloroisopropyl) ether	108-60-1	434	< 434	
Bis(2-ethylhexyl) phthalate	117-81-7	434	< 434	
bis(2-ethylhexyl)adipate	103-23-1	855	< 855	

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Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-011C
Client Sample ID: Parleys Cr. Above I-215 - Bed

Analyzed: 9/2/2011 0202h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Butyl benzyl phthalate	85-68-7	434	< 434	
Carbazole	86-74-8	434	< 434	
Chlorobenzilate	510-15-6	434	< 434	
Chrysene	218-01-9	434	< 434	
Di-n-butyl phthalate	84-74-2	434	< 434	
Di-n-octyl phthalate	117-84-0	434	< 434	
Diallate (cis or trans)	2303-16-4	434	< 434	
Dibenz(a,h)anthracene	53-70-3	434	< 434	
Dibenzofuran	132-64-9	434	< 434	
Diethyl phthalate	84-66-2	434	< 434	
Dimethoate	60-51-5	434	< 434	
Dimethyl phthalate	131-11-3	434	< 434	
Dimethylaminoazobenzene	60-11-7	434	< 434	
Dinoseb	88-85-7	855	< 855	
Diphenylamine	122-39-4	434	< 434	
Disulfoton	298-04-4	434	< 434	
Ethyl methanesulfonate	62-50-0	434	< 434	
Famphur	52-85-7	434	< 434	
Fluoranthene	206-44-0	434	< 434	
Fluorene	86-73-7	434	< 434	
Hexachlorobenzene	118-74-1	434	< 434	
Hexachlorobutadiene	87-68-3	434	< 434	
Hexachlorocyclopentadiene	77-47-4	434	< 434	
Hexachloroethane	67-72-1	434	< 434	
Hexachlorophene	70-30-4	434	< 434	
Hexachloropropene	1888-71-7	434	< 434	
Indene	95-13-6	434	< 434	
Indeno(1,2,3-cd)pyrene	193-39-5	434	< 434	
Isodrin	465-73-6	434	< 434	
Isophorone	78-59-1	434	< 434	
Isosafrole	120-58-1	434	< 434	
Kepone	143-50-0	434	< 434	
Methapyrilene	91-80-5	855	< 855	
Methyl methanesulfonate	66-27-3	434	< 434	
n-Decane	124-18-5	434	< 434	
N-Nitrosodi-n-butylamine	924-16-3	434	< 434	
N-Nitrosodiethylamine	55-18-5	434	< 434	

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Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-011C
Client Sample ID: Parleys Cr. Above I-215 - Bed

Analyzed: 9/2/2011 0202h **Extracted:** 8/26/2011 1505h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
N-Nitrosodimethylamine	62-75-9	855	< 855	
N-Nitrosodiphenylamine	86-30-6	434	< 434	
N-Nitrosodi-n-propylamine	621-64-7	434	< 434	
N-Nitrosomethylethylamine	10595-95-6	434	< 434	
N-Nitrosomorpholine	59-89-2	434	< 434	
N-Nitrosopiperidine	100-75-4	434	< 434	
N-Nitrosopyrrolidine	930-55-2	434	< 434	
n-Octadecane	593-45-3	434	< 434	
Naphthalene	91-20-3	434	< 434	
Nitrobenzene	98-95-3	434	< 434	
Nitroquinoline-1-oxide	56-57-5	855	< 855	
O,O,O-Triethyl phosphorothioate	126-68-1	434	< 434	
o-Toluidine	95-53-4	434	< 434	
Parathion	56-38-2	434	< 434	
Methyl parathion	298-00-0	434	< 434	
Pentachlorobenzene	608-93-5	434	< 434	
Pentachloronitrobenzene	82-68-8	434	< 434	
Pentachlorophenol	87-86-5	434	< 434	
Phenacetin	62-44-2	434	< 434	
Phenanthrene	85-01-8	434	< 434	
Phenol	108-95-2	434	< 434	
Phorate	298-02-2	434	< 434	
Pronamide	23950-58-5	434	< 434	
Pyrene	129-00-0	434	< 434	
Pyridine	110-86-1	855	< 855	
Quinoline	91-22-5	434	< 434	
Safrole	94-59-7	434	< 434	
Tetraethyl dithiopyrophosphate	3689-24-5	434	< 434	
Thionazin	297-97-2	434	< 434	
Surr: 2,4,6-Tribromophenol	118-79-6	10-237	**82.7**	
Surr: 2-Fluorobiphenyl	321-60-8	17-179	**71.7**	
Surr: 2-Fluorophenol	367-12-4	10-186	**64.7**	
Surr: Nitrobenzene-d5	4165-60-0	10-166	**73.2**	
Surr: Phenol-d6	13127-88-3	10-194	**71.8**	
Surr: Terphenyl-d14	1718-51-0	10-265	**102**	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.
This sample was analyzed for TICs. Those results can be found on pages 402-415.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-012C
Client Sample ID: Parleys Cr. Above I-215 - Bank
Collection Date: 8/25/2011 0950h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/7/2011 0219h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	452	< 452	
1,2,4,5-Tetrachlorobenzene	95-94-3	452	< 452	
1,2,4-Trichlorobenzene	120-82-1	452	< 452	
1,2-Dichlorobenzene	95-50-1	452	< 452	
1,3,5-Trinitrobenzene	99-35-4	452	< 452	
1,4-Naphthoquinone	130-15-4	891	< 891	
1,3-Dichlorobenzene	541-73-1	452	< 452	
1,3-Dinitrobenzene	99-65-0	452	< 452	
1,4-Dichlorobenzene	106-46-7	452	< 452	
1,4-Phenylenediamine	106-50-3	452	< 452	
1-Chloronaphthalene	90-13-1	452	< 452	
1-Methylnaphthalene	90-12-0	452	< 452	
1-Naphthylamine	134-32-7	891	< 891	
2,3,4,6-Tetrachlorophenol	58-90-2	452	< 452	
2,4,5-Trichlorophenol	95-95-4	452	< 452	
2,4,6-Trichlorophenol	88-06-2	452	< 452	
2,4-Dichlorophenol	120-83-2	452	< 452	
2,4-Dimethylphenol	105-67-9	452	< 452	
2,4-Dinitrophenol	51-28-5	891	< 891	
2,4-Dinitrotoluene	121-14-2	452	< 452	
2,6-Dichlorophenol	87-65-0	452	< 452	
2,6-Dinitrotoluene	606-20-2	452	< 452	
2-Acetylaminofluorene	53-96-3	452	< 452	
2-Chloronaphthalene	91-58-7	452	< 452	
2-Chlorophenol	95-57-8	452	< 452	
2-Methylnaphthalene	91-57-6	452	< 452	
2-Methylphenol	95-48-7	452	< 452	
2-Naphthylamine	91-59-8	891	< 891	
2-Nitroaniline	88-74-4	452	< 452	
2-Nitrophenol	88-75-5	452	< 452	
2-Picoline	109-06-8	452	< 452	

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Kyle F. Gross
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QA Officer

Lab Sample ID: 1108511-012C
Client Sample ID: Parleys Cr. Above I-215 - Bank

Analyzed: 9/7/2011 0219h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
3&4-Methylphenol		452	< 452	
3,3´-Dichlorobenzidine	91-94-1	452	< 452	
3,3´-Dimethylbenzidine	119-93-7	891	< 891	
3-Methylcholanthrene	56-49-5	452	< 452	
3-Nitroaniline	99-09-2	1,330	< 1,330	
4,6-Dinitro-2-methylphenol	534-52-1	891	< 891	
4-Aminobiphenyl	92-67-1	452	< 452	
4-Bromophenyl phenyl ether	101-55-3	452	< 452	
4-Chloro-3-methylphenol	59-50-7	452	< 452	
4-Chloroaniline	106-47-8	452	< 452	
4-Chlorophenyl phenyl ether	7005-72-3	452	< 452	
4-Nitroaniline	100-01-6	1,330	< 1,330	
4-Nitrophenol	100-02-7	891	< 891	
5-Nitro-o-toluidine	99-55-8	452	< 452	
7,12-Dimethylbenz(a)anthracene	57-97-6	452	< 452	
a,a-Dimethylphenethylamine	122-09-8	891	< 891	
Acenaphthene	83-32-9	452	< 452	
Acenaphthylene	208-96-8	452	< 452	
Acetophenone	98-86-2	452	< 452	
alpha-Terpineol	98-55-5	452	< 452	
Aniline	62-53-3	891	< 891	
Anthracene	120-12-7	452	< 452	
Aramite	140-57-8	891	< 891	
Azobenzene	103-33-3	452	< 452	
Benz(a)anthracene	56-55-3	452	< 452	
Benzidine	92-87-5	1,780	< 1,780	
Benzo(a)pyrene	50-32-8	452	< 452	
Benzo(b)fluoranthene	205-99-2	452	< 452	
Benzo(g,h,i)perylene	191-24-2	452	< 452	
Benzo(k)fluoranthene	207-08-9	452	< 452	
Benzoic acid	65-85-0	1,330	< 1,330	
Benzyl alcohol	100-51-6	452	< 452	
Bis(2-chloroethoxy)methane	111-91-1	452	< 452	
Bis(2-chloroethyl) ether	111-44-4	452	< 452	
Bis(2-chloroisopropyl) ether	108-60-1	452	< 452	
Bis(2-ethylhexyl) phthalate	117-81-7	452	< 452	
bis(2-ethylhexyl)adipate	103-23-1	891	**1,170**	

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Jose Rocha
QA Officer

Lab Sample ID: 1108511-012C
Client Sample ID: Parleys Cr. Above I-215 - Bank

Analyzed: 9/7/2011 0219h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Butyl benzyl phthalate	85-68-7	452	< 452	
Carbazole	86-74-8	452	< 452	
Chlorobenzilate	510-15-6	452	< 452	
Chrysene	218-01-9	452	< 452	
Di-n-butyl phthalate	84-74-2	452	< 452	
Di-n-octyl phthalate	117-84-0	452	< 452	
Diallate (cis or trans)	2303-16-4	452	< 452	
Dibenz(a,h)anthracene	53-70-3	452	< 452	
Dibenzofuran	132-64-9	452	< 452	
Diethyl phthalate	84-66-2	452	< 452	
Dimethoate	60-51-5	452	< 452	
Dimethyl phthalate	131-11-3	452	< 452	
Dimethylaminoazobenzene	60-11-7	452	< 452	
Dinoseb	88-85-7	891	< 891	
Diphenylamine	122-39-4	452	< 452	
Disulfoton	298-04-4	452	< 452	
Ethyl methanesulfonate	62-50-0	452	< 452	
Famphur	52-85-7	452	< 452	
Fluoranthene	206-44-0	452	**472**	
Fluorene	86-73-7	452	< 452	
Hexachlorobenzene	118-74-1	452	< 452	
Hexachlorobutadiene	87-68-3	452	< 452	
Hexachlorocyclopentadiene	77-47-4	452	< 452	
Hexachloroethane	67-72-1	452	< 452	
Hexachlorophene	70-30-4	452	< 452	
Hexachloropropene	1888-71-7	452	< 452	
Indene	95-13-6	452	< 452	
Indeno(1,2,3-cd)pyrene	193-39-5	452	< 452	
Isodrin	465-73-6	452	< 452	
Isophorone	78-59-1	452	< 452	
Isosafrole	120-58-1	452	< 452	
Kepone	143-50-0	452	< 452	
Methapyrilene	91-80-5	891	< 891	
Methyl methanesulfonate	66-27-3	452	< 452	
n-Decane	124-18-5	452	< 452	
N-Nitrosodi-n-butylamine	924-16-3	452	< 452	
N-Nitrosodiethylamine	55-18-5	452	< 452	

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Jose Rocha
QA Officer

Lab Sample ID: 1108511-012C
Client Sample ID: Parleys Cr. Above I-215 - Bank

Analyzed: 9/7/2011 0219h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
N-Nitrosodimethylamine	62-75-9	891	< 891	
N-Nitrosodiphenylamine	86-30-6	452	< 452	
N-Nitrosodi-n-propylamine	621-64-7	452	< 452	
N-Nitrosomethylethylamine	10595-95-6	452	< 452	
N-Nitrosomorpholine	59-89-2	452	< 452	
N-Nitrosopiperidine	100-75-4	452	< 452	
N-Nitrosopyrrolidine	930-55-2	452	< 452	
n-Octadecane	593-45-3	452	< 452	
Naphthalene	91-20-3	452	< 452	
Nitrobenzene	98-95-3	452	< 452	
Nitroquinoline-1-oxide	56-57-5	891	< 891	
O,O,O-Triethyl phosphorothioate	126-68-1	452	< 452	
o-Toluidine	95-53-4	452	< 452	
Parathion	56-38-2	452	< 452	
Methyl parathion	298-00-0	452	< 452	
Pentachlorobenzene	608-93-5	452	< 452	
Pentachloronitrobenzene	82-68-8	452	< 452	
Pentachlorophenol	87-86-5	452	< 452	
Phenacetin	62-44-2	452	< 452	
Phenanthrene	85-01-8	452	< 452	
Phenol	108-95-2	452	< 452	
Phorate	298-02-2	452	< 452	
Pronamide	23950-58-5	452	< 452	
Pyrene	129-00-0	452	**453**	
Pyridine	110-86-1	891	< 891	
Quinoline	91-22-5	452	< 452	
Safrole	94-59-7	452	< 452	
Tetraethyl dithiopyrophosphate	3689-24-5	452	< 452	
Thionazin	297-97-2	452	< 452	
Surr: 2,4,6-Tribromophenol	118-79-6	10-237	**87.8**	
Surr: 2-Fluorobiphenyl	321-60-8	17-179	**85.2**	
Surr: 2-Fluorophenol	367-12-4	10-186	**77.4**	
Surr: Nitrobenzene-d5	4165-60-0	10-166	**90.7**	
Surr: Phenol-d6	13127-88-3	10-194	**84.9**	
Surr: Terphenyl-d14	1718-51-0	10-265	**104**	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.
This sample was analyzed for TICs. Those results can be found on pages 416 to 429.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-013C
Client Sample ID: Emigration Cr. Above 1300 E.
Collection Date: 8/25/2011 1045h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/1/2011 0348h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

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	20.0	< 20.0	
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	
2-Nitrophenol	88-75-5	10.0	< 10.0	

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Lab Sample ID: 1108511-013C
Client Sample ID: Emigration Cr. Above 1300 E.

Analyzed: 9/1/2011 0348h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	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	
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	

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QA Officer

Lab Sample ID: 1108511-013C
Client Sample ID: Emigration Cr. Above 1300 E.

Analyzed: 9/1/2011 0348h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
bis(2-ethylhexyl)adipate	103-23-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	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	
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	

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Lab Sample ID: 1108511-013C
Client Sample ID: Emigration Cr. Above 1300 E.

Analyzed: 9/1/2011 0348h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	
Surr: 2,4,6-Tribromophenol	118-79-6	14-159	**95.6**	
Surr: 2-Fluorobiphenyl	321-60-8	10-124	**68.0**	
Surr: 2-Fluorophenol	367-12-4	10-106	**44.0**	
Surr: Nitrobenzene-d5	4165-60-0	10-180	**67.1**	
Surr: Phenol-d6	13127-88-3	10-122	**33.5**	
Surr: Terphenyl-d14	1718-51-0	10-199	**91.7**	

This sample was analyzed for TICs. Those results can be found on pages 302 to 308.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-014C
Client Sample ID: Emigration Cr. Above 1300 E. - Bed
Collection Date: 8/25/2011 1045h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/7/2011 0245h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	454	< 454	
1,2,4,5-Tetrachlorobenzene	95-94-3	454	< 454	
1,2,4-Trichlorobenzene	120-82-1	454	< 454	
1,2-Dichlorobenzene	95-50-1	454	< 454	
1,3,5-Trinitrobenzene	99-35-4	454	< 454	
1,4-Naphthoquinone	130-15-4	896	< 896	
1,3-Dichlorobenzene	541-73-1	454	< 454	
1,3-Dinitrobenzene	99-65-0	454	< 454	
1,4-Dichlorobenzene	106-46-7	454	< 454	
1,4-Phenylenediamine	106-50-3	454	< 454	
1-Chloronaphthalene	90-13-1	454	< 454	
1-Methylnaphthalene	90-12-0	454	< 454	
1-Naphthylamine	134-32-7	896	< 896	
2,3,4,6-Tetrachlorophenol	58-90-2	454	< 454	
2,4,5-Trichlorophenol	95-95-4	454	< 454	
2,4,6-Trichlorophenol	88-06-2	454	< 454	
2,4-Dichlorophenol	120-83-2	454	< 454	
2,4-Dimethylphenol	105-67-9	454	< 454	
2,4-Dinitrophenol	51-28-5	896	< 896	
2,4-Dinitrotoluene	121-14-2	454	< 454	
2,6-Dichlorophenol	87-65-0	454	< 454	
2,6-Dinitrotoluene	606-20-2	454	< 454	
2-Acetylaminofluorene	53-96-3	454	< 454	
2-Chloronaphthalene	91-58-7	454	< 454	
2-Chlorophenol	95-57-8	454	< 454	
2-Methylnaphthalene	91-57-6	454	< 454	
2-Methylphenol	95-48-7	454	< 454	
2-Naphthylamine	91-59-8	896	< 896	
2-Nitroaniline	88-74-4	454	< 454	
2-Nitrophenol	88-75-5	454	< 454	
2-Picoline	109-06-8	454	< 454	

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Kyle F. Gross
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Jose Rocha
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Lab Sample ID: 1108511-014C
Client Sample ID: Emigration Cr. Above 1300 E. - Bed

Analyzed: 9/7/2011 0245h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
3&4-Methylphenol		454	< 454	
3,3´-Dichlorobenzidine	91-94-1	454	< 454	
3,3´-Dimethylbenzidine	119-93-7	896	< 896	
3-Methylcholanthrene	56-49-5	454	< 454	
3-Nitroaniline	99-09-2	1,340	< 1,340	
4,6-Dinitro-2-methylphenol	534-52-1	896	< 896	
4-Aminobiphenyl	92-67-1	454	< 454	
4-Bromophenyl phenyl ether	101-55-3	454	< 454	
4-Chloro-3-methylphenol	59-50-7	454	< 454	
4-Chloroaniline	106-47-8	454	< 454	
4-Chlorophenyl phenyl ether	7005-72-3	454	< 454	
4-Nitroaniline	100-01-6	1,340	< 1,340	
4-Nitrophenol	100-02-7	896	< 896	
5-Nitro-o-toluidine	99-55-8	454	< 454	
7,12-Dimethylbenz(a)anthracene	57-97-6	454	< 454	
a,a-Dimethylphenethylamine	122-09-8	896	< 896	
Acenaphthene	83-32-9	454	< 454	
Acenaphthylene	208-96-8	454	< 454	
Acetophenone	98-86-2	454	< 454	
alpha-Terpineol	98-55-5	454	< 454	
Aniline	62-53-3	896	< 896	
Anthracene	120-12-7	454	< 454	
Aramite	140-57-8	896	< 896	
Azobenzene	103-33-3	454	< 454	
Benz(a)anthracene	56-55-3	454	< 454	
Benzidine	92-87-5	1,790	< 1,790	
Benzo(a)pyrene	50-32-8	454	< 454	
Benzo(b)fluoranthene	205-99-2	454	< 454	
Benzo(g,h,i)perylene	191-24-2	454	< 454	
Benzo(k)fluoranthene	207-08-9	454	< 454	
Benzoic acid	65-85-0	1,340	< 1,340	
Benzyl alcohol	100-51-6	454	< 454	
Bis(2-chloroethoxy)methane	111-91-1	454	< 454	
Bis(2-chloroethyl) ether	111-44-4	454	< 454	
Bis(2-chloroisopropyl) ether	108-60-1	454	< 454	
Bis(2-ethylhexyl) phthalate	117-81-7	454	< 454	
bis(2-ethylhexyl)adipate	103-23-1	896	< 896	

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Lab Sample ID: 1108511-014C
Client Sample ID: Emigration Cr. Above 1300 E. - Bed

Analyzed: 9/7/2011 0245h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Butyl benzyl phthalate	85-68-7	454	< 454	
Carbazole	86-74-8	454	< 454	
Chlorobenzilate	510-15-6	454	< 454	
Chrysene	218-01-9	454	< 454	
Di-n-butyl phthalate	84-74-2	454	< 454	
Di-n-octyl phthalate	117-84-0	454	< 454	
Diallate (cis or trans)	2303-16-4	454	< 454	
Dibenz(a,h)anthracene	53-70-3	454	< 454	
Dibenzofuran	132-64-9	454	< 454	
Diethyl phthalate	84-66-2	454	< 454	
Dimethoate	60-51-5	454	< 454	
Dimethyl phthalate	131-11-3	454	< 454	
Dimethylaminoazobenzene	60-11-7	454	< 454	
Dinoseb	88-85-7	896	< 896	
Diphenylamine	122-39-4	454	< 454	
Disulfoton	298-04-4	454	< 454	
Ethyl methanesulfonate	62-50-0	454	< 454	
Famphur	52-85-7	454	< 454	
Fluoranthene	206-44-0	454	< 454	
Fluorene	86-73-7	454	< 454	
Hexachlorobenzene	118-74-1	454	< 454	
Hexachlorobutadiene	87-68-3	454	< 454	
Hexachlorocyclopentadiene	77-47-4	454	< 454	
Hexachloroethane	67-72-1	454	< 454	
Hexachlorophene	70-30-4	454	< 454	
Hexachloropropene	1888-71-7	454	< 454	
Indene	95-13-6	454	< 454	
Indeno(1,2,3-cd)pyrene	193-39-5	454	< 454	
Isodrin	465-73-6	454	< 454	
Isophorone	78-59-1	454	< 454	
Isosafrole	120-58-1	454	< 454	
Kepone	143-50-0	454	< 454	
Methapyrilene	91-80-5	896	< 896	
Methyl methanesulfonate	66-27-3	454	< 454	
n-Decane	124-18-5	454	< 454	
N-Nitrosodi-n-butylamine	924-16-3	454	< 454	
N-Nitrosodiethylamine	55-18-5	454	< 454	

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Lab Sample ID: 1108511-014C
Client Sample ID: Emigration Cr. Above 1300 E. - Bed

Analyzed: 9/7/2011 0245h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
N-Nitrosodimethylamine	62-75-9	896	< 896	
N-Nitrosodiphenylamine	86-30-6	454	< 454	
N-Nitrosodi-n-propylamine	621-64-7	454	< 454	
N-Nitrosomethylethylamine	10595-95-6	454	< 454	
N-Nitrosomorpholine	59-89-2	454	< 454	
N-Nitrosopiperidine	100-75-4	454	< 454	
N-Nitrosopyrrolidine	930-55-2	454	< 454	
n-Octadecane	593-45-3	454	< 454	
Naphthalene	91-20-3	454	< 454	
Nitrobenzene	98-95-3	454	< 454	
Nitroquinoline-1-oxide	56-57-5	896	< 896	
O,O,O-Triethyl phosphorothioate	126-68-1	454	< 454	
o-Toluidine	95-53-4	454	< 454	
Parathion	56-38-2	454	< 454	
Methyl parathion	298-00-0	454	< 454	
Pentachlorobenzene	608-93-5	454	< 454	
Pentachloronitrobenzene	82-68-8	454	< 454	
Pentachlorophenol	87-86-5	454	< 454	
Phenacetin	62-44-2	454	< 454	
Phenanthrene	85-01-8	454	< 454	
Phenol	108-95-2	454	< 454	
Phorate	298-02-2	454	< 454	
Pronamide	23950-58-5	454	< 454	
Pyrene	129-00-0	454	< 454	
Pyridine	110-86-1	896	< 896	
Quinoline	91-22-5	454	< 454	
Safrole	94-59-7	454	< 454	
Tetraethyl dithiopyrophosphate	3689-24-5	454	< 454	
Thionazin	297-97-2	454	< 454	
Surr: 2,4,6-Tribromophenol	118-79-6	10-237	**93.1**	
Surr: 2-Fluorobiphenyl	321-60-8	17-179	**86.4**	
Surr: 2-Fluorophenol	367-12-4	10-186	**75.8**	
Surr: Nitrobenzene-d5	4165-60-0	10-166	**90.6**	
Surr: Phenol-d6	13127-88-3	10-194	**85.9**	
Surr: Terphenyl-d14	1718-51-0	10-265	**100**	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.
This sample was analyzed for TICs. Those results can be found on pages 430 to 441.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-015C
Client Sample ID: Emigration Cr. Above 1300 E. - Bank
Collection Date: 8/25/2011 1045h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/7/2011 0311h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	414	< 414	
1,2,4,5-Tetrachlorobenzene	95-94-3	414	< 414	
1,2,4-Trichlorobenzene	120-82-1	414	< 414	
1,2-Dichlorobenzene	95-50-1	414	< 414	
1,3,5-Trinitrobenzene	99-35-4	414	< 414	
1,4-Naphthoquinone	130-15-4	816	< 816	
1,3-Dichlorobenzene	541-73-1	414	< 414	
1,3-Dinitrobenzene	99-65-0	414	< 414	
1,4-Dichlorobenzene	106-46-7	414	< 414	
1,4-Phenylenediamine	106-50-3	414	< 414	
1-Chloronaphthalene	90-13-1	414	< 414	
1-Methylnaphthalene	90-12-0	414	< 414	
1-Naphthylamine	134-32-7	816	< 816	
2,3,4,6-Tetrachlorophenol	58-90-2	414	< 414	
2,4,5-Trichlorophenol	95-95-4	414	< 414	
2,4,6-Trichlorophenol	88-06-2	414	< 414	
2,4-Dichlorophenol	120-83-2	414	< 414	
2,4-Dimethylphenol	105-67-9	414	< 414	
2,4-Dinitrophenol	51-28-5	816	< 816	
2,4-Dinitrotoluene	121-14-2	414	< 414	
2,6-Dichlorophenol	87-65-0	414	< 414	
2,6-Dinitrotoluene	606-20-2	414	< 414	
2-Acetylaminofluorene	53-96-3	414	< 414	
2-Chloronaphthalene	91-58-7	414	< 414	
2-Chlorophenol	95-57-8	414	< 414	
2-Methylnaphthalene	91-57-6	414	< 414	
2-Methylphenol	95-48-7	414	< 414	
2-Naphthylamine	91-59-8	816	< 816	
2-Nitroaniline	88-74-4	414	< 414	
2-Nitrophenol	88-75-5	414	< 414	
2-Picoline	109-06-8	414	< 414	

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Kyle F. Gross
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Jose Rocha
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Lab Sample ID: 1108511-015C
Client Sample ID: Emigration Cr. Above 1300 E. - Bank

Analyzed: 9/7/2011 0311h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
3&4-Methylphenol		414	< 414	
3,3´-Dichlorobenzidine	91-94-1	414	< 414	
3,3´-Dimethylbenzidine	119-93-7	816	< 816	
3-Methylcholanthrene	56-49-5	414	< 414	
3-Nitroaniline	99-09-2	1,220	< 1,220	
4,6-Dinitro-2-methylphenol	534-52-1	816	< 816	
4-Aminobiphenyl	92-67-1	414	< 414	
4-Bromophenyl phenyl ether	101-55-3	414	< 414	
4-Chloro-3-methylphenol	59-50-7	414	< 414	
4-Chloroaniline	106-47-8	414	< 414	
4-Chlorophenyl phenyl ether	7005-72-3	414	< 414	
4-Nitroaniline	100-01-6	1,220	< 1,220	
4-Nitrophenol	100-02-7	816	< 816	
5-Nitro-o-toluidine	99-55-8	414	< 414	
7,12-Dimethylbenz(a)anthracene	57-97-6	414	< 414	
a,a-Dimethylphenethylamine	122-09-8	816	< 816	
Acenaphthene	83-32-9	414	< 414	
Acenaphthylene	208-96-8	414	< 414	
Acetophenone	98-86-2	414	< 414	
alpha-Terpineol	98-55-5	414	< 414	
Aniline	62-53-3	816	< 816	
Anthracene	120-12-7	414	< 414	
Aramite	140-57-8	816	< 816	
Azobenzene	103-33-3	414	< 414	
Benz(a)anthracene	56-55-3	414	< 414	
Benzidine	92-87-5	1,630	< 1,630	
Benzo(a)pyrene	50-32-8	414	< 414	
Benzo(b)fluoranthene	205-99-2	414	< 414	
Benzo(g,h,i)perylene	191-24-2	414	< 414	
Benzo(k)fluoranthene	207-08-9	414	< 414	
Benzoic acid	65-85-0	1,220	< 1,220	
Benzyl alcohol	100-51-6	414	< 414	
Bis(2-chloroethoxy)methane	111-91-1	414	< 414	
Bis(2-chloroethyl) ether	111-44-4	414	< 414	
Bis(2-chloroisopropyl) ether	108-60-1	414	< 414	
Bis(2-ethylhexyl) phthalate	117-81-7	414	< 414	
bis(2-ethylhexyl)adipate	103-23-1	816	< 816	

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Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-015C
Client Sample ID: Emigration Cr. Above 1300 E. - Bank

Analyzed: 9/7/2011 0311h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Butyl benzyl phthalate	85-68-7	414	< 414	
Carbazole	86-74-8	414	< 414	
Chlorobenzilate	510-15-6	414	< 414	
Chrysene	218-01-9	414	< 414	
Di-n-butyl phthalate	84-74-2	414	< 414	
Di-n-octyl phthalate	117-84-0	414	< 414	
Diallate (cis or trans)	2303-16-4	414	< 414	
Dibenz(a,h)anthracene	53-70-3	414	< 414	
Dibenzofuran	132-64-9	414	< 414	
Diethyl phthalate	84-66-2	414	< 414	
Dimethoate	60-51-5	414	< 414	
Dimethyl phthalate	131-11-3	414	< 414	
Dimethylaminoazobenzene	60-11-7	414	< 414	
Dinoseb	88-85-7	816	< 816	
Diphenylamine	122-39-4	414	< 414	
Disulfoton	298-04-4	414	< 414	
Ethyl methanesulfonate	62-50-0	414	< 414	
Famphur	52-85-7	414	< 414	
Fluoranthene	206-44-0	414	< 414	
Fluorene	86-73-7	414	< 414	
Hexachlorobenzene	118-74-1	414	< 414	
Hexachlorobutadiene	87-68-3	414	< 414	
Hexachlorocyclopentadiene	77-47-4	414	< 414	
Hexachloroethane	67-72-1	414	< 414	
Hexachlorophene	70-30-4	414	< 414	
Hexachloropropene	1888-71-7	414	< 414	
Indene	95-13-6	414	< 414	
Indeno(1,2,3-cd)pyrene	193-39-5	414	< 414	
Isodrin	465-73-6	414	< 414	
Isophorone	78-59-1	414	< 414	
Isosafrole	120-58-1	414	< 414	
Kepone	143-50-0	414	< 414	
Methapyrilene	91-80-5	816	< 816	
Methyl methanesulfonate	66-27-3	414	< 414	
n-Decane	124-18-5	414	< 414	
N-Nitrosodi-n-butylamine	924-16-3	414	< 414	
N-Nitrosodiethylamine	55-18-5	414	< 414	

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Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-015C
Client Sample ID: Emigration Cr. Above 1300 E. - Bank

Analyzed: 9/7/2011 0311h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
N-Nitrosodimethylamine	62-75-9	816	< 816	
N-Nitrosodiphenylamine	86-30-6	414	< 414	
N-Nitrosodi-n-propylamine	621-64-7	414	< 414	
N-Nitrosomethylethylamine	10595-95-6	414	< 414	
N-Nitrosomorpholine	59-89-2	414	< 414	
N-Nitrosopiperidine	100-75-4	414	< 414	
N-Nitrosopyrrolidine	930-55-2	414	< 414	
n-Octadecane	593-45-3	414	< 414	
Naphthalene	91-20-3	414	< 414	
Nitrobenzene	98-95-3	414	< 414	
Nitroquinoline-1-oxide	56-57-5	816	< 816	
O,O,O-Triethyl phosphorothioate	126-68-1	414	< 414	
o-Toluidine	95-53-4	414	< 414	
Parathion	56-38-2	414	< 414	
Methyl parathion	298-00-0	414	< 414	
Pentachlorobenzene	608-93-5	414	< 414	
Pentachloronitrobenzene	82-68-8	414	< 414	
Pentachlorophenol	87-86-5	414	< 414	
Phenacetin	62-44-2	414	< 414	
Phenanthrene	85-01-8	414	< 414	
Phenol	108-95-2	414	< 414	
Phorate	298-02-2	414	< 414	
Pronamide	23950-58-5	414	< 414	
Pyrene	129-00-0	414	< 414	
Pyridine	110-86-1	816	< 816	
Quinoline	91-22-5	414	< 414	
Safrole	94-59-7	414	< 414	
Tetraethyl dithiopyrophosphate	3689-24-5	414	< 414	
Thionazin	297-97-2	414	< 414	
Surr: 2,4,6-Tribromophenol	118-79-6	10-237	**89.5**	
Surr: 2-Fluorobiphenyl	321-60-8	17-179	**83.2**	
Surr: 2-Fluorophenol	367-12-4	10-186	**69.9**	
Surr: Nitrobenzene-d5	4165-60-0	10-166	**82.3**	
Surr: Phenol-d6	13127-88-3	10-194	**77.5**	
Surr: Terphenyl-d14	1718-51-0	10-265	**96.0**	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.
This sample was analyzed for TICs. Those results can be found on pages 442 to 455.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-016C
Client Sample ID: Emigration Cr. Above 1900 E.
Collection Date: 8/25/2011 1135h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/1/2011 0414h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

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	20.0	< 20.0	
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	
2-Nitrophenol	88-75-5	10.0	< 10.0	

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Lab Sample ID: 1108511-016C
Client Sample ID: Emigration Cr. Above 1900 E.

Analyzed: 9/1/2011 0414h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	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	
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	

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Jose Rocha
QA Officer

Lab Sample ID: 1108511-016C
Client Sample ID: Emigration Cr. Above 1900 E.

Analyzed: 9/1/2011 0414h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
bis(2-ethylhexyl)adipate	103-23-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	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	
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	

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Jose Rocha
QA Officer

Lab Sample ID: 1108511-016C
Client Sample ID: Emigration Cr. Above 1900 E.

Analyzed: 9/1/2011 0414h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	
Surr: 2,4,6-Tribromophenol	118-79-6	14-159	**89.5**	
Surr: 2-Fluorobiphenyl	321-60-8	10-124	**61.0**	
Surr: 2-Fluorophenol	367-12-4	10-106	**39.0**	
Surr: Nitrobenzene-d5	4165-60-0	10-180	**60.9**	
Surr: Phenol-d6	13127-88-3	10-122	**30.1**	
Surr: Terphenyl-d14	1718-51-0	10-199	**90.2**	

This sample was analyzed for TICs. Those results can be found on pages 309 to 312.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-017C
Client Sample ID: Emigration Cr. Above 1900 E. - Bed
Collection Date: 8/25/2011 1135h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/7/2011 0337h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	479	< 479	
1,2,4,5-Tetrachlorobenzene	95-94-3	479	< 479	
1,2,4-Trichlorobenzene	120-82-1	479	< 479	
1,2-Dichlorobenzene	95-50-1	479	< 479	
1,3,5-Trinitrobenzene	99-35-4	479	< 479	
1,4-Naphthoquinone	130-15-4	944	< 944	
1,3-Dichlorobenzene	541-73-1	479	< 479	
1,3-Dinitrobenzene	99-65-0	479	< 479	
1,4-Dichlorobenzene	106-46-7	479	< 479	
1,4-Phenylenediamine	106-50-3	479	< 479	
1-Chloronaphthalene	90-13-1	479	< 479	
1-Methylnaphthalene	90-12-0	479	< 479	
1-Naphthylamine	134-32-7	944	< 944	
2,3,4,6-Tetrachlorophenol	58-90-2	479	< 479	
2,4,5-Trichlorophenol	95-95-4	479	< 479	
2,4,6-Trichlorophenol	88-06-2	479	< 479	
2,4-Dichlorophenol	120-83-2	479	< 479	
2,4-Dimethylphenol	105-67-9	479	< 479	
2,4-Dinitrophenol	51-28-5	944	< 944	
2,4-Dinitrotoluene	121-14-2	479	< 479	
2,6-Dichlorophenol	87-65-0	479	< 479	
2,6-Dinitrotoluene	606-20-2	479	< 479	
2-Acetylaminofluorene	53-96-3	479	< 479	
2-Chloronaphthalene	91-58-7	479	< 479	
2-Chlorophenol	95-57-8	479	< 479	
2-Methylnaphthalene	91-57-6	479	< 479	
2-Methylphenol	95-48-7	479	< 479	
2-Naphthylamine	91-59-8	944	< 944	
2-Nitroaniline	88-74-4	479	< 479	
2-Nitrophenol	88-75-5	479	< 479	
2-Picoline	109-06-8	479	< 479	

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Kyle F. Gross
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Jose Rocha
QA Officer

Lab Sample ID: 1108511-017C
Client Sample ID: Emigration Cr. Above 1900 E. - Bed

Analyzed: 9/7/2011 0337h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
3&4-Methylphenol		479	< 479	
3,3´-Dichlorobenzidine	91-94-1	479	< 479	
3,3´-Dimethylbenzidine	119-93-7	944	< 944	
3-Methylcholanthrene	56-49-5	479	< 479	
3-Nitroaniline	99-09-2	1,410	< 1,410	
4,6-Dinitro-2-methylphenol	534-52-1	944	< 944	
4-Aminobiphenyl	92-67-1	479	< 479	
4-Bromophenyl phenyl ether	101-55-3	479	< 479	
4-Chloro-3-methylphenol	59-50-7	479	< 479	
4-Chloroaniline	106-47-8	479	< 479	
4-Chlorophenyl phenyl ether	7005-72-3	479	< 479	
4-Nitroaniline	100-01-6	1,410	< 1,410	
4-Nitrophenol	100-02-7	944	< 944	
5-Nitro-o-toluidine	99-55-8	479	< 479	
7,12-Dimethylbenz(a)anthracene	57-97-6	479	< 479	
a,a-Dimethylphenethylamine	122-09-8	944	< 944	
Acenaphthene	83-32-9	479	< 479	
Acenaphthylene	208-96-8	479	< 479	
Acetophenone	98-86-2	479	< 479	
alpha-Terpineol	98-55-5	479	< 479	
Aniline	62-53-3	944	< 944	
Anthracene	120-12-7	479	< 479	
Aramite	140-57-8	944	< 944	
Azobenzene	103-33-3	479	< 479	
Benz(a)anthracene	56-55-3	479	< 479	
Benzidine	92-87-5	1,890	< 1,890	
Benzo(a)pyrene	50-32-8	479	< 479	
Benzo(b)fluoranthene	205-99-2	479	< 479	
Benzo(g,h,i)perylene	191-24-2	479	< 479	
Benzo(k)fluoranthene	207-08-9	479	< 479	
Benzoic acid	65-85-0	1,410	< 1,410	
Benzyl alcohol	100-51-6	479	< 479	
Bis(2-chloroethoxy)methane	111-91-1	479	< 479	
Bis(2-chloroethyl) ether	111-44-4	479	< 479	
Bis(2-chloroisopropyl) ether	108-60-1	479	< 479	
Bis(2-ethylhexyl) phthalate	117-81-7	479	< 479	
bis(2-ethylhexyl)adipate	103-23-1	944	< 944	

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Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-017C
Client Sample ID: Emigration Cr. Above 1900 E. - Bed

Analyzed: 9/7/2011 0337h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Butyl benzyl phthalate	85-68-7	479	< 479	
Carbazole	86-74-8	479	< 479	
Chlorobenzilate	510-15-6	479	< 479	
Chrysene	218-01-9	479	< 479	
Di-n-butyl phthalate	84-74-2	479	< 479	
Di-n-octyl phthalate	117-84-0	479	< 479	
Diallate (cis or trans)	2303-16-4	479	< 479	
Dibenz(a,h)anthracene	53-70-3	479	< 479	
Dibenzofuran	132-64-9	479	< 479	
Diethyl phthalate	84-66-2	479	< 479	
Dimethoate	60-51-5	479	< 479	
Dimethyl phthalate	131-11-3	479	< 479	
Dimethylaminoazobenzene	60-11-7	479	< 479	
Dinoseb	88-85-7	944	< 944	
Diphenylamine	122-39-4	479	< 479	
Disulfoton	298-04-4	479	< 479	
Ethyl methanesulfonate	62-50-0	479	< 479	
Famphur	52-85-7	479	< 479	
Fluoranthene	206-44-0	479	< 479	
Fluorene	86-73-7	479	< 479	
Hexachlorobenzene	118-74-1	479	< 479	
Hexachlorobutadiene	87-68-3	479	< 479	
Hexachlorocyclopentadiene	77-47-4	479	< 479	
Hexachloroethane	67-72-1	479	< 479	
Hexachlorophene	70-30-4	479	< 479	
Hexachloropropene	1888-71-7	479	< 479	
Indene	95-13-6	479	< 479	
Indeno(1,2,3-cd)pyrene	193-39-5	479	< 479	
Isodrin	465-73-6	479	< 479	
Isophorone	78-59-1	479	< 479	
Isosafrole	120-58-1	479	< 479	
Kepone	143-50-0	479	< 479	
Methapyrilene	91-80-5	944	< 944	
Methyl methanesulfonate	66-27-3	479	< 479	
n-Decane	124-18-5	479	< 479	
N-Nitrosodi-n-butylamine	924-16-3	479	< 479	
N-Nitrosodiethylamine	55-18-5	479	< 479	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-017C
Client Sample ID: Emigration Cr. Above 1900 E. - Bed

Analyzed: 9/7/2011 0337h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
N-Nitrosodimethylamine	62-75-9	944	< 944	
N-Nitrosodiphenylamine	86-30-6	479	< 479	
N-Nitrosodi-n-propylamine	621-64-7	479	< 479	
N-Nitrosomethylethylamine	10595-95-6	479	< 479	
N-Nitrosomorpholine	59-89-2	479	< 479	
N-Nitrosopiperidine	100-75-4	479	< 479	
N-Nitrosopyrrolidine	930-55-2	479	< 479	
n-Octadecane	593-45-3	479	< 479	
Naphthalene	91-20-3	479	< 479	
Nitrobenzene	98-95-3	479	< 479	
Nitroquinoline-1-oxide	56-57-5	944	< 944	
O,O,O-Triethyl phosphorothioate	126-68-1	479	< 479	
o-Toluidine	95-53-4	479	< 479	
Parathion	56-38-2	479	< 479	
Methyl parathion	298-00-0	479	< 479	
Pentachlorobenzene	608-93-5	479	< 479	
Pentachloronitrobenzene	82-68-8	479	< 479	
Pentachlorophenol	87-86-5	479	< 479	
Phenacetin	62-44-2	479	< 479	
Phenanthrene	85-01-8	479	< 479	
Phenol	108-95-2	479	< 479	
Phorate	298-02-2	479	< 479	
Pronamide	23950-58-5	479	< 479	
Pyrene	129-00-0	479	< 479	
Pyridine	110-86-1	944	< 944	
Quinoline	91-22-5	479	< 479	
Safrole	94-59-7	479	< 479	
Tetraethyl dithiopyrophosphate	3689-24-5	479	< 479	
Thionazin	297-97-2	479	< 479	
Surr: 2,4,6-Tribromophenol	118-79-6	10-237	**85.3**	
Surr: 2-Fluorobiphenyl	321-60-8	17-179	**79.0**	
Surr: 2-Fluorophenol	367-12-4	10-186	**69.0**	
Surr: Nitrobenzene-d5	4165-60-0	10-166	**83.8**	
Surr: Phenol-d6	13127-88-3	10-194	**77.0**	
Surr: Terphenyl-d14	1718-51-0	10-265	**95.6**	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.
This sample was analyzed for TICs. Those results can be found on pages 456 to 466.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-018C
Client Sample ID: Emigration Cr. Above 1900 E. - Bank
Collection Date: 8/25/2011 1135h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/7/2011 0403h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

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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	366	< 366	
1,2,4,5-Tetrachlorobenzene	95-94-3	366	< 366	
1,2,4-Trichlorobenzene	120-82-1	366	< 366	
1,2-Dichlorobenzene	95-50-1	366	< 366	
1,3,5-Trinitrobenzene	99-35-4	366	< 366	
1,4-Naphthoquinone	130-15-4	722	< 722	
1,3-Dichlorobenzene	541-73-1	366	< 366	
1,3-Dinitrobenzene	99-65-0	366	< 366	
1,4-Dichlorobenzene	106-46-7	366	< 366	
1,4-Phenylenediamine	106-50-3	366	< 366	
1-Chloronaphthalene	90-13-1	366	< 366	
1-Methylnaphthalene	90-12-0	366	< 366	
1-Naphthylamine	134-32-7	722	< 722	
2,3,4,6-Tetrachlorophenol	58-90-2	366	< 366	
2,4,5-Trichlorophenol	95-95-4	366	< 366	
2,4,6-Trichlorophenol	88-06-2	366	< 366	
2,4-Dichlorophenol	120-83-2	366	< 366	
2,4-Dimethylphenol	105-67-9	366	< 366	
2,4-Dinitrophenol	51-28-5	722	< 722	
2,4-Dinitrotoluene	121-14-2	366	< 366	
2,6-Dichlorophenol	87-65-0	366	< 366	
2,6-Dinitrotoluene	606-20-2	366	< 366	
2-Acetylaminofluorene	53-96-3	366	< 366	
2-Chloronaphthalene	91-58-7	366	< 366	
2-Chlorophenol	95-57-8	366	< 366	
2-Methylnaphthalene	91-57-6	366	< 366	
2-Methylphenol	95-48-7	366	< 366	
2-Naphthylamine	91-59-8	722	< 722	
2-Nitroaniline	88-74-4	366	< 366	
2-Nitrophenol	88-75-5	366	< 366	
2-Picoline	109-06-8	366	< 366	

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Kyle F. Gross
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Jose Rocha
QA Officer

Lab Sample ID: 1108511-018C
Client Sample ID: Emigration Cr. Above 1900 E. - Bank

Analyzed: 9/7/2011 0403h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
3&4-Methylphenol		366	< 366	
3,3´-Dichlorobenzidine	91-94-1	366	< 366	
3,3´-Dimethylbenzidine	119-93-7	722	< 722	
3-Methylcholanthrene	56-49-5	366	< 366	
3-Nitroaniline	99-09-2	1,080	< 1,080	
4,6-Dinitro-2-methylphenol	534-52-1	722	< 722	
4-Aminobiphenyl	92-67-1	366	< 366	
4-Bromophenyl phenyl ether	101-55-3	366	< 366	
4-Chloro-3-methylphenol	59-50-7	366	< 366	
4-Chloroaniline	106-47-8	366	< 366	
4-Chlorophenyl phenyl ether	7005-72-3	366	< 366	
4-Nitroaniline	100-01-6	1,080	< 1,080	
4-Nitrophenol	100-02-7	722	< 722	
5-Nitro-o-toluidine	99-55-8	366	< 366	
7,12-Dimethylbenz(a)anthracene	57-97-6	366	< 366	
a,a-Dimethylphenethylamine	122-09-8	722	< 722	
Acenaphthene	83-32-9	366	< 366	
Acenaphthylene	208-96-8	366	< 366	
Acetophenone	98-86-2	366	< 366	
alpha-Terpineol	98-55-5	366	< 366	
Aniline	62-53-3	722	< 722	
Anthracene	120-12-7	366	< 366	
Aramite	140-57-8	722	< 722	
Azobenzene	103-33-3	366	< 366	
Benz(a)anthracene	56-55-3	366	< 366	
Benzidine	92-87-5	1,440	< 1,440	
Benzo(a)pyrene	50-32-8	366	< 366	
Benzo(b)fluoranthene	205-99-2	366	< 366	
Benzo(g,h,i)perylene	191-24-2	366	< 366	
Benzo(k)fluoranthene	207-08-9	366	< 366	
Benzoic acid	65-85-0	1,080	< 1,080	
Benzyl alcohol	100-51-6	366	< 366	
Bis(2-chloroethoxy)methane	111-91-1	366	< 366	
Bis(2-chloroethyl) ether	111-44-4	366	< 366	
Bis(2-chloroisopropyl) ether	108-60-1	366	< 366	
Bis(2-ethylhexyl) phthalate	117-81-7	366	< 366	
bis(2-ethylhexyl)adipate	103-23-1	722	< 722	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-018C
Client Sample ID: Emigration Cr. Above 1900 E. - Bank

Analyzed: 9/7/2011 0403h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Butyl benzyl phthalate	85-68-7	366	< 366	
Carbazole	86-74-8	366	< 366	
Chlorobenzilate	510-15-6	366	< 366	
Chrysene	218-01-9	366	< 366	
Di-n-butyl phthalate	84-74-2	366	< 366	
Di-n-octyl phthalate	117-84-0	366	< 366	
Diallate (cis or trans)	2303-16-4	366	< 366	
Dibenz(a,h)anthracene	53-70-3	366	< 366	
Dibenzofuran	132-64-9	366	< 366	
Diethyl phthalate	84-66-2	366	< 366	
Dimethoate	60-51-5	366	< 366	
Dimethyl phthalate	131-11-3	366	< 366	
Dimethylaminoazobenzene	60-11-7	366	< 366	
Dinoseb	88-85-7	722	< 722	
Diphenylamine	122-39-4	366	< 366	
Disulfoton	298-04-4	366	< 366	
Ethyl methanesulfonate	62-50-0	366	< 366	
Famphur	52-85-7	366	< 366	
Fluoranthene	206-44-0	366	< 366	
Fluorene	86-73-7	366	< 366	
Hexachlorobenzene	118-74-1	366	< 366	
Hexachlorobutadiene	87-68-3	366	< 366	
Hexachlorocyclopentadiene	77-47-4	366	< 366	
Hexachloroethane	67-72-1	366	< 366	
Hexachlorophene	70-30-4	366	< 366	
Hexachloropropene	1888-71-7	366	< 366	
Indene	95-13-6	366	< 366	
Indeno(1,2,3-cd)pyrene	193-39-5	366	< 366	
Isodrin	465-73-6	366	< 366	
Isophorone	78-59-1	366	< 366	
Isosafrole	120-58-1	366	< 366	
Kepone	143-50-0	366	< 366	
Methapyrilene	91-80-5	722	< 722	
Methyl methanesulfonate	66-27-3	366	< 366	
n-Decane	124-18-5	366	< 366	
N-Nitrosodi-n-butylamine	924-16-3	366	< 366	
N-Nitrosodiethylamine	55-18-5	366	< 366	

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Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-018C
Client Sample ID: Emigration Cr. Above 1900 E. - Bank

Analyzed: 9/7/2011 0403h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
N-Nitrosodimethylamine	62-75-9	722	< 722	
N-Nitrosodiphenylamine	86-30-6	366	< 366	
N-Nitrosodi-n-propylamine	621-64-7	366	< 366	
N-Nitrosomethylethylamine	10595-95-6	366	< 366	
N-Nitrosomorpholine	59-89-2	366	< 366	
N-Nitrosopiperidine	100-75-4	366	< 366	
N-Nitrosopyrrolidine	930-55-2	366	< 366	
n-Octadecane	593-45-3	366	< 366	
Naphthalene	91-20-3	366	< 366	
Nitrobenzene	98-95-3	366	< 366	
Nitroquinoline-1-oxide	56-57-5	722	< 722	
O,O,O-Triethyl phosphorothioate	126-68-1	366	< 366	
o-Toluidine	95-53-4	366	< 366	
Parathion	56-38-2	366	< 366	
Methyl parathion	298-00-0	366	< 366	
Pentachlorobenzene	608-93-5	366	< 366	
Pentachloronitrobenzene	82-68-8	366	< 366	
Pentachlorophenol	87-86-5	366	< 366	
Phenacetin	62-44-2	366	< 366	
Phenanthrene	85-01-8	366	< 366	
Phenol	108-95-2	366	< 366	
Phorate	298-02-2	366	< 366	
Pronamide	23950-58-5	366	< 366	
Pyrene	129-00-0	366	< 366	
Pyridine	110-86-1	722	< 722	
Quinoline	91-22-5	366	< 366	
Safrole	94-59-7	366	< 366	
Tetraethyl dithiopyrophosphate	3689-24-5	366	< 366	
Thionazin	297-97-2	366	< 366	
Surr: 2,4,6-Tribromophenol	118-79-6	10-237	**88.7**	
Surr: 2-Fluorobiphenyl	321-60-8	17-179	**85.3**	
Surr: 2-Fluorophenol	367-12-4	10-186	**77.9**	
Surr: Nitrobenzene-d5	4165-60-0	10-166	**88.9**	
Surr: Phenol-d6	13127-88-3	10-194	**83.4**	
Surr: Terphenyl-d14	1718-51-0	10-265	**106**	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.
This sample was analyzed for TICs. Those results can be found on pages 467 to 480.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-019C
Client Sample ID: Emigration Cr. Above 2100 E.
Collection Date: 8/25/2011 1215h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/1/2011 0440h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

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	20.0	< 20.0	
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	
2-Nitrophenol	88-75-5	10.0	< 10.0	

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Jose Rocha
QA Officer

Lab Sample ID: 1108511-019C
Client Sample ID: Emigration Cr. Above 2100 E.

Analyzed: 9/1/2011 0440h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	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	
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	

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Jose Rocha
QA Officer

Lab Sample ID: 1108511-019C
Client Sample ID: Emigration Cr. Above 2100 E.

Analyzed: 9/1/2011 0440h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
bis(2-ethylhexyl)adipate	103-23-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	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	
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	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-019C
Client Sample ID: Emigration Cr. Above 2100 E.

Analyzed: 9/1/2011 0440h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	
Surr: 2,4,6-Tribromophenol	118-79-6	14-159	**95.8**	
Surr: 2-Fluorobiphenyl	321-60-8	10-124	**63.9**	
Surr: 2-Fluorophenol	367-12-4	10-106	**43.0**	
Surr: Nitrobenzene-d5	4165-60-0	10-180	**69.1**	
Surr: Phenol-d6	13127-88-3	10-122	**32.4**	
Surr: Terphenyl-d14	1718-51-0	10-199	**95.1**	

This sample was analyzed for TICs. Those results can be found on pages 313 to 316.

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-020C
Client Sample ID: Emigration Cr. Above 2100 E. - Bed
Collection Date: 8/25/2011 1215h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/7/2011 0428h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	428	< 428	
1,2,4,5-Tetrachlorobenzene	95-94-3	428	< 428	
1,2,4-Trichlorobenzene	120-82-1	428	< 428	
1,2-Dichlorobenzene	95-50-1	428	< 428	
1,3,5-Trinitrobenzene	99-35-4	428	< 428	
1,4-Naphthoquinone	130-15-4	844	< 844	
1,3-Dichlorobenzene	541-73-1	428	< 428	
1,3-Dinitrobenzene	99-65-0	428	< 428	
1,4-Dichlorobenzene	106-46-7	428	< 428	
1,4-Phenylenediamine	106-50-3	428	< 428	
1-Chloronaphthalene	90-13-1	428	< 428	
1-Methylnaphthalene	90-12-0	428	< 428	
1-Naphthylamine	134-32-7	844	< 844	
2,3,4,6-Tetrachlorophenol	58-90-2	428	< 428	
2,4,5-Trichlorophenol	95-95-4	428	< 428	
2,4,6-Trichlorophenol	88-06-2	428	< 428	
2,4-Dichlorophenol	120-83-2	428	< 428	
2,4-Dimethylphenol	105-67-9	428	< 428	
2,4-Dinitrophenol	51-28-5	844	< 844	
2,4-Dinitrotoluene	121-14-2	428	< 428	
2,6-Dichlorophenol	87-65-0	428	< 428	
2,6-Dinitrotoluene	606-20-2	428	< 428	
2-Acetylaminofluorene	53-96-3	428	< 428	
2-Chloronaphthalene	91-58-7	428	< 428	
2-Chlorophenol	95-57-8	428	< 428	
2-Methylnaphthalene	91-57-6	428	< 428	
2-Methylphenol	95-48-7	428	< 428	
2-Naphthylamine	91-59-8	844	< 844	
2-Nitroaniline	88-74-4	428	< 428	
2-Nitrophenol	88-75-5	428	< 428	
2-Picoline	109-06-8	428	< 428	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-020C
Client Sample ID: Emigration Cr. Above 2100 E. - Bed

Analyzed: 9/7/2011 0428h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
3&4-Methylphenol		428	< 428	
3,3´-Dichlorobenzidine	91-94-1	428	< 428	
3,3´-Dimethylbenzidine	119-93-7	844	< 844	
3-Methylcholanthrene	56-49-5	428	< 428	
3-Nitroaniline	99-09-2	1,260	< 1,260	
4,6-Dinitro-2-methylphenol	534-52-1	844	< 844	
4-Aminobiphenyl	92-67-1	428	< 428	
4-Bromophenyl phenyl ether	101-55-3	428	< 428	
4-Chloro-3-methylphenol	59-50-7	428	< 428	
4-Chloroaniline	106-47-8	428	< 428	
4-Chlorophenyl phenyl ether	7005-72-3	428	< 428	
4-Nitroaniline	100-01-6	1,260	< 1,260	
4-Nitrophenol	100-02-7	844	< 844	
5-Nitro-o-toluidine	99-55-8	428	< 428	
7,12-Dimethylbenz(a)anthracene	57-97-6	428	< 428	
a,a-Dimethylphenethylamine	122-09-8	844	< 844	
Acenaphthene	83-32-9	428	< 428	
Acenaphthylene	208-96-8	428	< 428	
Acetophenone	98-86-2	428	< 428	
alpha-Terpineol	98-55-5	428	< 428	
Aniline	62-53-3	844	< 844	
Anthracene	120-12-7	428	< 428	
Aramite	140-57-8	844	< 844	
Azobenzene	103-33-3	428	< 428	
Benz(a)anthracene	56-55-3	428	< 428	
Benzidine	92-87-5	1,690	< 1,690	
Benzo(a)pyrene	50-32-8	428	< 428	
Benzo(b)fluoranthene	205-99-2	428	< 428	
Benzo(g,h,i)perylene	191-24-2	428	< 428	
Benzo(k)fluoranthene	207-08-9	428	< 428	
Benzoic acid	65-85-0	1,260	< 1,260	
Benzyl alcohol	100-51-6	428	< 428	
Bis(2-chloroethoxy)methane	111-91-1	428	< 428	
Bis(2-chloroethyl) ether	111-44-4	428	< 428	
Bis(2-chloroisopropyl) ether	108-60-1	428	< 428	
Bis(2-ethylhexyl) phthalate	117-81-7	428	< 428	
bis(2-ethylhexyl)adipate	103-23-1	844	< 844	

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Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-020C
Client Sample ID: Emigration Cr. Above 2100 E. - Bed

Analyzed: 9/7/2011 0428h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Butyl benzyl phthalate	85-68-7	428	< 428	
Carbazole	86-74-8	428	< 428	
Chlorobenzilate	510-15-6	428	< 428	
Chrysene	218-01-9	428	< 428	
Di-n-butyl phthalate	84-74-2	428	< 428	
Di-n-octyl phthalate	117-84-0	428	< 428	
Diallate (cis or trans)	2303-16-4	428	< 428	
Dibenz(a,h)anthracene	53-70-3	428	< 428	
Dibenzofuran	132-64-9	428	< 428	
Diethyl phthalate	84-66-2	428	< 428	
Dimethoate	60-51-5	428	< 428	
Dimethyl phthalate	131-11-3	428	< 428	
Dimethylaminoazobenzene	60-11-7	428	< 428	
Dinoseb	88-85-7	844	< 844	
Diphenylamine	122-39-4	428	< 428	
Disulfoton	298-04-4	428	< 428	
Ethyl methanesulfonate	62-50-0	428	< 428	
Famphur	52-85-7	428	< 428	
Fluoranthene	206-44-0	428	< 428	
Fluorene	86-73-7	428	< 428	
Hexachlorobenzene	118-74-1	428	< 428	
Hexachlorobutadiene	87-68-3	428	< 428	
Hexachlorocyclopentadiene	77-47-4	428	< 428	
Hexachloroethane	67-72-1	428	< 428	
Hexachlorophene	70-30-4	428	< 428	
Hexachloropropene	1888-71-7	428	< 428	
Indene	95-13-6	428	< 428	
Indeno(1,2,3-cd)pyrene	193-39-5	428	< 428	
Isodrin	465-73-6	428	< 428	
Isophorone	78-59-1	428	< 428	
Isosafrole	120-58-1	428	< 428	
Kepone	143-50-0	428	< 428	
Methapyrilene	91-80-5	844	< 844	
Methyl methanesulfonate	66-27-3	428	< 428	
n-Decane	124-18-5	428	< 428	
N-Nitrosodi-n-butylamine	924-16-3	428	< 428	
N-Nitrosodiethylamine	55-18-5	428	< 428	

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Lab Sample ID: 1108511-020C
Client Sample ID: Emigration Cr. Above 2100 E. - Bed

Analyzed: 9/7/2011 0428h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
N-Nitrosodimethylamine	62-75-9	844	< 844	
N-Nitrosodiphenylamine	86-30-6	428	< 428	
N-Nitrosodi-n-propylamine	621-64-7	428	< 428	
N-Nitrosomethylethylamine	10595-95-6	428	< 428	
N-Nitrosomorpholine	59-89-2	428	< 428	
N-Nitrosopiperidine	100-75-4	428	< 428	
N-Nitrosopyrrolidine	930-55-2	428	< 428	
n-Octadecane	593-45-3	428	< 428	
Naphthalene	91-20-3	428	< 428	
Nitrobenzene	98-95-3	428	< 428	
Nitroquinoline-1-oxide	56-57-5	844	< 844	
O,O,O-Triethyl phosphorothioate	126-68-1	428	< 428	
o-Toluidine	95-53-4	428	< 428	
Parathion	56-38-2	428	< 428	
Methyl parathion	298-00-0	428	< 428	
Pentachlorobenzene	608-93-5	428	< 428	
Pentachloronitrobenzene	82-68-8	428	< 428	
Pentachlorophenol	87-86-5	428	< 428	
Phenacetin	62-44-2	428	< 428	
Phenanthrene	85-01-8	428	< 428	
Phenol	108-95-2	428	< 428	
Phorate	298-02-2	428	< 428	
Pronamide	23950-58-5	428	< 428	
Pyrene	129-00-0	428	< 428	
Pyridine	110-86-1	844	< 844	
Quinoline	91-22-5	428	< 428	
Safrole	94-59-7	428	< 428	
Tetraethyl dithiopyrophosphate	3689-24-5	428	< 428	
Thionazin	297-97-2	428	< 428	
Surr: 2,4,6-Tribromophenol	118-79-6	10-237	**88.9**	
Surr: 2-Fluorobiphenyl	321-60-8	17-179	**83.2**	
Surr: 2-Fluorophenol	367-12-4	10-186	**74.9**	
Surr: Nitrobenzene-d5	4165-60-0	10-166	**84.9**	
Surr: Phenol-d6	13127-88-3	10-194	**81.4**	
Surr: Terphenyl-d14	1718-51-0	10-265	**99.0**	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.
This sample was analyzed for TICs. Those results can be found on pages 481 to 490.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-021C
Client Sample ID: Emigration Cr. Above 2100 E. - Bank
Collection Date: 8/25/2011 1215h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/7/2011 0454h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	414	< 414	
1,2,4,5-Tetrachlorobenzene	95-94-3	414	< 414	
1,2,4-Trichlorobenzene	120-82-1	414	< 414	
1,2-Dichlorobenzene	95-50-1	414	< 414	
1,3,5-Trinitrobenzene	99-35-4	414	< 414	
1,4-Naphthoquinone	130-15-4	816	< 816	
1,3-Dichlorobenzene	541-73-1	414	< 414	
1,3-Dinitrobenzene	99-65-0	414	< 414	
1,4-Dichlorobenzene	106-46-7	414	< 414	
1,4-Phenylenediamine	106-50-3	414	< 414	
1-Chloronaphthalene	90-13-1	414	< 414	
1-Methylnaphthalene	90-12-0	414	< 414	
1-Naphthylamine	134-32-7	816	< 816	
2,3,4,6-Tetrachlorophenol	58-90-2	414	< 414	
2,4,5-Trichlorophenol	95-95-4	414	< 414	
2,4,6-Trichlorophenol	88-06-2	414	< 414	
2,4-Dichlorophenol	120-83-2	414	< 414	
2,4-Dimethylphenol	105-67-9	414	< 414	
2,4-Dinitrophenol	51-28-5	816	< 816	
2,4-Dinitrotoluene	121-14-2	414	< 414	
2,6-Dichlorophenol	87-65-0	414	< 414	
2,6-Dinitrotoluene	606-20-2	414	< 414	
2-Acetylaminofluorene	53-96-3	414	< 414	
2-Chloronaphthalene	91-58-7	414	< 414	
2-Chlorophenol	95-57-8	414	< 414	
2-Methylnaphthalene	91-57-6	414	< 414	
2-Methylphenol	95-48-7	414	< 414	
2-Naphthylamine	91-59-8	816	< 816	
2-Nitroaniline	88-74-4	414	< 414	
2-Nitrophenol	88-75-5	414	< 414	
2-Picoline	109-06-8	414	< 414	

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Kyle F. Gross
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Jose Rocha
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Lab Sample ID: 1108511-021C
Client Sample ID: Emigration Cr. Above 2100 E. - Bank

Analyzed: 9/7/2011 0454h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
3&4-Methylphenol		414	< 414	
3,3´-Dichlorobenzidine	91-94-1	414	< 414	
3,3´-Dimethylbenzidine	119-93-7	816	< 816	
3-Methylcholanthrene	56-49-5	414	< 414	
3-Nitroaniline	99-09-2	1,220	< 1,220	
4,6-Dinitro-2-methylphenol	534-52-1	816	< 816	
4-Aminobiphenyl	92-67-1	414	< 414	
4-Bromophenyl phenyl ether	101-55-3	414	< 414	
4-Chloro-3-methylphenol	59-50-7	414	< 414	
4-Chloroaniline	106-47-8	414	< 414	
4-Chlorophenyl phenyl ether	7005-72-3	414	< 414	
4-Nitroaniline	100-01-6	1,220	< 1,220	
4-Nitrophenol	100-02-7	816	< 816	
5-Nitro-o-toluidine	99-55-8	414	< 414	
7,12-Dimethylbenz(a)anthracene	57-97-6	414	< 414	
a,a-Dimethylphenethylamine	122-09-8	816	< 816	
Acenaphthene	83-32-9	414	< 414	
Acenaphthylene	208-96-8	414	< 414	
Acetophenone	98-86-2	414	< 414	
alpha-Terpineol	98-55-5	414	< 414	
Aniline	62-53-3	816	< 816	
Anthracene	120-12-7	414	< 414	
Aramite	140-57-8	816	< 816	
Azobenzene	103-33-3	414	< 414	
Benz(a)anthracene	56-55-3	414	< 414	
Benzidine	92-87-5	1,630	< 1,630	
Benzo(a)pyrene	50-32-8	414	< 414	
Benzo(b)fluoranthene	205-99-2	414	< 414	
Benzo(g,h,i)perylene	191-24-2	414	< 414	
Benzo(k)fluoranthene	207-08-9	414	< 414	
Benzoic acid	65-85-0	1,220	< 1,220	
Benzyl alcohol	100-51-6	414	< 414	
Bis(2-chloroethoxy)methane	111-91-1	414	< 414	
Bis(2-chloroethyl) ether	111-44-4	414	< 414	
Bis(2-chloroisopropyl) ether	108-60-1	414	< 414	
Bis(2-ethylhexyl) phthalate	117-81-7	414	< 414	
bis(2-ethylhexyl)adipate	103-23-1	816	< 816	

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Jose Rocha
QA Officer

Lab Sample ID: 1108511-021C
Client Sample ID: Emigration Cr. Above 2100 E. - Bank

Analyzed: 9/7/2011 0454h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Butyl benzyl phthalate	85-68-7	414	< 414	
Carbazole	86-74-8	414	< 414	
Chlorobenzilate	510-15-6	414	< 414	
Chrysene	218-01-9	414	< 414	
Di-n-butyl phthalate	84-74-2	414	< 414	
Di-n-octyl phthalate	117-84-0	414	< 414	
Diallate (cis or trans)	2303-16-4	414	< 414	
Dibenz(a,h)anthracene	53-70-3	414	< 414	
Dibenzofuran	132-64-9	414	< 414	
Diethyl phthalate	84-66-2	414	< 414	
Dimethoate	60-51-5	414	< 414	
Dimethyl phthalate	131-11-3	414	< 414	
Dimethylaminoazobenzene	60-11-7	414	< 414	
Dinoseb	88-85-7	816	< 816	
Diphenylamine	122-39-4	414	< 414	
Disulfoton	298-04-4	414	< 414	
Ethyl methanesulfonate	62-50-0	414	< 414	
Famphur	52-85-7	414	< 414	
Fluoranthene	206-44-0	414	< 414	
Fluorene	86-73-7	414	< 414	
Hexachlorobenzene	118-74-1	414	< 414	
Hexachlorobutadiene	87-68-3	414	< 414	
Hexachlorocyclopentadiene	77-47-4	414	< 414	
Hexachloroethane	67-72-1	414	< 414	
Hexachlorophene	70-30-4	414	< 414	
Hexachloropropene	1888-71-7	414	< 414	
Indene	95-13-6	414	< 414	
Indeno(1,2,3-cd)pyrene	193-39-5	414	< 414	
Isodrin	465-73-6	414	< 414	
Isophorone	78-59-1	414	< 414	
Isosafrole	120-58-1	414	< 414	
Kepone	143-50-0	414	< 414	
Methapyrilene	91-80-5	816	< 816	
Methyl methanesulfonate	66-27-3	414	< 414	
n-Decane	124-18-5	414	< 414	
N-Nitrosodi-n-butylamine	924-16-3	414	< 414	
N-Nitrosodiethylamine	55-18-5	414	< 414	

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Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-021C
Client Sample ID: Emigration Cr. Above 2100 E. - Bank

Analyzed: 9/7/2011 0454h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
N-Nitrosodimethylamine	62-75-9	816	< 816	
N-Nitrosodiphenylamine	86-30-6	414	< 414	
N-Nitrosodi-n-propylamine	621-64-7	414	< 414	
N-Nitrosomethylethylamine	10595-95-6	414	< 414	
N-Nitrosomorpholine	59-89-2	414	< 414	
N-Nitrosopiperidine	100-75-4	414	< 414	
N-Nitrosopyrrolidine	930-55-2	414	< 414	
n-Octadecane	593-45-3	414	< 414	
Naphthalene	91-20-3	414	< 414	
Nitrobenzene	98-95-3	414	< 414	
Nitroquinoline-1-oxide	56-57-5	816	< 816	
O,O,O-Triethyl phosphorothioate	126-68-1	414	< 414	
o-Toluidine	95-53-4	414	< 414	
Parathion	56-38-2	414	< 414	
Methyl parathion	298-00-0	414	< 414	
Pentachlorobenzene	608-93-5	414	< 414	
Pentachloronitrobenzene	82-68-8	414	< 414	
Pentachlorophenol	87-86-5	414	< 414	
Phenacetin	62-44-2	414	< 414	
Phenanthrene	85-01-8	414	< 414	
Phenol	108-95-2	414	< 414	
Phorate	298-02-2	414	< 414	
Pronamide	23950-58-5	414	< 414	
Pyrene	129-00-0	414	< 414	
Pyridine	110-86-1	816	< 816	
Quinoline	91-22-5	414	< 414	
Safrole	94-59-7	414	< 414	
Tetraethyl dithiopyrophosphate	3689-24-5	414	< 414	
Thionazin	297-97-2	414	< 414	
Surr: 2,4,6-Tribromophenol	118-79-6	10-237	**91.6**	
Surr: 2-Fluorobiphenyl	321-60-8	17-179	**79.7**	
Surr: 2-Fluorophenol	367-12-4	10-186	**70.6**	
Surr: Nitrobenzene-d5	4165-60-0	10-166	**83.8**	
Surr: Phenol-d6	13127-88-3	10-194	**81.0**	
Surr: Terphenyl-d14	1718-51-0	10-265	**100**	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.
This sample was analyzed for TICs. Those results can be found on pages 491 to 503.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-022C
Client Sample ID: Emigration Cr. @ Donner Hill Marker
Collection Date: 8/25/2011 1300h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/1/2011 0506h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

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	20.0	< 20.0	
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	
2-Nitrophenol	88-75-5	10.0	< 10.0	

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Lab Sample ID: 1108511-022C
Client Sample ID: Emigration Cr. @ Donner Hill Marker

Analyzed: 9/1/2011 0506h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	
Azobenzene	103-33-3	10.0	< 10.0	
Benz(a)anthracene	56-55-3	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	
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	

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Lab Sample ID: 1108511-022C
Client Sample ID: Emigration Cr. @ Donner Hill Marker

Analyzed: 9/1/2011 0506h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
bis(2-ethylhexyl)adipate	103-23-1	10.0	< 10.0	
Butyl benzyl phthalate	85-68-7	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	
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	

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Lab Sample ID: 1108511-022C
Client Sample ID: Emigration Cr. @ Donner Hill Marker

Analyzed: 9/1/2011 0506h **Extracted:** 8/29/2011 1340h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	
Surr: 2,4,6-Tribromophenol	118-79-6	14-159	**87.2**	
Surr: 2-Fluorobiphenyl	321-60-8	10-124	**41.0**	
Surr: 2-Fluorophenol	367-12-4	10-106	**31.9**	
Surr: Nitrobenzene-d5	4165-60-0	10-180	**47.0**	
Surr: Phenol-d6	13127-88-3	10-122	**23.6**	
Surr: Terphenyl-d14	1718-51-0	10-199	**93.7**	

This sample was analyzed for TICs. Those results can be found on pages 317 to 321.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-023C
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bed
Collection Date: 8/25/2011 1300h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/7/2011 0520h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	469	< 469	
1,2,4,5-Tetrachlorobenzene	95-94-3	469	< 469	
1,2,4-Trichlorobenzene	120-82-1	469	< 469	
1,2-Dichlorobenzene	95-50-1	469	< 469	
1,3,5-Trinitrobenzene	99-35-4	469	< 469	
1,4-Naphthoquinone	130-15-4	925	< 925	
1,3-Dichlorobenzene	541-73-1	469	< 469	
1,3-Dinitrobenzene	99-65-0	469	< 469	
1,4-Dichlorobenzene	106-46-7	469	< 469	
1,4-Phenylenediamine	106-50-3	469	< 469	
1-Chloronaphthalene	90-13-1	469	< 469	
1-Methylnaphthalene	90-12-0	469	< 469	
1-Naphthylamine	134-32-7	925	< 925	
2,3,4,6-Tetrachlorophenol	58-90-2	469	< 469	
2,4,5-Trichlorophenol	95-95-4	469	< 469	
2,4,6-Trichlorophenol	88-06-2	469	< 469	
2,4-Dichlorophenol	120-83-2	469	< 469	
2,4-Dimethylphenol	105-67-9	469	< 469	
2,4-Dinitrophenol	51-28-5	925	< 925	
2,4-Dinitrotoluene	121-14-2	469	< 469	
2,6-Dichlorophenol	87-65-0	469	< 469	
2,6-Dinitrotoluene	606-20-2	469	< 469	
2-Acetylaminofluorene	53-96-3	469	< 469	
2-Chloronaphthalene	91-58-7	469	< 469	
2-Chlorophenol	95-57-8	469	< 469	
2-Methylnaphthalene	91-57-6	469	< 469	
2-Methylphenol	95-48-7	469	< 469	
2-Naphthylamine	91-59-8	925	< 925	
2-Nitroaniline	88-74-4	469	< 469	
2-Nitrophenol	88-75-5	469	< 469	
2-Picoline	109-06-8	469	< 469	

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Kyle F. Gross
Laboratory Director

Jose Rocha
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Lab Sample ID: 1108511-023C
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bed

Analyzed: 9/7/2011 0520h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
3&4-Methylphenol		469	< 469	
3,3´-Dichlorobenzidine	91-94-1	469	< 469	
3,3´-Dimethylbenzidine	119-93-7	925	< 925	
3-Methylcholanthrene	56-49-5	469	< 469	
3-Nitroaniline	99-09-2	1,380	< 1,380	
4,6-Dinitro-2-methylphenol	534-52-1	925	< 925	
4-Aminobiphenyl	92-67-1	469	< 469	
4-Bromophenyl phenyl ether	101-55-3	469	< 469	
4-Chloro-3-methylphenol	59-50-7	469	< 469	
4-Chloroaniline	106-47-8	469	< 469	
4-Chlorophenyl phenyl ether	7005-72-3	469	< 469	
4-Nitroaniline	100-01-6	1,380	< 1,380	
4-Nitrophenol	100-02-7	925	< 925	
5-Nitro-o-toluidine	99-55-8	469	< 469	
7,12-Dimethylbenz(a)anthracene	57-97-6	469	< 469	
a,a-Dimethylphenethylamine	122-09-8	925	< 925	
Acenaphthene	83-32-9	469	< 469	
Acenaphthylene	208-96-8	469	< 469	
Acetophenone	98-86-2	469	< 469	
alpha-Terpineol	98-55-5	469	< 469	
Aniline	62-53-3	925	< 925	
Anthracene	120-12-7	469	< 469	
Aramite	140-57-8	925	< 925	
Azobenzene	103-33-3	469	< 469	
Benz(a)anthracene	56-55-3	469	< 469	
Benzidine	92-87-5	1,850	< 1,850	
Benzo(a)pyrene	50-32-8	469	< 469	
Benzo(b)fluoranthene	205-99-2	469	< 469	
Benzo(g,h,i)perylene	191-24-2	469	< 469	
Benzo(k)fluoranthene	207-08-9	469	< 469	
Benzoic acid	65-85-0	1,380	< 1,380	
Benzyl alcohol	100-51-6	469	< 469	
Bis(2-chloroethoxy)methane	111-91-1	469	< 469	
Bis(2-chloroethyl) ether	111-44-4	469	< 469	
Bis(2-chloroisopropyl) ether	108-60-1	469	< 469	
Bis(2-ethylhexyl) phthalate	117-81-7	469	< 469	
bis(2-ethylhexyl)adipate	103-23-1	925	< 925	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-023C
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bed

Analyzed: 9/7/2011 0520h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Butyl benzyl phthalate	85-68-7	469	< 469	
Carbazole	86-74-8	469	< 469	
Chlorobenzilate	510-15-6	469	< 469	
Chrysene	218-01-9	469	< 469	
Di-n-butyl phthalate	84-74-2	469	< 469	
Di-n-octyl phthalate	117-84-0	469	< 469	
Diallate (cis or trans)	2303-16-4	469	< 469	
Dibenz(a,h)anthracene	53-70-3	469	< 469	
Dibenzofuran	132-64-9	469	< 469	
Diethyl phthalate	84-66-2	469	< 469	
Dimethoate	60-51-5	469	< 469	
Dimethyl phthalate	131-11-3	469	< 469	
Dimethylaminoazobenzene	60-11-7	469	< 469	
Dinoseb	88-85-7	925	< 925	
Diphenylamine	122-39-4	469	< 469	
Disulfoton	298-04-4	469	< 469	
Ethyl methanesulfonate	62-50-0	469	< 469	
Famphur	52-85-7	469	< 469	
Fluoranthene	206-44-0	469	< 469	
Fluorene	86-73-7	469	< 469	
Hexachlorobenzene	118-74-1	469	< 469	
Hexachlorobutadiene	87-68-3	469	< 469	
Hexachlorocyclopentadiene	77-47-4	469	< 469	
Hexachloroethane	67-72-1	469	< 469	
Hexachlorophene	70-30-4	469	< 469	
Hexachloropropene	1888-71-7	469	< 469	
Indene	95-13-6	469	< 469	
Indeno(1,2,3-cd)pyrene	193-39-5	469	< 469	
Isodrin	465-73-6	469	< 469	
Isophorone	78-59-1	469	< 469	
Isosafrole	120-58-1	469	< 469	
Kepone	143-50-0	469	< 469	
Methapyrilene	91-80-5	925	< 925	
Methyl methanesulfonate	66-27-3	469	< 469	
n-Decane	124-18-5	469	< 469	
N-Nitrosodi-n-butylamine	924-16-3	469	< 469	
N-Nitrosodiethylamine	55-18-5	469	< 469	

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Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-023C
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bed

Analyzed: 9/7/2011 0520h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
N-Nitrosodimethylamine	62-75-9	925	< 925	
N-Nitrosodiphenylamine	86-30-6	469	< 469	
N-Nitrosodi-n-propylamine	621-64-7	469	< 469	
N-Nitrosomethylethylamine	10595-95-6	469	< 469	
N-Nitrosomorpholine	59-89-2	469	< 469	
N-Nitrosopiperidine	100-75-4	469	< 469	
N-Nitrosopyrrolidine	930-55-2	469	< 469	
n-Octadecane	593-45-3	469	< 469	
Naphthalene	91-20-3	469	< 469	
Nitrobenzene	98-95-3	469	< 469	
Nitroquinoline-1-oxide	56-57-5	925	< 925	
O,O,O-Triethyl phosphorothioate	126-68-1	469	< 469	
o-Toluidine	95-53-4	469	< 469	
Parathion	56-38-2	469	< 469	
Methyl parathion	298-00-0	469	< 469	
Pentachlorobenzene	608-93-5	469	< 469	
Pentachloronitrobenzene	82-68-8	469	< 469	
Pentachlorophenol	87-86-5	469	< 469	
Phenacetin	62-44-2	469	< 469	
Phenanthrene	85-01-8	469	< 469	
Phenol	108-95-2	469	< 469	
Phorate	298-02-2	469	< 469	
Pronamide	23950-58-5	469	< 469	
Pyrene	129-00-0	469	< 469	
Pyridine	110-86-1	925	< 925	
Quinoline	91-22-5	469	< 469	
Safrole	94-59-7	469	< 469	
Tetraethyl dithiopyrophosphate	3689-24-5	469	< 469	
Thionazin	297-97-2	469	< 469	
Surr: 2,4,6-Tribromophenol	118-79-6	10-237	**104**	
Surr: 2-Fluorobiphenyl	321-60-8	17-179	**90.8**	
Surr: 2-Fluorophenol	367-12-4	10-186	**80.4**	
Surr: Nitrobenzene-d5	4165-60-0	10-166	**97.4**	
Surr: Phenol-d6	13127-88-3	10-194	**91.5**	
Surr: Terphenyl-d14	1718-51-0	10-265	**113**	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.
This sample was analyzed for TICs. Those results can be found on pages 504 to 511.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-024C
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bank
Collection Date: 8/25/2011 1300h
Received Date: 8/25/2011 1345h **Method:** SW8270D

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

Analyzed: 9/7/2011 0546h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1´-Biphenyl	92-52-4	413	< 413	
1,2,4,5-Tetrachlorobenzene	95-94-3	413	< 413	
1,2,4-Trichlorobenzene	120-82-1	413	< 413	
1,2-Dichlorobenzene	95-50-1	413	< 413	
1,3,5-Trinitrobenzene	99-35-4	413	< 413	
1,4-Naphthoquinone	130-15-4	815	< 815	
1,3-Dichlorobenzene	541-73-1	413	< 413	
1,3-Dinitrobenzene	99-65-0	413	< 413	
1,4-Dichlorobenzene	106-46-7	413	< 413	
1,4-Phenylenediamine	106-50-3	413	< 413	
1-Chloronaphthalene	90-13-1	413	< 413	
1-Methylnaphthalene	90-12-0	413	< 413	
1-Naphthylamine	134-32-7	815	< 815	
2,3,4,6-Tetrachlorophenol	58-90-2	413	< 413	
2,4,5-Trichlorophenol	95-95-4	413	< 413	
2,4,6-Trichlorophenol	88-06-2	413	< 413	
2,4-Dichlorophenol	120-83-2	413	< 413	
2,4-Dimethylphenol	105-67-9	413	< 413	
2,4-Dinitrophenol	51-28-5	815	< 815	
2,4-Dinitrotoluene	121-14-2	413	< 413	
2,6-Dichlorophenol	87-65-0	413	< 413	
2,6-Dinitrotoluene	606-20-2	413	< 413	
2-Acetylaminofluorene	53-96-3	413	< 413	
2-Chloronaphthalene	91-58-7	413	< 413	
2-Chlorophenol	95-57-8	413	< 413	
2-Methylnaphthalene	91-57-6	413	< 413	
2-Methylphenol	95-48-7	413	< 413	
2-Naphthylamine	91-59-8	815	< 815	
2-Nitroaniline	88-74-4	413	< 413	
2-Nitrophenol	88-75-5	413	< 413	
2-Picoline	109-06-8	413	< 413	

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Jose Rocha
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Lab Sample ID: 1108511-024C
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bank

Analyzed: 9/7/2011 0546h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
3&4-Methylphenol		413	< 413	
3,3´-Dichlorobenzidine	91-94-1	413	< 413	
3,3´-Dimethylbenzidine	119-93-7	815	< 815	
3-Methylcholanthrene	56-49-5	413	< 413	
3-Nitroaniline	99-09-2	1,220	< 1,220	
4,6-Dinitro-2-methylphenol	534-52-1	815	< 815	
4-Aminobiphenyl	92-67-1	413	< 413	
4-Bromophenyl phenyl ether	101-55-3	413	< 413	
4-Chloro-3-methylphenol	59-50-7	413	< 413	
4-Chloroaniline	106-47-8	413	< 413	
4-Chlorophenyl phenyl ether	7005-72-3	413	< 413	
4-Nitroaniline	100-01-6	1,220	< 1,220	
4-Nitrophenol	100-02-7	815	< 815	
5-Nitro-o-toluidine	99-55-8	413	< 413	
7,12-Dimethylbenz(a)anthracene	57-97-6	413	< 413	
a,a-Dimethylphenethylamine	122-09-8	815	< 815	
Acenaphthene	83-32-9	413	< 413	
Acenaphthylene	208-96-8	413	< 413	
Acetophenone	98-86-2	413	< 413	
alpha-Terpineol	98-55-5	413	< 413	
Aniline	62-53-3	815	< 815	
Anthracene	120-12-7	413	< 413	
Aramite	140-57-8	815	< 815	
Azobenzene	103-33-3	413	< 413	
Benz(a)anthracene	56-55-3	413	< 413	
Benzidine	92-87-5	1,630	< 1,630	
Benzo(a)pyrene	50-32-8	413	< 413	
Benzo(b)fluoranthene	205-99-2	413	< 413	
Benzo(g,h,i)perylene	191-24-2	413	< 413	
Benzo(k)fluoranthene	207-08-9	413	< 413	
Benzoic acid	65-85-0	1,220	< 1,220	
Benzyl alcohol	100-51-6	413	< 413	
Bis(2-chloroethoxy)methane	111-91-1	413	< 413	
Bis(2-chloroethyl) ether	111-44-4	413	< 413	
Bis(2-chloroisopropyl) ether	108-60-1	413	< 413	
Bis(2-ethylhexyl) phthalate	117-81-7	413	< 413	
bis(2-ethylhexyl)adipate	103-23-1	815	< 815	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-024C
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bank

Analyzed: 9/7/2011 0546h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Butyl benzyl phthalate	85-68-7	413	< 413	
Carbazole	86-74-8	413	< 413	
Chlorobenzilate	510-15-6	413	< 413	
Chrysene	218-01-9	413	< 413	
Di-n-butyl phthalate	84-74-2	413	< 413	
Di-n-octyl phthalate	117-84-0	413	< 413	
Diallate (cis or trans)	2303-16-4	413	< 413	
Dibenz(a,h)anthracene	53-70-3	413	< 413	
Dibenzofuran	132-64-9	413	< 413	
Diethyl phthalate	84-66-2	413	< 413	
Dimethoate	60-51-5	413	< 413	
Dimethyl phthalate	131-11-3	413	< 413	
Dimethylaminoazobenzene	60-11-7	413	< 413	
Dinoseb	88-85-7	815	< 815	
Diphenylamine	122-39-4	413	< 413	
Disulfoton	298-04-4	413	< 413	
Ethyl methanesulfonate	62-50-0	413	< 413	
Famphur	52-85-7	413	< 413	
Fluoranthene	206-44-0	413	< 413	
Fluorene	86-73-7	413	< 413	
Hexachlorobenzene	118-74-1	413	< 413	
Hexachlorobutadiene	87-68-3	413	< 413	
Hexachlorocyclopentadiene	77-47-4	413	< 413	
Hexachloroethane	67-72-1	413	< 413	
Hexachlorophene	70-30-4	413	< 413	
Hexachloropropene	1888-71-7	413	< 413	
Indene	95-13-6	413	< 413	
Indeno(1,2,3-cd)pyrene	193-39-5	413	< 413	
Isodrin	465-73-6	413	< 413	
Isophorone	78-59-1	413	< 413	
Isosafrole	120-58-1	413	< 413	
Kepone	143-50-0	413	< 413	
Methapyrilene	91-80-5	815	< 815	
Methyl methanesulfonate	66-27-3	413	< 413	
n-Decane	124-18-5	413	< 413	
N-Nitrosodi-n-butylamine	924-16-3	413	< 413	
N-Nitrosodiethylamine	55-18-5	413	< 413	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-024C
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bank

Analyzed: 9/7/2011 0546h **Extracted:** 8/27/2011 0932h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
N-Nitrosodimethylamine	62-75-9	815	< 815	
N-Nitrosodiphenylamine	86-30-6	413	< 413	
N-Nitrosodi-n-propylamine	621-64-7	413	< 413	
N-Nitrosomethylethylamine	10595-95-6	413	< 413	
N-Nitrosomorpholine	59-89-2	413	< 413	
N-Nitrosopiperidine	100-75-4	413	< 413	
N-Nitrosopyrrolidine	930-55-2	413	< 413	
n-Octadecane	593-45-3	413	< 413	
Naphthalene	91-20-3	413	< 413	
Nitrobenzene	98-95-3	413	< 413	
Nitroquinoline-1-oxide	56-57-5	815	< 815	
O,O,O-Triethyl phosphorothioate	126-68-1	413	< 413	
o-Toluidine	95-53-4	413	< 413	
Parathion	56-38-2	413	< 413	
Methyl parathion	298-00-0	413	< 413	
Pentachlorobenzene	608-93-5	413	< 413	
Pentachloronitrobenzene	82-68-8	413	< 413	
Pentachlorophenol	87-86-5	413	< 413	
Phenacetin	62-44-2	413	< 413	
Phenanthrene	85-01-8	413	< 413	
Phenol	108-95-2	413	< 413	
Phorate	298-02-2	413	< 413	
Pronamide	23950-58-5	413	< 413	
Pyrene	129-00-0	413	< 413	
Pyridine	110-86-1	815	< 815	
Quinoline	91-22-5	413	< 413	
Safrole	94-59-7	413	< 413	
Tetraethyl dithiopyrophosphate	3689-24-5	413	< 413	
Thionazin	297-97-2	413	< 413	
Surr: 2,4,6-Tribromophenol	118-79-6	10-237	**93.9**	
Surr: 2-Fluorobiphenyl	321-60-8	17-179	**76.3**	
Surr: 2-Fluorophenol	367-12-4	10-186	**66.3**	
Surr: Nitrobenzene-d5	4165-60-0	10-166	**79.2**	
Surr: Phenol-d6	13127-88-3	10-194	**77.0**	
Surr: Terphenyl-d14	1718-51-0	10-265	**96.9**	

Gel-Permeation Chromatography (GPC) Cleanup, method 3640A, utilized for this sample.
This sample was analyzed for TICs. Those results can be found on pages 512 to 525.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-001D
Client Sample ID: Parleys Cr. Below 1300 E.
Collection Date: 8/25/2011 0720h
Received Date: 8/25/2011 1345h **Method:** SW8260C

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

Analyzed: 8/25/2011 2101h
Units: µg/L
Dilution Factor: 1

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	
4-Isopropyltoluene	99-87-6	2.00	< 2.00	

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Jose Rocha
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Jose Rocha
QA Officer

Lab Sample ID: 1108511-001D
Client Sample ID: Parleys Cr. Below 1300 E.

Analyzed: 8/25/2011 2101h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	5.00	< 5.00	
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	
Isopropyl acetate	108-21-4	2.00	< 2.00	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-001D
Client Sample ID: Parleys Cr. Below 1300 E.

Analyzed: 8/25/2011 2101h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	25.0	< 25.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
Isopropyltoluene	99-87-6	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	2.00	< 2.00	
n-Butyl alcohol	71-36-3	50.0	< 50.0	
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	2.00	< 2.00	
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	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	**119**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-001D
Client Sample ID: Parleys Cr. Below 1300 E.

Analyzed: 8/25/2011 2101h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	80-123	**115**	
Surr: Dibromofluoromethane	1868-53-7	80-124	**112**	
Surr: Toluene-d8	2037-26-5	80-125	**99.2**	

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

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-002B
Client Sample ID: Parleys Cr. Below 1300 E. - Bed
Collection Date: 8/25/2011 0720h
Received Date: 8/25/2011 1345h **Method:** SW8260C

Analytical Results VOAs Full List by GC/MS Method 8260C

Analyzed: 8/26/2011 1144h
Units: µg/kg-dry
Dilution Factor: 1

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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	2.35	< 2.35	
1,1,1-Trichloroethane	71-55-6	2.35	< 2.35	
1,1,2,2-Tetrachloroethane	79-34-5	2.35	< 2.35	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.35	< 2.35	
1,1,2-Trichloroethane	79-00-5	2.35	< 2.35	
1,1-Dichloropropene	563-58-6	2.35	< 2.35	
1,1-Dichloroethane	75-34-3	2.35	< 2.35	
1,1-Dichloroethene	75-35-4	2.35	< 2.35	
1,2,3-Trichlorobenzene	87-61-6	2.35	< 2.35	
1,2,3-Trichloropropane	96-18-4	2.35	< 2.35	
1,2,3-Trimethylbenzene	526-73-8	2.35	< 2.35	
1,2,4-Trichlorobenzene	120-82-1	2.35	< 2.35	
1,2,4-Trimethylbenzene	95-63-6	2.35	< 2.35	
1,2-Dibromo-3-chloropropane	96-12-8	5.88	< 5.88	
1,2-Dibromoethane	106-93-4	2.35	< 2.35	
1,2-Dichlorobenzene	95-50-1	2.35	< 2.35	
1,2-Dichloroethane	107-06-2	2.35	< 2.35	
1,2-Dichloropropane	78-87-5	2.35	< 2.35	
1,3,5-Trimethylbenzene	108-67-8	2.35	< 2.35	
1,3-Dichlorobenzene	541-73-1	2.35	< 2.35	
1,3-Dichloropropane	142-28-9	2.35	< 2.35	
1,4-Dichlorobenzene	106-46-7	2.35	< 2.35	
1,4-Dioxane	123-91-1	58.8	< 58.8	
2,2-Dichloropropane	594-20-7	2.35	< 2.35	
2-Butanone	78-93-3	11.8	< 11.8	
2-Chloroethyl vinyl ether	110-75-8	5.88	< 5.88	
2-Chlorotoluene	95-49-8	2.35	< 2.35	
2-Hexanone	591-78-6	5.88	< 5.88	
2-Nitropropane	79-46-9	5.88	< 5.88	
4-Chlorotoluene	106-43-4	2.35	< 2.35	
4-Isopropyltoluene	99-87-6	2.35	< 2.35	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-002B
Client Sample ID: Parleys Cr. Below 1300 E. - Bed

Analyzed: 8/26/2011 1144h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Methyl-2-pentanone	108-10-1	5.88	< 5.88	
Acetone	67-64-1	11.8	< 11.8	
Acetonitrile	75-05-8	5.88	< 5.88	
Acrolein	107-02-8	5.88	< 5.88	
Acrylonitrile	107-13-1	11.8	< 11.8	
Allyl chloride	107-05-1	5.88	< 5.88	
Benzene	71-43-2	2.35	< 2.35	
Benzyl chloride	100-44-7	5.88	< 5.88	
Bis(2-chloroisopropyl) ether	108-60-1	5.88	< 5.88	
Bromobenzene	108-86-1	2.35	< 2.35	
Bromochloromethane	74-97-5	2.35	< 2.35	
Bromodichloromethane	75-27-4	2.35	< 2.35	
Bromoform	75-25-2	2.35	< 2.35	
Bromomethane	74-83-9	5.88	< 5.88	
Butyl acetate	123-86-4	11.8	< 11.8	
Carbon disulfide	75-15-0	2.35	< 2.35	
Carbon tetrachloride	56-23-5	2.35	< 2.35	
Chlorobenzene	108-90-7	2.35	< 2.35	
Chloroethane	75-00-3	2.35	< 2.35	
Chloroform	67-66-3	2.35	< 2.35	
Chloromethane	74-87-3	5.88	< 5.88	
Chloroprene	126-99-8	2.35	< 2.35	
cis-1,2-Dichloroethene	156-59-2	2.35	< 2.35	
cis-1,3-Dichloropropene	10061-01-5	2.35	< 2.35	
Cyclohexane	110-82-7	2.35	< 2.35	
Cyclohexanone	108-94-1	58.8	< 58.8	
Dibromochloromethane	124-48-1	2.35	< 2.35	
Dibromomethane	74-95-3	2.35	< 2.35	
Dichlorodifluoromethane	75-71-8	2.35	< 2.35	
Ethyl acetate	141-78-6	11.8	< 11.8	
Ethyl ether	60-29-7	11.8	< 11.8	
Ethyl methacrylate	97-63-2	2.35	< 2.35	
Ethylbenzene	100-41-4	2.35	< 2.35	
Hexachlorobutadiene	87-68-3	2.35	< 2.35	
Iodomethane	74-88-4	5.88	< 5.88	
Isobutyl alcohol	78-83-1	118	< 118	
Isopropyl acetate	108-21-4	11.8	< 11.8	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-002B
Client Sample ID: Parleys Cr. Below 1300 E. - Bed

Analyzed: 8/26/2011 1144h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	47.1	< 47.1	
Isopropylbenzene	98-82-8	2.35	< 2.35	
Isopropyltoluene	99-87-6	2.35	< 2.35	
m,p-Xylene	179601-23-1	2.35	< 2.35	
Methacrylonitrile	126-98-7	5.88	< 5.88	
Methyl Acetate	79-20-9	5.88	< 5.88	
Methyl methacrylate	80-62-6	5.88	< 5.88	
Methyl tert-butyl ether	1634-04-4	2.35	< 2.35	
Methylcyclohexane	108-87-2	2.35	< 2.35	
Methylene chloride	75-09-2	5.88	< 5.88	
n-Amyl acetate	628-63-7	11.8	< 11.8	
n-Butyl alcohol	71-36-3	118	< 118	
n-Butylbenzene	104-51-8	2.35	< 2.35	
n-Hexane	110-54-3	2.35	< 2.35	
n-Octane	111-65-9	2.35	< 2.35	
n-Propylbenzene	103-65-1	2.35	< 2.35	
Naphthalene	91-20-3	2.35	< 2.35	
o-Xylene	95-47-6	2.35	< 2.35	
Pentachloroethane	76-01-7	2.35	< 2.35	
Propionitrile	107-12-0	29.4	< 29.4	
Propyl acetate	109-60-4	11.8	< 11.8	
sec-Butylbenzene	135-98-8	2.35	< 2.35	
Styrene	100-42-5	2.35	< 2.35	
tert-Butyl alcohol	76-65-0	23.5	< 23.5	
tert-Butylbenzene	98-06-6	2.35	< 2.35	
Tetrachloroethene	127-18-4	2.35	**4.58**	
Tetrahydrofuran	109-99-9	2.35	< 2.35	
Toluene	108-88-3	2.35	< 2.35	
trans-1,2-Dichloroethene	156-60-5	2.35	< 2.35	
trans-1,3-Dichloropropene	10061-02-6	2.35	< 2.35	
trans-1,4-Dichloro-2-butene	110-57-6	2.35	< 2.35	
Trichloroethene	79-01-6	2.35	< 2.35	
Trichlorofluoromethane	75-69-4	2.35	< 2.35	
Vinyl acetate	108-05-4	11.8	< 11.8	
Vinyl chloride	75-01-4	1.18	< 1.18	
Xylenes, Total	1330-20-7	2.35	< 2.35	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	**102**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-002B
Client Sample ID: Parleys Cr. Below 1300 E. - Bed

Analyzed: 8/26/2011 1144h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	71-144	**104**	
Surr: Dibromofluoromethane	1868-53-7	71-129	**101**	
Surr: Toluene-d8	2037-26-5	72-129	**106**	

The sample was received with headspace.
Sampling and analytical preparation performed by method 5030C.
This sample was analyzed for TICs and no unknown peaks were detected.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-003B
Client Sample ID: Parleys Cr. Below 1300 E. - Bank
Collection Date: 8/25/2011 0720h
Received Date: 8/25/2011 1345h **Method:** SW8260C

Analytical Results VOAs Full List by GC/MS Method 8260C

Analyzed: 8/26/2011 1252h
Units: µg/kg-dry
Dilution Factor: 1

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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	2.79	< 2.79	
1,1,1-Trichloroethane	71-55-6	2.79	< 2.79	
1,1,2,2-Tetrachloroethane	79-34-5	2.79	< 2.79	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.79	< 2.79	
1,1,2-Trichloroethane	79-00-5	2.79	< 2.79	
1,1-Dichloropropene	563-58-6	2.79	< 2.79	
1,1-Dichloroethane	75-34-3	2.79	< 2.79	
1,1-Dichloroethene	75-35-4	2.79	< 2.79	
1,2,3-Trichlorobenzene	87-61-6	2.79	< 2.79	
1,2,3-Trichloropropane	96-18-4	2.79	< 2.79	
1,2,3-Trimethylbenzene	526-73-8	2.79	< 2.79	
1,2,4-Trichlorobenzene	120-82-1	2.79	< 2.79	
1,2,4-Trimethylbenzene	95-63-6	2.79	< 2.79	
1,2-Dibromo-3-chloropropane	96-12-8	6.96	< 6.96	
1,2-Dibromoethane	106-93-4	2.79	< 2.79	
1,2-Dichlorobenzene	95-50-1	2.79	< 2.79	
1,2-Dichloroethane	107-06-2	2.79	< 2.79	
1,2-Dichloropropane	78-87-5	2.79	< 2.79	
1,3,5-Trimethylbenzene	108-67-8	2.79	< 2.79	
1,3-Dichlorobenzene	541-73-1	2.79	< 2.79	
1,3-Dichloropropane	142-28-9	2.79	< 2.79	
1,4-Dichlorobenzene	106-46-7	2.79	< 2.79	
1,4-Dioxane	123-91-1	69.6	< 69.6	
2,2-Dichloropropane	594-20-7	2.79	< 2.79	
2-Butanone	78-93-3	13.9	< 13.9	
2-Chloroethyl vinyl ether	110-75-8	6.96	< 6.96	
2-Chlorotoluene	95-49-8	2.79	< 2.79	
2-Hexanone	591-78-6	6.96	< 6.96	
2-Nitropropane	79-46-9	6.96	< 6.96	
4-Chlorotoluene	106-43-4	2.79	< 2.79	
4-Isopropyltoluene	99-87-6	2.79	< 2.79	

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Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-003B
Client Sample ID: Parleys Cr. Below 1300 E. - Bank

Analyzed: 8/26/2011 1252h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Methyl-2-pentanone	108-10-1	6.96	< 6.96	
Acetone	67-64-1	13.9	< 13.9	
Acetonitrile	75-05-8	6.96	< 6.96	
Acrolein	107-02-8	6.96	< 6.96	
Acrylonitrile	107-13-1	13.9	< 13.9	
Allyl chloride	107-05-1	6.96	< 6.96	
Benzene	71-43-2	2.79	< 2.79	
Benzyl chloride	100-44-7	6.96	< 6.96	
Bis(2-chloroisopropyl) ether	108-60-1	6.96	< 6.96	
Bromobenzene	108-86-1	2.79	< 2.79	
Bromochloromethane	74-97-5	2.79	< 2.79	
Bromodichloromethane	75-27-4	2.79	< 2.79	
Bromoform	75-25-2	2.79	< 2.79	
Bromomethane	74-83-9	6.96	< 6.96	
Butyl acetate	123-86-4	13.9	< 13.9	
Carbon disulfide	75-15-0	2.79	< 2.79	
Carbon tetrachloride	56-23-5	2.79	< 2.79	
Chlorobenzene	108-90-7	2.79	< 2.79	
Chloroethane	75-00-3	2.79	< 2.79	
Chloroform	67-66-3	2.79	< 2.79	
Chloromethane	74-87-3	6.96	< 6.96	
Chloroprene	126-99-8	2.79	< 2.79	
cis-1,2-Dichloroethene	156-59-2	2.79	< 2.79	
cis-1,3-Dichloropropene	10061-01-5	2.79	< 2.79	
Cyclohexane	110-82-7	2.79	< 2.79	
Cyclohexanone	108-94-1	69.6	< 69.6	
Dibromochloromethane	124-48-1	2.79	< 2.79	
Dibromomethane	74-95-3	2.79	< 2.79	
Dichlorodifluoromethane	75-71-8	2.79	< 2.79	
Ethyl acetate	141-78-6	13.9	< 13.9	
Ethyl ether	60-29-7	13.9	< 13.9	
Ethyl methacrylate	97-63-2	2.79	< 2.79	
Ethylbenzene	100-41-4	2.79	< 2.79	
Hexachlorobutadiene	87-68-3	2.79	< 2.79	
Iodomethane	74-88-4	6.96	< 6.96	
Isobutyl alcohol	78-83-1	139	< 139	
Isopropyl acetate	108-21-4	13.9	< 13.9	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-003B
Client Sample ID: Parleys Cr. Below 1300 E. - Bank

Analyzed: 8/26/2011 1252h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	55.7	< 55.7	
Isopropylbenzene	98-82-8	2.79	< 2.79	
Isopropyltoluene	99-87-6	2.79	< 2.79	
m,p-Xylene	179601-23-1	2.79	< 2.79	
Methacrylonitrile	126-98-7	6.96	< 6.96	
Methyl Acetate	79-20-9	6.96	< 6.96	
Methyl methacrylate	80-62-6	6.96	< 6.96	
Methyl tert-butyl ether	1634-04-4	2.79	< 2.79	
Methylcyclohexane	108-87-2	2.79	< 2.79	
Methylene chloride	75-09-2	6.96	< 6.96	
n-Amyl acetate	628-63-7	13.9	< 13.9	
n-Butyl alcohol	71-36-3	139	< 139	
n-Butylbenzene	104-51-8	2.79	< 2.79	
n-Hexane	110-54-3	2.79	< 2.79	
n-Octane	111-65-9	2.79	< 2.79	
n-Propylbenzene	103-65-1	2.79	< 2.79	
Naphthalene	91-20-3	2.79	< 2.79	
o-Xylene	95-47-6	2.79	< 2.79	
Pentachloroethane	76-01-7	2.79	< 2.79	
Propionitrile	107-12-0	34.8	< 34.8	
Propyl acetate	109-60-4	13.9	< 13.9	
sec-Butylbenzene	135-98-8	2.79	< 2.79	
Styrene	100-42-5	2.79	< 2.79	
tert-Butyl alcohol	76-65-0	27.9	< 27.9	
tert-Butylbenzene	98-06-6	2.79	< 2.79	
Tetrachloroethene	127-18-4	2.79	< 2.79	
Tetrahydrofuran	109-99-9	2.79	< 2.79	
Toluene	108-88-3	2.79	< 2.79	
trans-1,2-Dichloroethene	156-60-5	2.79	< 2.79	
trans-1,3-Dichloropropene	10061-02-6	2.79	< 2.79	
trans-1,4-Dichloro-2-butene	110-57-6	2.79	< 2.79	
Trichloroethene	79-01-6	2.79	< 2.79	
Trichlorofluoromethane	75-69-4	2.79	< 2.79	
Vinyl acetate	108-05-4	13.9	< 13.9	
Vinyl chloride	75-01-4	1.39	< 1.39	
Xylenes, Total	1330-20-7	2.79	< 2.79	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	**112**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-003B
Client Sample ID: Parleys Cr. Below 1300 E. - Bank

Analyzed: 8/26/2011 1252h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	71-144	**124**	
Surr: Dibromofluoromethane	1868-53-7	71-129	**106**	
Surr: Toluene-d8	2037-26-5	72-129	**111**	

Internal standard areas were outside of the QC limits. Reanalysis yielded similar results indicating matrix interference.
Sampling and analytical preparation performed by method 5030C.
This sample was analyzed for TICs and no unknown peaks were detected.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-004D
Client Sample ID: Parleys Cr. Below 1700 E.
Collection Date: 8/25/2011 0820h
Received Date: 8/25/2011 1345h **Method:** SW8260C

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

Analyzed: 8/25/2011 2120h
Units: µg/L
Dilution Factor: 1

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	
4-Isopropyltoluene	99-87-6	2.00	< 2.00	

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Lab Sample ID: 1108511-004D
Client Sample ID: Parleys Cr. Below 1700 E.

Analyzed: 8/25/2011 2120h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	5.00	< 5.00	
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	
Isopropyl acetate	108-21-4	2.00	< 2.00	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-004D
Client Sample ID: Parleys Cr. Below 1700 E.

Analyzed: 8/25/2011 2120h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	25.0	< 25.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
Isopropyltoluene	99-87-6	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	2.00	< 2.00	
n-Butyl alcohol	71-36-3	50.0	< 50.0	
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	2.00	< 2.00	
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	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	**121**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-004D
Client Sample ID: Parleys Cr. Below 1700 E.

Analyzed: 8/25/2011 2120h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	80-123	**113**	
Surr: Dibromofluoromethane	1868-53-7	80-124	**113**	
Surr: Toluene-d8	2037-26-5	80-125	**97.1**	

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

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-005B
Client Sample ID: Parleys Cr. Below 1700 E. - Bed
Collection Date: 8/25/2011 0820h
Received Date: 8/25/2011 1345h **Method:** SW8260C

Analytical Results VOAs Full List by GC/MS Method 8260C

Analyzed: 8/26/2011 1320h
Units: µg/kg-dry
Dilution Factor: 1

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.35	< 2.35	
1,1,1-Trichloroethane	71-55-6	2.35	< 2.35	
1,1,2,2-Tetrachloroethane	79-34-5	2.35	< 2.35	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.35	< 2.35	
1,1,2-Trichloroethane	79-00-5	2.35	< 2.35	
1,1-Dichloropropene	563-58-6	2.35	< 2.35	
1,1-Dichloroethane	75-34-3	2.35	< 2.35	
1,1-Dichloroethene	75-35-4	2.35	< 2.35	
1,2,3-Trichlorobenzene	87-61-6	2.35	< 2.35	
1,2,3-Trichloropropane	96-18-4	2.35	< 2.35	
1,2,3-Trimethylbenzene	526-73-8	2.35	< 2.35	
1,2,4-Trichlorobenzene	120-82-1	2.35	< 2.35	
1,2,4-Trimethylbenzene	95-63-6	2.35	< 2.35	
1,2-Dibromo-3-chloropropane	96-12-8	5.88	< 5.88	
1,2-Dibromoethane	106-93-4	2.35	< 2.35	
1,2-Dichlorobenzene	95-50-1	2.35	< 2.35	
1,2-Dichloroethane	107-06-2	2.35	< 2.35	
1,2-Dichloropropane	78-87-5	2.35	< 2.35	
1,3,5-Trimethylbenzene	108-67-8	2.35	< 2.35	
1,3-Dichlorobenzene	541-73-1	2.35	< 2.35	
1,3-Dichloropropane	142-28-9	2.35	< 2.35	
1,4-Dichlorobenzene	106-46-7	2.35	< 2.35	
1,4-Dioxane	123-91-1	58.8	< 58.8	
2,2-Dichloropropane	594-20-7	2.35	< 2.35	
2-Butanone	78-93-3	11.8	< 11.8	
2-Chloroethyl vinyl ether	110-75-8	5.88	< 5.88	
2-Chlorotoluene	95-49-8	2.35	< 2.35	
2-Hexanone	591-78-6	5.88	< 5.88	
2-Nitropropane	79-46-9	5.88	< 5.88	
4-Chlorotoluene	106-43-4	2.35	< 2.35	
4-Isopropyltoluene	99-87-6	2.35	< 2.35	

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Lab Sample ID: 1108511-005B
Client Sample ID: Parleys Cr. Below 1700 E. - Bed

Analyzed: 8/26/2011 1320h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Methyl-2-pentanone	108-10-1	5.88	< 5.88	
Acetone	67-64-1	11.8	< 11.8	
Acetonitrile	75-05-8	5.88	< 5.88	
Acrolein	107-02-8	5.88	< 5.88	
Acrylonitrile	107-13-1	11.8	< 11.8	
Allyl chloride	107-05-1	5.88	< 5.88	
Benzene	71-43-2	2.35	< 2.35	
Benzyl chloride	100-44-7	5.88	< 5.88	
Bis(2-chloroisopropyl) ether	108-60-1	5.88	< 5.88	
Bromobenzene	108-86-1	2.35	< 2.35	
Bromochloromethane	74-97-5	2.35	< 2.35	
Bromodichloromethane	75-27-4	2.35	< 2.35	
Bromoform	75-25-2	2.35	< 2.35	
Bromomethane	74-83-9	5.88	< 5.88	
Butyl acetate	123-86-4	11.8	< 11.8	
Carbon disulfide	75-15-0	2.35	< 2.35	
Carbon tetrachloride	56-23-5	2.35	< 2.35	
Chlorobenzene	108-90-7	2.35	< 2.35	
Chloroethane	75-00-3	2.35	< 2.35	
Chloroform	67-66-3	2.35	< 2.35	
Chloromethane	74-87-3	5.88	< 5.88	
Chloroprene	126-99-8	2.35	< 2.35	
cis-1,2-Dichloroethene	156-59-2	2.35	< 2.35	
cis-1,3-Dichloropropene	10061-01-5	2.35	< 2.35	
Cyclohexane	110-82-7	2.35	< 2.35	
Cyclohexanone	108-94-1	58.8	< 58.8	
Dibromochloromethane	124-48-1	2.35	< 2.35	
Dibromomethane	74-95-3	2.35	< 2.35	
Dichlorodifluoromethane	75-71-8	2.35	< 2.35	
Ethyl acetate	141-78-6	11.8	< 11.8	
Ethyl ether	60-29-7	11.8	< 11.8	
Ethyl methacrylate	97-63-2	2.35	< 2.35	
Ethylbenzene	100-41-4	2.35	< 2.35	
Hexachlorobutadiene	87-68-3	2.35	< 2.35	
Iodomethane	74-88-4	5.88	< 5.88	
Isobutyl alcohol	78-83-1	118	< 118	
Isopropyl acetate	108-21-4	11.8	< 11.8	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-005B
Client Sample ID: Parleys Cr. Below 1700 E. - Bed

Analyzed: 8/26/2011 1320h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	47.0	< 47.0	
Isopropylbenzene	98-82-8	2.35	< 2.35	
Isopropyltoluene	99-87-6	2.35	< 2.35	
m,p-Xylene	179601-23-1	2.35	< 2.35	
Methacrylonitrile	126-98-7	5.88	< 5.88	
Methyl Acetate	79-20-9	5.88	< 5.88	
Methyl methacrylate	80-62-6	5.88	< 5.88	
Methyl tert-butyl ether	1634-04-4	2.35	< 2.35	
Methylcyclohexane	108-87-2	2.35	< 2.35	
Methylene chloride	75-09-2	5.88	< 5.88	
n-Amyl acetate	628-63-7	11.8	< 11.8	
n-Butyl alcohol	71-36-3	118	< 118	
n-Butylbenzene	104-51-8	2.35	< 2.35	
n-Hexane	110-54-3	2.35	< 2.35	
n-Octane	111-65-9	2.35	< 2.35	
n-Propylbenzene	103-65-1	2.35	< 2.35	
Naphthalene	91-20-3	2.35	< 2.35	
o-Xylene	95-47-6	2.35	< 2.35	
Pentachloroethane	76-01-7	2.35	< 2.35	
Propionitrile	107-12-0	29.4	< 29.4	
Propyl acetate	109-60-4	11.8	< 11.8	
sec-Butylbenzene	135-98-8	2.35	< 2.35	
Styrene	100-42-5	2.35	< 2.35	
tert-Butyl alcohol	76-65-0	23.5	< 23.5	
tert-Butylbenzene	98-06-6	2.35	< 2.35	
Tetrachloroethene	127-18-4	2.35	< 2.35	
Tetrahydrofuran	109-99-9	2.35	< 2.35	
Toluene	108-88-3	2.35	< 2.35	
trans-1,2-Dichloroethene	156-60-5	2.35	< 2.35	
trans-1,3-Dichloropropene	10061-02-6	2.35	< 2.35	
trans-1,4-Dichloro-2-butene	110-57-6	2.35	< 2.35	
Trichloroethene	79-01-6	2.35	< 2.35	
Trichlorofluoromethane	75-69-4	2.35	< 2.35	
Vinyl acetate	108-05-4	11.8	< 11.8	
Vinyl chloride	75-01-4	1.18	< 1.18	
Xylenes, Total	1330-20-7	2.35	< 2.35	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	**121**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-005B
Client Sample ID: Parleys Cr. Below 1700 E. - Bed

Analyzed: 8/26/2011 1320h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	71-144	**101**	
Surr: Dibromofluoromethane	1868-53-7	71-129	**108**	
Surr: Toluene-d8	2037-26-5	72-129	**99.0**	

Sampling and analytical preparation performed by method 5030C.
This sample was analyzed for TICs and no unknown peaks were detected.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-006B
Client Sample ID: Parleys Cr. Below 1700 E. - Bank
Collection Date: 8/25/2011 0820h
Received Date: 8/25/2011 1345h **Method:** SW8260C

Analytical Results VOAs Full List by GC/MS Method 8260C

Analyzed: 8/27/2011 0205h
Units: µg/kg-dry
Dilution Factor: 1

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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	2.95	< 2.95	
1,1,1-Trichloroethane	71-55-6	2.95	< 2.95	
1,1,2,2-Tetrachloroethane	79-34-5	2.95	< 2.95	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.95	< 2.95	
1,1,2-Trichloroethane	79-00-5	2.95	< 2.95	
1,1-Dichloropropene	563-58-6	2.95	< 2.95	
1,1-Dichloroethane	75-34-3	2.95	< 2.95	
1,1-Dichloroethene	75-35-4	2.95	< 2.95	
1,2,3-Trichlorobenzene	87-61-6	2.95	< 2.95	
1,2,3-Trichloropropane	96-18-4	2.95	< 2.95	
1,2,3-Trimethylbenzene	526-73-8	2.95	< 2.95	
1,2,4-Trichlorobenzene	120-82-1	2.95	< 2.95	
1,2,4-Trimethylbenzene	95-63-6	2.95	< 2.95	
1,2-Dibromo-3-chloropropane	96-12-8	7.38	< 7.38	
1,2-Dibromoethane	106-93-4	2.95	< 2.95	
1,2-Dichlorobenzene	95-50-1	2.95	< 2.95	
1,2-Dichloroethane	107-06-2	2.95	< 2.95	
1,2-Dichloropropane	78-87-5	2.95	< 2.95	
1,3,5-Trimethylbenzene	108-67-8	2.95	< 2.95	
1,3-Dichlorobenzene	541-73-1	2.95	< 2.95	
1,3-Dichloropropane	142-28-9	2.95	< 2.95	
1,4-Dichlorobenzene	106-46-7	2.95	< 2.95	
1,4-Dioxane	123-91-1	73.8	< 73.8	
2,2-Dichloropropane	594-20-7	2.95	< 2.95	
2-Butanone	78-93-3	14.8	< 14.8	
2-Chloroethyl vinyl ether	110-75-8	7.38	< 7.38	
2-Chlorotoluene	95-49-8	2.95	< 2.95	
2-Hexanone	591-78-6	7.38	< 7.38	
2-Nitropropane	79-46-9	7.38	< 7.38	
4-Chlorotoluene	106-43-4	2.95	< 2.95	
4-Isopropyltoluene	99-87-6	2.95	< 2.95	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-006B
Client Sample ID: Parleys Cr. Below 1700 E. - Bank

Analyzed: 8/27/2011 0205h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Methyl-2-pentanone	108-10-1	7.38	< 7.38	
Acetone	67-64-1	14.8	< 14.8	
Acetonitrile	75-05-8	7.38	< 7.38	
Acrolein	107-02-8	7.38	< 7.38	
Acrylonitrile	107-13-1	14.8	< 14.8	
Allyl chloride	107-05-1	7.38	< 7.38	
Benzene	71-43-2	2.95	< 2.95	
Benzyl chloride	100-44-7	7.38	< 7.38	
Bis(2-chloroisopropyl) ether	108-60-1	7.38	< 7.38	
Bromobenzene	108-86-1	2.95	< 2.95	
Bromochloromethane	74-97-5	2.95	< 2.95	
Bromodichloromethane	75-27-4	2.95	< 2.95	
Bromoform	75-25-2	2.95	< 2.95	
Bromomethane	74-83-9	7.38	< 7.38	
Butyl acetate	123-86-4	14.8	< 14.8	
Carbon disulfide	75-15-0	2.95	< 2.95	
Carbon tetrachloride	56-23-5	2.95	< 2.95	
Chlorobenzene	108-90-7	2.95	< 2.95	
Chloroethane	75-00-3	2.95	< 2.95	
Chloroform	67-66-3	2.95	< 2.95	
Chloromethane	74-87-3	7.38	< 7.38	
Chloroprene	126-99-8	2.95	< 2.95	
cis-1,2-Dichloroethene	156-59-2	2.95	< 2.95	
cis-1,3-Dichloropropene	10061-01-5	2.95	< 2.95	
Cyclohexane	110-82-7	2.95	< 2.95	
Cyclohexanone	108-94-1	73.8	< 73.8	
Dibromochloromethane	124-48-1	2.95	< 2.95	
Dibromomethane	74-95-3	2.95	< 2.95	
Dichlorodifluoromethane	75-71-8	2.95	< 2.95	
Ethyl acetate	141-78-6	14.8	< 14.8	
Ethyl ether	60-29-7	14.8	< 14.8	
Ethyl methacrylate	97-63-2	2.95	< 2.95	
Ethylbenzene	100-41-4	2.95	< 2.95	
Hexachlorobutadiene	87-68-3	2.95	< 2.95	
Iodomethane	74-88-4	7.38	< 7.38	
Isobutyl alcohol	78-83-1	148	< 148	
Isopropyl acetate	108-21-4	14.8	< 14.8	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-006B
Client Sample ID: Parleys Cr. Below 1700 E. - Bank

Analyzed: 8/27/2011 0205h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	59.0	< 59.0	
Isopropylbenzene	98-82-8	2.95	< 2.95	
Isopropyltoluene	99-87-6	2.95	< 2.95	
m,p-Xylene	179601-23-1	2.95	< 2.95	
Methacrylonitrile	126-98-7	7.38	< 7.38	
Methyl Acetate	79-20-9	7.38	< 7.38	
Methyl methacrylate	80-62-6	7.38	< 7.38	
Methyl tert-butyl ether	1634-04-4	2.95	< 2.95	
Methylcyclohexane	108-87-2	2.95	< 2.95	
Methylene chloride	75-09-2	7.38	< 7.38	
n-Amyl acetate	628-63-7	14.8	< 14.8	
n-Butyl alcohol	71-36-3	148	< 148	
n-Butylbenzene	104-51-8	2.95	< 2.95	
n-Hexane	110-54-3	2.95	< 2.95	
n-Octane	111-65-9	2.95	< 2.95	
n-Propylbenzene	103-65-1	2.95	< 2.95	
Naphthalene	91-20-3	2.95	< 2.95	
o-Xylene	95-47-6	2.95	< 2.95	
Pentachloroethane	76-01-7	2.95	< 2.95	
Propionitrile	107-12-0	36.9	< 36.9	
Propyl acetate	109-60-4	14.8	< 14.8	
sec-Butylbenzene	135-98-8	2.95	< 2.95	
Styrene	100-42-5	2.95	< 2.95	
tert-Butyl alcohol	76-65-0	29.5	< 29.5	
tert-Butylbenzene	98-06-6	2.95	< 2.95	
Tetrachloroethene	127-18-4	2.95	< 2.95	
Tetrahydrofuran	109-99-9	2.95	< 2.95	
Toluene	108-88-3	2.95	< 2.95	
trans-1,2-Dichloroethene	156-60-5	2.95	< 2.95	
trans-1,3-Dichloropropene	10061-02-6	2.95	< 2.95	
trans-1,4-Dichloro-2-butene	110-57-6	2.95	< 2.95	
Trichloroethene	79-01-6	2.95	< 2.95	
Trichlorofluoromethane	75-69-4	2.95	< 2.95	
Vinyl acetate	108-05-4	14.8	< 14.8	
Vinyl chloride	75-01-4	1.48	< 1.48	
Xylenes, Total	1330-20-7	2.95	< 2.95	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	**134**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-006B
Client Sample ID: Parleys Cr. Below 1700 E. - Bank

Analyzed: 8/27/2011 0205h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	71-144	**100**	
Surr: Dibromofluoromethane	1868-53-7	71-129	**112**	
Surr: Toluene-d8	2037-26-5	72-129	**100**	

Sampling and analytical preparation performed by method 5030C.
This sample was analyzed for TICs and no unknown peaks were detected.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-007D
Client Sample ID: Parleys Cr. Above 2000 E.
Collection Date: 8/25/2011 0900h
Received Date: 8/25/2011 1345h **Method:** SW8260C

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

Analyzed: 8/25/2011 2139h
Units: µg/L
Dilution Factor: 1

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	
4-Isopropyltoluene	99-87-6	2.00	< 2.00	

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Jose Rocha
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Lab Sample ID: 1108511-007D
Client Sample ID: Parleys Cr. Above 2000 E.

Analyzed: 8/25/2011 2139h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	5.00	< 5.00	
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	
Isopropyl acetate	108-21-4	2.00	< 2.00	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-007D
Client Sample ID: Parleys Cr. Above 2000 E.

Analyzed: 8/25/2011 2139h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	25.0	< 25.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
Isopropyltoluene	99-87-6	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	2.00	< 2.00	
n-Butyl alcohol	71-36-3	50.0	< 50.0	
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	2.00	< 2.00	
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	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	**119**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-007D
Client Sample ID: Parleys Cr. Above 2000 E.

Analyzed: 8/25/2011 2139h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	80-123	**115**	
Surr: Dibromofluoromethane	1868-53-7	80-124	**112**	
Surr: Toluene-d8	2037-26-5	80-125	**98.0**	

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

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-008B
Client Sample ID: Parleys Cr. Above 2000 E. - Bed
Collection Date: 8/25/2011 0900h
Received Date: 8/25/2011 1345h **Method:** SW8260C

Analytical Results VOAs Full List by GC/MS Method 8260C

Analyzed: 8/26/2011 1406h
Units: µg/kg-dry
Dilution Factor: 1

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.95	< 2.95	
1,1,1-Trichloroethane	71-55-6	2.95	< 2.95	
1,1,2,2-Tetrachloroethane	79-34-5	2.95	< 2.95	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.95	< 2.95	
1,1,2-Trichloroethane	79-00-5	2.95	< 2.95	
1,1-Dichloropropene	563-58-6	2.95	< 2.95	
1,1-Dichloroethane	75-34-3	2.95	< 2.95	
1,1-Dichloroethene	75-35-4	2.95	< 2.95	
1,2,3-Trichlorobenzene	87-61-6	2.95	< 2.95	
1,2,3-Trichloropropane	96-18-4	2.95	< 2.95	
1,2,3-Trimethylbenzene	526-73-8	2.95	< 2.95	
1,2,4-Trichlorobenzene	120-82-1	2.95	< 2.95	
1,2,4-Trimethylbenzene	95-63-6	2.95	< 2.95	
1,2-Dibromo-3-chloropropane	96-12-8	7.37	< 7.37	
1,2-Dibromoethane	106-93-4	2.95	< 2.95	
1,2-Dichlorobenzene	95-50-1	2.95	< 2.95	
1,2-Dichloroethane	107-06-2	2.95	< 2.95	
1,2-Dichloropropane	78-87-5	2.95	< 2.95	
1,3,5-Trimethylbenzene	108-67-8	2.95	< 2.95	
1,3-Dichlorobenzene	541-73-1	2.95	< 2.95	
1,3-Dichloropropane	142-28-9	2.95	< 2.95	
1,4-Dichlorobenzene	106-46-7	2.95	< 2.95	
1,4-Dioxane	123-91-1	73.7	< 73.7	
2,2-Dichloropropane	594-20-7	2.95	< 2.95	
2-Butanone	78-93-3	14.7	< 14.7	
2-Chloroethyl vinyl ether	110-75-8	7.37	< 7.37	
2-Chlorotoluene	95-49-8	2.95	< 2.95	
2-Hexanone	591-78-6	7.37	< 7.37	
2-Nitropropane	79-46-9	7.37	< 7.37	
4-Chlorotoluene	106-43-4	2.95	< 2.95	
4-Isopropyltoluene	99-87-6	2.95	< 2.95	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-008B
Client Sample ID: Parleys Cr. Above 2000 E. - Bed

Analyzed: 8/26/2011 1406h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Methyl-2-pentanone	108-10-1	7.37	< 7.37	
Acetone	67-64-1	14.7	< 14.7	
Acetonitrile	75-05-8	7.37	< 7.37	
Acrolein	107-02-8	7.37	< 7.37	
Acrylonitrile	107-13-1	14.7	< 14.7	
Allyl chloride	107-05-1	7.37	< 7.37	
Benzene	71-43-2	2.95	< 2.95	
Benzyl chloride	100-44-7	7.37	< 7.37	
Bis(2-chloroisopropyl) ether	108-60-1	7.37	< 7.37	
Bromobenzene	108-86-1	2.95	< 2.95	
Bromochloromethane	74-97-5	2.95	< 2.95	
Bromodichloromethane	75-27-4	2.95	< 2.95	
Bromoform	75-25-2	2.95	< 2.95	
Bromomethane	74-83-9	7.37	< 7.37	
Butyl acetate	123-86-4	14.7	< 14.7	
Carbon disulfide	75-15-0	2.95	< 2.95	
Carbon tetrachloride	56-23-5	2.95	< 2.95	
Chlorobenzene	108-90-7	2.95	< 2.95	
Chloroethane	75-00-3	2.95	< 2.95	
Chloroform	67-66-3	2.95	< 2.95	
Chloromethane	74-87-3	7.37	< 7.37	
Chloroprene	126-99-8	2.95	< 2.95	
cis-1,2-Dichloroethene	156-59-2	2.95	< 2.95	
cis-1,3-Dichloropropene	10061-01-5	2.95	< 2.95	
Cyclohexane	110-82-7	2.95	< 2.95	
Cyclohexanone	108-94-1	73.7	< 73.7	
Dibromochloromethane	124-48-1	2.95	< 2.95	
Dibromomethane	74-95-3	2.95	< 2.95	
Dichlorodifluoromethane	75-71-8	2.95	< 2.95	
Ethyl acetate	141-78-6	14.7	< 14.7	
Ethyl ether	60-29-7	14.7	< 14.7	
Ethyl methacrylate	97-63-2	2.95	< 2.95	
Ethylbenzene	100-41-4	2.95	< 2.95	
Hexachlorobutadiene	87-68-3	2.95	< 2.95	
Iodomethane	74-88-4	7.37	< 7.37	
Isobutyl alcohol	78-83-1	147	< 147	
Isopropyl acetate	108-21-4	14.7	< 14.7	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-008B
Client Sample ID: Parleys Cr. Above 2000 E. - Bed

Analyzed: 8/26/2011 1406h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	59.0	< 59.0	
Isopropylbenzene	98-82-8	2.95	< 2.95	
Isopropyltoluene	99-87-6	2.95	< 2.95	
m,p-Xylene	179601-23-1	2.95	< 2.95	
Methacrylonitrile	126-98-7	7.37	< 7.37	
Methyl Acetate	79-20-9	7.37	< 7.37	
Methyl methacrylate	80-62-6	7.37	< 7.37	
Methyl tert-butyl ether	1634-04-4	2.95	< 2.95	
Methylcyclohexane	108-87-2	2.95	< 2.95	
Methylene chloride	75-09-2	7.37	< 7.37	
n-Amyl acetate	628-63-7	14.7	< 14.7	
n-Butyl alcohol	71-36-3	147	< 147	
n-Butylbenzene	104-51-8	2.95	< 2.95	
n-Hexane	110-54-3	2.95	< 2.95	
n-Octane	111-65-9	2.95	< 2.95	
n-Propylbenzene	103-65-1	2.95	< 2.95	
Naphthalene	91-20-3	2.95	< 2.95	
o-Xylene	95-47-6	2.95	< 2.95	
Pentachloroethane	76-01-7	2.95	< 2.95	
Propionitrile	107-12-0	36.9	< 36.9	
Propyl acetate	109-60-4	14.7	< 14.7	
sec-Butylbenzene	135-98-8	2.95	< 2.95	
Styrene	100-42-5	2.95	< 2.95	
tert-Butyl alcohol	76-65-0	29.5	< 29.5	
tert-Butylbenzene	98-06-6	2.95	< 2.95	
Tetrachloroethene	127-18-4	2.95	< 2.95	
Tetrahydrofuran	109-99-9	2.95	< 2.95	
Toluene	108-88-3	2.95	< 2.95	
trans-1,2-Dichloroethene	156-60-5	2.95	< 2.95	
trans-1,3-Dichloropropene	10061-02-6	2.95	< 2.95	
trans-1,4-Dichloro-2-butene	110-57-6	2.95	< 2.95	
Trichloroethene	79-01-6	2.95	< 2.95	
Trichlorofluoromethane	75-69-4	2.95	< 2.95	
Vinyl acetate	108-05-4	14.7	< 14.7	
Vinyl chloride	75-01-4	1.47	< 1.47	
Xylenes, Total	1330-20-7	2.95	< 2.95	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	**114**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-008B
Client Sample ID: Parleys Cr. Above 2000 E. - Bed

Analyzed: 8/26/2011 1406h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	71-144	**110**	
Surr: Dibromofluoromethane	1868-53-7	71-129	**104**	
Surr: Toluene-d8	2037-26-5	72-129	**102**	

Internal standard areas were outside of the QC limits. Reanalysis yielded similar results indicating matrix interference.
Sampling and analytical preparation performed by method 5030C.
This sample was analyzed for TICs and no unknown peaks were detected.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-009B
Client Sample ID: Parleys Cr. Above 2000 E. - Bank
Collection Date: 8/25/2011 0900h
Received Date: 8/25/2011 1345h **Method:** SW8260C

Analytical Results VOAs Full List by GC/MS Method 8260C

Analyzed: 8/26/2011 2025h
Units: µg/kg-dry
Dilution Factor: 1

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.29	< 2.29	
1,1,1-Trichloroethane	71-55-6	2.29	< 2.29	
1,1,2,2-Tetrachloroethane	79-34-5	2.29	< 2.29	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.29	< 2.29	
1,1,2-Trichloroethane	79-00-5	2.29	< 2.29	
1,1-Dichloropropene	563-58-6	2.29	< 2.29	
1,1-Dichloroethane	75-34-3	2.29	< 2.29	
1,1-Dichloroethene	75-35-4	2.29	< 2.29	
1,2,3-Trichlorobenzene	87-61-6	2.29	< 2.29	
1,2,3-Trichloropropane	96-18-4	2.29	< 2.29	
1,2,3-Trimethylbenzene	526-73-8	2.29	< 2.29	
1,2,4-Trichlorobenzene	120-82-1	2.29	< 2.29	
1,2,4-Trimethylbenzene	95-63-6	2.29	< 2.29	
1,2-Dibromo-3-chloropropane	96-12-8	5.71	< 5.71	
1,2-Dibromoethane	106-93-4	2.29	< 2.29	
1,2-Dichlorobenzene	95-50-1	2.29	< 2.29	
1,2-Dichloroethane	107-06-2	2.29	< 2.29	
1,2-Dichloropropane	78-87-5	2.29	< 2.29	
1,3,5-Trimethylbenzene	108-67-8	2.29	< 2.29	
1,3-Dichlorobenzene	541-73-1	2.29	< 2.29	
1,3-Dichloropropane	142-28-9	2.29	< 2.29	
1,4-Dichlorobenzene	106-46-7	2.29	< 2.29	
1,4-Dioxane	123-91-1	57.1	< 57.1	
2,2-Dichloropropane	594-20-7	2.29	< 2.29	
2-Butanone	78-93-3	11.4	< 11.4	
2-Chloroethyl vinyl ether	110-75-8	5.71	< 5.71	
2-Chlorotoluene	95-49-8	2.29	< 2.29	
2-Hexanone	591-78-6	5.71	< 5.71	
2-Nitropropane	79-46-9	5.71	< 5.71	
4-Chlorotoluene	106-43-4	2.29	< 2.29	
4-Isopropyltoluene	99-87-6	2.29	< 2.29	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-009B
Client Sample ID: Parleys Cr. Above 2000 E. - Bank

Analyzed: 8/26/2011 2025h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Methyl-2-pentanone	108-10-1	5.71	< 5.71	
Acetone	67-64-1	11.4	< 11.4	
Acetonitrile	75-05-8	5.71	< 5.71	
Acrolein	107-02-8	5.71	< 5.71	
Acrylonitrile	107-13-1	11.4	< 11.4	
Allyl chloride	107-05-1	5.71	< 5.71	
Benzene	71-43-2	2.29	< 2.29	
Benzyl chloride	100-44-7	5.71	< 5.71	
Bis(2-chloroisopropyl) ether	108-60-1	5.71	< 5.71	
Bromobenzene	108-86-1	2.29	< 2.29	
Bromochloromethane	74-97-5	2.29	< 2.29	
Bromodichloromethane	75-27-4	2.29	< 2.29	
Bromoform	75-25-2	2.29	< 2.29	
Bromomethane	74-83-9	5.71	< 5.71	
Butyl acetate	123-86-4	11.4	< 11.4	
Carbon disulfide	75-15-0	2.29	< 2.29	
Carbon tetrachloride	56-23-5	2.29	< 2.29	
Chlorobenzene	108-90-7	2.29	< 2.29	
Chloroethane	75-00-3	2.29	< 2.29	
Chloroform	67-66-3	2.29	< 2.29	
Chloromethane	74-87-3	5.71	< 5.71	
Chloroprene	126-99-8	2.29	< 2.29	
cis-1,2-Dichloroethene	156-59-2	2.29	< 2.29	
cis-1,3-Dichloropropene	10061-01-5	2.29	< 2.29	
Cyclohexane	110-82-7	2.29	< 2.29	
Cyclohexanone	108-94-1	57.1	< 57.1	
Dibromochloromethane	124-48-1	2.29	< 2.29	
Dibromomethane	74-95-3	2.29	< 2.29	
Dichlorodifluoromethane	75-71-8	2.29	< 2.29	
Ethyl acetate	141-78-6	11.4	< 11.4	
Ethyl ether	60-29-7	11.4	< 11.4	
Ethyl methacrylate	97-63-2	2.29	< 2.29	
Ethylbenzene	100-41-4	2.29	< 2.29	
Hexachlorobutadiene	87-68-3	2.29	< 2.29	
Iodomethane	74-88-4	5.71	< 5.71	
Isobutyl alcohol	78-83-1	114	< 114	
Isopropyl acetate	108-21-4	11.4	< 11.4	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-009B
Client Sample ID: Parleys Cr. Above 2000 E. - Bank

Analyzed: 8/26/2011 2025h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	45.7	< 45.7	
Isopropylbenzene	98-82-8	2.29	< 2.29	
Isopropyltoluene	99-87-6	2.29	< 2.29	
m,p-Xylene	179601-23-1	2.29	< 2.29	
Methacrylonitrile	126-98-7	5.71	< 5.71	
Methyl Acetate	79-20-9	5.71	< 5.71	
Methyl methacrylate	80-62-6	5.71	< 5.71	
Methyl tert-butyl ether	1634-04-4	2.29	< 2.29	
Methylcyclohexane	108-87-2	2.29	< 2.29	
Methylene chloride	75-09-2	5.71	< 5.71	
n-Amyl acetate	628-63-7	11.4	< 11.4	
n-Butyl alcohol	71-36-3	114	< 114	
n-Butylbenzene	104-51-8	2.29	< 2.29	
n-Hexane	110-54-3	2.29	< 2.29	
n-Octane	111-65-9	2.29	< 2.29	
n-Propylbenzene	103-65-1	2.29	< 2.29	
Naphthalene	91-20-3	2.29	< 2.29	
o-Xylene	95-47-6	2.29	< 2.29	
Pentachloroethane	76-01-7	2.29	< 2.29	
Propionitrile	107-12-0	28.6	< 28.6	
Propyl acetate	109-60-4	11.4	< 11.4	
sec-Butylbenzene	135-98-8	2.29	< 2.29	
Styrene	100-42-5	2.29	< 2.29	
tert-Butyl alcohol	76-65-0	22.9	< 22.9	
tert-Butylbenzene	98-06-6	2.29	< 2.29	
Tetrachloroethene	127-18-4	2.29	< 2.29	
Tetrahydrofuran	109-99-9	2.29	< 2.29	@
Toluene	108-88-3	2.29	< 2.29	
trans-1,2-Dichloroethene	156-60-5	2.29	< 2.29	
trans-1,3-Dichloropropene	10061-02-6	2.29	< 2.29	
trans-1,4-Dichloro-2-butene	110-57-6	2.29	< 2.29	
Trichloroethene	79-01-6	2.29	< 2.29	
Trichlorofluoromethane	75-69-4	2.29	< 2.29	
Vinyl acetate	108-05-4	11.4	< 11.4	
Vinyl chloride	75-01-4	1.14	< 1.14	
Xylenes, Total	1330-20-7	2.29	< 2.29	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	**118**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-009B
Client Sample ID: Parleys Cr. Above 2000 E. - Bank

Analyzed: 8/26/2011 2025h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	71-144	**97.1**	
Surr: Dibromofluoromethane	1868-53-7	71-129	**106**	
Surr: Toluene-d8	2037-26-5	72-129	**98.6**	

@ - High RPD due to suspected sample non-homogeneity or matrix interference.
Sampling and analytical preparation performed by method 5030C.
This sample was analyzed for TICs and no unknown peaks were detected.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-010D
Client Sample ID: Parleys Cr. Above I-215
Collection Date: 8/25/2011 0950h
Received Date: 8/25/2011 1345h **Method:** SW8260C

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

Analyzed: 8/25/2011 2158h
Units: µg/L
Dilution Factor: 1

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	
4-Isopropyltoluene	99-87-6	2.00	< 2.00	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-010D
Client Sample ID: Parleys Cr. Above I-215

Analyzed: 8/25/2011 2158h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	5.00	< 5.00	
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	
Isopropyl acetate	108-21-4	2.00	< 2.00	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-010D
Client Sample ID: Parleys Cr. Above I-215

Analyzed: 8/25/2011 2158h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	25.0	< 25.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
Isopropyltoluene	99-87-6	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	2.00	< 2.00	
n-Butyl alcohol	71-36-3	50.0	< 50.0	
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	2.00	< 2.00	
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	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	**119**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-010D
Client Sample ID: Parleys Cr. Above I-215

Analyzed: 8/25/2011 2158h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	80-123	**116**	
Surr: Dibromofluoromethane	1868-53-7	80-124	**112**	
Surr: Toluene-d8	2037-26-5	80-125	**96.9**	

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

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-011B
Client Sample ID: Parleys Cr. Above I-215 - Bed
Collection Date: 8/25/2011 0950h
Received Date: 8/25/2011 1345h **Method:** SW8260C

Analytical Results VOAs Full List by GC/MS Method 8260C

Analyzed: 8/26/2011 2133h
Units: µg/kg-dry
Dilution Factor: 1

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.55	< 2.55	
1,1,1-Trichloroethane	71-55-6	2.55	< 2.55	
1,1,2,2-Tetrachloroethane	79-34-5	2.55	< 2.55	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.55	< 2.55	
1,1,2-Trichloroethane	79-00-5	2.55	< 2.55	
1,1-Dichloropropene	563-58-6	2.55	< 2.55	
1,1-Dichloroethane	75-34-3	2.55	< 2.55	
1,1-Dichloroethene	75-35-4	2.55	< 2.55	
1,2,3-Trichlorobenzene	87-61-6	2.55	< 2.55	
1,2,3-Trichloropropane	96-18-4	2.55	< 2.55	
1,2,3-Trimethylbenzene	526-73-8	2.55	< 2.55	
1,2,4-Trichlorobenzene	120-82-1	2.55	< 2.55	
1,2,4-Trimethylbenzene	95-63-6	2.55	< 2.55	
1,2-Dibromo-3-chloropropane	96-12-8	6.38	< 6.38	
1,2-Dibromoethane	106-93-4	2.55	< 2.55	
1,2-Dichlorobenzene	95-50-1	2.55	< 2.55	
1,2-Dichloroethane	107-06-2	2.55	< 2.55	
1,2-Dichloropropane	78-87-5	2.55	< 2.55	
1,3,5-Trimethylbenzene	108-67-8	2.55	< 2.55	
1,3-Dichlorobenzene	541-73-1	2.55	< 2.55	
1,3-Dichloropropane	142-28-9	2.55	< 2.55	
1,4-Dichlorobenzene	106-46-7	2.55	< 2.55	
1,4-Dioxane	123-91-1	63.8	< 63.8	
2,2-Dichloropropane	594-20-7	2.55	< 2.55	
2-Butanone	78-93-3	12.8	< 12.8	
2-Chloroethyl vinyl ether	110-75-8	6.38	< 6.38	
2-Chlorotoluene	95-49-8	2.55	< 2.55	
2-Hexanone	591-78-6	6.38	< 6.38	
2-Nitropropane	79-46-9	6.38	< 6.38	
4-Chlorotoluene	106-43-4	2.55	< 2.55	
4-Isopropyltoluene	99-87-6	2.55	< 2.55	

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Jose Rocha
QA Officer

Lab Sample ID: 1108511-011B
Client Sample ID: Parleys Cr. Above I-215 - Bed

Analyzed: 8/26/2011 2133h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Methyl-2-pentanone	108-10-1	6.38	< 6.38	
Acetone	67-64-1	12.8	< 12.8	
Acetonitrile	75-05-8	6.38	< 6.38	
Acrolein	107-02-8	6.38	< 6.38	
Acrylonitrile	107-13-1	12.8	< 12.8	
Allyl chloride	107-05-1	6.38	< 6.38	
Benzene	71-43-2	2.55	< 2.55	
Benzyl chloride	100-44-7	6.38	< 6.38	
Bis(2-chloroisopropyl) ether	108-60-1	6.38	< 6.38	
Bromobenzene	108-86-1	2.55	< 2.55	
Bromochloromethane	74-97-5	2.55	< 2.55	
Bromodichloromethane	75-27-4	2.55	< 2.55	
Bromoform	75-25-2	2.55	< 2.55	
Bromomethane	74-83-9	6.38	< 6.38	
Butyl acetate	123-86-4	12.8	< 12.8	
Carbon disulfide	75-15-0	2.55	< 2.55	
Carbon tetrachloride	56-23-5	2.55	< 2.55	
Chlorobenzene	108-90-7	2.55	< 2.55	
Chloroethane	75-00-3	2.55	< 2.55	
Chloroform	67-66-3	2.55	< 2.55	
Chloromethane	74-87-3	6.38	< 6.38	
Chloroprene	126-99-8	2.55	< 2.55	
cis-1,2-Dichloroethene	156-59-2	2.55	< 2.55	
cis-1,3-Dichloropropene	10061-01-5	2.55	< 2.55	
Cyclohexane	110-82-7	2.55	< 2.55	
Cyclohexanone	108-94-1	63.8	< 63.8	
Dibromochloromethane	124-48-1	2.55	< 2.55	
Dibromomethane	74-95-3	2.55	< 2.55	
Dichlorodifluoromethane	75-71-8	2.55	< 2.55	
Ethyl acetate	141-78-6	12.8	< 12.8	
Ethyl ether	60-29-7	12.8	< 12.8	
Ethyl methacrylate	97-63-2	2.55	< 2.55	
Ethylbenzene	100-41-4	2.55	< 2.55	
Hexachlorobutadiene	87-68-3	2.55	< 2.55	
Iodomethane	74-88-4	6.38	< 6.38	
Isobutyl alcohol	78-83-1	128	< 128	
Isopropyl acetate	108-21-4	12.8	< 12.8	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-011B
Client Sample ID: Parleys Cr. Above I-215 - Bed

Analyzed: 8/26/2011 2133h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	51.0	< 51.0	
Isopropylbenzene	98-82-8	2.55	< 2.55	
Isopropyltoluene	99-87-6	2.55	< 2.55	
m,p-Xylene	179601-23-1	2.55	< 2.55	
Methacrylonitrile	126-98-7	6.38	< 6.38	
Methyl Acetate	79-20-9	6.38	< 6.38	
Methyl methacrylate	80-62-6	6.38	< 6.38	
Methyl tert-butyl ether	1634-04-4	2.55	< 2.55	
Methylcyclohexane	108-87-2	2.55	< 2.55	
Methylene chloride	75-09-2	6.38	< 6.38	
n-Amyl acetate	628-63-7	12.8	< 12.8	
n-Butyl alcohol	71-36-3	128	< 128	
n-Butylbenzene	104-51-8	2.55	< 2.55	
n-Hexane	110-54-3	2.55	< 2.55	
n-Octane	111-65-9	2.55	< 2.55	
n-Propylbenzene	103-65-1	2.55	< 2.55	
Naphthalene	91-20-3	2.55	< 2.55	
o-Xylene	95-47-6	2.55	< 2.55	
Pentachloroethane	76-01-7	2.55	< 2.55	
Propionitrile	107-12-0	31.9	< 31.9	
Propyl acetate	109-60-4	12.8	< 12.8	
sec-Butylbenzene	135-98-8	2.55	< 2.55	
Styrene	100-42-5	2.55	< 2.55	
tert-Butyl alcohol	76-65-0	25.5	< 25.5	
tert-Butylbenzene	98-06-6	2.55	< 2.55	
Tetrachloroethene	127-18-4	2.55	< 2.55	
Tetrahydrofuran	109-99-9	2.55	< 2.55	
Toluene	108-88-3	2.55	< 2.55	
trans-1,2-Dichloroethene	156-60-5	2.55	< 2.55	
trans-1,3-Dichloropropene	10061-02-6	2.55	< 2.55	
trans-1,4-Dichloro-2-butene	110-57-6	2.55	< 2.55	
Trichloroethene	79-01-6	2.55	< 2.55	
Trichlorofluoromethane	75-69-4	2.55	< 2.55	
Vinyl acetate	108-05-4	12.8	< 12.8	
Vinyl chloride	75-01-4	1.28	< 1.28	
Xylenes, Total	1330-20-7	2.55	< 2.55	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	**130**	

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Kyle F. Gross
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Jose Rocha
QA Officer

Lab Sample ID: 1108511-011B
Client Sample ID: Parleys Cr. Above I-215 - Bed

Analyzed: 8/26/2011 2133h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	71-144	**97.2**	
Surr: Dibromofluoromethane	1868-53-7	71-129	**111**	
Surr: Toluene-d8	2037-26-5	72-129	**98.4**	

The sample was received with headspace.
Sampling and analytical preparation performed by method 5030C.
This sample was analyzed for TICs and no unknown peaks were detected.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-012B
Client Sample ID: Parleys Cr. Above I-215 - Bank
Collection Date: 8/25/2011 0950h
Received Date: 8/25/2011 1345h **Method:** SW8260C

Analytical Results VOAs Full List by GC/MS Method 8260C

Analyzed: 8/26/2011 2206h
Units: µg/kg-dry
Dilution Factor: 1

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Jose Rocha
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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.66	< 2.66	
1,1,1-Trichloroethane	71-55-6	2.66	< 2.66	
1,1,2,2-Tetrachloroethane	79-34-5	2.66	< 2.66	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.66	< 2.66	
1,1,2-Trichloroethane	79-00-5	2.66	< 2.66	
1,1-Dichloropropene	563-58-6	2.66	< 2.66	
1,1-Dichloroethane	75-34-3	2.66	< 2.66	
1,1-Dichloroethene	75-35-4	2.66	< 2.66	
1,2,3-Trichlorobenzene	87-61-6	2.66	< 2.66	
1,2,3-Trichloropropane	96-18-4	2.66	< 2.66	
1,2,3-Trimethylbenzene	526-73-8	2.66	< 2.66	
1,2,4-Trichlorobenzene	120-82-1	2.66	< 2.66	
1,2,4-Trimethylbenzene	95-63-6	2.66	< 2.66	
1,2-Dibromo-3-chloropropane	96-12-8	6.65	< 6.65	
1,2-Dibromoethane	106-93-4	2.66	< 2.66	
1,2-Dichlorobenzene	95-50-1	2.66	< 2.66	
1,2-Dichloroethane	107-06-2	2.66	< 2.66	
1,2-Dichloropropane	78-87-5	2.66	< 2.66	
1,3,5-Trimethylbenzene	108-67-8	2.66	< 2.66	
1,3-Dichlorobenzene	541-73-1	2.66	< 2.66	
1,3-Dichloropropane	142-28-9	2.66	< 2.66	
1,4-Dichlorobenzene	106-46-7	2.66	< 2.66	
1,4-Dioxane	123-91-1	66.5	< 66.5	
2,2-Dichloropropane	594-20-7	2.66	< 2.66	
2-Butanone	78-93-3	13.3	< 13.3	
2-Chloroethyl vinyl ether	110-75-8	6.65	< 6.65	
2-Chlorotoluene	95-49-8	2.66	< 2.66	
2-Hexanone	591-78-6	6.65	< 6.65	
2-Nitropropane	79-46-9	6.65	< 6.65	
4-Chlorotoluene	106-43-4	2.66	< 2.66	
4-Isopropyltoluene	99-87-6	2.66	< 2.66	

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QA Officer

Lab Sample ID: 1108511-012B
Client Sample ID: Parleys Cr. Above I-215 - Bank

Analyzed: 8/26/2011 2206h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Methyl-2-pentanone	108-10-1	6.65	< 6.65	
Acetone	67-64-1	13.3	< 13.3	
Acetonitrile	75-05-8	6.65	< 6.65	
Acrolein	107-02-8	6.65	< 6.65	
Acrylonitrile	107-13-1	13.3	< 13.3	
Allyl chloride	107-05-1	6.65	< 6.65	
Benzene	71-43-2	2.66	< 2.66	
Benzyl chloride	100-44-7	6.65	< 6.65	
Bis(2-chloroisopropyl) ether	108-60-1	6.65	< 6.65	
Bromobenzene	108-86-1	2.66	< 2.66	
Bromochloromethane	74-97-5	2.66	< 2.66	
Bromodichloromethane	75-27-4	2.66	< 2.66	
Bromoform	75-25-2	2.66	< 2.66	
Bromomethane	74-83-9	6.65	< 6.65	
Butyl acetate	123-86-4	13.3	< 13.3	
Carbon disulfide	75-15-0	2.66	< 2.66	
Carbon tetrachloride	56-23-5	2.66	< 2.66	
Chlorobenzene	108-90-7	2.66	< 2.66	
Chloroethane	75-00-3	2.66	< 2.66	
Chloroform	67-66-3	2.66	< 2.66	
Chloromethane	74-87-3	6.65	< 6.65	
Chloroprene	126-99-8	2.66	< 2.66	
cis-1,2-Dichloroethene	156-59-2	2.66	< 2.66	
cis-1,3-Dichloropropene	10061-01-5	2.66	< 2.66	
Cyclohexane	110-82-7	2.66	< 2.66	
Cyclohexanone	108-94-1	66.5	< 66.5	
Dibromochloromethane	124-48-1	2.66	< 2.66	
Dibromomethane	74-95-3	2.66	< 2.66	
Dichlorodifluoromethane	75-71-8	2.66	< 2.66	
Ethyl acetate	141-78-6	13.3	< 13.3	
Ethyl ether	60-29-7	13.3	< 13.3	
Ethyl methacrylate	97-63-2	2.66	< 2.66	
Ethylbenzene	100-41-4	2.66	< 2.66	
Hexachlorobutadiene	87-68-3	2.66	< 2.66	
Iodomethane	74-88-4	6.65	< 6.65	
Isobutyl alcohol	78-83-1	133	< 133	
Isopropyl acetate	108-21-4	13.3	< 13.3	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-012B
Client Sample ID: Parleys Cr. Above I-215 - Bank

Analyzed: 8/26/2011 2206h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	53.2	< 53.2	
Isopropylbenzene	98-82-8	2.66	< 2.66	
Isopropyltoluene	99-87-6	2.66	< 2.66	
m,p-Xylene	179601-23-1	2.66	< 2.66	
Methacrylonitrile	126-98-7	6.65	< 6.65	
Methyl Acetate	79-20-9	6.65	< 6.65	
Methyl methacrylate	80-62-6	6.65	< 6.65	
Methyl tert-butyl ether	1634-04-4	2.66	< 2.66	
Methylcyclohexane	108-87-2	2.66	< 2.66	
Methylene chloride	75-09-2	6.65	< 6.65	
n-Amyl acetate	628-63-7	13.3	< 13.3	
n-Butyl alcohol	71-36-3	133	< 133	
n-Butylbenzene	104-51-8	2.66	< 2.66	
n-Hexane	110-54-3	2.66	< 2.66	
n-Octane	111-65-9	2.66	< 2.66	
n-Propylbenzene	103-65-1	2.66	< 2.66	
Naphthalene	91-20-3	2.66	< 2.66	
o-Xylene	95-47-6	2.66	< 2.66	
Pentachloroethane	76-01-7	2.66	< 2.66	
Propionitrile	107-12-0	33.2	< 33.2	
Propyl acetate	109-60-4	13.3	< 13.3	
sec-Butylbenzene	135-98-8	2.66	< 2.66	
Styrene	100-42-5	2.66	< 2.66	
tert-Butyl alcohol	76-65-0	26.6	< 26.6	
tert-Butylbenzene	98-06-6	2.66	< 2.66	
Tetrachloroethene	127-18-4	2.66	< 2.66	
Tetrahydrofuran	109-99-9	2.66	< 2.66	
Toluene	108-88-3	2.66	< 2.66	
trans-1,2-Dichloroethene	156-60-5	2.66	< 2.66	
trans-1,3-Dichloropropene	10061-02-6	2.66	< 2.66	
trans-1,4-Dichloro-2-butene	110-57-6	2.66	< 2.66	
Trichloroethene	79-01-6	2.66	< 2.66	
Trichlorofluoromethane	75-69-4	2.66	< 2.66	
Vinyl acetate	108-05-4	13.3	< 13.3	
Vinyl chloride	75-01-4	1.33	< 1.33	
Xylenes, Total	1330-20-7	2.66	< 2.66	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	**125**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-012B
Client Sample ID: Parleys Cr. Above I-215 - Bank

Analyzed: 8/26/2011 2206h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	71-144	**96.1**	
Surr: Dibromofluoromethane	1868-53-7	71-129	**110**	
Surr: Toluene-d8	2037-26-5	72-129	**98.9**	

Sampling and analytical preparation performed by method 5030C.
This sample was analyzed for TICs and no unknown peaks were detected.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-013D
Client Sample ID: Emigration Cr. Above 1300 E.
Collection Date: 8/25/2011 1045h
Received Date: 8/25/2011 1345h **Method:** SW8260C

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

Analyzed: 8/25/2011 2217h
Units: µg/L
Dilution Factor: 1

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	
4-Isopropyltoluene	99-87-6	2.00	< 2.00	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

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Lab Sample ID: 1108511-013D
Client Sample ID: Emigration Cr. Above 1300 E.

Analyzed: 8/25/2011 2217h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	5.00	< 5.00	
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	
Isopropyl acetate	108-21-4	2.00	< 2.00	

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Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-013D
Client Sample ID: Emigration Cr. Above 1300 E.

Analyzed: 8/25/2011 2217h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	25.0	< 25.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
Isopropyltoluene	99-87-6	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	2.00	< 2.00	
n-Butyl alcohol	71-36-3	50.0	< 50.0	
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	2.00	< 2.00	
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	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	**120**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-013D
Client Sample ID: Emigration Cr. Above 1300 E.

Analyzed: 8/25/2011 2217h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	80-123	**115**	
Surr: Dibromofluoromethane	1868-53-7	80-124	**112**	
Surr: Toluene-d8	2037-26-5	80-125	**97.1**	

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

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-014B
Client Sample ID: Emigration Cr. Above 1300 E. - Bed
Collection Date: 8/25/2011 1045h
Received Date: 8/25/2011 1345h **Method:** SW8260C

Analytical Results VOAs Full List by GC/MS Method 8260C

Analyzed: 8/26/2011 2229h
Units: µg/kg-dry
Dilution Factor: 1

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.67	< 2.67	
1,1,1-Trichloroethane	71-55-6	2.67	< 2.67	
1,1,2,2-Tetrachloroethane	79-34-5	2.67	< 2.67	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.67	< 2.67	
1,1,2-Trichloroethane	79-00-5	2.67	< 2.67	
1,1-Dichloropropene	563-58-6	2.67	< 2.67	
1,1-Dichloroethane	75-34-3	2.67	< 2.67	
1,1-Dichloroethene	75-35-4	2.67	< 2.67	
1,2,3-Trichlorobenzene	87-61-6	2.67	< 2.67	
1,2,3-Trichloropropane	96-18-4	2.67	< 2.67	
1,2,3-Trimethylbenzene	526-73-8	2.67	< 2.67	
1,2,4-Trichlorobenzene	120-82-1	2.67	< 2.67	
1,2,4-Trimethylbenzene	95-63-6	2.67	< 2.67	
1,2-Dibromo-3-chloropropane	96-12-8	6.68	< 6.68	
1,2-Dibromoethane	106-93-4	2.67	< 2.67	
1,2-Dichlorobenzene	95-50-1	2.67	< 2.67	
1,2-Dichloroethane	107-06-2	2.67	< 2.67	
1,2-Dichloropropane	78-87-5	2.67	< 2.67	
1,3,5-Trimethylbenzene	108-67-8	2.67	< 2.67	
1,3-Dichlorobenzene	541-73-1	2.67	< 2.67	
1,3-Dichloropropane	142-28-9	2.67	< 2.67	
1,4-Dichlorobenzene	106-46-7	2.67	< 2.67	
1,4-Dioxane	123-91-1	66.8	< 66.8	
2,2-Dichloropropane	594-20-7	2.67	< 2.67	
2-Butanone	78-93-3	13.4	< 13.4	
2-Chloroethyl vinyl ether	110-75-8	6.68	< 6.68	
2-Chlorotoluene	95-49-8	2.67	< 2.67	
2-Hexanone	591-78-6	6.68	< 6.68	
2-Nitropropane	79-46-9	6.68	< 6.68	
4-Chlorotoluene	106-43-4	2.67	< 2.67	
4-Isopropyltoluene	99-87-6	2.67	< 2.67	

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Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-014B
Client Sample ID: Emigration Cr. Above 1300 E. - Bed

Analyzed: 8/26/2011 2229h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Methyl-2-pentanone	108-10-1	6.68	< 6.68	
Acetone	67-64-1	13.4	< 13.4	
Acetonitrile	75-05-8	6.68	< 6.68	
Acrolein	107-02-8	6.68	< 6.68	
Acrylonitrile	107-13-1	13.4	< 13.4	
Allyl chloride	107-05-1	6.68	< 6.68	
Benzene	71-43-2	2.67	< 2.67	
Benzyl chloride	100-44-7	6.68	< 6.68	
Bis(2-chloroisopropyl) ether	108-60-1	6.68	< 6.68	
Bromobenzene	108-86-1	2.67	< 2.67	
Bromochloromethane	74-97-5	2.67	< 2.67	
Bromodichloromethane	75-27-4	2.67	< 2.67	
Bromoform	75-25-2	2.67	< 2.67	
Bromomethane	74-83-9	6.68	< 6.68	
Butyl acetate	123-86-4	13.4	< 13.4	
Carbon disulfide	75-15-0	2.67	< 2.67	
Carbon tetrachloride	56-23-5	2.67	< 2.67	
Chlorobenzene	108-90-7	2.67	< 2.67	
Chloroethane	75-00-3	2.67	< 2.67	
Chloroform	67-66-3	2.67	< 2.67	
Chloromethane	74-87-3	6.68	< 6.68	
Chloroprene	126-99-8	2.67	< 2.67	
cis-1,2-Dichloroethene	156-59-2	2.67	< 2.67	
cis-1,3-Dichloropropene	10061-01-5	2.67	< 2.67	
Cyclohexane	110-82-7	2.67	< 2.67	
Cyclohexanone	108-94-1	66.8	< 66.8	
Dibromochloromethane	124-48-1	2.67	< 2.67	
Dibromomethane	74-95-3	2.67	< 2.67	
Dichlorodifluoromethane	75-71-8	2.67	< 2.67	
Ethyl acetate	141-78-6	13.4	< 13.4	
Ethyl ether	60-29-7	13.4	< 13.4	
Ethyl methacrylate	97-63-2	2.67	< 2.67	
Ethylbenzene	100-41-4	2.67	< 2.67	
Hexachlorobutadiene	87-68-3	2.67	< 2.67	
Iodomethane	74-88-4	6.68	< 6.68	
Isobutyl alcohol	78-83-1	134	< 134	
Isopropyl acetate	108-21-4	13.4	< 13.4	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-014B
Client Sample ID: Emigration Cr. Above 1300 E. - Bed

Analyzed: 8/26/2011 2229h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	53.5	< 53.5	
Isopropylbenzene	98-82-8	2.67	< 2.67	
Isopropyltoluene	99-87-6	2.67	< 2.67	
m,p-Xylene	179601-23-1	2.67	< 2.67	
Methacrylonitrile	126-98-7	6.68	< 6.68	
Methyl Acetate	79-20-9	6.68	< 6.68	
Methyl methacrylate	80-62-6	6.68	< 6.68	
Methyl tert-butyl ether	1634-04-4	2.67	< 2.67	
Methylcyclohexane	108-87-2	2.67	< 2.67	
Methylene chloride	75-09-2	6.68	< 6.68	
n-Amyl acetate	628-63-7	13.4	< 13.4	
n-Butyl alcohol	71-36-3	134	< 134	
n-Butylbenzene	104-51-8	2.67	< 2.67	
n-Hexane	110-54-3	2.67	< 2.67	
n-Octane	111-65-9	2.67	< 2.67	
n-Propylbenzene	103-65-1	2.67	< 2.67	
Naphthalene	91-20-3	2.67	< 2.67	
o-Xylene	95-47-6	2.67	< 2.67	
Pentachloroethane	76-01-7	2.67	< 2.67	
Propionitrile	107-12-0	33.4	< 33.4	
Propyl acetate	109-60-4	13.4	< 13.4	
sec-Butylbenzene	135-98-8	2.67	< 2.67	
Styrene	100-42-5	2.67	< 2.67	
tert-Butyl alcohol	76-65-0	26.7	< 26.7	
tert-Butylbenzene	98-06-6	2.67	< 2.67	
Tetrachloroethene	127-18-4	2.67	< 2.67	
Tetrahydrofuran	109-99-9	2.67	< 2.67	
Toluene	108-88-3	2.67	< 2.67	
trans-1,2-Dichloroethene	156-60-5	2.67	< 2.67	
trans-1,3-Dichloropropene	10061-02-6	2.67	< 2.67	
trans-1,4-Dichloro-2-butene	110-57-6	2.67	< 2.67	
Trichloroethene	79-01-6	2.67	< 2.67	
Trichlorofluoromethane	75-69-4	2.67	< 2.67	
Vinyl acetate	108-05-4	13.4	< 13.4	
Vinyl chloride	75-01-4	1.34	< 1.34	
Xylenes, Total	1330-20-7	2.67	< 2.67	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	**129**	

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Kyle F. Gross
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Jose Rocha
QA Officer

Lab Sample ID: 1108511-014B
Client Sample ID: Emigration Cr. Above 1300 E. - Bed

Analyzed: 8/26/2011 2229h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	71-144	**98.0**	
Surr: Dibromofluoromethane	1868-53-7	71-129	**111**	
Surr: Toluene-d8	2037-26-5	72-129	**99.1**	

The sample was received with headspace.
Sampling and analytical preparation performed by method 5030C.
This sample was analyzed for TICs and no unknown peaks were detected.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-015B
Client Sample ID: Emigration Cr. Above 1300 E. - Bank
Collection Date: 8/25/2011 1045h
Received Date: 8/25/2011 1345h **Method:** SW8260C

Analytical Results VOAs Full List by GC/MS Method 8260C

Analyzed: 8/27/2011 1532h
Units: µg/kg-dry
Dilution Factor: 1

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.44	< 2.44	
1,1,1-Trichloroethane	71-55-6	2.44	< 2.44	
1,1,2,2-Tetrachloroethane	79-34-5	2.44	< 2.44	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.44	< 2.44	
1,1,2-Trichloroethane	79-00-5	2.44	< 2.44	
1,1-Dichloropropene	563-58-6	2.44	< 2.44	
1,1-Dichloroethane	75-34-3	2.44	< 2.44	
1,1-Dichloroethene	75-35-4	2.44	< 2.44	
1,2,3-Trichlorobenzene	87-61-6	2.44	< 2.44	
1,2,3-Trichloropropane	96-18-4	2.44	< 2.44	
1,2,3-Trimethylbenzene	526-73-8	2.44	< 2.44	
1,2,4-Trichlorobenzene	120-82-1	2.44	< 2.44	
1,2,4-Trimethylbenzene	95-63-6	2.44	< 2.44	
1,2-Dibromo-3-chloropropane	96-12-8	6.09	< 6.09	
1,2-Dibromoethane	106-93-4	2.44	< 2.44	
1,2-Dichlorobenzene	95-50-1	2.44	< 2.44	
1,2-Dichloroethane	107-06-2	2.44	< 2.44	
1,2-Dichloropropane	78-87-5	2.44	< 2.44	
1,3,5-Trimethylbenzene	108-67-8	2.44	< 2.44	
1,3-Dichlorobenzene	541-73-1	2.44	< 2.44	
1,3-Dichloropropane	142-28-9	2.44	< 2.44	
1,4-Dichlorobenzene	106-46-7	2.44	< 2.44	
1,4-Dioxane	123-91-1	60.9	< 60.9	
2,2-Dichloropropane	594-20-7	2.44	< 2.44	
2-Butanone	78-93-3	12.2	< 12.2	
2-Chloroethyl vinyl ether	110-75-8	6.09	< 6.09	
2-Chlorotoluene	95-49-8	2.44	< 2.44	
2-Hexanone	591-78-6	6.09	< 6.09	
2-Nitropropane	79-46-9	6.09	< 6.09	
4-Chlorotoluene	106-43-4	2.44	< 2.44	
4-Isopropyltoluene	99-87-6	2.44	< 2.44	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-015B
Client Sample ID: Emigration Cr. Above 1300 E. - Bank

Analyzed: 8/27/2011 1532h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Methyl-2-pentanone	108-10-1	6.09	< 6.09	
Acetone	67-64-1	12.2	< 12.2	
Acetonitrile	75-05-8	6.09	< 6.09	
Acrolein	107-02-8	6.09	< 6.09	
Acrylonitrile	107-13-1	12.2	< 12.2	
Allyl chloride	107-05-1	6.09	< 6.09	
Benzene	71-43-2	2.44	< 2.44	
Benzyl chloride	100-44-7	6.09	< 6.09	
Bis(2-chloroisopropyl) ether	108-60-1	6.09	< 6.09	
Bromobenzene	108-86-1	2.44	< 2.44	
Bromochloromethane	74-97-5	2.44	< 2.44	
Bromodichloromethane	75-27-4	2.44	< 2.44	
Bromoform	75-25-2	2.44	< 2.44	
Bromomethane	74-83-9	6.09	< 6.09	
Butyl acetate	123-86-4	12.2	< 12.2	
Carbon disulfide	75-15-0	2.44	< 2.44	
Carbon tetrachloride	56-23-5	2.44	< 2.44	
Chlorobenzene	108-90-7	2.44	< 2.44	
Chloroethane	75-00-3	2.44	< 2.44	
Chloroform	67-66-3	2.44	**3.67**	
Chloromethane	74-87-3	6.09	< 6.09	
Chloroprene	126-99-8	2.44	< 2.44	
cis-1,2-Dichloroethene	156-59-2	2.44	< 2.44	
cis-1,3-Dichloropropene	10061-01-5	2.44	< 2.44	
Cyclohexane	110-82-7	2.44	< 2.44	
Cyclohexanone	108-94-1	60.9	< 60.9	
Dibromochloromethane	124-48-1	2.44	< 2.44	
Dibromomethane	74-95-3	2.44	< 2.44	
Dichlorodifluoromethane	75-71-8	2.44	< 2.44	
Ethyl acetate	141-78-6	12.2	< 12.2	
Ethyl ether	60-29-7	12.2	< 12.2	
Ethyl methacrylate	97-63-2	2.44	< 2.44	
Ethylbenzene	100-41-4	2.44	< 2.44	
Hexachlorobutadiene	87-68-3	2.44	< 2.44	
Iodomethane	74-88-4	6.09	< 6.09	
Isobutyl alcohol	78-83-1	122	< 122	
Isopropyl acetate	108-21-4	12.2	< 12.2	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-015B
Client Sample ID: Emigration Cr. Above 1300 E. - Bank

Analyzed: 8/27/2011 1532h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	48.7	< 48.7	
Isopropylbenzene	98-82-8	2.44	< 2.44	
Isopropyltoluene	99-87-6	2.44	< 2.44	
m,p-Xylene	179601-23-1	2.44	**2.73**	
Methacrylonitrile	126-98-7	6.09	< 6.09	
Methyl Acetate	79-20-9	6.09	< 6.09	
Methyl methacrylate	80-62-6	6.09	< 6.09	
Methyl tert-butyl ether	1634-04-4	2.44	< 2.44	
Methylcyclohexane	108-87-2	2.44	< 2.44	
Methylene chloride	75-09-2	6.09	< 6.09	
n-Amyl acetate	628-63-7	12.2	< 12.2	
n-Butyl alcohol	71-36-3	122	< 122	
n-Butylbenzene	104-51-8	2.44	< 2.44	
n-Hexane	110-54-3	2.44	< 2.44	
n-Octane	111-65-9	2.44	< 2.44	
n-Propylbenzene	103-65-1	2.44	< 2.44	
Naphthalene	91-20-3	2.44	< 2.44	
o-Xylene	95-47-6	2.44	< 2.44	
Pentachloroethane	76-01-7	2.44	< 2.44	
Propionitrile	107-12-0	30.5	< 30.5	
Propyl acetate	109-60-4	12.2	< 12.2	
sec-Butylbenzene	135-98-8	2.44	< 2.44	
Styrene	100-42-5	2.44	< 2.44	
tert-Butyl alcohol	76-65-0	24.4	< 24.4	
tert-Butylbenzene	98-06-6	2.44	< 2.44	
Tetrachloroethene	127-18-4	2.44	**5.36**	
Tetrahydrofuran	109-99-9	2.44	< 2.44	
Toluene	108-88-3	2.44	**3.14**	
trans-1,2-Dichloroethene	156-60-5	2.44	< 2.44	
trans-1,3-Dichloropropene	10061-02-6	2.44	< 2.44	
trans-1,4-Dichloro-2-butene	110-57-6	2.44	< 2.44	
Trichloroethene	79-01-6	2.44	< 2.44	
Trichlorofluoromethane	75-69-4	2.44	< 2.44	
Vinyl acetate	108-05-4	12.2	< 12.2	
Vinyl chloride	75-01-4	1.22	< 1.22	
Xylenes, Total	1330-20-7	2.44	**2.73**	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	**122**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-015B
Client Sample ID: Emigration Cr. Above 1300 E. - Bank

Analyzed: 8/27/2011 1532h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	71-144	**118**	
Surr: Dibromofluoromethane	1868-53-7	71-129	**110**	
Surr: Toluene-d8	2037-26-5	72-129	**104**	

Internal standard areas were outside of the QC limits. Reanalysis yielded similar results indicating matrix interference.
Sampling and analytical preparation performed by method 5030C.
This sample was analyzed for TICs. Those results can be found on pages 756 to 757.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-016D
Client Sample ID: Emigration Cr. Above 1900 E.
Collection Date: 8/25/2011 1135h
Received Date: 8/25/2011 1345h **Method:** SW8260C

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

Analyzed: 8/25/2011 2236h
Units: µg/L
Dilution Factor: 1

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	
4-Isopropyltoluene	99-87-6	2.00	< 2.00	

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Jose Rocha
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Lab Sample ID: 1108511-016D
Client Sample ID: Emigration Cr. Above 1900 E.

Analyzed: 8/25/2011 2236h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	5.00	< 5.00	
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	
Isopropyl acetate	108-21-4	2.00	< 2.00	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-016D
Client Sample ID: Emigration Cr. Above 1900 E.

Analyzed: 8/25/2011 2236h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	25.0	< 25.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
Isopropyltoluene	99-87-6	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	2.00	< 2.00	
n-Butyl alcohol	71-36-3	50.0	< 50.0	
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	2.00	< 2.00	
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	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	**121**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-016D
Client Sample ID: Emigration Cr. Above 1900 E.

Analyzed: 8/25/2011 2236h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	80-123	**115**	
Surr: Dibromofluoromethane	1868-53-7	80-124	**113**	
Surr: Toluene-d8	2037-26-5	80-125	**96.4**	

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

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-017B
Client Sample ID: Emigration Cr. Above 1900 E. - Bed
Collection Date: 8/25/2011 1135h
Received Date: 8/25/2011 1345h **Method:** SW8260C

Analytical Results VOAs Full List by GC/MS Method 8260C

Analyzed: 8/27/2011 1501h
Units: µg/kg-dry
Dilution Factor: 1

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.82	< 2.82	
1,1,1-Trichloroethane	71-55-6	2.82	< 2.82	
1,1,2,2-Tetrachloroethane	79-34-5	2.82	< 2.82	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.82	< 2.82	
1,1,2-Trichloroethane	79-00-5	2.82	< 2.82	
1,1-Dichloropropene	563-58-6	2.82	< 2.82	
1,1-Dichloroethane	75-34-3	2.82	< 2.82	
1,1-Dichloroethene	75-35-4	2.82	< 2.82	
1,2,3-Trichlorobenzene	87-61-6	2.82	< 2.82	
1,2,3-Trichloropropane	96-18-4	2.82	< 2.82	
1,2,3-Trimethylbenzene	526-73-8	2.82	< 2.82	
1,2,4-Trichlorobenzene	120-82-1	2.82	< 2.82	
1,2,4-Trimethylbenzene	95-63-6	2.82	< 2.82	
1,2-Dibromo-3-chloropropane	96-12-8	7.05	< 7.05	
1,2-Dibromoethane	106-93-4	2.82	< 2.82	
1,2-Dichlorobenzene	95-50-1	2.82	< 2.82	
1,2-Dichloroethane	107-06-2	2.82	< 2.82	
1,2-Dichloropropane	78-87-5	2.82	< 2.82	
1,3,5-Trimethylbenzene	108-67-8	2.82	< 2.82	
1,3-Dichlorobenzene	541-73-1	2.82	< 2.82	
1,3-Dichloropropane	142-28-9	2.82	< 2.82	
1,4-Dichlorobenzene	106-46-7	2.82	< 2.82	
1,4-Dioxane	123-91-1	70.5	< 70.5	
2,2-Dichloropropane	594-20-7	2.82	< 2.82	
2-Butanone	78-93-3	14.1	< 14.1	
2-Chloroethyl vinyl ether	110-75-8	7.05	< 7.05	
2-Chlorotoluene	95-49-8	2.82	< 2.82	
2-Hexanone	591-78-6	7.05	< 7.05	
2-Nitropropane	79-46-9	7.05	< 7.05	
4-Chlorotoluene	106-43-4	2.82	< 2.82	
4-Isopropyltoluene	99-87-6	2.82	< 2.82	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-017B
Client Sample ID: Emigration Cr. Above 1900 E. - Bed

Analyzed: 8/27/2011 1501h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Methyl-2-pentanone	108-10-1	7.05	< 7.05	
Acetone	67-64-1	14.1	< 14.1	
Acetonitrile	75-05-8	7.05	< 7.05	
Acrolein	107-02-8	7.05	< 7.05	
Acrylonitrile	107-13-1	14.1	< 14.1	
Allyl chloride	107-05-1	7.05	< 7.05	
Benzene	71-43-2	2.82	< 2.82	
Benzyl chloride	100-44-7	7.05	< 7.05	
Bis(2-chloroisopropyl) ether	108-60-1	7.05	< 7.05	
Bromobenzene	108-86-1	2.82	< 2.82	
Bromochloromethane	74-97-5	2.82	< 2.82	
Bromodichloromethane	75-27-4	2.82	< 2.82	
Bromoform	75-25-2	2.82	< 2.82	
Bromomethane	74-83-9	7.05	< 7.05	
Butyl acetate	123-86-4	14.1	< 14.1	
Carbon disulfide	75-15-0	2.82	< 2.82	
Carbon tetrachloride	56-23-5	2.82	< 2.82	
Chlorobenzene	108-90-7	2.82	< 2.82	
Chloroethane	75-00-3	2.82	< 2.82	
Chloroform	67-66-3	2.82	< 2.82	
Chloromethane	74-87-3	7.05	< 7.05	
Chloroprene	126-99-8	2.82	< 2.82	
cis-1,2-Dichloroethene	156-59-2	2.82	< 2.82	
cis-1,3-Dichloropropene	10061-01-5	2.82	< 2.82	
Cyclohexane	110-82-7	2.82	< 2.82	
Cyclohexanone	108-94-1	70.5	< 70.5	
Dibromochloromethane	124-48-1	2.82	< 2.82	
Dibromomethane	74-95-3	2.82	< 2.82	
Dichlorodifluoromethane	75-71-8	2.82	< 2.82	
Ethyl acetate	141-78-6	14.1	< 14.1	
Ethyl ether	60-29-7	14.1	< 14.1	
Ethyl methacrylate	97-63-2	2.82	< 2.82	
Ethylbenzene	100-41-4	2.82	< 2.82	
Hexachlorobutadiene	87-68-3	2.82	< 2.82	
Iodomethane	74-88-4	7.05	< 7.05	
Isobutyl alcohol	78-83-1	141	< 141	
Isopropyl acetate	108-21-4	14.1	< 14.1	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-017B
Client Sample ID: Emigration Cr. Above 1900 E. - Bed

Analyzed: 8/27/2011 1501h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	56.4	< 56.4	
Isopropylbenzene	98-82-8	2.82	< 2.82	
Isopropyltoluene	99-87-6	2.82	< 2.82	
m,p-Xylene	179601-23-1	2.82	< 2.82	
Methacrylonitrile	126-98-7	7.05	< 7.05	
Methyl Acetate	79-20-9	7.05	< 7.05	
Methyl methacrylate	80-62-6	7.05	< 7.05	
Methyl tert-butyl ether	1634-04-4	2.82	< 2.82	
Methylcyclohexane	108-87-2	2.82	< 2.82	
Methylene chloride	75-09-2	7.05	< 7.05	
n-Amyl acetate	628-63-7	14.1	< 14.1	
n-Butyl alcohol	71-36-3	141	< 141	
n-Butylbenzene	104-51-8	2.82	< 2.82	
n-Hexane	110-54-3	2.82	< 2.82	
n-Octane	111-65-9	2.82	< 2.82	
n-Propylbenzene	103-65-1	2.82	< 2.82	
Naphthalene	91-20-3	2.82	< 2.82	
o-Xylene	95-47-6	2.82	< 2.82	
Pentachloroethane	76-01-7	2.82	< 2.82	
Propionitrile	107-12-0	35.2	< 35.2	
Propyl acetate	109-60-4	14.1	< 14.1	
sec-Butylbenzene	135-98-8	2.82	< 2.82	
Styrene	100-42-5	2.82	< 2.82	
tert-Butyl alcohol	76-65-0	28.2	< 28.2	
tert-Butylbenzene	98-06-6	2.82	< 2.82	
Tetrachloroethene	127-18-4	2.82	< 2.82	
Tetrahydrofuran	109-99-9	2.82	< 2.82	
Toluene	108-88-3	2.82	< 2.82	
trans-1,2-Dichloroethene	156-60-5	2.82	< 2.82	
trans-1,3-Dichloropropene	10061-02-6	2.82	< 2.82	
trans-1,4-Dichloro-2-butene	110-57-6	2.82	< 2.82	
Trichloroethene	79-01-6	2.82	< 2.82	
Trichlorofluoromethane	75-69-4	2.82	< 2.82	
Vinyl acetate	108-05-4	14.1	< 14.1	
Vinyl chloride	75-01-4	1.41	< 1.41	
Xylenes, Total	1330-20-7	2.82	< 2.82	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	**121**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-017B
Client Sample ID: Emigration Cr. Above 1900 E. - Bed

Analyzed: 8/27/2011 1501h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	71-144	**96.7**	
Surr: Dibromofluoromethane	1868-53-7	71-129	**106**	
Surr: Toluene-d8	2037-26-5	72-129	**98.7**	

The sample was received with headspace.
Sampling and analytical preparation performed by method 5030C.
This sample was analyzed for TICs and no unknown peaks were detected.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-018B
Client Sample ID: Emigration Cr. Above 1900 E. - Bank
Collection Date: 8/25/2011 1135h
Received Date: 8/25/2011 1345h **Method:** SW8260C

Analytical Results VOAs Full List by GC/MS Method 8260C

Analyzed: 8/27/2011 1554h
Units: µg/kg-dry
Dilution Factor: 1

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Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.15	< 2.15	
1,1,1-Trichloroethane	71-55-6	2.15	< 2.15	
1,1,2,2-Tetrachloroethane	79-34-5	2.15	< 2.15	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.15	< 2.15	
1,1,2-Trichloroethane	79-00-5	2.15	< 2.15	
1,1-Dichloropropene	563-58-6	2.15	< 2.15	
1,1-Dichloroethane	75-34-3	2.15	< 2.15	
1,1-Dichloroethene	75-35-4	2.15	< 2.15	
1,2,3-Trichlorobenzene	87-61-6	2.15	< 2.15	
1,2,3-Trichloropropane	96-18-4	2.15	< 2.15	
1,2,3-Trimethylbenzene	526-73-8	2.15	< 2.15	
1,2,4-Trichlorobenzene	120-82-1	2.15	< 2.15	
1,2,4-Trimethylbenzene	95-63-6	2.15	< 2.15	
1,2-Dibromo-3-chloropropane	96-12-8	5.38	< 5.38	
1,2-Dibromoethane	106-93-4	2.15	< 2.15	
1,2-Dichlorobenzene	95-50-1	2.15	< 2.15	
1,2-Dichloroethane	107-06-2	2.15	< 2.15	
1,2-Dichloropropane	78-87-5	2.15	< 2.15	
1,3,5-Trimethylbenzene	108-67-8	2.15	< 2.15	
1,3-Dichlorobenzene	541-73-1	2.15	< 2.15	
1,3-Dichloropropane	142-28-9	2.15	< 2.15	
1,4-Dichlorobenzene	106-46-7	2.15	< 2.15	
1,4-Dioxane	123-91-1	53.8	< 53.8	
2,2-Dichloropropane	594-20-7	2.15	< 2.15	
2-Butanone	78-93-3	10.8	< 10.8	
2-Chloroethyl vinyl ether	110-75-8	5.38	< 5.38	
2-Chlorotoluene	95-49-8	2.15	< 2.15	
2-Hexanone	591-78-6	5.38	< 5.38	
2-Nitropropane	79-46-9	5.38	< 5.38	
4-Chlorotoluene	106-43-4	2.15	< 2.15	
4-Isopropyltoluene	99-87-6	2.15	< 2.15	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-018B
Client Sample ID: Emigration Cr. Above 1900 E. - Bank

Analyzed: 8/27/2011 1554h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Methyl-2-pentanone	108-10-1	5.38	< 5.38	
Acetone	67-64-1	10.8	< 10.8	
Acetonitrile	75-05-8	5.38	< 5.38	
Acrolein	107-02-8	5.38	< 5.38	
Acrylonitrile	107-13-1	10.8	< 10.8	
Allyl chloride	107-05-1	5.38	< 5.38	
Benzene	71-43-2	2.15	< 2.15	
Benzyl chloride	100-44-7	5.38	< 5.38	
Bis(2-chloroisopropyl) ether	108-60-1	5.38	< 5.38	
Bromobenzene	108-86-1	2.15	< 2.15	
Bromochloromethane	74-97-5	2.15	< 2.15	
Bromodichloromethane	75-27-4	2.15	< 2.15	
Bromoform	75-25-2	2.15	< 2.15	
Bromomethane	74-83-9	5.38	< 5.38	
Butyl acetate	123-86-4	10.8	< 10.8	
Carbon disulfide	75-15-0	2.15	< 2.15	
Carbon tetrachloride	56-23-5	2.15	< 2.15	
Chlorobenzene	108-90-7	2.15	< 2.15	
Chloroethane	75-00-3	2.15	< 2.15	
Chloroform	67-66-3	2.15	**4.53**	
Chloromethane	74-87-3	5.38	< 5.38	
Chloroprene	126-99-8	2.15	< 2.15	
cis-1,2-Dichloroethene	156-59-2	2.15	< 2.15	
cis-1,3-Dichloropropene	10061-01-5	2.15	< 2.15	
Cyclohexane	110-82-7	2.15	< 2.15	
Cyclohexanone	108-94-1	53.8	< 53.8	
Dibromochloromethane	124-48-1	2.15	< 2.15	
Dibromomethane	74-95-3	2.15	< 2.15	
Dichlorodifluoromethane	75-71-8	2.15	< 2.15	
Ethyl acetate	141-78-6	10.8	< 10.8	
Ethyl ether	60-29-7	10.8	< 10.8	
Ethyl methacrylate	97-63-2	2.15	< 2.15	
Ethylbenzene	100-41-4	2.15	< 2.15	
Hexachlorobutadiene	87-68-3	2.15	< 2.15	
Iodomethane	74-88-4	5.38	< 5.38	
Isobutyl alcohol	78-83-1	108	< 108	
Isopropyl acetate	108-21-4	10.8	< 10.8	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-018B
Client Sample ID: Emigration Cr. Above 1900 E. - Bank

Analyzed: 8/27/2011 1554h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	43.1	< 43.1	
Isopropylbenzene	98-82-8	2.15	< 2.15	
Isopropyltoluene	99-87-6	2.15	< 2.15	
m,p-Xylene	179601-23-1	2.15	**6.05**	
Methacrylonitrile	126-98-7	5.38	< 5.38	
Methyl Acetate	79-20-9	5.38	< 5.38	
Methyl methacrylate	80-62-6	5.38	< 5.38	
Methyl tert-butyl ether	1634-04-4	2.15	< 2.15	
Methylcyclohexane	108-87-2	2.15	< 2.15	
Methylene chloride	75-09-2	5.38	< 5.38	
n-Amyl acetate	628-63-7	10.8	< 10.8	
n-Butyl alcohol	71-36-3	108	< 108	
n-Butylbenzene	104-51-8	2.15	< 2.15	
n-Hexane	110-54-3	2.15	< 2.15	
n-Octane	111-65-9	2.15	< 2.15	
n-Propylbenzene	103-65-1	2.15	< 2.15	
Naphthalene	91-20-3	2.15	< 2.15	
o-Xylene	95-47-6	2.15	< 2.15	
Pentachloroethane	76-01-7	2.15	< 2.15	
Propionitrile	107-12-0	26.9	< 26.9	
Propyl acetate	109-60-4	10.8	< 10.8	
sec-Butylbenzene	135-98-8	2.15	< 2.15	
Styrene	100-42-5	2.15	< 2.15	
tert-Butyl alcohol	76-65-0	21.5	< 21.5	
tert-Butylbenzene	98-06-6	2.15	< 2.15	
Tetrachloroethene	127-18-4	2.15	**6.43**	
Tetrahydrofuran	109-99-9	2.15	< 2.15	
Toluene	108-88-3	2.15	**7.19**	
trans-1,2-Dichloroethene	156-60-5	2.15	< 2.15	
trans-1,3-Dichloropropene	10061-02-6	2.15	< 2.15	
trans-1,4-Dichloro-2-butene	110-57-6	2.15	< 2.15	
Trichloroethene	79-01-6	2.15	< 2.15	
Trichlorofluoromethane	75-69-4	2.15	< 2.15	
Vinyl acetate	108-05-4	10.8	< 10.8	
Vinyl chloride	75-01-4	1.08	< 1.08	
Xylenes, Total	1330-20-7	2.15	**7.52**	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	**123**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-018B
Client Sample ID: Emigration Cr. Above 1900 E. - Bank

Analyzed: 8/27/2011 1554h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	71-144	**117**	
Surr: Dibromofluoromethane	1868-53-7	71-129	**122**	
Surr: Toluene-d8	2037-26-5	72-129	**106**	

Internal standard areas were outside of the QC limits. Reanalysis yielded similar results indicating matrix interference.
Sampling and analytical preparation performed by method 5030C.
This sample was analyzed for TICs and no unknown peaks were detected.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-019D
Client Sample ID: Emigration Cr. Above 2100 E.
Collection Date: 8/25/2011 1215h
Received Date: 8/25/2011 1345h **Method:** SW8260C

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

Analyzed: 8/25/2011 2255h
Units: µg/L
Dilution Factor: 1

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	
4-Isopropyltoluene	99-87-6	2.00	< 2.00	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-019D
Client Sample ID: Emigration Cr. Above 2100 E.

Analyzed: 8/25/2011 2255h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	5.00	< 5.00	
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	
Isopropyl acetate	108-21-4	2.00	< 2.00	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-019D
Client Sample ID: Emigration Cr. Above 2100 E.

Analyzed: 8/25/2011 2255h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	25.0	< 25.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
Isopropyltoluene	99-87-6	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	2.00	< 2.00	
n-Butyl alcohol	71-36-3	50.0	< 50.0	
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	2.00	< 2.00	
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	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	**120**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-019D
Client Sample ID: Emigration Cr. Above 2100 E.

Analyzed: 8/25/2011 2255h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	80-123	**115**	
Surr: Dibromofluoromethane	1868-53-7	80-124	**112**	
Surr: Toluene-d8	2037-26-5	80-125	**96.5**	

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

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-020B
Client Sample ID: Emigration Cr. Above 2100 E. - Bed
Collection Date: 8/25/2011 1215h
Received Date: 8/25/2011 1345h **Method:** SW8260C

Analytical Results VOAs Full List by GC/MS Method 8260C

Analyzed: 8/26/2011 2342h
Units: µg/kg-dry
Dilution Factor: 1

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Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.52	< 2.52	
1,1,1-Trichloroethane	71-55-6	2.52	< 2.52	
1,1,2,2-Tetrachloroethane	79-34-5	2.52	< 2.52	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.52	< 2.52	
1,1,2-Trichloroethane	79-00-5	2.52	< 2.52	
1,1-Dichloropropene	563-58-6	2.52	< 2.52	
1,1-Dichloroethane	75-34-3	2.52	< 2.52	
1,1-Dichloroethene	75-35-4	2.52	< 2.52	
1,2,3-Trichlorobenzene	87-61-6	2.52	< 2.52	
1,2,3-Trichloropropane	96-18-4	2.52	< 2.52	
1,2,3-Trimethylbenzene	526-73-8	2.52	< 2.52	
1,2,4-Trichlorobenzene	120-82-1	2.52	< 2.52	
1,2,4-Trimethylbenzene	95-63-6	2.52	< 2.52	
1,2-Dibromo-3-chloropropane	96-12-8	6.30	< 6.30	
1,2-Dibromoethane	106-93-4	2.52	< 2.52	
1,2-Dichlorobenzene	95-50-1	2.52	< 2.52	
1,2-Dichloroethane	107-06-2	2.52	< 2.52	
1,2-Dichloropropane	78-87-5	2.52	< 2.52	
1,3,5-Trimethylbenzene	108-67-8	2.52	< 2.52	
1,3-Dichlorobenzene	541-73-1	2.52	< 2.52	
1,3-Dichloropropane	142-28-9	2.52	< 2.52	
1,4-Dichlorobenzene	106-46-7	2.52	< 2.52	
1,4-Dioxane	123-91-1	63.0	< 63.0	
2,2-Dichloropropane	594-20-7	2.52	< 2.52	
2-Butanone	78-93-3	12.6	< 12.6	
2-Chloroethyl vinyl ether	110-75-8	6.30	< 6.30	
2-Chlorotoluene	95-49-8	2.52	< 2.52	
2-Hexanone	591-78-6	6.30	< 6.30	
2-Nitropropane	79-46-9	6.30	< 6.30	
4-Chlorotoluene	106-43-4	2.52	< 2.52	
4-Isopropyltoluene	99-87-6	2.52	< 2.52	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-020B
Client Sample ID: Emigration Cr. Above 2100 E. - Bed

Analyzed: 8/26/2011 2342h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Methyl-2-pentanone	108-10-1	6.30	< 6.30	
Acetone	67-64-1	12.6	< 12.6	
Acetonitrile	75-05-8	6.30	< 6.30	
Acrolein	107-02-8	6.30	< 6.30	
Acrylonitrile	107-13-1	12.6	< 12.6	
Allyl chloride	107-05-1	6.30	< 6.30	
Benzene	71-43-2	2.52	< 2.52	
Benzyl chloride	100-44-7	6.30	< 6.30	
Bis(2-chloroisopropyl) ether	108-60-1	6.30	< 6.30	
Bromobenzene	108-86-1	2.52	< 2.52	
Bromochloromethane	74-97-5	2.52	< 2.52	
Bromodichloromethane	75-27-4	2.52	< 2.52	
Bromoform	75-25-2	2.52	< 2.52	
Bromomethane	74-83-9	6.30	< 6.30	
Butyl acetate	123-86-4	12.6	< 12.6	
Carbon disulfide	75-15-0	2.52	< 2.52	
Carbon tetrachloride	56-23-5	2.52	< 2.52	
Chlorobenzene	108-90-7	2.52	< 2.52	
Chloroethane	75-00-3	2.52	< 2.52	
Chloroform	67-66-3	2.52	< 2.52	
Chloromethane	74-87-3	6.30	< 6.30	
Chloroprene	126-99-8	2.52	< 2.52	
cis-1,2-Dichloroethene	156-59-2	2.52	< 2.52	
cis-1,3-Dichloropropene	10061-01-5	2.52	< 2.52	
Cyclohexane	110-82-7	2.52	< 2.52	
Cyclohexanone	108-94-1	63.0	< 63.0	
Dibromochloromethane	124-48-1	2.52	< 2.52	
Dibromomethane	74-95-3	2.52	< 2.52	
Dichlorodifluoromethane	75-71-8	2.52	< 2.52	
Ethyl acetate	141-78-6	12.6	< 12.6	
Ethyl ether	60-29-7	12.6	< 12.6	
Ethyl methacrylate	97-63-2	2.52	< 2.52	
Ethylbenzene	100-41-4	2.52	< 2.52	
Hexachlorobutadiene	87-68-3	2.52	< 2.52	
Iodomethane	74-88-4	6.30	< 6.30	
Isobutyl alcohol	78-83-1	126	< 126	
Isopropyl acetate	108-21-4	12.6	< 12.6	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-020B
Client Sample ID: Emigration Cr. Above 2100 E. - Bed

Analyzed: 8/26/2011 2342h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	50.4	< 50.4	
Isopropylbenzene	98-82-8	2.52	< 2.52	
Isopropyltoluene	99-87-6	2.52	< 2.52	
m,p-Xylene	179601-23-1	2.52	< 2.52	
Methacrylonitrile	126-98-7	6.30	< 6.30	
Methyl Acetate	79-20-9	6.30	< 6.30	
Methyl methacrylate	80-62-6	6.30	< 6.30	
Methyl tert-butyl ether	1634-04-4	2.52	< 2.52	
Methylcyclohexane	108-87-2	2.52	< 2.52	
Methylene chloride	75-09-2	6.30	< 6.30	
n-Amyl acetate	628-63-7	12.6	< 12.6	
n-Butyl alcohol	71-36-3	126	< 126	
n-Butylbenzene	104-51-8	2.52	< 2.52	
n-Hexane	110-54-3	2.52	< 2.52	
n-Octane	111-65-9	2.52	< 2.52	
n-Propylbenzene	103-65-1	2.52	< 2.52	
Naphthalene	91-20-3	2.52	< 2.52	
o-Xylene	95-47-6	2.52	< 2.52	
Pentachloroethane	76-01-7	2.52	< 2.52	
Propionitrile	107-12-0	31.5	< 31.5	
Propyl acetate	109-60-4	12.6	< 12.6	
sec-Butylbenzene	135-98-8	2.52	< 2.52	
Styrene	100-42-5	2.52	< 2.52	
tert-Butyl alcohol	76-65-0	25.2	< 25.2	
tert-Butylbenzene	98-06-6	2.52	< 2.52	
Tetrachloroethene	127-18-4	2.52	< 2.52	
Tetrahydrofuran	109-99-9	2.52	< 2.52	
Toluene	108-88-3	2.52	< 2.52	
trans-1,2-Dichloroethene	156-60-5	2.52	< 2.52	
trans-1,3-Dichloropropene	10061-02-6	2.52	< 2.52	
trans-1,4-Dichloro-2-butene	110-57-6	2.52	< 2.52	
Trichloroethene	79-01-6	2.52	< 2.52	
Trichlorofluoromethane	75-69-4	2.52	< 2.52	
Vinyl acetate	108-05-4	12.6	< 12.6	
Vinyl chloride	75-01-4	1.26	< 1.26	
Xylenes, Total	1330-20-7	2.52	< 2.52	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	**130**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-020B
Client Sample ID: Emigration Cr. Above 2100 E. - Bed

Analyzed: 8/26/2011 2342h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	71-144	**99.0**	
Surr: Dibromofluoromethane	1868-53-7	71-129	**111**	
Surr: Toluene-d8	2037-26-5	72-129	**99.1**	

Sampling and analytical preparation performed by method 5030C.
This sample was analyzed for TICs and no unknown peaks were detected.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-021B
Client Sample ID: Emigration Cr. Above 2100 E. - Bank
Collection Date: 8/25/2011 1215h
Received Date: 8/25/2011 1345h **Method:** SW8260C

Analytical Results VOAs Full List by GC/MS Method 8260C

Analyzed: 8/27/2011 1617h
Units: µg/kg-dry
Dilution Factor: 1

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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	2.44	< 2.44	
1,1,1-Trichloroethane	71-55-6	2.44	< 2.44	
1,1,2,2-Tetrachloroethane	79-34-5	2.44	< 2.44	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.44	< 2.44	
1,1,2-Trichloroethane	79-00-5	2.44	< 2.44	
1,1-Dichloropropene	563-58-6	2.44	< 2.44	
1,1-Dichloroethane	75-34-3	2.44	< 2.44	
1,1-Dichloroethene	75-35-4	2.44	< 2.44	
1,2,3-Trichlorobenzene	87-61-6	2.44	< 2.44	
1,2,3-Trichloropropane	96-18-4	2.44	< 2.44	
1,2,3-Trimethylbenzene	526-73-8	2.44	< 2.44	
1,2,4-Trichlorobenzene	120-82-1	2.44	< 2.44	
1,2,4-Trimethylbenzene	95-63-6	2.44	< 2.44	
1,2-Dibromo-3-chloropropane	96-12-8	6.09	< 6.09	
1,2-Dibromoethane	106-93-4	2.44	< 2.44	
1,2-Dichlorobenzene	95-50-1	2.44	< 2.44	
1,2-Dichloroethane	107-06-2	2.44	< 2.44	
1,2-Dichloropropane	78-87-5	2.44	< 2.44	
1,3,5-Trimethylbenzene	108-67-8	2.44	< 2.44	
1,3-Dichlorobenzene	541-73-1	2.44	< 2.44	
1,3-Dichloropropane	142-28-9	2.44	< 2.44	
1,4-Dichlorobenzene	106-46-7	2.44	< 2.44	
1,4-Dioxane	123-91-1	60.9	< 60.9	
2,2-Dichloropropane	594-20-7	2.44	< 2.44	
2-Butanone	78-93-3	12.2	< 12.2	
2-Chloroethyl vinyl ether	110-75-8	6.09	< 6.09	
2-Chlorotoluene	95-49-8	2.44	< 2.44	
2-Hexanone	591-78-6	6.09	< 6.09	
2-Nitropropane	79-46-9	6.09	< 6.09	
4-Chlorotoluene	106-43-4	2.44	< 2.44	
4-Isopropyltoluene	99-87-6	2.44	< 2.44	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-021B
Client Sample ID: Emigration Cr. Above 2100 E. - Bank

Analyzed: 8/27/2011 1617h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Methyl-2-pentanone	108-10-1	6.09	< 6.09	
Acetone	67-64-1	12.2	< 12.2	
Acetonitrile	75-05-8	6.09	< 6.09	
Acrolein	107-02-8	6.09	< 6.09	
Acrylonitrile	107-13-1	12.2	< 12.2	
Allyl chloride	107-05-1	6.09	< 6.09	
Benzene	71-43-2	2.44	< 2.44	
Benzyl chloride	100-44-7	6.09	< 6.09	
Bis(2-chloroisopropyl) ether	108-60-1	6.09	< 6.09	
Bromobenzene	108-86-1	2.44	< 2.44	
Bromochloromethane	74-97-5	2.44	< 2.44	
Bromodichloromethane	75-27-4	2.44	< 2.44	
Bromoform	75-25-2	2.44	< 2.44	
Bromomethane	74-83-9	6.09	< 6.09	
Butyl acetate	123-86-4	12.2	< 12.2	
Carbon disulfide	75-15-0	2.44	< 2.44	
Carbon tetrachloride	56-23-5	2.44	< 2.44	
Chlorobenzene	108-90-7	2.44	< 2.44	
Chloroethane	75-00-3	2.44	< 2.44	
Chloroform	67-66-3	2.44	**2.78**	
Chloromethane	74-87-3	6.09	< 6.09	
Chloroprene	126-99-8	2.44	< 2.44	
cis-1,2-Dichloroethene	156-59-2	2.44	< 2.44	
cis-1,3-Dichloropropene	10061-01-5	2.44	< 2.44	
Cyclohexane	110-82-7	2.44	< 2.44	
Cyclohexanone	108-94-1	60.9	< 60.9	
Dibromochloromethane	124-48-1	2.44	< 2.44	
Dibromomethane	74-95-3	2.44	< 2.44	
Dichlorodifluoromethane	75-71-8	2.44	< 2.44	
Ethyl acetate	141-78-6	12.2	< 12.2	
Ethyl ether	60-29-7	12.2	< 12.2	
Ethyl methacrylate	97-63-2	2.44	< 2.44	
Ethylbenzene	100-41-4	2.44	< 2.44	
Hexachlorobutadiene	87-68-3	2.44	< 2.44	
Iodomethane	74-88-4	6.09	< 6.09	
Isobutyl alcohol	78-83-1	122	< 122	
Isopropyl acetate	108-21-4	12.2	< 12.2	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-021B
Client Sample ID: Emigration Cr. Above 2100 E. - Bank

Analyzed: 8/27/2011 1617h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	48.7	< 48.7	
Isopropylbenzene	98-82-8	2.44	< 2.44	
Isopropyltoluene	99-87-6	2.44	< 2.44	
m,p-Xylene	179601-23-1	2.44	< 2.44	
Methacrylonitrile	126-98-7	6.09	< 6.09	
Methyl Acetate	79-20-9	6.09	< 6.09	
Methyl methacrylate	80-62-6	6.09	< 6.09	
Methyl tert-butyl ether	1634-04-4	2.44	< 2.44	
Methylcyclohexane	108-87-2	2.44	< 2.44	
Methylene chloride	75-09-2	6.09	< 6.09	
n-Amyl acetate	628-63-7	12.2	< 12.2	
n-Butyl alcohol	71-36-3	122	< 122	
n-Butylbenzene	104-51-8	2.44	< 2.44	
n-Hexane	110-54-3	2.44	< 2.44	
n-Octane	111-65-9	2.44	< 2.44	
n-Propylbenzene	103-65-1	2.44	< 2.44	
Naphthalene	91-20-3	2.44	< 2.44	
o-Xylene	95-47-6	2.44	< 2.44	
Pentachloroethane	76-01-7	2.44	< 2.44	
Propionitrile	107-12-0	30.5	< 30.5	
Propyl acetate	109-60-4	12.2	< 12.2	
sec-Butylbenzene	135-98-8	2.44	< 2.44	
Styrene	100-42-5	2.44	< 2.44	
tert-Butyl alcohol	76-65-0	24.4	< 24.4	
tert-Butylbenzene	98-06-6	2.44	< 2.44	
Tetrachloroethene	127-18-4	2.44	**3.22**	
Tetrahydrofuran	109-99-9	2.44	< 2.44	
Toluene	108-88-3	2.44	< 2.44	
trans-1,2-Dichloroethene	156-60-5	2.44	< 2.44	
trans-1,3-Dichloropropene	10061-02-6	2.44	< 2.44	
trans-1,4-Dichloro-2-butene	110-57-6	2.44	< 2.44	
Trichloroethene	79-01-6	2.44	< 2.44	
Trichlorofluoromethane	75-69-4	2.44	< 2.44	
Vinyl acetate	108-05-4	12.2	< 12.2	
Vinyl chloride	75-01-4	1.22	< 1.22	
Xylenes, Total	1330-20-7	2.44	< 2.44	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	**123**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-021B
Client Sample ID: Emigration Cr. Above 2100 E. - Bank

Analyzed: 8/27/2011 1617h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	71-144	**113**	
Surr: Dibromofluoromethane	1868-53-7	71-129	**116**	
Surr: Toluene-d8	2037-26-5	72-129	**102**	

Internal standard areas were outside of the QC limits. Reanalysis yielded similar results indicating matrix interference.
Sampling and analytical preparation performed by method 5030C.
This sample was analyzed for TICs and no unknown peaks were detected.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-022D
Client Sample ID: Emigration Cr. @ Donner Hill Marker
Collection Date: 8/25/2011 1300h
Received Date: 8/25/2011 1345h **Method:** SW8260C

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

Analyzed: 8/25/2011 2351h
Units: µg/L
Dilution Factor: 1

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	
4-Isopropyltoluene	99-87-6	2.00	< 2.00	

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QA Officer

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Lab Sample ID: 1108511-022D
Client Sample ID: Emigration Cr. @ Donner Hill Marker

Analyzed: 8/25/2011 2351h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
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	5.00	< 5.00	
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	
Isopropyl acetate	108-21-4	2.00	< 2.00	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-022D
Client Sample ID: Emigration Cr. @ Donner Hill Marker

Analyzed: 8/25/2011 2351h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	25.0	< 25.0	
Isopropylbenzene	98-82-8	2.00	< 2.00	
Isopropyltoluene	99-87-6	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	2.00	< 2.00	
n-Butyl alcohol	71-36-3	50.0	< 50.0	
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	2.00	< 2.00	
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	
Surr: 1,2-Dichloroethane-d4	17060-07-0	77-144	**118**	

Lab Sample ID: 1108511-022D
Client Sample ID: Emigration Cr. @ Donner Hill Marker

Analyzed: 8/25/2011 2351h
Units: µg/L
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	80-123	**116**	
Surr: Dibromofluoromethane	1868-53-7	80-124	**112**	
Surr: Toluene-d8	2037-26-5	80-125	**97.1**	

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: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-023B
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bed
Collection Date: 8/25/2011 1300h
Received Date: 8/25/2011 1345h **Method:** SW8260C

Analytical Results VOAs Full List by GC/MS Method 8260C

Analyzed: 8/27/2011 0026h
Units: µg/kg-dry
Dilution Factor: 1

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Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.76	< 2.76	
1,1,1-Trichloroethane	71-55-6	2.76	< 2.76	
1,1,2,2-Tetrachloroethane	79-34-5	2.76	< 2.76	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.76	< 2.76	
1,1,2-Trichloroethane	79-00-5	2.76	< 2.76	
1,1-Dichloropropene	563-58-6	2.76	< 2.76	
1,1-Dichloroethane	75-34-3	2.76	< 2.76	
1,1-Dichloroethene	75-35-4	2.76	< 2.76	
1,2,3-Trichlorobenzene	87-61-6	2.76	< 2.76	
1,2,3-Trichloropropane	96-18-4	2.76	< 2.76	
1,2,3-Trimethylbenzene	526-73-8	2.76	< 2.76	
1,2,4-Trichlorobenzene	120-82-1	2.76	< 2.76	
1,2,4-Trimethylbenzene	95-63-6	2.76	< 2.76	
1,2-Dibromo-3-chloropropane	96-12-8	6.90	< 6.90	
1,2-Dibromoethane	106-93-4	2.76	< 2.76	
1,2-Dichlorobenzene	95-50-1	2.76	< 2.76	
1,2-Dichloroethane	107-06-2	2.76	< 2.76	
1,2-Dichloropropane	78-87-5	2.76	< 2.76	
1,3,5-Trimethylbenzene	108-67-8	2.76	< 2.76	
1,3-Dichlorobenzene	541-73-1	2.76	< 2.76	
1,3-Dichloropropane	142-28-9	2.76	< 2.76	
1,4-Dichlorobenzene	106-46-7	2.76	< 2.76	
1,4-Dioxane	123-91-1	69.0	< 69.0	
2,2-Dichloropropane	594-20-7	2.76	< 2.76	
2-Butanone	78-93-3	13.8	< 13.8	
2-Chloroethyl vinyl ether	110-75-8	6.90	< 6.90	
2-Chlorotoluene	95-49-8	2.76	< 2.76	
2-Hexanone	591-78-6	6.90	< 6.90	
2-Nitropropane	79-46-9	6.90	< 6.90	
4-Chlorotoluene	106-43-4	2.76	< 2.76	
4-Isopropyltoluene	99-87-6	2.76	< 2.76	

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Kyle F. Gross
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Jose Rocha
QA Officer

Lab Sample ID: 1108511-023B
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bed

Analyzed: 8/27/2011 0026h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Methyl-2-pentanone	108-10-1	6.90	< 6.90	
Acetone	67-64-1	13.8	< 13.8	
Acetonitrile	75-05-8	6.90	< 6.90	
Acrolein	107-02-8	6.90	< 6.90	
Acrylonitrile	107-13-1	13.8	< 13.8	
Allyl chloride	107-05-1	6.90	< 6.90	
Benzene	71-43-2	2.76	< 2.76	
Benzyl chloride	100-44-7	6.90	< 6.90	
Bis(2-chloroisopropyl) ether	108-60-1	6.90	< 6.90	
Bromobenzene	108-86-1	2.76	< 2.76	
Bromochloromethane	74-97-5	2.76	< 2.76	
Bromodichloromethane	75-27-4	2.76	< 2.76	
Bromoform	75-25-2	2.76	< 2.76	
Bromomethane	74-83-9	6.90	< 6.90	
Butyl acetate	123-86-4	13.8	< 13.8	
Carbon disulfide	75-15-0	2.76	< 2.76	
Carbon tetrachloride	56-23-5	2.76	< 2.76	
Chlorobenzene	108-90-7	2.76	< 2.76	
Chloroethane	75-00-3	2.76	< 2.76	
Chloroform	67-66-3	2.76	< 2.76	
Chloromethane	74-87-3	6.90	< 6.90	
Chloroprene	126-99-8	2.76	< 2.76	
cis-1,2-Dichloroethene	156-59-2	2.76	< 2.76	
cis-1,3-Dichloropropene	10061-01-5	2.76	< 2.76	
Cyclohexane	110-82-7	2.76	< 2.76	
Cyclohexanone	108-94-1	69.0	< 69.0	
Dibromochloromethane	124-48-1	2.76	< 2.76	
Dibromomethane	74-95-3	2.76	< 2.76	
Dichlorodifluoromethane	75-71-8	2.76	< 2.76	
Ethyl acetate	141-78-6	13.8	< 13.8	
Ethyl ether	60-29-7	13.8	< 13.8	
Ethyl methacrylate	97-63-2	2.76	< 2.76	
Ethylbenzene	100-41-4	2.76	< 2.76	
Hexachlorobutadiene	87-68-3	2.76	< 2.76	
Iodomethane	74-88-4	6.90	< 6.90	
Isobutyl alcohol	78-83-1	138	< 138	
Isopropyl acetate	108-21-4	13.8	< 13.8	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-023B
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bed

Analyzed: 8/27/2011 0026h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	55.2	< 55.2	
Isopropylbenzene	98-82-8	2.76	< 2.76	
Isopropyltoluene	99-87-6	2.76	< 2.76	
m,p-Xylene	179601-23-1	2.76	< 2.76	
Methacrylonitrile	126-98-7	6.90	< 6.90	
Methyl Acetate	79-20-9	6.90	< 6.90	
Methyl methacrylate	80-62-6	6.90	< 6.90	
Methyl tert-butyl ether	1634-04-4	2.76	< 2.76	
Methylcyclohexane	108-87-2	2.76	< 2.76	
Methylene chloride	75-09-2	6.90	< 6.90	
n-Amyl acetate	628-63-7	13.8	< 13.8	
n-Butyl alcohol	71-36-3	138	< 138	
n-Butylbenzene	104-51-8	2.76	< 2.76	
n-Hexane	110-54-3	2.76	< 2.76	
n-Octane	111-65-9	2.76	< 2.76	
n-Propylbenzene	103-65-1	2.76	< 2.76	
Naphthalene	91-20-3	2.76	< 2.76	
o-Xylene	95-47-6	2.76	< 2.76	
Pentachloroethane	76-01-7	2.76	< 2.76	
Propionitrile	107-12-0	34.5	< 34.5	
Propyl acetate	109-60-4	13.8	< 13.8	
sec-Butylbenzene	135-98-8	2.76	< 2.76	
Styrene	100-42-5	2.76	< 2.76	
tert-Butyl alcohol	76-65-0	27.6	< 27.6	
tert-Butylbenzene	98-06-6	2.76	< 2.76	
Tetrachloroethene	127-18-4	2.76	< 2.76	
Tetrahydrofuran	109-99-9	2.76	< 2.76	
Toluene	108-88-3	2.76	< 2.76	
trans-1,2-Dichloroethene	156-60-5	2.76	< 2.76	
trans-1,3-Dichloropropene	10061-02-6	2.76	< 2.76	
trans-1,4-Dichloro-2-butene	110-57-6	2.76	< 2.76	
Trichloroethene	79-01-6	2.76	< 2.76	
Trichlorofluoromethane	75-69-4	2.76	< 2.76	
Vinyl acetate	108-05-4	13.8	< 13.8	
Vinyl chloride	75-01-4	1.38	< 1.38	
Xylenes, Total	1330-20-7	2.76	< 2.76	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	**129**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-023B
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bed

Analyzed: 8/27/2011 0026h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	71-144	**103**	
Surr: Dibromofluoromethane	1868-53-7	71-129	**112**	
Surr: Toluene-d8	2037-26-5	72-129	**102**	

Sampling and analytical preparation performed by method 5030C.
This sample was analyzed for TICs and no unknown peaks were detected.

ORGANIC ANALYTICAL REPORT

Client: EarthFax Engineering **Contact:** Galen Williams
Project: Red Butte
Lab Sample ID: 1108511-024B
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bank
Collection Date: 8/25/2011 1300h
Received Date: 8/25/2011 1345h **Method:** SW8260C

Analytical Results VOAs Full List by GC/MS Method 8260C

Analyzed: 8/27/2011 0120h
Units: µg/kg-dry
Dilution Factor: 1

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
1,1,1,2-Tetrachloroethane	630-20-6	2.43	< 2.43	
1,1,1-Trichloroethane	71-55-6	2.43	< 2.43	
1,1,2,2-Tetrachloroethane	79-34-5	2.43	< 2.43	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2.43	< 2.43	
1,1,2-Trichloroethane	79-00-5	2.43	< 2.43	
1,1-Dichloropropene	563-58-6	2.43	< 2.43	
1,1-Dichloroethane	75-34-3	2.43	< 2.43	
1,1-Dichloroethene	75-35-4	2.43	< 2.43	
1,2,3-Trichlorobenzene	87-61-6	2.43	< 2.43	
1,2,3-Trichloropropane	96-18-4	2.43	< 2.43	
1,2,3-Trimethylbenzene	526-73-8	2.43	< 2.43	
1,2,4-Trichlorobenzene	120-82-1	2.43	< 2.43	
1,2,4-Trimethylbenzene	95-63-6	2.43	< 2.43	
1,2-Dibromo-3-chloropropane	96-12-8	6.08	< 6.08	
1,2-Dibromoethane	106-93-4	2.43	< 2.43	
1,2-Dichlorobenzene	95-50-1	2.43	< 2.43	
1,2-Dichloroethane	107-06-2	2.43	< 2.43	
1,2-Dichloropropane	78-87-5	2.43	< 2.43	
1,3,5-Trimethylbenzene	108-67-8	2.43	< 2.43	
1,3-Dichlorobenzene	541-73-1	2.43	< 2.43	
1,3-Dichloropropane	142-28-9	2.43	< 2.43	
1,4-Dichlorobenzene	106-46-7	2.43	< 2.43	
1,4-Dioxane	123-91-1	60.8	< 60.8	
2,2-Dichloropropane	594-20-7	2.43	< 2.43	
2-Butanone	78-93-3	12.2	< 12.2	
2-Chloroethyl vinyl ether	110-75-8	6.08	< 6.08	
2-Chlorotoluene	95-49-8	2.43	< 2.43	
2-Hexanone	591-78-6	6.08	< 6.08	
2-Nitropropane	79-46-9	6.08	< 6.08	
4-Chlorotoluene	106-43-4	2.43	< 2.43	
4-Isopropyltoluene	99-87-6	2.43	< 2.43	

American West
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web: www.awal-labs.com

Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-024B
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bank

Analyzed: 8/27/2011 0120h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
4-Methyl-2-pentanone	108-10-1	6.08	< 6.08	
Acetone	67-64-1	12.2	< 12.2	
Acetonitrile	75-05-8	6.08	< 6.08	
Acrolein	107-02-8	6.08	< 6.08	
Acrylonitrile	107-13-1	12.2	< 12.2	
Allyl chloride	107-05-1	6.08	< 6.08	
Benzene	71-43-2	2.43	< 2.43	
Benzyl chloride	100-44-7	6.08	< 6.08	
Bis(2-chloroisopropyl) ether	108-60-1	6.08	< 6.08	
Bromobenzene	108-86-1	2.43	< 2.43	
Bromochloromethane	74-97-5	2.43	< 2.43	
Bromodichloromethane	75-27-4	2.43	< 2.43	
Bromoform	75-25-2	2.43	< 2.43	
Bromomethane	74-83-9	6.08	< 6.08	
Butyl acetate	123-86-4	12.2	< 12.2	
Carbon disulfide	75-15-0	2.43	< 2.43	
Carbon tetrachloride	56-23-5	2.43	< 2.43	
Chlorobenzene	108-90-7	2.43	< 2.43	
Chloroethane	75-00-3	2.43	< 2.43	
Chloroform	67-66-3	2.43	< 2.43	
Chloromethane	74-87-3	6.08	< 6.08	
Chloroprene	126-99-8	2.43	< 2.43	
cis-1,2-Dichloroethene	156-59-2	2.43	< 2.43	
cis-1,3-Dichloropropene	10061-01-5	2.43	< 2.43	
Cyclohexane	110-82-7	2.43	< 2.43	
Cyclohexanone	108-94-1	60.8	< 60.8	
Dibromochloromethane	124-48-1	2.43	< 2.43	
Dibromomethane	74-95-3	2.43	< 2.43	
Dichlorodifluoromethane	75-71-8	2.43	< 2.43	
Ethyl acetate	141-78-6	12.2	< 12.2	
Ethyl ether	60-29-7	12.2	< 12.2	
Ethyl methacrylate	97-63-2	2.43	< 2.43	
Ethylbenzene	100-41-4	2.43	< 2.43	
Hexachlorobutadiene	87-68-3	2.43	< 2.43	
Iodomethane	74-88-4	6.08	< 6.08	
Isobutyl alcohol	78-83-1	122	< 122	
Isopropyl acetate	108-21-4	12.2	< 12.2	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-024B
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bank

Analyzed: 8/27/2011 0120h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Isopropyl alcohol	67-63-0	48.6	< 48.6	
Isopropylbenzene	98-82-8	2.43	< 2.43	
Isopropyltoluene	99-87-6	2.43	< 2.43	
m,p-Xylene	179601-23-1	2.43	< 2.43	
Methacrylonitrile	126-98-7	6.08	< 6.08	
Methyl Acetate	79-20-9	6.08	< 6.08	
Methyl methacrylate	80-62-6	6.08	< 6.08	
Methyl tert-butyl ether	1634-04-4	2.43	< 2.43	
Methylcyclohexane	108-87-2	2.43	< 2.43	
Methylene chloride	75-09-2	6.08	< 6.08	
n-Amyl acetate	628-63-7	12.2	< 12.2	
n-Butyl alcohol	71-36-3	122	< 122	
n-Butylbenzene	104-51-8	2.43	< 2.43	
n-Hexane	110-54-3	2.43	< 2.43	
n-Octane	111-65-9	2.43	< 2.43	
n-Propylbenzene	103-65-1	2.43	< 2.43	
Naphthalene	91-20-3	2.43	< 2.43	
o-Xylene	95-47-6	2.43	< 2.43	
Pentachloroethane	76-01-7	2.43	< 2.43	
Propionitrile	107-12-0	30.4	< 30.4	
Propyl acetate	109-60-4	12.2	< 12.2	
sec-Butylbenzene	135-98-8	2.43	< 2.43	
Styrene	100-42-5	2.43	< 2.43	
tert-Butyl alcohol	76-65-0	24.3	< 24.3	
tert-Butylbenzene	98-06-6	2.43	< 2.43	
Tetrachloroethene	127-18-4	2.43	< 2.43	
Tetrahydrofuran	109-99-9	2.43	< 2.43	
Toluene	108-88-3	2.43	< 2.43	
trans-1,2-Dichloroethene	156-60-5	2.43	< 2.43	
trans-1,3-Dichloropropene	10061-02-6	2.43	< 2.43	
trans-1,4-Dichloro-2-butene	110-57-6	2.43	< 2.43	
Trichloroethene	79-01-6	2.43	< 2.43	
Trichlorofluoromethane	75-69-4	2.43	< 2.43	
Vinyl acetate	108-05-4	12.2	< 12.2	
Vinyl chloride	75-01-4	1.22	< 1.22	
Xylenes, Total	1330-20-7	2.43	< 2.43	
Surr: 1,2-Dichloroethane-d4	17060-07-0	68-147	**133**	

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer

Lab Sample ID: 1108511-024B
Client Sample ID: Emigration Cr. @ Donner Hill Marker - Bank

Analyzed: 8/27/2011 0120h
Units: µg/kg-dry
Dilution Factor: 1

Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Surr: 4-Bromofluorobenzene	460-00-4	71-144	**103**	
Surr: Dibromofluoromethane	1868-53-7	71-129	**113**	
Surr: Toluene-d8	2037-26-5	72-129	**102**	

Sampling and analytical preparation performed by method 5030C.
This sample was analyzed for TICs and no unknown peaks were detected.

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V83 1108511-001C.D
Acq On : 1 Sep 2011 2:05 am
Operator : ALICIA HABERLE
Sample : 1108511-001C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.037	211	218	221	rVB	24993	20931	1.64%	0.205%
2	3.080	221	227	230	rBV	26713	21952	1.72%	0.215%
3	3.118	230	235	239	rBV	31536	23340	1.83%	0.228%
4	3.186	243	249	260	rBV2	432913	389701	30.48%	3.814%
5	3.662	342	348	350	rBV2	15256	16474	1.29%	0.161%
6	3.691	350	354	356	rVB	21251	17969	1.41%	0.176%
7	3.931	400	404	422	rBV	299963	269975	21.11%	2.642%
8	4.273	471	475	493	rVB	1041359	810666	63.40%	7.934%
9	4.768	574	578	589	rVB	230166	216286	16.91%	2.117%
10	5.350	696	699	705	rBV2	85643	82040	6.42%	0.803%
11	5.436	713	717	729	rVB	1329759	1098661	85.92%	10.753%
12	5.744	776	781	790	rBV2	15479	19967	1.56%	0.195%
13	6.480	930	934	942	rBV	694056	558272	43.66%	5.464%
14	7.066	1052	1056	1062	rBV3	17789	26383	2.06%	0.258%
15	7.143	1068	1072	1085	rVB	1686532	1278715	100.00%	12.515%
16	7.918	1229	1233	1251	rVB	784626	634424	49.61%	6.209%
17	8.153	1278	1282	1286	rBV	47055	37992	2.97%	0.372%
18	8.610	1372	1377	1384	rBV	1508022	1226916	95.95%	12.008%
19	9.168	1489	1493	1498	rBV	146071	132169	10.34%	1.294%
20	9.918	1645	1649	1652	rBV4	17795	16823	1.32%	0.165%
21	9.952	1652	1656	1665	rVB2	48926	53032	4.15%	0.519%
22	10.197	1702	1707	1712	rBV	1050231	874883	68.42%	8.563%
23	11.188	1907	1913	1932	rBV3	76278	161038	12.59%	1.576%
24	11.313	1933	1939	1945	rVV	1068157	1154069	90.25%	11.295%
25	11.356	1945	1948	1954	rVB	18268	22481	1.76%	0.220%
26	12.496	2180	2185	2195	rBV4	21640	37556	2.94%	0.368%
27	13.342	2352	2361	2374	rBV	666381	1014869	79.37%	9.933%

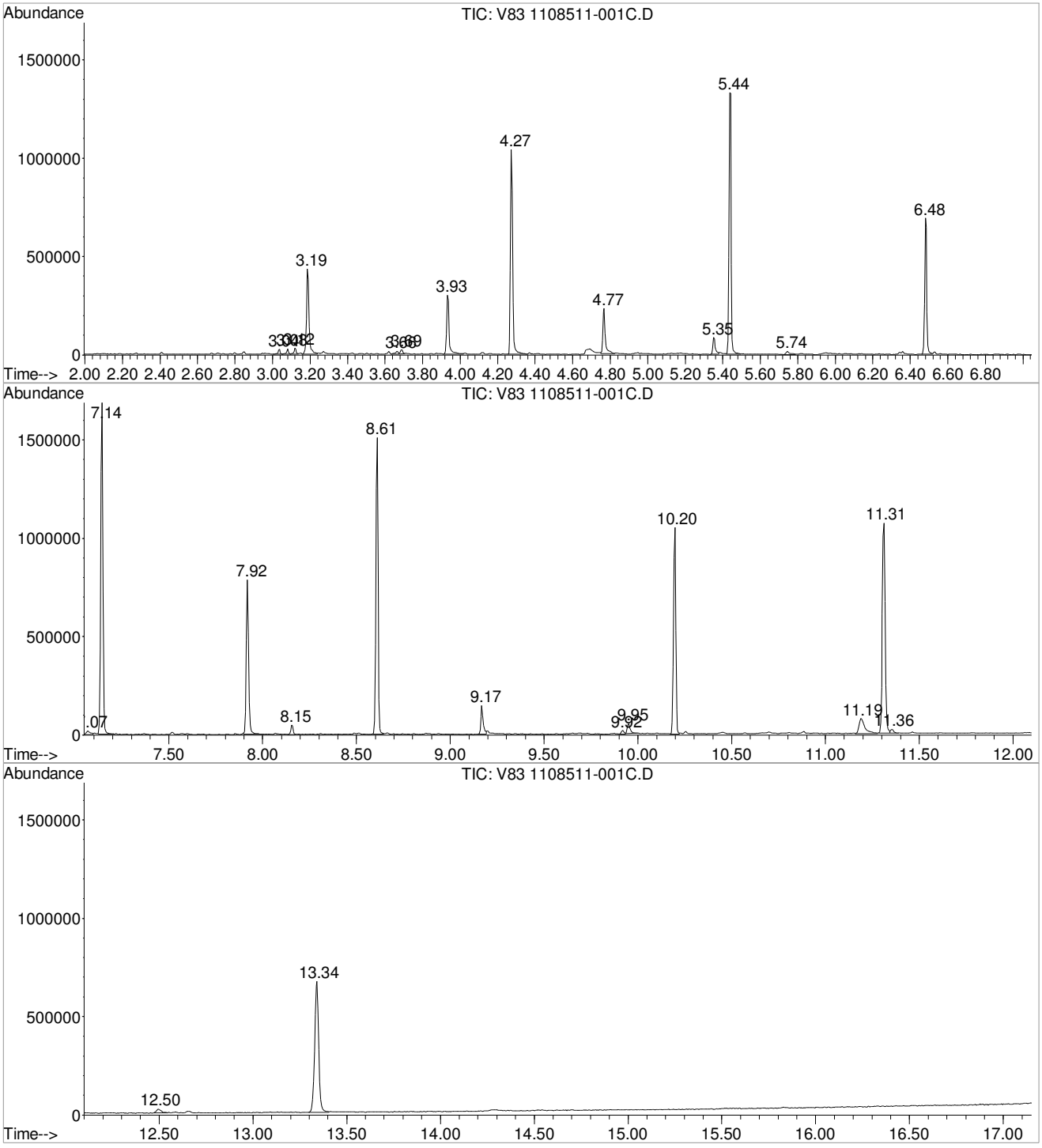
Sum of corrected areas: 10217584

LSC Report - Integrated Chromatogram

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V83 1108511-001C.D
Acq On : 1 Sep 2011 2:05 am
Operator : ALICIA HABERLE
Sample : 1108511-001C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V83 1108511-001C.D
Acq On : 1 Sep 2011 2:05 am
Operator : ALICIA HABERLE
Sample : 1108511-001C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

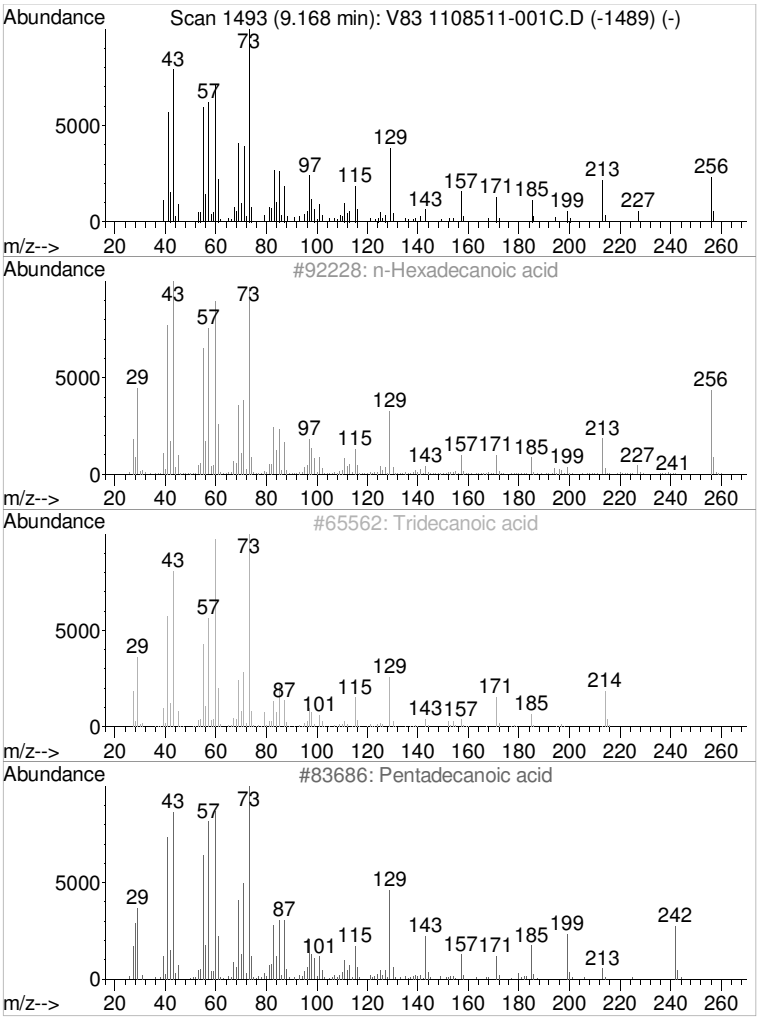
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

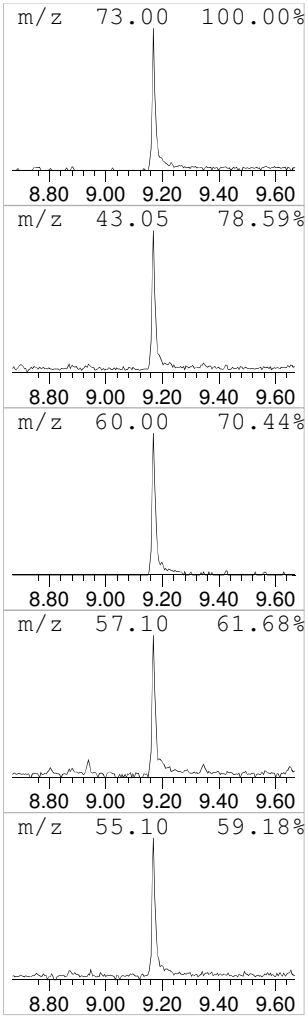
****

Peak Number 1 n-Hexadecanoic acid Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.17	4.31 ug/l	132169	ISTD-Phenanthrene-d10	8.61

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	98
2	Tridecanoic acid	214	C13H26O2	000638-53-9	91
3	Pentadecanoic acid	242	C15H30O2	001002-84-2	58
4	n-Decanoic acid	172	C10H20O2	000334-48-5	53
5	Estra-1,3,5(10)-trien-17.beta.-ol	256	C18H24O	002529-64-8	50





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V83 1108511-001C.D
Acq On : 1 Sep 2011 2:05 am
Operator : ALICIA HABERLE
Sample : 1108511-001C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

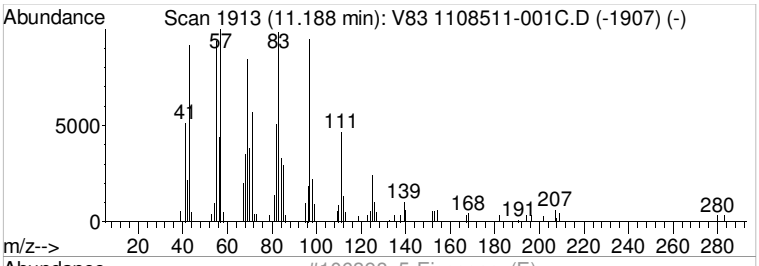
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

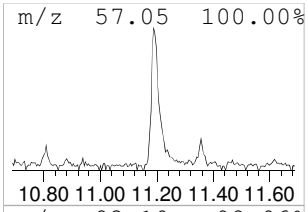
****

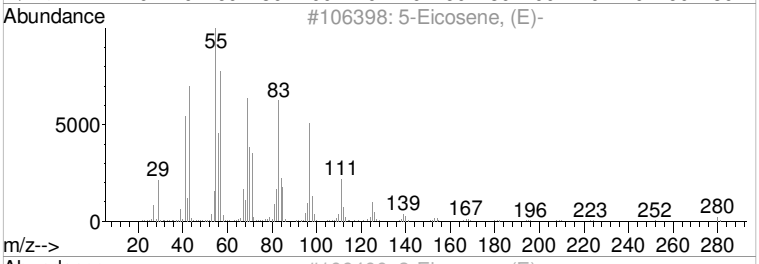
Peak Number 2 5-Eicosene, (E)- Concentration Rank 1

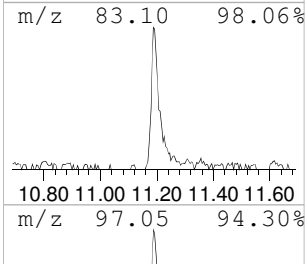
R.T.	EstConc	Area	Relative to ISTD	R.T.
11.19	5.58 ug/l	161038	ISTD-Chrysene-d12	11.31

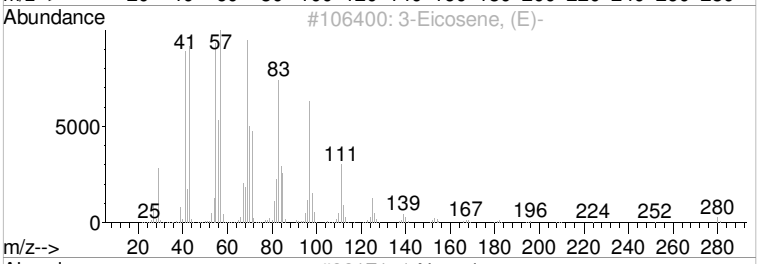
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	5-Eicosene, (E)-	280	C20H40	074685-30-6	93
2	3-Eicosene, (E)-	280	C20H40	074685-33-9	91
3	1-Nonadecene	266	C19H38	018435-45-5	90
4	Isoheptadecanol	256	C17H36O	057289-07-3	90
5	9-Eicosene, (E)-	280	C20H40	074685-29-3	89

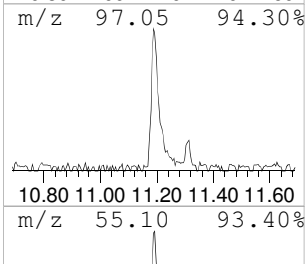


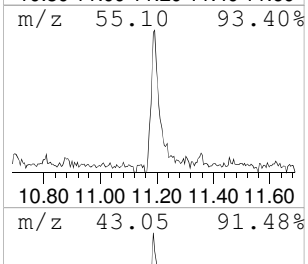


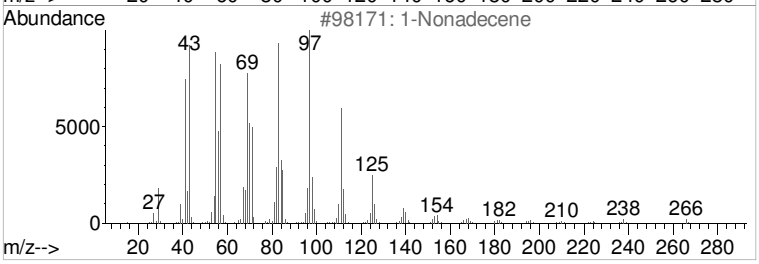


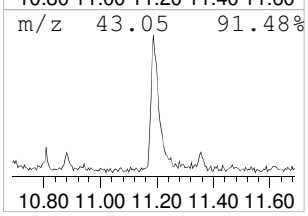












Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V83 1108511-001C.D
Acq On : 1 Sep 2011 2:05 am
Operator : ALICIA HABERLE
Sample : 1108511-001C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
n-Hexadecanoic acid	9.17	4.3	ug/l	132169	4	8.61	1226920	40.0
5-Eicosene, (E)-	11.19	5.6	ug/l	161038	5	11.31	1154070	40.0

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V84 1108511-004C.D
Acq On : 1 Sep 2011 2:31 am
Operator : ALICIA HABERLE
Sample : 1108511-004C
Misc : SAMP
ALS Vial : 16 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

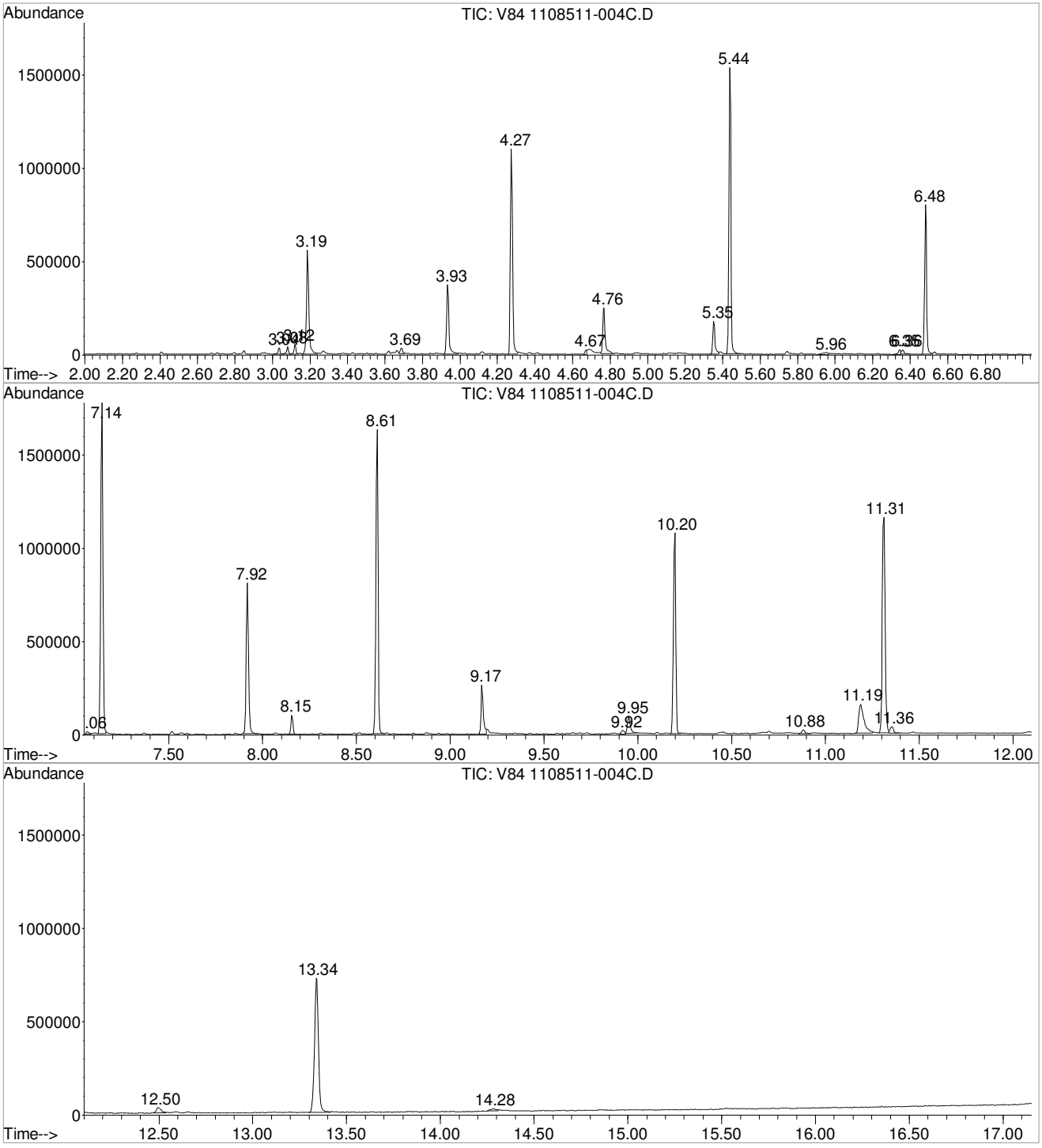
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.037	211	218	221	rBV	34339	28432	2.09%	0.248%
2	3.081	222	227	230	rBV	39668	28463	2.10%	0.249%
3	3.119	230	235	239	rBV	51985	38028	2.80%	0.332%
4	3.186	243	249	260	rBV2	557649	473108	34.84%	4.132%
5	3.687	350	353	356	rVB	30508	23602	1.74%	0.206%
6	3.932	400	404	416	rBV	371177	310861	22.89%	2.715%
7	4.273	471	475	482	rBV	1098795	845966	62.30%	7.388%
8	4.672	555	558	559	rBV	24903	22460	1.65%	0.196%
9	4.764	574	577	588	rVB	244851	235876	17.37%	2.060%
10	5.350	695	699	705	rBV	176919	152911	11.26%	1.335%
11	5.437	713	717	729	rVB	1536656	1175959	86.60%	10.271%
12	5.956	815	825	827	rBV6	9036	18760	1.38%	0.164%
13	6.346	896	906	907	rBV2	25194	25753	1.90%	0.225%
14	6.360	907	909	916	rVB2	23811	21771	1.60%	0.190%
15	6.480	930	934	942	rBV	801085	637335	46.93%	5.566%
16	7.062	1052	1055	1060	rBV4	13528	18015	1.33%	0.157%
17	7.144	1067	1072	1076	rBV	1774820	1357964	100.00%	11.860%
18	7.918	1229	1233	1244	rVB	809933	642472	47.31%	5.611%
19	8.154	1278	1282	1287	rBV	101961	76664	5.65%	0.670%
20	8.611	1372	1377	1385	rBV	1630560	1310702	96.52%	11.447%
21	9.169	1489	1493	1498	rBV	263225	231925	17.08%	2.026%
22	9.919	1646	1649	1652	rBV2	20417	21888	1.61%	0.191%
23	9.952	1652	1656	1665	rVB	90990	92014	6.78%	0.804%
24	10.198	1702	1707	1714	rBV	1077465	910841	67.07%	7.955%
25	10.881	1844	1849	1857	rBV	19488	25020	1.84%	0.219%
26	11.188	1907	1913	1926	rBV2	155562	295198	21.74%	2.578%
27	11.313	1933	1939	1944	rBV	1157555	1217265	89.64%	10.631%
28	11.357	1944	1948	1956	rVB	35806	46078	3.39%	0.402%
29	12.496	2179	2185	2194	rBV3	29721	54277	4.00%	0.474%
30	13.338	2352	2360	2376	rBV	719701	1079989	79.53%	9.432%
31	14.280	2550	2556	2562	rBV9	13365	30197	2.22%	0.264%

Sum of corrected areas: 11449794

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V84 1108511-004C.D
Acq On : 1 Sep 2011 2:31 am
Operator : ALICIA HABERLE
Sample : 1108511-004C
Misc : SAMP
ALS Vial : 16 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V84 1108511-004C.D
Acq On : 1 Sep 2011 2:31 am
Operator : ALICIA HABERLE
Sample : 1108511-004C
Misc : SAMP
ALS Vial : 16 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

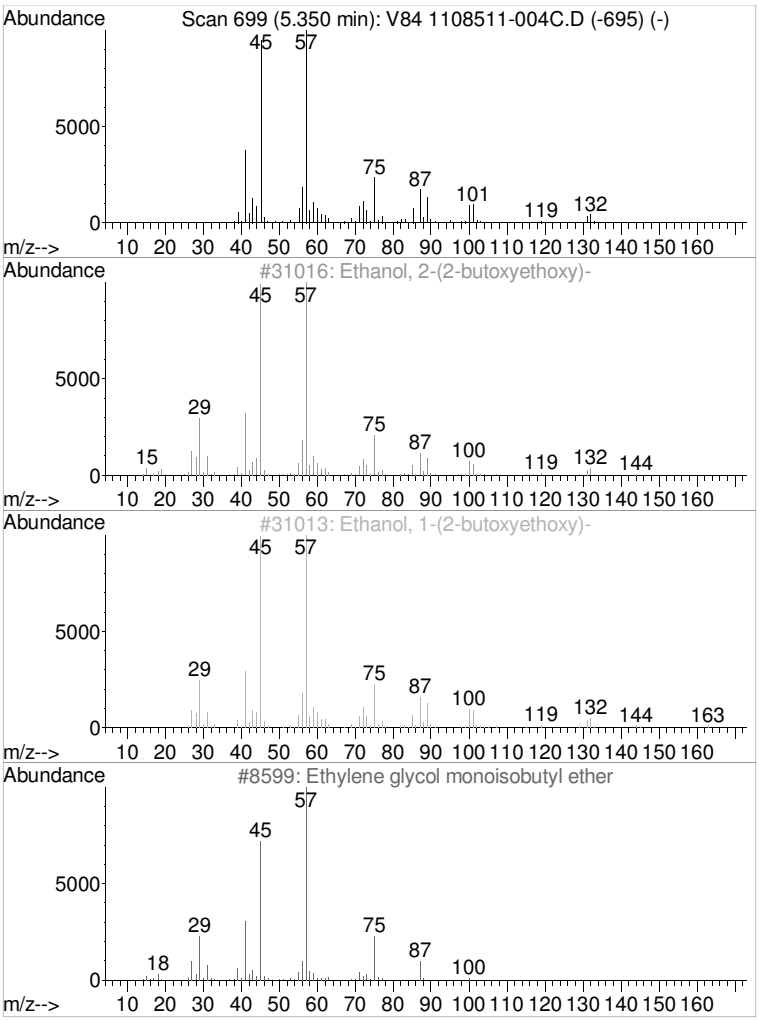
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

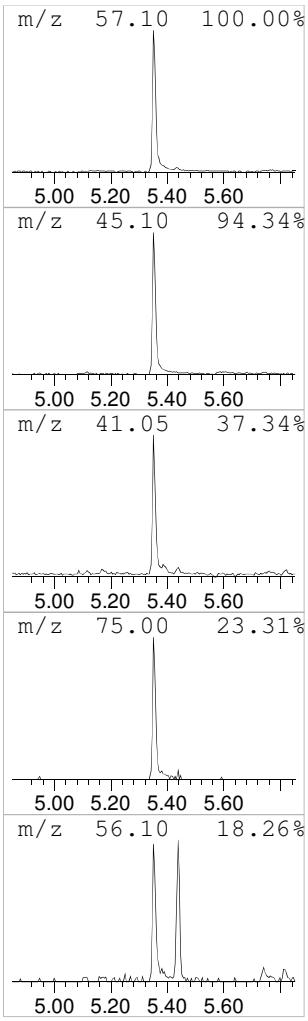
****

Peak Number 1 Ethanol, 2-(2-butoxyethoxy)- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
5.35	5.20 ug/l	152911	ISTD Naphthalene-d8	5.44

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Ethanol, 2-(2-butoxyethoxy)-	162	C8H18O3	000112-34-5	90
2	Ethanol, 1-(2-butoxyethoxy)-	162	C8H18O3	054446-78-5	90
3	Ethylene glycol monoisobutyl ether	118	C6H14O2	004439-24-1	53
4	3,3-Dimethylbutane-2-ol	102	C6H14O	000464-07-3	47
5	Di-sec-butyl ether	130	C8H18O	006863-58-7	47





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V84 1108511-004C.D
Acq On : 1 Sep 2011 2:31 am
Operator : ALICIA HABERLE
Sample : 1108511-004C
Misc : SAMP
ALS Vial : 16 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

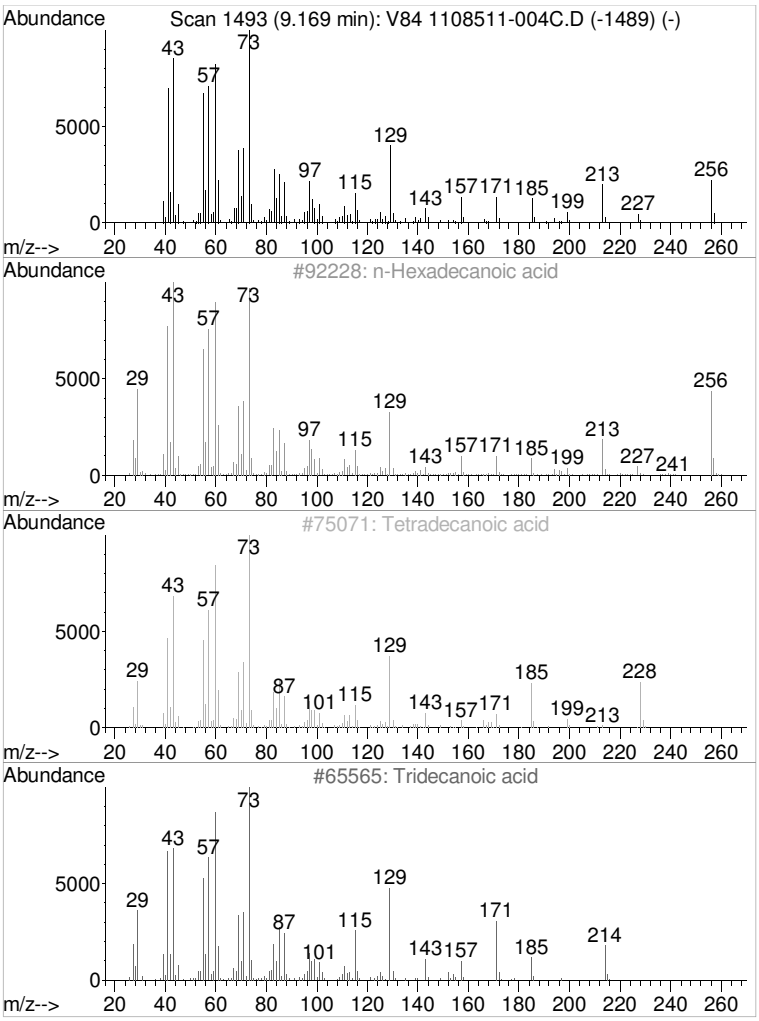
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

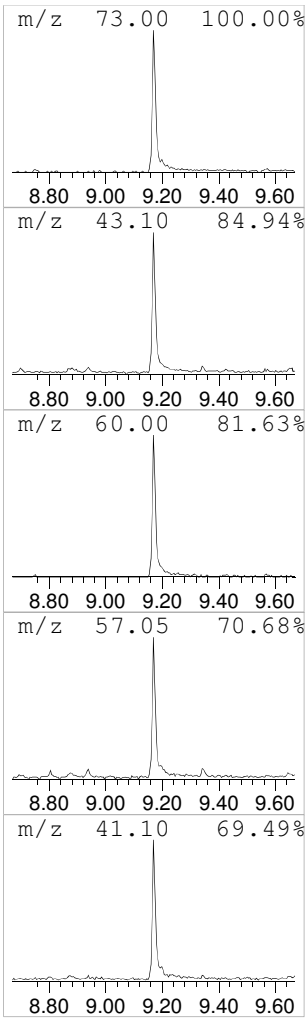
****

Peak Number 2 n-Hexadecanoic acid Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.17	7.08 ug/l	231925	ISTD-Phenanthrene-d10	8.61

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	99
2	Tetradecanoic acid	228	C14H28O2	000544-63-8	94
3	Tridecanoic acid	214	C13H26O2	000638-53-9	83
4	Pentadecanoic acid	242	C15H30O2	001002-84-2	74
5	n-Decanoic acid	172	C10H20O2	000334-48-5	70





Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V84 1108511-004C.D
Acq On : 1 Sep 2011 2:31 am
Operator : ALICIA HABERLE
Sample : 1108511-004C
Misc : SAMP
ALS Vial : 16 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

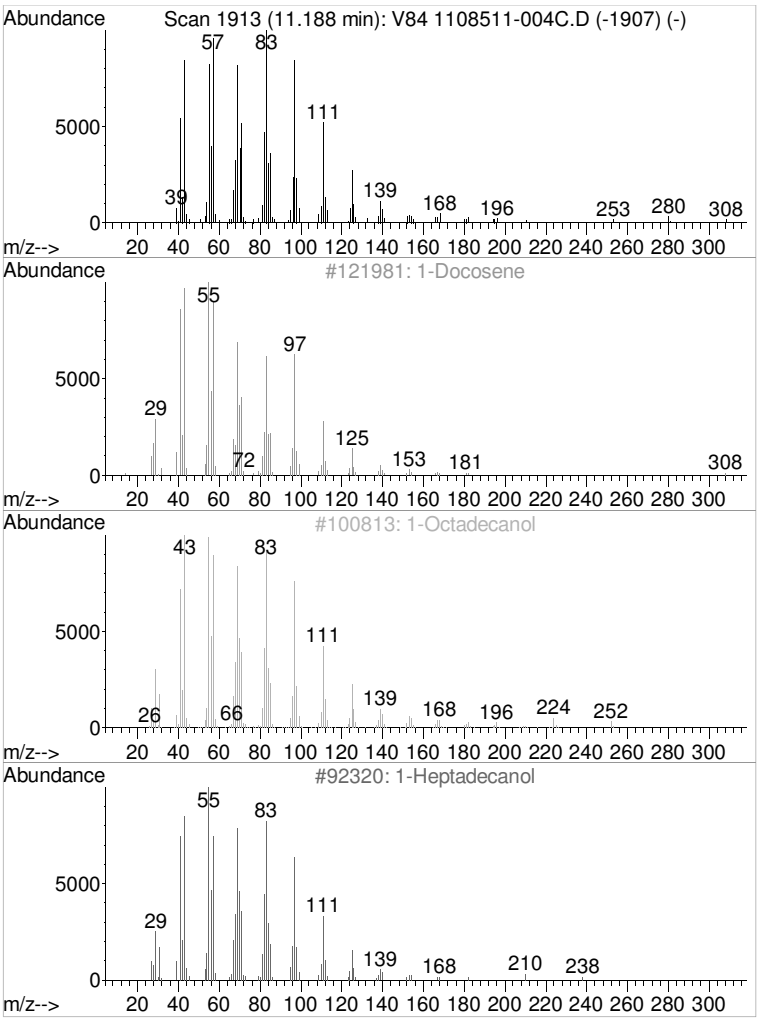
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

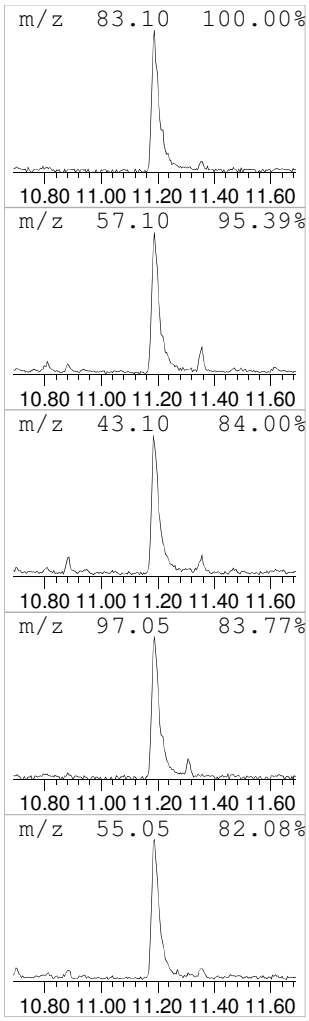
****

Peak Number 3 1-Docosene Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.19	9.70 ug/l	295198	ISTD-Chrysene-d12	11.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Docosene	308	C22H44	001599-67-3	93
2	1-Octadecanol	270	C18H38O	000112-92-5	91
3	1-Heptadecanol	256	C17H36O	001454-85-9	91
4	1-Hexadecanol	242	C16H34O	036653-82-4	91
5	1-Tetracosanol	354	C24H50O	000506-51-4	90





Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V84 1108511-004C.D
Acq On : 1 Sep 2011 2:31 am
Operator : ALICIA HABERLE
Sample : 1108511-004C
Misc : SAMP
ALS Vial : 16 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Ethanol, 2-(2-but...	5.35	5.2	ug/l	152911	2	5.44	1175960	40.0
n-Hexadecanoic acid	9.17	7.1	ug/l	231925	4	8.61	1310700	40.0
1-Docosene	11.19	9.7	ug/l	295198	5	11.31	1217270	40.0

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V85 1108511-007C.D
Acq On : 1 Sep 2011 2:57 am
Operator : ALICIA HABERLE
Sample : 1108511-007C
Misc : SAMP
ALS Vial : 17 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.038	212	218	221	rBV	24901	20755	1.64%	0.204%
2	3.081	222	227	231	rVB	28044	20272	1.60%	0.199%
3	3.119	231	235	238	rBV	36580	25697	2.03%	0.253%
4	3.187	244	249	263	rBV2	466051	391304	30.95%	3.846%
5	3.687	350	353	356	rVB	24314	18191	1.44%	0.179%
6	3.932	401	404	419	rBV	329529	275142	21.76%	2.704%
7	4.274	471	475	492	rVB	1064924	799767	63.26%	7.860%
8	4.692	556	562	570	rBV4	20818	51619	4.08%	0.507%
9	4.764	574	577	589	rVB	211399	198060	15.67%	1.946%
10	5.351	695	699	706	rBV2	119989	106231	8.40%	1.044%
11	5.437	713	717	730	rVB	1467323	1086170	85.92%	10.674%
12	6.481	930	934	942	rBV	674843	501492	39.67%	4.928%
13	7.063	1049	1055	1060	rBV5	10917	17094	1.35%	0.168%
14	7.140	1067	1071	1083	rVB	1527345	1264206	100.00%	12.424%
15	7.919	1229	1233	1245	rVB	761341	619985	49.04%	6.093%
16	8.154	1278	1282	1286	rBV	60709	47242	3.74%	0.464%
17	8.611	1372	1377	1385	rBV	1438257	1234378	97.64%	12.131%
18	9.169	1489	1493	1503	rBV2	153614	151853	12.01%	1.492%
19	9.919	1645	1649	1652	rBV2	17464	17318	1.37%	0.170%
20	9.953	1652	1656	1670	rVB	47217	54423	4.30%	0.535%
21	10.193	1702	1706	1716	rBV	1058191	880104	69.62%	8.649%
22	11.189	1908	1913	1928	rBV2	72566	154735	12.24%	1.521%
23	11.314	1933	1939	1945	rVV	1080537	1168891	92.46%	11.487%
24	11.352	1945	1947	1953	rVB2	13004	15358	1.21%	0.151%
25	12.497	2178	2185	2190	rBV6	14873	26472	2.09%	0.260%
26	13.343	2351	2361	2371	rBV	658611	1028846	81.38%	10.111%

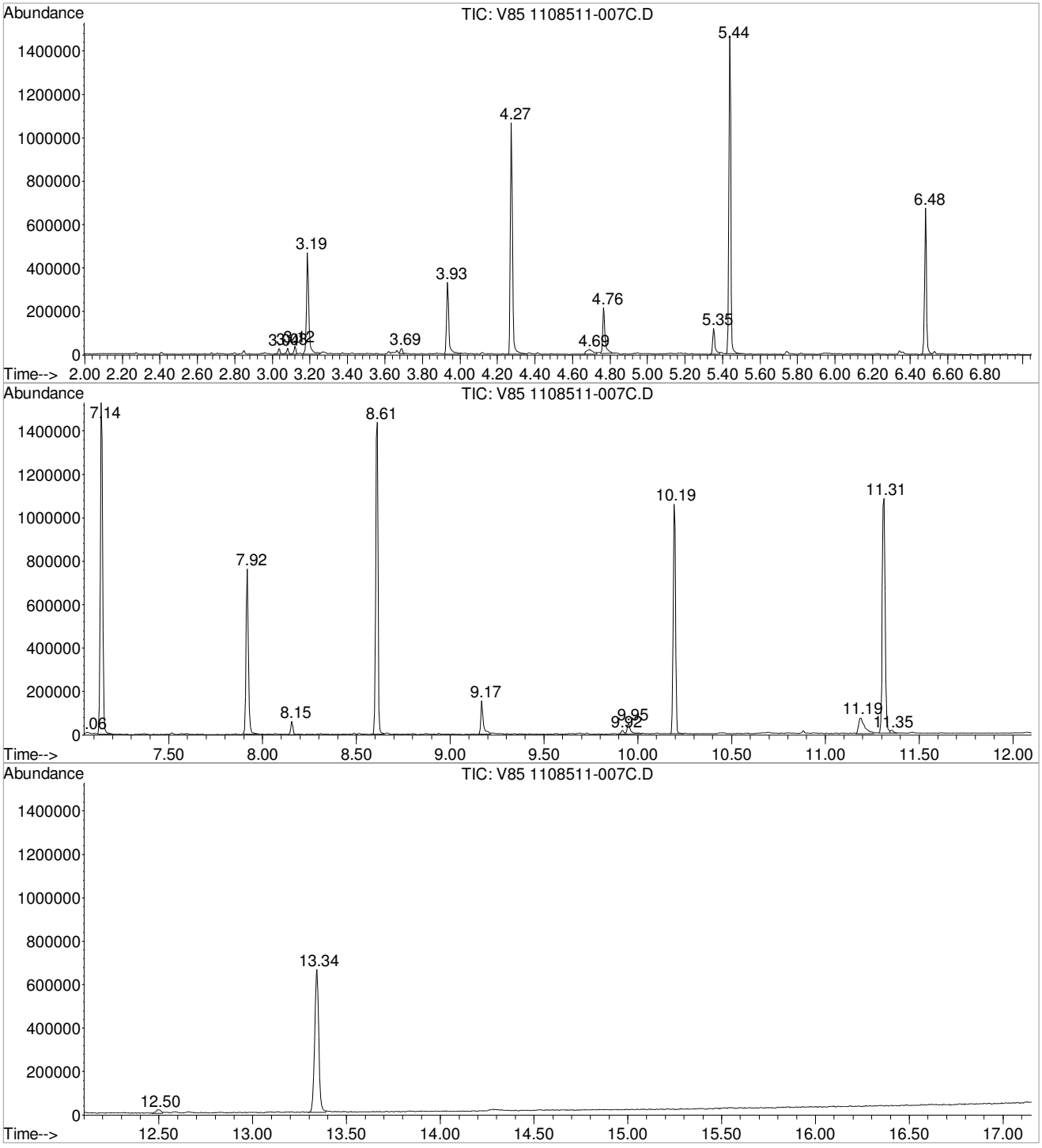
Sum of corrected areas: 10175605

LSC Report - Integrated Chromatogram

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V85 1108511-007C.D
Acq On : 1 Sep 2011 2:57 am
Operator : ALICIA HABERLE
Sample : 1108511-007C
Misc : SAMP
ALS Vial : 17 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V85 1108511-007C.D
Acq On : 1 Sep 2011 2:57 am
Operator : ALICIA HABERLE
Sample : 1108511-007C
Misc : SAMP
ALS Vial : 17 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

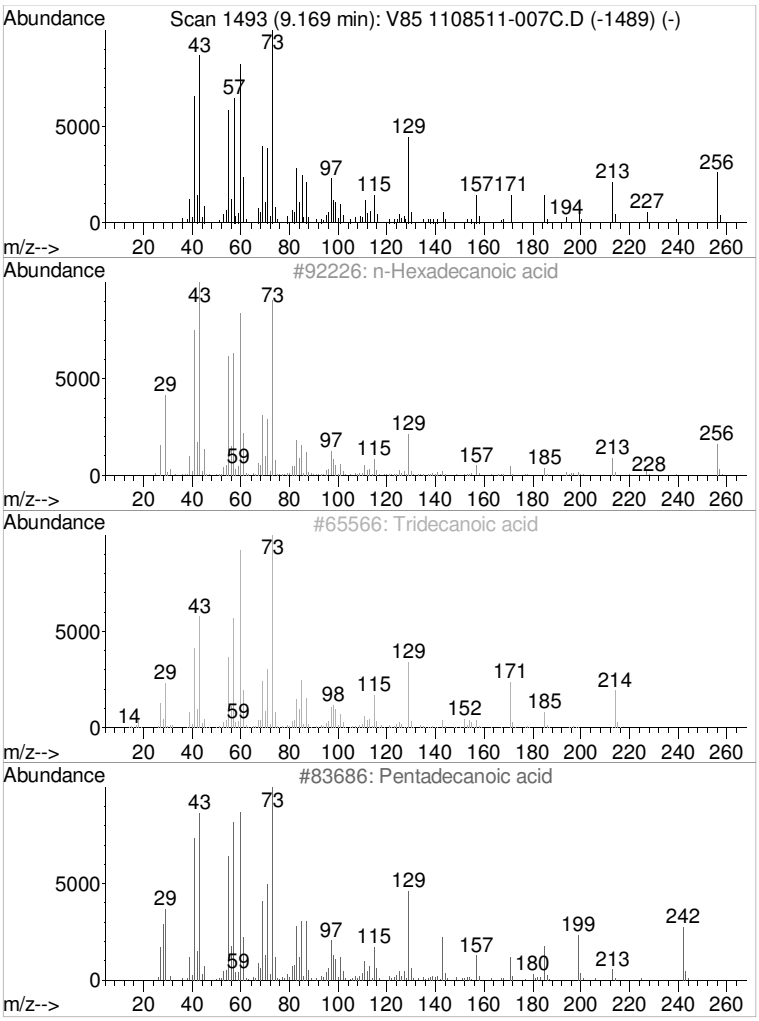
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

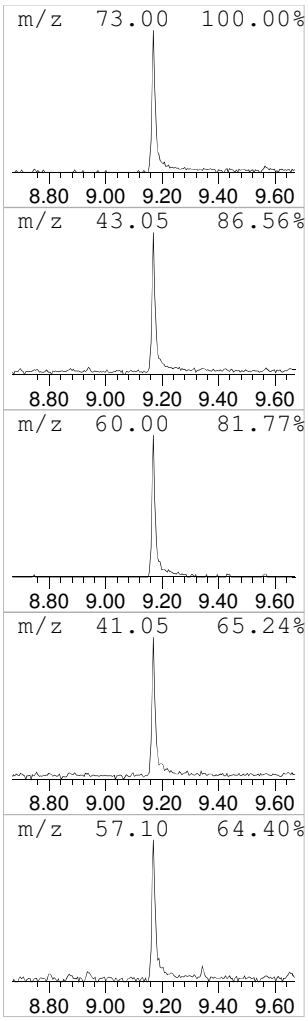
****

Peak Number 1 n-Hexadecanoic acid Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.17	4.92 ug/l	151853	ISTD-Phenanthrene-d10	8.61

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	96
2	Tridecanoic acid	214	C13H26O2	000638-53-9	81
3	Pentadecanoic acid	242	C15H30O2	001002-84-2	74
4	Tetradecanoic acid	228	C14H28O2	000544-63-8	72
5	Estra-1,3,5(10)-trien-17.beta.-ol	256	C18H24O	002529-64-8	42





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V85 1108511-007C.D
Acq On : 1 Sep 2011 2:57 am
Operator : ALICIA HABERLE
Sample : 1108511-007C
Misc : SAMP
ALS Vial : 17 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

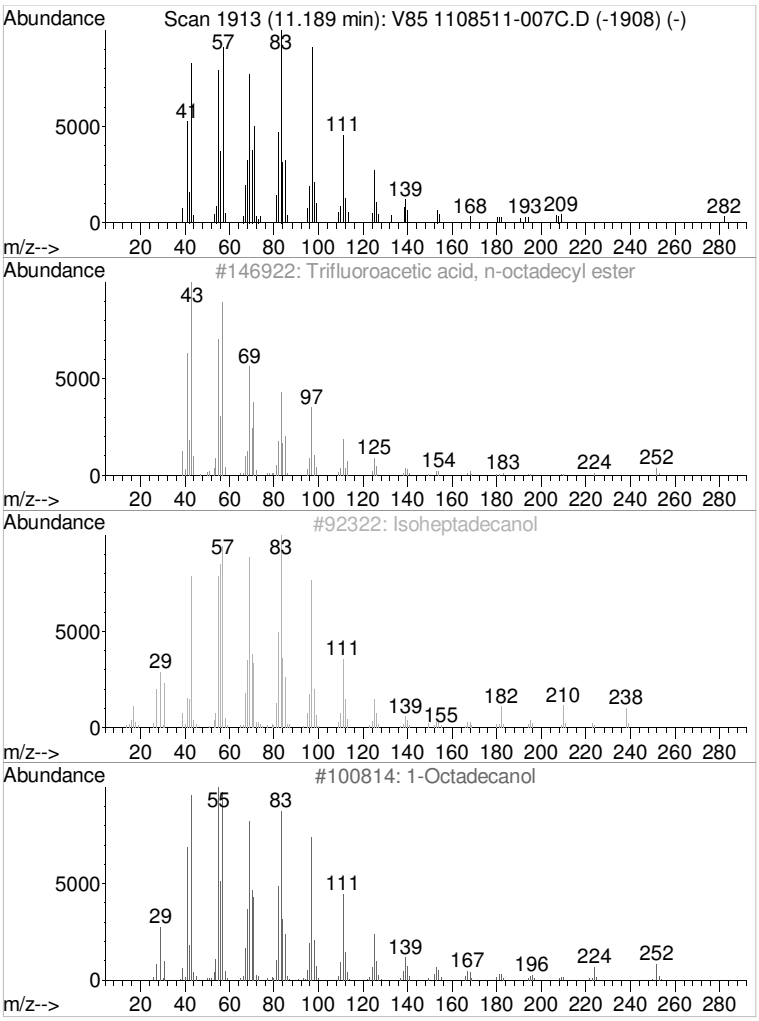
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

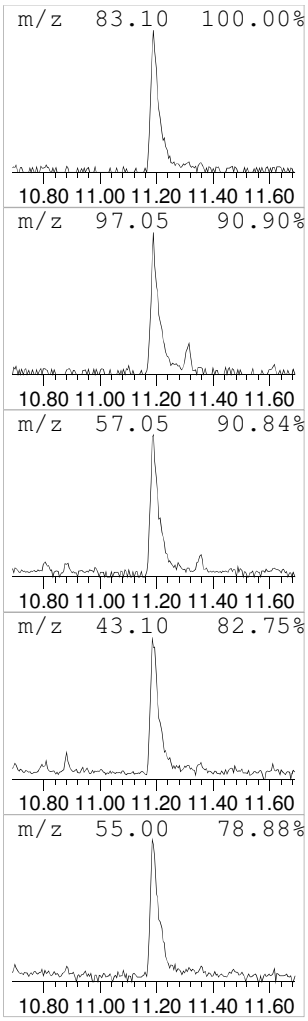
****

Peak Number 2 Trifluoroacetic acid, n-oct... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.19	5.30 ug/l	154735	ISTD-Chrysene-d12	11.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Trifluoroacetic acid, n-octadecy...	366	C20H37F3O2	079392-43-1	91
2	Isoheptadecanol	256	C17H36O	057289-07-3	90
3	1-Octadecanol	270	C18H38O	000112-92-5	90
4	1-Nonadecene	266	C19H38	018435-45-5	90
5	Trichloroacetic acid, pentadecyl...	372	C17H31Cl3O2	074339-53-0	90





Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V85 1108511-007C.D
Acq On : 1 Sep 2011 2:57 am
Operator : ALICIA HABERLE
Sample : 1108511-007C
Misc : SAMP
ALS Vial : 17 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
n-Hexadecanoic acid	9.17	4.9	ug/l	151853	4	8.61	1234380	40.0
Trifluoroacetic a...	11.19	5.3	ug/l	154735	5	11.31	1168890	40.0

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V86 1108511-010C.D
Acq On : 1 Sep 2011 3:22 am
Operator : ALICIA HABERLE
Sample : 1108511-010C
Misc : SAMP
ALS Vial : 18 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

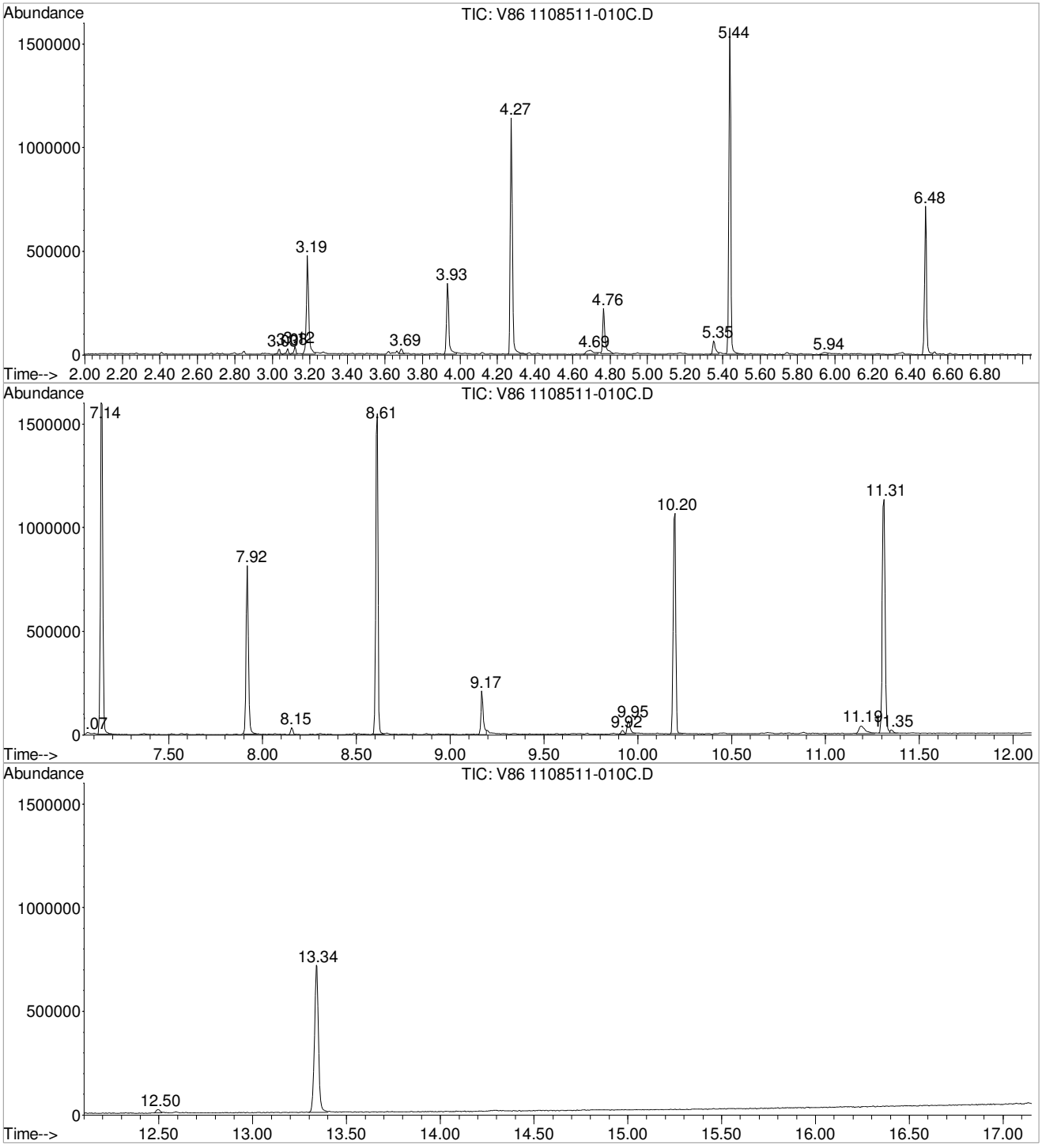
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.033	212	217	221	rBV	24064	19784	1.48%	0.186%
2	3.081	221	227	230	rBV	26850	20498	1.54%	0.193%
3	3.119	230	235	238	rBV	35703	25834	1.94%	0.243%
4	3.187	243	249	258	rBV2	475825	401603	30.09%	3.779%
5	3.687	350	353	356	rVB	23216	17656	1.32%	0.166%
6	3.932	400	404	414	rBV	343018	289756	21.71%	2.727%
7	4.274	471	475	492	rVB	1139722	842156	63.11%	7.925%
8	4.692	555	562	571	rBV4	19145	51570	3.86%	0.485%
9	4.764	574	577	588	rVB	218711	204369	15.31%	1.923%
10	5.351	695	699	705	rBV2	64919	69760	5.23%	0.656%
11	5.437	713	717	731	rVB	1573604	1148190	86.04%	10.805%
12	5.942	815	822	826	rBV7	8108	17250	1.29%	0.162%
13	6.481	930	934	942	rBV	717223	557300	41.76%	5.245%
14	7.067	1050	1056	1061	rBV3	11389	17995	1.35%	0.169%
15	7.140	1067	1071	1085	rVB	1600895	1334460	100.00%	12.558%
16	7.919	1229	1233	1244	rVB	812885	658684	49.36%	6.199%
17	8.154	1279	1282	1286	rBV	33902	26179	1.96%	0.246%
18	8.611	1372	1377	1385	rBV	1548053	1278974	95.84%	12.036%
19	9.169	1489	1493	1498	rBV2	209425	189541	14.20%	1.784%
20	9.919	1645	1649	1652	rBV2	18291	18272	1.37%	0.172%
21	9.953	1652	1656	1664	rVV2	61978	67778	5.08%	0.638%
22	10.198	1702	1707	1715	rBV	1065130	961156	72.03%	9.045%
23	11.189	1908	1913	1929	rBV6	37111	86581	6.49%	0.815%
24	11.314	1933	1939	1945	rVV	1128455	1207004	90.45%	11.359%
25	11.352	1945	1947	1953	rVB2	14961	17150	1.29%	0.161%
26	12.497	2180	2185	2189	rBV3	16300	23146	1.73%	0.218%
27	13.338	2352	2360	2373	rBV	709875	1073562	80.45%	10.103%

Sum of corrected areas: 10626208

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V86 1108511-010C.D
Acq On : 1 Sep 2011 3:22 am
Operator : ALICIA HABERLE
Sample : 1108511-010C
Misc : SAMP
ALS Vial : 18 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V86 1108511-010C.D
Acq On : 1 Sep 2011 3:22 am
Operator : ALICIA HABERLE
Sample : 1108511-010C
Misc : SAMP
ALS Vial : 18 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

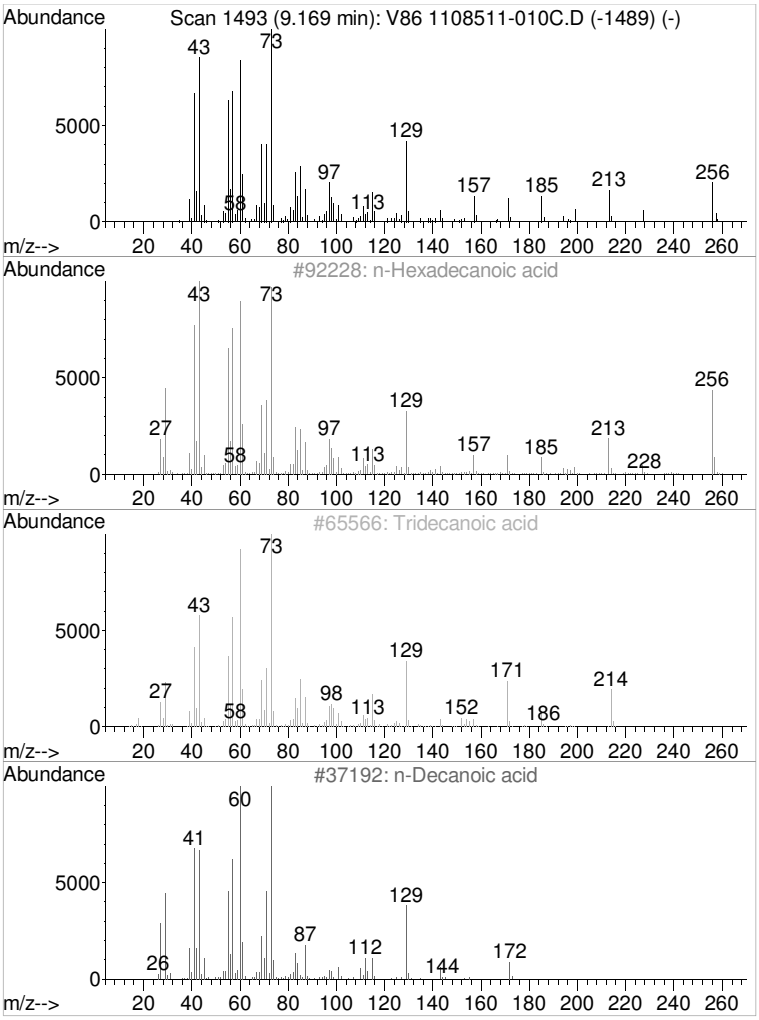
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

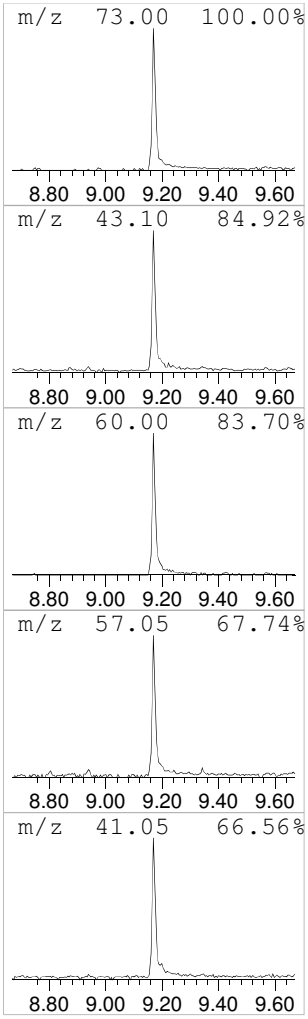
****

Peak Number 1 n-Hexadecanoic acid Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.17	5.93 ug/l	189541	ISTD-Phenanthrene-d10	8.61

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	99
2	Tridecanoic acid	214	C13H26O2	000638-53-9	74
3	n-Decanoic acid	172	C10H20O2	000334-48-5	70
4	Tridecane	184	C13H28	000629-50-5	11
5	Eicosane	282	C20H42	000112-95-8	11





Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V86 1108511-010C.D
Acq On : 1 Sep 2011 3:22 am
Operator : ALICIA HABERLE
Sample : 1108511-010C
Misc : SAMP
ALS Vial : 18 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
n-Hexadecanoic acid	9.17	5.9	ug/l	189541	4	8.61	1278970	40.0

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V87 1108511-013C.D
Acq On : 1 Sep 2011 3:48 am
Operator : ALICIA HABERLE
Sample : 1108511-013C
Misc : SAMP
ALS Vial : 19 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.541	101	115	132	rBV6	23969	107503	8.09%	0.895%
2	3.037	211	218	221	rBV	29678	23343	1.76%	0.194%
3	3.080	221	227	230	rVB	30642	22807	1.72%	0.190%
4	3.118	230	235	239	rVB	37731	29845	2.25%	0.249%
5	3.186	243	249	263	rBV2	608314	547437	41.19%	4.558%
6	3.618	333	339	342	rBV	21013	16277	1.22%	0.136%
7	3.662	342	348	351	rBV	22224	22449	1.69%	0.187%
8	3.931	401	404	415	rBV	392042	336590	25.33%	2.803%
9	4.272	471	475	491	rBV	1021525	837242	63.00%	6.971%
10	4.691	555	562	571	rBV3	25959	69995	5.27%	0.583%
11	4.768	574	578	589	rVB	398044	348039	26.19%	2.898%
12	5.350	696	699	705	rBV	100283	90077	6.78%	0.750%
13	5.436	713	717	730	rBV	1405951	1143335	86.03%	9.520%
14	6.345	902	906	918	rBV	298150	251392	18.92%	2.093%
15	6.484	930	935	942	rBV	1011945	838794	63.12%	6.984%
16	7.143	1068	1072	1084	rVB	1707836	1328944	100.00%	11.065%
17	7.917	1229	1233	1242	rVB	873534	702991	52.90%	5.853%
18	8.153	1279	1282	1287	rBV	180085	144886	10.90%	1.206%
19	8.610	1372	1377	1385	rBV	1591751	1296200	97.54%	10.793%
20	9.168	1489	1493	1497	rBV2	89412	80234	6.04%	0.668%
21	9.918	1646	1649	1653	rBV3	22324	21166	1.59%	0.176%
22	9.952	1653	1656	1665	rVB2	44929	47890	3.60%	0.399%
23	10.197	1702	1707	1711	rBV	1250256	1046010	78.71%	8.710%
24	11.187	1906	1913	1929	rBV3	69033	151602	11.41%	1.262%
25	11.313	1933	1939	1944	rVV	1161571	1229103	92.49%	10.234%
26	11.356	1944	1948	1955	rVB	144345	154263	11.61%	1.284%
27	12.495	2180	2185	2193	rBV3	22778	32643	2.46%	0.272%
28	13.342	2352	2361	2371	rBV	728449	1088752	81.93%	9.066%

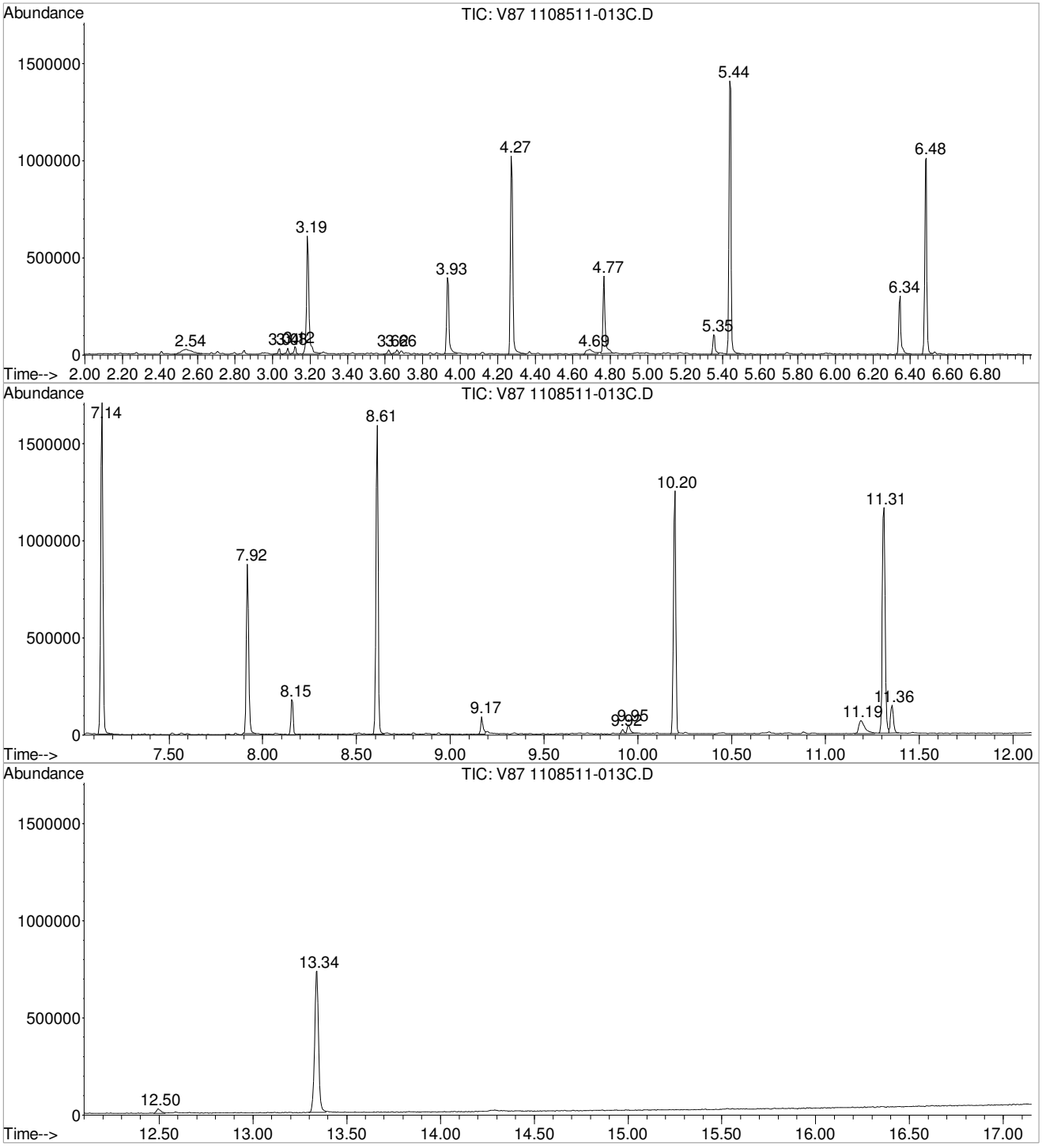
Sum of corrected areas: 12009809

LSC Report - Integrated Chromatogram

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V87 1108511-013C.D
Acq On : 1 Sep 2011 3:48 am
Operator : ALICIA HABERLE
Sample : 1108511-013C
Misc : SAMP
ALS Vial : 19 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V87 1108511-013C.D
Acq On : 1 Sep 2011 3:48 am
Operator : ALICIA HABERLE
Sample : 1108511-013C
Misc : SAMP
ALS Vial : 19 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

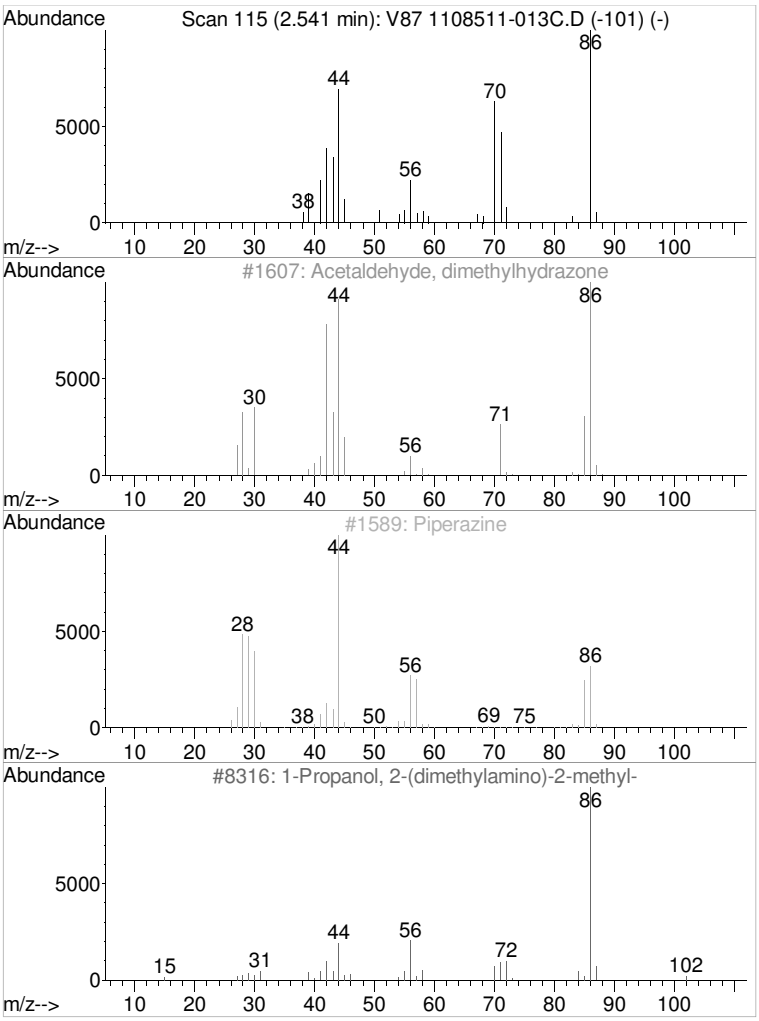
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

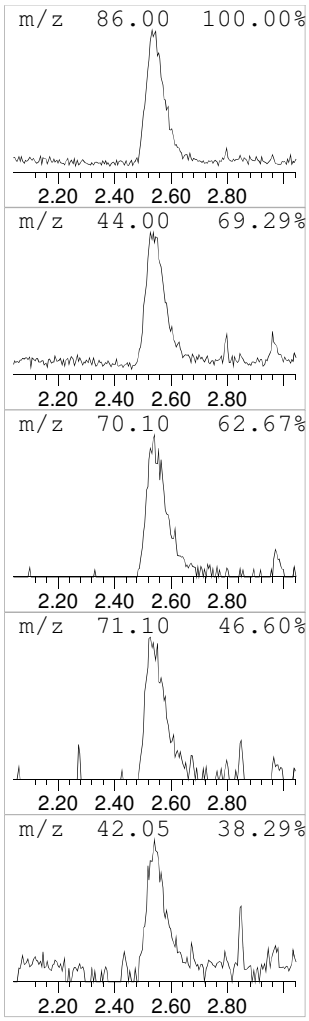
****

Peak Number 1 Acetaldehyde, dimethylhydra... Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.54	5.14 ug/l	107503	ISTD 1,4-Dichlorobenzene-d4	4.27

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Acetaldehyde, dimethylhydrazone	86	C4H10N2	007422-90-4	53
2	Piperazine	86	C4H10N2	000110-85-0	27
3	1-Propanol, 2-(dimethylamino)-2-...	117	C6H15NO	007005-47-2	25
4	D-Leucine	131	C6H13NO2	000328-38-1	25
5	(R)-(-)-Leucinol	117	C6H15NO	053448-09-2	23





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V87 1108511-013C.D
Acq On : 1 Sep 2011 3:48 am
Operator : ALICIA HABERLE
Sample : 1108511-013C
Misc : SAMP
ALS Vial : 19 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

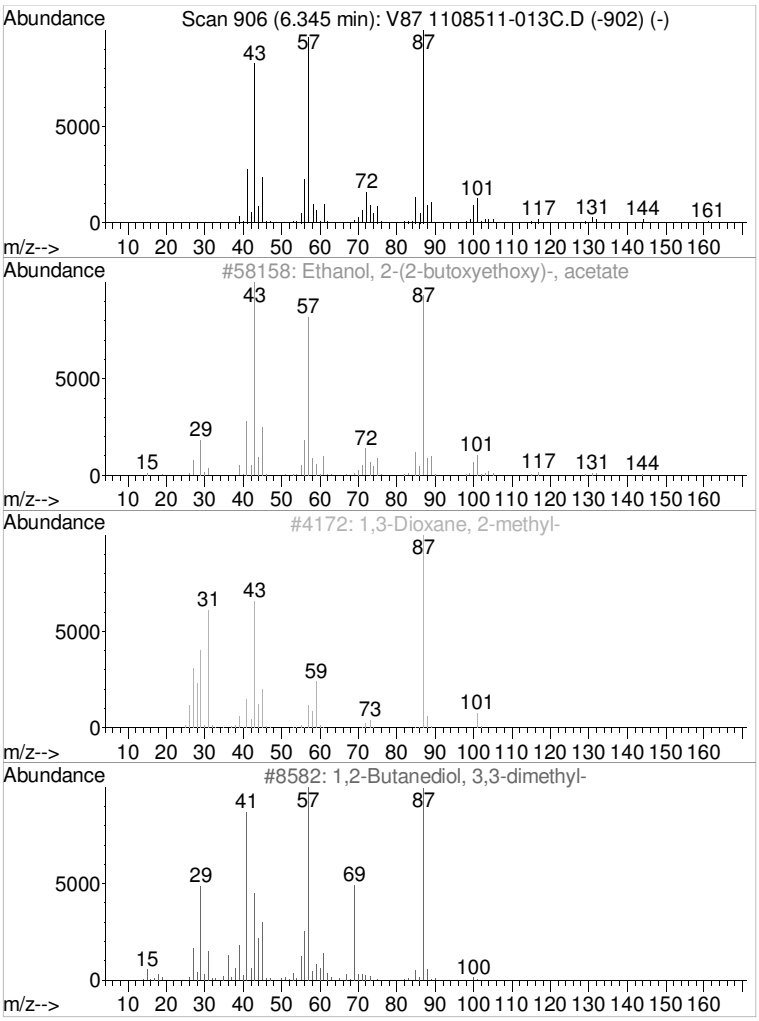
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

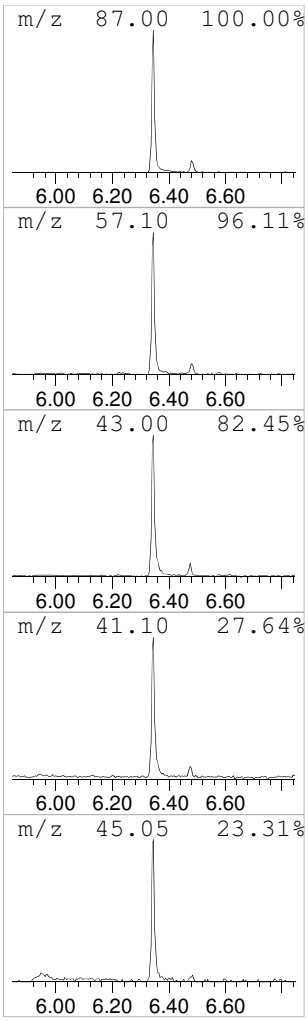
****

Peak Number 2 Ethanol, 2-(2-butoxyethoxy)... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.34	7.57 ug/l	251392	ISTD Acenaphthene-d10	7.14

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Ethanol, 2-(2-butoxyethoxy)-, ac...	204	C10H20O4	000124-17-4	91
2	1,3-Dioxane, 2-methyl-	102	C5H10O2	000626-68-6	47
3	1,2-Butanediol, 3,3-dimethyl-	118	C6H14O2	059562-82-2	45
4	2-Butoxyethyl acetate	160	C8H16O3	000112-07-2	43
5	5-Hexen-3-ol, 2,2,4-trimethyl-	142	C9H18O	090676-50-9	38





Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V87 1108511-013C.D
Acq On : 1 Sep 2011 3:48 am
Operator : ALICIA HABERLE
Sample : 1108511-013C
Misc : SAMP
ALS Vial : 19 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

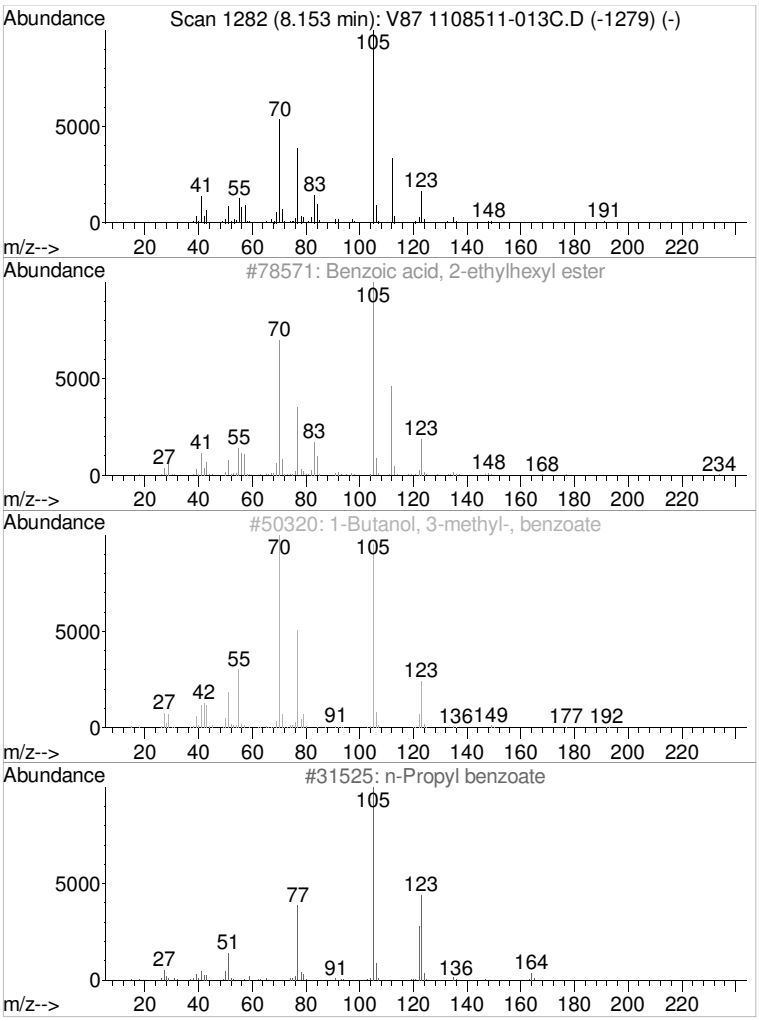
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

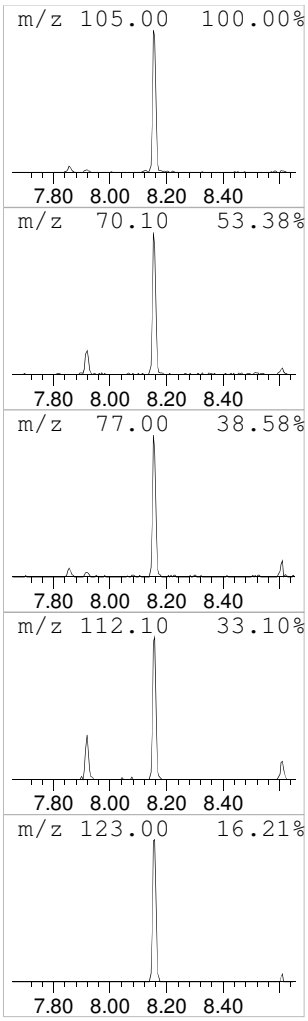
****

Peak Number 3 Benzoic acid, 2-ethylhexyl ... Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.15	4.47 ug/l	144886	ISTD-Phenanthrene-d10	8.61

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzoic acid, 2-ethylhexyl ester	234	C15H22O2	005444-75-7	83
2	1-Butanol, 3-methyl-, benzoate	192	C12H16O2	000094-46-2	40
3	n-Propyl benzoate	164	C10H12O2	002315-68-6	35
4	Pentanal, 5-(benzoyloxy)-	206	C12H14O3	055162-83-9	32
5	1-Butanone, 3-methyl-2-nitro-1-p...	207	C11H13NO3	059906-55-7	27





Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V87 1108511-013C.D
Acq On : 1 Sep 2011 3:48 am
Operator : ALICIA HABERLE
Sample : 1108511-013C
Misc : SAMP
ALS Vial : 19 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

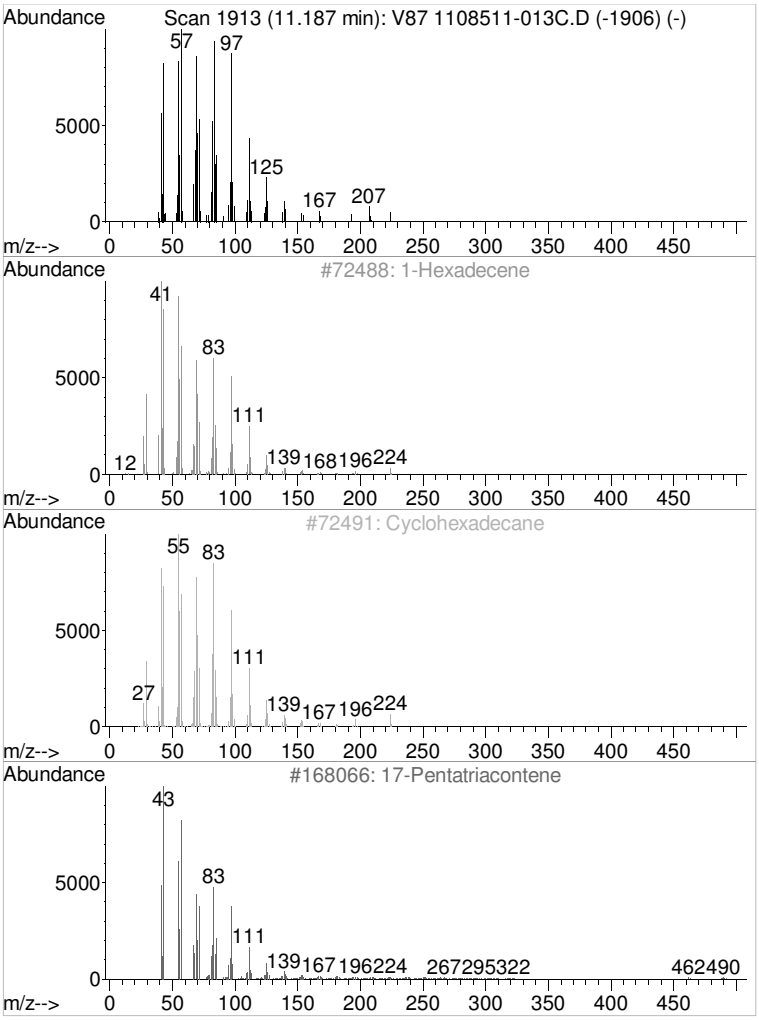
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

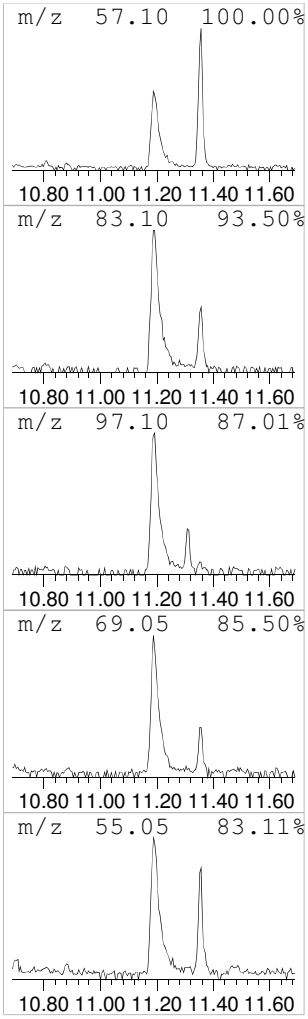
****

Peak Number 4 1-Hexadecene Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.19	4.93 ug/l	151602	ISTD-Chrysene-d12	11.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Hexadecene	224	C16H32	000629-73-2	94
2	Cyclohexadecane	224	C16H32	000295-65-8	94
3	17-Pentatriacontene	491	C35H70	006971-40-0	91
4	1-Heptadecanol	256	C17H36O	001454-85-9	90
5	Bromoacetic acid, pentadecyl ester	348	C17H33BrO2	131143-01-6	90





Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V87 1108511-013C.D
Acq On : 1 Sep 2011 3:48 am
Operator : ALICIA HABERLE
Sample : 1108511-013C
Misc : SAMP
ALS Vial : 19 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Acetaldehyde, dim...	2.54	5.1	ug/l	107503	1	4.27	837242	40.0
Ethanol, 2-(2-but...	6.34	7.6	ug/l	251392	3	7.14	1328940	40.0
Benzoic acid, 2-e...	8.15	4.5	ug/l	144886	4	8.61	1296200	40.0
1-Hexadecene	11.19	4.9	ug/l	151602	5	11.31	1229100	40.0

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V88 1108511-016C.D
Acq On : 1 Sep 2011 4:14 am
Operator : ALICIA HABERLE
Sample : 1108511-016C
Misc : SAMP
ALS Vial : 20 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.538	100	114	115	rBV3	21089	48940	3.69%	0.440%
2	3.034	211	217	221	rBV	25964	20142	1.52%	0.181%
3	3.082	221	227	230	rBV	28038	21737	1.64%	0.195%
4	3.120	230	235	239	rBV	36618	26608	2.01%	0.239%
5	3.188	243	249	259	rBV2	579739	478941	36.14%	4.301%
6	3.664	341	348	350	rBV	19988	19460	1.47%	0.175%
7	3.933	400	404	421	rBV	395827	322896	24.37%	2.900%
8	4.274	471	475	492	rBV	1109798	840809	63.45%	7.552%
9	4.693	554	562	569	rBV5	20493	55359	4.18%	0.497%
10	4.765	573	577	588	rVB	367269	313162	23.63%	2.813%
11	5.351	695	699	705	rBV	98857	84862	6.40%	0.762%
12	5.438	713	717	729	rBV	1579565	1145683	86.45%	10.290%
13	6.342	899	905	915	rBV	159829	146751	11.07%	1.318%
14	6.482	930	934	941	rBV	987576	733176	55.32%	6.585%
15	7.140	1067	1071	1084	rVB	1684507	1325217	100.00%	11.902%
16	7.919	1223	1233	1244	rBV	767491	666386	50.29%	5.985%
17	8.155	1278	1282	1287	rBV	102515	74879	5.65%	0.673%
18	8.607	1372	1376	1385	rBV	1471676	1250399	94.35%	11.230%
19	9.170	1488	1493	1497	rBV2	48628	50581	3.82%	0.454%
20	9.920	1644	1649	1652	rBV	18686	17661	1.33%	0.159%
21	9.949	1652	1655	1662	rVV	28612	27110	2.05%	0.243%
22	10.194	1702	1706	1714	rBV	1194480	990269	74.73%	8.894%
23	11.189	1905	1913	1932	rBV3	50248	117304	8.85%	1.054%
24	11.310	1932	1938	1943	rVV	1118653	1173423	88.55%	10.539%
25	11.353	1943	1947	1957	rVB	100215	115934	8.75%	1.041%
26	12.493	2180	2184	2190	rBV5	17706	28788	2.17%	0.259%
27	13.339	2352	2360	2372	rBV	723256	1037840	78.31%	9.321%

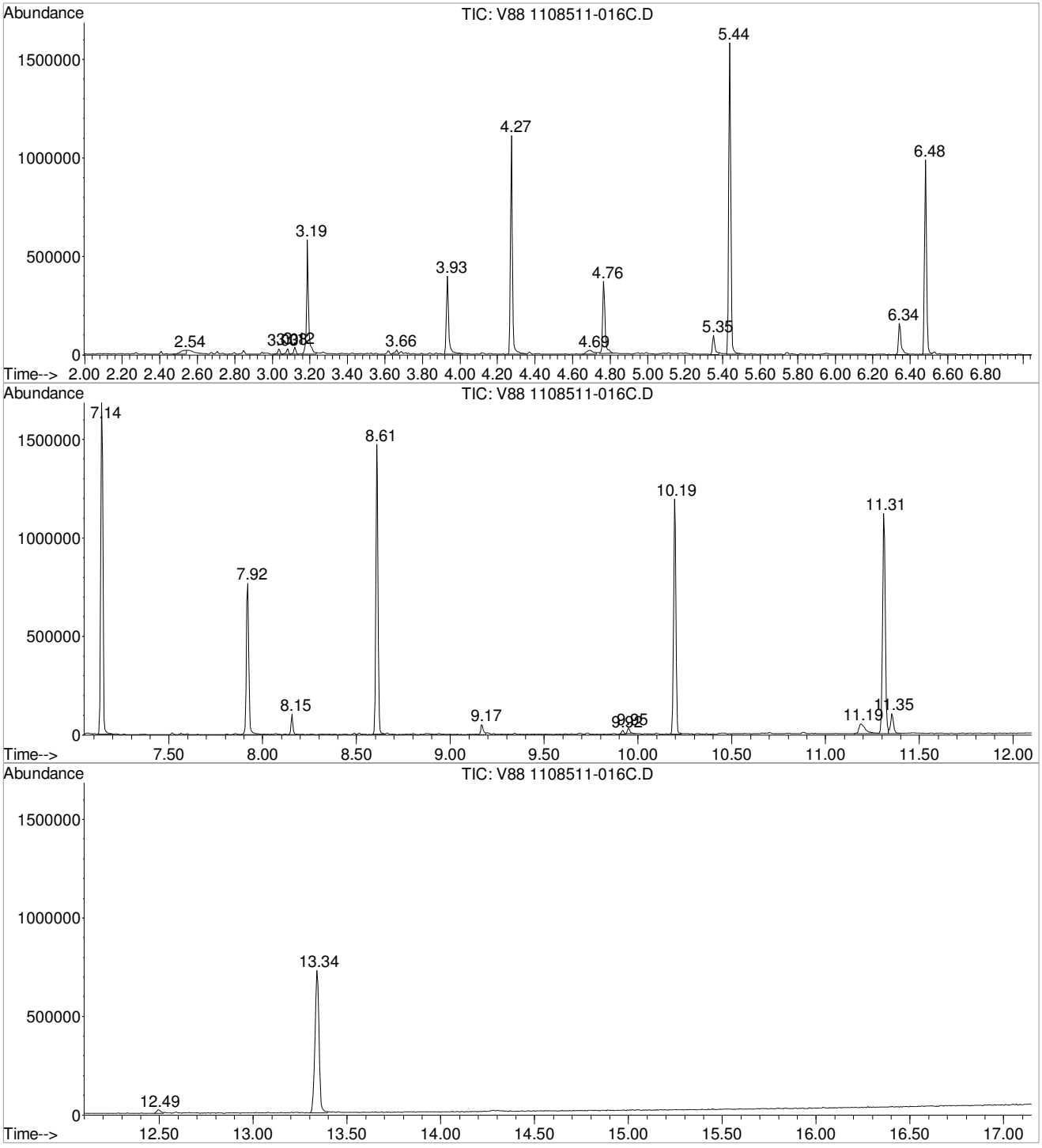
Sum of corrected areas: 11134317

LSC Report - Integrated Chromatogram

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V88 1108511-016C.D
Acq On : 1 Sep 2011 4:14 am
Operator : ALICIA HABERLE
Sample : 1108511-016C
Misc : SAMP
ALS Vial : 20 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V88 1108511-016C.D
Acq On : 1 Sep 2011 4:14 am
Operator : ALICIA HABERLE
Sample : 1108511-016C
Misc : SAMP
ALS Vial : 20 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

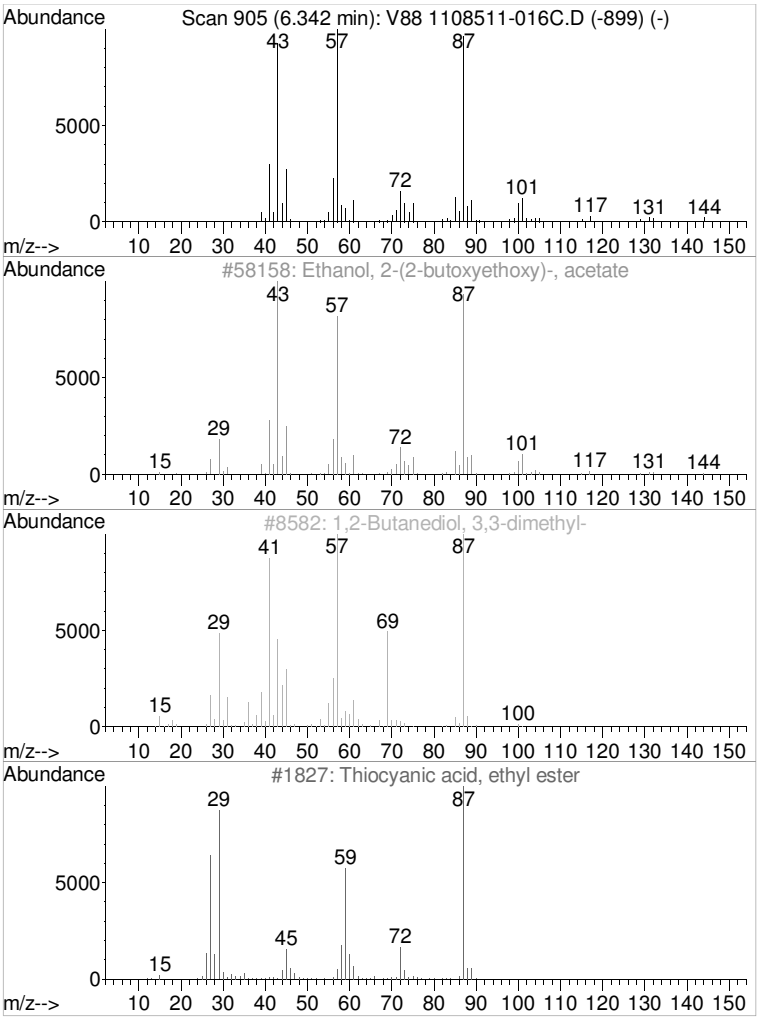
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

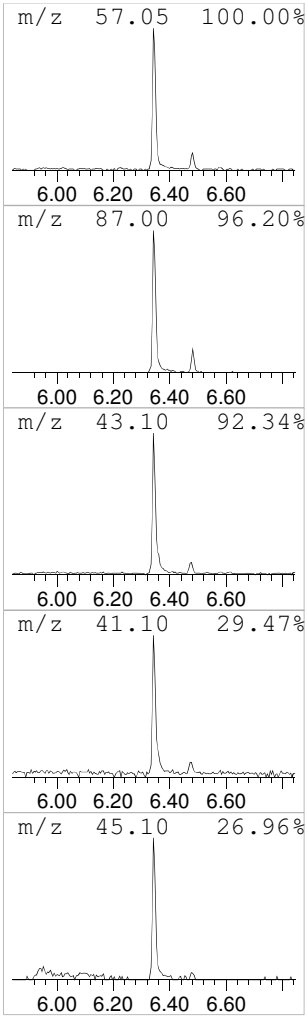
****

Peak Number 1 Ethanol, 2-(2-butoxyethoxy)... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.34	4.43 ug/l	146751	ISTD Acenaphthene-d10	7.14

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Ethanol, 2-(2-butoxyethoxy)-, ac...	204	C10H20O4	000124-17-4	91
2	1,2-Butanediol, 3,3-dimethyl-	118	C6H14O2	059562-82-2	53
3	Thiocyanic acid, ethyl ester	87	C3H5NS	000542-90-5	47
4	Pentanamide, N-ethyl-	129	C7H15NO	054007-33-9	43
5	Ethanol, 2,2'-[1,2-ethanediylbis...	234	C10H18O6	000111-21-7	38





Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V88 1108511-016C.D
Acq On : 1 Sep 2011 4:14 am
Operator : ALICIA HABERLE
Sample : 1108511-016C
Misc : SAMP
ALS Vial : 20 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Ethanol, 2-(2-but...	6.34	4.4	ug/l	146751	3	7.14	1325220	40.0

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V89 1108511-019C.D
Acq On : 1 Sep 2011 4:40 am
Operator : ALICIA HABERLE
Sample : 1108511-019C
Misc : SAMP
ALS Vial : 21 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

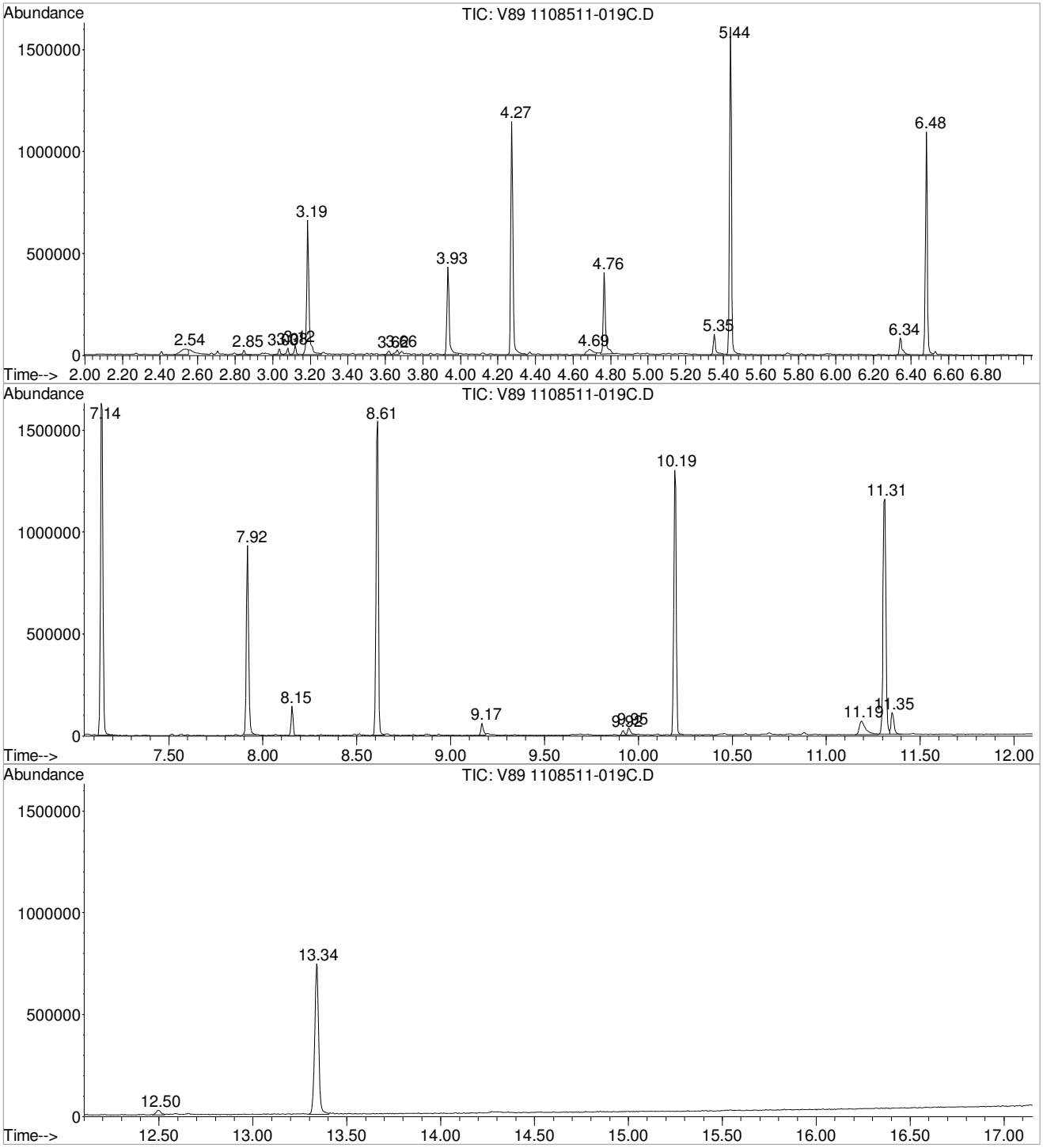
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.538	101	114	117	rBV5	27432	80346	5.83%	0.668%
2	2.845	170	178	186	rVB	20239	17587	1.28%	0.146%
3	3.033	211	217	222	rBV	29321	24088	1.75%	0.200%
4	3.081	222	227	230	rBV	33218	23740	1.72%	0.197%
5	3.119	230	235	239	rVB	43507	30748	2.23%	0.255%
6	3.187	243	249	264	rBV2	659224	548462	39.80%	4.557%
7	3.620	333	339	341	rBV	19577	15934	1.16%	0.132%
8	3.663	341	348	350	rBV	22908	22601	1.64%	0.188%
9	3.932	399	404	416	rBV	432167	359283	26.07%	2.985%
10	4.274	471	475	491	rVB	1145015	866775	62.90%	7.202%
11	4.687	555	561	569	rBV4	25405	64865	4.71%	0.539%
12	4.764	573	577	589	rVB	398023	360751	26.18%	2.998%
13	5.351	695	699	710	rBV	101190	91567	6.64%	0.761%
14	5.437	713	717	728	rBV	1607130	1184536	85.96%	9.843%
15	6.341	902	905	915	rBV2	81210	82537	5.99%	0.686%
16	6.481	930	934	942	rBV	1092401	815816	59.20%	6.779%
17	7.140	1067	1071	1085	rVB	1630467	1378049	100.00%	11.451%
18	7.919	1229	1233	1242	rVB	928806	728308	52.85%	6.052%
19	8.154	1278	1282	1286	rBV	144026	101239	7.35%	0.841%
20	8.611	1372	1377	1385	rBV	1542079	1322113	95.94%	10.986%
21	9.169	1488	1493	1497	rBV2	58670	60256	4.37%	0.501%
22	9.919	1646	1649	1652	rBV	23004	19910	1.44%	0.165%
23	9.948	1652	1655	1664	rVB2	32717	35537	2.58%	0.295%
24	10.193	1702	1706	1715	rBV	1300910	1114771	80.89%	9.263%
25	11.189	1906	1913	1932	rBV3	68260	153490	11.14%	1.275%
26	11.314	1932	1939	1944	rVV	1155330	1254582	91.04%	10.425%
27	11.352	1944	1947	1957	rVB	107110	119576	8.68%	0.994%
28	12.497	2178	2185	2192	rBV3	23929	38111	2.77%	0.317%
29	13.338	2352	2360	2374	rBV	739826	1118980	81.20%	9.298%

Sum of corrected areas: 12034558

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V89 1108511-019C.D
Acq On : 1 Sep 2011 4:40 am
Operator : ALICIA HABERLE
Sample : 1108511-019C
Misc : SAMP
ALS Vial : 21 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V89 1108511-019C.D
Acq On : 1 Sep 2011 4:40 am
Operator : ALICIA HABERLE
Sample : 1108511-019C
Misc : SAMP
ALS Vial : 21 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

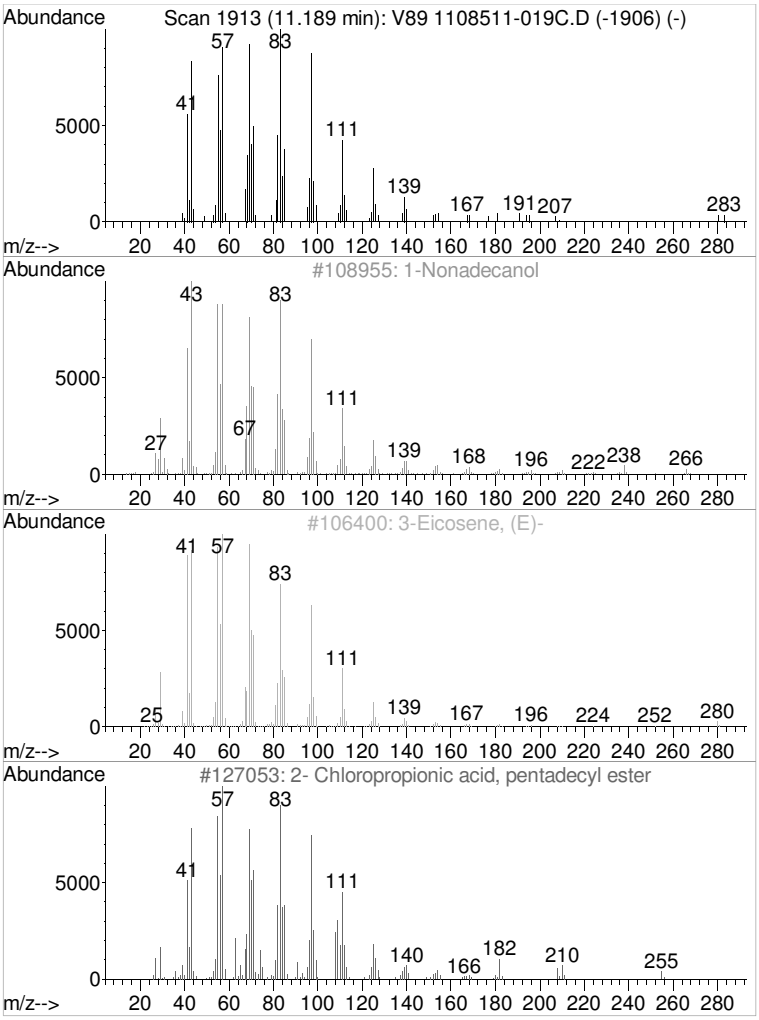
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

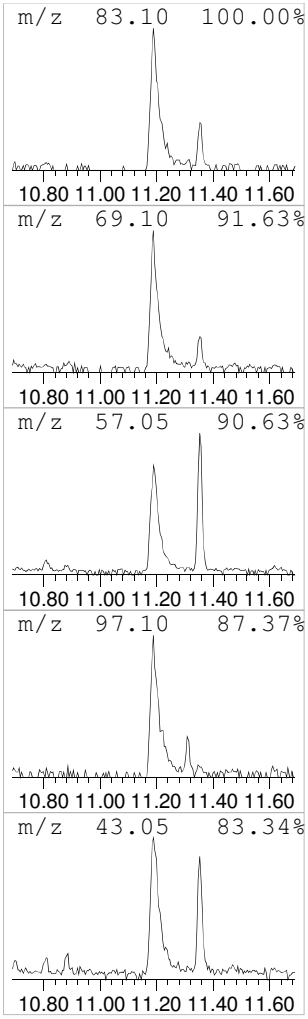
****

Peak Number 1 1-Nonadecanol Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.19	4.89 ug/l	153490	ISTD-Chrysene-d12	11.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Nonadecanol	284	C19H40O	001454-84-8	90
2	3-Eicosene, (E)-	280	C20H40	074685-33-9	90
3	2- Chloropropionic acid, pentade...	318	C18H35ClO2	1000292-44-1	87
4	2- Chloropropionic acid, hexadec...	332	C19H37ClO2	086711-81-1	86
5	Cyclohexadecane	224	C16H32	000295-65-8	86





Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V89 1108511-019C.D
Acq On : 1 Sep 2011 4:40 am
Operator : ALICIA HABERLE
Sample : 1108511-019C
Misc : SAMP
ALS Vial : 21 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
1-Nonadecanol	11.19	4.9	ug/l	153490	5	11.31	1254580	40.0

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V90 1108511-022C.D
Acq On : 1 Sep 2011 5:06 am
Operator : ALICIA HABERLE
Sample : 1108511-022C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

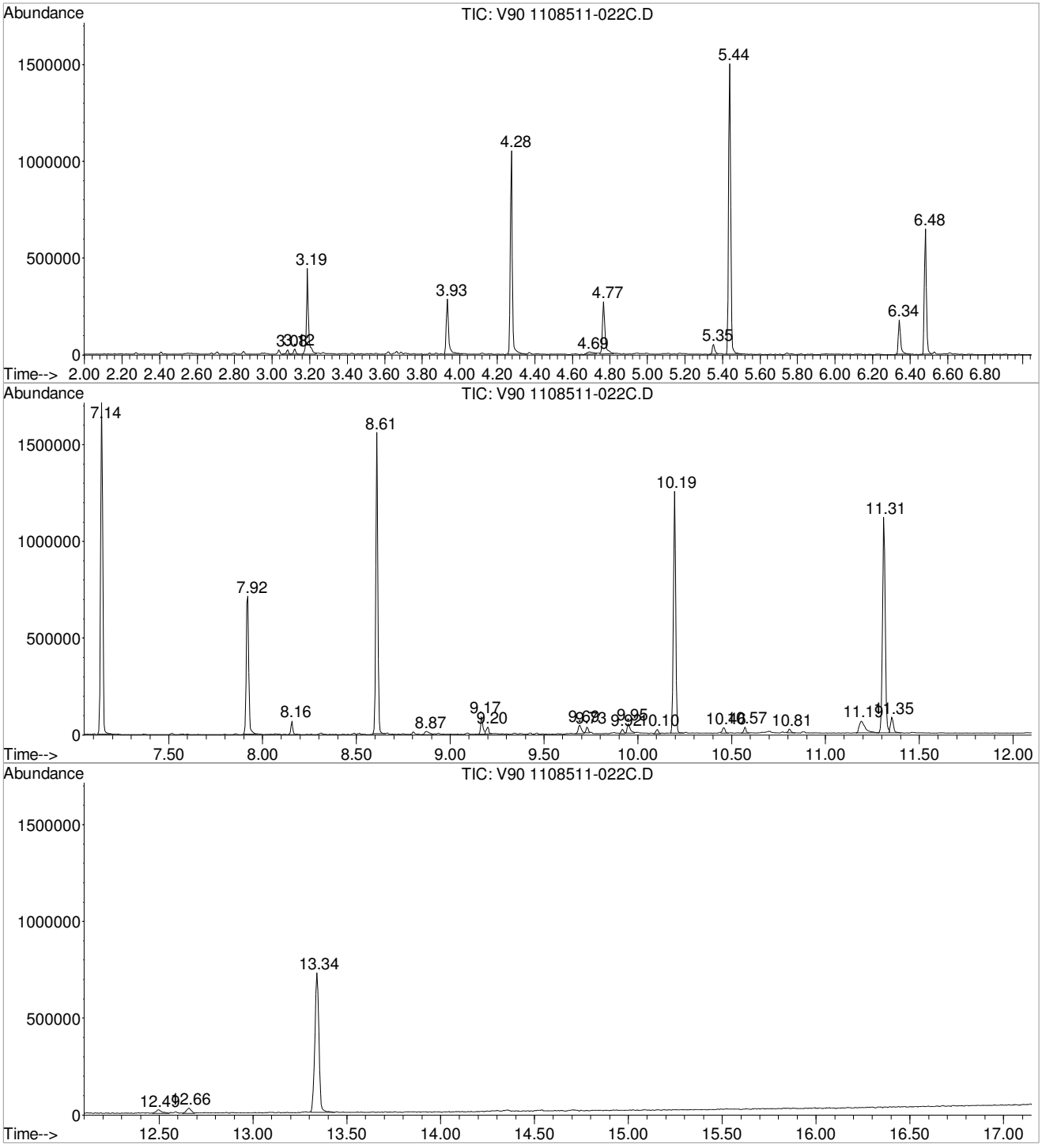
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	3.083	221	227	230	rVB	21873	16527	1.28%	0.154%
2	3.121	230	235	240	rBV	28445	21595	1.67%	0.201%
3	3.188	243	249	259	rBV2	442989	380169	29.37%	3.542%
4	3.934	400	404	421	rBV	286655	243811	18.84%	2.272%
5	4.275	471	475	492	rVB	1049024	813499	62.85%	7.580%
6	4.689	556	561	569	rBV4	13950	32289	2.49%	0.301%
7	4.766	573	577	588	rVB	267987	236553	18.28%	2.204%
8	5.352	695	699	704	rBV	53009	46792	3.62%	0.436%
9	5.439	713	717	730	rBV	1500124	1125576	86.96%	10.488%
10	6.343	901	905	917	rVB	178855	144014	11.13%	1.342%
11	6.482	930	934	941	rBV	647709	487728	37.68%	4.545%
12	7.141	1067	1071	1085	rVB	1715009	1294308	100.00%	12.060%
13	7.920	1228	1233	1243	rVB	712506	628160	48.53%	5.853%
14	8.156	1278	1282	1286	rBV	69975	51237	3.96%	0.477%
15	8.608	1372	1376	1385	rBV2	1559084	1268921	98.04%	11.824%
16	8.872	1426	1431	1439	rBV3	16683	28351	2.19%	0.264%
17	9.166	1488	1492	1496	rBV	91921	85334	6.59%	0.795%
18	9.199	1496	1499	1503	rVB	34698	31125	2.40%	0.290%
19	9.690	1596	1601	1606	rBV2	45006	53516	4.13%	0.499%
20	9.728	1606	1609	1612	rVV2	30182	24563	1.90%	0.229%
21	9.916	1645	1648	1651	rBV2	21722	18820	1.45%	0.175%
22	9.950	1651	1655	1662	rVV2	49696	52562	4.06%	0.490%
23	10.104	1683	1687	1690	rBV	22595	18367	1.42%	0.171%
24	10.195	1702	1706	1716	rBV	1249746	1028036	79.43%	9.579%
25	10.459	1757	1761	1765	rVB	29963	28616	2.21%	0.267%
26	10.570	1780	1784	1789	rBV	30013	24901	1.92%	0.232%
27	10.810	1830	1834	1839	rVB2	20040	19667	1.52%	0.183%
28	11.190	1907	1913	1932	rVB2	63736	137014	10.59%	1.277%
29	11.311	1932	1938	1944	rBV	1115086	1184184	91.49%	11.034%
30	11.354	1944	1947	1957	rVB	80916	88221	6.82%	0.822%
31	12.493	2178	2184	2196	rBV4	16092	33355	2.58%	0.311%
32	12.657	2211	2218	2225	rBV2	26012	41157	3.18%	0.384%
33	13.340	2353	2360	2379	rVB	720355	1042962	80.58%	9.718%

Sum of corrected areas: 10731930

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V90 1108511-022C.D
Acq On : 1 Sep 2011 5:06 am
Operator : ALICIA HABERLE
Sample : 1108511-022C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V90 1108511-022C.D
Acq On : 1 Sep 2011 5:06 am
Operator : ALICIA HABERLE
Sample : 1108511-022C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

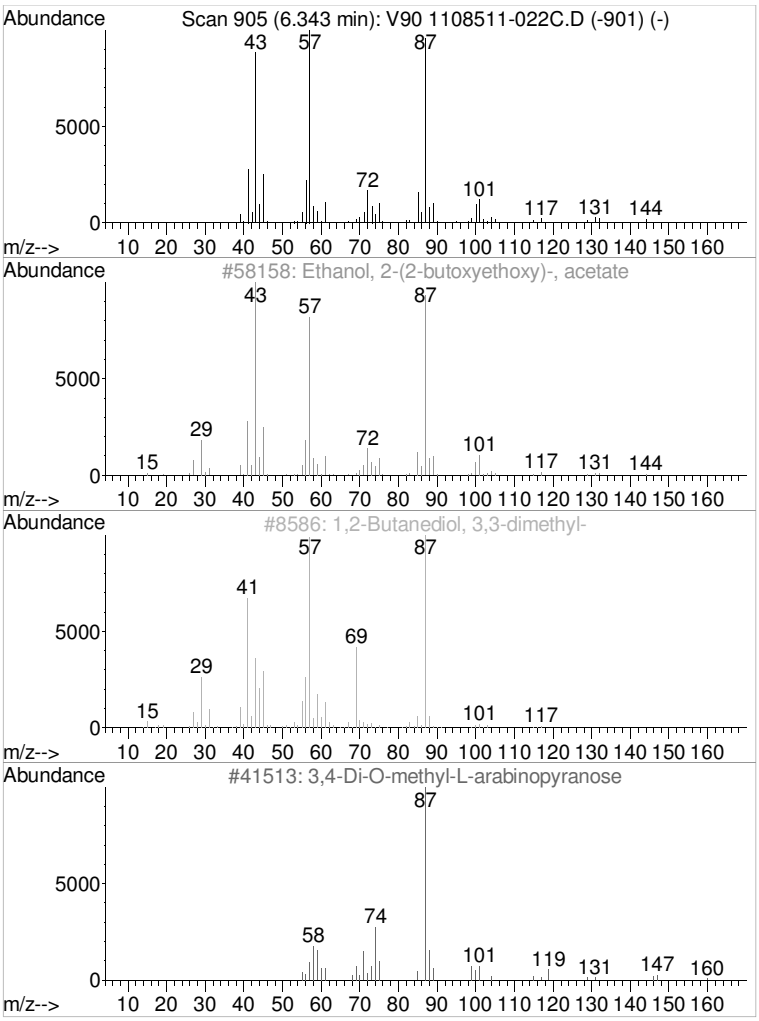
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

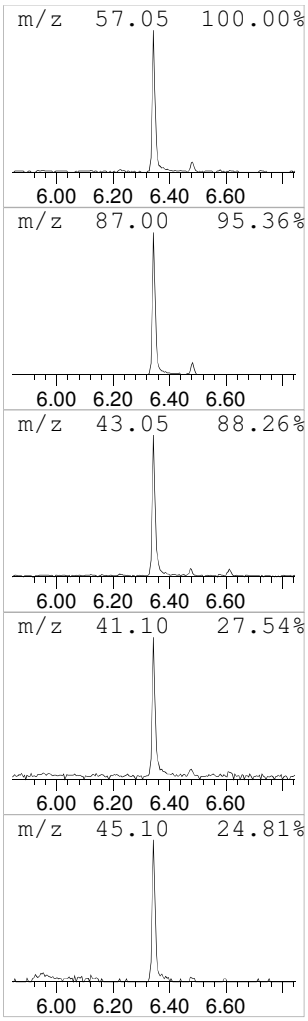
****

Peak Number 1 Ethanol, 2-(2-butoxyethoxy)... Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.34	4.45 ug/l	144014	ISTD Acenaphthene-d10	7.14

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Ethanol, 2-(2-butoxyethoxy)-, ac...	204	C10H20O4	000124-17-4	91
2	1,2-Butanediol, 3,3-dimethyl-	118	C6H14O2	059562-82-2	50
3	3,4-Di-O-methyl-L-arabinopyranose	178	C7H14O5	086049-20-9	42
4	Pentanamide, N-ethyl-	129	C7H15NO	054007-33-9	38
5	3-Hexanol, 2,3-dimethyl-	130	C8H18O	004166-46-5	38





Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V90 1108511-022C.D
Acq On : 1 Sep 2011 5:06 am
Operator : ALICIA HABERLE
Sample : 1108511-022C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

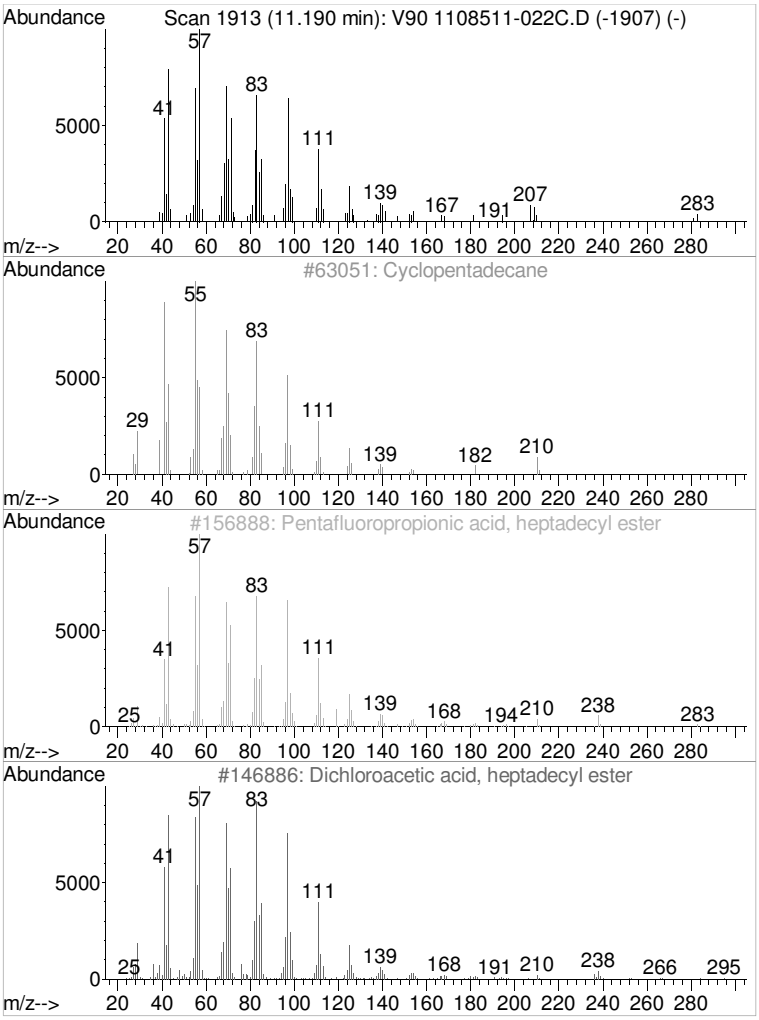
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

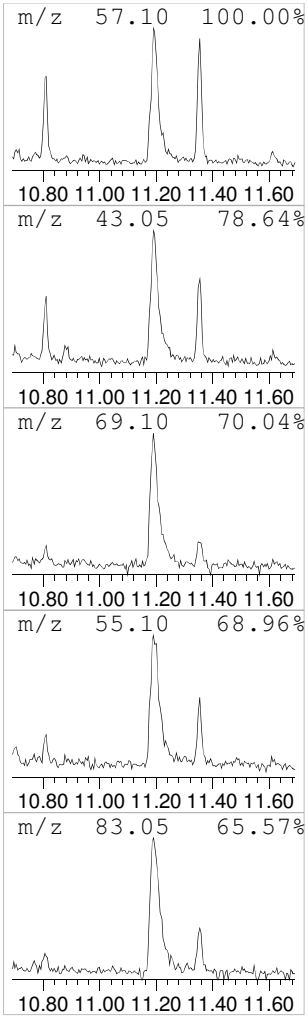
****

Peak Number 2 Cyclopentadecane Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.19	4.63 ug/l	137014	ISTD-Chrysene-d12	11.31

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentadecane	210	C15H30	000295-48-7	97
2	Pentafluoropropionic acid, hepta...	402	C20H35F5O2	1000283-04-2	95
3	Dichloroacetic acid, heptadecyl ...	366	C19H36Cl2O2	1000282-98-2	91
4	1-Hexadecanesulfonyl chloride	324	C16H33ClO2S	038775-38-1	91
5	2- Chloropropionic acid, hexadec...	332	C19H37ClO2	086711-81-1	91





Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\AUG11-B\31AUG11\
Data File : V90 1108511-022C.D
Acq On : 1 Sep 2011 5:06 am
Operator : ALICIA HABERLE
Sample : 1108511-022C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Ethanol, 2-(2-but...	6.34	4.5	ug/l	144014	3	7.14	1294310	40.0
Cyclopentadecane	11.19	4.6	ug/l	137014	5	11.31	1184180	40.0

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W15 1108511-002C.D
Acq On : 1 Sep 2011 7:55 pm
Operator : ALICIA HABERLE
Sample : 1108511-002C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.412	85	88	92	rVB	34677	21430	1.52%	0.128%
2	2.547	108	116	124	rBV5	22215	54411	3.86%	0.325%
3	2.710	145	150	154	rVB3	32383	26323	1.87%	0.157%
4	2.955	193	201	204	rBV	1765892	1410271	100.00%	8.435%
5	3.042	213	219	222	rBV	46857	36549	2.59%	0.219%
6	3.085	222	228	232	rVB	46382	33393	2.37%	0.200%
7	3.124	232	236	240	rBV	64657	47149	3.34%	0.282%
8	3.196	245	251	265	rBV	1158604	915172	64.89%	5.474%
9	3.278	265	268	273	rVB	31945	25613	1.82%	0.153%
10	3.691	351	354	357	rVB	26493	19252	1.37%	0.115%
11	3.903	394	398	403	rBV3	25307	33189	2.35%	0.199%
12	3.946	403	407	421	rVV	969391	854509	60.59%	5.111%
13	4.182	453	456	461	rBV	60802	52169	3.70%	0.312%
14	4.278	472	476	492	rBV	1134775	863332	61.22%	5.164%
15	4.494	518	521	526	rBV	23222	23133	1.64%	0.138%
16	4.773	569	579	591	rBV	442637	447352	31.72%	2.676%
17	4.845	591	594	598	rVB2	21342	20143	1.43%	0.120%
18	5.441	714	718	730	rBV	1438409	1160564	82.29%	6.942%
19	6.485	931	935	943	rBV	1250234	1017473	72.15%	6.086%
20	6.629	961	965	974	rVB	50108	60605	4.30%	0.363%
21	6.749	984	990	1001	rBV	32426	65392	4.64%	0.391%
22	7.149	1068	1073	1087	rVB	1645795	1361211	96.52%	8.142%
23	7.432	1127	1132	1136	rBV	26386	29337	2.08%	0.175%
24	7.577	1158	1162	1165	rBV4	18268	21705	1.54%	0.130%
25	7.860	1215	1221	1225	rBV5	14524	21998	1.56%	0.132%
26	7.928	1225	1235	1243	rVV	808616	727453	51.58%	4.351%
27	8.072	1258	1265	1269	rBV7	15057	22446	1.59%	0.134%
28	8.158	1279	1283	1287	rBV3	43493	39614	2.81%	0.237%
29	8.303	1308	1313	1319	rBV3	99019	145181	10.29%	0.868%
30	8.481	1346	1350	1352	rBV2	39291	32335	2.29%	0.193%
31	8.615	1371	1378	1387	rBV2	1430400	1245274	88.30%	7.448%
32	8.702	1392	1396	1401	rVB2	43204	39645	2.81%	0.237%
33	8.865	1426	1430	1438	rBV5	30087	46823	3.32%	0.280%
34	9.101	1475	1479	1483	rBV3	37979	51230	3.63%	0.306%
35	9.139	1483	1487	1491	rVV2	99507	89565	6.35%	0.536%
36	9.178	1491	1495	1503	rVV2	434976	424916	30.13%	2.542%
37	9.351	1527	1531	1537	rBV3	50324	70453	5.00%	0.421%
38	9.736	1608	1611	1613	rBV	29923	22200	1.57%	0.133%

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W15 1108511-002C.D
Acq On : 1 Sep 2011 7:55 pm
Operator : ALICIA HABERLE
Sample : 1108511-002C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

39	9.818	1625	1628	1633	rBV2	17630	20007	1.42%	0.120%
40	9.856	1633	1636	1638	rBV2	61287	58287	4.13%	0.349%
41	9.880	1638	1641	1648	rVV5	79417	155516	11.03%	0.930%
42	9.923	1648	1650	1654	rVV3	31652	33231	2.36%	0.199%
43	9.957	1654	1657	1665	rVV2	114335	125917	8.93%	0.753%
44	10.053	1672	1677	1682	rBV2	456626	367920	26.09%	2.201%
45	10.202	1704	1708	1715	rBV	1014222	820919	58.21%	4.910%
46	10.443	1754	1758	1760	rBV4	29782	36153	2.56%	0.216%
47	10.462	1760	1762	1765	rVB	30471	23117	1.64%	0.138%
48	10.673	1802	1806	1810	rBV3	44794	70172	4.98%	0.420%
49	10.707	1810	1813	1820	rVB	68116	67322	4.77%	0.403%
50	10.765	1821	1825	1830	rVV	304441	280387	19.88%	1.677%
51	11.193	1910	1914	1923	rVB2	161128	244462	17.33%	1.462%
52	11.323	1936	1941	1946	rBV	693492	746199	52.91%	4.463%
53	11.477	1969	1973	1978	rBV6	44840	55021	3.90%	0.329%
54	12.078	2093	2098	2114	rVB2	221037	371199	26.32%	2.220%
55	12.506	2184	2187	2193	rVB2	87548	102176	7.25%	0.611%
56	12.785	2241	2245	2252	rVB3	85057	122608	8.69%	0.733%
57	13.092	2303	2309	2313	rBV	408906	637982	45.24%	3.816%
58	13.357	2360	2364	2371	rVB	278735	389648	27.63%	2.331%
59	14.227	2539	2545	2552	rBV	244389	411405	29.17%	2.461%

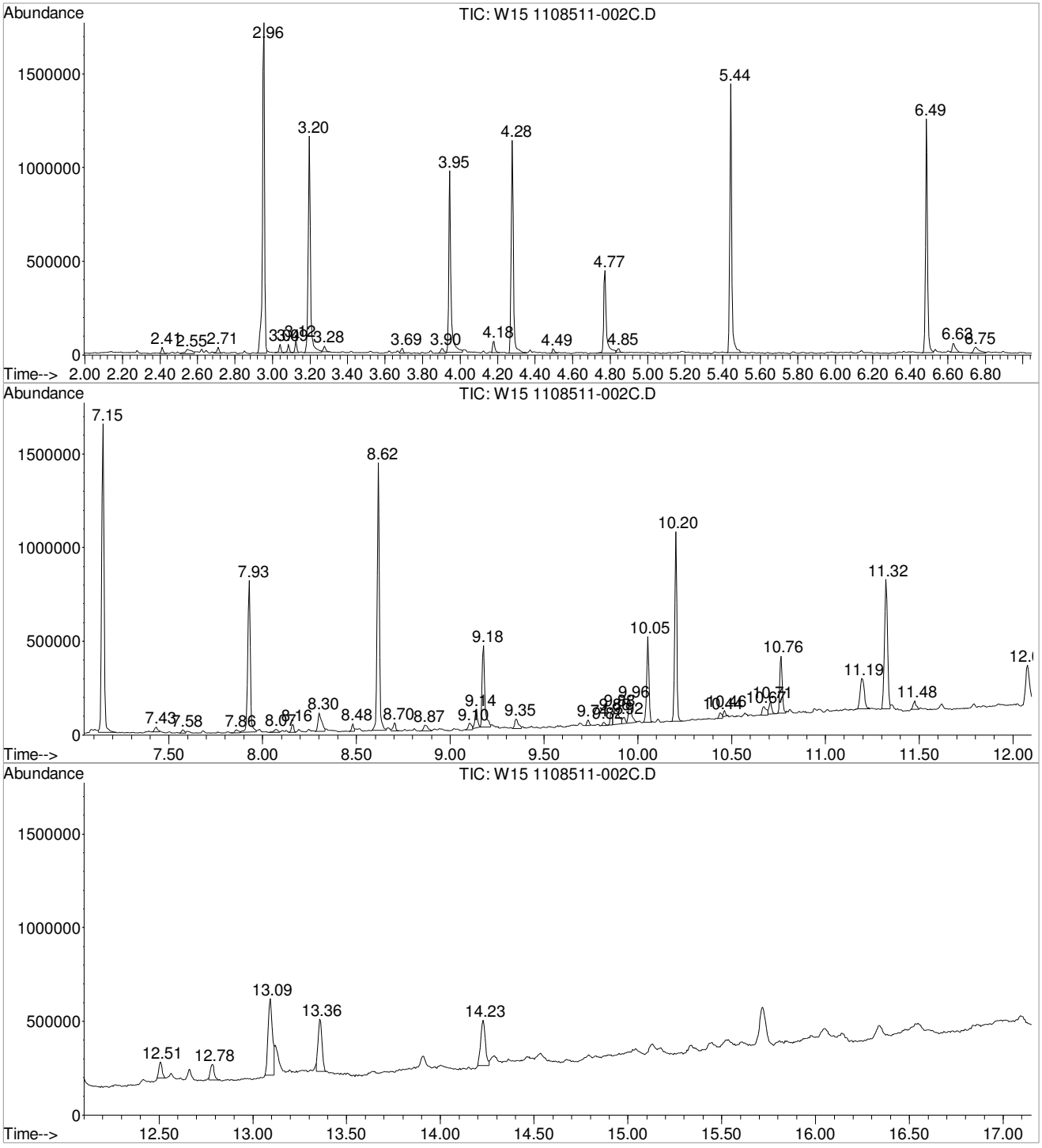
Sum of corrected areas: 16718458

LSC Report - Integrated Chromatogram

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W15 1108511-002C.D
Acq On : 1 Sep 2011 7:55 pm
Operator : ALICIA HABERLE
Sample : 1108511-002C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W15 1108511-002C.D
Acq On : 1 Sep 2011 7:55 pm
Operator : ALICIA HABERLE
Sample : 1108511-002C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

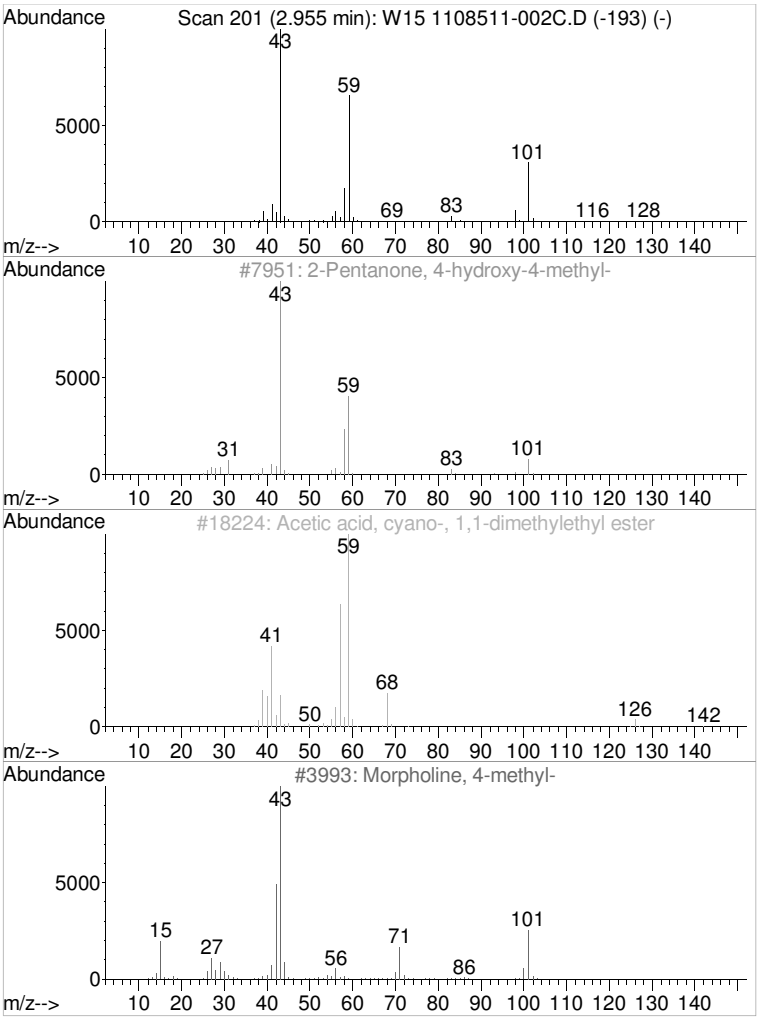
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

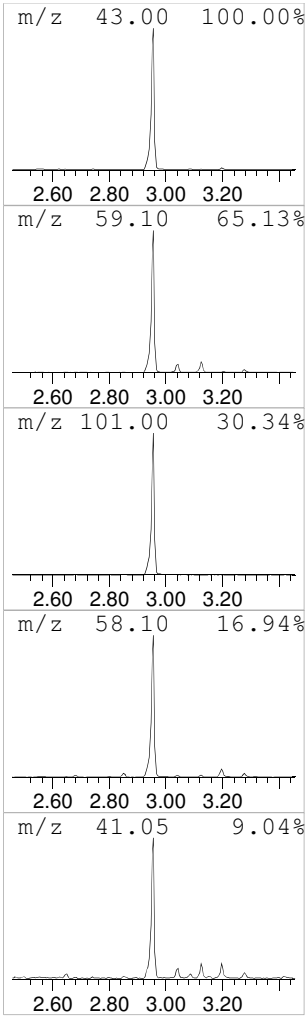
****

Peak Number 1 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.96	65.34 ug/l	1410270	ISTD 1,4-Dichlorobenzene-d4	4.28

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	56
2	Acetic acid, cyano-, 1,1-dimethy...	141	C7H11NO2	001116-98-9	17
3	Morpholine, 4-methyl-	101	C5H11NO	000109-02-4	9
4	5-Hexen-2-one	98	C6H10O	000109-49-9	9
5	(+-)-4-Amino-4,5-dihydro-2(3H)-f...	101	C4H7NO2	016504-58-8	9





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W15 1108511-002C.D
Acq On : 1 Sep 2011 7:55 pm
Operator : ALICIA HABERLE
Sample : 1108511-002C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

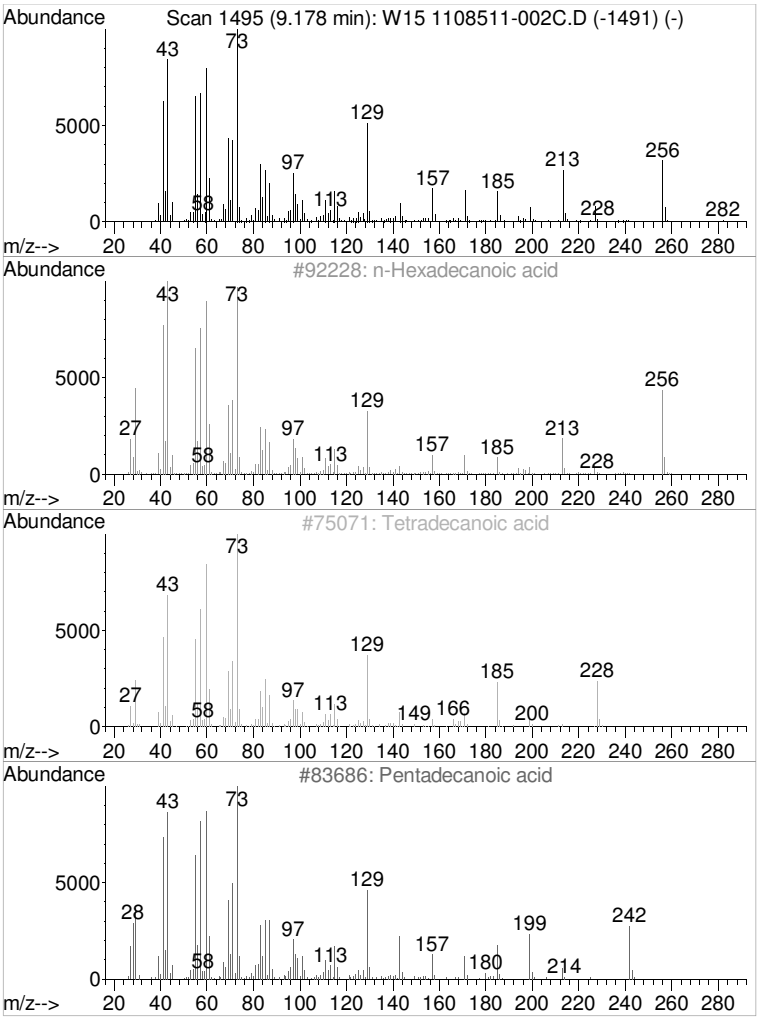
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

****

Peak Number 2 n-Hexadecanoic acid Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.18	13.65 ug/l	424916	ISTD-Phenanthrene-d10	8.62

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	99
2	Tetradecanoic acid	228	C14H28O2	000544-63-8	90
3	Pentadecanoic acid	242	C15H30O2	001002-84-2	81
4	Undecanoic acid	186	C11H22O2	000112-37-8	62
5	n-Decanoic acid	172	C10H20O2	000334-48-5	53



Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W15 1108511-002C.D
Acq On : 1 Sep 2011 7:55 pm
Operator : ALICIA HABERLE
Sample : 1108511-002C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

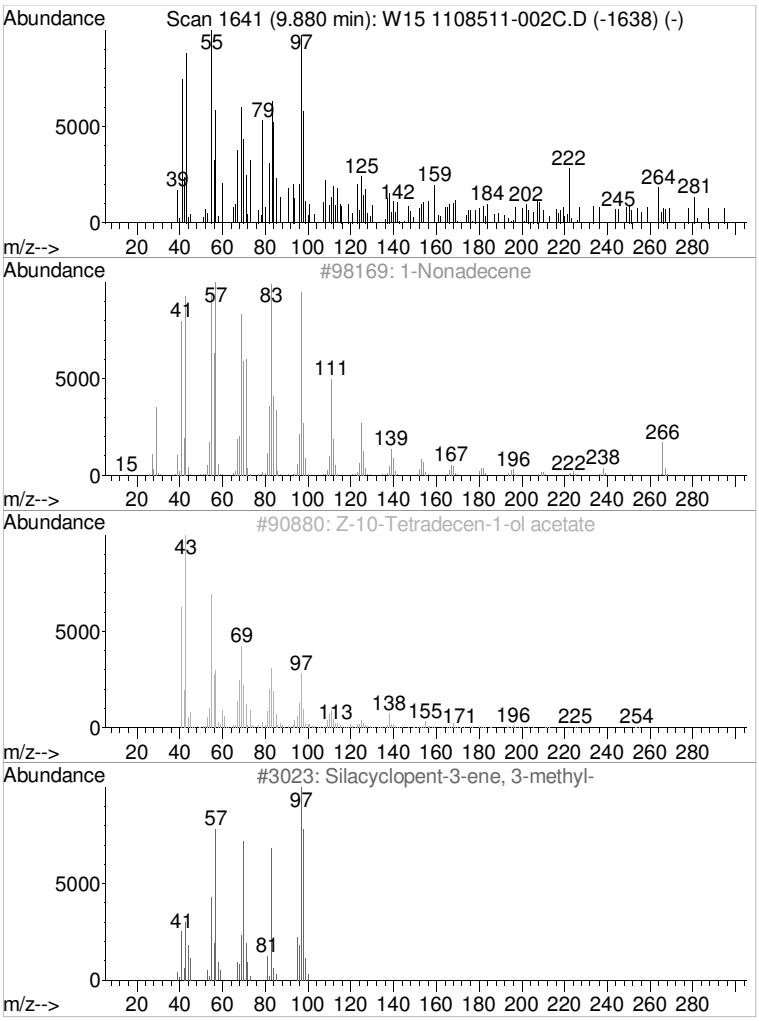
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

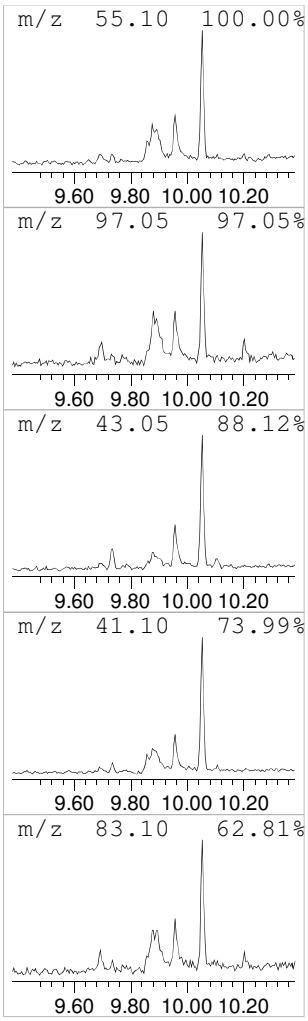
****

Peak Number 3 1-Nonadecene Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.88	5.00 ug/l	155516	ISTD-Phenanthrene-d10	8.62

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Nonadecene	266	C19H38	018435-45-5	58
2	Z-10-Tetradecen-1-ol acetate	254	C16H30O2	1000130-99-3	55
3	Silacyclopent-3-ene, 3-methyl-	98	C5H10Si	054077-65-5	43
4	E-11-Tetradecenoic acid	226	C14H26O2	1000130-96-2	42
5	Cyclopentadecane	210	C15H30	000295-48-7	38





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W15 1108511-002C.D
Acq On : 1 Sep 2011 7:55 pm
Operator : ALICIA HABERLE
Sample : 1108511-002C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

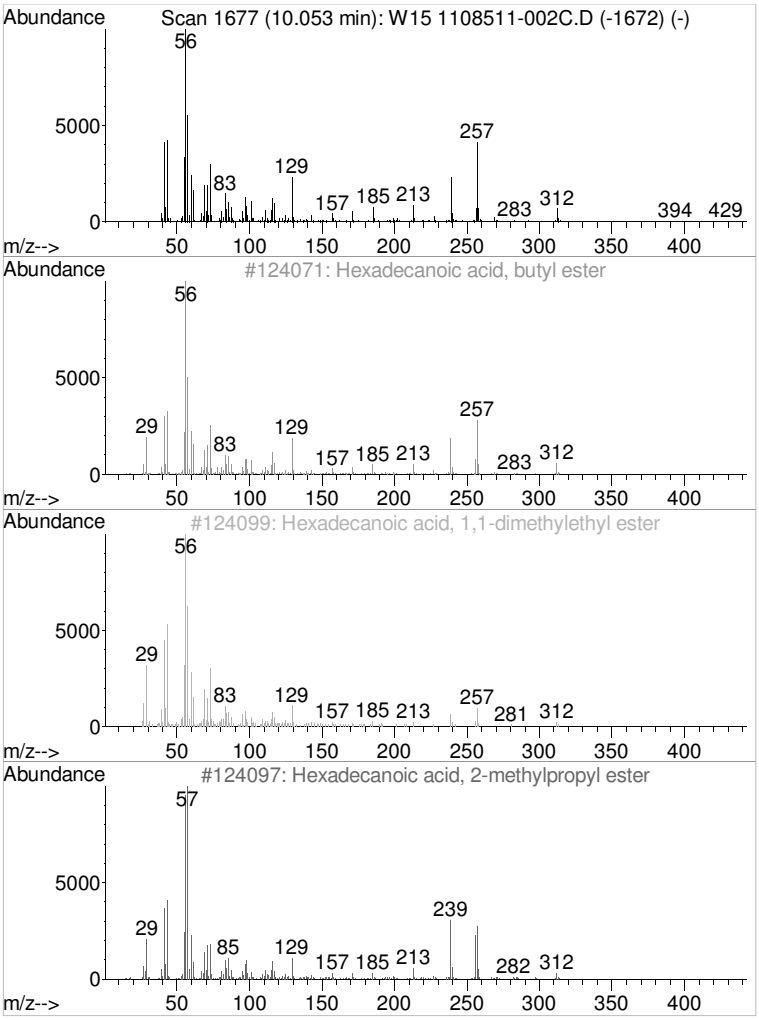
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

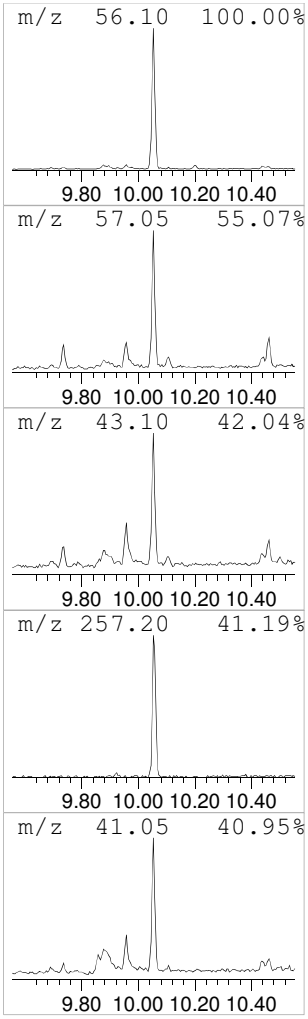
****

Peak Number 4 Hexadecanoic acid, butyl ester Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.05	19.72 ug/l	367920	ISTD-Chrysene-d12	11.32

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexadecanoic acid, butyl ester	312	C20H40O2	000111-06-8	99
2	Hexadecanoic acid, 1,1-dimethyle...	312	C20H40O2	031158-91-5	91
3	Hexadecanoic acid, 2-methylpropy...	312	C20H40O2	000110-34-9	89
4	Nipecotic acid	129	C6H11NO2	000498-95-3	38
5	2,2-Dimethyl-1,3-butanediol	118	C6H14O2	000076-35-7	25





Library Search Compound Report

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Data File : W15 1108511-002C.D
Acq On : 1 Sep 2011 7:55 pm
Operator : ALICIA HABERLE
Sample : 1108511-002C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

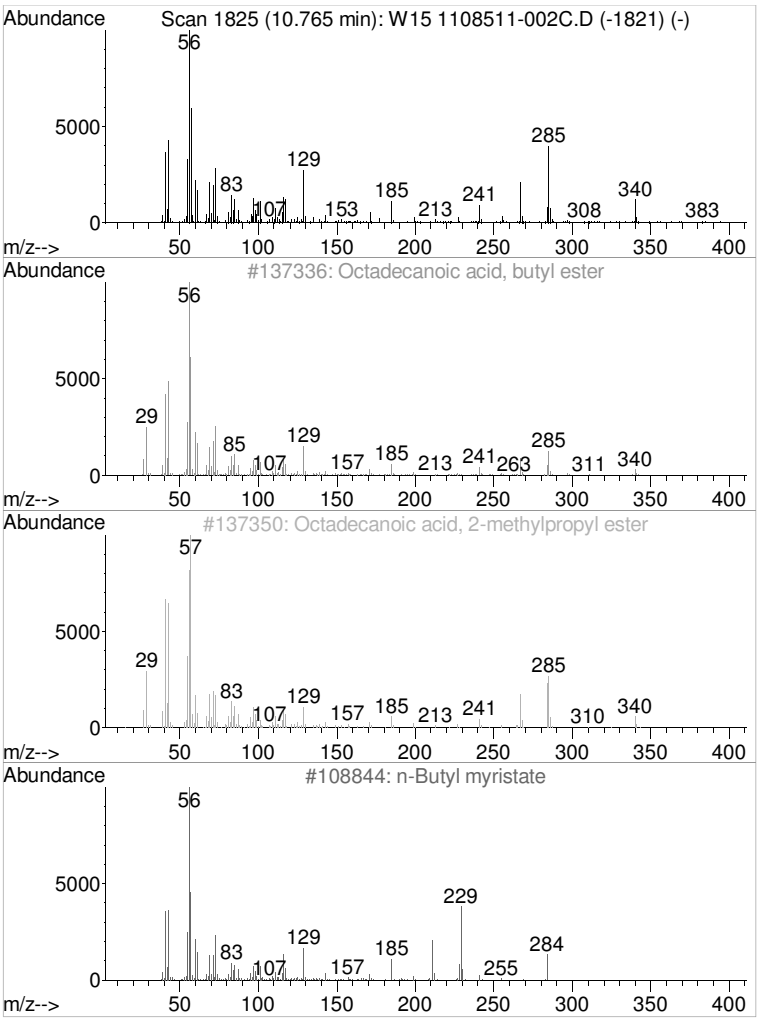
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

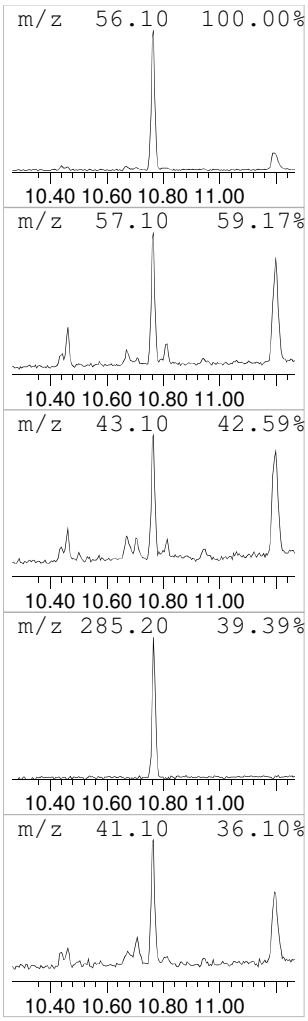
****

Peak Number 5 Octadecanoic acid, butyl ester Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.76	15.03 ug/l	280387	ISTD-Chrysene-d12	11.32

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	96
2	Octadecanoic acid, 2-methylpropy...	340	C22H44O2	000646-13-9	93
3	n-Butyl myristate	284	C18H36O2	000110-36-1	53
4	Pentanal, 3-methyl-	100	C6H12O	015877-57-3	25
5	2-Methyl-1-octadecene	266	C19H38	061868-20-0	22





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W15 1108511-002C.D
Acq On : 1 Sep 2011 7:55 pm
Operator : ALICIA HABERLE
Sample : 1108511-002C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

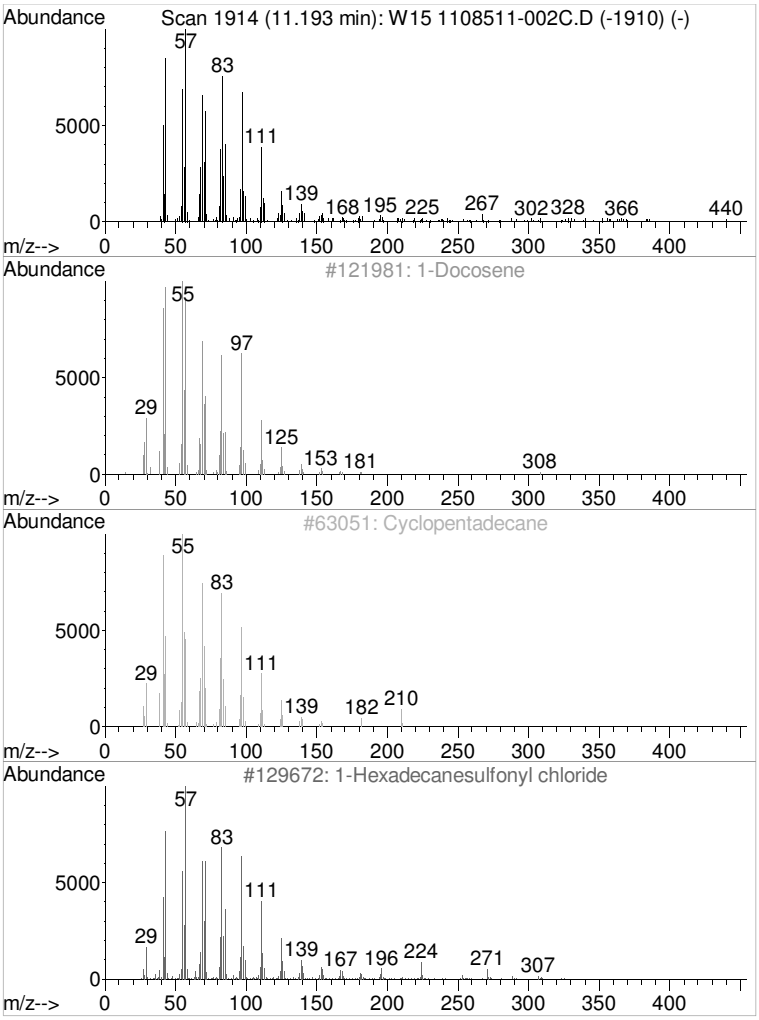
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

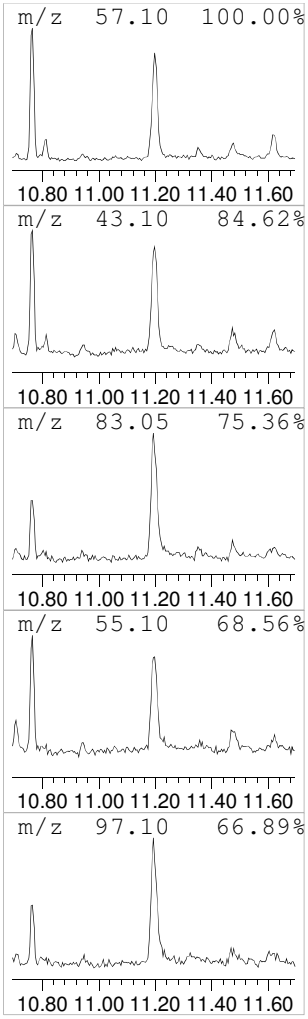
****

Peak Number 6 1-Docosene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.19	13.10 ug/l	244462	ISTD-Chrysene-d12	11.32

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Docosene	308	C22H44	001599-67-3	94
2	Cyclopentadecane	210	C15H30	000295-48-7	91
3	1-Hexadecanesulfonyl chloride	324	C16H33ClO2S	038775-38-1	91
4	Pentafluoropropionic acid, hepta...	402	C20H35F5O2	1000283-04-2	91
5	17-Pentatriacontene	491	C35H70	006971-40-0	91





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W15 1108511-002C.D
Acq On : 1 Sep 2011 7:55 pm
Operator : ALICIA HABERLE
Sample : 1108511-002C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

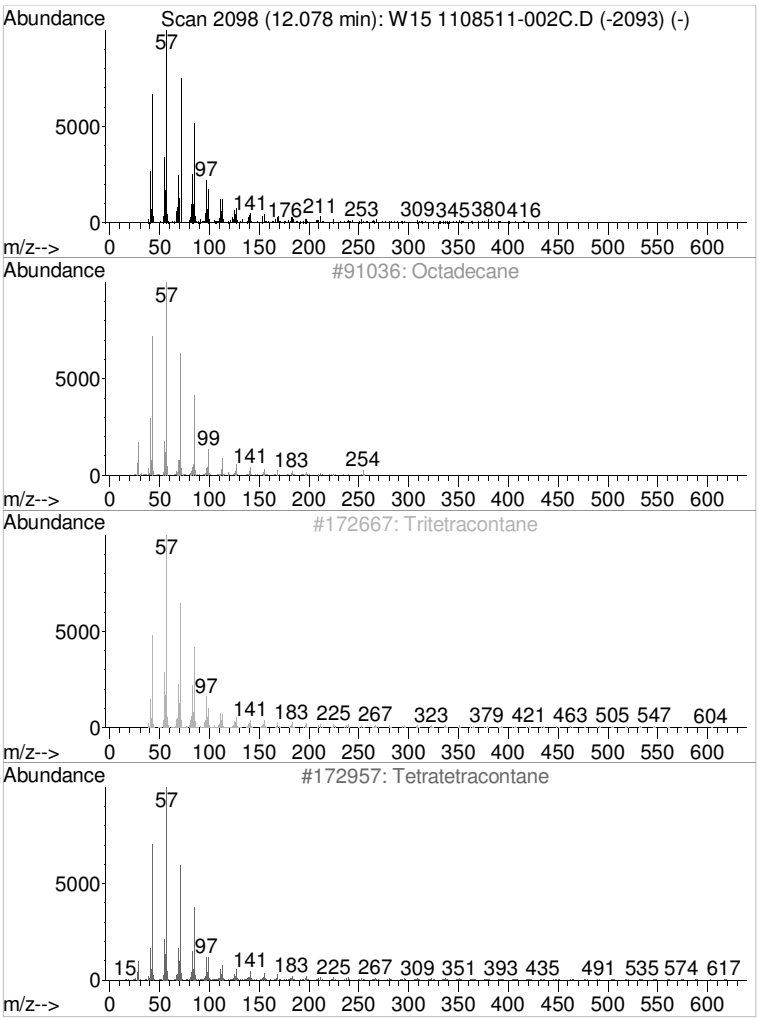
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

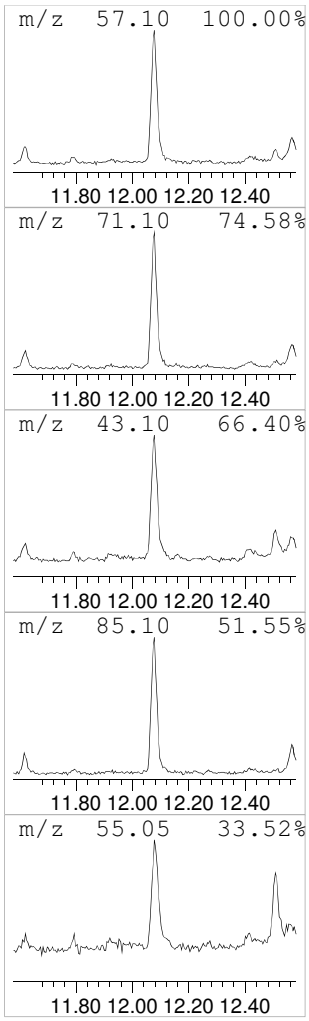
****

Peak Number 7 Octadecane Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.08	19.90 ug/l	371199	ISTD-Chrysene-d12	11.32

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecane	254	C18H38	000593-45-3	95
2	Tritetracontane	605	C43H88	007098-21-7	91
3	Tetratetracontane	619	C44H90	007098-22-8	90
4	Dodecane, 2-methyl-	184	C13H28	001560-97-0	81
5	Eicosane	282	C20H42	000112-95-8	81





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W15 1108511-002C.D
Acq On : 1 Sep 2011 7:55 pm
Operator : ALICIA HABERLE
Sample : 1108511-002C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

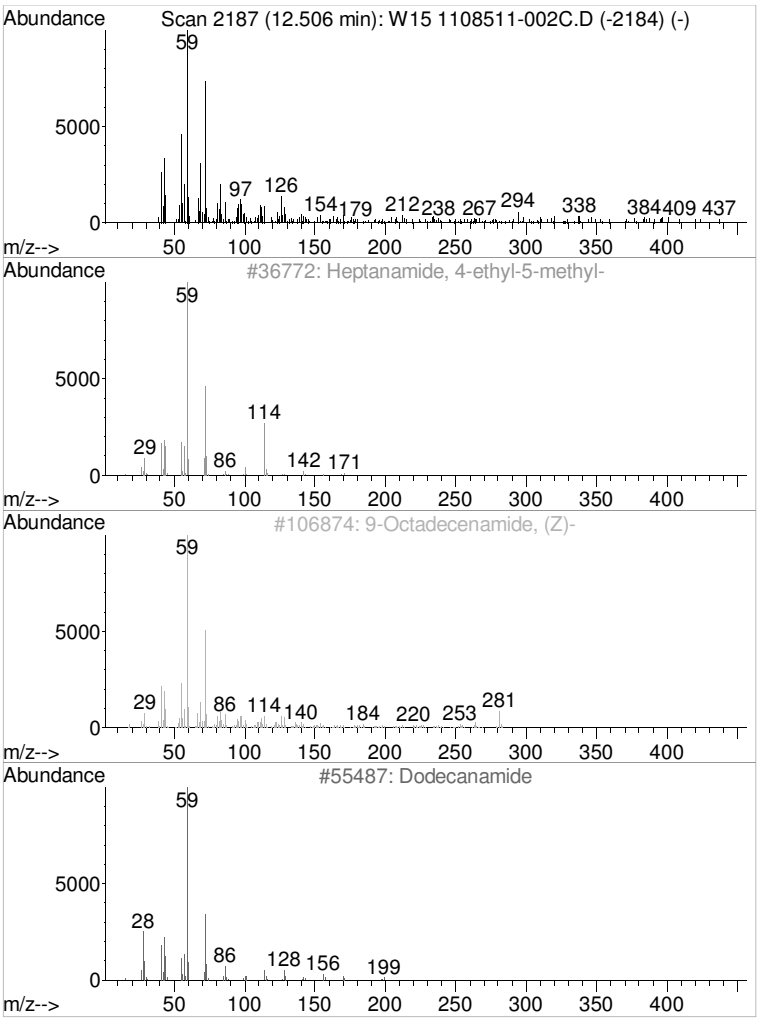
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

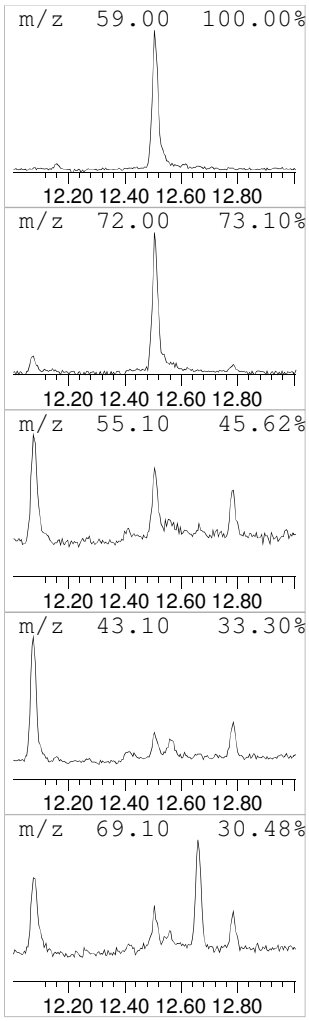
****

Peak Number 8 Heptanamide, 4-ethyl-5-methyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.51	10.49 ug/l	102176	ISTD-Perylene-d12	13.36

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptanamide, 4-ethyl-5-methyl-	171	C10H21NO	054789-40-1	80
2	9-Octadecenamide, (Z)-	281	C18H35NO	000301-02-0	80
3	Dodecanamide	199	C12H25NO	001120-16-7	58
4	Hexadecanamide	255	C16H33NO	000629-54-9	53
5	Acetic acid, cyanohydroxyimino-,...	128	C4H4N2O3	061295-92-9	46





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Data File : W15 1108511-002C.D
Acq On : 1 Sep 2011 7:55 pm
Operator : ALICIA HABERLE
Sample : 1108511-002C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

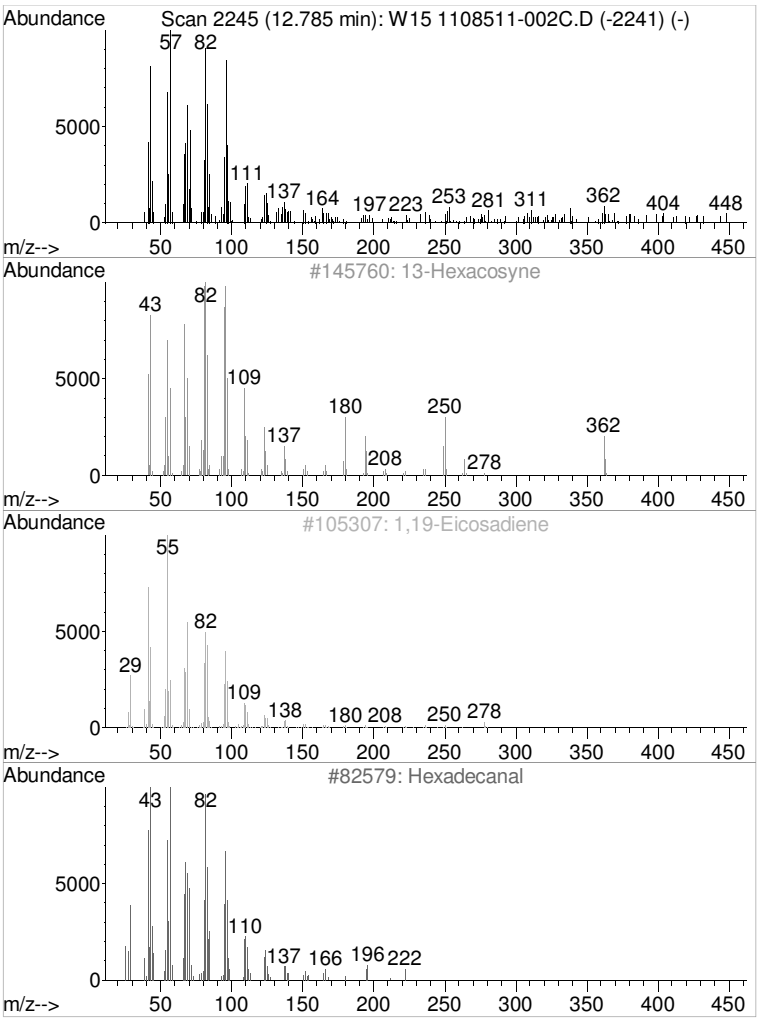
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

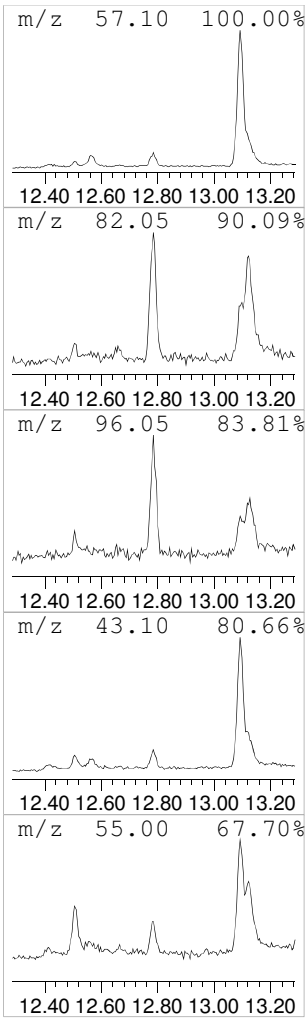
****

Peak Number 9 13-Hexacosyne Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.78	12.59 ug/l	122608	ISTD-Perylene-d12	13.36

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	13-Hexacosyne	362	C26H50	034291-68-4	90
2	1,19-Eicosadiene	278	C20H38	014811-95-1	83
3	Hexadecanal	240	C16H32O	000629-80-1	83
4	E-15-Octadecacen-1-ol acetate	310	C20H38O2	1000130-94-1	70
5	Octadecanal	268	C18H36O	000638-66-4	70





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W15 1108511-002C.D
Acq On : 1 Sep 2011 7:55 pm
Operator : ALICIA HABERLE
Sample : 1108511-002C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

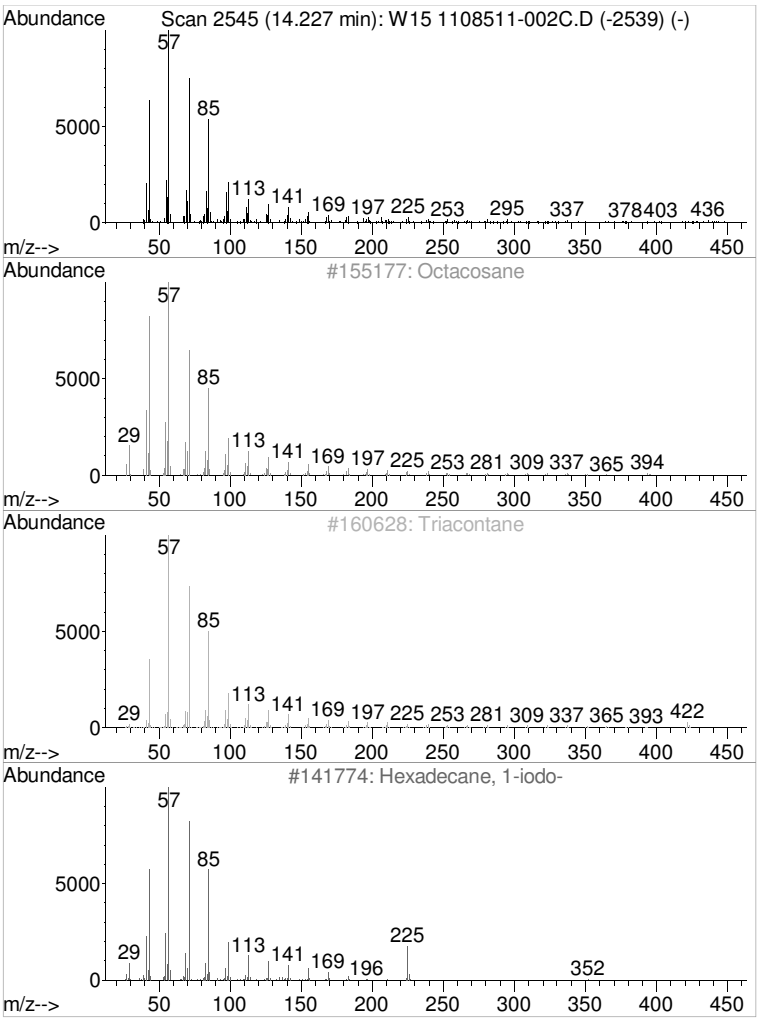
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

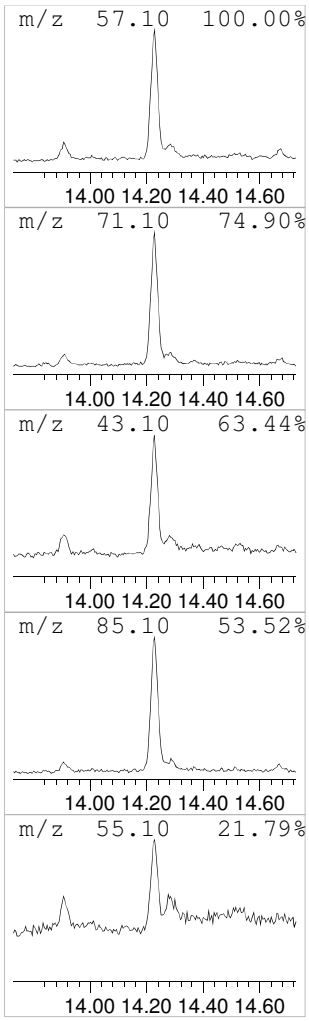
****

Peak Number 10 Octacosane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
14.23	42.23 ug/l	411405	ISTD-Perylene-d12	13.36

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octacosane	394	C28H58	000630-02-4	99
2	Triacontane	422	C30H62	000638-68-6	97
3	Hexadecane, 1-iodo-	352	C16H33I	000544-77-4	96
4	Hexadecane, 2,6,10,14-tetramethyl-	282	C20H42	000638-36-8	94
5	Tetratriacontane	479	C34H70	014167-59-0	94





Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W15 1108511-002C.D
Acq On : 1 Sep 2011 7:55 pm
Operator : ALICIA HABERLE
Sample : 1108511-002C
Misc : SAMP
ALS Vial : 22 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
2-Pentanone, 4-hy...	2.96	65.3	ug/l	1410270	1	4.28	863332	40.0
n-Hexadecanoic acid	9.18	13.6	ug/l	424916	4	8.62	1245270	40.0
1-Nonadecene	9.88	5.0	ug/l	155516	4	8.62	1245270	40.0
Hexadecanoic acid...	10.05	19.7	ug/l	367920	5	11.32	746199	40.0
Octadecanoic acid...	10.76	15.0	ug/l	280387	5	11.32	746199	40.0
1-Docosene	11.19	13.1	ug/l	244462	5	11.32	746199	40.0
Octadecane	12.08	19.9	ug/l	371199	5	11.32	746199	40.0
Heptanamide, 4-et...	12.51	10.5	ug/l	102176	6	13.36	389648	40.0
13-Hexacosyne	12.78	12.6	ug/l	122608	6	13.36	389648	40.0
Octacosane	14.23	42.2	ug/l	411405	6	13.36	389648	40.0

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W16 1108511-003C.D
Acq On : 1 Sep 2011 8:22 pm
Operator : ALICIA HABERLE
Sample : 1108511-003C
Misc : SAMP
ALS Vial : 23 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.412	86	88	91	rVB	32901	19961	1.19%	0.132%
2	2.542	107	115	125	rBV3	53244	128877	7.66%	0.852%
3	2.710	147	150	154	rVB	33993	25275	1.50%	0.167%
4	2.955	193	201	204	rBV	2033767	1682724	100.00%	11.123%
5	3.042	214	219	223	rVB	49742	40189	2.39%	0.266%
6	3.085	223	228	231	rVB	49306	37792	2.25%	0.250%
7	3.124	231	236	240	rBV	67447	56297	3.35%	0.372%
8	3.196	246	251	265	rBV	1206050	989259	58.79%	6.539%
9	3.278	265	268	275	rVB2	31639	29091	1.73%	0.192%
10	3.691	351	354	357	rVB	27943	21161	1.26%	0.140%
11	3.946	403	407	421	rBV	1056414	945160	56.17%	6.248%
12	4.182	452	456	461	rBV	36325	34805	2.07%	0.230%
13	4.278	472	476	493	rVB	1128657	903545	53.70%	5.973%
14	4.773	575	579	591	rBV	463231	449780	26.73%	2.973%
15	5.441	714	718	736	rBV	1441599	1225412	72.82%	8.100%
16	6.485	931	935	943	rBV	1307499	1118045	66.44%	7.390%
17	7.105	1058	1064	1066	rBV4	17863	21762	1.29%	0.144%
18	7.149	1066	1073	1090	rVB	1736405	1416009	84.15%	9.360%
19	7.928	1226	1235	1243	rBV	805272	751369	44.65%	4.967%
20	8.057	1255	1262	1271	rBV3	49025	59502	3.54%	0.393%
21	8.158	1280	1283	1286	rBV2	42792	36069	2.14%	0.238%
22	8.317	1309	1316	1323	rBV4	83494	109230	6.49%	0.722%
23	8.615	1366	1378	1387	rBV2	1439579	1250711	74.33%	8.267%
24	8.875	1426	1432	1439	rBV4	27858	40241	2.39%	0.266%
25	9.101	1474	1479	1483	rBV2	63538	82275	4.89%	0.544%
26	9.173	1491	1494	1504	rBV2	249349	266433	15.83%	1.761%
27	9.351	1527	1531	1534	rBV3	19705	23194	1.38%	0.153%
28	9.692	1598	1602	1608	rBV	48831	58814	3.50%	0.389%
29	9.875	1634	1640	1648	rBV6	53988	113186	6.73%	0.748%
30	9.957	1654	1657	1666	rBV3	84294	105307	6.26%	0.696%
31	10.053	1673	1677	1681	rBV	353574	274697	16.32%	1.816%
32	10.106	1685	1688	1693	rBV4	20698	23038	1.37%	0.152%
33	10.202	1704	1708	1714	rVB	1066504	860220	51.12%	5.686%
34	10.577	1782	1786	1789	rBV2	75795	66103	3.93%	0.437%
35	10.707	1810	1813	1820	rVB2	69624	76006	4.52%	0.502%
36	10.765	1821	1825	1829	rVV	210703	190561	11.32%	1.260%
37	11.198	1911	1915	1921	rVB2	91835	118316	7.03%	0.782%
38	11.323	1936	1941	1946	rBV	678309	704815	41.89%	4.659%

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W16 1108511-003C.D
Acq On : 1 Sep 2011 8:22 pm
Operator : ALICIA HABERLE
Sample : 1108511-003C
Misc : SAMP
ALS Vial : 23 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

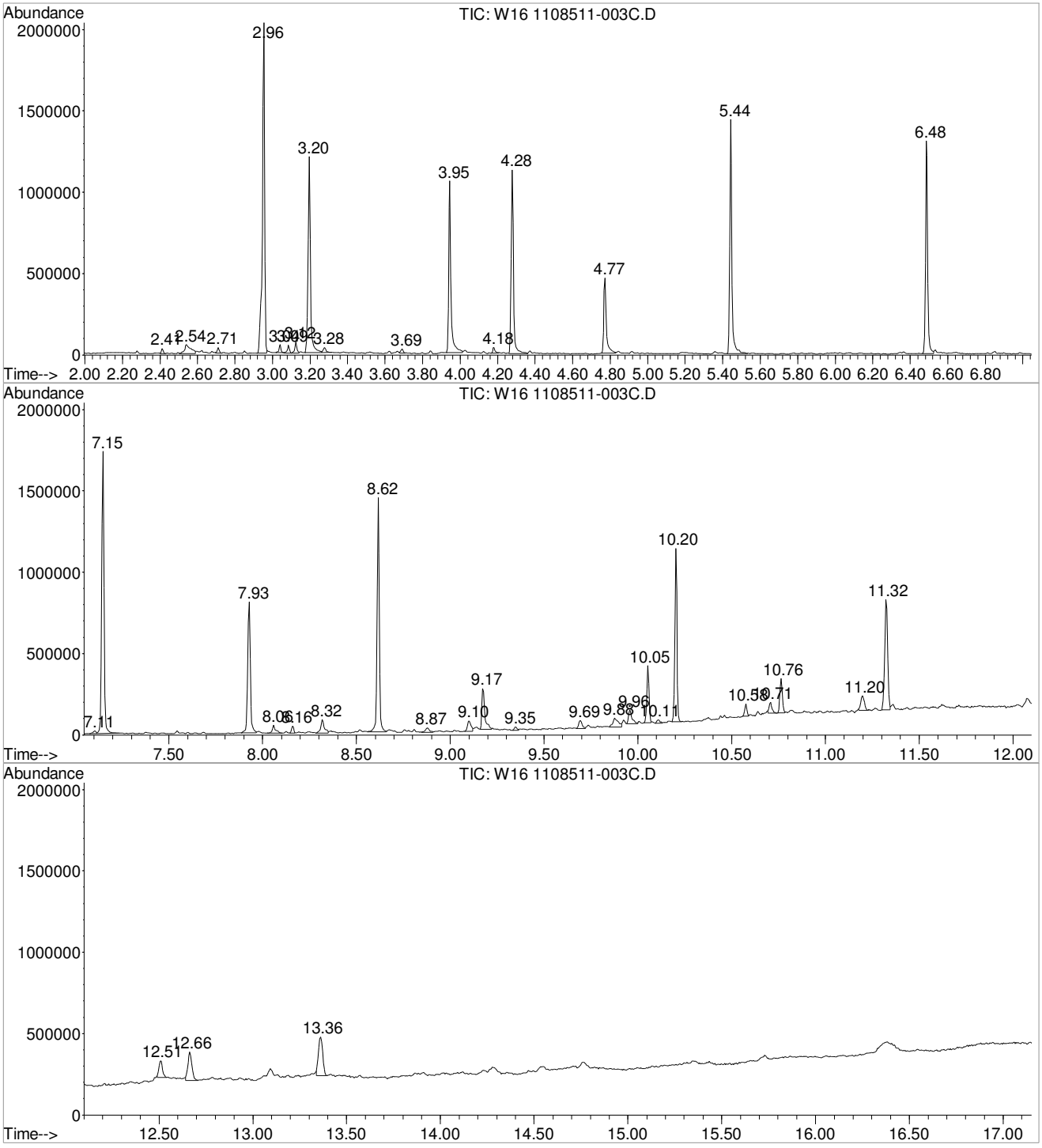
39	12.506	2184	2187	2194	rVB	105335	139659	8.30%	0.923%
40	12.664	2215	2220	2229	rVB	175159	260168	15.46%	1.720%
41	13.362	2360	2365	2372	rVB	238405	373113	22.17%	2.466%

Sum of corrected areas: 15128171

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W16 1108511-003C.D
Acq On : 1 Sep 2011 8:22 pm
Operator : ALICIA HABERLE
Sample : 1108511-003C
Misc : SAMP
ALS Vial : 23 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W16 1108511-003C.D
Acq On : 1 Sep 2011 8:22 pm
Operator : ALICIA HABERLE
Sample : 1108511-003C
Misc : SAMP
ALS Vial : 23 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

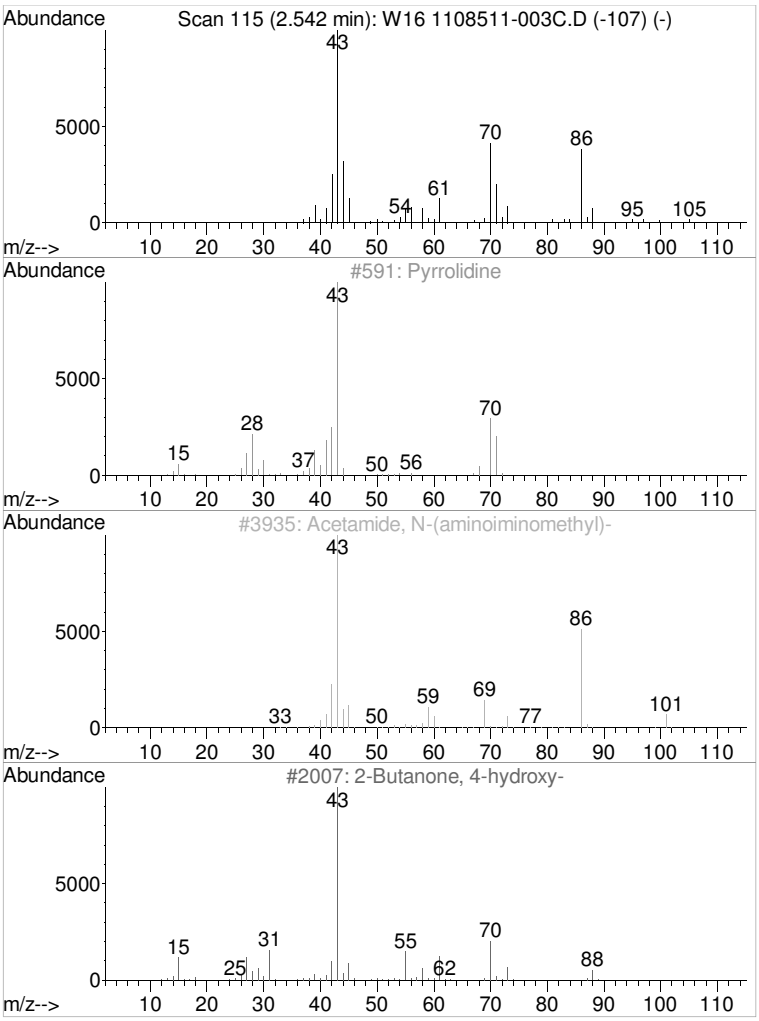
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

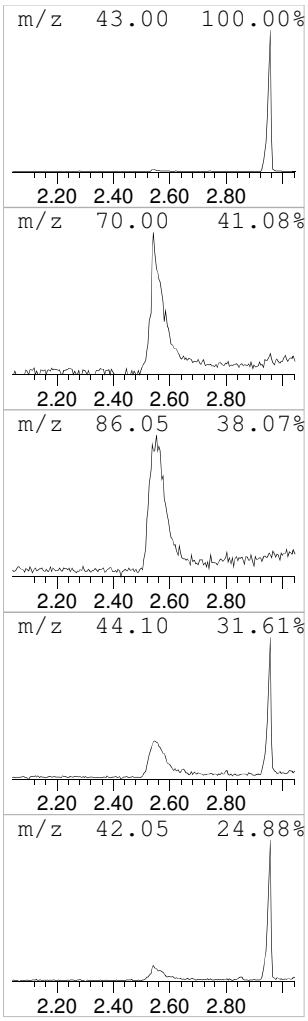
****

Peak Number 1 Pyrrolidine Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.54	5.71 ug/l	128877	ISTD 1,4-Dichlorobenzene-d4	4.28

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pyrrolidine	71	C4H9N	000123-75-1	43
2	Acetamide, N-(aminoiminomethyl)-	101	C3H7N3O	005699-40-1	32
3	2-Butanone, 4-hydroxy-	88	C4H8O2	000590-90-9	27
4	1,4-Butanediol, diacetate	174	C8H14O4	000628-67-1	22
5	N,N'-Bis(2-methyl-2-nitrosobutan...	230	C10H18N2O4	034946-73-1	17





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W16 1108511-003C.D
Acq On : 1 Sep 2011 8:22 pm
Operator : ALICIA HABERLE
Sample : 1108511-003C
Misc : SAMP
ALS Vial : 23 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

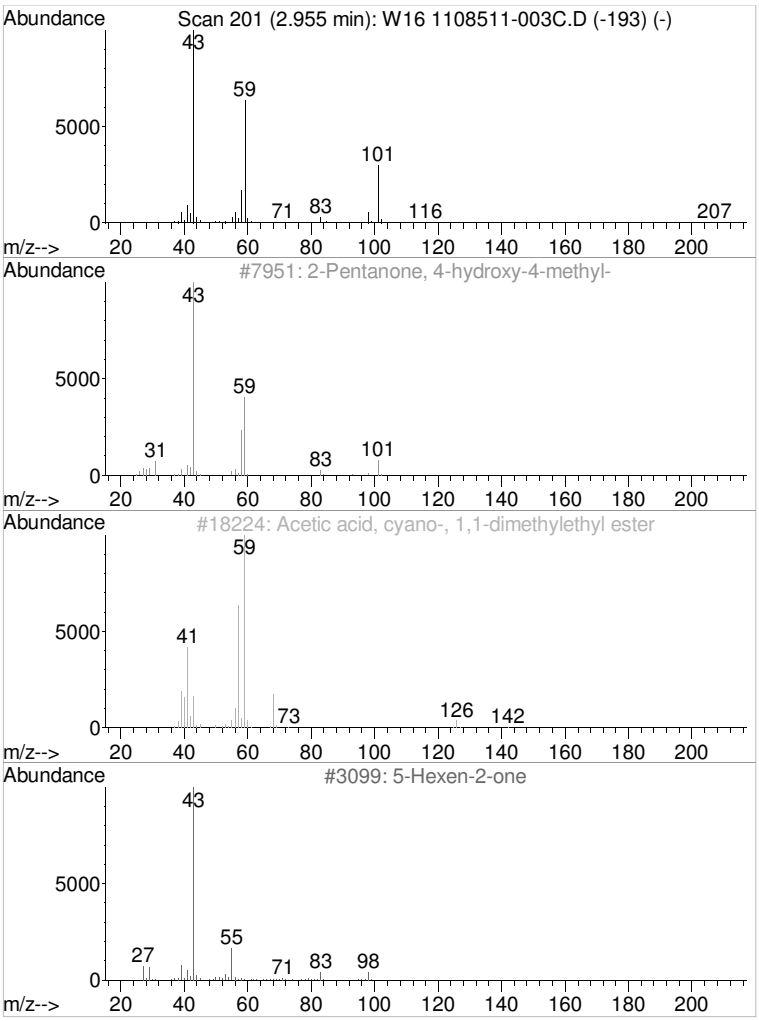
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

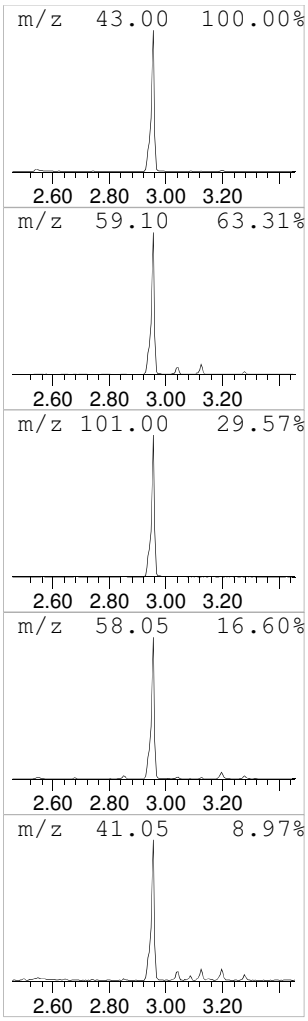
****

Peak Number 2 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.96	74.49 ug/l	1682720	ISTD 1,4-Dichlorobenzene-d4	4.28

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	56
2	Acetic acid, cyano-, 1,1-dimethy...	141	C7H11NO2	001116-98-9	17
3	5-Hexen-2-one	98	C6H10O	000109-49-9	9
4	(+-)-4-Amino-4,5-dihydro-2(3H)-f...	101	C4H7NO2	016504-58-8	9
5	Morpholine, 4-methyl-	101	C5H11NO	000109-02-4	9





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W16 1108511-003C.D
Acq On : 1 Sep 2011 8:22 pm
Operator : ALICIA HABERLE
Sample : 1108511-003C
Misc : SAMP
ALS Vial : 23 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

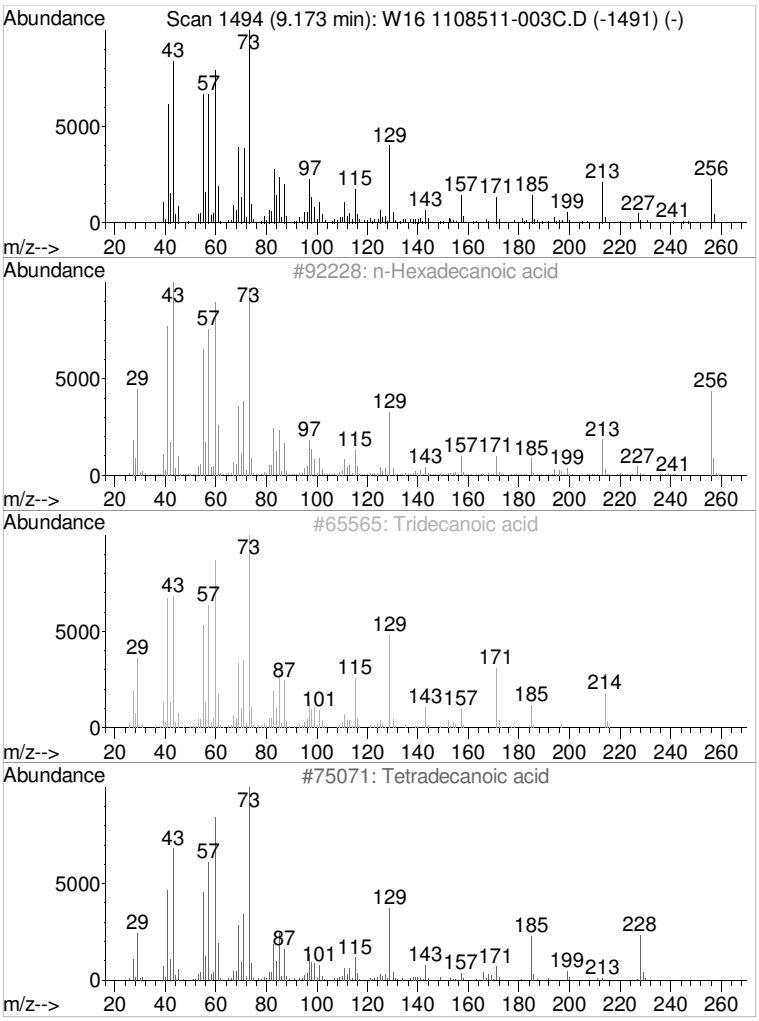
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

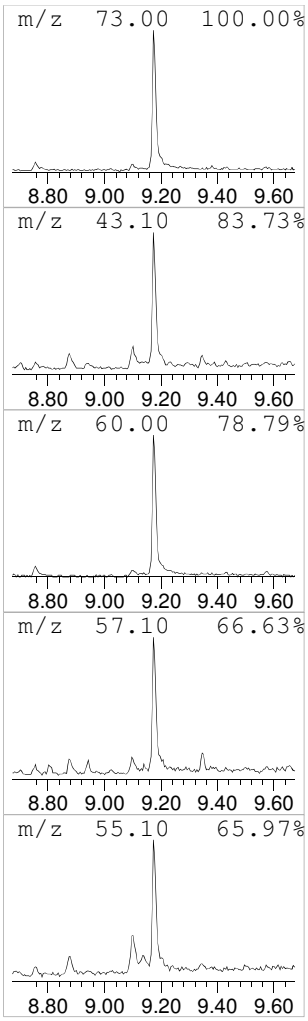
****

Peak Number 3 n-Hexadecanoic acid Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.17	8.52 ug/l	266433	ISTD-Phenanthrene-d10	8.62

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	99
2	Tridecanoic acid	214	C13H26O2	000638-53-9	95
3	Tetradecanoic acid	228	C14H28O2	000544-63-8	93
4	Pentadecanoic acid	242	C15H30O2	001002-84-2	74
5	n-Decanoic acid	172	C10H20O2	000334-48-5	70





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W16 1108511-003C.D
Acq On : 1 Sep 2011 8:22 pm
Operator : ALICIA HABERLE
Sample : 1108511-003C
Misc : SAMP
ALS Vial : 23 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

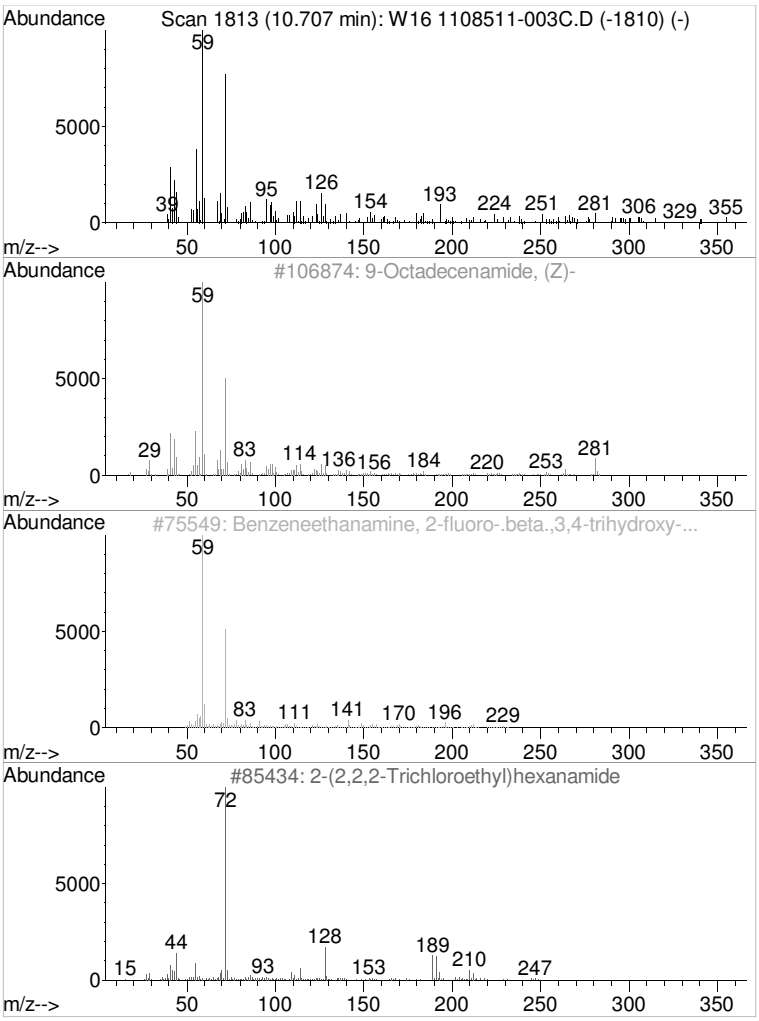
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

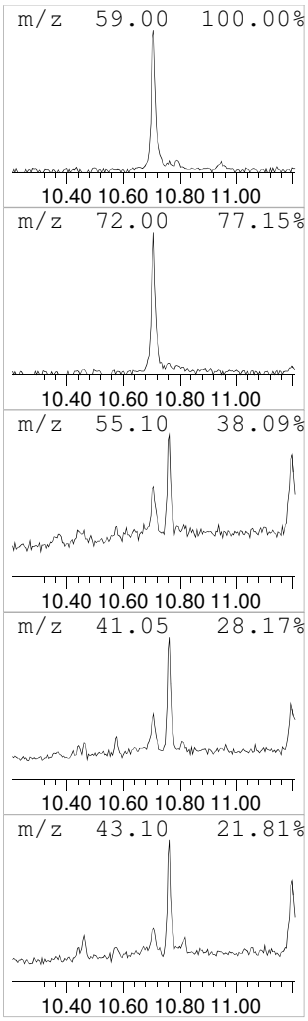
****

Peak Number 4 9-Octadecenamide, (Z)- Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.71	4.31 ug/l	76006	ISTD-Chrysene-d12	11.32

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	9-Octadecenamide, (Z)-	281	C18H35NO	000301-02-0	86
2	Benzeneethanamine, 2-fluoro-.bet...	229	C11H16FNO3	061338-98-5	45
3	2-(2,2,2-Trichloroethyl)hexanamide	245	C8H14Cl3NO	025236-78-6	27
4	Hexanamide	115	C6H13NO	000628-02-4	27
5	3,4-Dihydroxy-.alpha.-(isopropyl...	211	C11H17NO3	007683-59-2	27





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W16 1108511-003C.D
Acq On : 1 Sep 2011 8:22 pm
Operator : ALICIA HABERLE
Sample : 1108511-003C
Misc : SAMP
ALS Vial : 23 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

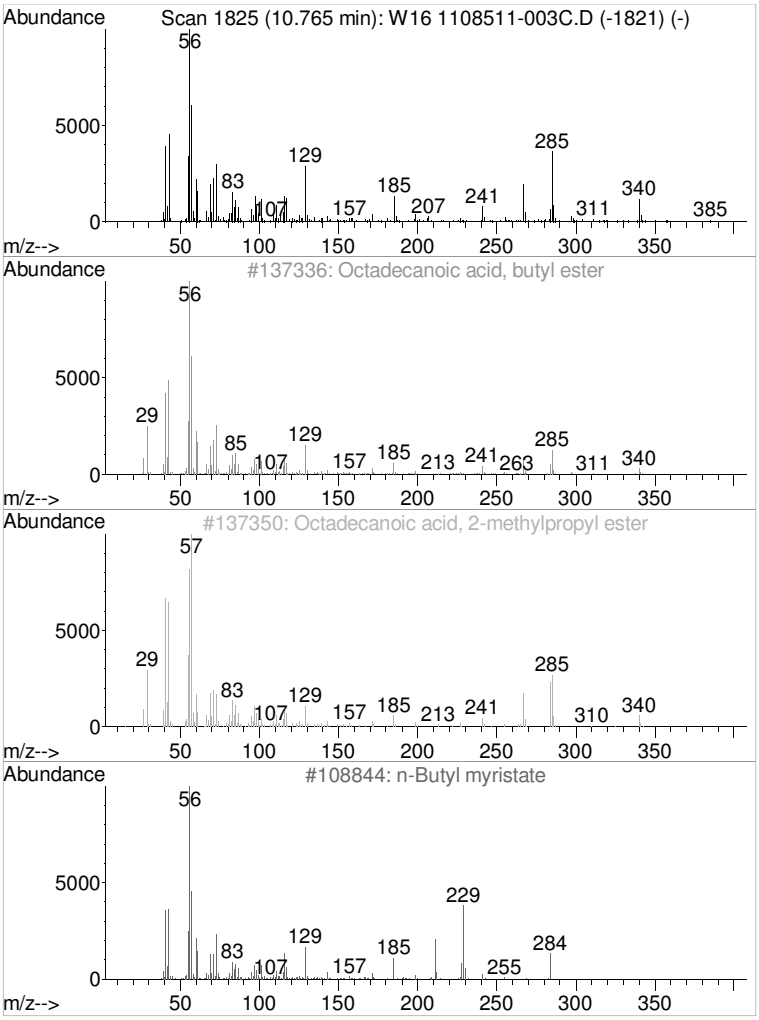
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

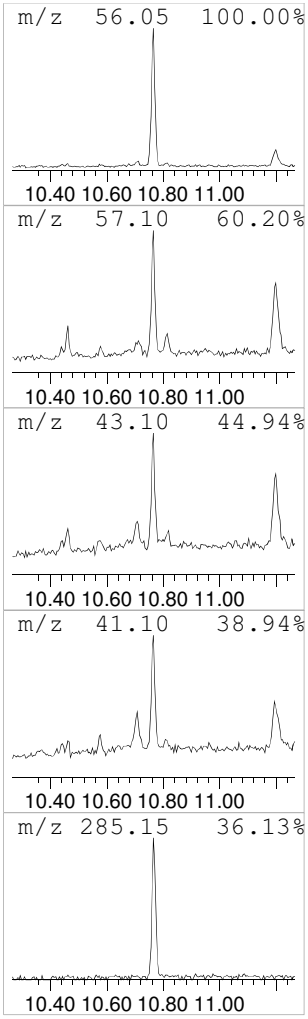
****

Peak Number 5 Octadecanoic acid, butyl ester Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.76	10.81 ug/l	190561	ISTD-Chrysene-d12	11.32

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	96
2	Octadecanoic acid, 2-methylpropy...	340	C22H44O2	000646-13-9	94
3	n-Butyl myristate	284	C18H36O2	000110-36-1	53
4	Nipecotic acid	129	C6H11NO2	000498-95-3	43
5	Cyclohexane, (1,1-dimethylethyl)-	140	C10H20	003178-22-1	30





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W16 1108511-003C.D
Acq On : 1 Sep 2011 8:22 pm
Operator : ALICIA HABERLE
Sample : 1108511-003C
Misc : SAMP
ALS Vial : 23 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

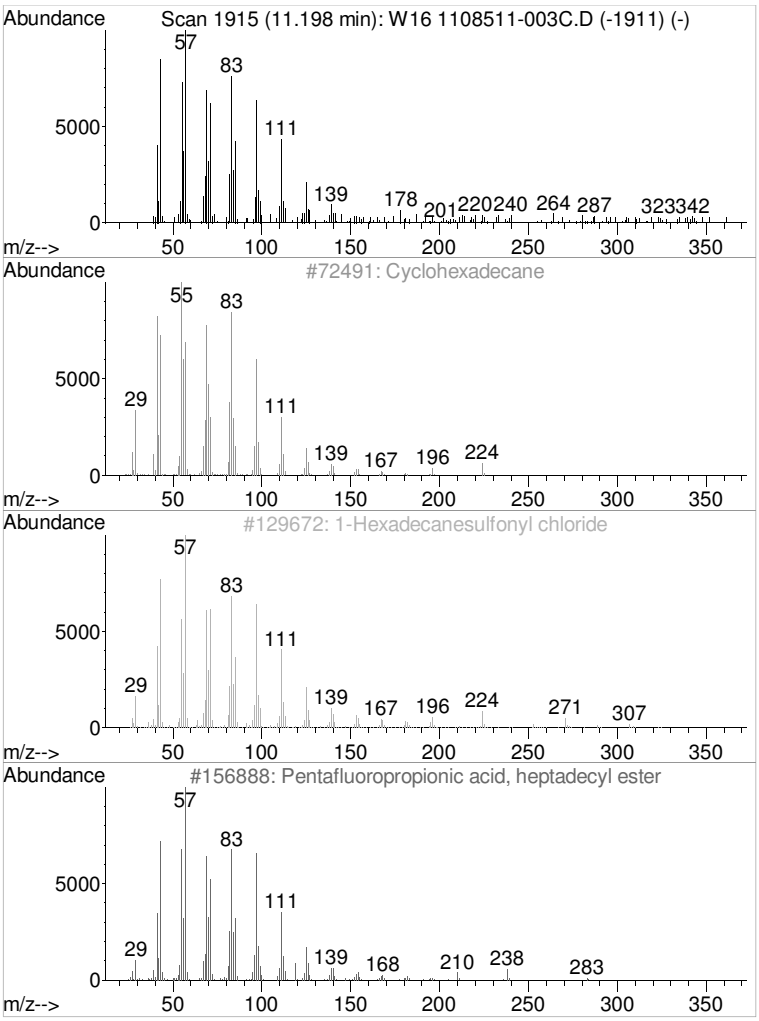
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

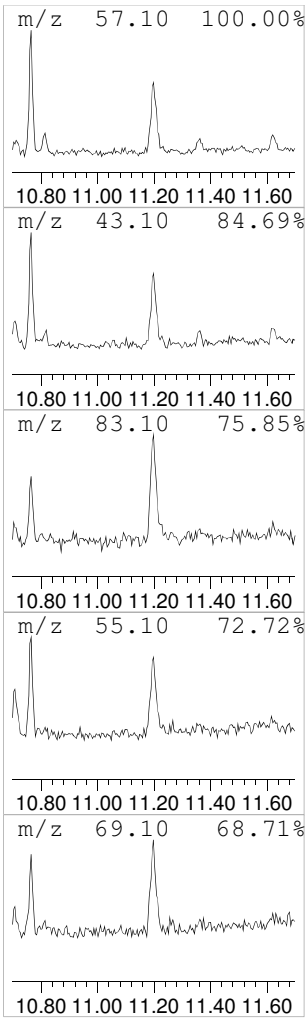
****

Peak Number 6 Cyclohexadecane Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.20	6.71 ug/l	118316	ISTD-Chrysene-d12	11.32

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclohexadecane	224	C16H32	000295-65-8	92
2	1-Hexadecanesulfonyl chloride	324	C16H33ClO2S	038775-38-1	91
3	Pentafluoropropionic acid, hepta...	402	C20H35F5O2	1000283-04-2	87
4	Ethanol, 2-(tetradecyloxy)-	258	C16H34O2	002136-70-1	87
5	1-Tricosene	322	C23H46	018835-32-0	87





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W16 1108511-003C.D
Acq On : 1 Sep 2011 8:22 pm
Operator : ALICIA HABERLE
Sample : 1108511-003C
Misc : SAMP
ALS Vial : 23 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

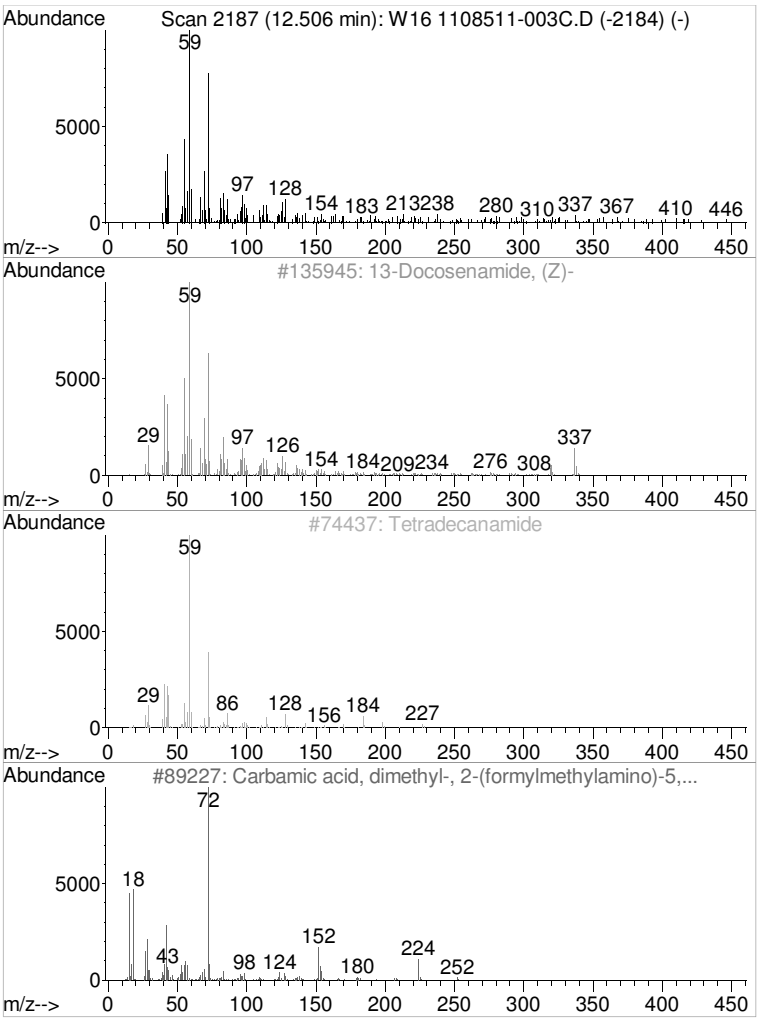
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

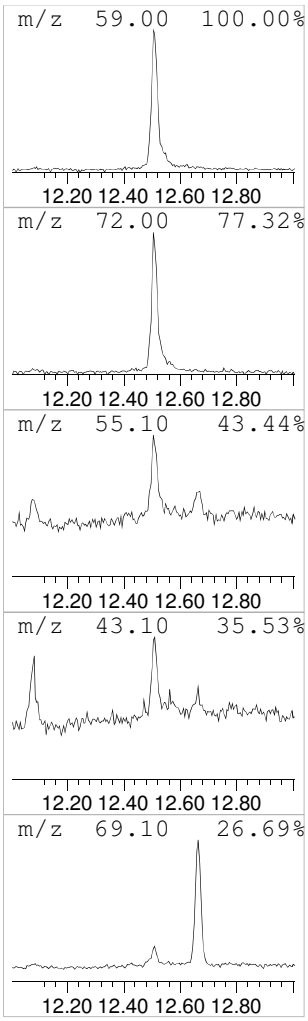
****

Peak Number 7 13-Docosenamide, (Z)- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.51	14.97 ug/l	139659	ISTD-Perylene-d12	13.36

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	13-Docosenamide, (Z)-	337	C22H43NO	000112-84-5	80
2	Tetradecanamide	227	C14H29NO	000638-58-4	50
3	Carbamic acid, dimethyl-, 2-(for...	252	C11H16N4O3	027218-04-8	38
4	3,4-Dihydroxy-.alpha.-(isopropyl...	211	C11H17NO3	007683-59-2	38
5	2-Octanol, 2-methyl-6-methylene-	156	C10H20O	018479-59-9	38





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W16 1108511-003C.D
Acq On : 1 Sep 2011 8:22 pm
Operator : ALICIA HABERLE
Sample : 1108511-003C
Misc : SAMP
ALS Vial : 23 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

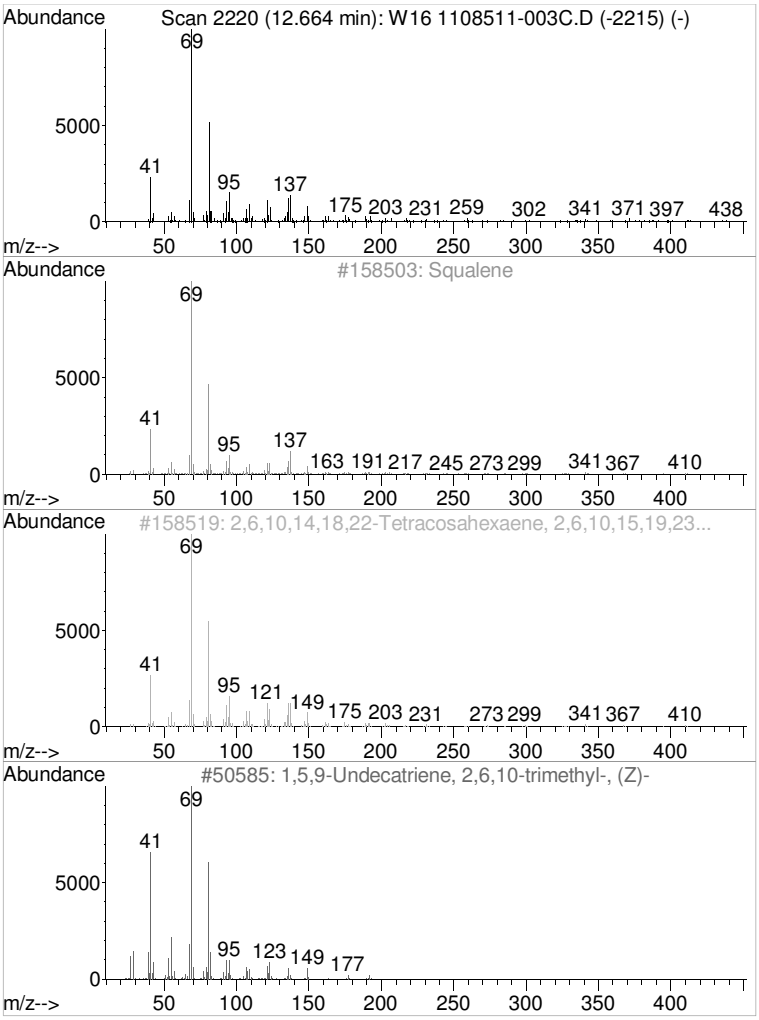
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

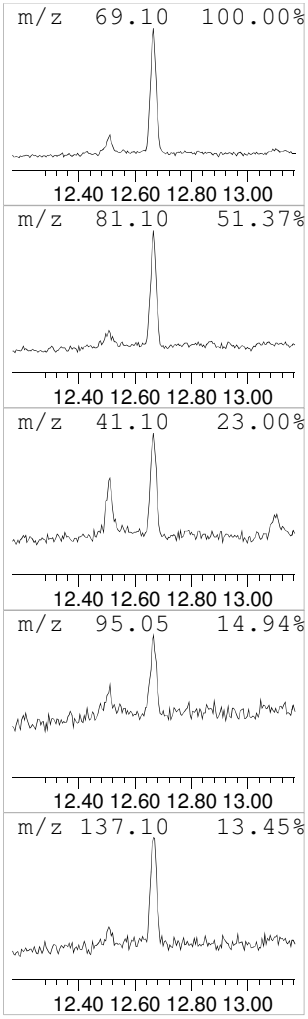
****

Peak Number 8 Squalene Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.66	27.89 ug/l	260168	ISTD-Perylene-d12	13.36

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Squalene	410	C30H50	007683-64-9	90
2	2,6,10,14,18,22-Tetracosahexaene...	410	C30H50	000111-02-4	90
3	1,5,9-Undecatriene, 2,6,10-trime...	192	C14H24	062951-96-6	74
4	Farnesol isomer a	222	C15H26O	1000108-92-4	72
5	2,6,10-Dodecatrien-1-ol, 3,7,11-...	222	C15H26O	000106-28-5	59





Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W16 1108511-003C.D
Acq On : 1 Sep 2011 8:22 pm
Operator : ALICIA HABERLE
Sample : 1108511-003C
Misc : SAMP
ALS Vial : 23 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
Pyrrolidine	2.54	5.7	ug/l	128877	1	4.28	903545	40.0
2-Pentanone, 4-hy...	2.96	74.5	ug/l	1682720	1	4.28	903545	40.0
n-Hexadecanoic acid	9.17	8.5	ug/l	266433	4	8.62	1250710	40.0
9-Octadecenamide,...	10.71	4.3	ug/l	76006	5	11.32	704815	40.0
Octadecanoic acid...	10.76	10.8	ug/l	190561	5	11.32	704815	40.0
Cyclohexadecane	11.20	6.7	ug/l	118316	5	11.32	704815	40.0
13-Docosenamide, ...	12.51	15.0	ug/l	139659	6	13.36	373113	40.0
Squalene	12.66	27.9	ug/l	260168	6	13.36	373113	40.0

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W25 11084511-005C.D
Acq On : 2 Sep 2011 12:18 am
Operator : ALICIA HABERLE
Sample : 11084511-005C
Misc : SAMP
ALS Vial : 6 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.937	8	10	14	rVB	58479	33173	1.74%	0.150%
2	2.066	34	37	40	rBV	68813	43511	2.29%	0.197%
3	2.350	91	96	99	rVB	44737	31053	1.63%	0.140%
4	2.432	105	113	114	rBV2	19617	25837	1.36%	0.117%
5	2.475	115	122	132	rVB2	109816	148031	7.78%	0.669%
6	2.557	137	139	142	rVV	36737	27016	1.42%	0.122%
7	2.586	142	145	148	rVV	35461	24969	1.31%	0.113%
8	2.629	152	154	155	rVV	39608	26336	1.38%	0.119%
9	2.643	155	157	162	rVB2	50553	38327	2.01%	0.173%
10	2.893	200	209	212	rBV	1808012	1588524	83.47%	7.179%
11	2.975	221	226	231	rBV	71486	55678	2.93%	0.252%
12	3.023	233	236	239	rVB	47615	34357	1.81%	0.155%
13	3.062	239	244	247	rBV	72769	52829	2.78%	0.239%
14	3.134	253	259	271	rBV	1209031	1000996	52.60%	4.524%
15	3.216	271	276	281	rVB2	38118	35733	1.88%	0.161%
16	3.408	313	316	323	rVB3	22418	27139	1.43%	0.123%
17	3.624	357	361	363	rVB	23990	19658	1.03%	0.089%
18	3.836	401	405	408	rBV	91819	77524	4.07%	0.350%
19	3.884	411	415	425	rVV	1200278	983834	51.70%	4.446%
20	3.956	425	430	433	rVB2	27327	35647	1.87%	0.161%
21	4.115	459	463	468	rVB	323044	246217	12.94%	1.113%
22	4.206	478	482	487	rBV	1172868	942029	49.50%	4.258%
23	4.245	487	490	498	rVB	48350	47872	2.52%	0.216%
24	4.327	504	507	511	rBV	43840	36489	1.92%	0.165%
25	4.360	511	514	517	rVB2	33938	27907	1.47%	0.126%
26	4.427	525	528	532	rBV	70579	52508	2.76%	0.237%
27	4.562	549	556	558	rBV3	21844	29536	1.55%	0.133%
28	4.702	581	585	589	rBV	531421	425798	22.37%	1.924%
29	4.750	593	595	598	rVV	36825	33159	1.74%	0.150%
30	4.774	598	600	603	rVB	42995	30371	1.60%	0.137%
31	4.841	609	614	617	rBV2	29432	30509	1.60%	0.138%
32	5.120	667	672	674	rBV	59527	58382	3.07%	0.264%
33	5.288	703	707	710	rBV2	23948	27449	1.44%	0.124%
34	5.327	711	715	720	rVV	71103	97803	5.14%	0.442%
35	5.370	720	724	728	rVV	1720070	1288548	67.71%	5.824%
36	5.413	731	733	741	rVB3	28142	25622	1.35%	0.116%
37	5.481	742	747	752	rVV2	22807	24824	1.30%	0.112%
38	5.625	773	777	787	rVB3	47292	77103	4.05%	0.348%

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W25 11084511-005C.D
Acq On : 2 Sep 2011 12:18 am
Operator : ALICIA HABERLE
Sample : 11084511-005C
Misc : SAMP
ALS Vial : 6 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

39	5.716	793	796	799	rBV	24055	20716	1.09%	0.094%
40	5.885	828	831	836	rBV3	19736	26122	1.37%	0.118%
41	5.990	848	853	856	rBV3	26207	29941	1.57%	0.135%
42	6.067	860	869	873	rBV	57586	56108	2.95%	0.254%
43	6.313	917	920	929	rVB	68285	71845	3.78%	0.325%
44	6.414	935	941	947	rVB	1441748	1081124	56.81%	4.886%
45	6.529	959	965	967	rBV5	30465	43192	2.27%	0.195%
46	6.558	967	971	982	rVB	229704	216127	11.36%	0.977%
47	6.822	1015	1026	1030	rBV	157900	156783	8.24%	0.709%
48	6.995	1058	1062	1063	rBV3	23322	23384	1.23%	0.106%
49	7.010	1063	1065	1068	rVV	53143	50608	2.66%	0.229%
50	7.072	1068	1078	1084	rVV2	1861048	1903099	100.00%	8.601%
51	7.313	1125	1128	1130	rBV2	35475	33203	1.74%	0.150%
52	7.337	1130	1133	1138	rVV5	38537	50991	2.68%	0.230%
53	7.370	1138	1140	1143	rVB2	33489	25300	1.33%	0.114%
54	7.500	1163	1167	1171	rBV2	79288	75852	3.99%	0.343%
55	7.524	1171	1172	1178	rVB5	16584	20419	1.07%	0.092%
56	7.606	1186	1189	1194	rVB6	27931	28293	1.49%	0.128%
57	7.736	1214	1216	1221	rVB3	22846	20978	1.10%	0.095%
58	7.789	1221	1227	1230	rBV4	45902	67494	3.55%	0.305%
59	7.851	1232	1240	1245	rVV3	829690	852235	44.78%	3.852%
60	7.914	1249	1253	1258	rVV2	57792	57301	3.01%	0.259%
61	8.029	1275	1277	1280	rVB	116789	76692	4.03%	0.347%
62	8.087	1285	1289	1293	rBV2	114806	101902	5.35%	0.461%
63	8.140	1298	1300	1302	rBV2	21904	19195	1.01%	0.087%
64	8.169	1304	1306	1310	rVV3	33491	38665	2.03%	0.175%
65	8.198	1310	1312	1314	rVV2	39740	40337	2.12%	0.182%
66	8.226	1314	1318	1326	rVB	921743	912563	47.95%	4.124%
67	8.371	1342	1348	1352	rBV8	17708	30275	1.59%	0.137%
68	8.409	1353	1356	1358	rBV4	23848	26266	1.38%	0.119%
69	8.539	1378	1383	1386	rBV	1441868	1186745	62.36%	5.364%
70	8.563	1386	1388	1393	rVB4	96464	82373	4.33%	0.372%
71	8.630	1399	1402	1410	rVB2	49998	40661	2.14%	0.184%
72	8.683	1410	1413	1420	rBV7	28393	38507	2.02%	0.174%
73	8.789	1432	1435	1442	rVB3	83224	97731	5.14%	0.442%
74	8.953	1466	1469	1475	rBV7	35396	49536	2.60%	0.224%
75	9.034	1482	1486	1490	rBV	203647	197067	10.36%	0.891%
76	9.068	1490	1493	1497	rVV	206594	182974	9.61%	0.827%
77	9.111	1497	1502	1509	rVV2	1396586	1216165	63.90%	5.497%
78	9.246	1528	1530	1533	rVB2	34510	22027	1.16%	0.100%
79	9.280	1533	1537	1545	rVB	318357	300398	15.78%	1.358%
80	9.457	1572	1574	1577	rVB3	34953	25099	1.32%	0.113%

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W25 11084511-005C.D
Acq On : 2 Sep 2011 12:18 am
Operator : ALICIA HABERLE
Sample : 11084511-005C
Misc : SAMP
ALS Vial : 6 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

81	9.616	1605	1607	1610	rBV3	32985	26220	1.38%	0.119%
82	9.789	1639	1643	1645	rBV	207239	222508	11.69%	1.006%
83	9.809	1645	1647	1648	rVV	74286	57629	3.03%	0.260%
84	9.890	1660	1664	1671	rBV	912173	838309	44.05%	3.789%
85	9.982	1680	1683	1686	rVB	446458	337939	17.76%	1.527%
86	10.126	1709	1713	1717	rBV	911971	779794	40.97%	3.524%
87	10.684	1826	1829	1834	rVB	312952	277359	14.57%	1.254%
88	11.102	1912	1916	1923	rVB2	353166	451282	23.71%	2.040%
89	11.222	1937	1941	1946	rVV	614100	614270	32.28%	2.776%
90	11.266	1946	1950	1956	rVB	456995	484185	25.44%	2.188%
91	11.972	2094	2097	2103	rVB2	208217	251556	13.22%	1.137%
92	13.218	2353	2356	2369	rVB	259483	376493	19.78%	1.702%

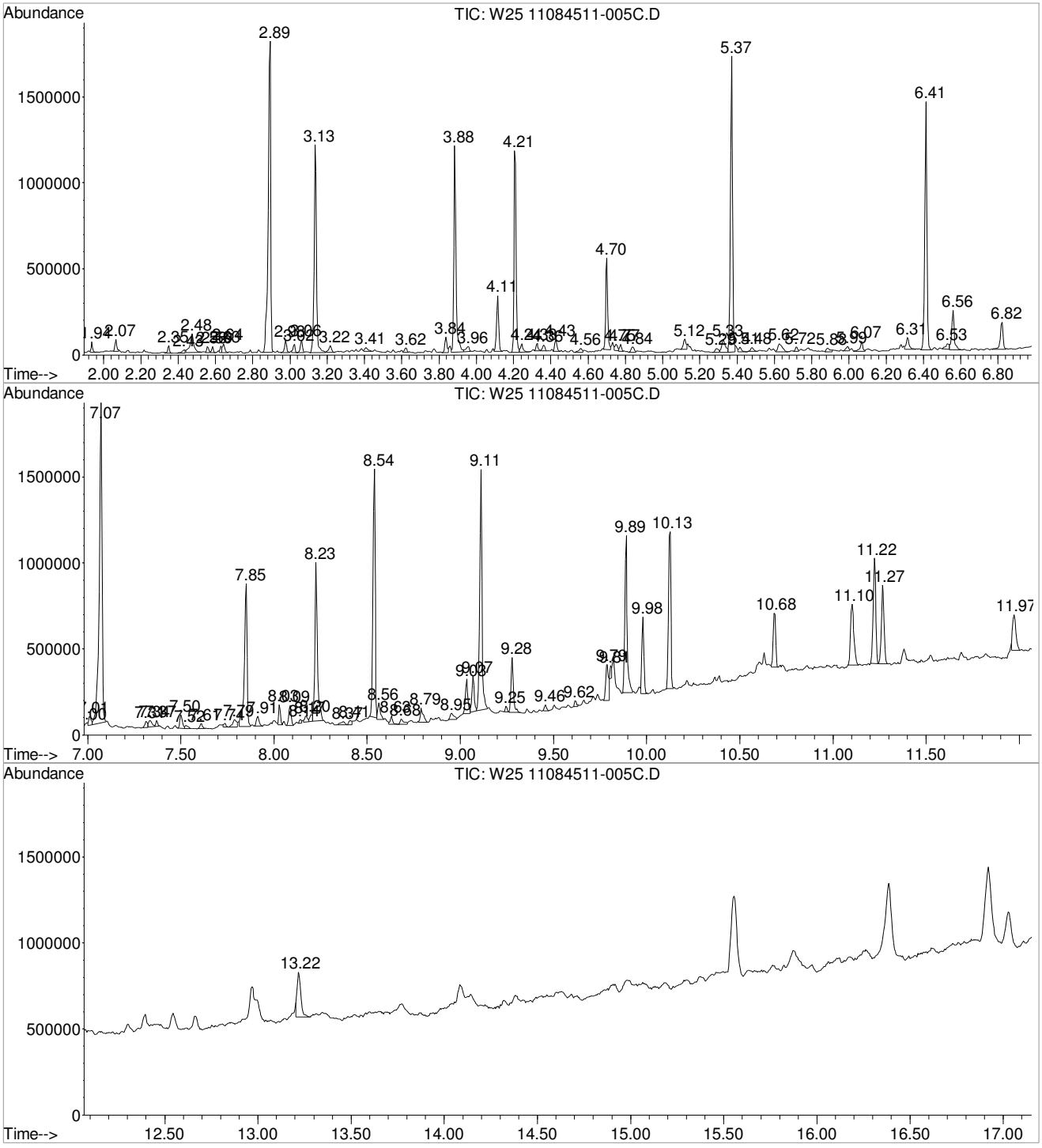
Sum of corrected areas: 22126135

LSC Report - Integrated Chromatogram

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W25 11084511-005C.D
Acq On : 2 Sep 2011 12:18 am
Operator : ALICIA HABERLE
Sample : 11084511-005C
Misc : SAMP
ALS Vial : 6 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W25 11084511-005C.D
Acq On : 2 Sep 2011 12:18 am
Operator : ALICIA HABERLE
Sample : 11084511-005C
Misc : SAMP
ALS Vial : 6 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

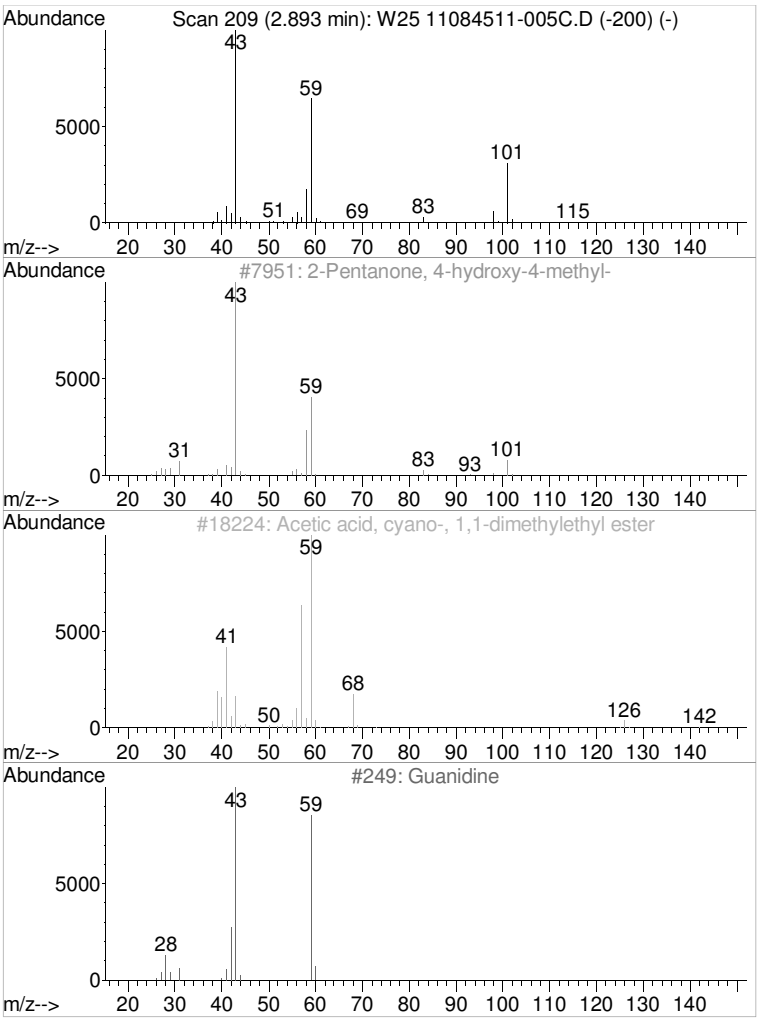
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

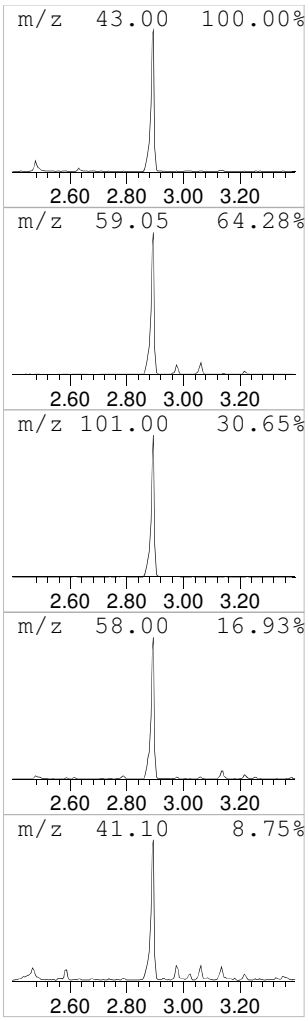
****

Peak Number 1 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.89	67.45 ug/l	1588520	ISTD 1,4-Dichlorobenzene-d4	4.21

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	56
2	Acetic acid, cyano-, 1,1-dimethy...	141	C7H11NO2	001116-98-9	17
3	Guanidine	59	CH5N3	000113-00-8	9
4	(+-)-4-Amino-4,5-dihydro-2(3H)-f...	101	C4H7NO2	016504-58-8	9
5	Morpholine, 4-methyl-	101	C5H11NO	000109-02-4	9





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W25 11084511-005C.D
Acq On : 2 Sep 2011 12:18 am
Operator : ALICIA HABERLE
Sample : 11084511-005C
Misc : SAMP
ALS Vial : 6 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

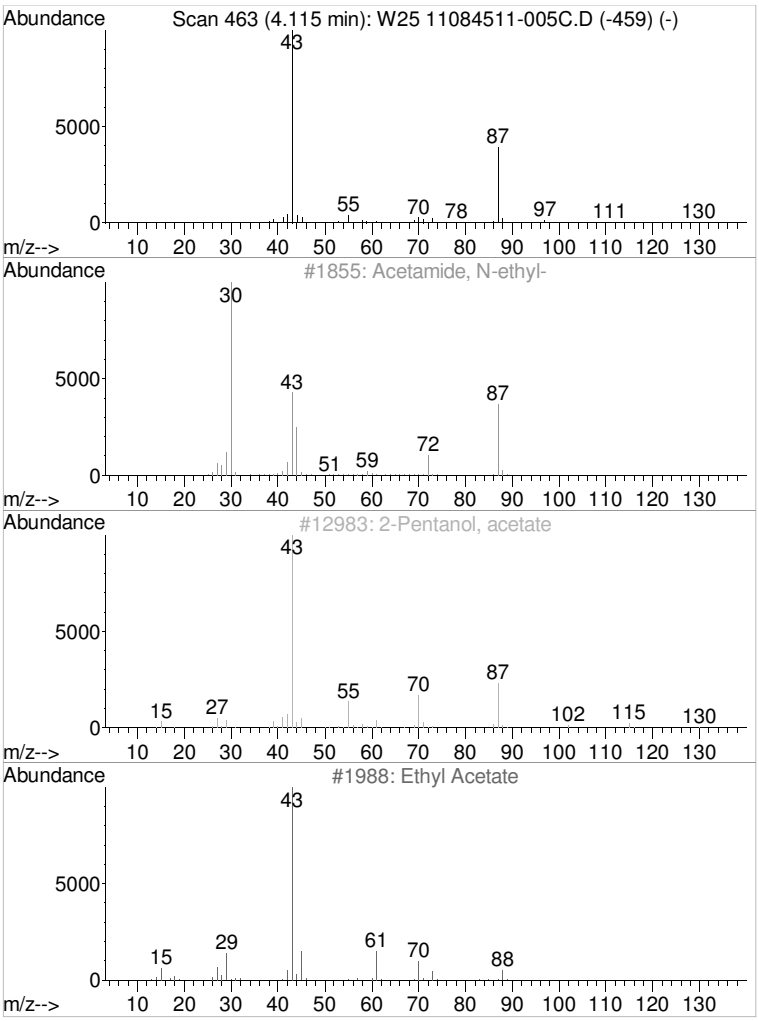
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

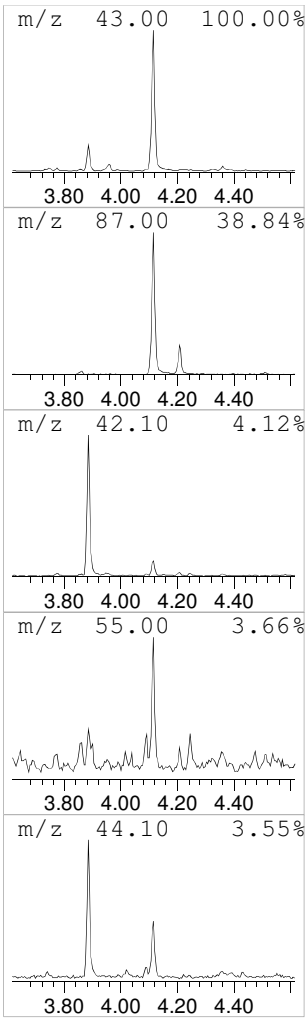
****

Peak Number 2 Acetamide, N-ethyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.11	10.45 ug/l	246217	ISTD 1,4-Dichlorobenzene-d4	4.21

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Acetamide, N-ethyl-	87	C4H9NO	000625-50-3	5
2	2-Pentanol, acetate	130	C7H14O2	000626-38-0	5
3	Ethyl Acetate	88	C4H8O2	000141-78-6	4
4	2-Ethoxyethyl acetate	132	C6H12O3	000111-15-9	4
5	1,2-Propanediol, 2-acetate	118	C5H10O3	006214-01-3	4





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Data File : W25 11084511-005C.D
Acq On : 2 Sep 2011 12:18 am
Operator : ALICIA HABERLE
Sample : 11084511-005C
Misc : SAMP
ALS Vial : 6 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

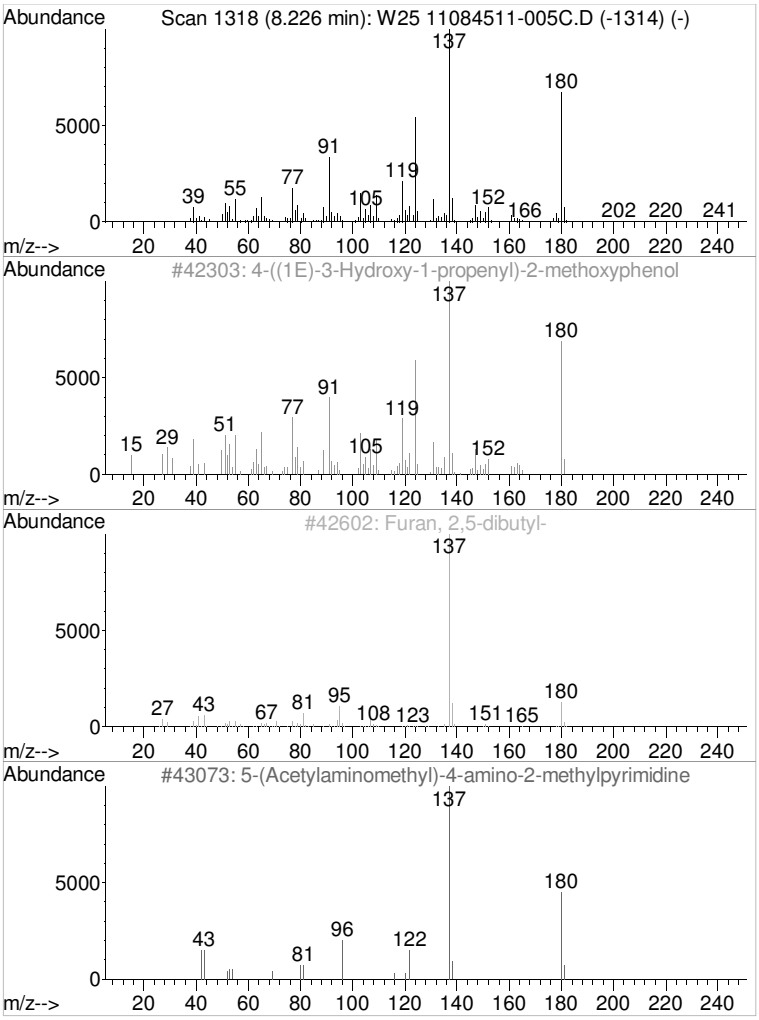
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

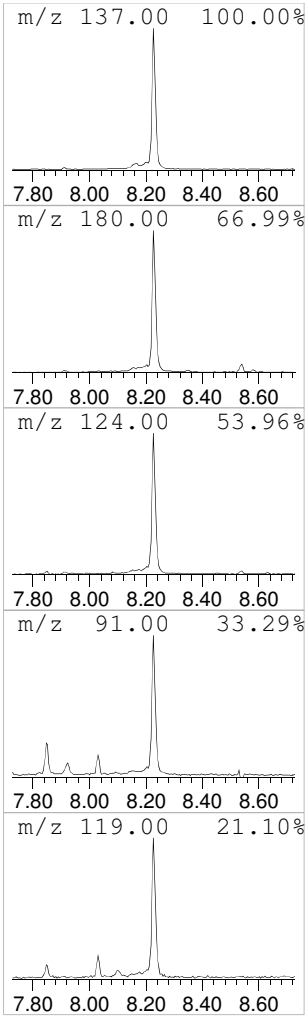
****

Peak Number 3 4-((1E)-3-Hydroxy-1-propeny... Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.23	30.76 ug/l	912563	ISTD-Phenanthrene-d10	8.54

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	4-((1E)-3-Hydroxy-1-propenyl)-2-...	180	C10H12O3	1000297-95-5	95
2	Furan, 2,5-dibutyl-	180	C12H20O	072636-53-4	46
3	5-(Acetylaminomethyl)-4-amino-2-...	180	C8H12N4O	023676-63-3	43
4	Pyrazine, 2-methoxy-3-(1-methyle...	152	C8H12N2O	025773-40-4	43
5	Phenol, 3-methyl-4-nitroso-	137	C7H7NO2	000615-01-0	30





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W25 11084511-005C.D
Acq On : 2 Sep 2011 12:18 am
Operator : ALICIA HABERLE
Sample : 11084511-005C
Misc : SAMP
ALS Vial : 6 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

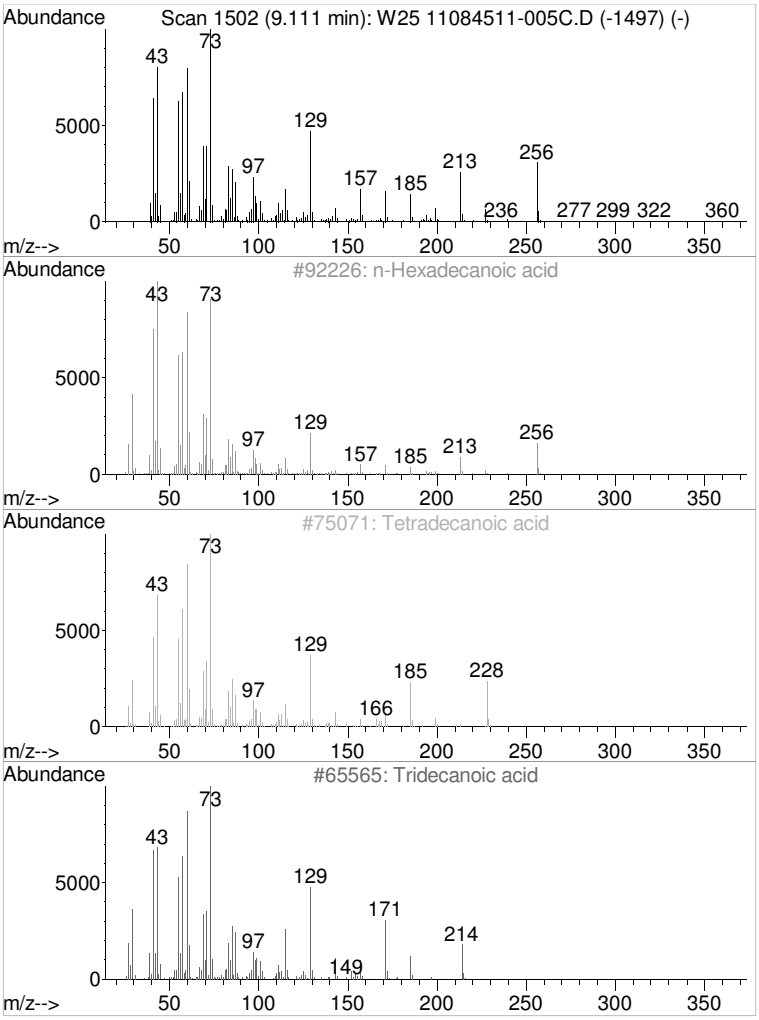
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

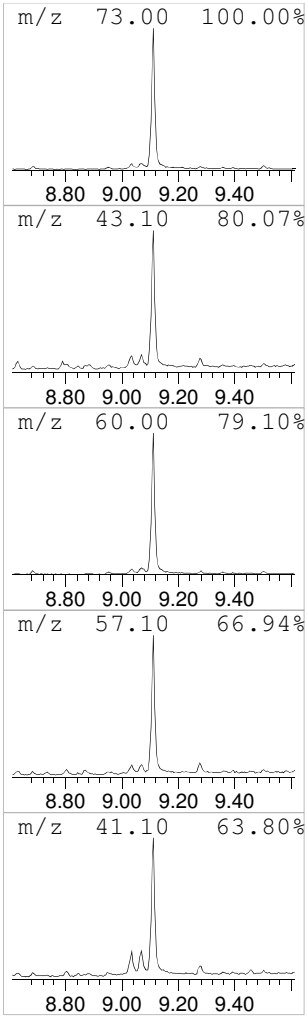
****

Peak Number 4 n-Hexadecanoic acid Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.11	40.99 ug/l	1216170	ISTD-Phenanthrene-d10	8.54

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	98
2	Tetradecanoic acid	228	C14H28O2	000544-63-8	90
3	Tridecanoic acid	214	C13H26O2	000638-53-9	81
4	n-Decanoic acid	172	C10H20O2	000334-48-5	70
5	Pentadecanoic acid	242	C15H30O2	001002-84-2	58





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W25 11084511-005C.D
Acq On : 2 Sep 2011 12:18 am
Operator : ALICIA HABERLE
Sample : 11084511-005C
Misc : SAMP
ALS Vial : 6 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

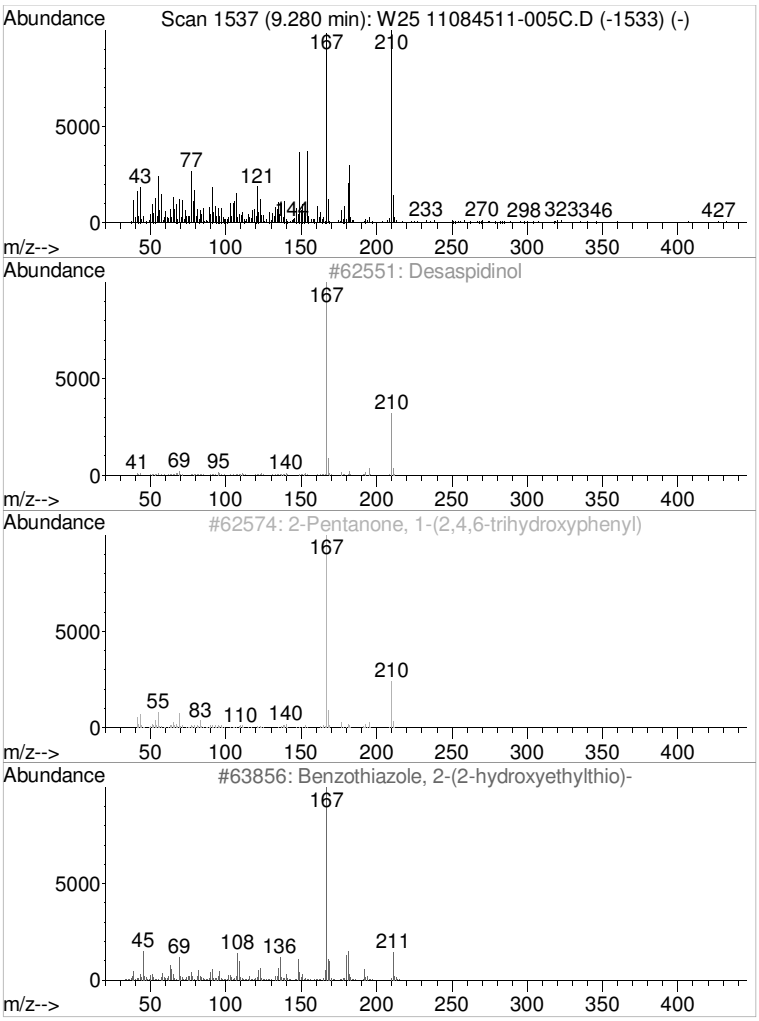
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

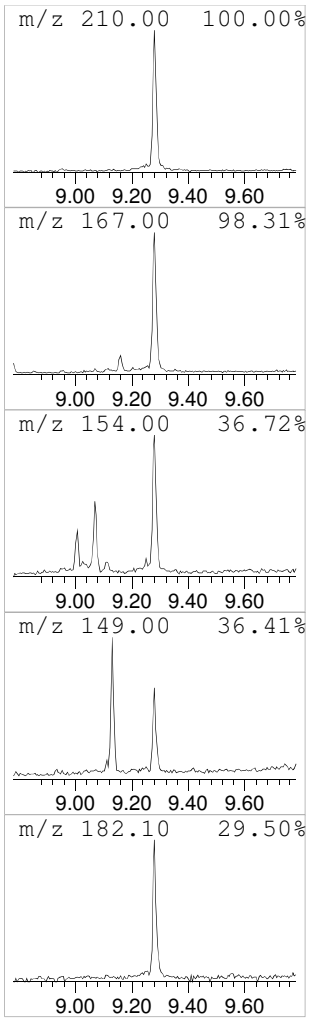
****

Peak Number 5 Desaspidinol Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.28	10.13 ug/l	300398	ISTD-Phenanthrene-d10	8.54

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Desaspidinol	210	C11H14O4	000437-72-9	58
2	2-Pentanone, 1-(2,4,6-trihydroxy...	210	C11H14O4	1000116-22-3	52
3	Benzothiazole, 2-(2-hydroxyethyl...	211	C9H9NOS2	004665-63-8	38
4	Ethanone, 1-(2,6-dihydroxy-4-met...	182	C9H10O4	007507-89-3	38
5	3-Isopropyl-1-methyl-4-methylami...	182	C9H14N2O2	1000296-12-2	38





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W25 11084511-005C.D
Acq On : 2 Sep 2011 12:18 am
Operator : ALICIA HABERLE
Sample : 11084511-005C
Misc : SAMP
ALS Vial : 6 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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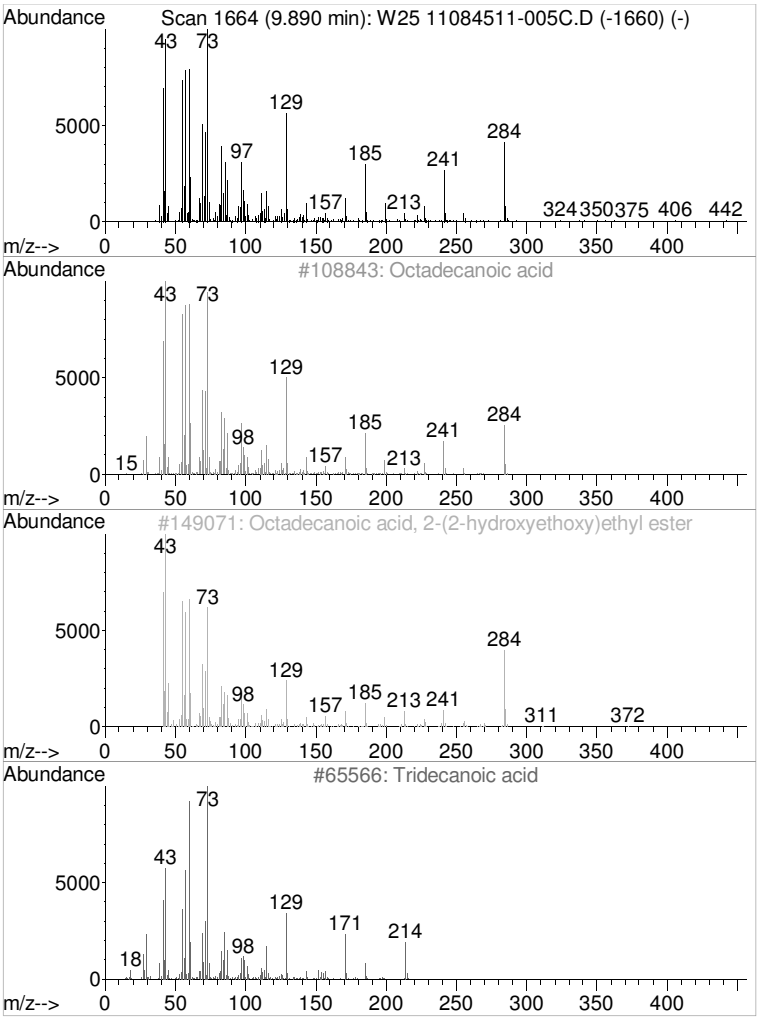
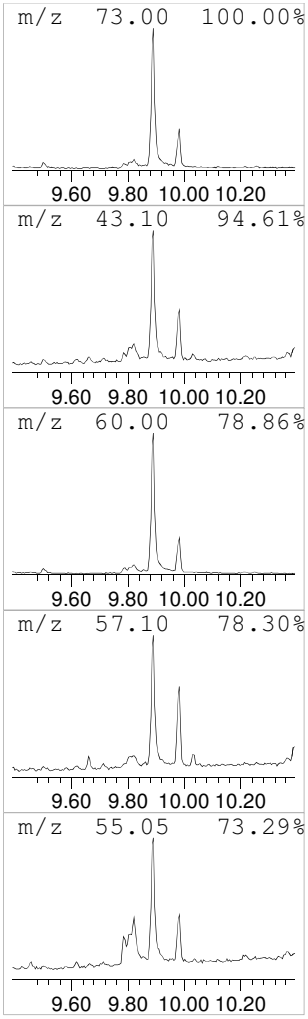
Peak Number 6 Octadecanoic acid Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.89	54.59 ug/l	838309	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid	284	C18H36O2	000057-11-4	99
2	Octadecanoic acid, 2-(2-hydroxye...	372	C22H44O4	000106-11-6	96
3	Tridecanoic acid	214	C13H26O2	000638-53-9	60
4	Tetradecanoic acid	228	C14H28O2	000544-63-8	58
5	Pentadecanoic acid	242	C15H30O2	001002-84-2	49





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W25 11084511-005C.D
Acq On : 2 Sep 2011 12:18 am
Operator : ALICIA HABERLE
Sample : 11084511-005C
Misc : SAMP
ALS Vial : 6 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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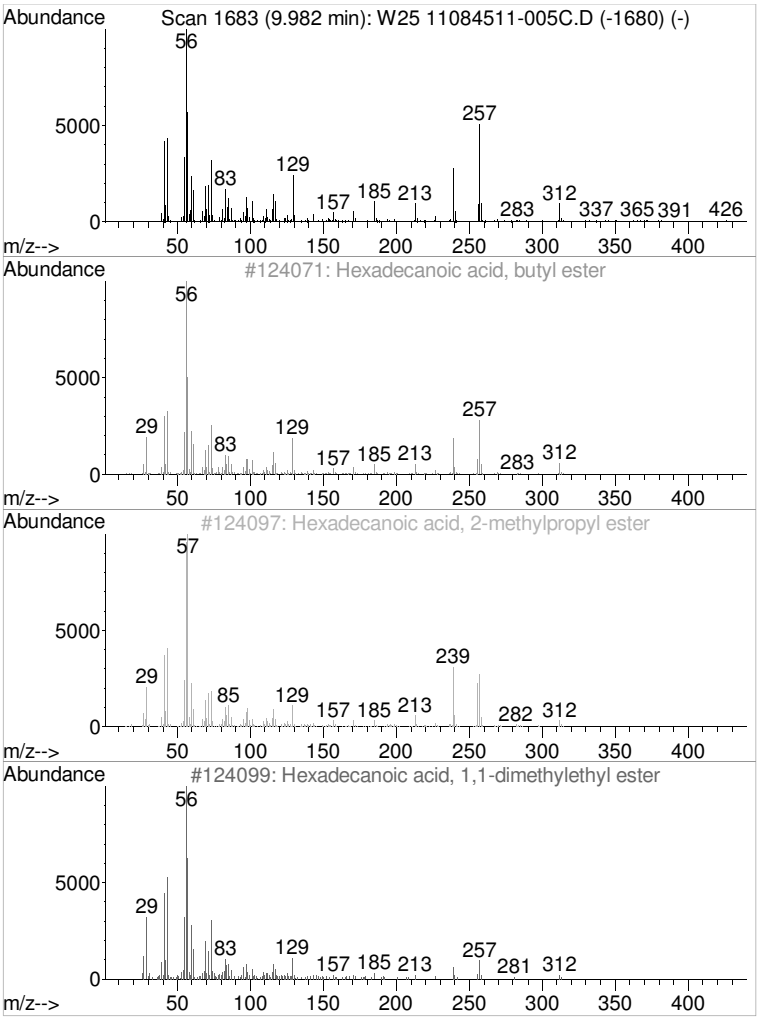
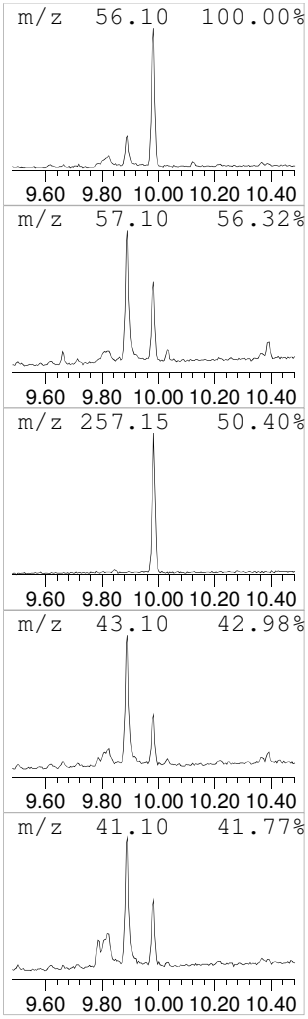
Peak Number 7 Hexadecanoic acid, butyl ester Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.98	22.01 ug/l	337939	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexadecanoic acid, butyl ester	312	C20H40O2	000111-06-8	99
2	Hexadecanoic acid, 2-methylpropy...	312	C20H40O2	000110-34-9	74
3	Hexadecanoic acid, 1,1-dimethyle...	312	C20H40O2	031158-91-5	47
4	Nipecotic acid	129	C6H11NO2	000498-95-3	38
5	2,4-Dipropyl-5-ethyl-1,3-dioxane	200	C12H24O2	006413-83-8	35





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W25 11084511-005C.D
Acq On : 2 Sep 2011 12:18 am
Operator : ALICIA HABERLE
Sample : 11084511-005C
Misc : SAMP
ALS Vial : 6 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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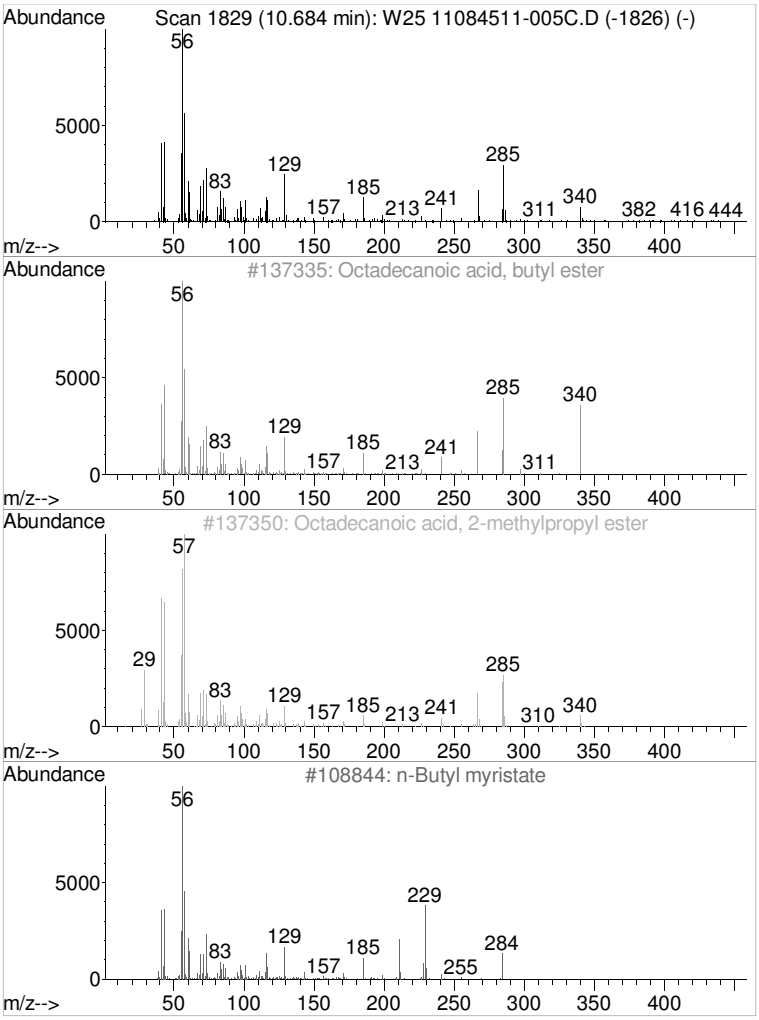
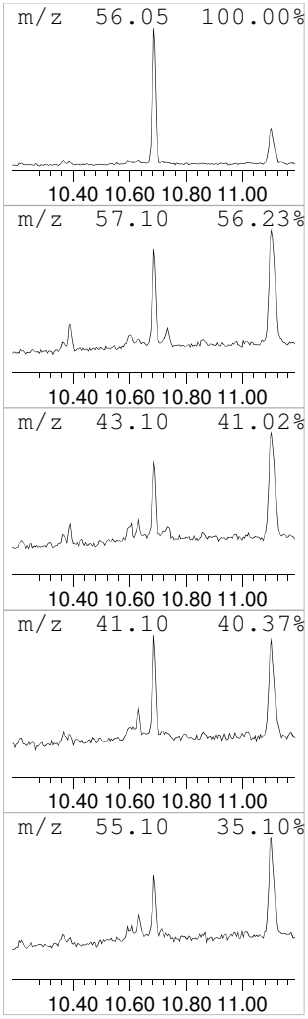
Peak Number 8 Octadecanoic acid, butyl ester Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.68	18.06 ug/l	277359	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	99
2	Octadecanoic acid, 2-methylpropy...	340	C22H44O2	000646-13-9	91
3	n-Butyl myristate	284	C18H36O2	000110-36-1	62
4	1,3-Pentanediol, 2,2,4-trimethyl-	146	C8H18O2	000144-19-4	38
5	1-Piperidinyloxy, 4-(hydroxyimin...	185	C9H17N2O2	003229-75-2	35





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W25 11084511-005C.D
Acq On : 2 Sep 2011 12:18 am
Operator : ALICIA HABERLE
Sample : 11084511-005C
Misc : SAMP
ALS Vial : 6 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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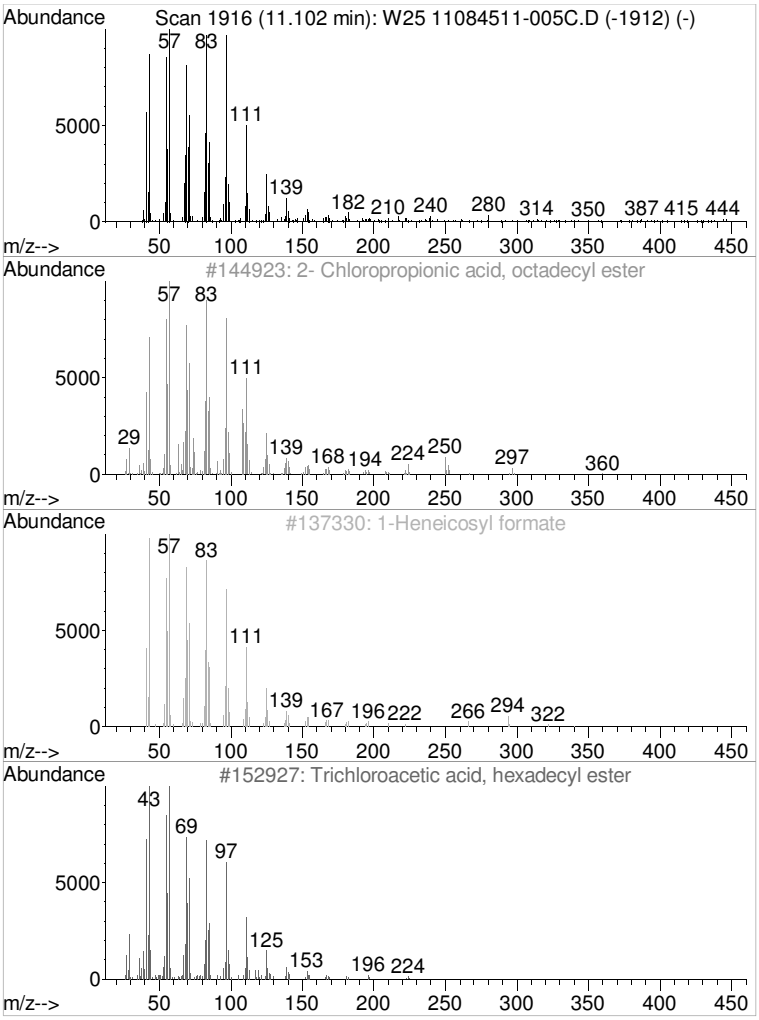
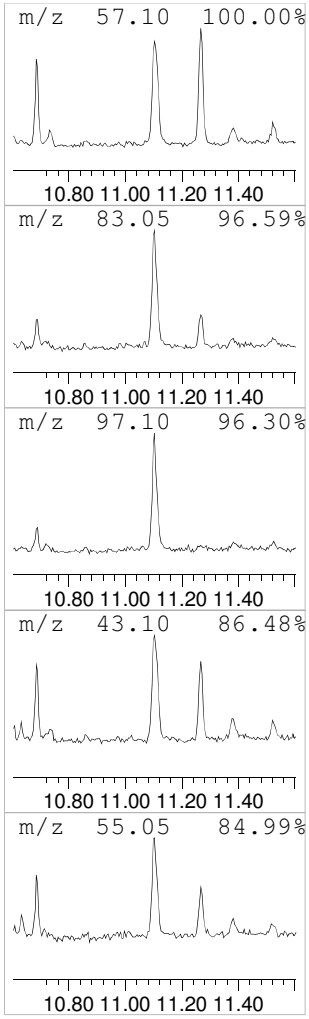
Peak Number 9 2- Chloropropionic acid, oc... Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.10	29.39 ug/l	451282	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2- Chloropropionic acid, octadec...	360	C21H41ClO2	088104-31-8	93
2	1-Heneicosyl formate	340	C22H44O2	077899-03-7	91
3	Trichloroacetic acid, hexadecyl ...	386	C18H33Cl3O2	074339-54-1	90
4	1-Heptadecanol	256	C17H36O	001454-85-9	90
5	1-Nonadecene	266	C19H38	018435-45-5	87





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W25 11084511-005C.D
Acq On : 2 Sep 2011 12:18 am
Operator : ALICIA HABERLE
Sample : 11084511-005C
Misc : SAMP
ALS Vial : 6 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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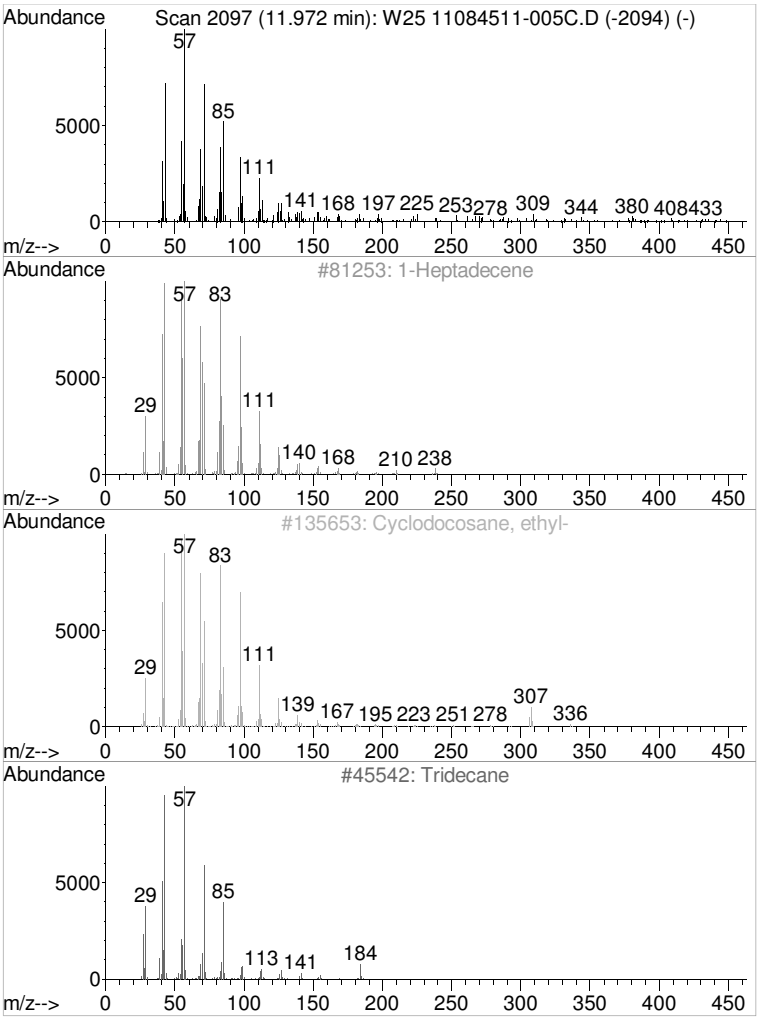
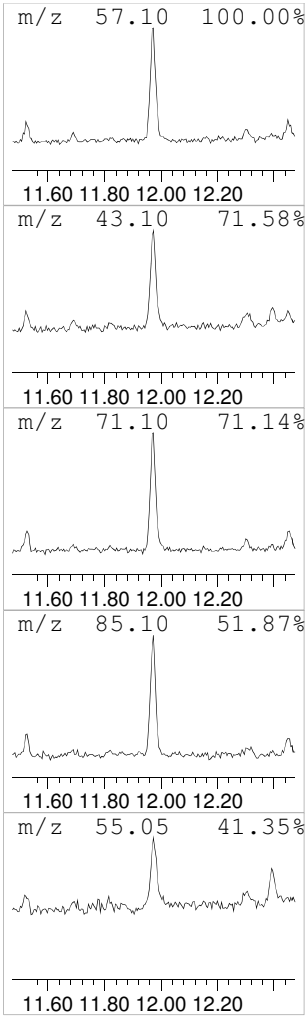
Peak Number 10 1-Heptadecene Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.97	16.38 ug/l	251556	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Heptadecene	238	C17H34	006765-39-5	95
2	Cyclodocosane, ethyl-	336	C24H48	1000151-22-6	87
3	Tridecane	184	C13H28	000629-50-5	86
4	Ethanol, 2-(octadecyloxy)-	314	C20H42O2	002136-72-3	83
5	Tetrapentacontane, 1,54-dibromo-	915	C54H108Br2	1000156-09-4	74





Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W25 11084511-005C.D
Acq On : 2 Sep 2011 12:18 am
Operator : ALICIA HABERLE
Sample : 11084511-005C
Misc : SAMP
ALS Vial : 6 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
2-Pentanone, 4-hy...	2.89	67.5	ug/l	1588520	1	4.21	942029	40.0
Acetamide, N-ethyl-	4.11	10.5	ug/l	246217	1	4.21	942029	40.0
4-((1E)-3-Hydroxy...	8.23	30.8	ug/l	912563	4	8.54	1186750	40.0
n-Hexadecanoic acid	9.11	41.0	ug/l	1216170	4	8.54	1186750	40.0
Desaspidinol	9.28	10.1	ug/l	300398	4	8.54	1186750	40.0
Octadecanoic acid	9.89	54.6	ug/l	838309	5	11.22	614270	40.0
Hexadecanoic acid...	9.98	22.0	ug/l	337939	5	11.22	614270	40.0
Octadecanoic acid...	10.68	18.1	ug/l	277359	5	11.22	614270	40.0
2- Chloropropioni...	11.10	29.4	ug/l	451282	5	11.22	614270	40.0
1-Heptadecene	11.97	16.4	ug/l	251556	5	11.22	614270	40.0

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W26 11084511-006C.D
Acq On : 2 Sep 2011 12:44 am
Operator : ALICIA HABERLE
Sample : 11084511-006C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.481	115	123	133	rBV3	45886	102541	5.09%	0.584%
2	2.644	154	157	162	rVB3	36500	26519	1.32%	0.151%
3	2.889	201	208	211	rBV	1912570	1641052	81.48%	9.346%
4	2.976	220	226	230	rVB	54746	38805	1.93%	0.221%
5	3.019	230	235	238	rBV	49050	37413	1.86%	0.213%
6	3.062	238	244	247	rBV	60691	49314	2.45%	0.281%
7	3.135	253	259	270	rBV	1216281	949378	47.14%	5.407%
8	3.216	273	276	284	rVB	34045	29970	1.49%	0.171%
9	3.880	411	414	428	rBV	1089829	904545	44.91%	5.151%
10	4.207	478	482	496	rBV	1138517	906127	44.99%	5.160%
11	4.640	567	572	578	rBV3	12360	31754	1.58%	0.181%
12	4.702	581	585	597	rVB	512619	443021	22.00%	2.523%
13	5.371	720	724	732	rBV	1631526	1216455	60.40%	6.928%
14	6.414	937	941	948	rBV	1401666	1056350	52.45%	6.016%
15	7.073	1071	1078	1093	rVB	1740817	1473478	73.16%	8.391%
16	7.852	1231	1240	1250	rBV	868013	784091	38.93%	4.465%
17	8.088	1285	1289	1292	rBV2	75775	59853	2.97%	0.341%
18	8.540	1372	1383	1391	rBV	1579704	1317060	65.39%	7.501%
19	9.102	1496	1500	1504	rBV	217394	197594	9.81%	1.125%
20	9.617	1603	1607	1614	rBV8	26656	36313	1.80%	0.207%
21	9.886	1659	1663	1667	rBV	76676	85426	4.24%	0.486%
22	9.982	1679	1683	1687	rVB	2600309	2014018	100.00%	11.470%
23	10.122	1708	1712	1717	rBV	1021543	920768	45.72%	5.244%
24	10.632	1815	1818	1821	rVB	78267	64929	3.22%	0.370%
25	10.689	1825	1830	1837	rVB	1719657	1600497	79.47%	9.115%
26	11.103	1912	1916	1922	rBV3	124707	175351	8.71%	0.999%
27	11.223	1936	1941	1947	rBV	764028	783631	38.91%	4.463%
28	12.392	2180	2184	2191	rVB	150788	204802	10.17%	1.166%
29	13.219	2351	2356	2363	rVB	281959	408566	20.29%	2.327%

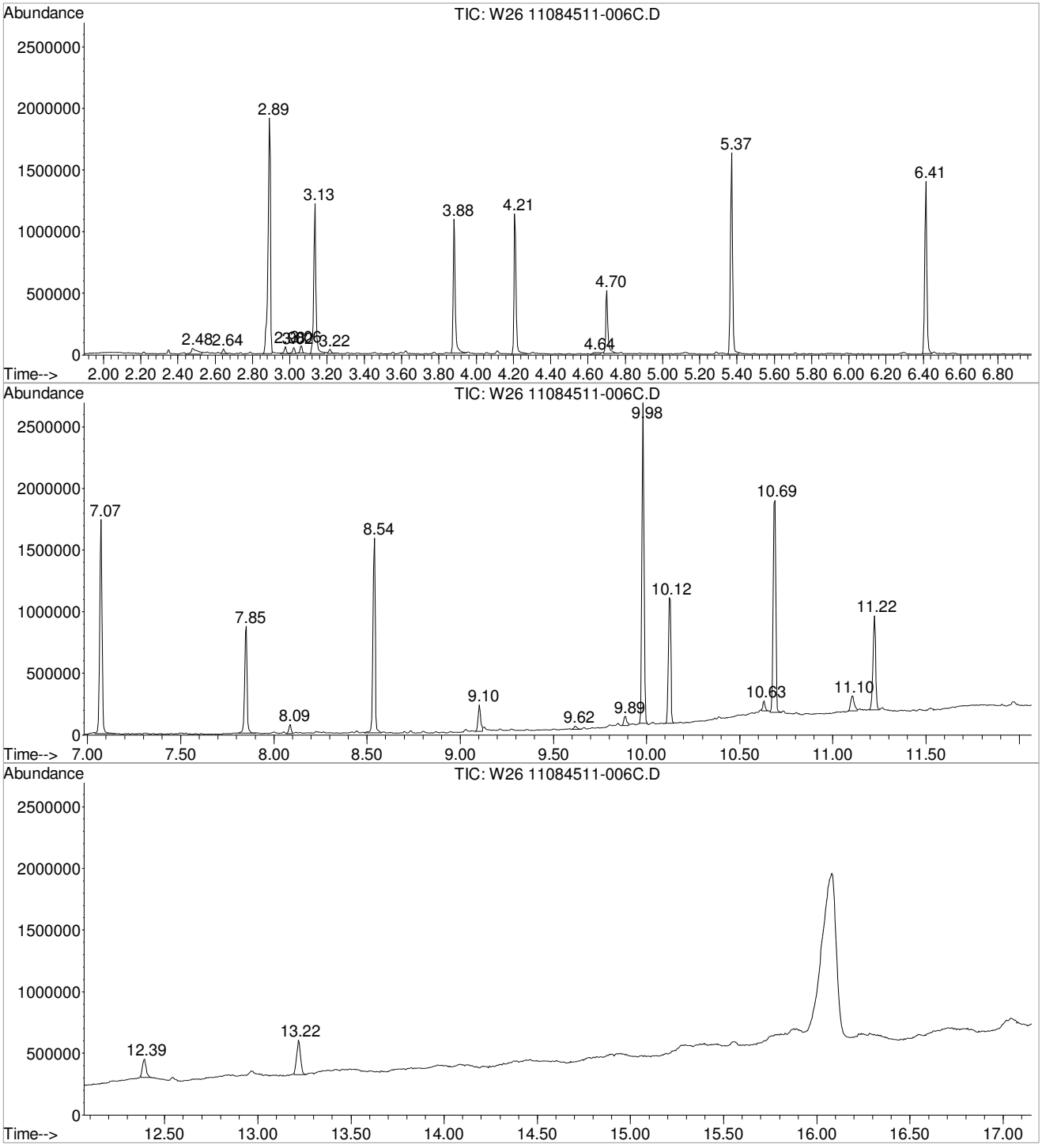
Sum of corrected areas: 17559621

LSC Report - Integrated Chromatogram

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W26 11084511-006C.D
Acq On : 2 Sep 2011 12:44 am
Operator : ALICIA HABERLE
Sample : 11084511-006C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W26 11084511-006C.D
Acq On : 2 Sep 2011 12:44 am
Operator : ALICIA HABERLE
Sample : 11084511-006C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

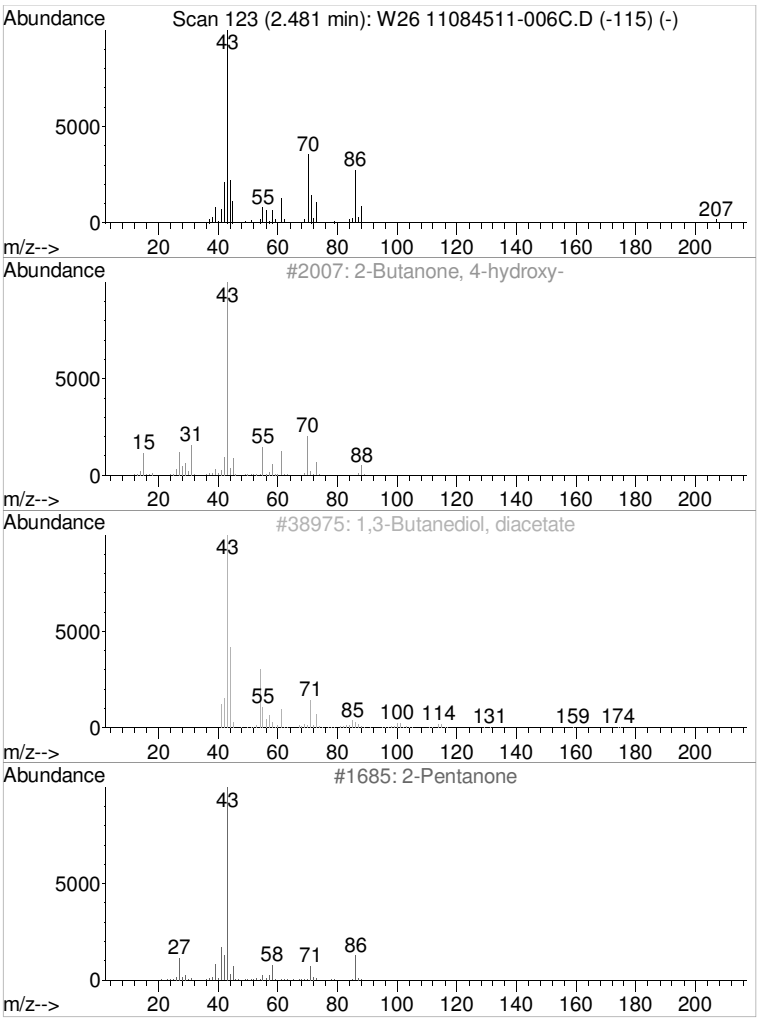
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

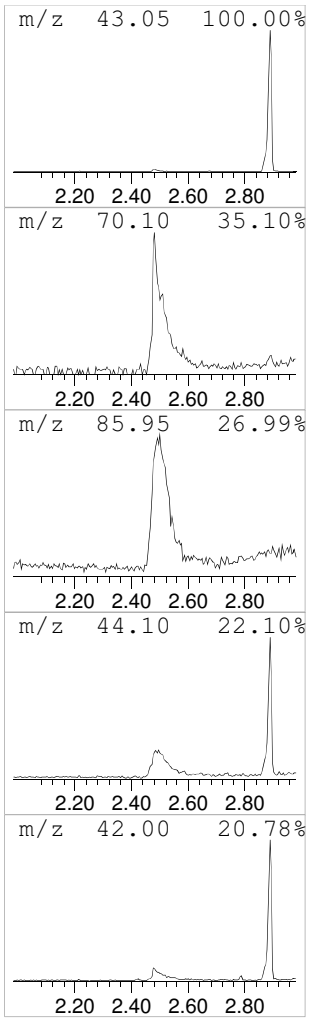
****

Peak Number 1 2-Butanone, 4-hydroxy- Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.48	4.53 ug/l	102541	ISTD 1,4-Dichlorobenzene-d4	4.21

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Butanone, 4-hydroxy-	88	C4H8O2	000590-90-9	47
2	1,3-Butanediol, diacetate	174	C8H14O4	001117-31-3	32
3	2-Pentanone	86	C5H10O	000107-87-9	32
4	N,N'-Bis(2-methyl-2-nitrosobutan...	230	C10H18N2O4	034946-73-1	32
5	Propanoic acid, 2-oxo-, 3-methyl...	158	C8H14O3	007779-72-8	32





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W26 11084511-006C.D
Acq On : 2 Sep 2011 12:44 am
Operator : ALICIA HABERLE
Sample : 11084511-006C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

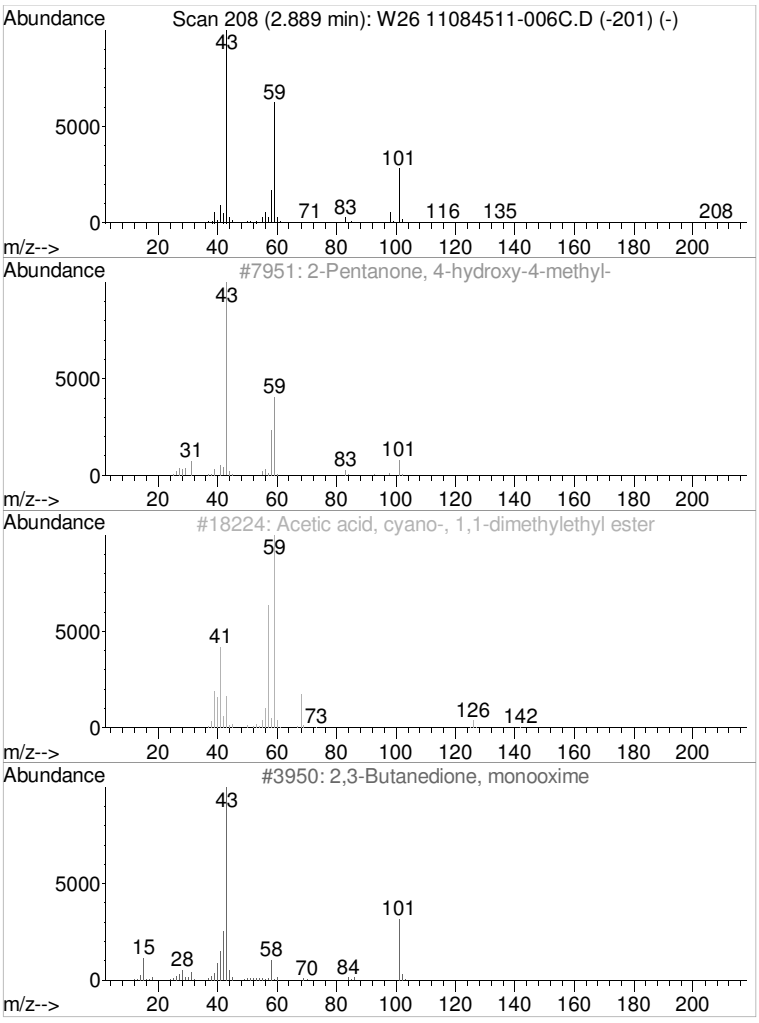
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

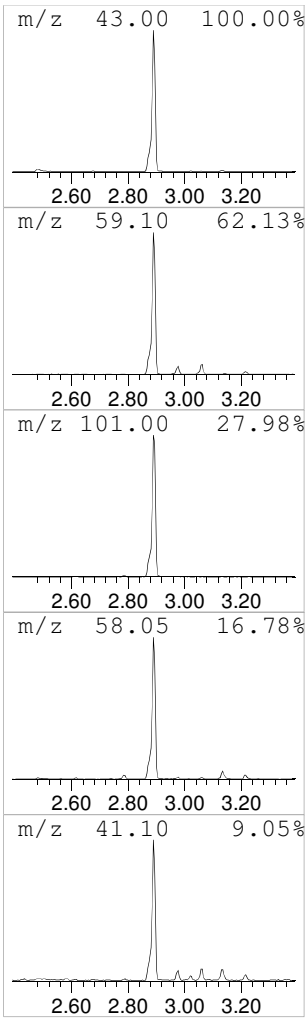
****

Peak Number 2 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.89	72.44 ug/l	1641050	ISTD 1,4-Dichlorobenzene-d4	4.21

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	56
2	Acetic acid, cyano-, 1,1-dimethy...	141	C7H11NO2	001116-98-9	17
3	2,3-Butanedione, monooxime	101	C4H7NO2	000057-71-6	17
4	(+-)-4-Amino-4,5-dihydro-2(3H)-f...	101	C4H7NO2	016504-58-8	9
5	Morpholine, 4-methyl-	101	C5H11NO	000109-02-4	9





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W26 11084511-006C.D
Acq On : 2 Sep 2011 12:44 am
Operator : ALICIA HABERLE
Sample : 11084511-006C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

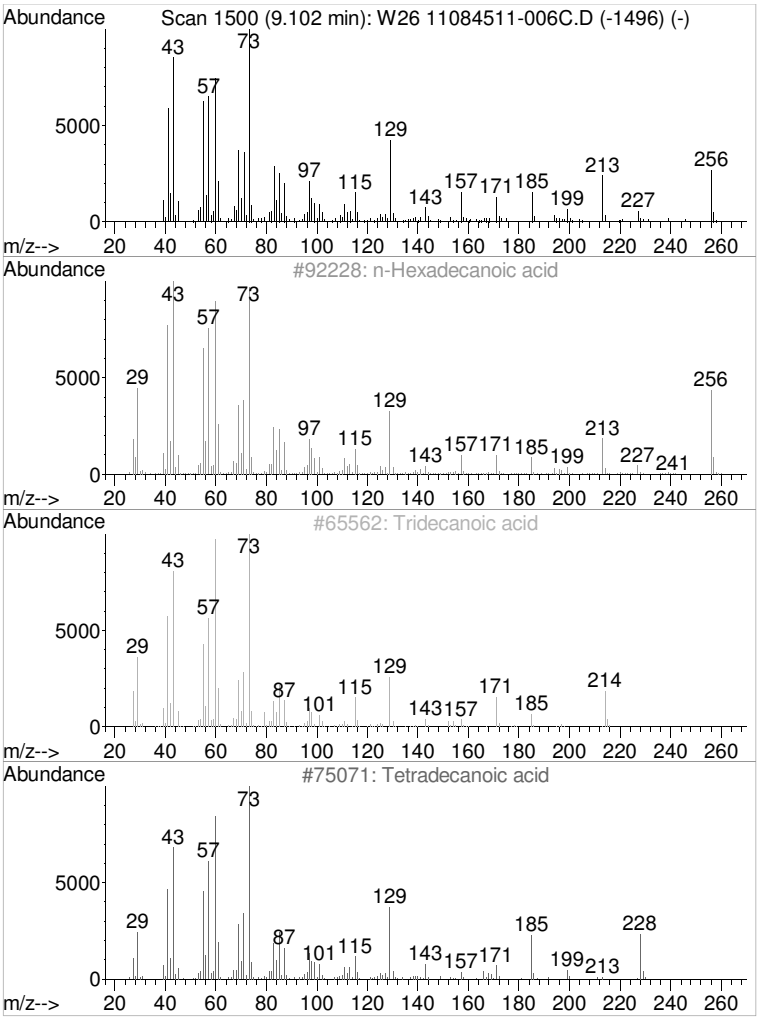
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

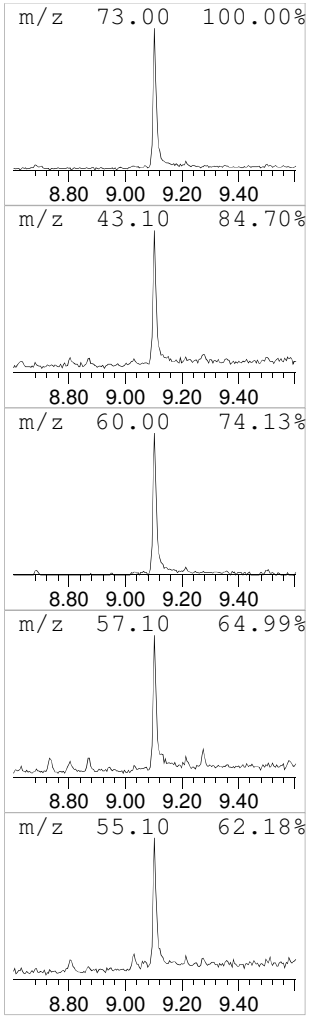
****

Peak Number 3 n-Hexadecanoic acid Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.10	6.00 ug/l	197594	ISTD-Phenanthrene-d10	8.54

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	99
2	Tridecanoic acid	214	C13H26O2	000638-53-9	90
3	Tetradecanoic acid	228	C14H28O2	000544-63-8	90
4	Pentadecanoic acid	242	C15H30O2	001002-84-2	68
5	n-Decanoic acid	172	C10H20O2	000334-48-5	58





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W26 11084511-006C.D
Acq On : 2 Sep 2011 12:44 am
Operator : ALICIA HABERLE
Sample : 11084511-006C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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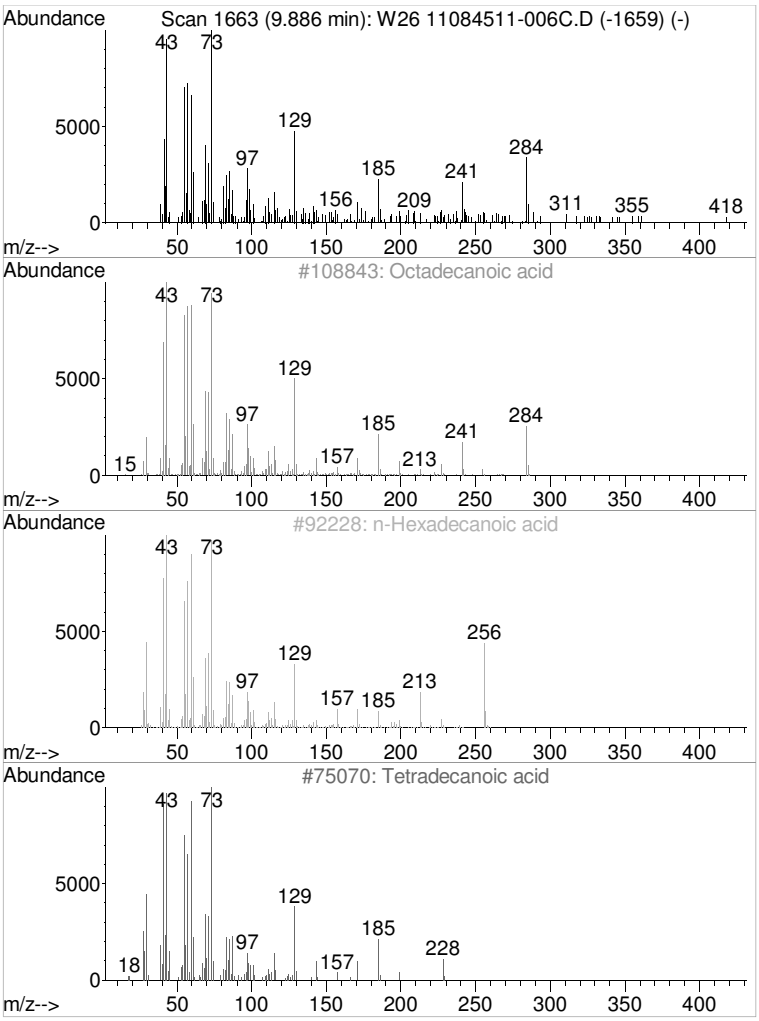
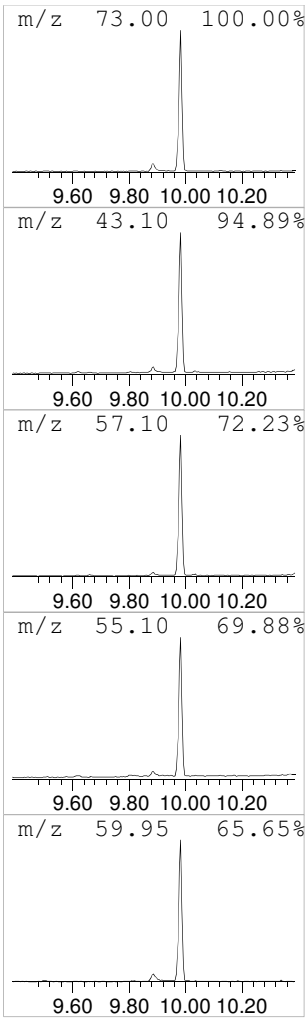
Peak Number 4 Octadecanoic acid Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.89	4.36 ug/l	85426	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid	284	C18H36O2	000057-11-4	98
2	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	70
3	Tetradecanoic acid	228	C14H28O2	000544-63-8	62
4	Pentadecanoic acid	242	C15H30O2	001002-84-2	50
5	Undecanoic acid	186	C11H22O2	000112-37-8	38





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W26 11084511-006C.D
Acq On : 2 Sep 2011 12:44 am
Operator : ALICIA HABERLE
Sample : 11084511-006C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

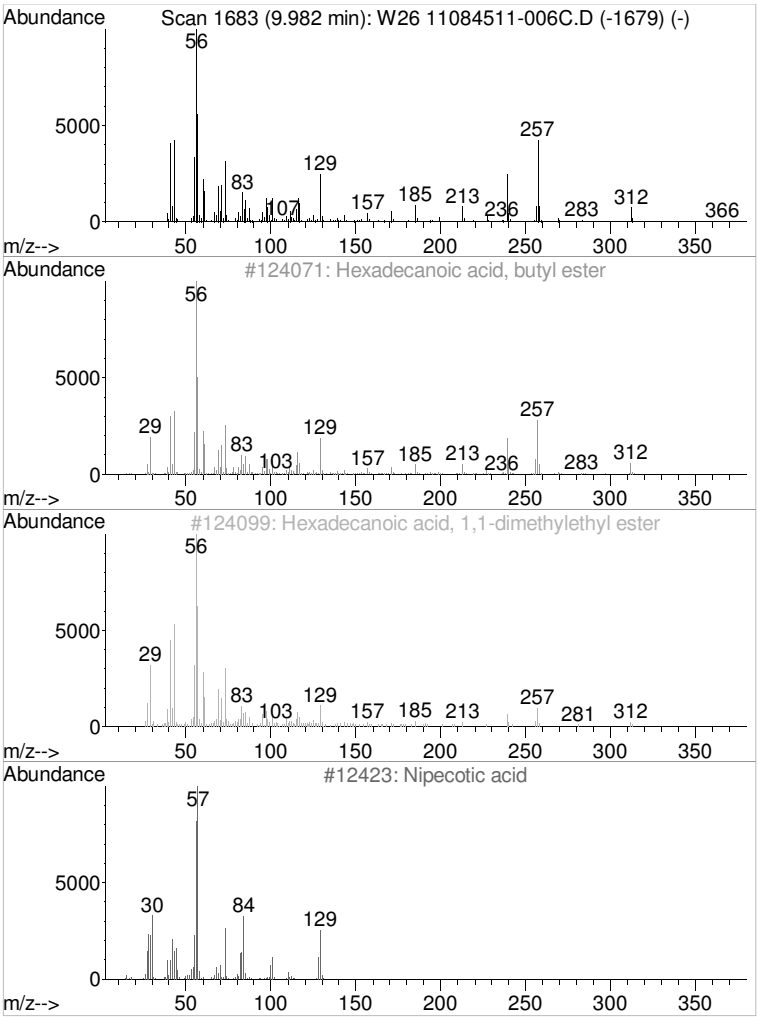
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

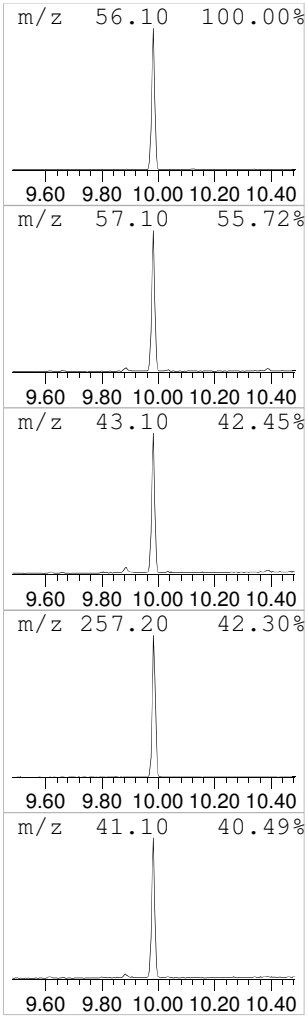
****

Peak Number 5 Hexadecanoic acid, butyl ester Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.98	102.80 ug/l	2014020	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexadecanoic acid, butyl ester	312	C20H40O2	000111-06-8	99
2	Hexadecanoic acid, 1,1-dimethyle...	312	C20H40O2	031158-91-5	91
3	Nipecotic acid	129	C6H11NO2	000498-95-3	38
4	Hexadecanoic acid, 2-methylpropy...	312	C20H40O2	000110-34-9	30
5	Cyclohexanol, 4-amino-, trans-	115	C6H13NO	027489-62-9	25





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W26 11084511-006C.D
Acq On : 2 Sep 2011 12:44 am
Operator : ALICIA HABERLE
Sample : 11084511-006C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

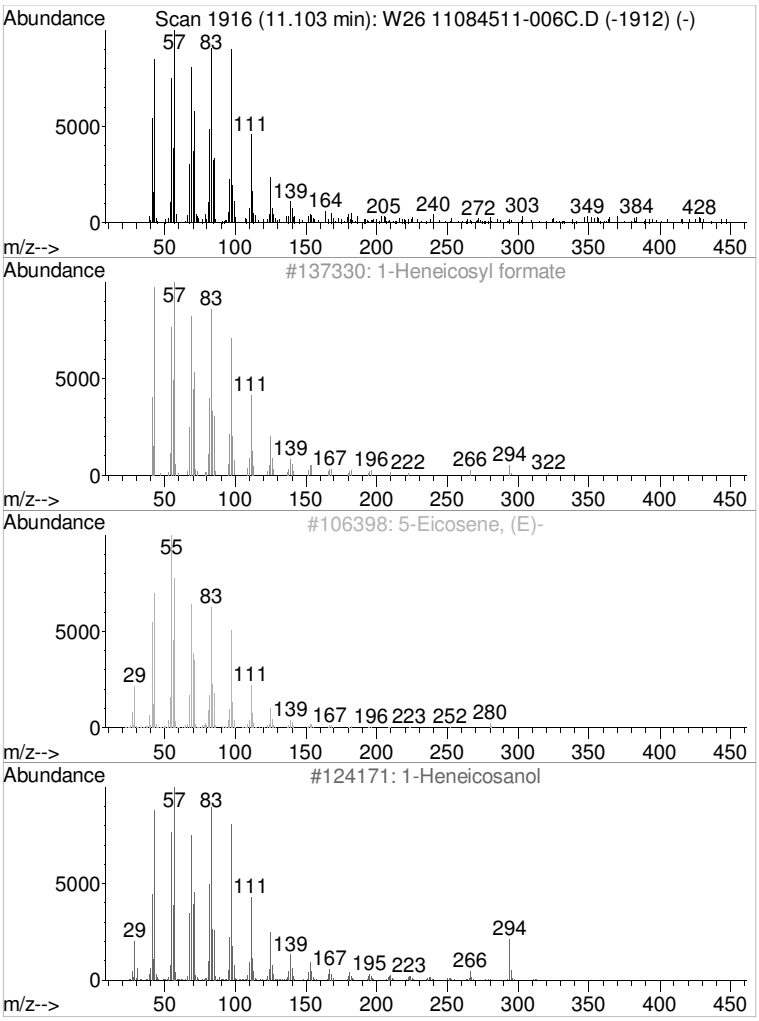
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

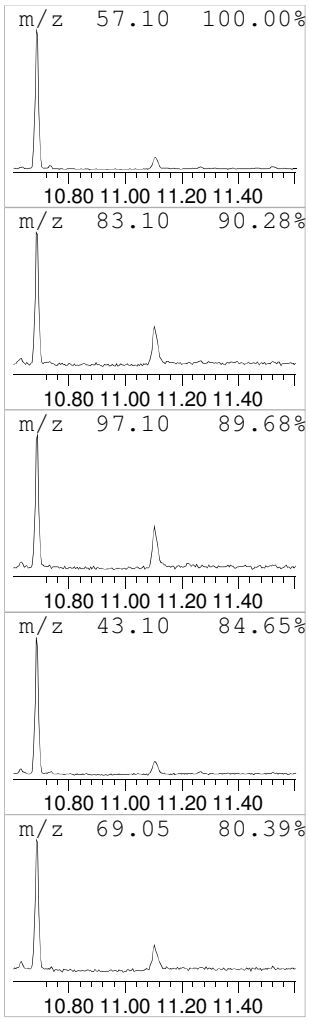
****

Peak Number 6 1-Heneicosyl formate Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.10	8.95 ug/l	175351	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Heneicosyl formate	340	C22H44O2	077899-03-7	94
2	5-Eicosene, (E)-	280	C20H40	074685-30-6	93
3	1-Heneicosanol	312	C21H44O	015594-90-8	91
4	1-Hexadecanol	242	C16H34O	036653-82-4	91
5	1-Nonadecene	266	C19H38	018435-45-5	91





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W26 11084511-006C.D
Acq On : 2 Sep 2011 12:44 am
Operator : ALICIA HABERLE
Sample : 11084511-006C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

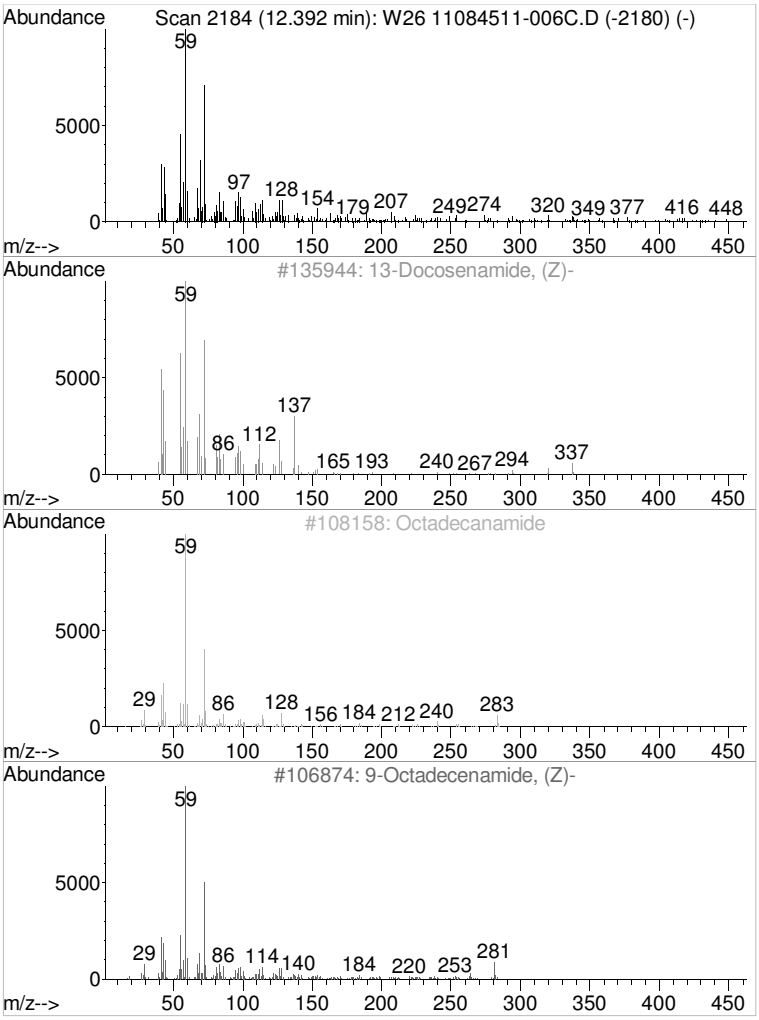
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

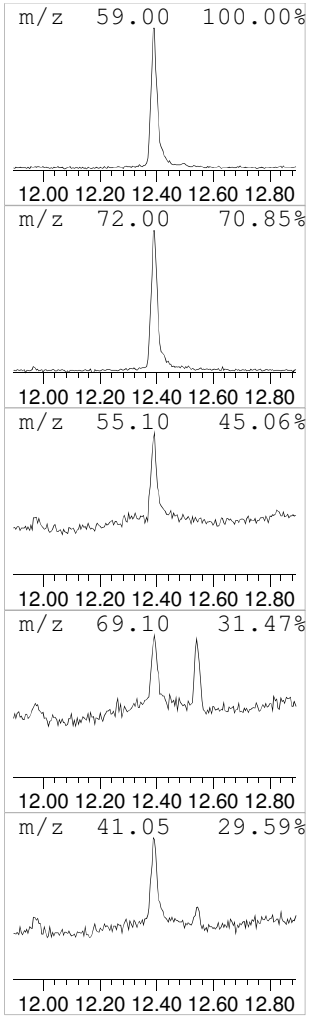
****

Peak Number 7 13-Docosenamide, (Z)- Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.39	20.05 ug/l	204802	ISTD-Perylene-d12	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	13-Docosenamide, (Z)-	337	C22H43NO	000112-84-5	93
2	Octadecanamide	283	C18H37NO	000124-26-5	53
3	9-Octadecenamide, (Z)-	281	C18H35NO	000301-02-0	53
4	Dodecanamide	199	C12H25NO	001120-16-7	50
5	2-Octanol, 2-methyl-6-methylene-	156	C10H20O	018479-59-9	45





Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W26 11084511-006C.D
Acq On : 2 Sep 2011 12:44 am
Operator : ALICIA HABERLE
Sample : 11084511-006C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
2-Butanone, 4-hyd...	2.48	4.5	ug/l	102541	1	4.21	906127	40.0
2-Pentanone, 4-hy...	2.89	72.4	ug/l	1641050	1	4.21	906127	40.0
n-Hexadecanoic acid	9.10	6.0	ug/l	197594	4	8.54	1317060	40.0
Octadecanoic acid	9.89	4.4	ug/l	85426	5	11.22	783631	40.0
Hexadecanoic acid...	9.98	102.8	ug/l	2014020	5	11.22	783631	40.0
1-Heneicosyl formate	11.10	9.0	ug/l	175351	5	11.22	783631	40.0
13-Docosenamide, ...	12.39	20.1	ug/l	204802	6	13.22	408566	40.0

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W27 11084511-008C.D
Acq On : 2 Sep 2011 1:10 am
Operator : ALICIA HABERLE
Sample : 11084511-008C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	1.937	8	10	14	rVB	75880	44236	1.80%	0.153%
2	2.067	34	37	43	rVB2	51832	40759	1.66%	0.141%
3	2.351	91	96	99	rVB	53892	39879	1.62%	0.138%
4	2.476	119	122	133	rVV	226361	205297	8.36%	0.712%
5	2.558	137	139	142	rVV	52781	38739	1.58%	0.134%
6	2.630	151	154	155	rVV	51690	40819	1.66%	0.142%
7	2.644	155	157	162	rVB2	57677	42867	1.75%	0.149%
8	2.894	202	209	212	rVV	2292827	1726842	70.32%	5.992%
9	2.976	221	226	230	rBV	99757	72456	2.95%	0.251%
10	3.019	233	235	239	rVB	50717	37685	1.53%	0.131%
11	3.063	239	244	247	rBV	74005	55370	2.25%	0.192%
12	3.135	254	259	266	rBV	1247562	904168	36.82%	3.137%
13	3.217	272	276	282	rVB3	38761	36837	1.50%	0.128%
14	3.409	312	316	323	rBV3	37885	47005	1.91%	0.163%
15	3.837	401	405	407	rBV	129824	99326	4.04%	0.345%
16	3.880	410	414	425	rVV	1064900	966970	39.38%	3.355%
17	3.957	425	430	434	rVB2	49031	55067	2.24%	0.191%
18	4.116	459	463	467	rVV	429894	326034	13.28%	1.131%
19	4.207	478	482	487	rBV	1133579	821871	33.47%	2.852%
20	4.246	487	490	496	rVB	88881	78208	3.18%	0.271%
21	4.323	503	506	511	rBV	69351	56365	2.30%	0.196%
22	4.361	511	514	517	rBV2	40945	33553	1.37%	0.116%
23	4.428	525	528	532	rVB	106146	82880	3.38%	0.288%
24	4.558	547	555	558	rBV3	28229	35641	1.45%	0.124%
25	4.702	581	585	588	rBV	465586	381755	15.55%	1.325%
26	4.726	588	590	593	rVV2	49993	43141	1.76%	0.150%
27	4.751	593	595	598	rVV	40317	32319	1.32%	0.112%
28	4.842	609	614	617	rBV2	44130	41287	1.68%	0.143%
29	5.082	658	664	666	rBV4	24501	36741	1.50%	0.127%
30	5.116	666	671	680	rVB2	98912	149313	6.08%	0.518%
31	5.289	702	707	708	rBV2	43034	37068	1.51%	0.129%
32	5.313	708	712	720	rVV	389053	419084	17.07%	1.454%
33	5.371	720	724	731	rVB	1464451	1131905	46.10%	3.928%
34	5.477	742	746	751	rBV	40665	36951	1.50%	0.128%
35	5.626	773	777	780	rBV	125498	111032	4.52%	0.385%
36	5.885	827	831	834	rBV2	34089	33778	1.38%	0.117%
37	5.991	849	853	856	rBV3	37628	42664	1.74%	0.148%
38	6.068	863	869	873	rVB	118543	100247	4.08%	0.348%

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W27 11084511-008C.D
Acq On : 2 Sep 2011 1:10 am
Operator : ALICIA HABERLE
Sample : 11084511-008C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

39	6.309	914	919	925	rVB2	96321	106727	4.35%	0.370%
40	6.414	935	941	947	rBV	1258154	996323	40.57%	3.457%
41	6.511	954	961	962	rBV5	27770	33186	1.35%	0.115%
42	6.559	967	971	981	rVB	285831	272123	11.08%	0.944%
43	6.674	988	995	1002	rVB2	20392	34120	1.39%	0.118%
44	6.818	1020	1025	1031	rVB	250842	212454	8.65%	0.737%
45	7.011	1058	1065	1068	rVV2	128956	167159	6.81%	0.580%
46	7.073	1068	1078	1083	rVV2	2009530	2455566	100.00%	8.520%
47	7.338	1129	1133	1136	rVV3	61248	86294	3.51%	0.299%
48	7.371	1137	1140	1148	rVB2	109148	114963	4.68%	0.399%
49	7.501	1163	1167	1171	rBV2	121776	105975	4.32%	0.368%
50	7.607	1186	1189	1195	rVB7	30408	32589	1.33%	0.113%
51	7.713	1207	1211	1214	rBV2	39758	45755	1.86%	0.159%
52	7.737	1214	1216	1220	rVV	40271	33484	1.36%	0.116%
53	7.790	1221	1227	1230	rVV5	39998	69597	2.83%	0.241%
54	7.828	1231	1235	1236	rVV	161168	157221	6.40%	0.546%
55	7.847	1236	1239	1246	rVV2	831862	776096	31.61%	2.693%
56	7.915	1249	1253	1256	rBV2	58119	53157	2.16%	0.184%
57	8.001	1267	1271	1274	rBV4	43123	42049	1.71%	0.146%
58	8.030	1274	1277	1280	rBV	169165	119032	4.85%	0.413%
59	8.083	1285	1288	1292	rBV2	116739	98429	4.01%	0.342%
60	8.146	1298	1301	1304	rBV3	48326	61259	2.49%	0.213%
61	8.174	1304	1307	1310	rVV3	103450	120182	4.89%	0.417%
62	8.198	1310	1312	1314	rVV3	73377	78398	3.19%	0.272%
63	8.227	1314	1318	1325	rVB2	1549662	1572174	64.02%	5.455%
64	8.492	1368	1373	1376	rBV5	35896	50571	2.06%	0.175%
65	8.540	1377	1383	1386	rVV	1331395	1200090	48.87%	4.164%
66	8.564	1386	1388	1393	rVB3	146013	127622	5.20%	0.443%
67	8.631	1399	1402	1410	rVB	51788	45284	1.84%	0.157%
68	8.790	1433	1435	1442	rVB3	71694	74646	3.04%	0.259%
69	8.843	1443	1446	1449	rBV	77137	62659	2.55%	0.217%
70	8.886	1449	1455	1458	rVB	95495	96533	3.93%	0.335%
71	8.953	1465	1469	1474	rBV6	39369	49928	2.03%	0.173%
72	9.035	1481	1486	1489	rBV2	139925	144708	5.89%	0.502%
73	9.069	1489	1493	1497	rVV	452356	399560	16.27%	1.386%
74	9.112	1497	1502	1509	rVV	1105156	1095193	44.60%	3.800%
75	9.155	1509	1511	1517	rVB3	44413	51108	2.08%	0.177%
76	9.247	1527	1530	1533	rBV	100058	90610	3.69%	0.314%
77	9.280	1533	1537	1548	rVB	710921	678916	27.65%	2.356%
78	9.737	1629	1632	1636	rVB	57606	49176	2.00%	0.171%
79	9.785	1639	1642	1644	rBV	187753	168364	6.86%	0.584%
80	9.805	1644	1646	1648	rBV2	120806	102246	4.16%	0.355%

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W27 11084511-008C.D
Acq On : 2 Sep 2011 1:10 am
Operator : ALICIA HABERLE
Sample : 11084511-008C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

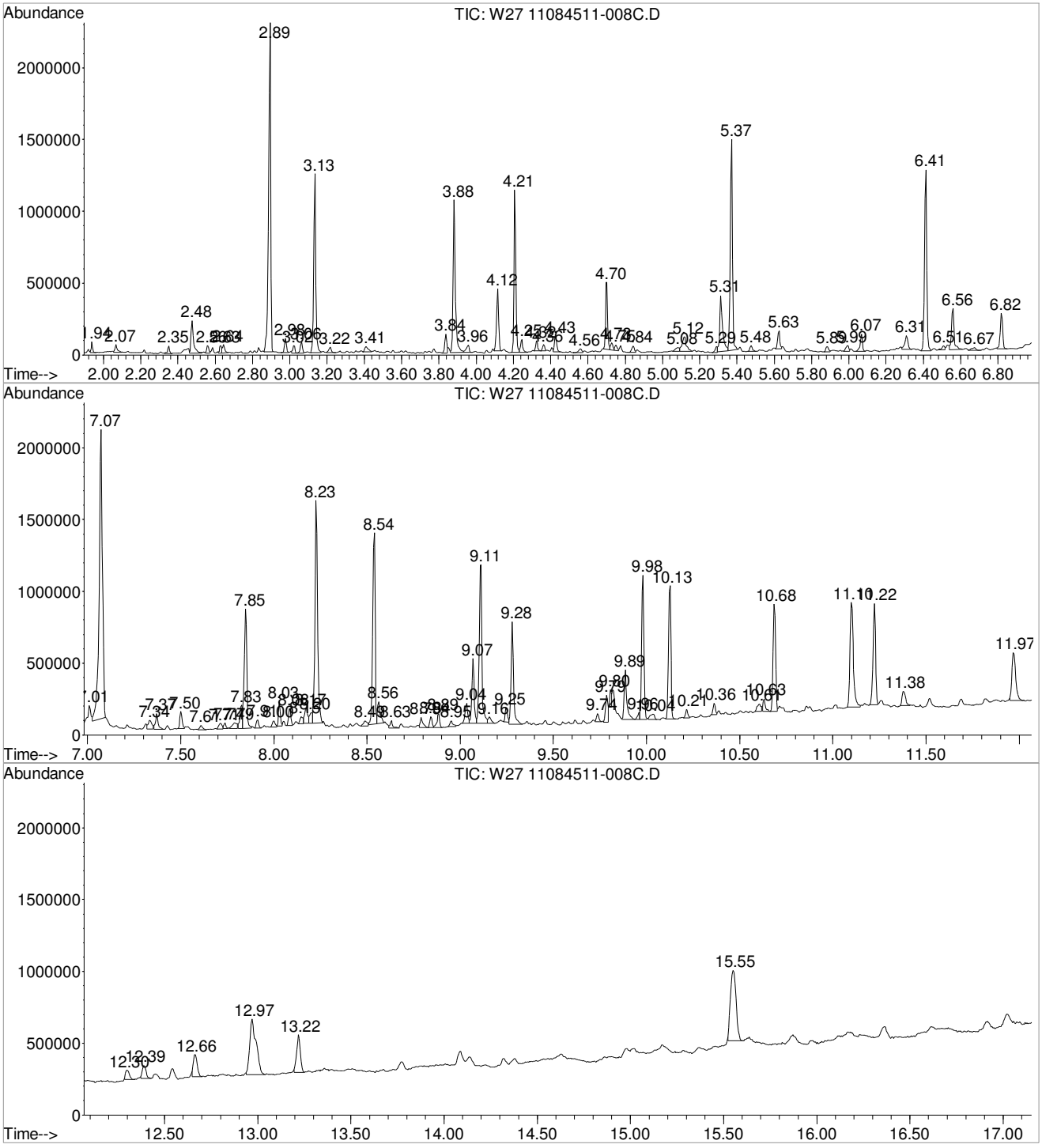
81	9.886	1659	1663	1674	rVB2	347677	357182	14.55%	1.239%
82	9.958	1675	1678	1679	rVV3	51478	42571	1.73%	0.148%
83	9.982	1679	1683	1687	rVV	1004564	844339	34.38%	2.930%
84	10.035	1689	1694	1698	rVB3	38382	57571	2.34%	0.200%
85	10.127	1708	1713	1719	rVB	930018	808851	32.94%	2.807%
86	10.213	1728	1731	1735	rBV4	58827	54929	2.24%	0.191%
87	10.362	1759	1762	1765	rBV	82234	66684	2.72%	0.231%
88	10.608	1808	1813	1815	rBV4	49108	71800	2.92%	0.249%
89	10.632	1816	1818	1825	rVB	88203	75227	3.06%	0.261%
90	10.685	1825	1829	1833	rBV	748212	667198	27.17%	2.315%
91	11.098	1911	1915	1925	rBV	729237	916715	37.33%	3.181%
92	11.223	1936	1941	1945	rBV	705551	689613	28.08%	2.393%
93	11.377	1970	1973	1981	rBV4	99814	125814	5.12%	0.437%
94	11.969	2092	2096	2107	rVB	332687	465446	18.95%	1.615%
95	12.300	2162	2165	2173	rVB6	65142	91270	3.72%	0.317%
96	12.387	2180	2183	2191	rVB2	92619	129032	5.25%	0.448%
97	12.661	2237	2240	2248	rVB4	154276	220891	9.00%	0.766%
98	12.969	2298	2304	2318	rVB2	388403	927416	37.77%	3.218%
99	13.219	2351	2356	2362	rVB	262396	367159	14.95%	1.274%
100	15.551	2835	2841	2852	rVB3	491619	1022361	41.63%	3.547%

Sum of corrected areas: 28819754

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W27 11084511-008C.D
Acq On : 2 Sep 2011 1:10 am
Operator : ALICIA HABERLE
Sample : 11084511-008C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



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Acq On : 2 Sep 2011 1:10 am
Operator : ALICIA HABERLE
Sample : 11084511-008C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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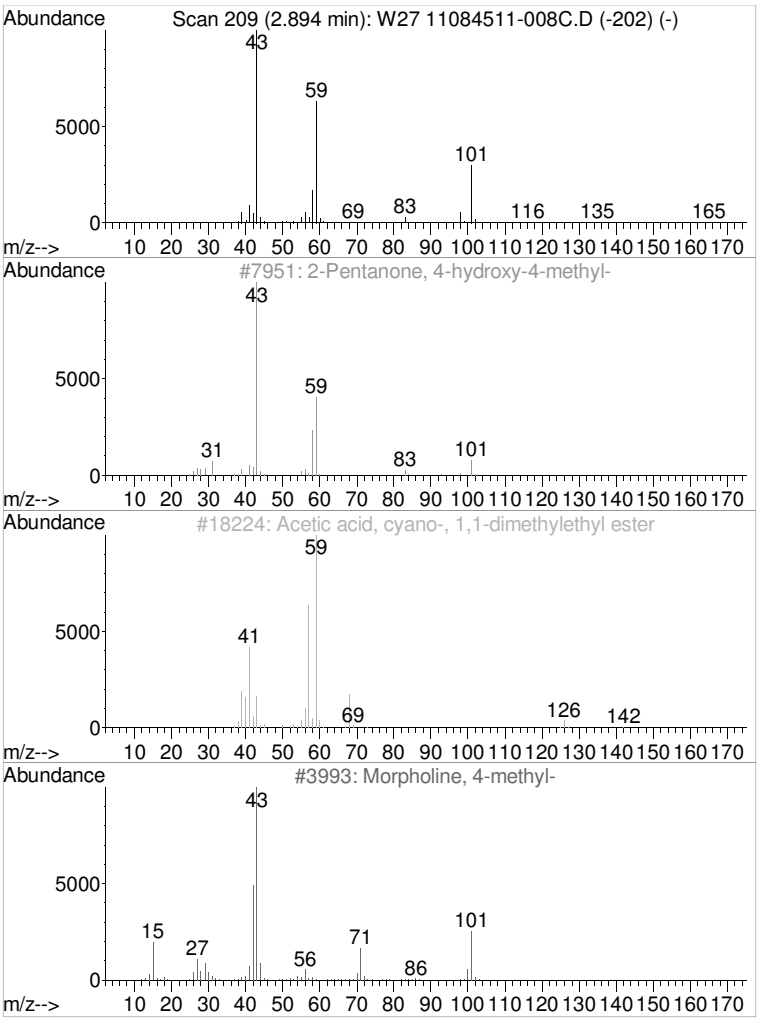
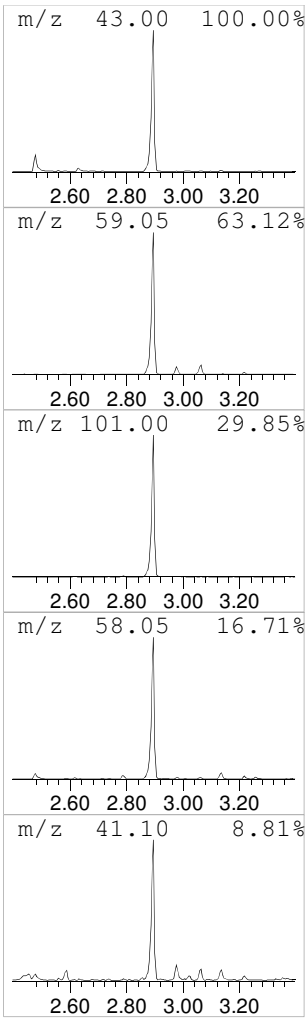
Peak Number 1 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.89	84.04 ug/l	1726840	ISTD 1,4-Dichlorobenzene-d4	4.21

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	56
2	Acetic acid, cyano-, 1,1-dimethy...	141	C7H11NO2	001116-98-9	17
3	Morpholine, 4-methyl-	101	C5H11NO	000109-02-4	9
4	5-Hexen-2-one	98	C6H10O	000109-49-9	9
5	(+-)-4-Amino-4,5-dihydro-2(3H)-f...	101	C4H7NO2	016504-58-8	9





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Data File : W27 11084511-008C.D
Acq On : 2 Sep 2011 1:10 am
Operator : ALICIA HABERLE
Sample : 11084511-008C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

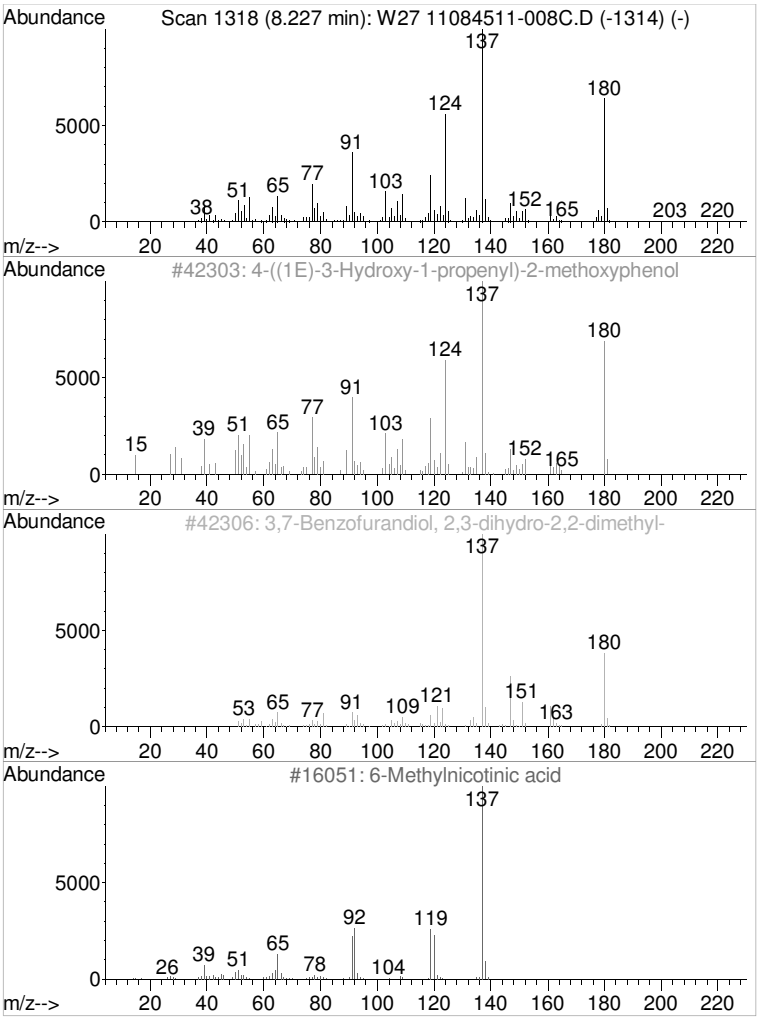
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

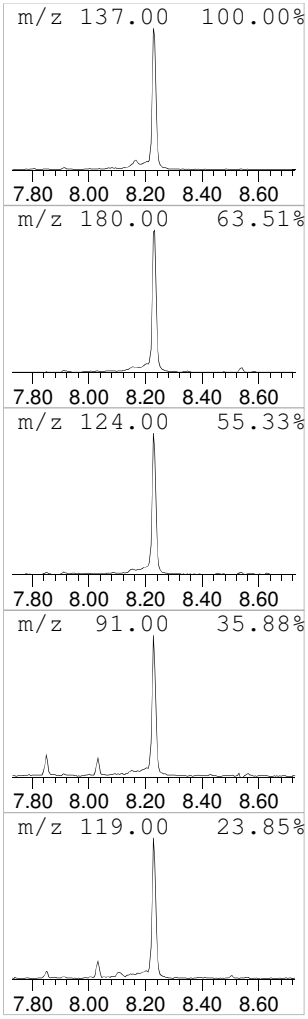
****

Peak Number 2 4-((1E)-3-Hydroxy-1-propeny... Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.23	52.40 ug/l	1572170	ISTD-Phenanthrene-d10	8.54

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	4-((1E)-3-Hydroxy-1-propenyl)-2-...	180	C10H12O3	1000297-95-5	96
2	3,7-Benzofurandiol, 2,3-dihydro-...	180	C10H12O3	017781-15-6	47
3	6-Methylnicotinic acid	137	C7H7NO2	003222-47-7	35
4	Phenol, 3-methyl-4-nitroso-	137	C7H7NO2	000615-01-0	30
5	2',6'-Dihydroxyacetophenone	152	C8H8O3	000699-83-2	27





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W27 11084511-008C.D
Acq On : 2 Sep 2011 1:10 am
Operator : ALICIA HABERLE
Sample : 11084511-008C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

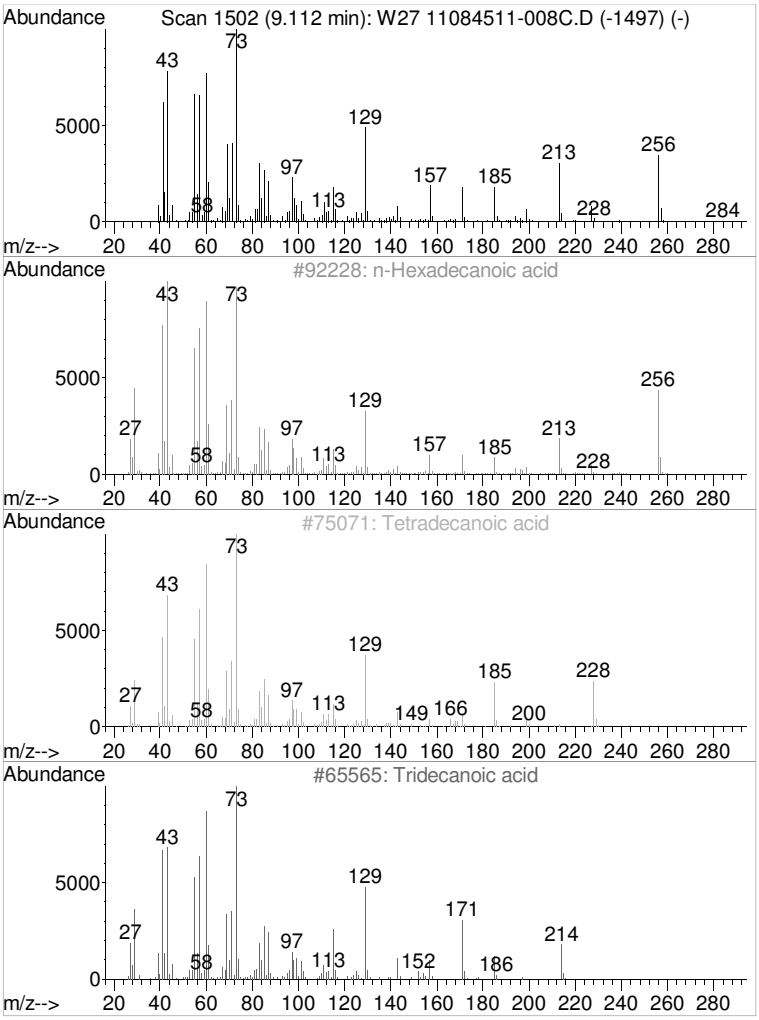
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

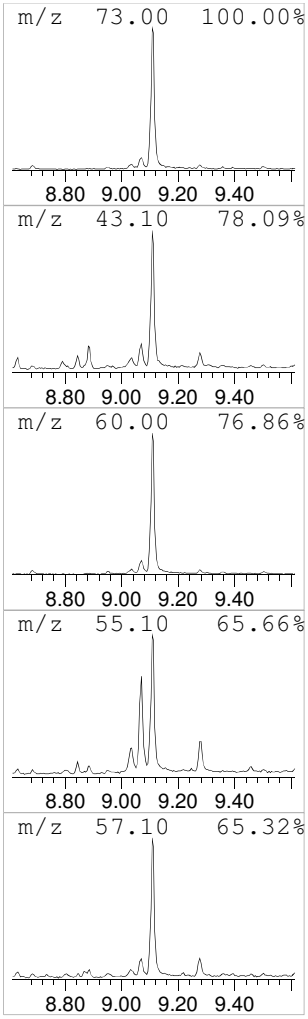
****

Peak Number 3 n-Hexadecanoic acid Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.11	36.50 ug/l	1095190	ISTD-Phenanthrene-d10	8.54

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	96
2	Tetradecanoic acid	228	C14H28O2	000544-63-8	93
3	Tridecanoic acid	214	C13H26O2	000638-53-9	83
4	n-Decanoic acid	172	C10H20O2	000334-48-5	70
5	Pentadecanoic acid	242	C15H30O2	001002-84-2	64





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Data File : W27 11084511-008C.D
Acq On : 2 Sep 2011 1:10 am
Operator : ALICIA HABERLE
Sample : 11084511-008C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

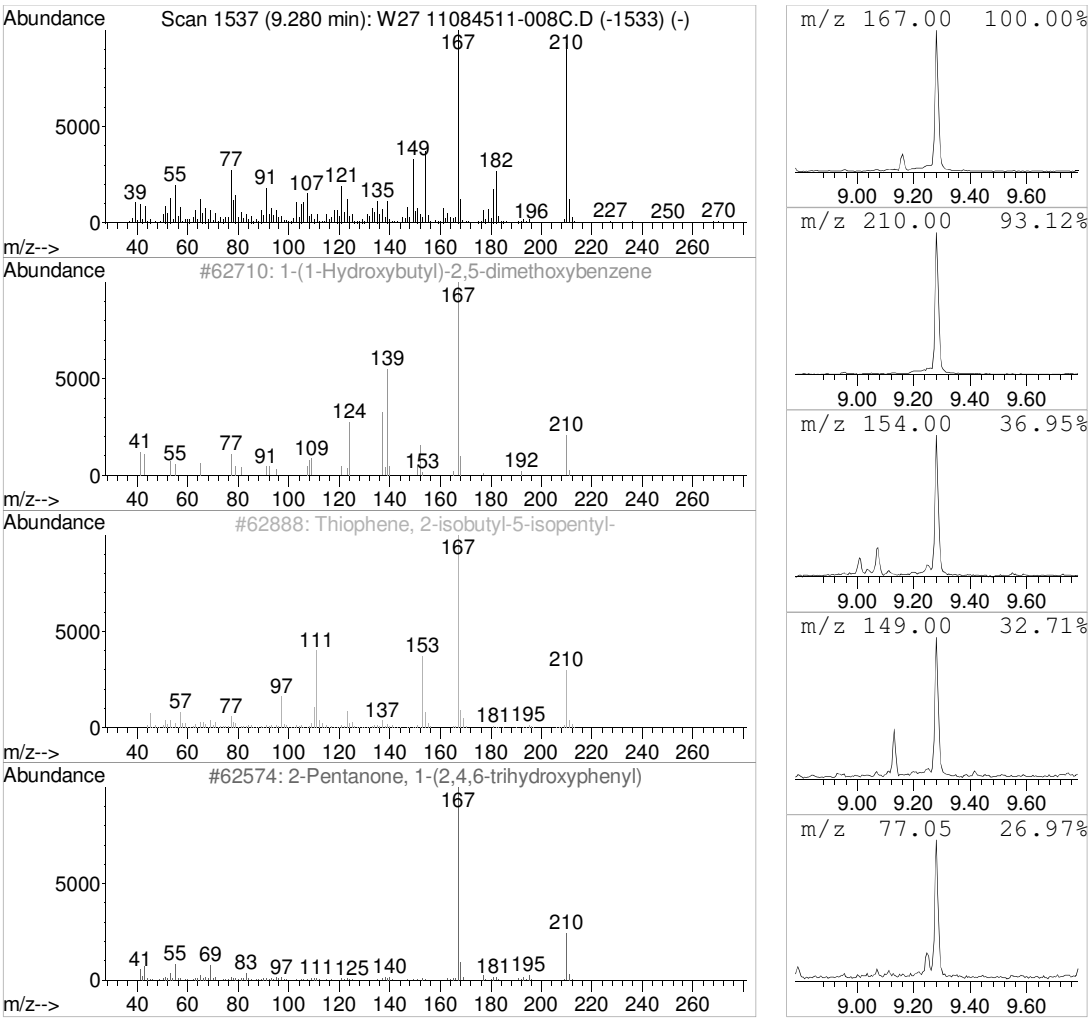
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

****

Peak Number 4 1-(1-Hydroxybutyl)-2,5-dime... Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.28	22.63 ug/l	678916	ISTD-Phenanthrene-d10	8.54

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-(1-Hydroxybutyl)-2,5-dimethoxy...	210	C12H18O3	149083-03-4	53
2	Thiophene, 2-isobutyl-5-isopentyl-	210	C13H22S	004806-10-4	50
3	2-Pentanone, 1-(2,4,6-trihydroxy...	210	C11H14O4	1000116-22-3	50
4	Desaspidinol	210	C11H14O4	000437-72-9	50
5	1-Hydroxy-6-methylphenazine	210	C13H10N2O	014031-08-4	41



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Data File : W27 11084511-008C.D
Acq On : 2 Sep 2011 1:10 am
Operator : ALICIA HABERLE
Sample : 11084511-008C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

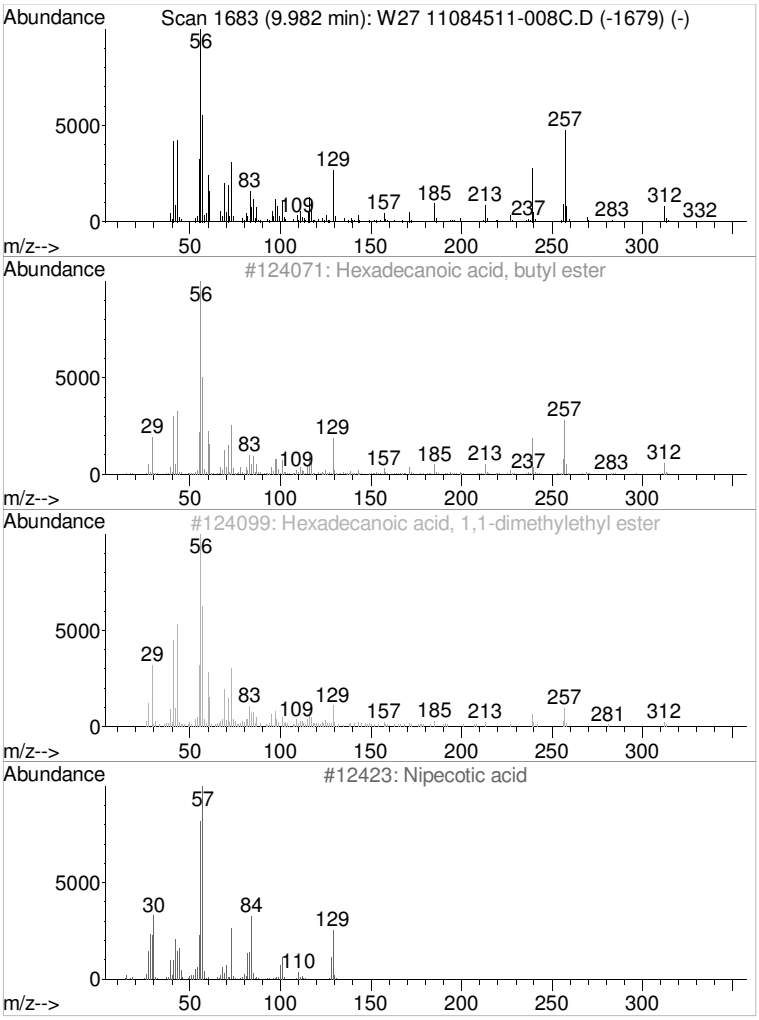
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

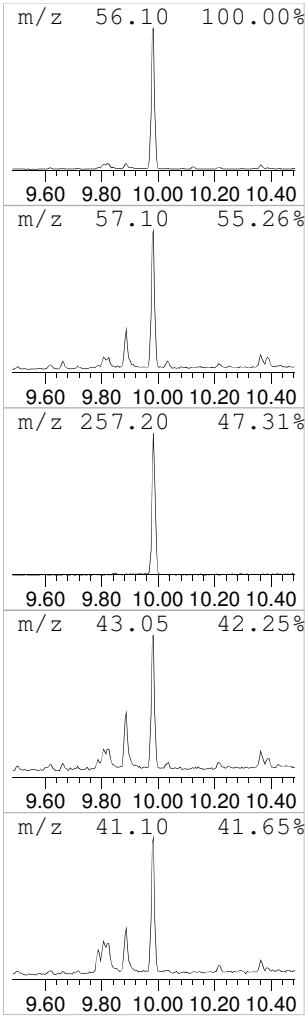
****

Peak Number 5 Hexadecanoic acid, butyl ester Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.98	48.97 ug/l	844339	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexadecanoic acid, butyl ester	312	C20H40O2	000111-06-8	99
2	Hexadecanoic acid, 1,1-dimethyle...	312	C20H40O2	031158-91-5	91
3	Nipecotic acid	129	C6H11NO2	000498-95-3	38
4	Hexadecanoic acid, 2-methylpropy...	312	C20H40O2	000110-34-9	38
5	Oxirane, 2,3-bis(1-methylethyl)-...	128	C8H16O	054644-32-5	25





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W27 11084511-008C.D
Acq On : 2 Sep 2011 1:10 am
Operator : ALICIA HABERLE
Sample : 11084511-008C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

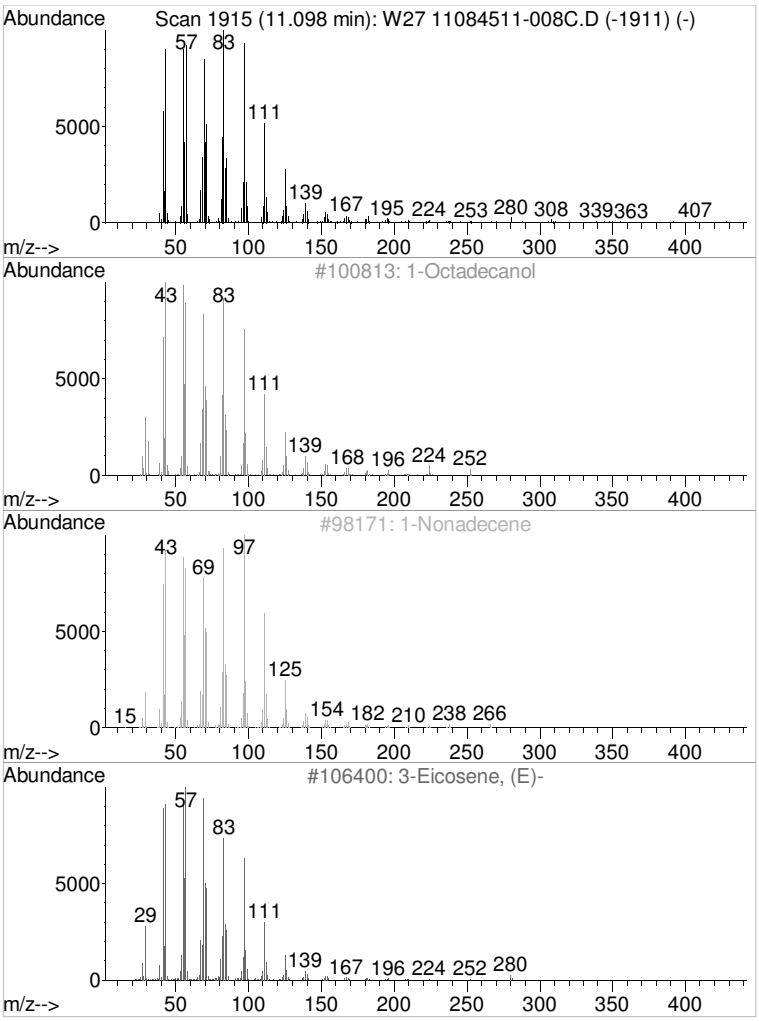
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

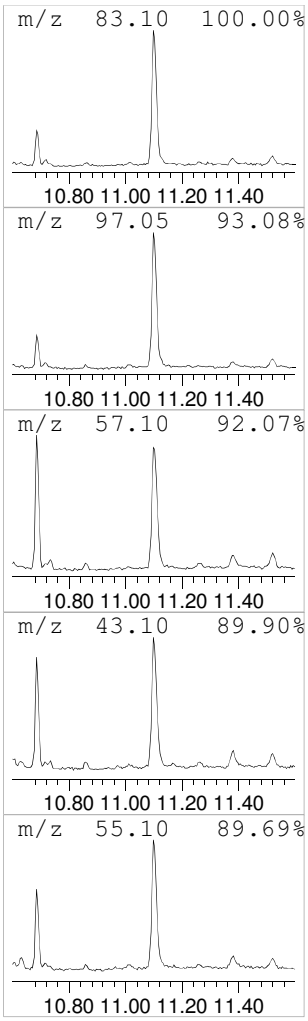
****

Peak Number 6 1-Octadecanol Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.10	53.17 ug/l	916715	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Octadecanol	270	C18H38O	000112-92-5	94
2	1-Nonadecene	266	C19H38	018435-45-5	90
3	3-Eicosene, (E)-	280	C20H40	074685-33-9	90
4	Trichloroacetic acid, pentadecyl...	372	C17H31Cl3O2	074339-53-0	87
5	Dichloroacetic acid, heptadecyl ...	366	C19H36Cl2O2	1000282-98-2	87





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W27 11084511-008C.D
Acq On : 2 Sep 2011 1:10 am
Operator : ALICIA HABERLE
Sample : 11084511-008C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

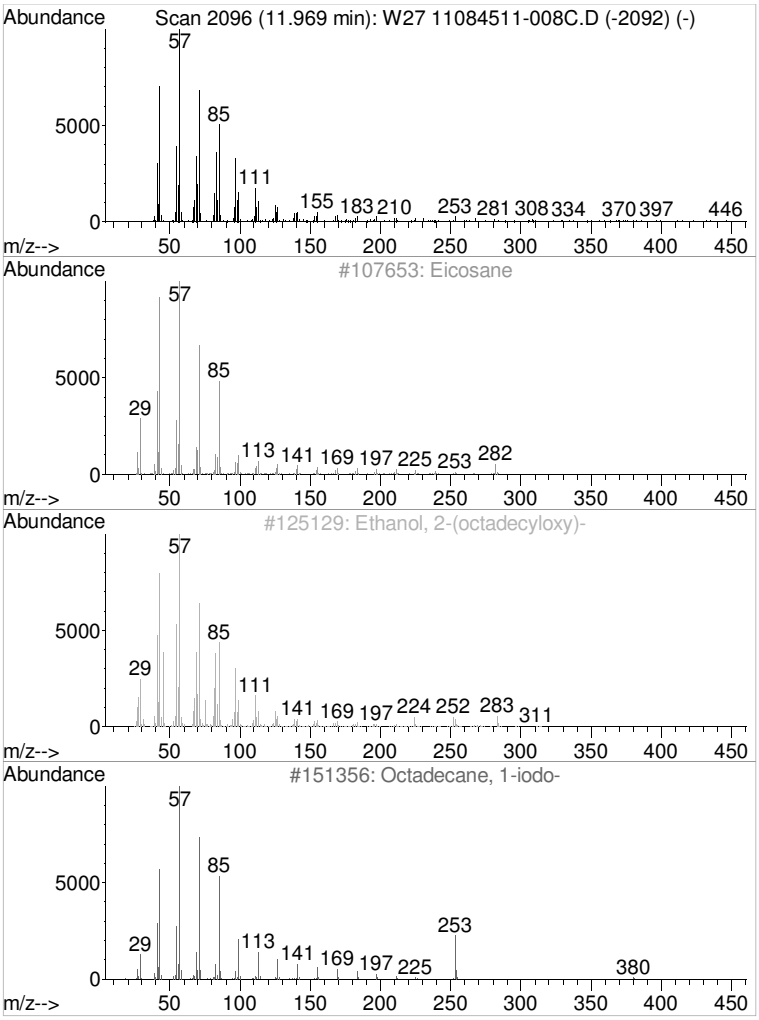
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

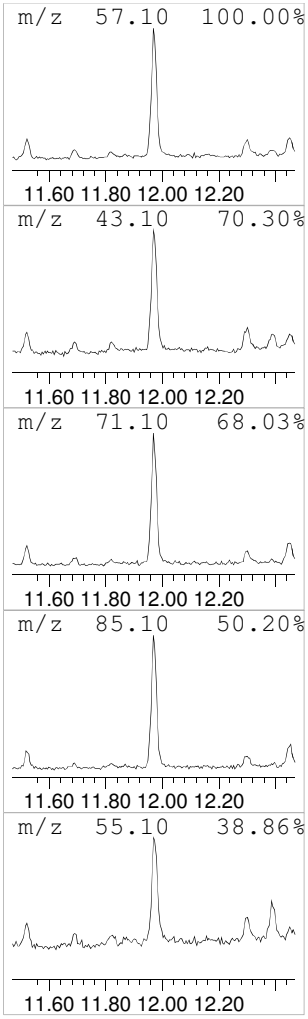
****

Peak Number 7 Eicosane Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.97	27.00 ug/l	465446	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Eicosane	282	C20H42	000112-95-8	93
2	Ethanol, 2-(octadecyloxy)-	314	C20H42O2	002136-72-3	92
3	Octadecane, 1-iodo-	380	C18H37I	000629-93-6	83
4	Heptadecane, 9-octyl-	352	C25H52	007225-64-1	64
5	Heptafluorobutanoic acid, heptad...	452	C21H35F7O2	1000282-97-3	64





Library Search Compound Report

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Data File : W27 11084511-008C.D
Acq On : 2 Sep 2011 1:10 am
Operator : ALICIA HABERLE
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Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

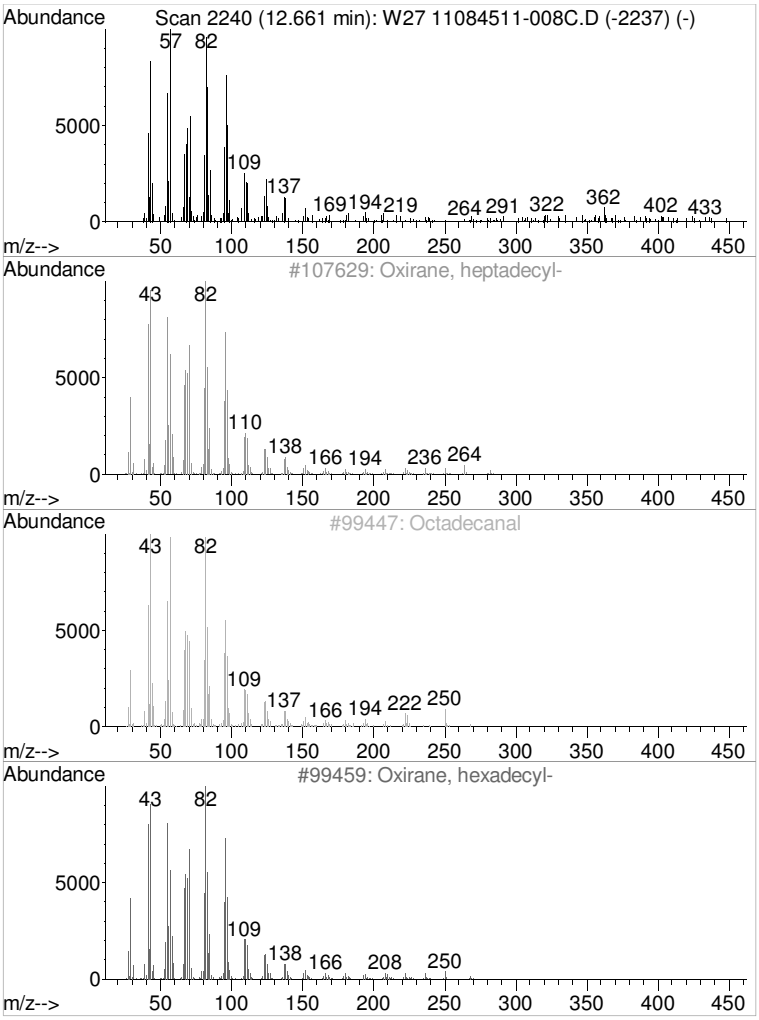
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

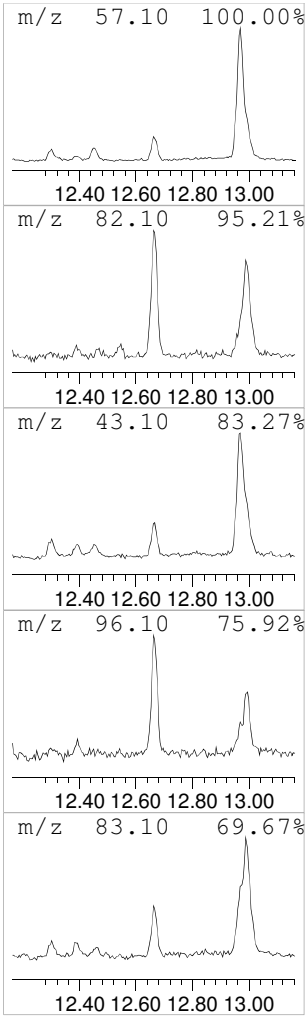
****

Peak Number 8 Oxirane, heptadecyl- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.66	24.06 ug/l	220891	ISTD-Perylene-d12	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Oxirane, heptadecyl-	282	C19H38O	067860-04-2	94
2	Octadecanal	268	C18H36O	000638-66-4	94
3	Oxirane, hexadecyl-	268	C18H36O	007390-81-0	91
4	Z-2-Octadecen-1-ol	268	C18H36O	1000131-11-0	87
5	Tetradecanal	212	C14H28O	000124-25-4	86





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W27 11084511-008C.D
Acq On : 2 Sep 2011 1:10 am
Operator : ALICIA HABERLE
Sample : 11084511-008C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

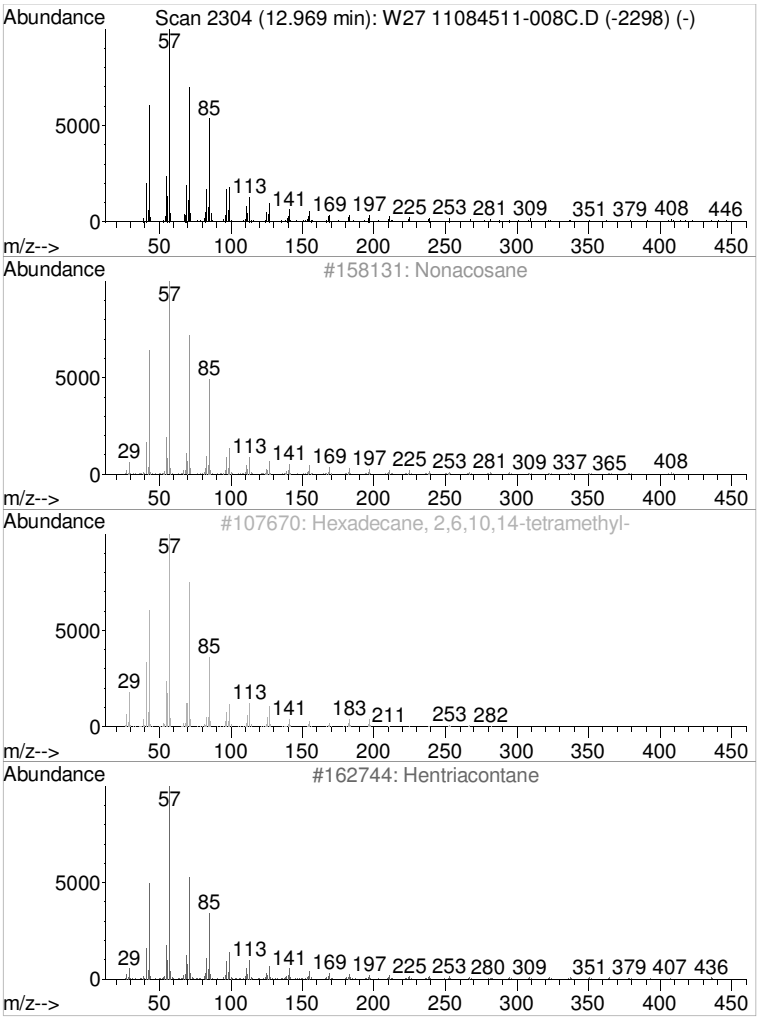
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

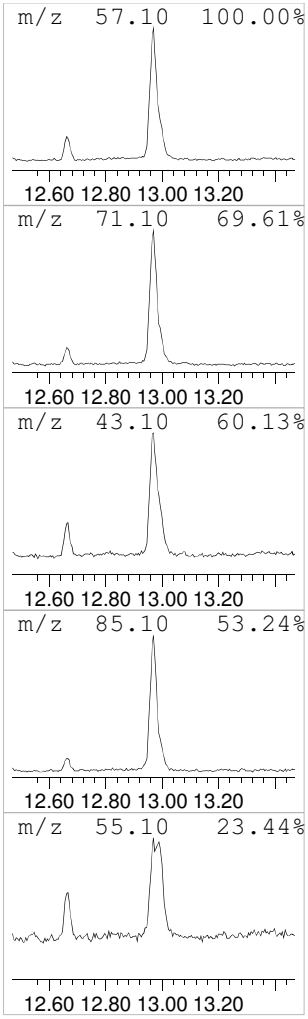
****

Peak Number 9 Nonacosane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.97	101.04 ug/l	927416	ISTD-Perylene-d12	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonacosane	408	C29H60	000630-03-5	99
2	Hexadecane, 2,6,10,14-tetramethyl-	282	C20H42	000638-36-8	98
3	Hentriacontane	437	C31H64	000630-04-6	95
4	Octacosane	394	C28H58	000630-02-4	94
5	Heneicosane, 11-pentyl-	366	C26H54	014739-72-1	94





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W27 11084511-008C.D
Acq On : 2 Sep 2011 1:10 am
Operator : ALICIA HABERLE
Sample : 11084511-008C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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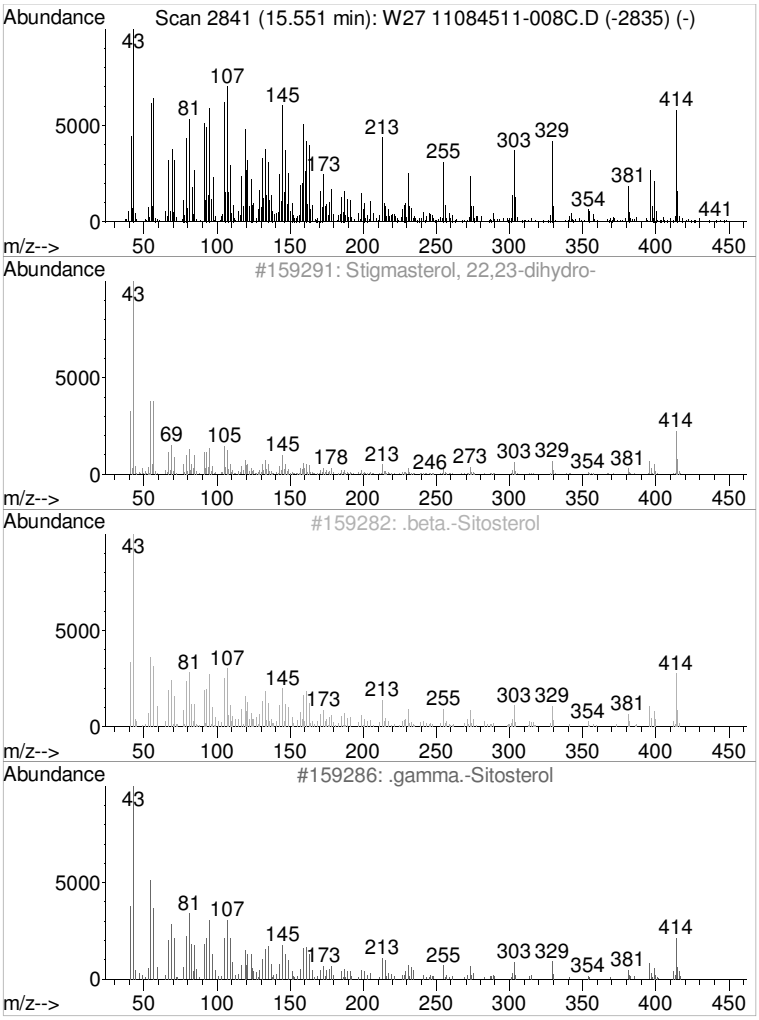
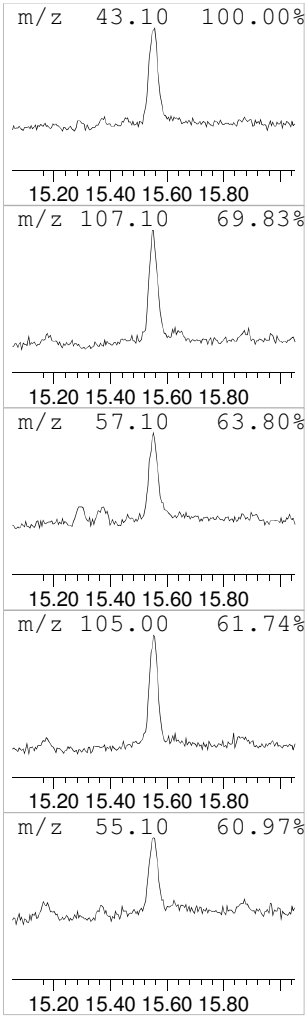
Peak Number 10 Stigmasterol, 22,23-dihydro- Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.55	111.38 ug/l	1022360	ISTD-Perylene-d12	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Stigmasterol, 22,23-dihydro-	414	C29H50O	1000214-20-7	97
2	.beta.-Sitosterol	414	C29H50O	000083-46-5	95
3	.gamma.-Sitosterol	414	C29H50O	000083-47-6	94
4	Stigmast-7-en-3-ol, (3.beta.,5.a...	414	C29H50O	018525-35-4	30
5	cis-4-Acetoxy-trans-1-(m-methoxy...	273	C16H19NO3	1000241-10-4	25





Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W27 11084511-008C.D
Acq On : 2 Sep 2011 1:10 am
Operator : ALICIA HABERLE
Sample : 11084511-008C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
2-Pentanone, 4-hy...	2.89	84.0	ug/l	1726840	1	4.21	821871	40.0
4-((1E)-3-Hydroxy...	8.23	52.4	ug/l	1572170	4	8.54	1200090	40.0
n-Hexadecanoic acid	9.11	36.5	ug/l	1095190	4	8.54	1200090	40.0
1-(1-Hydroxybutyl...	9.28	22.6	ug/l	678916	4	8.54	1200090	40.0
Hexadecanoic acid...	9.98	49.0	ug/l	844339	5	11.22	689613	40.0
1-Octadecanol	11.10	53.2	ug/l	916715	5	11.22	689613	40.0
Eicosane	11.97	27.0	ug/l	465446	5	11.22	689613	40.0
Oxirane, heptadecyl-	12.66	24.1	ug/l	220891	6	13.22	367159	40.0
Nonacosane	12.97	101.0	ug/l	927416	6	13.22	367159	40.0
Stigmasterol, 22,...	15.55	111.4	ug/l	1022360	6	13.22	367159	40.0

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W28 11084511-009C.D
Acq On : 2 Sep 2011 1:35 am
Operator : ALICIA HABERLE
Sample : 11084511-009C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.350	93	96	101	rVB	46039	29167	2.01%	0.194%
2	2.475	120	122	136	rBV	52217	83645	5.76%	0.556%
3	2.557	136	139	142	rVB	24461	18190	1.25%	0.121%
4	2.643	153	157	161	rVB2	47713	36636	2.52%	0.244%
5	2.889	201	208	212	rBV	1678278	1452336	100.00%	9.653%
6	2.975	221	226	230	rBV	54824	38170	2.63%	0.254%
7	3.018	230	235	238	rVB	46613	36576	2.52%	0.243%
8	3.062	238	244	247	rBV	67999	52122	3.59%	0.346%
9	3.134	253	259	273	rBV	1140887	879311	60.54%	5.844%
10	3.216	273	276	281	rVB	32884	28121	1.94%	0.187%
11	3.596	350	355	358	rBV2	14643	16715	1.15%	0.111%
12	3.836	402	405	408	rBV2	20851	19691	1.36%	0.131%
13	3.879	410	414	428	rVV	1011087	823834	56.72%	5.476%
14	4.115	459	463	469	rBV	106973	89554	6.17%	0.595%
15	4.211	479	483	490	rBV	1020511	837453	57.66%	5.566%
16	4.702	581	585	598	rVB	450730	377577	26.00%	2.510%
17	5.288	703	707	711	rBV2	31708	33151	2.28%	0.220%
18	5.370	720	724	732	rBV	1502841	1147819	79.03%	7.629%
19	6.413	937	941	948	rBV	1249036	938976	64.65%	6.241%
20	6.558	967	971	977	rVB2	29045	32822	2.26%	0.218%
21	7.034	1066	1070	1072	rBV2	26288	27070	1.86%	0.180%
22	7.072	1073	1078	1091	rVB	1677528	1355852	93.36%	9.012%
23	7.851	1231	1240	1249	rVB	715958	675792	46.53%	4.492%
24	8.000	1265	1271	1275	rVB7	20704	24025	1.65%	0.160%
25	8.087	1285	1289	1292	rVB2	52493	46873	3.23%	0.312%
26	8.226	1314	1318	1321	rBV2	73017	80612	5.55%	0.536%
27	8.539	1378	1383	1387	rBV	1387514	1147257	78.99%	7.625%
28	8.799	1431	1437	1444	rBV9	21323	34259	2.36%	0.228%
29	9.029	1475	1485	1490	rBV3	59839	84580	5.82%	0.562%
30	9.063	1490	1492	1496	rVV2	32833	35467	2.44%	0.236%
31	9.102	1496	1500	1518	rVV2	401991	425925	29.33%	2.831%
32	9.275	1533	1536	1544	rVB8	36570	35711	2.46%	0.237%
33	9.616	1604	1607	1610	rBV4	20486	18341	1.26%	0.122%
34	9.712	1624	1627	1630	rBV2	19101	17652	1.22%	0.117%
35	9.789	1639	1643	1644	rBV3	23860	26611	1.83%	0.177%
36	9.804	1644	1646	1647	rVV2	38369	27756	1.91%	0.184%
37	9.818	1647	1649	1653	rVB2	42251	39319	2.71%	0.261%
38	9.885	1659	1663	1670	rBV	210026	217383	14.97%	1.445%

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W28 11084511-009C.D
Acq On : 2 Sep 2011 1:35 am
Operator : ALICIA HABERLE
Sample : 11084511-009C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

39	9.982	1679	1683	1688	rVB	426721	351763	24.22%	2.338%
40	10.121	1708	1712	1721	rVB	911566	799999	55.08%	5.317%
41	10.361	1760	1762	1765	rBV4	19715	20253	1.39%	0.135%
42	10.390	1765	1768	1771	rVB	66774	57062	3.93%	0.379%
43	10.607	1808	1813	1815	rBV4	35798	54653	3.76%	0.363%
44	10.631	1815	1818	1820	rVV	61418	51910	3.57%	0.345%
45	10.684	1826	1829	1835	rVB	310282	271088	18.67%	1.802%
46	11.107	1912	1917	1923	rVB2	163591	236013	16.25%	1.569%
47	11.222	1936	1941	1946	rBV	721082	755651	52.03%	5.022%
48	11.972	2092	2097	2104	rVB2	177643	249247	17.16%	1.657%
49	12.386	2180	2183	2190	rBV2	82790	106658	7.34%	0.709%
50	12.963	2298	2303	2316	rVB2	210929	415500	28.61%	2.762%
51	13.218	2351	2356	2363	rVB	276908	383367	26.40%	2.548%

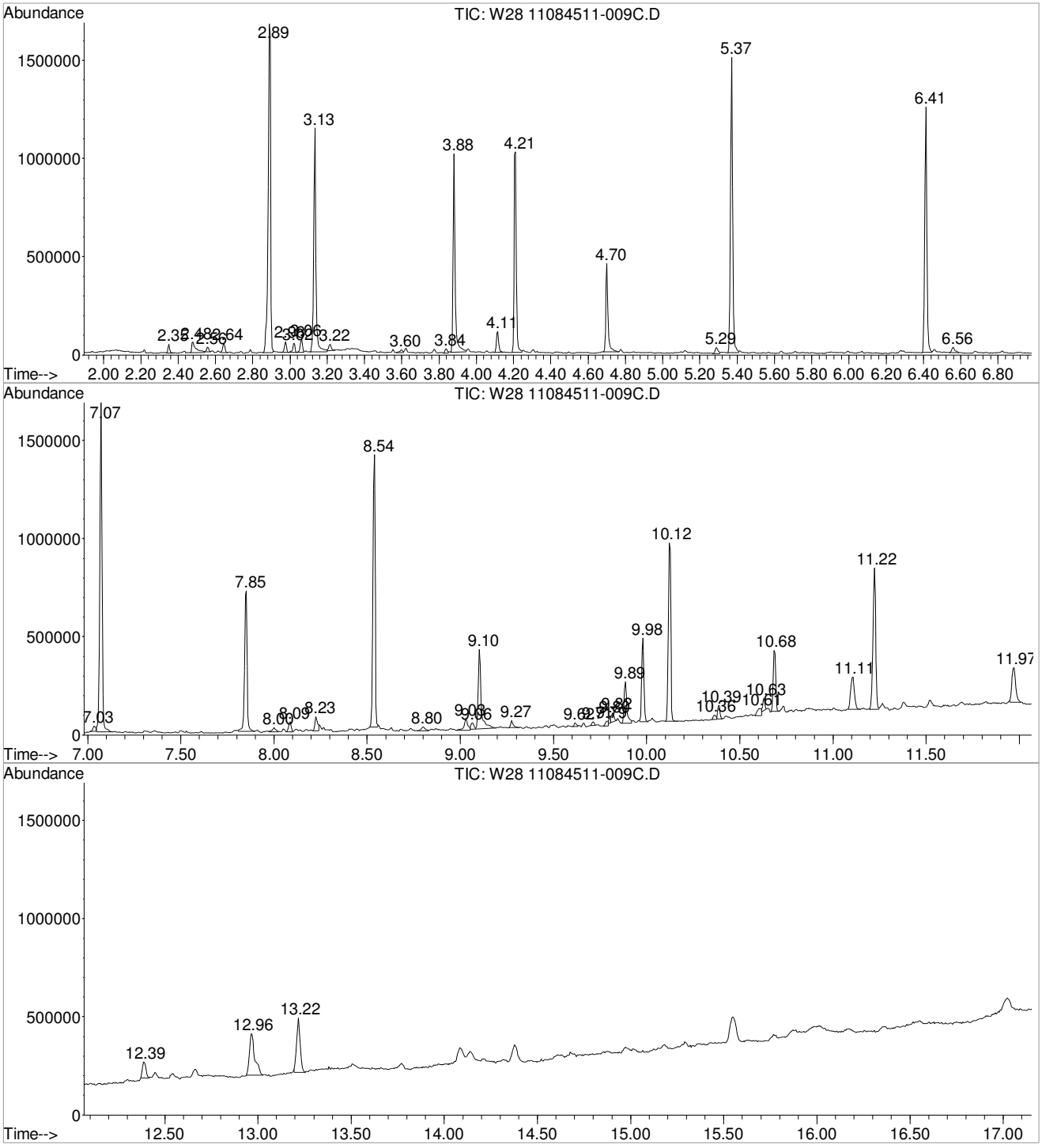
Sum of corrected areas: 15045515

LSC Report - Integrated Chromatogram

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W28 11084511-009C.D
Acq On : 2 Sep 2011 1:35 am
Operator : ALICIA HABERLE
Sample : 11084511-009C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W28 11084511-009C.D
Acq On : 2 Sep 2011 1:35 am
Operator : ALICIA HABERLE
Sample : 11084511-009C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

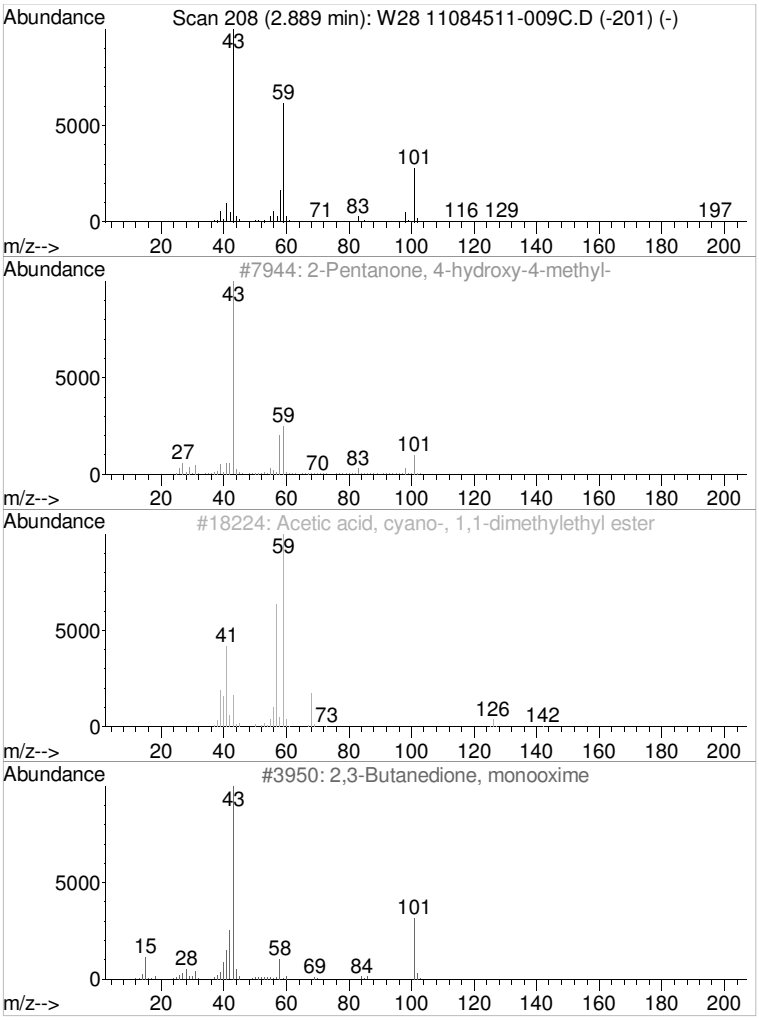
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

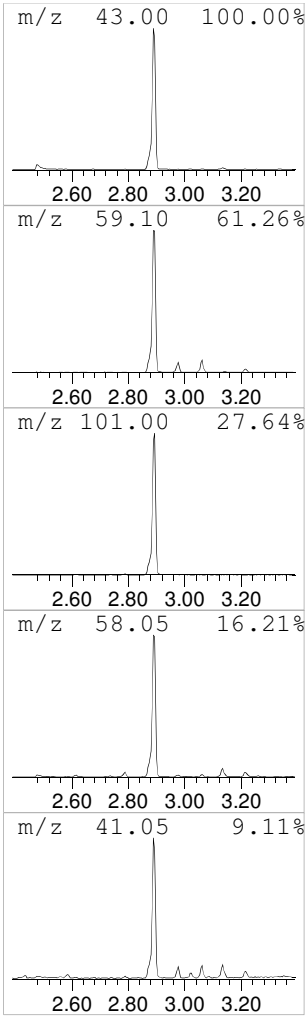
****

Peak Number 1 2-Pentanone, 4-hydroxy-4-me... Concentration Rank 1

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.89	69.37 ug/l	1452340	ISTD 1,4-Dichlorobenzene-d4	4.21

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	59
2	Acetic acid, cyano-, 1,1-dimethy...	141	C7H11NO2	001116-98-9	17
3	2,3-Butanedione, monooxime	101	C4H7NO2	000057-71-6	17
4	Morpholine, 4-methyl-	101	C5H11NO	000109-02-4	9
5	Butane, 1-ethoxy-	102	C6H14O	000628-81-9	9





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W28 11084511-009C.D
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Operator : ALICIA HABERLE
Sample : 11084511-009C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

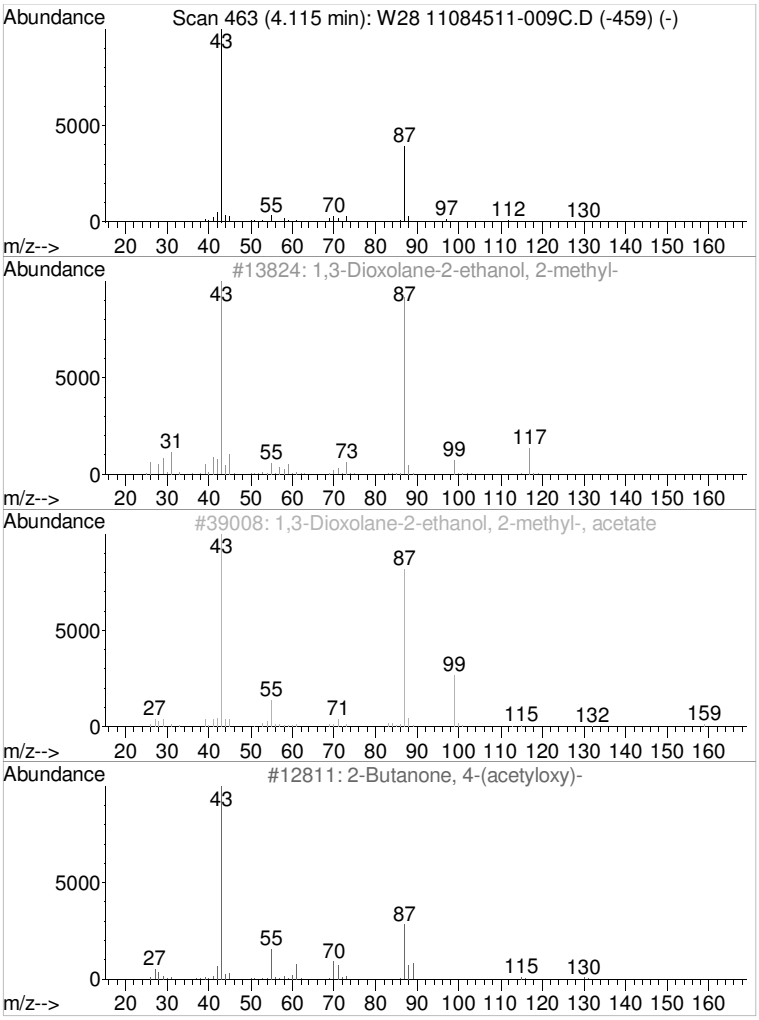
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

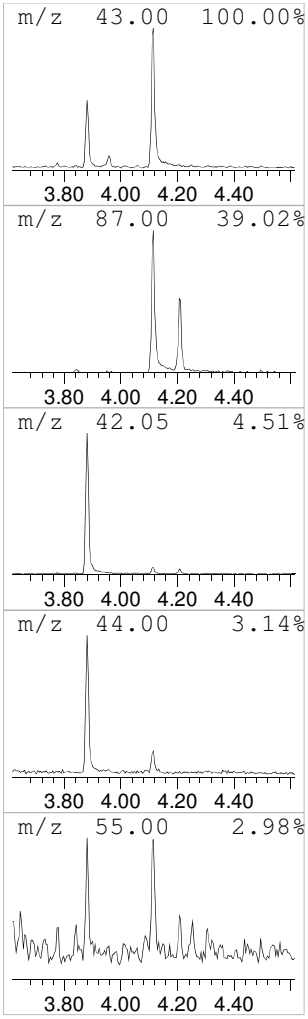
****

Peak Number 2 1,3-Dioxolane-2-ethanol, 2-... Concentration Rank 10

R.T.	EstConc	Area	Relative to ISTD	R.T.
4.11	4.28 ug/l	89554	ISTD 1,4-Dichlorobenzene-d4	4.21

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1,3-Dioxolane-2-ethanol, 2-methyl-	132	C6H12O3	005754-32-5	9
2	1,3-Dioxolane-2-ethanol, 2-methy...	174	C8H14O4	068039-72-5	9
3	2-Butanone, 4-(acetyloxy)-	130	C6H10O3	010150-87-5	5
4	Acetamide, N-ethyl-	87	C4H9NO	000625-50-3	5
5	2-Pentanol, acetate	130	C7H14O2	000626-38-0	4





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W28 11084511-009C.D
Acq On : 2 Sep 2011 1:35 am
Operator : ALICIA HABERLE
Sample : 11084511-009C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

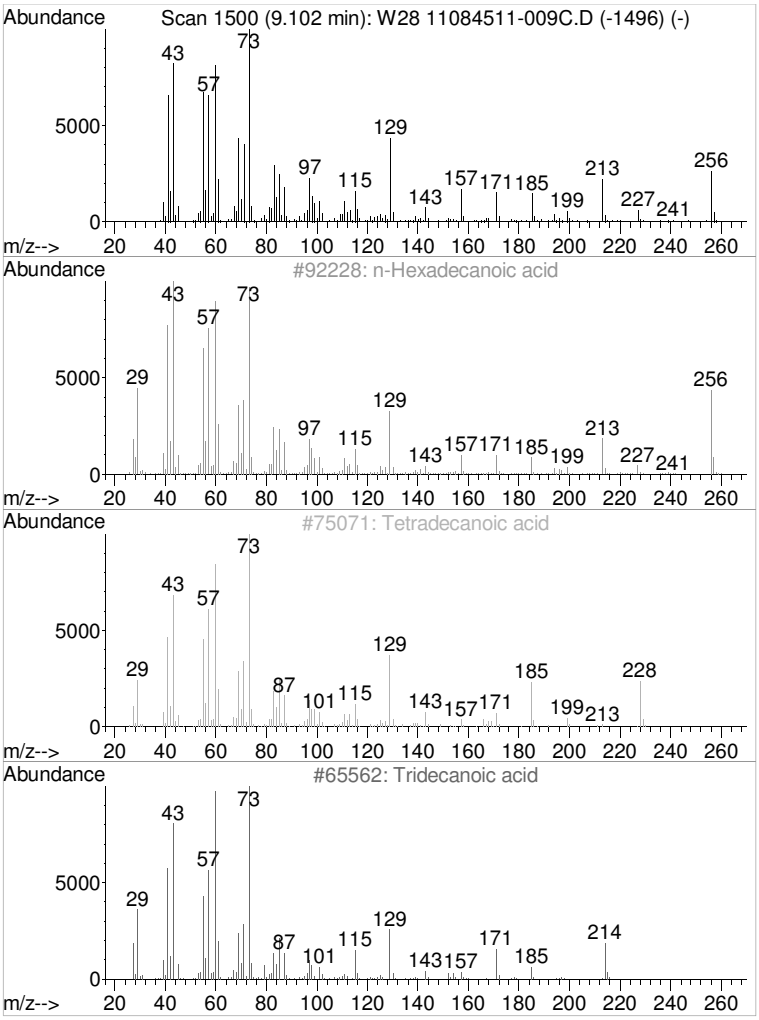
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

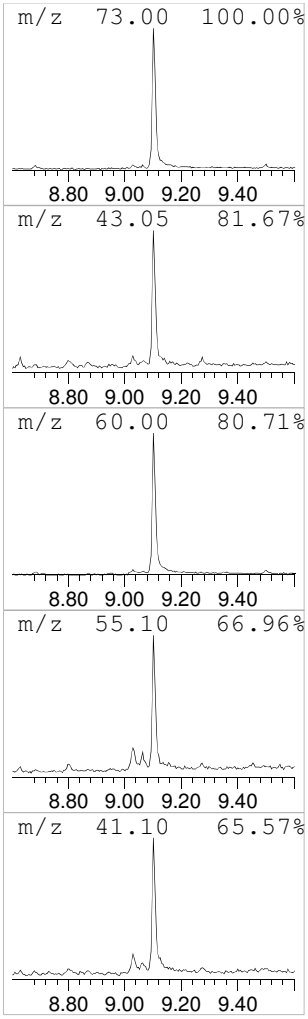
****

Peak Number 3 n-Hexadecanoic acid Concentration Rank 4

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.10	14.85 ug/l	425925	ISTD-Phenanthrene-d10	8.54

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	99
2	Tetradecanoic acid	228	C14H28O2	000544-63-8	94
3	Tridecanoic acid	214	C13H26O2	000638-53-9	78
4	n-Decanoic acid	172	C10H20O2	000334-48-5	64
5	Estra-1,3,5(10)-trien-17.beta.-ol	256	C18H24O	002529-64-8	38





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W28 11084511-009C.D
Acq On : 2 Sep 2011 1:35 am
Operator : ALICIA HABERLE
Sample : 11084511-009C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

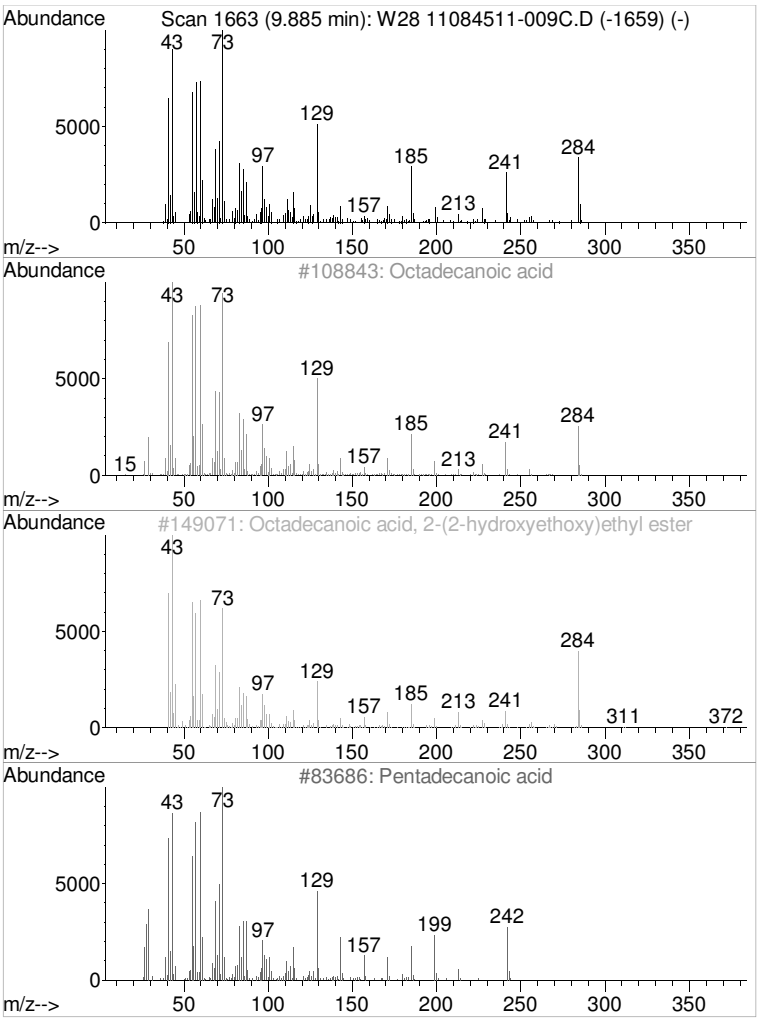
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

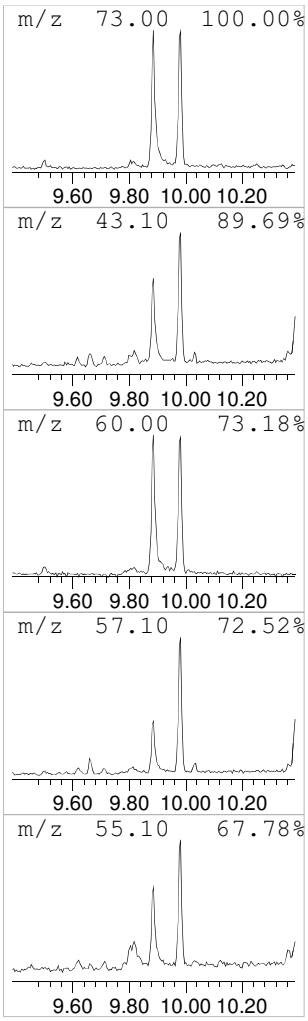
****

Peak Number 4 Octadecanoic acid Concentration Rank 8

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.89	11.51 ug/l	217383	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid	284	C18H36O2	000057-11-4	99
2	Octadecanoic acid, 2-(2-hydroxye...	372	C22H44O4	000106-11-6	86
3	Pentadecanoic acid	242	C15H30O2	001002-84-2	70
4	n-Decanoic acid	172	C10H20O2	000334-48-5	64
5	Tetradecanoic acid	228	C14H28O2	000544-63-8	64





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W28 11084511-009C.D
Acq On : 2 Sep 2011 1:35 am
Operator : ALICIA HABERLE
Sample : 11084511-009C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

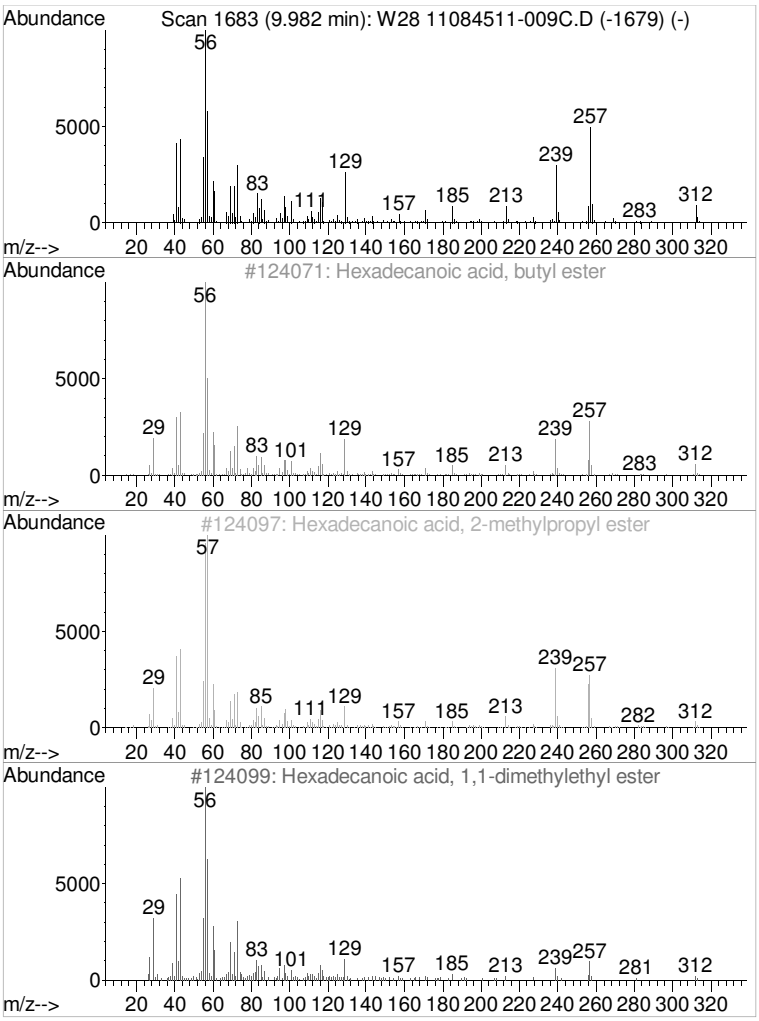
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

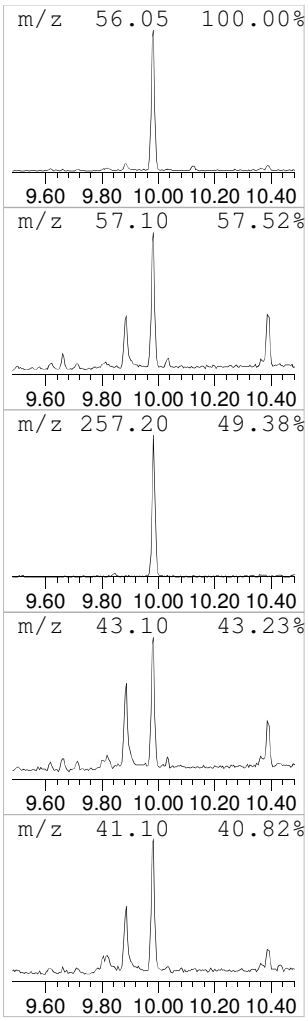
****

Peak Number 5 Hexadecanoic acid, butyl ester Concentration Rank 3

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.98	18.62 ug/l	351763	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexadecanoic acid, butyl ester	312	C20H40O2	000111-06-8	99
2	Hexadecanoic acid, 2-methylpropy...	312	C20H40O2	000110-34-9	59
3	Hexadecanoic acid, 1,1-dimethyle...	312	C20H40O2	031158-91-5	50
4	Cyclohexanamine	99	C6H13N	000108-91-8	25
5	1-Hexene, 2,5-dimethyl-	112	C8H16	006975-92-4	25





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W28 11084511-009C.D
Acq On : 2 Sep 2011 1:35 am
Operator : ALICIA HABERLE
Sample : 11084511-009C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

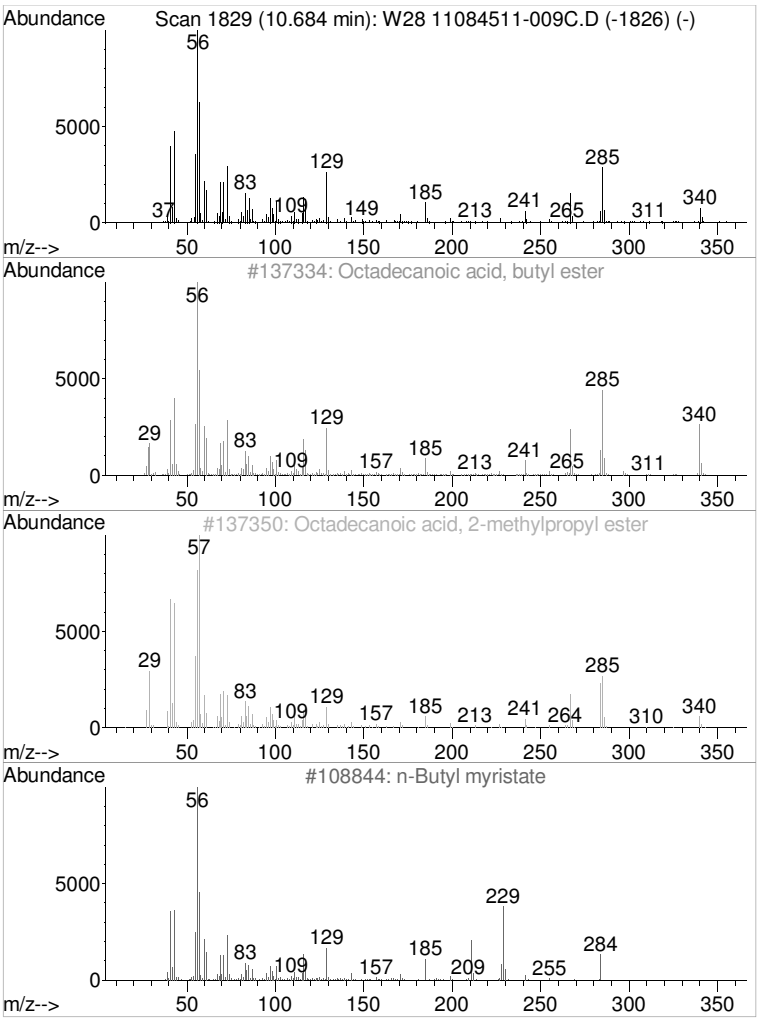
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

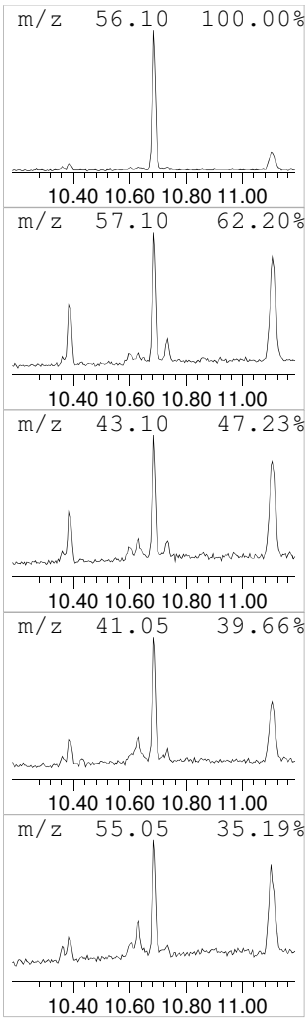
****

Peak Number 6 Octadecanoic acid, butyl ester Concentration Rank 5

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.68	14.35 ug/l	271088	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	98
2	Octadecanoic acid, 2-methylpropy...	340	C22H44O2	000646-13-9	90
3	n-Butyl myristate	284	C18H36O2	000110-36-1	62
4	Piperidin-4-carboxylic acid	129	C6H11NO2	000498-94-2	38
5	1-Hexene, 2,5-dimethyl-	112	C8H16	006975-92-4	27





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W28 11084511-009C.D
Acq On : 2 Sep 2011 1:35 am
Operator : ALICIA HABERLE
Sample : 11084511-009C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

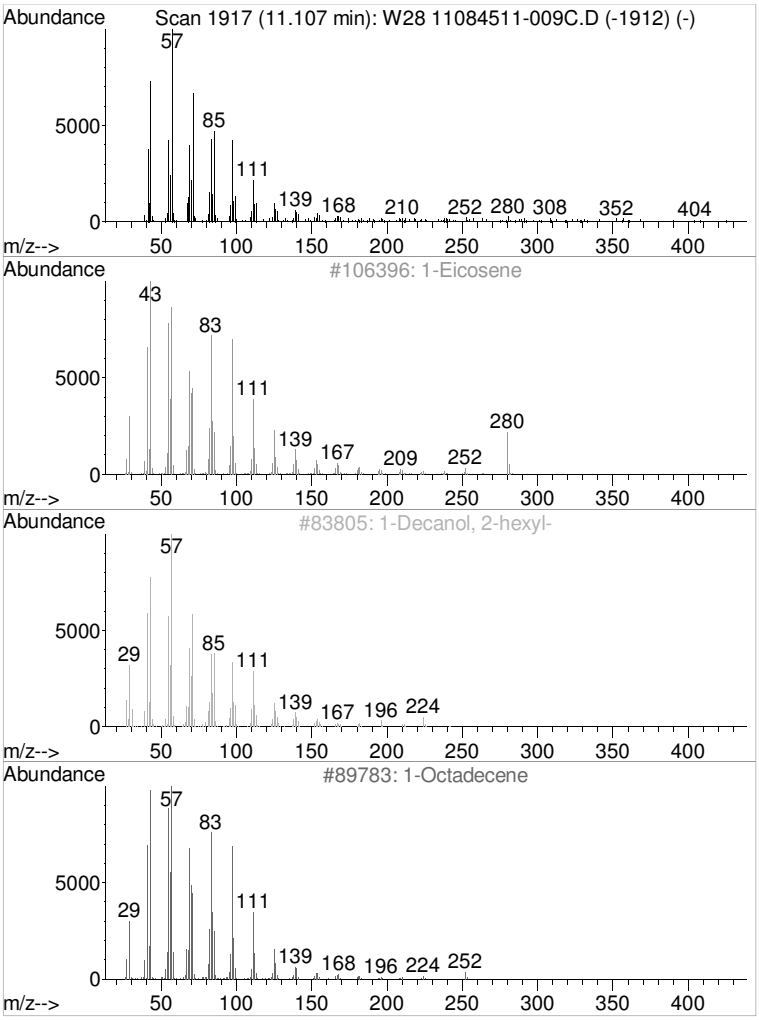
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

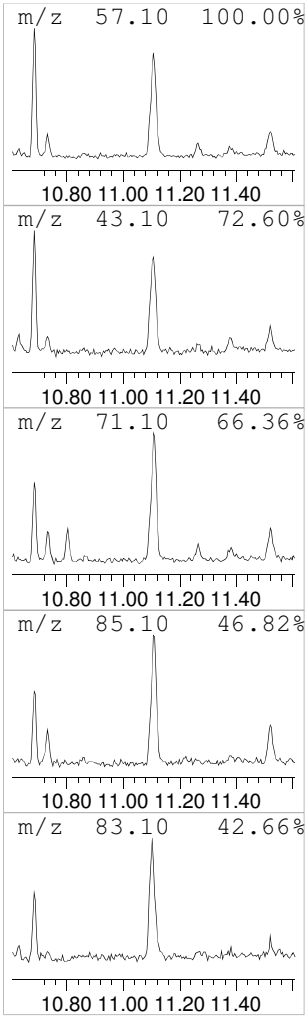
****

Peak Number 7 1-Eicosene Concentration Rank 7

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.11	12.49 ug/l	236013	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Eicosene	280	C20H40	003452-07-1	96
2	1-Decanol, 2-hexyl-	242	C16H34O	002425-77-6	92
3	1-Octadecene	252	C18H36	000112-88-9	91
4	1-Heptadecene	238	C17H34	006765-39-5	89
5	1-Docosene	308	C22H44	001599-67-3	86





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W28 11084511-009C.D
Acq On : 2 Sep 2011 1:35 am
Operator : ALICIA HABERLE
Sample : 11084511-009C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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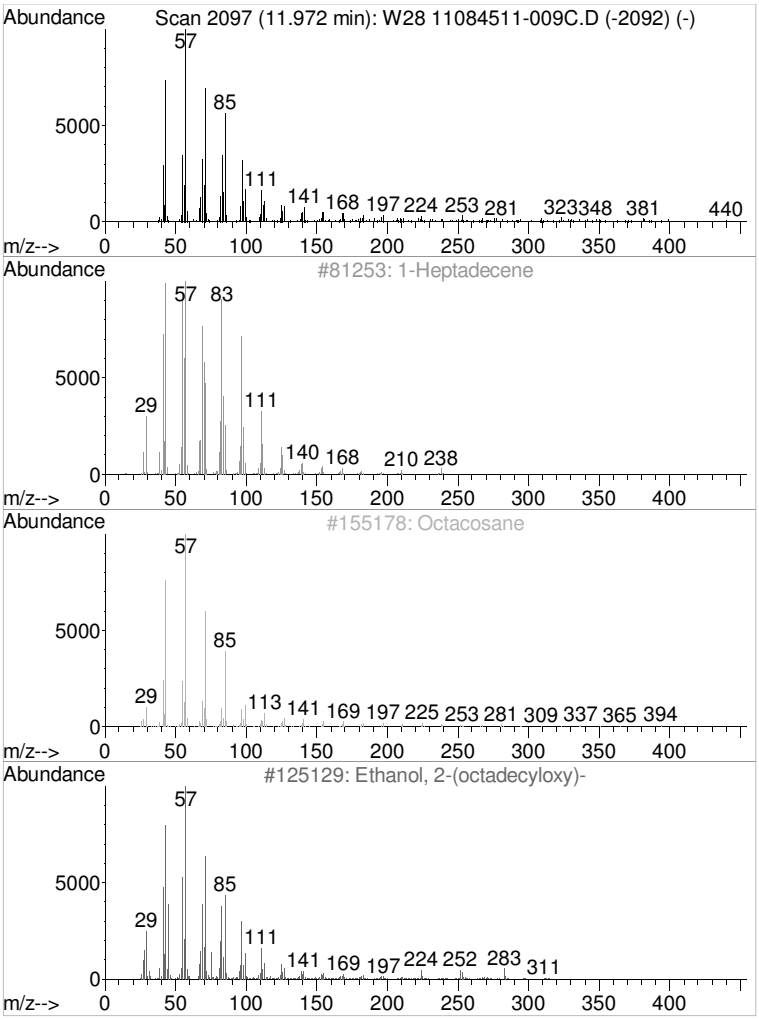
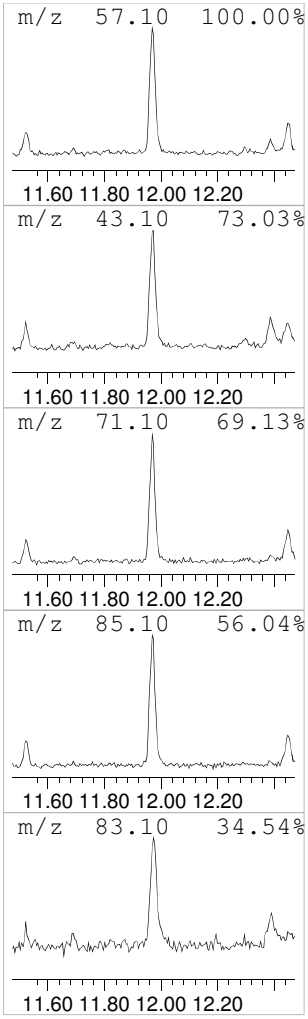
Peak Number 8 1-Heptadecene Concentration Rank 6

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.97	13.19 ug/l	249247	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Heptadecene	238	C17H34	006765-39-5	95
2	Octacosane	394	C28H58	000630-02-4	93
3	Ethanol, 2-(octadecyloxy)-	314	C20H42O2	002136-72-3	91
4	Nonahexacontanoic acid	999	C69H138O2	040710-32-5	90
5	Octadecane	254	C18H38	000593-45-3	86





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W28 11084511-009C.D
Acq On : 2 Sep 2011 1:35 am
Operator : ALICIA HABERLE
Sample : 11084511-009C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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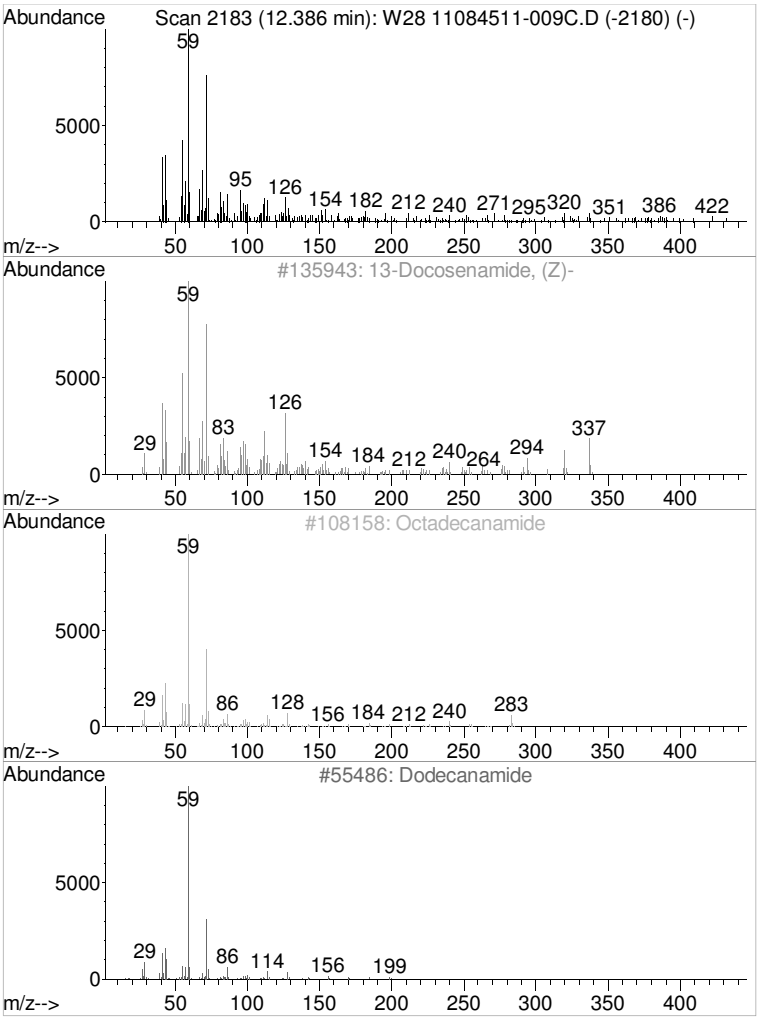
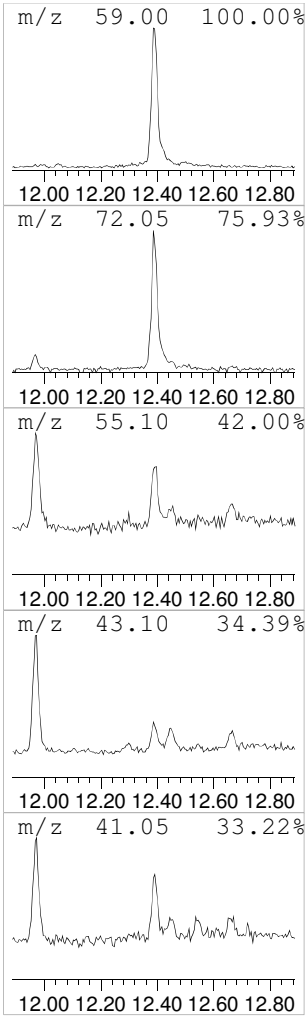
Peak Number 9 13-Docosenamide, (Z)- Concentration Rank 9

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.39	11.13 ug/l	106658	ISTD-Perylene-d12	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	13-Docosenamide, (Z)-	337	C22H43NO	000112-84-5	87
2	Octadecanamide	283	C18H37NO	000124-26-5	53
3	Dodecanamide	199	C12H25NO	001120-16-7	35
4	2-Propanol, 1-[(1-methylethyl)am...	249	C15H23NO2	013655-52-2	30
5	d,l-trans-4-Methyl-5-methoxy-1-(...	184	C11H20O2	1000101-22-2	30





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W28 11084511-009C.D
Acq On : 2 Sep 2011 1:35 am
Operator : ALICIA HABERLE
Sample : 11084511-009C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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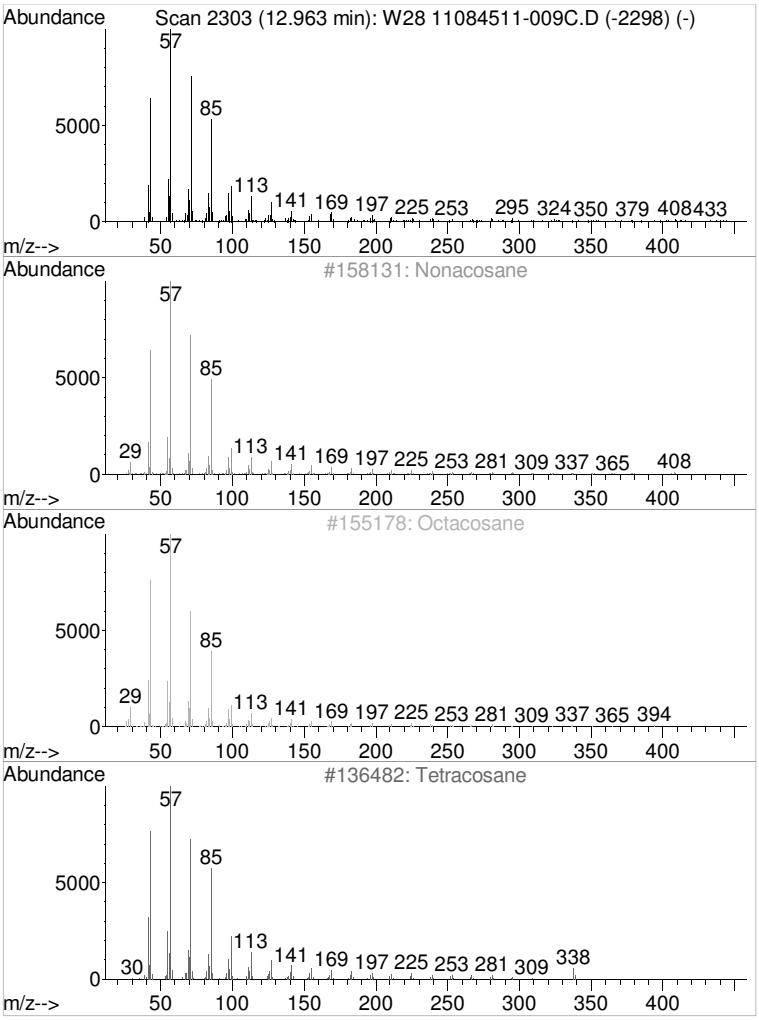
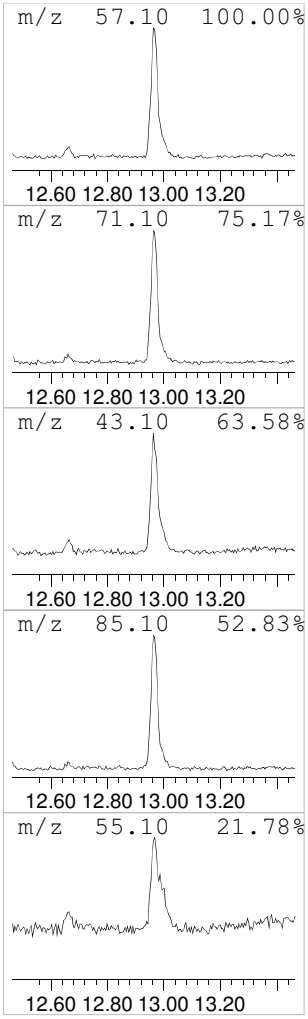
Peak Number 10 Nonacosane Concentration Rank 2

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.96	43.35 ug/l	415500	ISTD-Perylene-d12	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonacosane	408	C29H60	000630-03-5	98
2	Octacosane	394	C28H58	000630-02-4	96
3	Tetracosane	338	C24H50	000646-31-1	95
4	Heneicosane	296	C21H44	000629-94-7	91
5	Hexatriacontane	507	C36H74	000630-06-8	91





Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W28 11084511-009C.D
Acq On : 2 Sep 2011 1:35 am
Operator : ALICIA HABERLE
Sample : 11084511-009C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					Internal Standard		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
2-Pentanone, 4-hy...	2.89	69.4	ug/l	1452340	1	4.21	837453	40.0
1,3-Dioxolane-2-e...	4.11	4.3	ug/l	89554	1	4.21	837453	40.0
n-Hexadecanoic acid	9.10	14.9	ug/l	425925	4	8.54	1147260	40.0
Octadecanoic acid	9.89	11.5	ug/l	217383	5	11.22	755651	40.0
Hexadecanoic acid...	9.98	18.6	ug/l	351763	5	11.22	755651	40.0
Octadecanoic acid...	10.68	14.3	ug/l	271088	5	11.22	755651	40.0
1-Eicosene	11.11	12.5	ug/l	236013	5	11.22	755651	40.0
1-Heptadecene	11.97	13.2	ug/l	249247	5	11.22	755651	40.0
13-Docosenamide, ...	12.39	11.1	ug/l	106658	6	13.22	383367	40.0
Nonacosane	12.96	43.4	ug/l	415500	6	13.22	383367	40.0

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W29 11084511-011C.D
Acq On : 2 Sep 2011 2:02 am
Operator : ALICIA HABERLE
Sample : 11084511-011C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.346	91	95	98	rVB	30522	22601	1.54%	0.149%
2	2.481	115	123	137	rBV3	28512	86327	5.88%	0.570%
3	2.644	153	157	161	rVB2	38944	30663	2.09%	0.203%
4	2.890	200	208	211	rBV	1927401	1468300	100.00%	9.702%
5	2.976	220	226	229	rBV	51857	38653	2.63%	0.255%
6	3.019	229	235	239	rBV	52426	37996	2.59%	0.251%
7	3.058	239	243	247	rBV	68389	50965	3.47%	0.337%
8	3.130	253	258	272	rBV	967899	840921	57.27%	5.556%
9	3.212	272	275	280	rVB	36049	31661	2.16%	0.209%
10	3.837	401	405	408	rBV	23396	21673	1.48%	0.143%
11	3.880	410	414	426	rVV	981960	769385	52.40%	5.084%
12	4.111	460	462	471	rVB	23685	20559	1.40%	0.136%
13	4.207	478	482	488	rBV	1100741	866909	59.04%	5.728%
14	4.702	581	585	597	rVB	390096	372206	25.35%	2.459%
15	5.289	703	707	712	rBV3	37232	39108	2.66%	0.258%
16	5.371	720	724	732	rBV	1511680	1192802	81.24%	7.882%
17	6.414	937	941	948	rBV	1148048	910339	62.00%	6.015%
18	6.559	967	971	977	rVB2	27446	32271	2.20%	0.213%
19	7.073	1071	1078	1084	rBV	1670262	1401614	95.46%	9.261%
20	7.501	1163	1167	1170	rBV3	17394	18425	1.25%	0.122%
21	7.785	1220	1226	1231	rBV7	12034	18808	1.28%	0.124%
22	7.847	1231	1239	1245	rBV	753176	655753	44.66%	4.333%
23	8.011	1269	1273	1276	rVB3	17048	20611	1.40%	0.136%
24	8.088	1284	1289	1292	rBV2	56800	50441	3.44%	0.333%
25	8.227	1314	1318	1325	rBV6	27981	53732	3.66%	0.355%
26	8.535	1372	1382	1386	rBV	1467649	1301403	88.63%	8.599%
27	8.559	1386	1387	1391	rVB	60604	33635	2.29%	0.222%
28	8.631	1399	1402	1405	rVB	29947	22749	1.55%	0.150%
29	8.795	1428	1436	1443	rBV8	14993	26804	1.83%	0.177%
30	9.030	1480	1485	1489	rBV5	37290	47331	3.22%	0.313%
31	9.064	1489	1492	1495	rVV2	40687	34238	2.33%	0.226%
32	9.103	1496	1500	1508	rBV2	266278	259165	17.65%	1.712%
33	9.276	1532	1536	1541	rBV3	23977	28454	1.94%	0.188%
34	9.617	1603	1607	1612	rBV5	25010	27768	1.89%	0.183%
35	9.737	1629	1632	1635	rVB	45717	37197	2.53%	0.246%
36	9.805	1643	1646	1648	rBV4	33729	35439	2.41%	0.234%
37	9.843	1652	1654	1659	rVB3	24270	26332	1.79%	0.174%
38	9.882	1659	1662	1672	rBV2	142920	166585	11.35%	1.101%

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W29 11084511-011C.D
Acq On : 2 Sep 2011 2:02 am
Operator : ALICIA HABERLE
Sample : 11084511-011C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

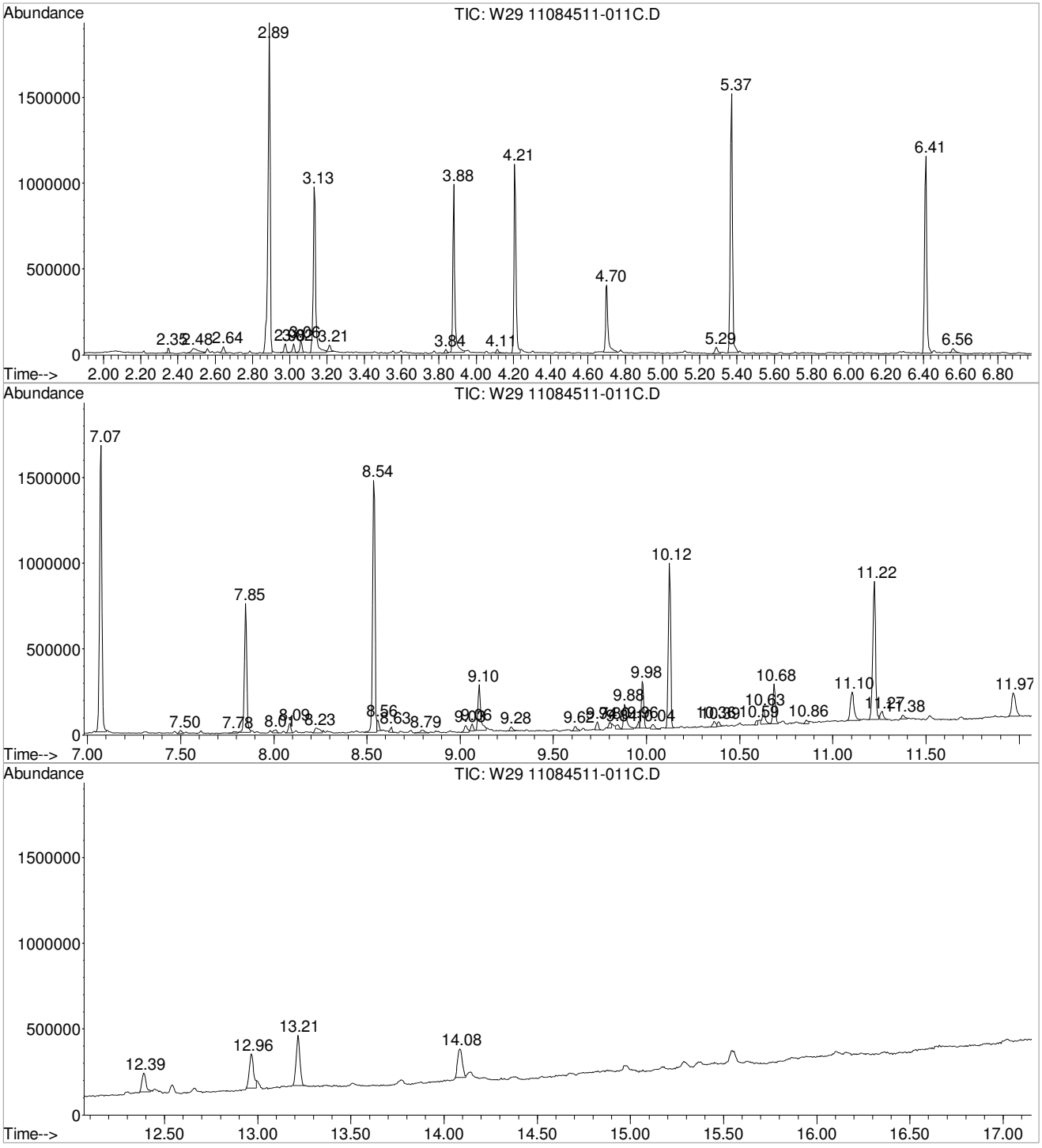
39	9.958	1674	1678	1679	rVV2	39773	32262	2.20%	0.213%
40	9.978	1679	1682	1686	rVB	271535	233786	15.92%	1.545%
41	10.035	1691	1694	1702	rVB3	25354	27475	1.87%	0.182%
42	10.122	1708	1712	1717	rBV	960769	781666	53.24%	5.165%
43	10.362	1758	1762	1765	rBV5	31297	35697	2.43%	0.236%
44	10.386	1765	1767	1771	rVB3	25848	25361	1.73%	0.168%
45	10.593	1807	1810	1811	rBV	27152	22867	1.56%	0.151%
46	10.627	1814	1817	1825	rVB	89676	97951	6.67%	0.647%
47	10.685	1825	1829	1834	rBV	232788	194714	13.26%	1.287%
48	10.858	1862	1865	1868	rBV5	21390	23385	1.59%	0.155%
49	11.103	1911	1916	1925	rBV2	167579	237416	16.17%	1.569%
50	11.223	1935	1941	1946	rBV	804132	853415	58.12%	5.639%
51	11.266	1947	1950	1955	rVB	46112	51235	3.49%	0.339%
52	11.377	1970	1973	1978	rBV7	22004	27638	1.88%	0.183%
53	11.969	2091	2096	2103	rBV3	135297	200429	13.65%	1.324%
54	12.387	2179	2183	2191	rBV	110967	161254	10.98%	1.066%
55	12.964	2298	2303	2309	rBV	199316	320833	21.85%	2.120%
56	13.214	2350	2355	2362	rVB	295396	426627	29.06%	2.819%
57	14.084	2531	2536	2543	rBV2	165231	280231	19.09%	1.852%

Sum of corrected areas: 15134065

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W29 11084511-011C.D
Acq On : 2 Sep 2011 2:02 am
Operator : ALICIA HABERLE
Sample : 11084511-011C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W29 11084511-011C.D
Acq On : 2 Sep 2011 2:02 am
Operator : ALICIA HABERLE
Sample : 11084511-011C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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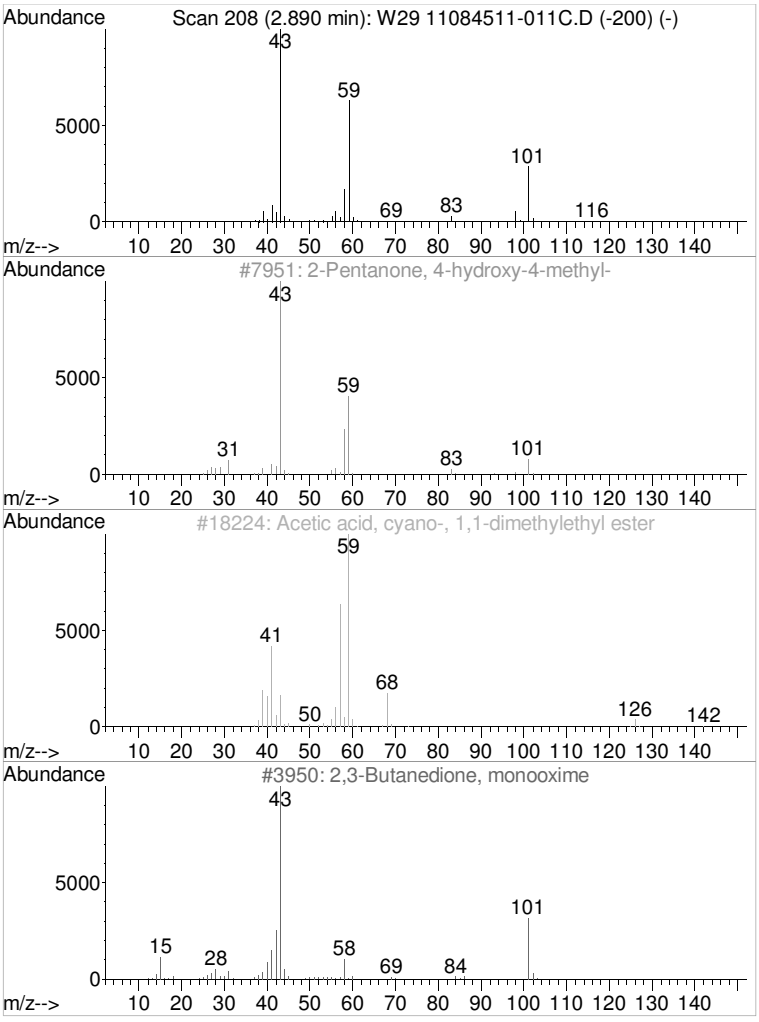
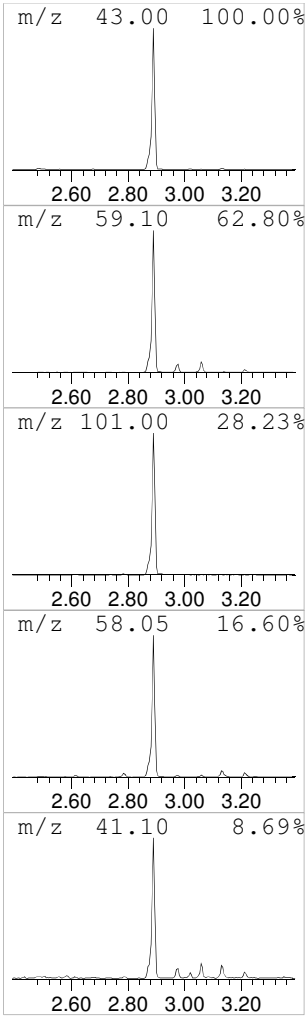
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.89	67.75 ug/l	1468300	ISTD 1,4-Dichlorobenzene-d4	4.21

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	56
2	Acetic acid, cyano-, 1,1-dimethy...	141	C7H11NO2	001116-98-9	17
3	2,3-Butanedione, monooxime	101	C4H7NO2	000057-71-6	17
4	(+-)-4-Amino-4,5-dihydro-2(3H)-f...	101	C4H7NO2	016504-58-8	9
5	Morpholine, 4-methyl-	101	C5H11NO	000109-02-4	9





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Data File : W29 11084511-011C.D
Acq On : 2 Sep 2011 2:02 am
Operator : ALICIA HABERLE
Sample : 11084511-011C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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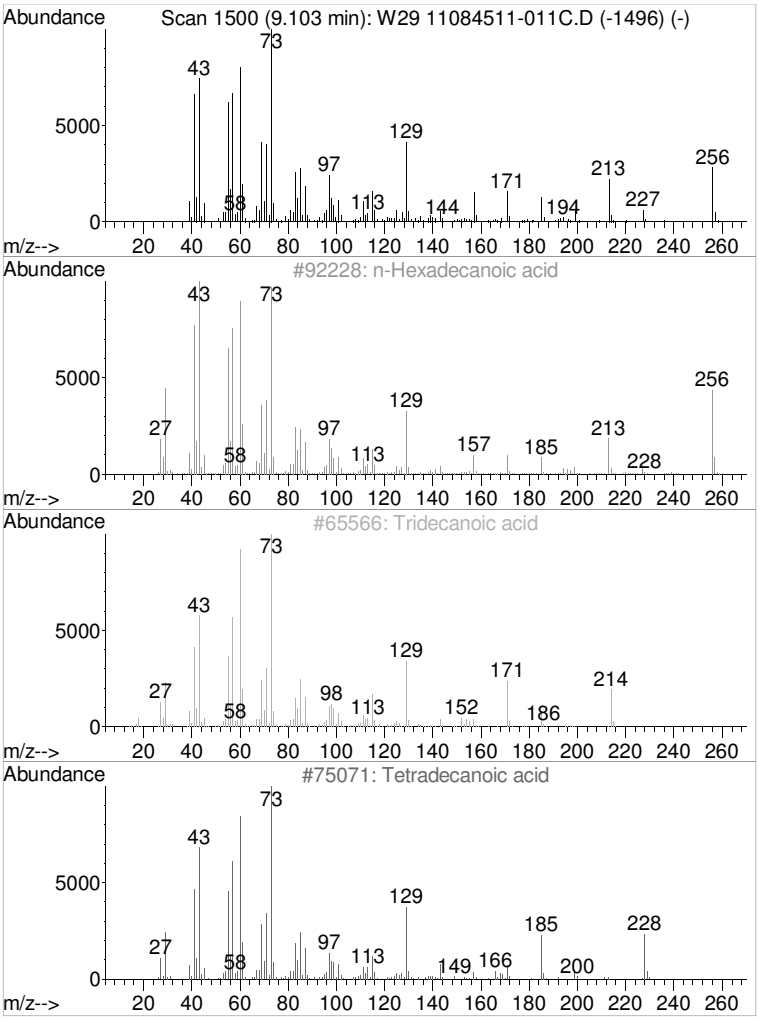
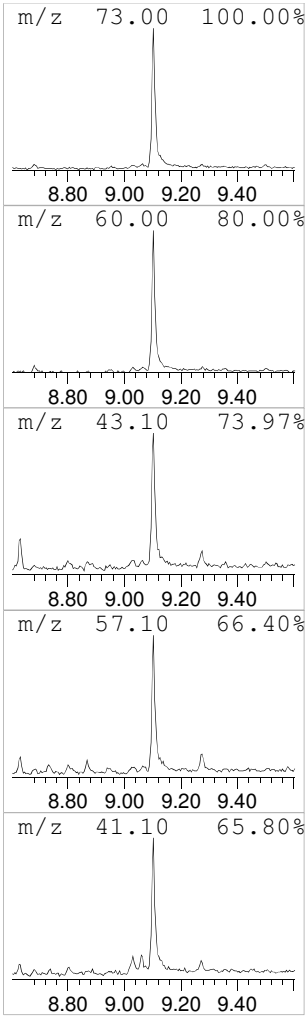
R.T.	EstConc	Area	Relative to ISTD	R.T.
9.10	7.97 ug/l	259165	ISTD-Phenanthrene-d10	8.54

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	98
2	Tridecanoic acid	214	C13H26O2	000638-53-9	89
3	Tetradecanoic acid	228	C14H28O2	000544-63-8	81
4	n-Decanoic acid	172	C10H20O2	000334-48-5	70
5	Estra-1,3,5(10)-trien-17.beta.-ol	256	C18H24O	002529-64-8	46





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Acq On : 2 Sep 2011 2:02 am
Operator : ALICIA HABERLE
Sample : 11084511-011C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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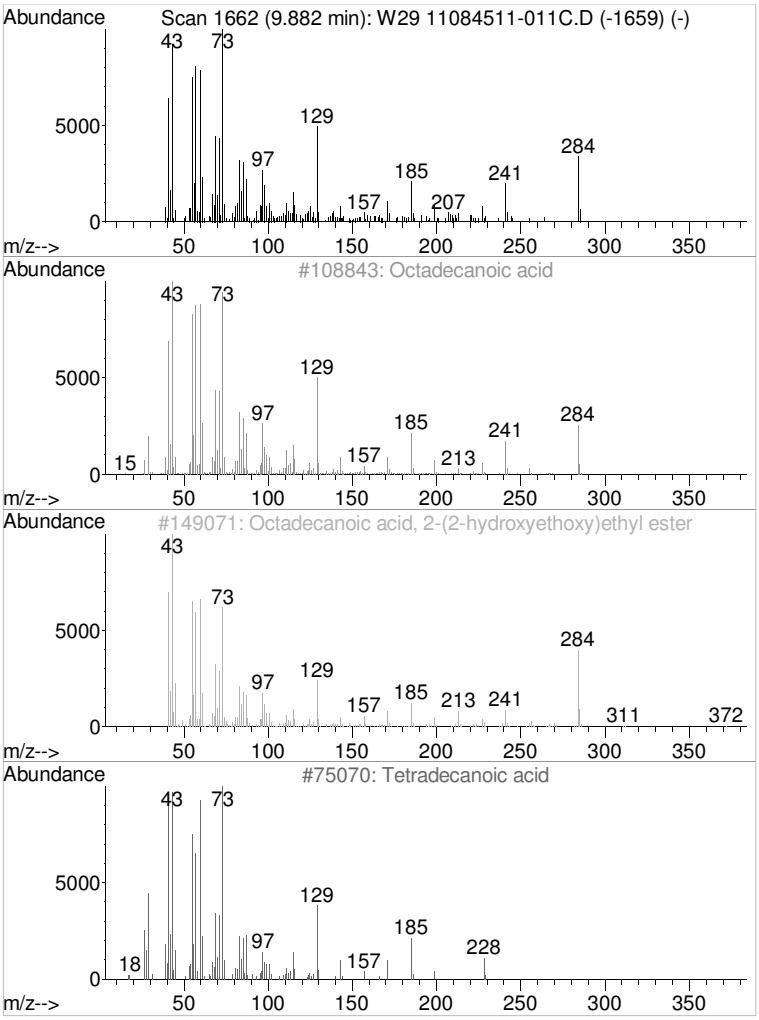
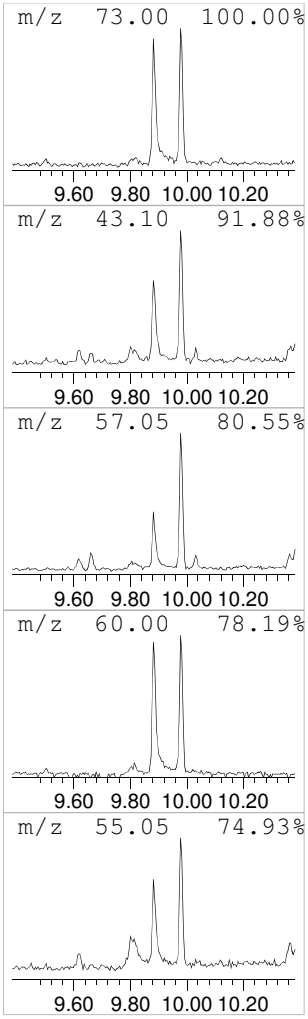
R.T.	EstConc	Area	Relative to ISTD	R.T.
9.88	7.81 ug/l	166585	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid	284	C18H36O2	000057-11-4	99
2	Octadecanoic acid, 2-(2-hydroxye...	372	C22H44O4	000106-11-6	91
3	Tetradecanoic acid	228	C14H28O2	000544-63-8	89
4	n-Decanoic acid	172	C10H20O2	000334-48-5	64
5	11-Bromoundecanoic acid	264	C11H21BrO2	002834-05-1	46





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Data File : W29 11084511-011C.D
Acq On : 2 Sep 2011 2:02 am
Operator : ALICIA HABERLE
Sample : 11084511-011C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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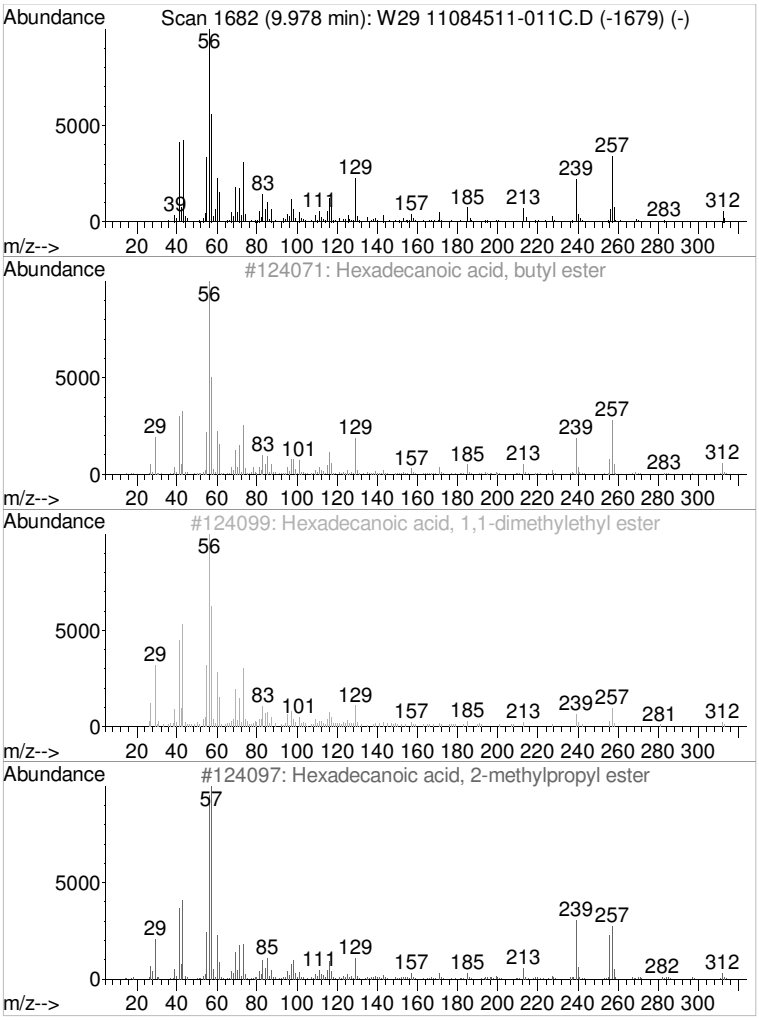
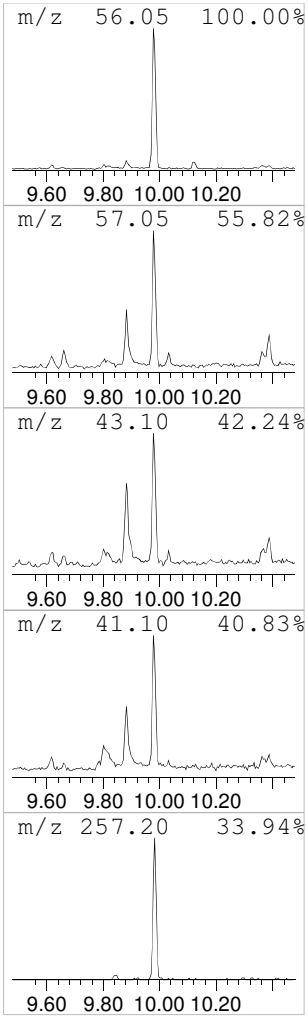
R.T.	EstConc	Area	Relative to ISTD	R.T.
9.98	10.96 ug/l	233786	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexadecanoic acid, butyl ester	312	C20H40O2	000111-06-8	97
2	Hexadecanoic acid, 1,1-dimethyle...	312	C20H40O2	031158-91-5	78
3	Hexadecanoic acid, 2-methylpropy...	312	C20H40O2	000110-34-9	76
4	Nipecotic acid	129	C6H11NO2	000498-95-3	43
5	1-Hexene, 2,5-dimethyl-	112	C8H16	006975-92-4	30





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Data File : W29 11084511-011C.D
Acq On : 2 Sep 2011 2:02 am
Operator : ALICIA HABERLE
Sample : 11084511-011C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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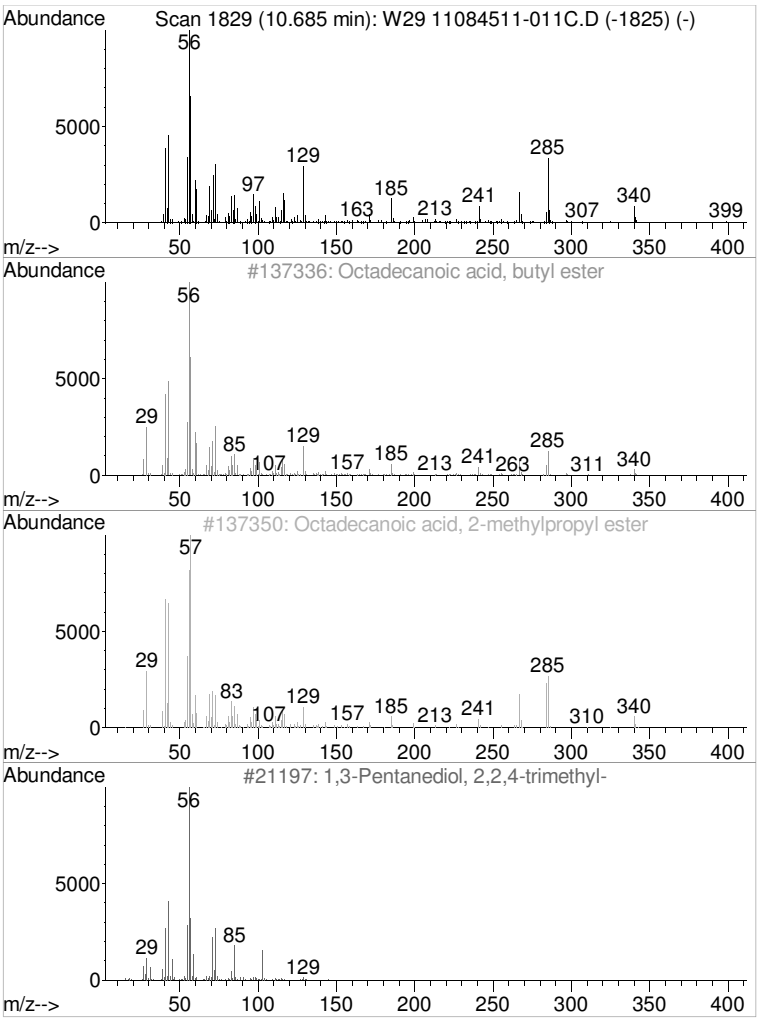
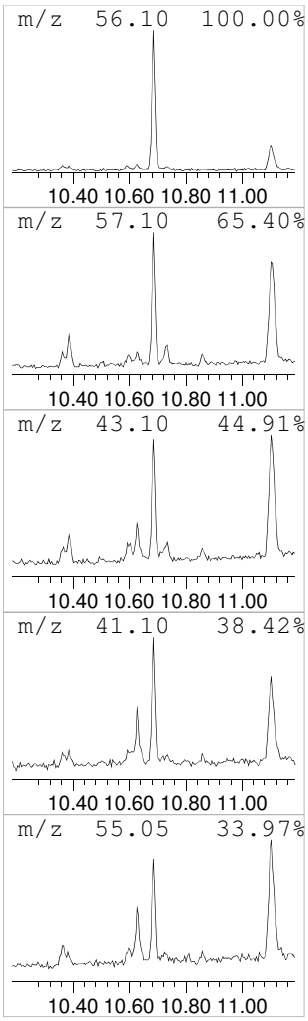
R.T.	EstConc	Area	Relative to ISTD	R.T.
10.68	9.13 ug/l	194714	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	95
2	Octadecanoic acid, 2-methylpropy...	340	C22H44O2	000646-13-9	93
3	1,3-Pentanediol, 2,2,4-trimethyl-	146	C8H18O2	000144-19-4	32
4	2-Butyl-1-decene	196	C14H28	051655-65-3	27
5	Cyclobutane, 1-hexyl-2,3-dimethyl-	168	C12H24	055170-84-8	27





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W29 11084511-011C.D
Acq On : 2 Sep 2011 2:02 am
Operator : ALICIA HABERLE
Sample : 11084511-011C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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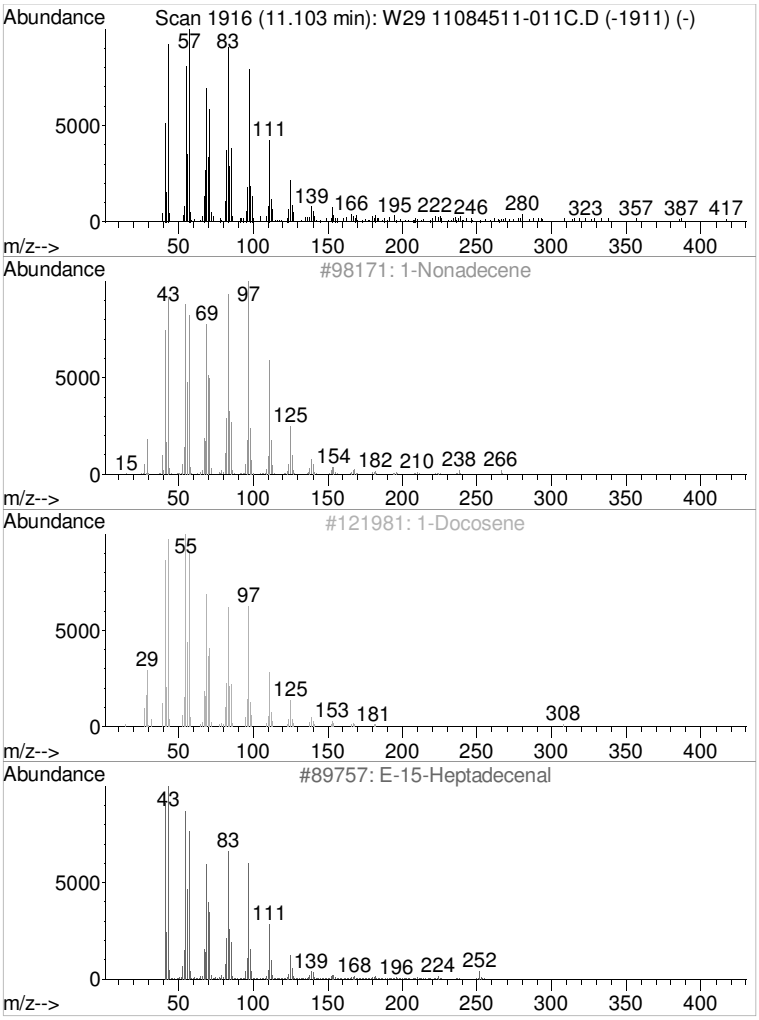
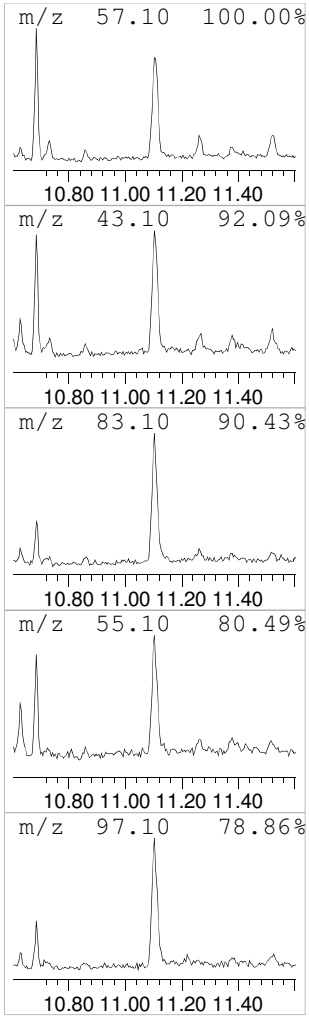
R.T.	EstConc	Area	Relative to ISTD	R.T.
11.10	11.13 ug/l	237416	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Nonadecene	266	C19H38	018435-45-5	98
2	1-Docosene	308	C22H44	001599-67-3	95
3	E-15-Heptadecenal	252	C17H32O	1000130-97-9	95
4	5-Eicosene, (E)-	280	C20H40	074685-30-6	95
5	2- Chloropropionic acid, octadec...	360	C21H41ClO2	088104-31-8	94





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Data File : W29 11084511-011C.D
Acq On : 2 Sep 2011 2:02 am
Operator : ALICIA HABERLE
Sample : 11084511-011C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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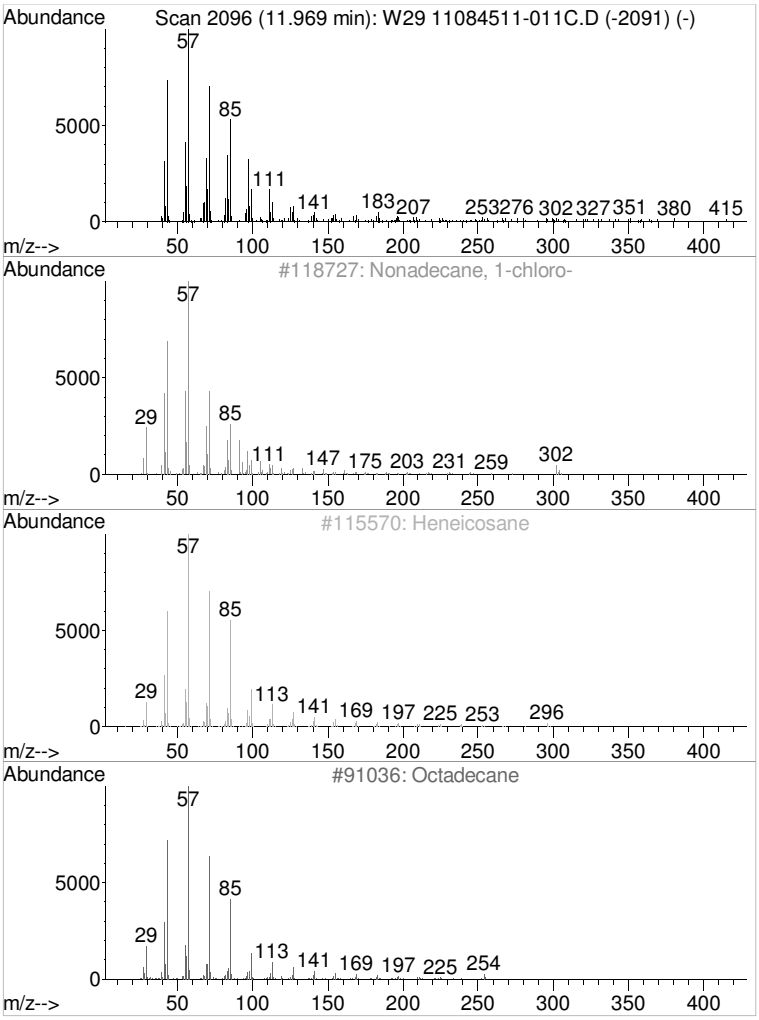
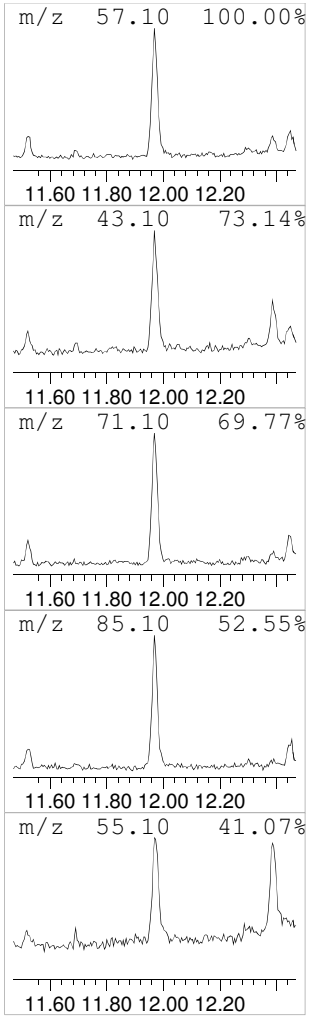
R.T.	EstConc	Area	Relative to ISTD	R.T.
11.97	9.39 ug/l	200429	ISTD-Chrysene-d12	11.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonadecane, 1-chloro-	302	C19H39Cl	062016-76-6	95
2	Heneicosane	296	C21H44	000629-94-7	94
3	Octadecane	254	C18H38	000593-45-3	93
4	Nonadecane	268	C19H40	000629-92-5	93
5	3-Eicosene, (E)-	280	C20H40	074685-33-9	89





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Data File : W29 11084511-011C.D
Acq On : 2 Sep 2011 2:02 am
Operator : ALICIA HABERLE
Sample : 11084511-011C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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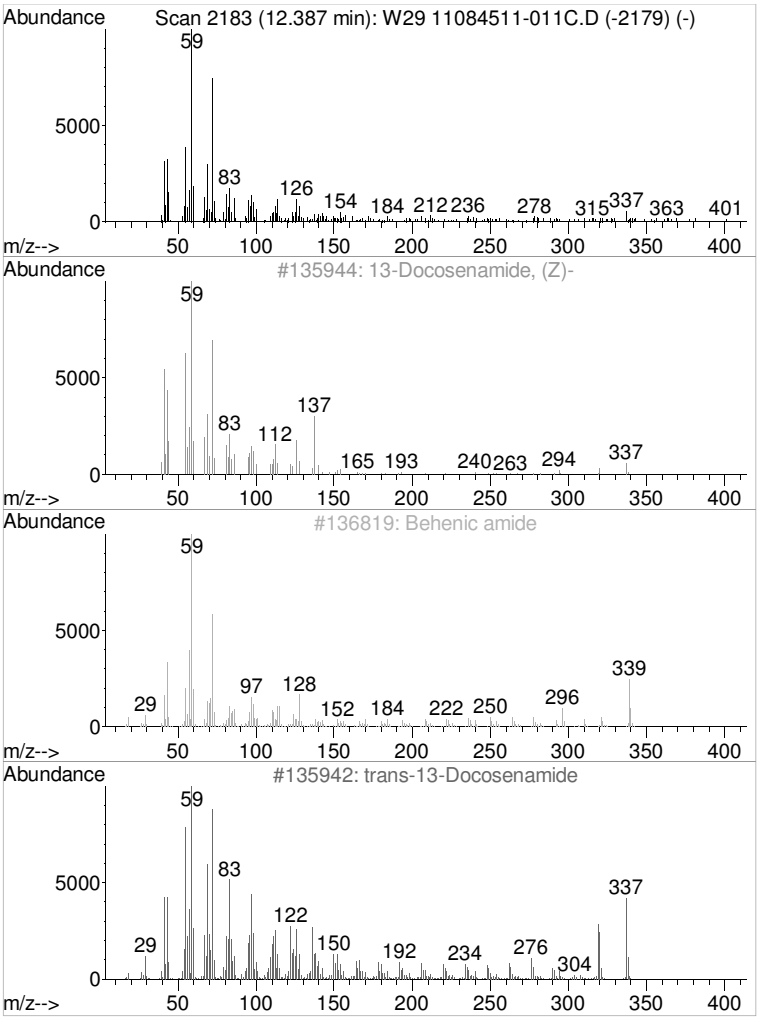
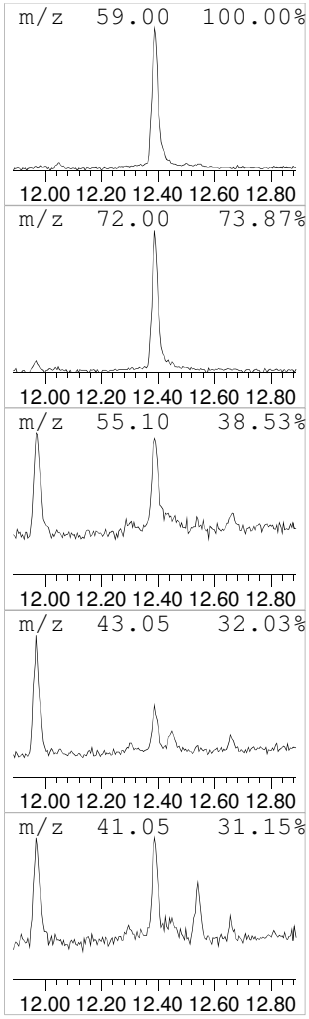
R.T.	EstConc	Area	Relative to ISTD	R.T.
12.39	15.12 ug/l	161254	ISTD-Perylene-d12	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	13-Docosenamide, (Z)-	337	C22H43NO	000112-84-5	93
2	Behenic amide	339	C22H45NO	003061-75-4	90
3	trans-13-Docosenamide	337	C22H43NO	010436-09-6	58
4	9-Octadecenamide, (Z)-	281	C18H35NO	000301-02-0	46
5	Dodecanamide	199	C12H25NO	001120-16-7	45





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Data File : W29 11084511-011C.D
Acq On : 2 Sep 2011 2:02 am
Operator : ALICIA HABERLE
Sample : 11084511-011C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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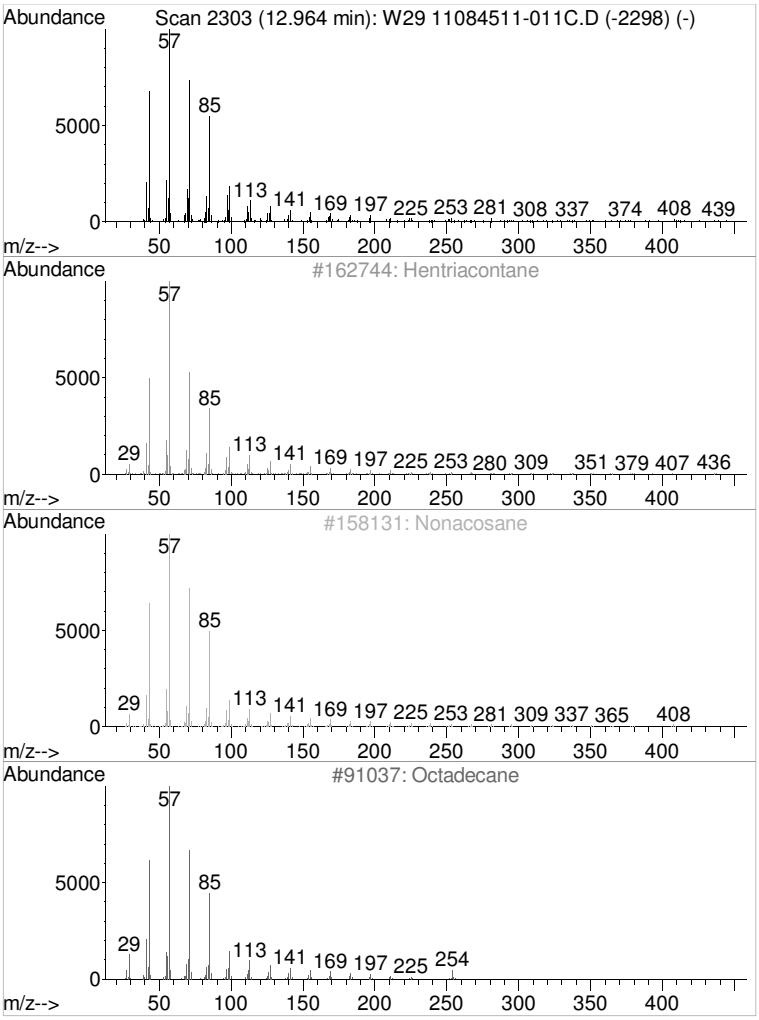
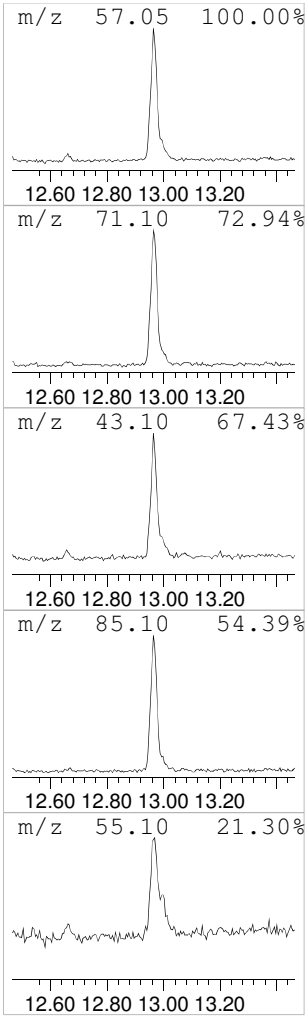
R.T.	EstConc	Area	Relative to ISTD	R.T.
12.96	30.08 ug/l	320833	ISTD-Perylene-d12	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hentriacontane	437	C31H64	000630-04-6	99
2	Nonacosane	408	C29H60	000630-03-5	98
3	Octadecane	254	C18H38	000593-45-3	96
4	Heptadecane	240	C17H36	000629-78-7	96
5	Octacosane	394	C28H58	000630-02-4	93





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W29 11084511-011C.D
Acq On : 2 Sep 2011 2:02 am
Operator : ALICIA HABERLE
Sample : 11084511-011C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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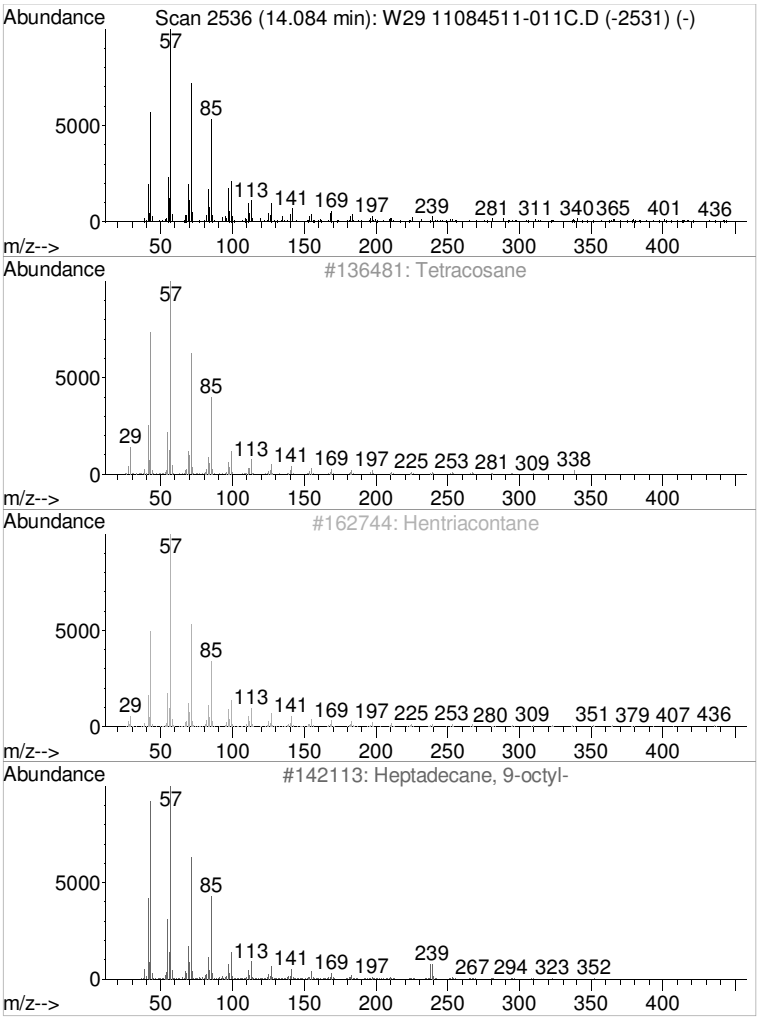
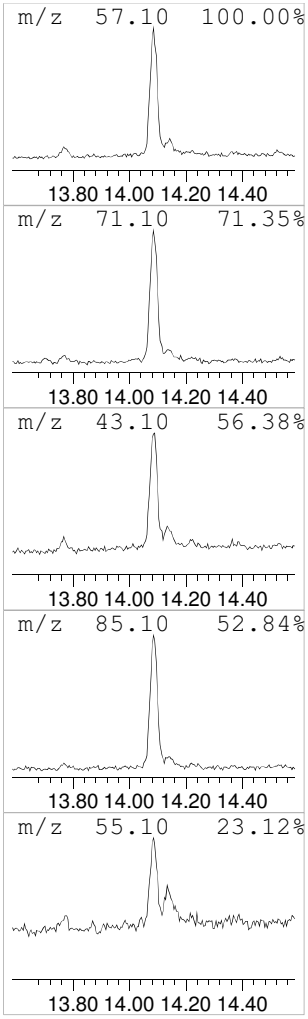
R.T.	EstConc	Area	Relative to ISTD	R.T.
14.08	26.27 ug/l	280231	ISTD-Perylene-d12	13.22

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tetracosane	338	C24H50	000646-31-1	95
2	Hentriacontane	437	C31H64	000630-04-6	93
3	Heptadecane, 9-octyl-	352	C25H52	007225-64-1	93
4	Eicosane, 9-octyl-	394	C28H58	013475-77-9	93
5	Hexadecane, 2-methyl-	240	C17H36	001560-92-5	92





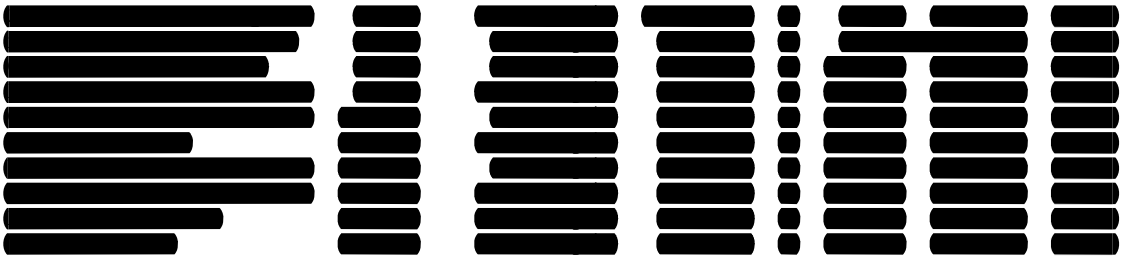
Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\01SEP11\
Data File : W29 11084511-011C.D
Acq On : 2 Sep 2011 2:02 am
Operator : ALICIA HABERLE
Sample : 11084511-011C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

| | |--Internal Standard---|
TIC Top Hit name RT EstConc Units Response |# RT Resp Conc|



LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X92 1108511-012C.D
Acq On : 7 Sep 2011 2:19 am
Operator : ALICIA HABERLE
Sample : 1108511-012C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.442	133	136	140	rBV	25447	18892	1.20%	0.112%
2	2.692	174	188	191	rBV	1389824	1063760	67.75%	6.293%
3	2.774	202	205	209	rVB	50345	31643	2.02%	0.187%
4	2.822	209	215	218	rBV	41981	32473	2.07%	0.192%
5	2.860	219	223	226	rBV	67128	44547	2.84%	0.264%
6	2.942	232	240	251	rBV2	951486	825644	52.59%	4.884%
7	3.019	251	256	262	rVB3	20537	35471	2.26%	0.210%
8	3.692	392	396	406	rBV	880690	750038	47.77%	4.437%
9	3.909	438	441	447	rBV	37600	31013	1.98%	0.183%
10	3.995	455	459	476	rBV	930712	743110	47.33%	4.396%
11	4.486	554	561	573	rBV	398975	392075	24.97%	2.319%
12	5.149	694	699	709	rBV	1103785	984939	62.73%	5.827%
13	6.193	907	916	922	rBV	1093560	901614	57.43%	5.334%
14	6.342	944	947	950	rBV2	18471	20046	1.28%	0.119%
15	6.837	1042	1050	1055	rBV	1256565	1099555	70.03%	6.505%
16	7.616	1208	1212	1219	rVB	644817	585336	37.28%	3.463%
17	7.780	1243	1246	1253	rBV3	76166	87425	5.57%	0.517%
18	7.833	1253	1257	1261	rVV	172152	181459	11.56%	1.073%
19	7.866	1261	1264	1267	rVV2	209959	211600	13.48%	1.252%
20	7.895	1267	1270	1273	rVV2	122542	159082	10.13%	0.941%
21	7.919	1273	1275	1278	rVV	108335	82055	5.23%	0.485%
22	7.958	1278	1283	1285	rVV2	76385	87394	5.57%	0.517%
23	7.977	1285	1287	1289	rVV	62320	50856	3.24%	0.301%
24	8.006	1289	1293	1297	rVV2	153425	203304	12.95%	1.203%
25	8.044	1297	1301	1305	rVV	183557	197052	12.55%	1.166%
26	8.083	1306	1309	1313	rVB2	96924	90682	5.78%	0.536%
27	8.164	1323	1326	1329	rBV3	15970	18945	1.21%	0.112%
28	8.227	1335	1339	1342	rBV2	24760	28514	1.82%	0.169%
29	8.275	1346	1349	1350	rVV2	37664	34545	2.20%	0.204%
30	8.299	1350	1354	1357	rVV	1039025	944295	60.14%	5.586%
31	8.318	1357	1358	1362	rVB	110379	61823	3.94%	0.366%
32	8.410	1374	1377	1383	rVB5	18254	20080	1.28%	0.119%
33	8.814	1454	1461	1466	rBV5	53898	98854	6.30%	0.585%
34	8.886	1472	1476	1483	rBV4	276972	272346	17.35%	1.611%
35	9.054	1508	1511	1517	rBV6	17137	24573	1.57%	0.145%
36	9.193	1536	1540	1546	rVB	23324	24140	1.54%	0.143%
37	9.419	1580	1587	1589	rBV7	14173	27036	1.72%	0.160%
38	9.492	1598	1602	1609	rVB	139023	128219	8.17%	0.759%

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X92 1108511-012C.D
Acq On : 7 Sep 2011 2:19 am
Operator : ALICIA HABERLE
Sample : 1108511-012C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

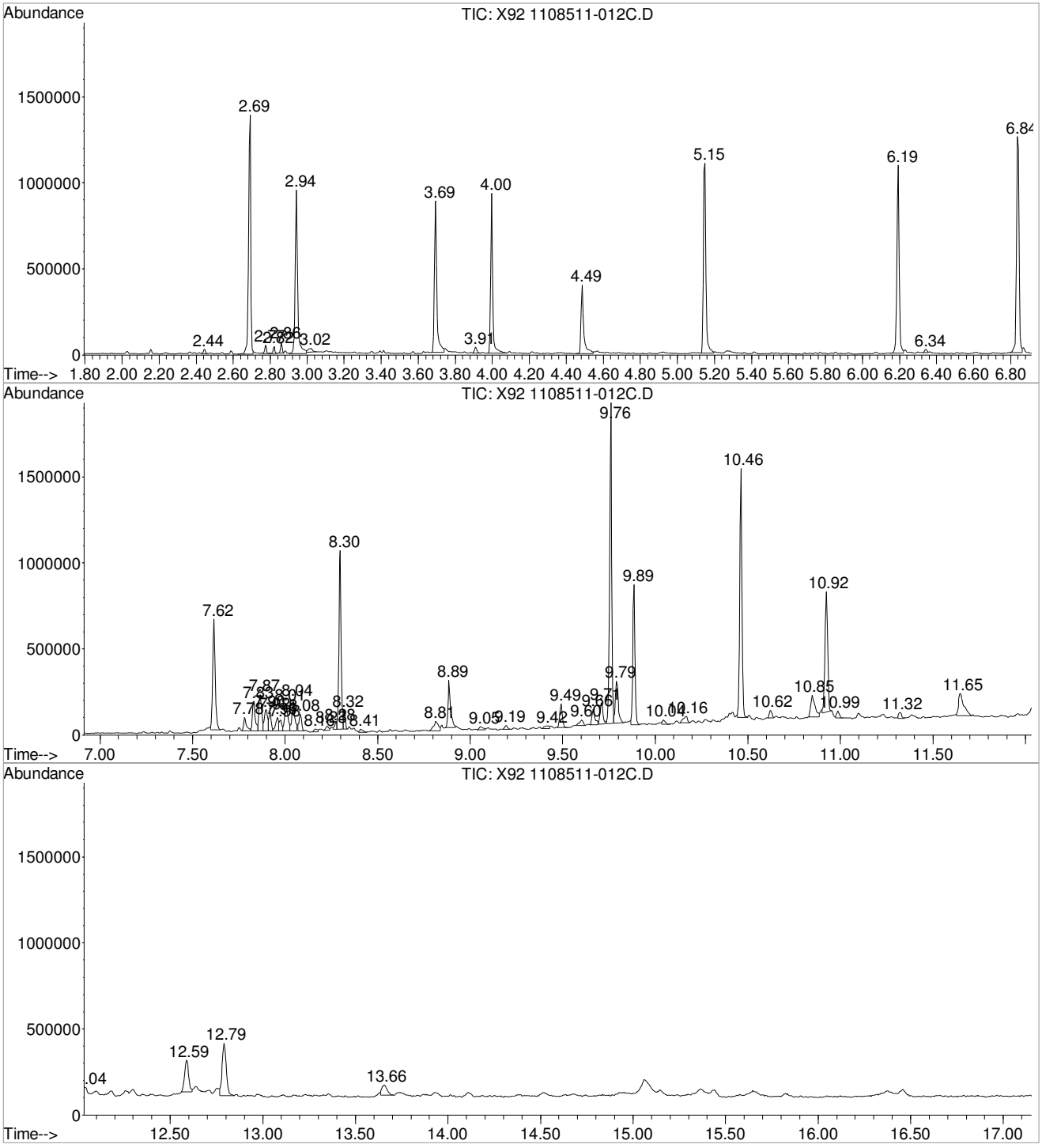
39	9.602	1619	1625	1629	rVB6	33325	47536	3.03%	0.281%
40	9.665	1634	1638	1643	rVV2	90550	97511	6.21%	0.577%
41	9.708	1644	1647	1652	rVV	122096	125212	7.97%	0.741%
42	9.761	1653	1658	1661	rVV	1864867	1570069	100.00%	9.288%
43	9.790	1661	1664	1672	rVB	240954	266871	17.00%	1.579%
44	9.886	1680	1684	1690	rVB	813914	693832	44.19%	4.105%
45	10.045	1715	1717	1724	rVB2	23365	22989	1.46%	0.136%
46	10.165	1736	1742	1747	rBV5	37828	60481	3.85%	0.358%
47	10.463	1800	1804	1811	rVB	1448219	1259453	80.22%	7.451%
48	10.622	1834	1837	1841	rBV3	44870	43547	2.77%	0.258%
49	10.848	1880	1884	1892	rBV2	128153	196535	12.52%	1.163%
50	10.925	1895	1900	1905	rVB	693655	676869	43.11%	4.004%
51	10.987	1910	1913	1918	rVB	43339	41972	2.67%	0.248%
52	11.324	1980	1983	1987	rVB	35208	36561	2.33%	0.216%
53	11.651	2046	2051	2063	rVB3	127639	252860	16.11%	1.496%
54	12.035	2128	2131	2137	rVB4	41460	61249	3.90%	0.362%
55	12.589	2240	2246	2252	rBV	187070	284969	18.15%	1.686%
56	12.790	2283	2288	2299	rVB	304467	459000	29.23%	2.715%
57	13.656	2464	2468	2477	rVB6	60972	111636	7.11%	0.660%

Sum of corrected areas: 16903587

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X92 1108511-012C.D
Acq On : 7 Sep 2011 2:19 am
Operator : ALICIA HABERLE
Sample : 1108511-012C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X92 1108511-012C.D
Acq On : 7 Sep 2011 2:19 am
Operator : ALICIA HABERLE
Sample : 1108511-012C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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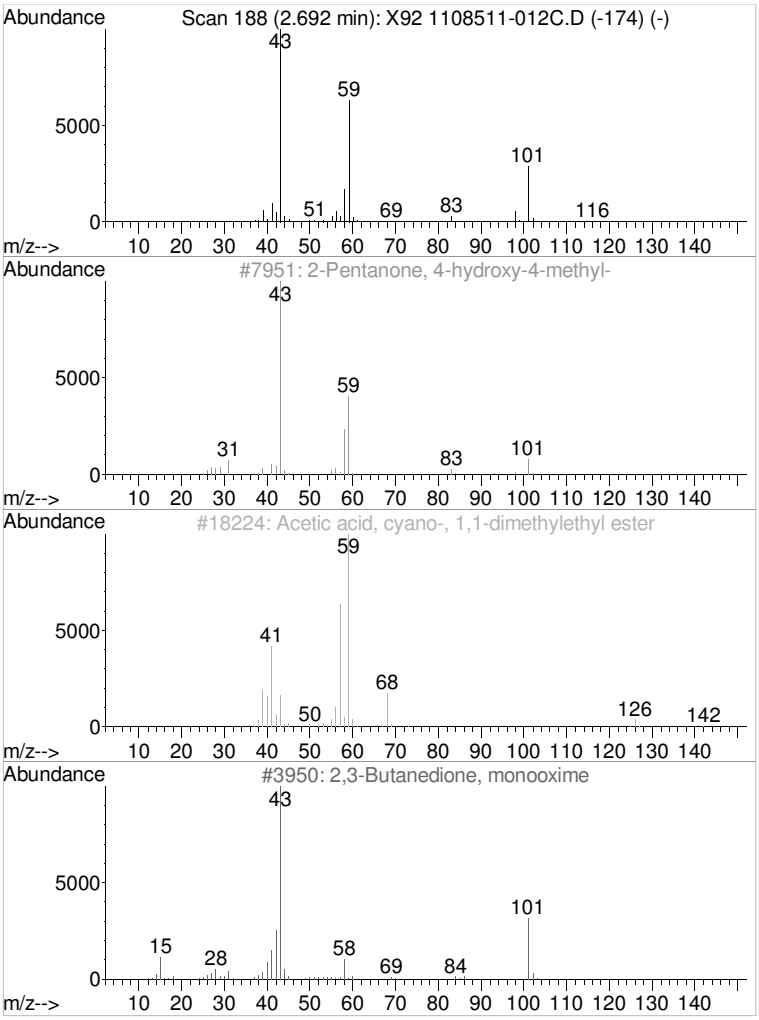
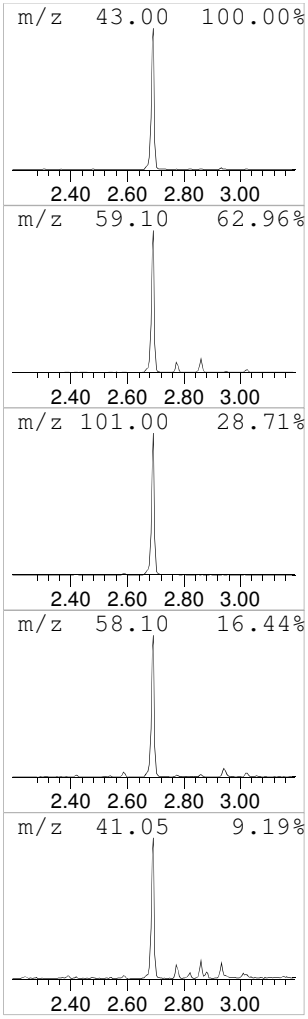
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.69	57.26 ug/l	1063760	ISTD 1,4-Dichlorobenzene-d4	4.00

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	56
2	Acetic acid, cyano-, 1,1-dimethy...	141	C7H11NO2	001116-98-9	17
3	2,3-Butanedione, monooxime	101	C4H7NO2	000057-71-6	17
4	Morpholine, 4-methyl-	101	C5H11NO	000109-02-4	9
5	Butane, 1-ethoxy-	102	C6H14O	000628-81-9	9





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Data File : X92 1108511-012C.D
Acq On : 7 Sep 2011 2:19 am
Operator : ALICIA HABERLE
Sample : 1108511-012C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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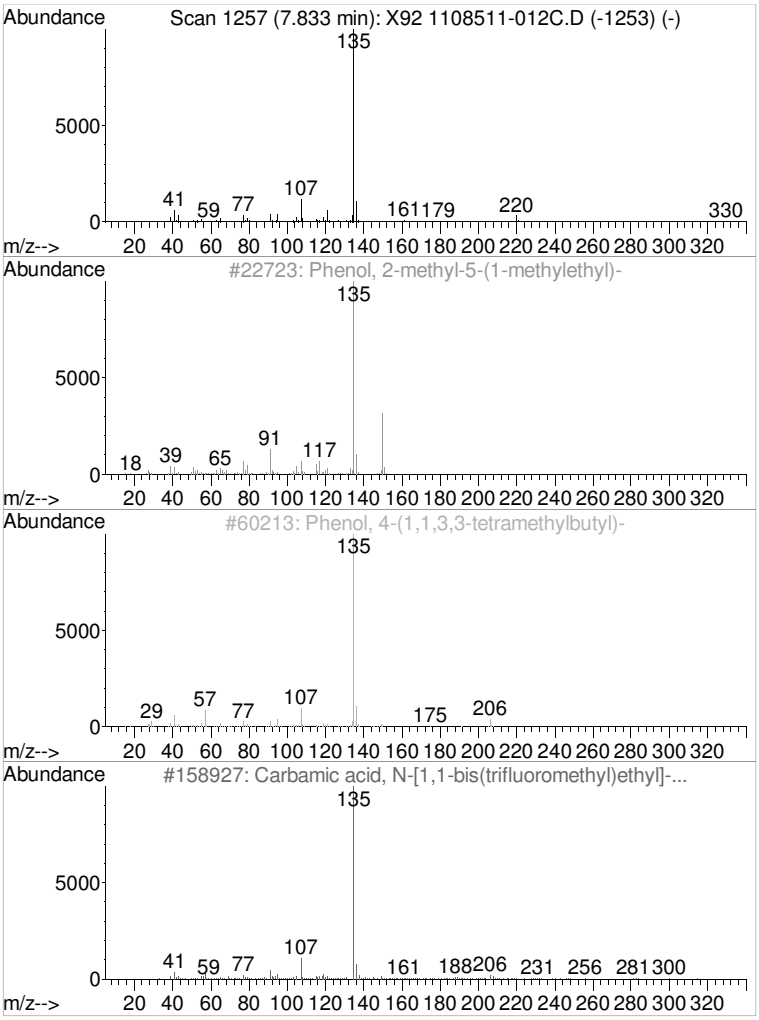
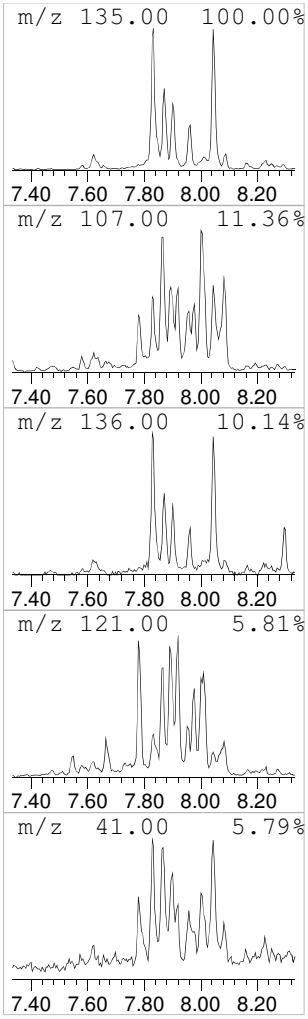
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.83	7.69 ug/l	181459	ISTD-Phenanthrene-d10	8.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, 2-methyl-5-(1-methylethyl)-	150	C10H14O	000499-75-2	78
2	Phenol, 4-(1,1,3,3-tetramethylbu...	206	C14H22O	000140-66-9	78
3	Carbamic acid, N-[1,1-bis(triflu...	413	C19H25F6NO2	296242-69-8	64
4	1-n-Hexyladamantane	220	C16H28	022458-75-9	64
5	4-tert-Butylphenyl acetate	192	C12H16O2	003056-64-2	64





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X92 1108511-012C.D
Acq On : 7 Sep 2011 2:19 am
Operator : ALICIA HABERLE
Sample : 1108511-012C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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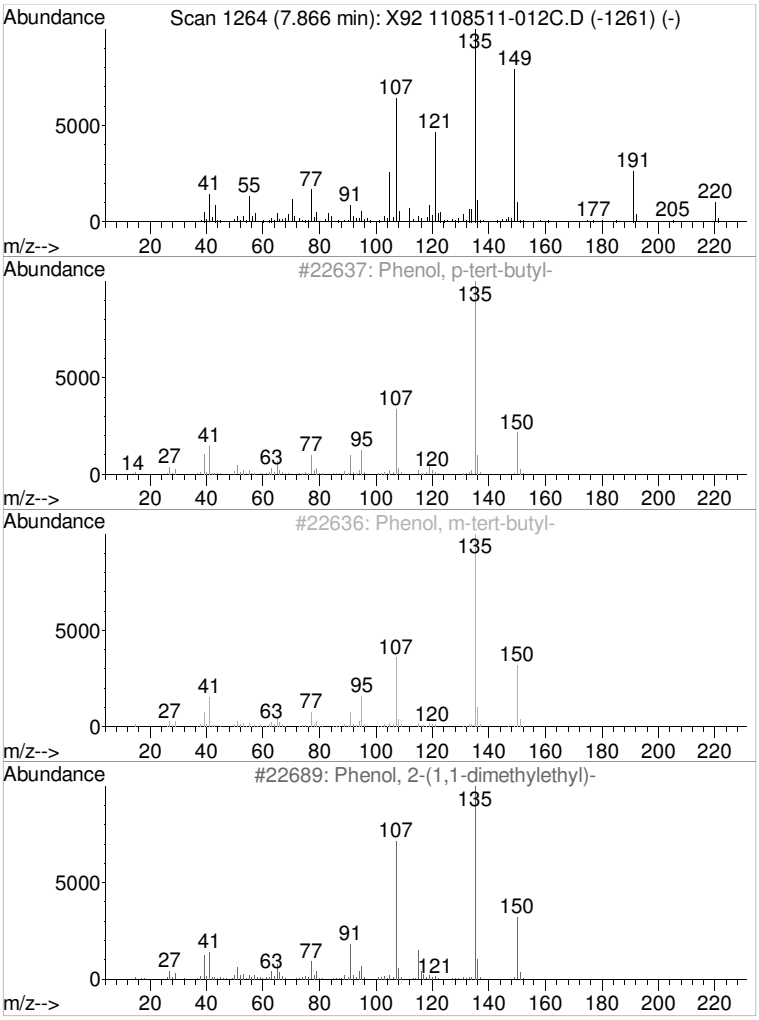
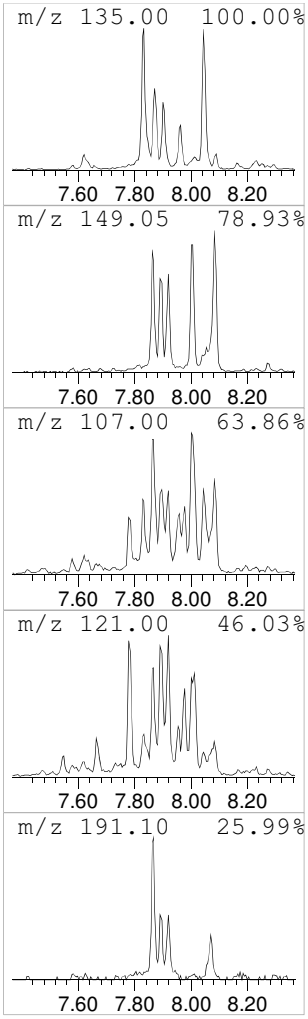
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
7.87	8.96 ug/l	211600	ISTD-Phenanthrene-d10	8.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, p-tert-butyl-	150	C10H14O	000098-54-4	45
2	Phenol, m-tert-butyl-	150	C10H14O	000585-34-2	43
3	Phenol, 2-(1,1-dimethylethyl)-	150	C10H14O	000088-18-6	43
4	Ethanone, 2-ethoxy-1,2-diphenyl-	240	C16H16O2	000574-09-4	38
5	Acetamide, N-(4-methylphenyl)-	149	C9H11NO	000103-89-9	35





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X92 1108511-012C.D
Acq On : 7 Sep 2011 2:19 am
Operator : ALICIA HABERLE
Sample : 1108511-012C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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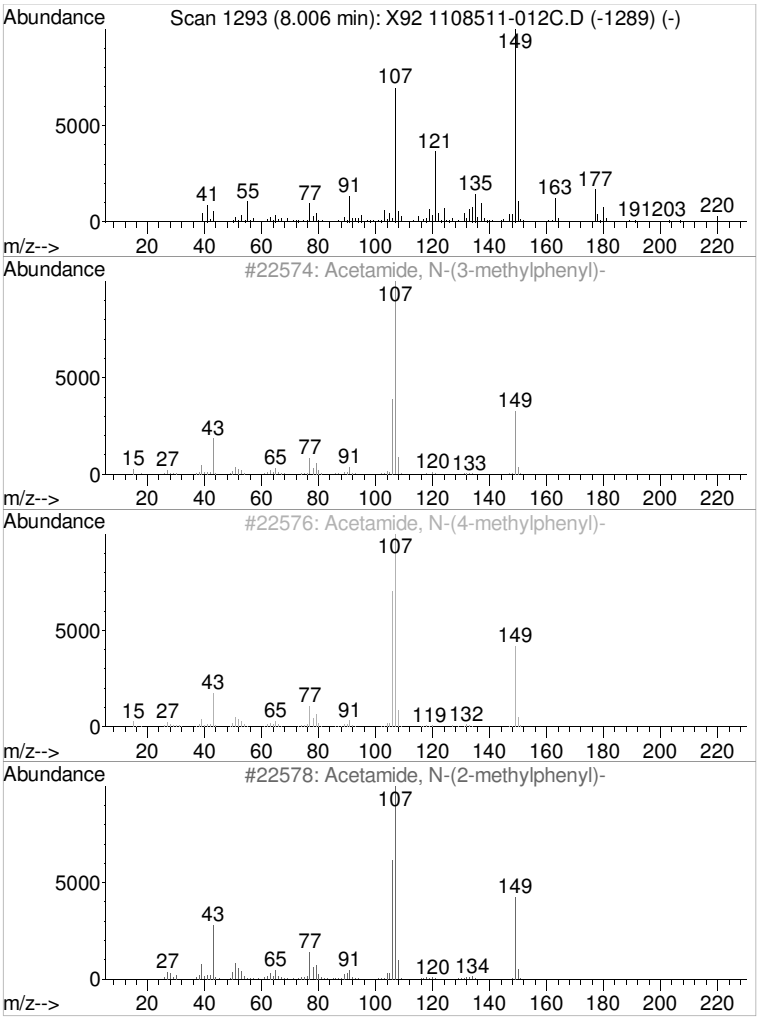
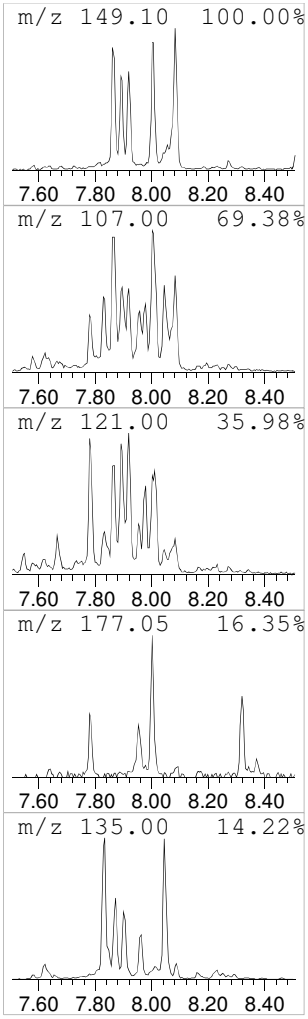
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.01	8.61 ug/l	203304	ISTD-Phenanthrene-d10	8.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Acetamide, N-(3-methylphenyl)-	149	C9H11NO	000537-92-8	58
2	Acetamide, N-(4-methylphenyl)-	149	C9H11NO	000103-89-9	58
3	Acetamide, N-(2-methylphenyl)-	149	C9H11NO	000120-66-1	53
4	Ethanone, 2-(1-methylethoxy)-1,2...	254	C17H18O2	006652-28-4	53
5	Benzene, 1-butyl-4-methoxy-	164	C11H16O	018272-84-9	46





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Data File : X92 1108511-012C.D
Acq On : 7 Sep 2011 2:19 am
Operator : ALICIA HABERLE
Sample : 1108511-012C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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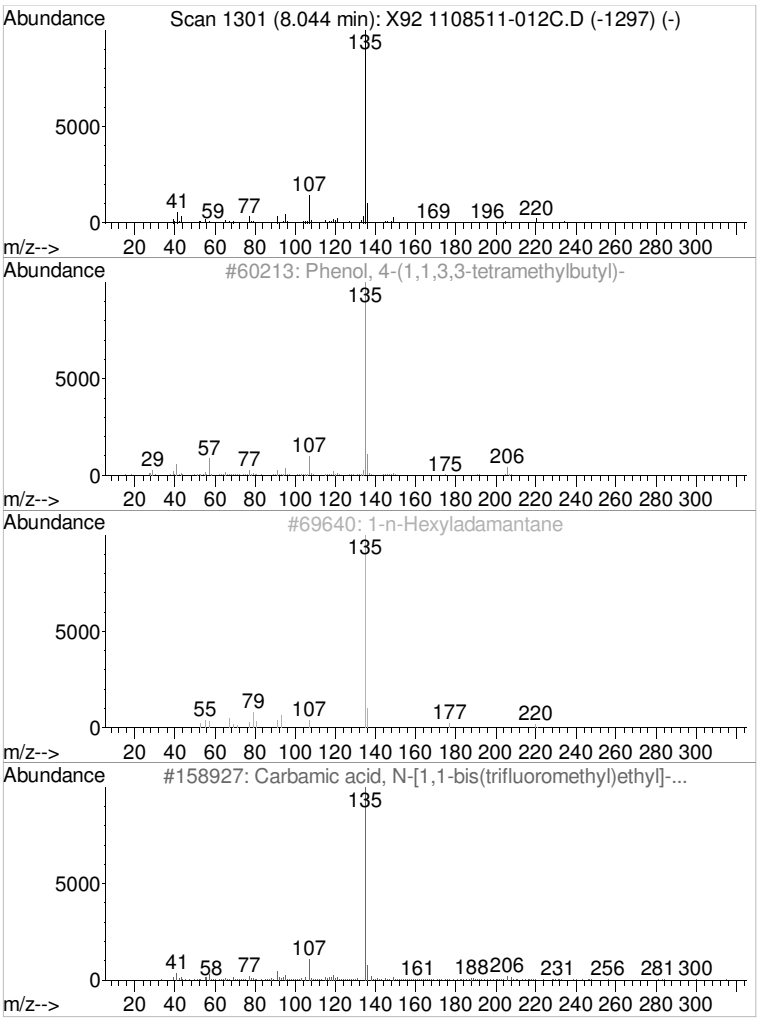
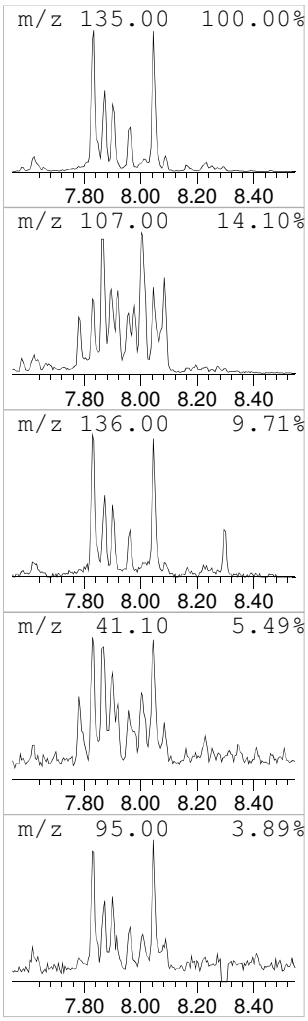
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.04	8.35 ug/l	197052	ISTD-Phenanthrene-d10	8.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Phenol, 4-(1,1,3,3-tetramethylbu...	206	C14H22O	000140-66-9	78
2	1-n-Hexyladamantane	220	C16H28	022458-75-9	59
3	Carbamic acid, N-[1,1-bis(triflu...	413	C19H25F6NO2	296242-69-8	56
4	p-Methoxyheptanophenone	220	C14H20O2	069287-13-4	50
5	4'-Methoxybutyrophenone	178	C11H14O2	004160-51-4	50





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X92 1108511-012C.D
Acq On : 7 Sep 2011 2:19 am
Operator : ALICIA HABERLE
Sample : 1108511-012C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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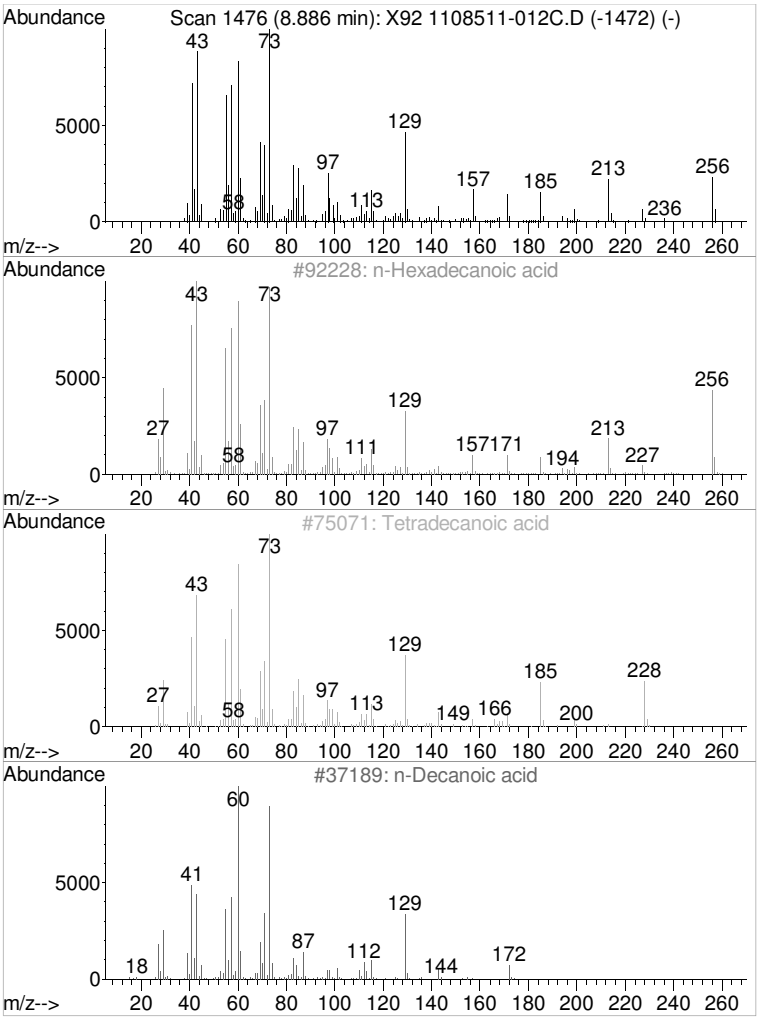
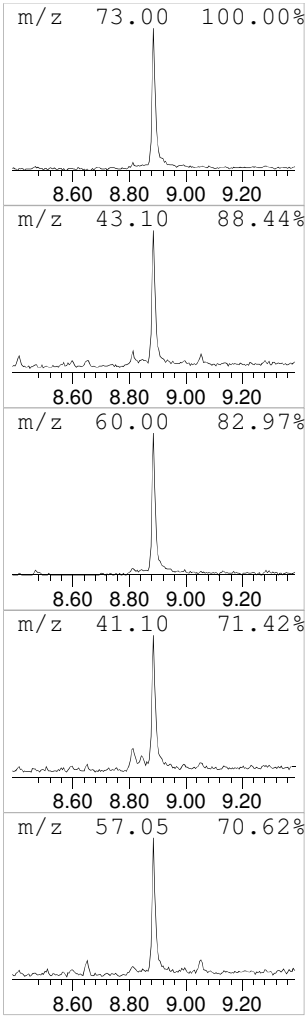
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.89	11.54 ug/l	272346	ISTD-Phenanthrene-d10	8.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	98
2	Tetradecanoic acid	228	C14H28O2	000544-63-8	90
3	n-Decanoic acid	172	C10H20O2	000334-48-5	64
4	Tridecanoic acid	214	C13H26O2	000638-53-9	64
5	Undecanoic acid	186	C11H22O2	000112-37-8	58





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Data File : X92 1108511-012C.D
Acq On : 7 Sep 2011 2:19 am
Operator : ALICIA HABERLE
Sample : 1108511-012C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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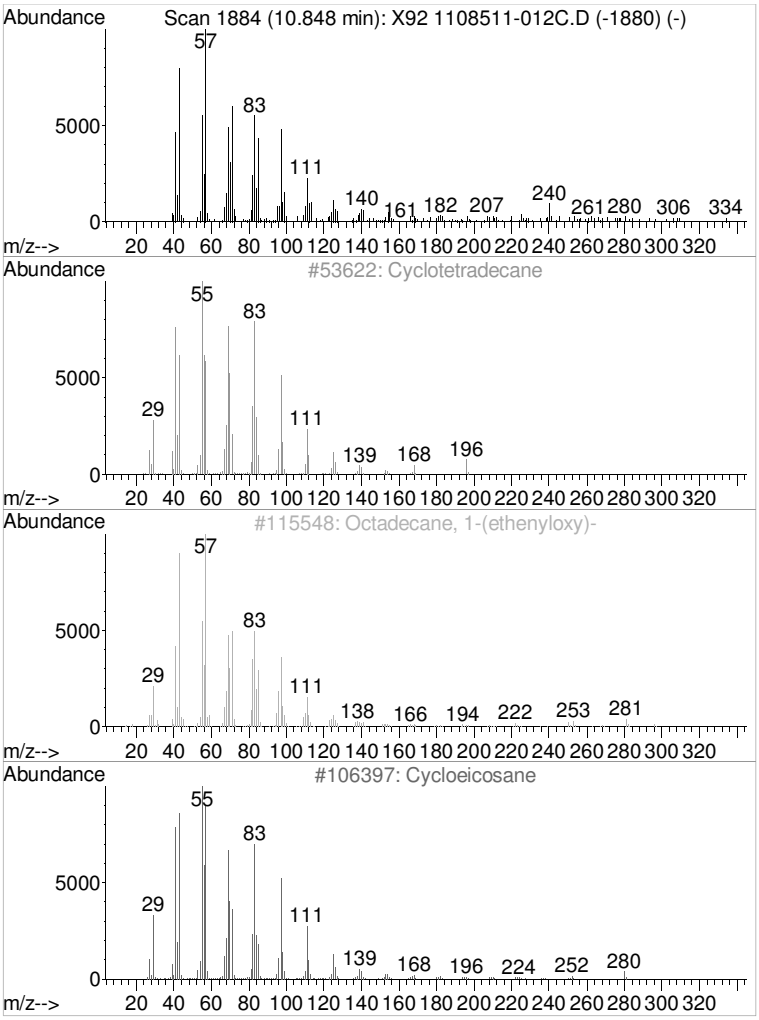
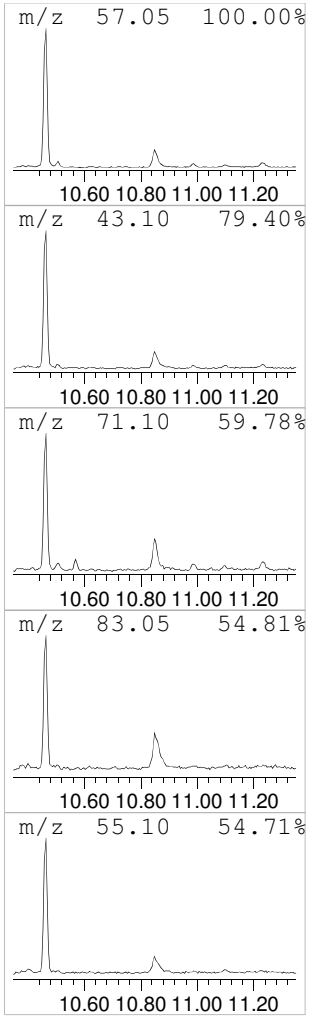
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.85	11.61 ug/l	196535	ISTD-Chrysene-d12	10.92

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclotetradecane	196	C14H28	000295-17-0	86
2	Octadecane, 1-(ethenyloxy)-	296	C20H40O	000930-02-9	86
3	Cycloeicosane	280	C20H40	000296-56-0	83
4	3-Eicosene, (E)-	280	C20H40	074685-33-9	83
5	Ethanol, 2-(tetradecyloxy)-	258	C16H34O2	002136-70-1	70





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X92 1108511-012C.D
Acq On : 7 Sep 2011 2:19 am
Operator : ALICIA HABERLE
Sample : 1108511-012C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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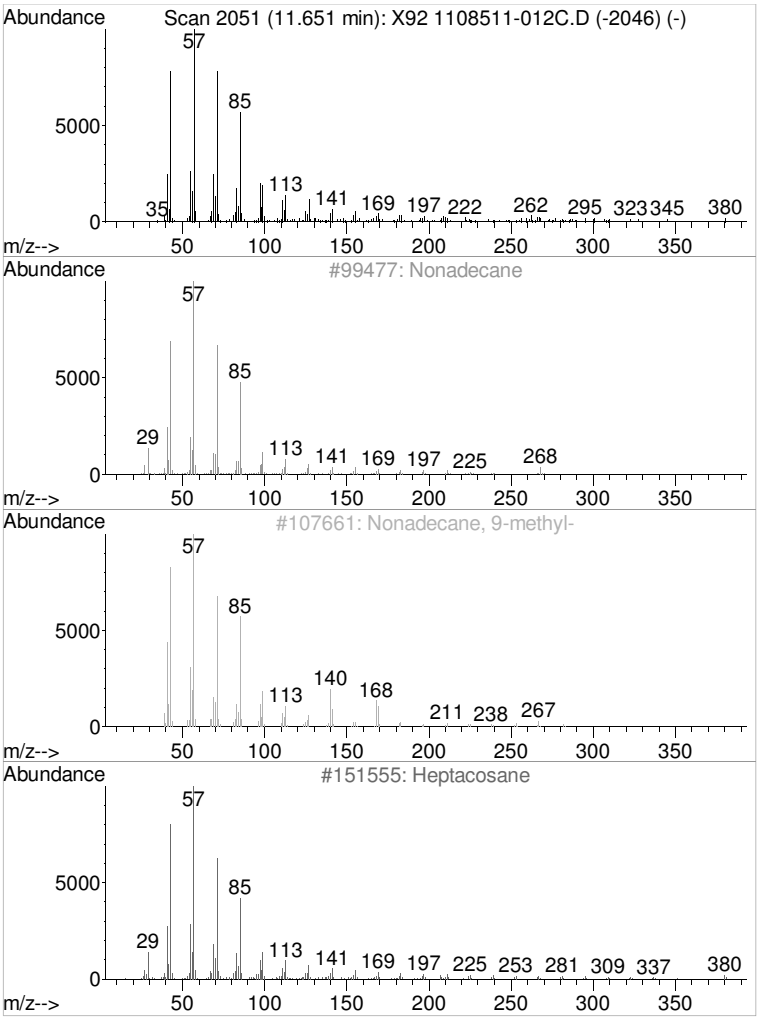
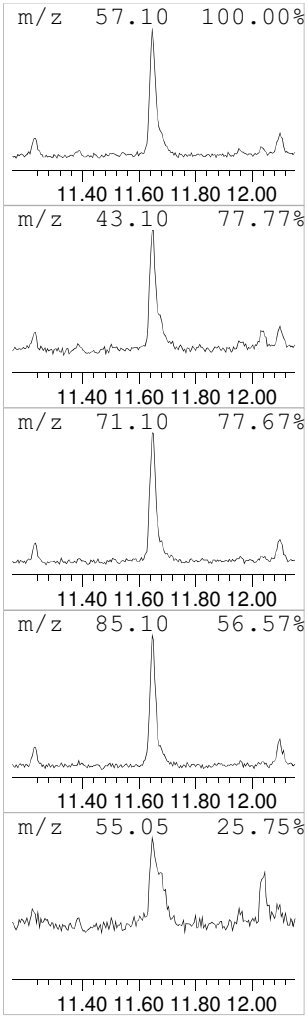
R.T.	EstConc	Area	Relative to ISTD	R.T.
11.65	14.94 ug/l	252860	ISTD-Chrysene-d12	10.92

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonadecane	268	C19H40	000629-92-5	93
2	Nonadecane, 9-methyl-	282	C20H42	013287-24-6	93
3	Heptacosane	380	C27H56	000593-49-7	92
4	Tetratriacontane	479	C34H70	014167-59-0	90
5	Octacosane	394	C28H58	000630-02-4	90





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X92 1108511-012C.D
Acq On : 7 Sep 2011 2:19 am
Operator : ALICIA HABERLE
Sample : 1108511-012C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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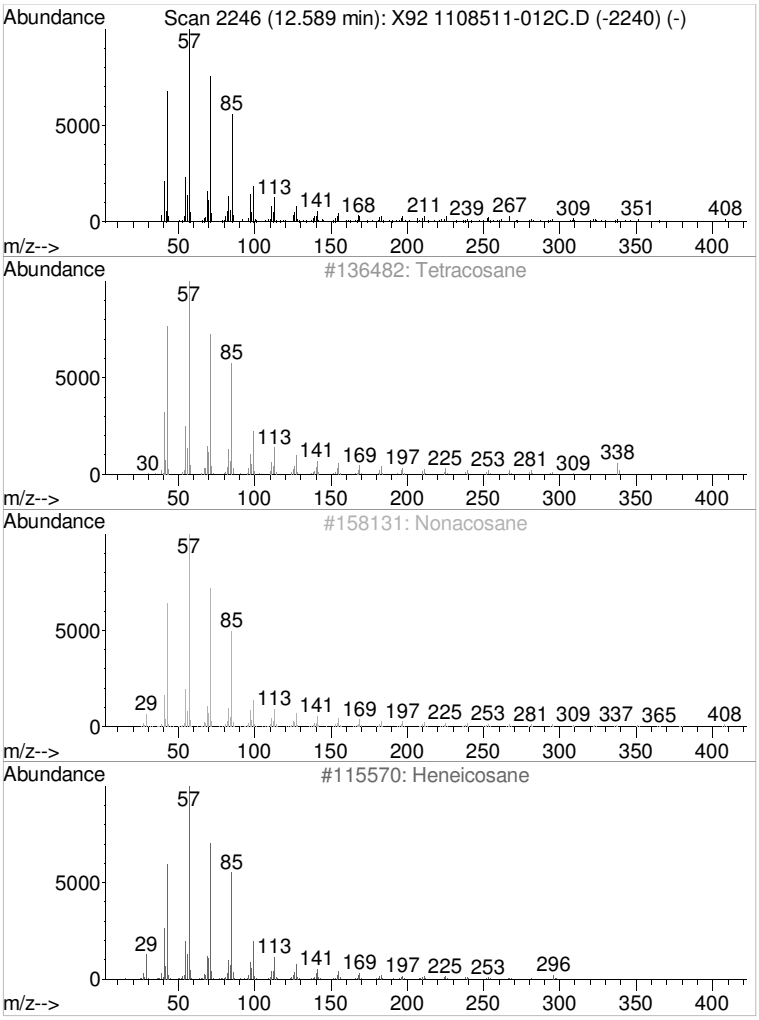
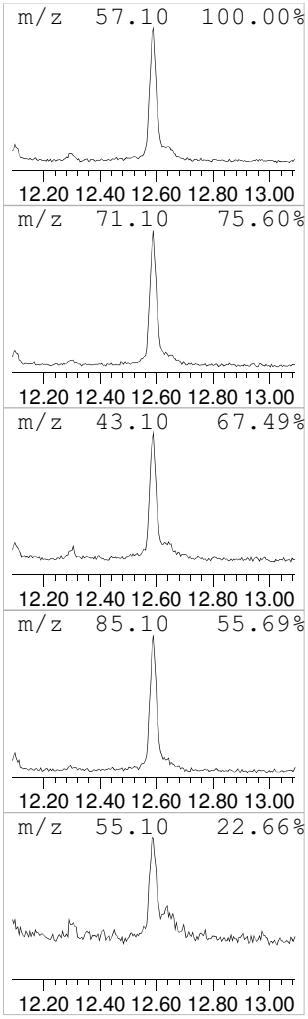
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.59	24.83 ug/l	284969	ISTD-Perylene-d12	12.79

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tetracosane	338	C24H50	000646-31-1	98
2	Nonacosane	408	C29H60	000630-03-5	98
3	Heneicosane	296	C21H44	000629-94-7	91
4	Heptadecane, 9-octyl-	352	C25H52	007225-64-1	91
5	Pentadecane, 8-heptyl-	310	C22H46	071005-15-7	91





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X92 1108511-012C.D
Acq On : 7 Sep 2011 2:19 am
Operator : ALICIA HABERLE
Sample : 1108511-012C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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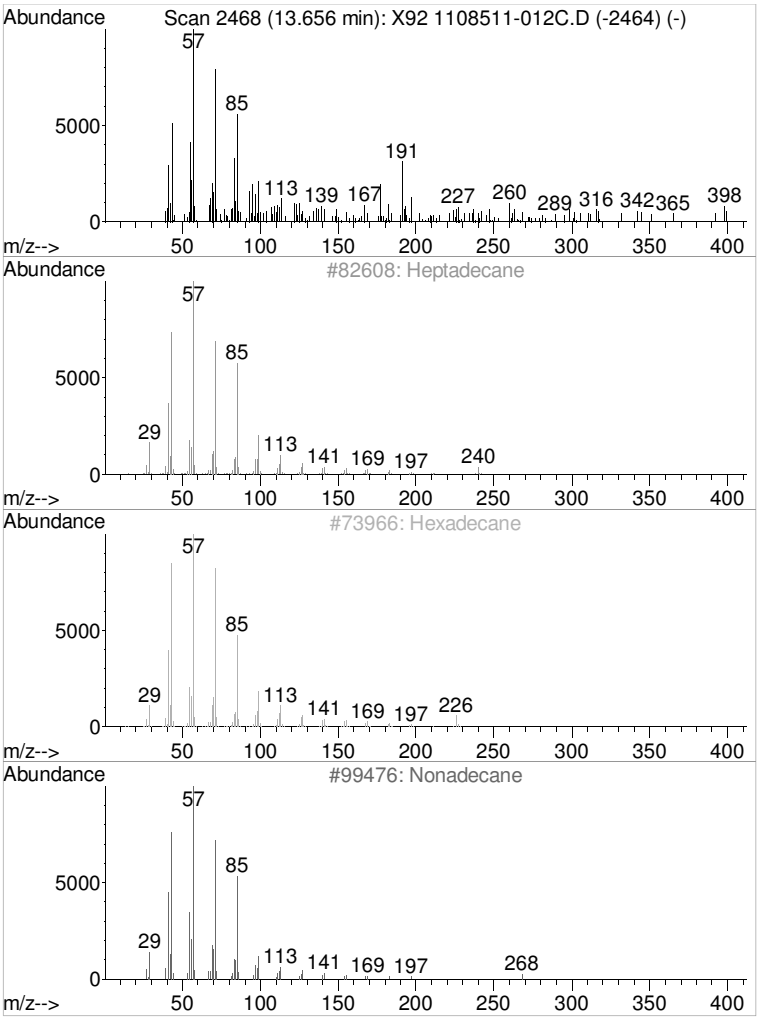
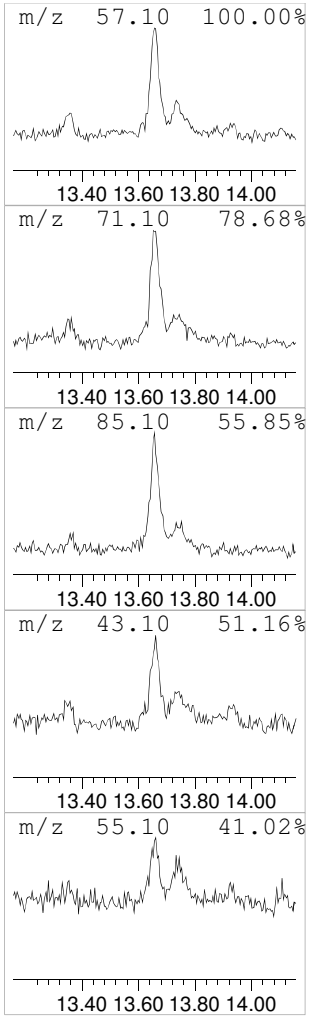
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.66	9.73 ug/l	111636	ISTD-Perylene-d12	12.79

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptadecane	240	C17H36	000629-78-7	90
2	Hexadecane	226	C16H34	000544-76-3	90
3	Nonadecane	268	C19H40	000629-92-5	78
4	Tridecane	184	C13H28	000629-50-5	70
5	1-Chloroeicosane	316	C20H41Cl	042217-02-7	53





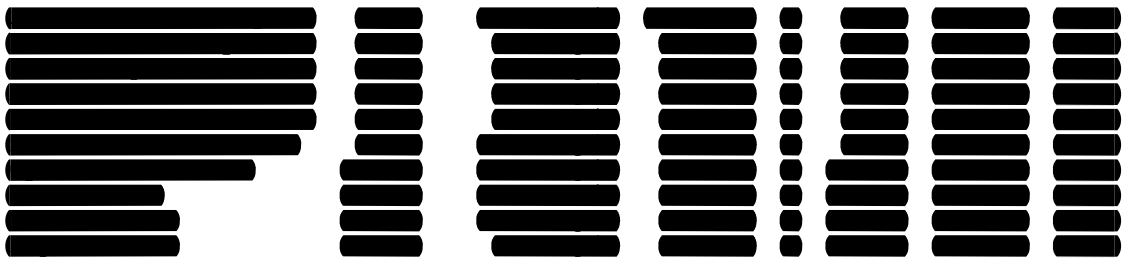
Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X92 1108511-012C.D
Acq On : 7 Sep 2011 2:19 am
Operator : ALICIA HABERLE
Sample : 1108511-012C
Misc : SAMP
ALS Vial : 7 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc



LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X93 1108511-014C.D
Acq On : 7 Sep 2011 2:45 am
Operator : ALICIA HABERLE
Sample : 1108511-014C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.155	73	76	80	rBV	23219	13833	1.19%	0.105%
2	2.309	99	108	111	rBV6	12395	26352	2.28%	0.201%
3	2.443	133	136	140	rBV2	31855	23218	2.00%	0.177%
4	2.693	179	188	191	rBV	1396978	1155272	99.75%	8.801%
5	2.775	202	205	208	rVB	49002	30892	2.67%	0.235%
6	2.818	208	214	218	rBV	45889	33976	2.93%	0.259%
7	2.862	218	223	225	rBV	61172	44620	3.85%	0.340%
8	2.943	232	240	250	rBV2	908077	821385	70.92%	6.257%
9	3.020	251	256	262	rVB2	24279	36701	3.17%	0.280%
10	3.347	318	324	328	rVB3	15703	14024	1.21%	0.107%
11	3.395	328	334	335	rBV3	13786	15120	1.31%	0.115%
12	3.415	335	338	341	rVB	57412	40309	3.48%	0.307%
13	3.689	392	395	405	rBV	836729	775737	66.98%	5.910%
14	3.910	438	441	446	rBV	23136	19834	1.71%	0.151%
15	3.997	455	459	476	rBV	938028	764275	65.99%	5.822%
16	4.093	476	479	486	rVB2	23118	18676	1.61%	0.142%
17	4.487	554	561	568	rBV	373878	380022	32.81%	2.895%
18	5.146	694	698	709	rBV	1183867	1029190	88.86%	7.840%
19	6.194	909	916	922	rBV	1053943	933495	80.60%	7.111%
20	6.512	979	982	985	rBV2	19092	15029	1.30%	0.114%
21	6.839	1042	1050	1055	rBV	1375392	1158176	100.00%	8.823%
22	7.618	1204	1212	1224	rVB	626002	618800	53.43%	4.714%
23	7.863	1260	1263	1267	rBV2	37331	31163	2.69%	0.237%
24	8.296	1349	1353	1362	rVB2	1140967	1014269	87.57%	7.727%
25	8.594	1410	1415	1424	rBV8	12571	20042	1.73%	0.153%
26	8.810	1455	1460	1465	rBV5	19105	23774	2.05%	0.181%
27	8.887	1471	1476	1486	rBV2	158194	171408	14.80%	1.306%
28	9.402	1580	1583	1589	rVB6	14218	17547	1.52%	0.134%
29	9.584	1617	1621	1623	rBV3	20645	23033	1.99%	0.175%
30	9.604	1623	1625	1629	rVB2	25300	23670	2.04%	0.180%
31	9.666	1634	1638	1644	rBV3	49044	63691	5.50%	0.485%
32	9.709	1644	1647	1650	rVB2	16762	15703	1.36%	0.120%
33	9.758	1653	1657	1662	rVV	495806	405079	34.98%	3.086%
34	9.883	1679	1683	1691	rVB	800336	750553	64.80%	5.718%
35	10.166	1735	1742	1746	rBV3	27965	39267	3.39%	0.299%
36	10.402	1785	1791	1797	rBV2	40248	54269	4.69%	0.413%
37	10.460	1799	1803	1808	rBV	377967	365347	31.55%	2.783%
38	10.849	1879	1884	1892	rBV	108051	159074	13.73%	1.212%

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X93 1108511-014C.D
Acq On : 7 Sep 2011 2:45 am
Operator : ALICIA HABERLE
Sample : 1108511-014C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

39	10.926	1895	1900	1910	rVV	774233	802693	69.31%	6.115%
40	10.989	1910	1913	1917	rVB	24010	21856	1.89%	0.166%
41	11.647	2045	2050	2061	rVB	135199	204619	17.67%	1.559%
42	12.037	2125	2131	2137	rBV3	53324	84601	7.30%	0.644%
43	12.585	2240	2245	2251	rBV	154480	235299	20.32%	1.793%
44	12.753	2276	2280	2282	rBV3	27569	39212	3.39%	0.299%
45	12.792	2283	2288	2296	rVB	337060	512795	44.28%	3.906%
46	13.662	2463	2469	2475	rVB5	45282	78890	6.81%	0.601%

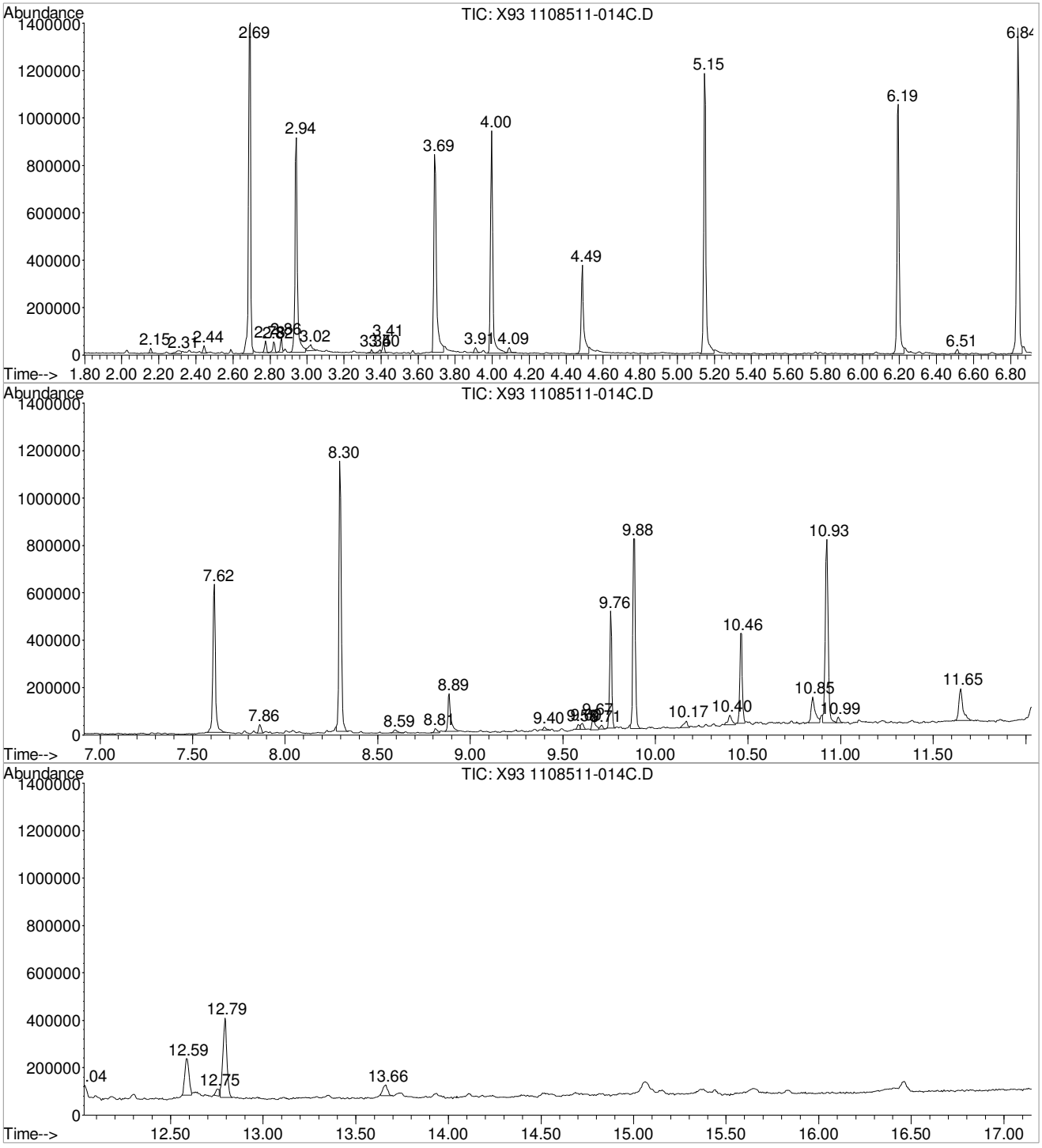
Sum of corrected areas: 13126790

LSC Report - Integrated Chromatogram

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X93 1108511-014C.D
Acq On : 7 Sep 2011 2:45 am
Operator : ALICIA HABERLE
Sample : 1108511-014C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X93 1108511-014C.D
Acq On : 7 Sep 2011 2:45 am
Operator : ALICIA HABERLE
Sample : 1108511-014C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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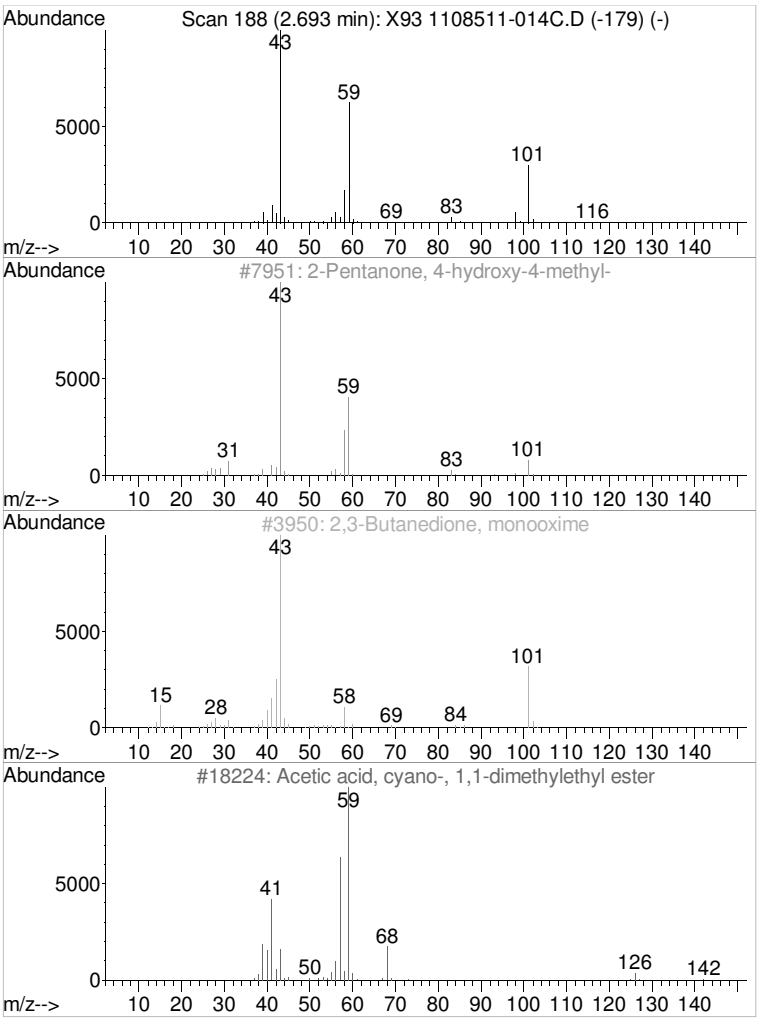
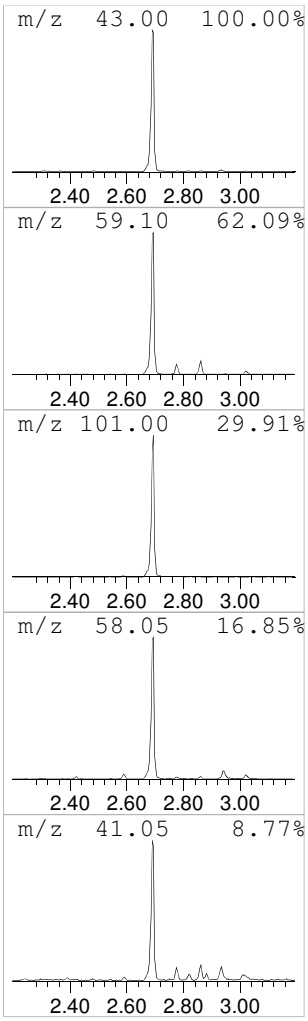
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.69	60.46 ug/l	1155270	ISTD 1,4-Dichlorobenzene-d4	4.00

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	56
2	2,3-Butanedione, monooxime	101	C4H7NO2	000057-71-6	17
3	Acetic acid, cyano-, 1,1-dimethy...	141	C7H11NO2	001116-98-9	17
4	Morpholine, 4-methyl-	101	C5H11NO	000109-02-4	9
5	(+-)-4-Amino-4,5-dihydro-2(3H)-f...	101	C4H7NO2	016504-58-8	9





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X93 1108511-014C.D
Acq On : 7 Sep 2011 2:45 am
Operator : ALICIA HABERLE
Sample : 1108511-014C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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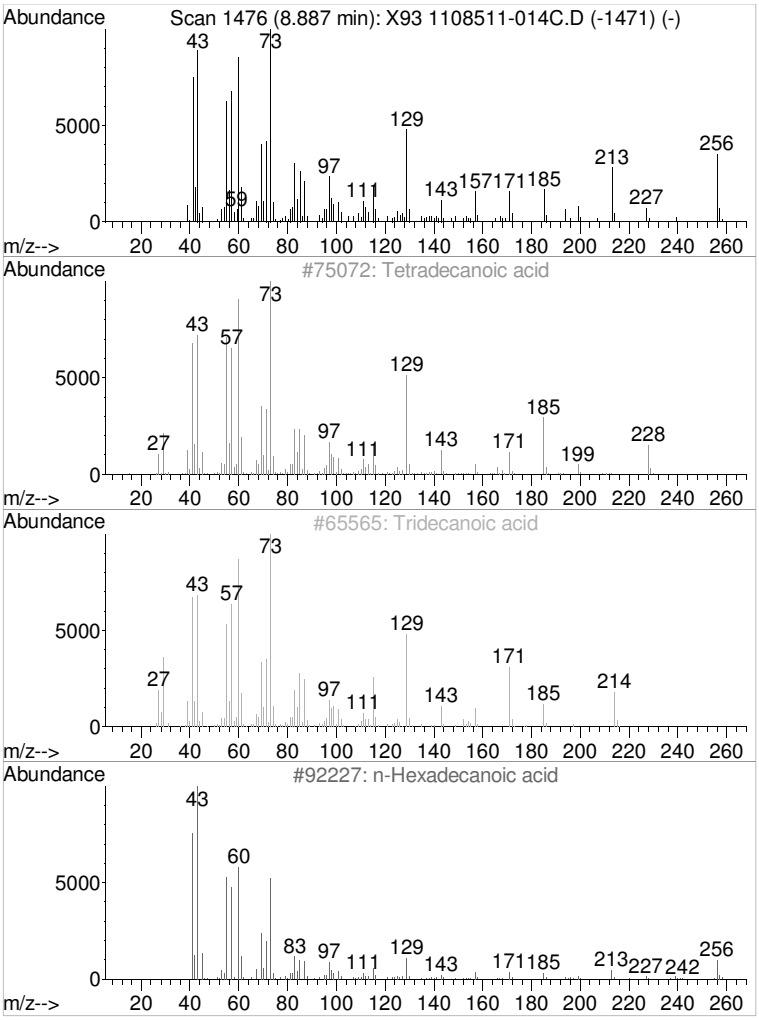
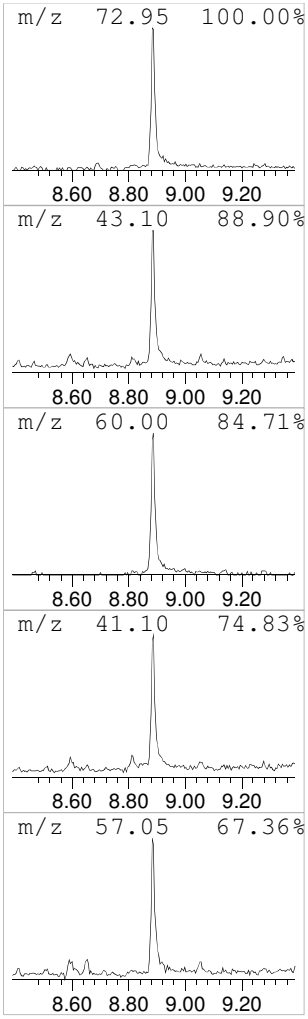
R.T.	EstConc	Area	Relative to ISTD	R.T.
8.89	6.76 ug/l	171408	ISTD-Phenanthrene-d10	8.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tetradecanoic acid	228	C14H28O2	000544-63-8	96
2	Tridecanoic acid	214	C13H26O2	000638-53-9	94
3	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	93
4	n-Decanoic acid	172	C10H20O2	000334-48-5	86
5	Undecanoic acid	186	C11H22O2	000112-37-8	62





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X93 1108511-014C.D
Acq On : 7 Sep 2011 2:45 am
Operator : ALICIA HABERLE
Sample : 1108511-014C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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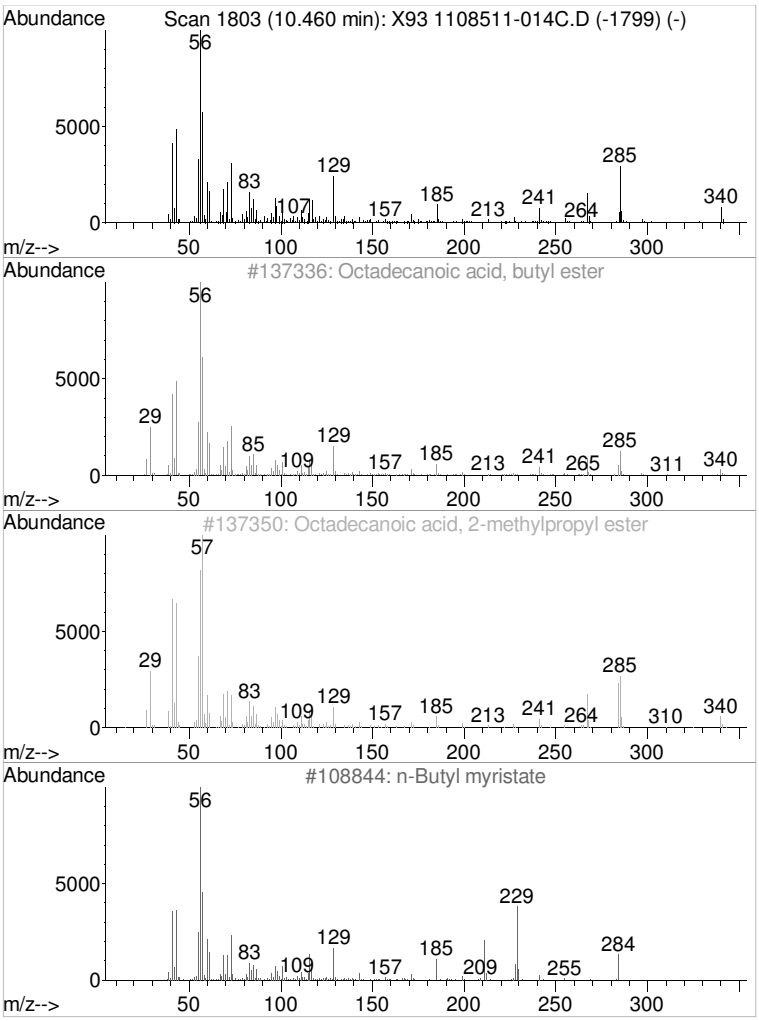
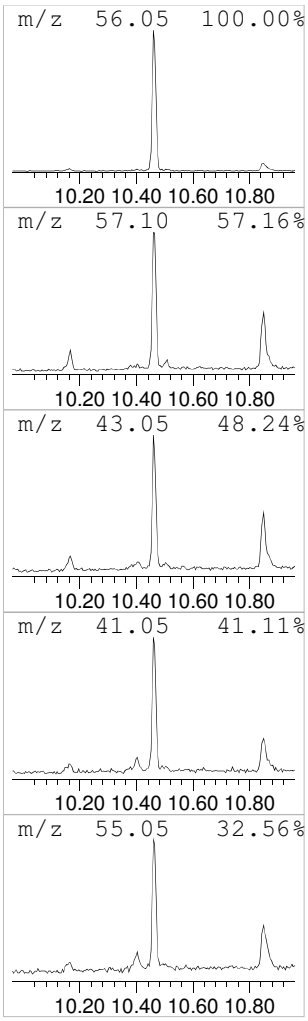
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.46	18.21 ug/l	365347	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	96
2	Octadecanoic acid, 2-methylpropy...	340	C22H44O2	000646-13-9	95
3	n-Butyl myristate	284	C18H36O2	000110-36-1	58
4	Oxirane, 2,3-bis(1-methylethyl)-...	128	C8H16O	054644-32-5	32
5	1-Pentene, 2,4-dimethyl-	98	C7H14	002213-32-3	30





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X93 1108511-014C.D
Acq On : 7 Sep 2011 2:45 am
Operator : ALICIA HABERLE
Sample : 1108511-014C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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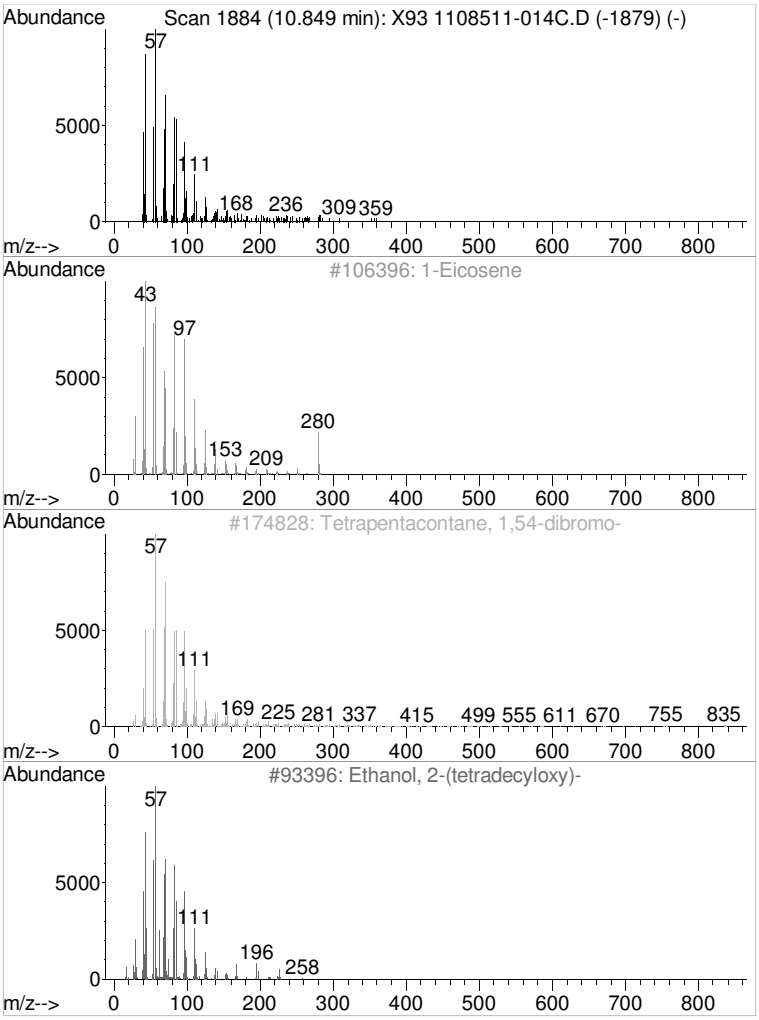
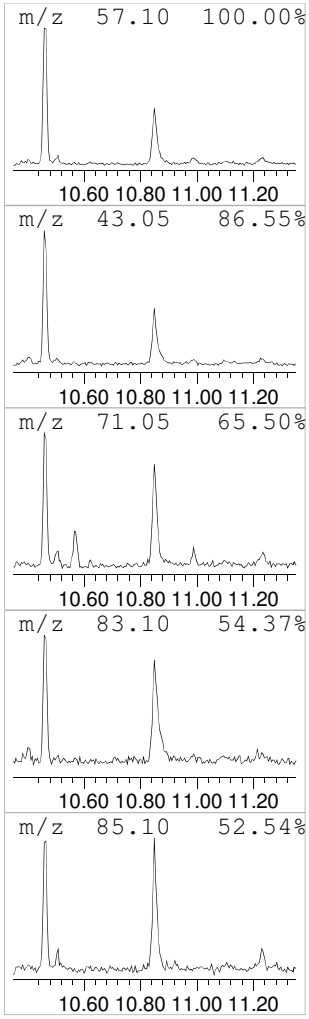
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.85	7.93 ug/l	159074	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Eicosene	280	C20H40	003452-07-1	96
2	Tetrapentacontane, 1,54-dibromo-	915	C54H108Br2	1000156-09-4	87
3	Ethanol, 2-(tetradecyloxy)-	258	C16H34O2	002136-70-1	87
4	Decane, 3,6-dimethyl-	170	C12H26	017312-53-7	83
5	1-Nonadecene	266	C19H38	018435-45-5	83





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X93 1108511-014C.D
Acq On : 7 Sep 2011 2:45 am
Operator : ALICIA HABERLE
Sample : 1108511-014C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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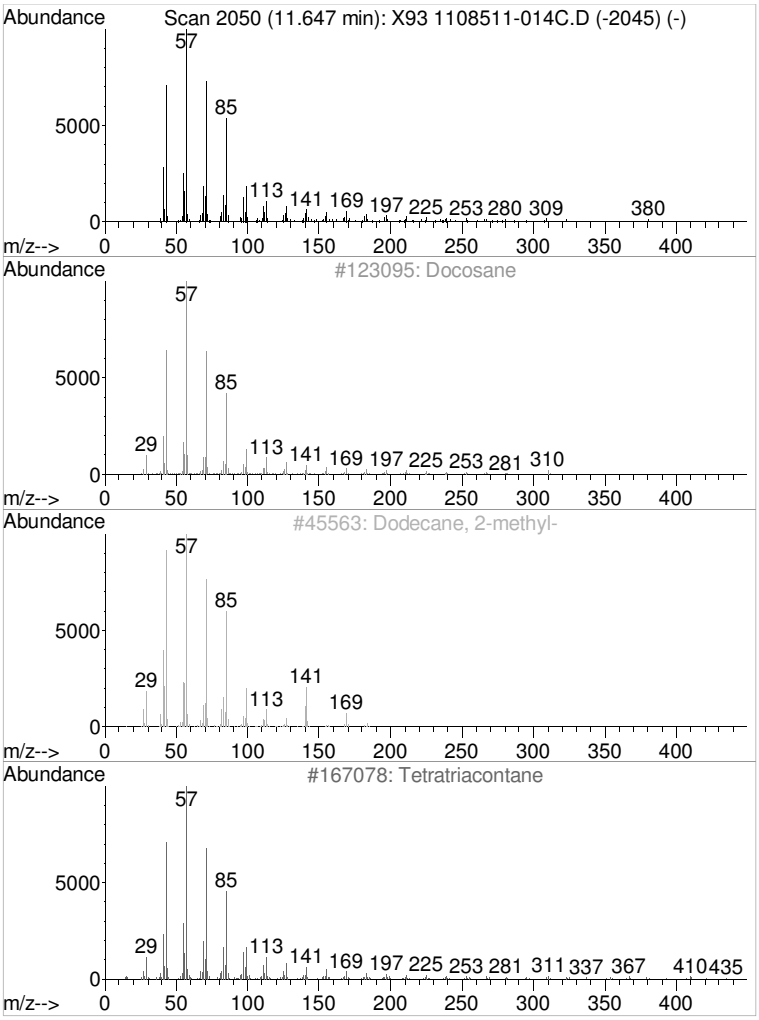
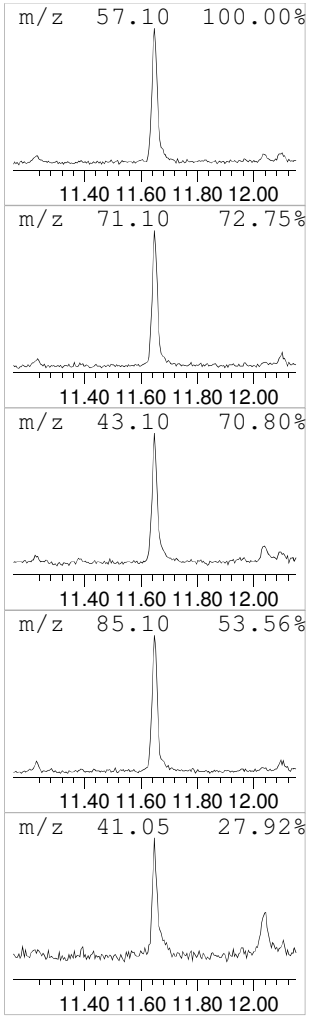
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.65	10.20 ug/l	204619	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Docosane	310	C22H46	000629-97-0	90
2	Dodecane, 2-methyl-	184	C13H28	001560-97-0	90
3	Tetratriacontane	479	C34H70	014167-59-0	90
4	Nonacosane	408	C29H60	000630-03-5	90
5	Eicosane	282	C20H42	000112-95-8	90





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X93 1108511-014C.D
Acq On : 7 Sep 2011 2:45 am
Operator : ALICIA HABERLE
Sample : 1108511-014C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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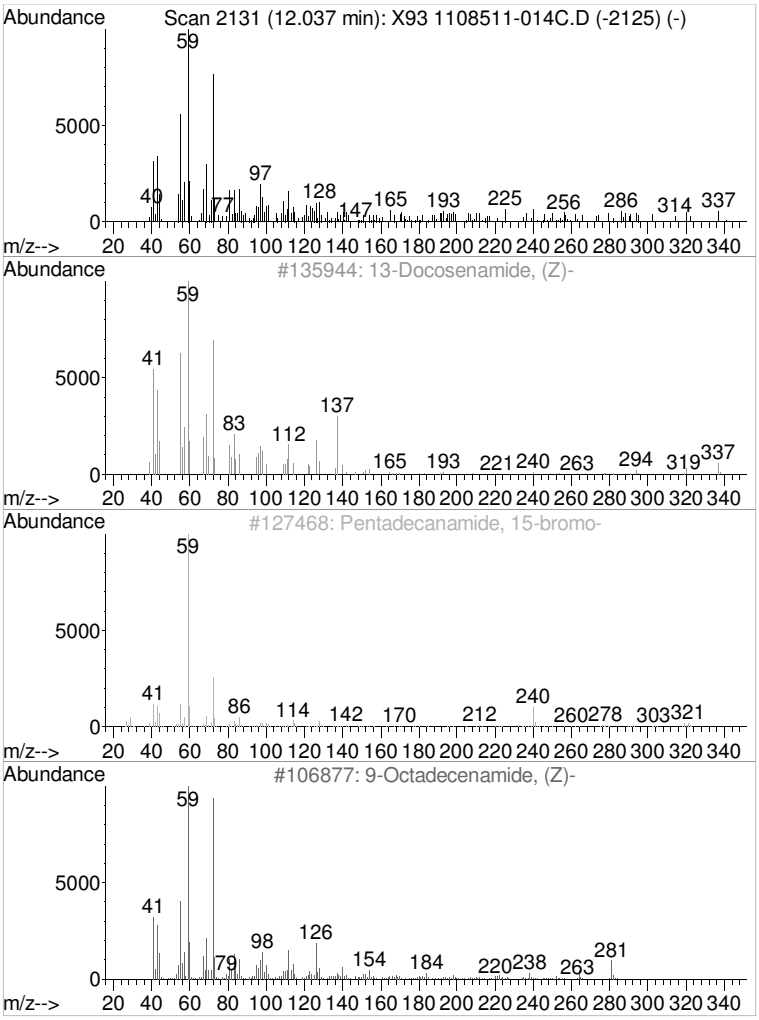
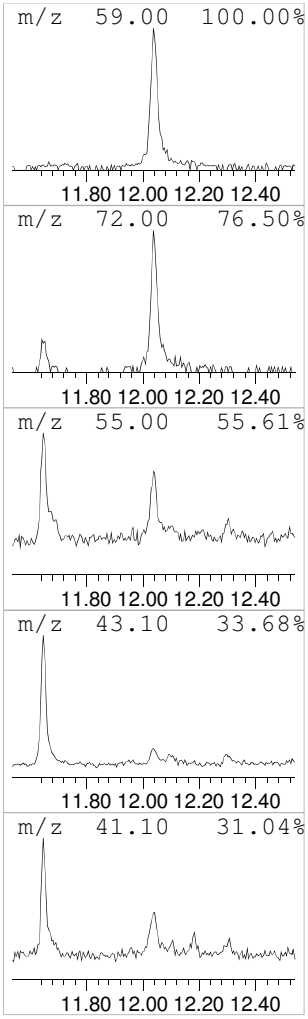
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.04	6.60 ug/l	84601	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	13-Docosenamide, (Z)-	337	C22H43NO	000112-84-5	90
2	Pentadecanamide, 15-bromo-	319	C15H30BrNO	1000163-86-1	59
3	9-Octadecenamide, (Z)-	281	C18H35NO	000301-02-0	50
4	7-Nonenamide	155	C9H17NO	090949-53-4	43
5	Benzeneethanamine, 2-fluoro-.bet...	229	C11H16FNO3	061338-98-5	42





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X93 1108511-014C.D
Acq On : 7 Sep 2011 2:45 am
Operator : ALICIA HABERLE
Sample : 1108511-014C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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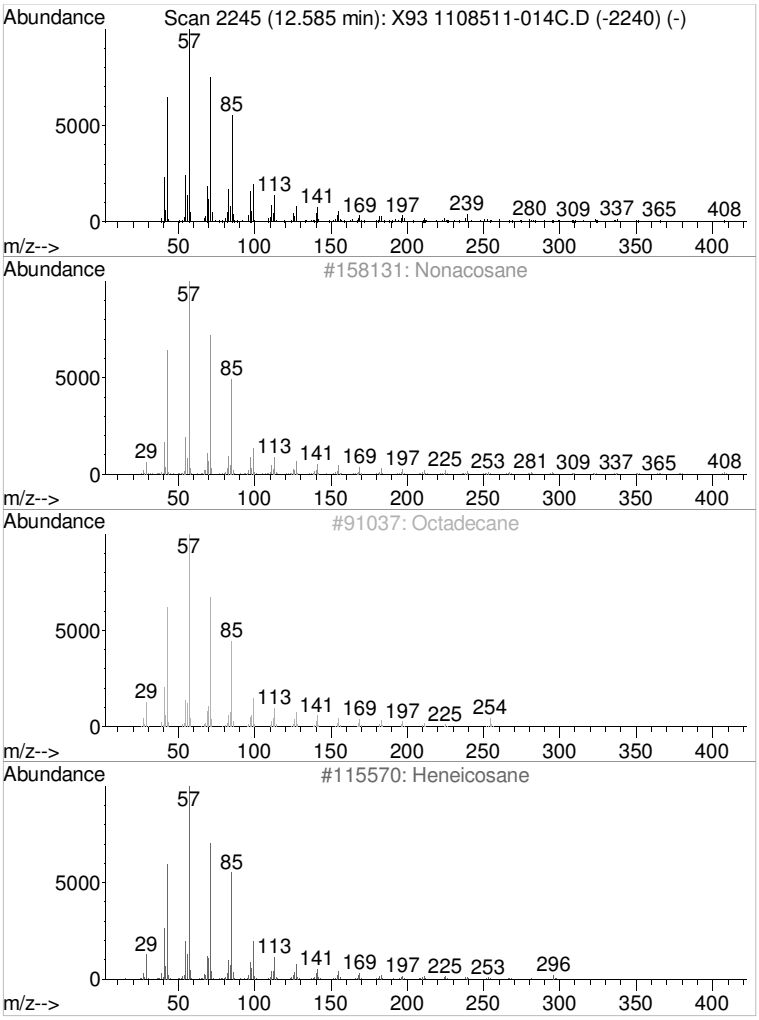
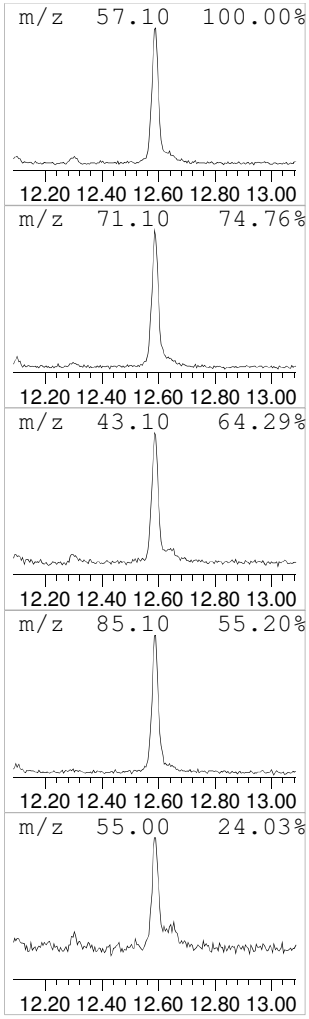
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.59	18.35 ug/l	235299	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonacosane	408	C29H60	000630-03-5	96
2	Octadecane	254	C18H38	000593-45-3	93
3	Heneicosane	296	C21H44	000629-94-7	91
4	Heptacosane	380	C27H56	000593-49-7	91
5	Heptadecane, 9-octyl-	352	C25H52	007225-64-1	91





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X93 1108511-014C.D
Acq On : 7 Sep 2011 2:45 am
Operator : ALICIA HABERLE
Sample : 1108511-014C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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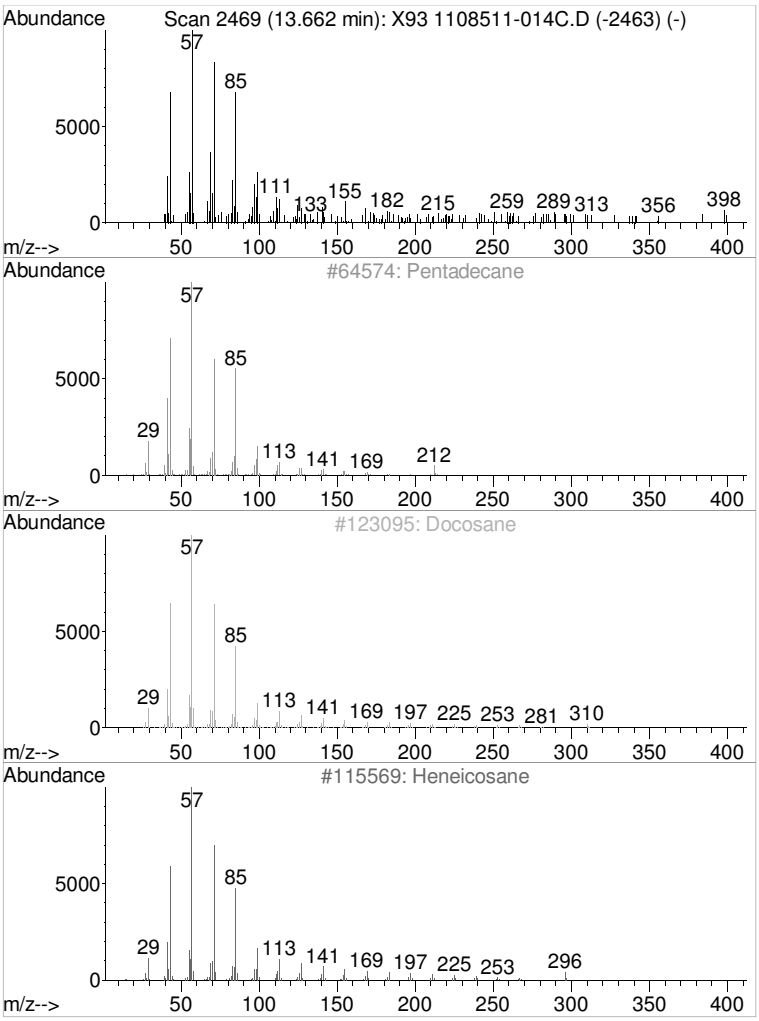
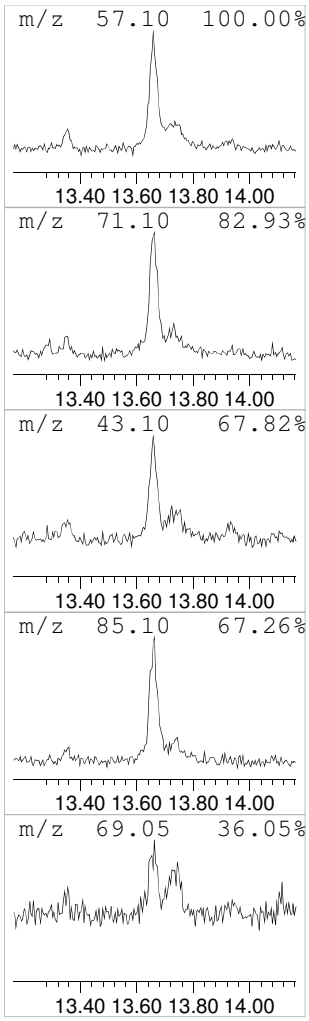
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.66	6.15 ug/l	78890	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Pentadecane	212	C15H32	000629-62-9	76
2	Docosane	310	C22H46	000629-97-0	70
3	Heneicosane	296	C21H44	000629-94-7	70
4	Eicosane	282	C20H42	000112-95-8	70
5	Heptadecane	240	C17H36	000629-78-7	64





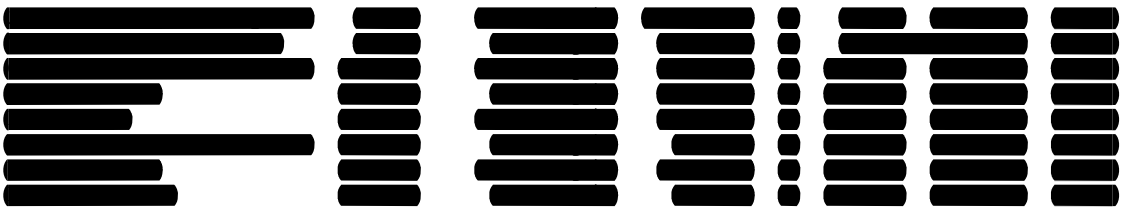
Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X93 1108511-014C.D
Acq On : 7 Sep 2011 2:45 am
Operator : ALICIA HABERLE
Sample : 1108511-014C
Misc : SAMP
ALS Vial : 8 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc



LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X94 1108511-015C.D
Acq On : 7 Sep 2011 3:11 am
Operator : ALICIA HABERLE
Sample : 1108511-015C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.029	44	50	52	rVB2	14155	12307	1.15%	0.101%
2	2.154	74	76	80	rVB	22658	13317	1.24%	0.109%
3	2.308	99	108	109	rBV4	13131	22525	2.10%	0.185%
4	2.443	133	136	140	rBV2	26627	20170	1.88%	0.165%
5	2.587	162	166	169	rVB2	17195	12442	1.16%	0.102%
6	2.688	177	187	191	rBV	1193136	933118	86.98%	7.644%
7	2.774	202	205	209	rVB	47087	29416	2.74%	0.241%
8	2.822	209	215	217	rBV	37628	29495	2.75%	0.242%
9	2.861	219	223	225	rBV	58710	38350	3.57%	0.314%
10	2.943	233	240	252	rBV2	814191	704104	65.63%	5.768%
11	3.020	252	256	260	rVB2	20833	25238	2.35%	0.207%
12	3.693	392	396	413	rBV	699496	677802	63.18%	5.553%
13	3.909	439	441	448	rBV	13257	12405	1.16%	0.102%
14	3.996	455	459	476	rBV	877235	711591	66.33%	5.829%
15	4.486	553	561	576	rBV	325305	359372	33.50%	2.944%
16	5.150	694	699	707	rBV	1034901	941749	87.79%	7.715%
17	6.193	908	916	922	rBV	903134	787938	73.45%	6.455%
18	6.319	934	942	944	rBV7	9982	15681	1.46%	0.128%
19	6.343	944	947	959	rVB3	19754	33515	3.12%	0.275%
20	6.838	1039	1050	1055	rBV	1207879	1072764	100.00%	8.788%
21	7.617	1204	1212	1221	rBV	572974	515341	48.04%	4.222%
22	7.780	1243	1246	1253	rBV4	8976	11803	1.10%	0.097%
23	7.862	1261	1263	1267	rBV2	20322	17788	1.66%	0.146%
24	8.006	1289	1293	1296	rBV5	11103	14891	1.39%	0.122%
25	8.030	1296	1298	1305	rVB3	11128	16414	1.53%	0.134%
26	8.180	1326	1329	1332	rBV2	12295	12906	1.20%	0.106%
27	8.213	1332	1336	1341	rVV2	22925	25957	2.42%	0.213%
28	8.295	1349	1353	1362	rVB	1010159	952102	88.75%	7.800%
29	8.348	1362	1364	1371	rVB5	14323	17470	1.63%	0.143%
30	8.410	1374	1377	1382	rVB3	14579	13131	1.22%	0.108%
31	8.588	1406	1414	1419	rBV5	17363	29414	2.74%	0.241%
32	8.809	1454	1460	1465	rBV6	21850	35480	3.31%	0.291%
33	8.848	1465	1468	1472	rVV3	28222	28068	2.62%	0.230%
34	8.886	1472	1476	1486	rVB2	202928	211206	19.69%	1.730%
35	9.055	1508	1511	1515	rBV3	12439	13199	1.23%	0.108%
36	9.401	1579	1583	1589	rBV3	32156	49968	4.66%	0.409%
37	9.492	1595	1602	1607	rBV2	21045	24440	2.28%	0.200%
38	9.584	1614	1621	1622	rBV6	21931	27119	2.53%	0.222%

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X94 1108511-015C.D
Acq On : 7 Sep 2011 3:11 am
Operator : ALICIA HABERLE
Sample : 1108511-015C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

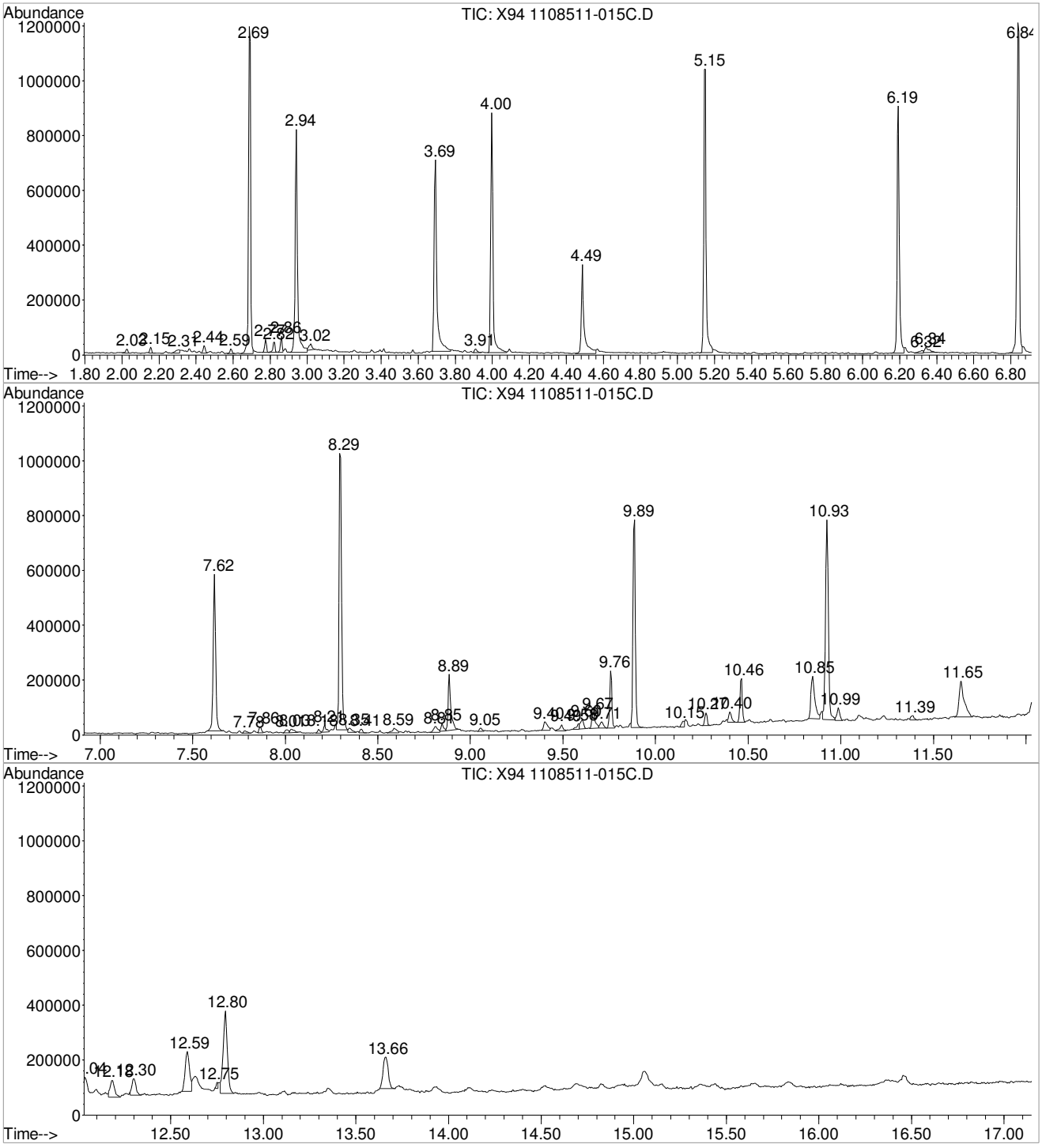
39	9.603	1622	1625	1630	rVV4	33777	38102	3.55%	0.312%
40	9.665	1633	1638	1644	rVV2	57832	73779	6.88%	0.604%
41	9.709	1644	1647	1652	rVB2	22581	26649	2.48%	0.218%
42	9.757	1653	1657	1662	rBV	208943	178695	16.66%	1.464%
43	9.887	1680	1684	1692	rVB	758366	663239	61.83%	5.433%
44	10.146	1734	1738	1740	rBV4	20839	22895	2.13%	0.188%
45	10.271	1760	1764	1769	rBV	47155	40155	3.74%	0.329%
46	10.401	1788	1791	1797	rVB	37811	39113	3.65%	0.320%
47	10.464	1800	1804	1808	rVB	160985	149676	13.95%	1.226%
48	10.848	1879	1884	1892	rBV2	155130	226835	21.14%	1.858%
49	10.925	1895	1900	1909	rVV	729364	745827	69.52%	6.110%
50	10.988	1909	1913	1917	rVB	46974	49921	4.65%	0.409%
51	11.392	1993	1997	2002	rVB8	16562	21888	2.04%	0.179%
52	11.647	2045	2050	2063	rVB3	130084	251872	23.48%	2.063%
53	12.036	2127	2131	2137	rVB2	58284	74244	6.92%	0.608%
54	12.180	2157	2161	2170	rVB2	60263	98229	9.16%	0.805%
55	12.301	2182	2186	2194	rVB4	59202	86343	8.05%	0.707%
56	12.589	2240	2246	2251	rBV	145298	235004	21.91%	1.925%
57	12.748	2277	2279	2280	rBV2	19885	13511	1.26%	0.111%
58	12.796	2283	2289	2298	rVB	300964	481468	44.88%	3.944%
59	13.662	2462	2469	2479	rVB2	113927	219376	20.45%	1.797%

Sum of corrected areas: 12206817

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X94 1108511-015C.D
Acq On : 7 Sep 2011 3:11 am
Operator : ALICIA HABERLE
Sample : 1108511-015C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X94 1108511-015C.D
Acq On : 7 Sep 2011 3:11 am
Operator : ALICIA HABERLE
Sample : 1108511-015C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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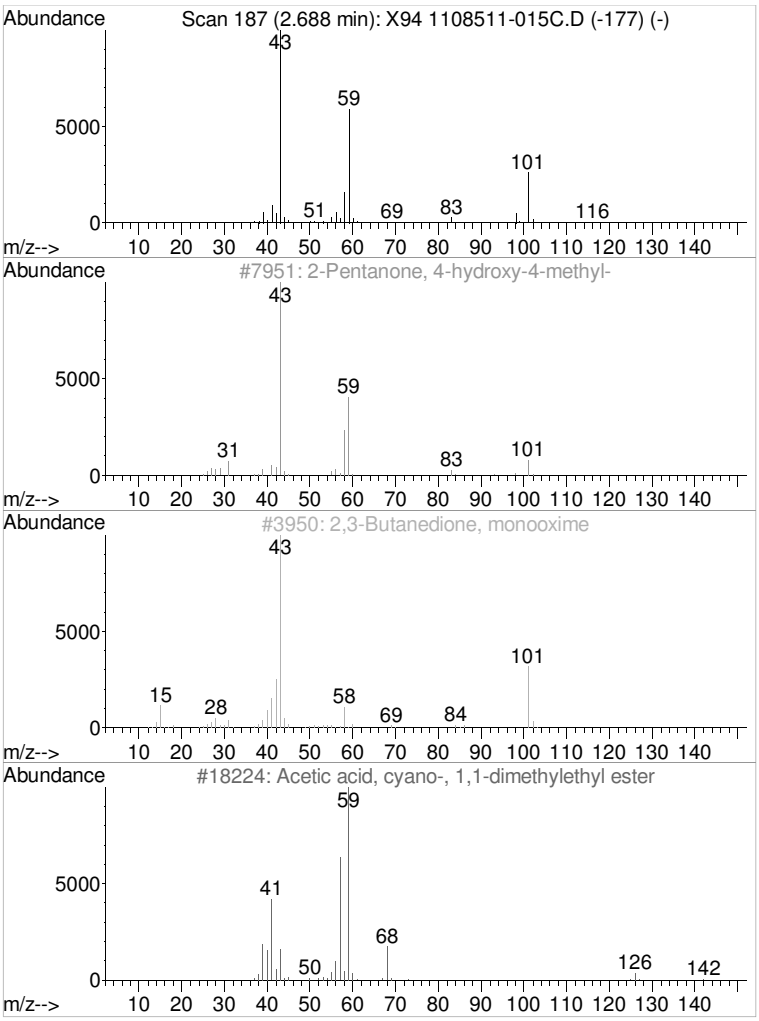
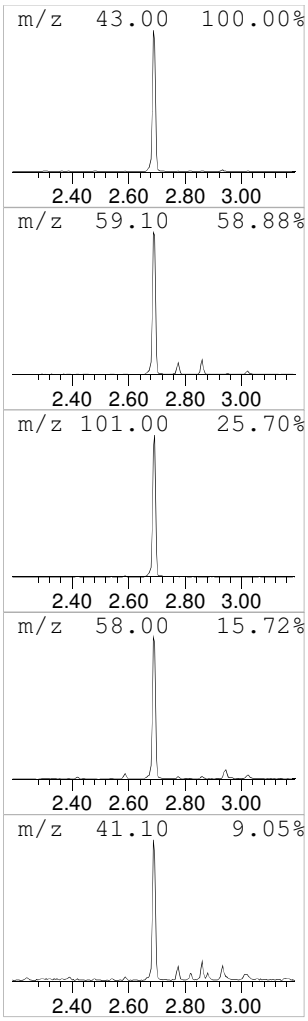
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.69	52.45 ug/l	933118	ISTD 1,4-Dichlorobenzene-d4	4.00

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	56
2	2,3-Butanedione, monooxime	101	C4H7NO2	000057-71-6	17
3	Acetic acid, cyano-, 1,1-dimethy...	141	C7H11NO2	001116-98-9	17
4	Butane, 1-ethoxy-	102	C6H14O	000628-81-9	9
5	(+-)-4-Amino-4,5-dihydro-2(3H)-f...	101	C4H7NO2	016504-58-8	9





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X94 1108511-015C.D
Acq On : 7 Sep 2011 3:11 am
Operator : ALICIA HABERLE
Sample : 1108511-015C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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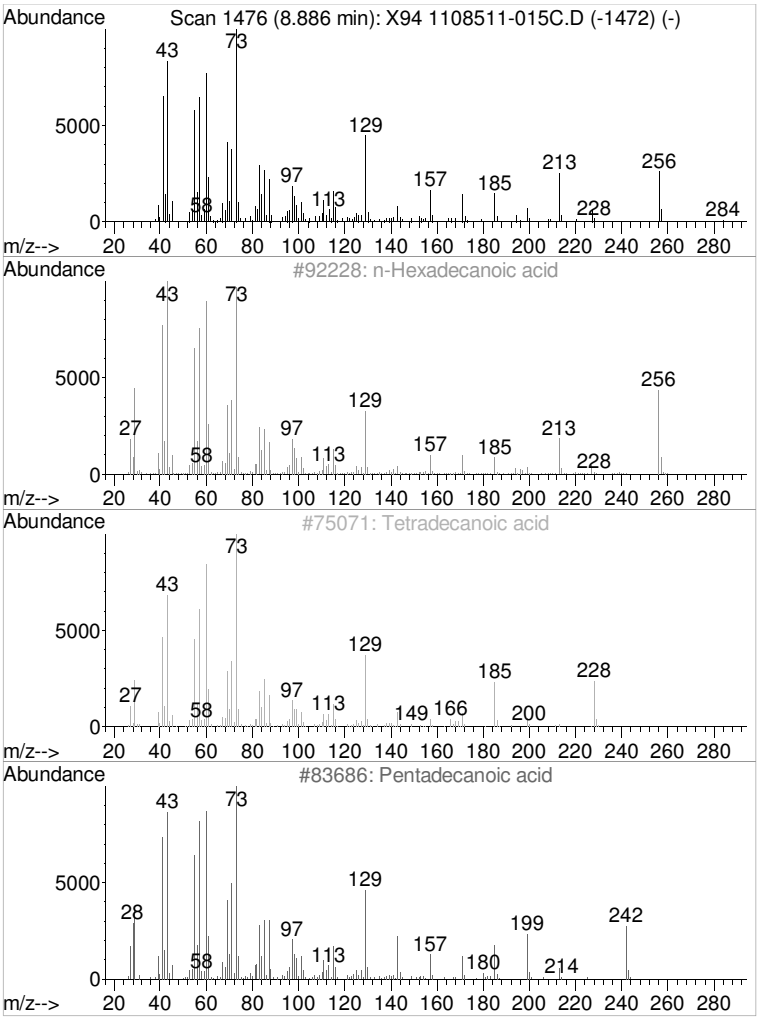
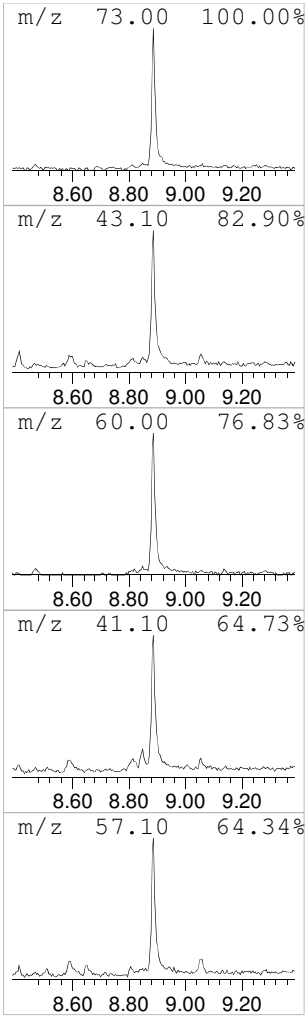
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.89	8.87 ug/l	211206	ISTD-Phenanthrene-d10	8.29

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	99
2	Tetradecanoic acid	228	C14H28O2	000544-63-8	89
3	Pentadecanoic acid	242	C15H30O2	001002-84-2	83
4	Tridecanoic acid	214	C13H26O2	000638-53-9	76
5	n-Decanoic acid	172	C10H20O2	000334-48-5	64





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X94 1108511-015C.D
Acq On : 7 Sep 2011 3:11 am
Operator : ALICIA HABERLE
Sample : 1108511-015C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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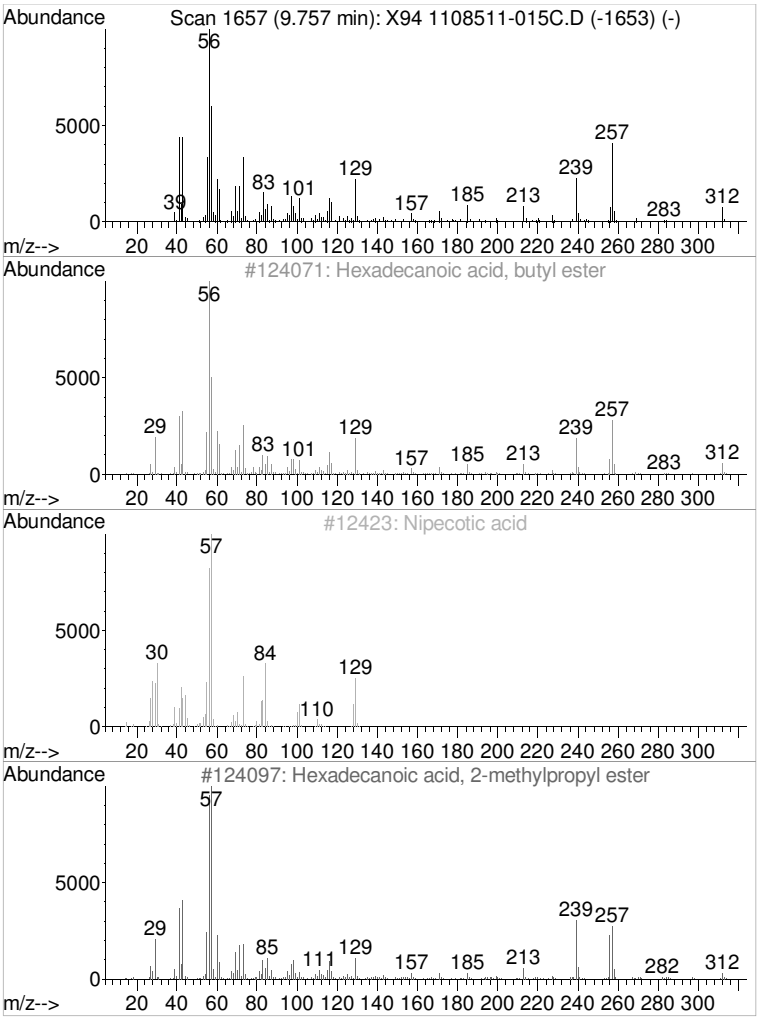
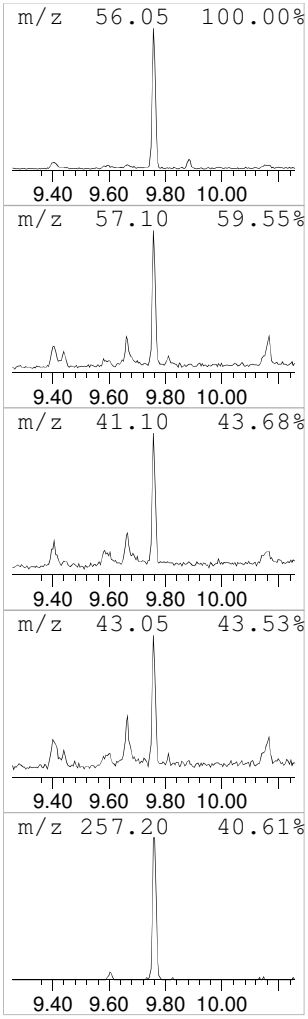
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.76	9.58 ug/l	178695	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexadecanoic acid, butyl ester	312	C20H40O2	000111-06-8	99
2	Nipecotic acid	129	C6H11NO2	000498-95-3	38
3	Hexadecanoic acid, 2-methylpropy...	312	C20H40O2	000110-34-9	35
4	Hexadecanoic acid, 1,1-dimethyle...	312	C20H40O2	031158-91-5	35
5	Oxirane, 2,3-bis(1-methylethyl)-...	128	C8H16O	054644-32-5	35





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X94 1108511-015C.D
Acq On : 7 Sep 2011 3:11 am
Operator : ALICIA HABERLE
Sample : 1108511-015C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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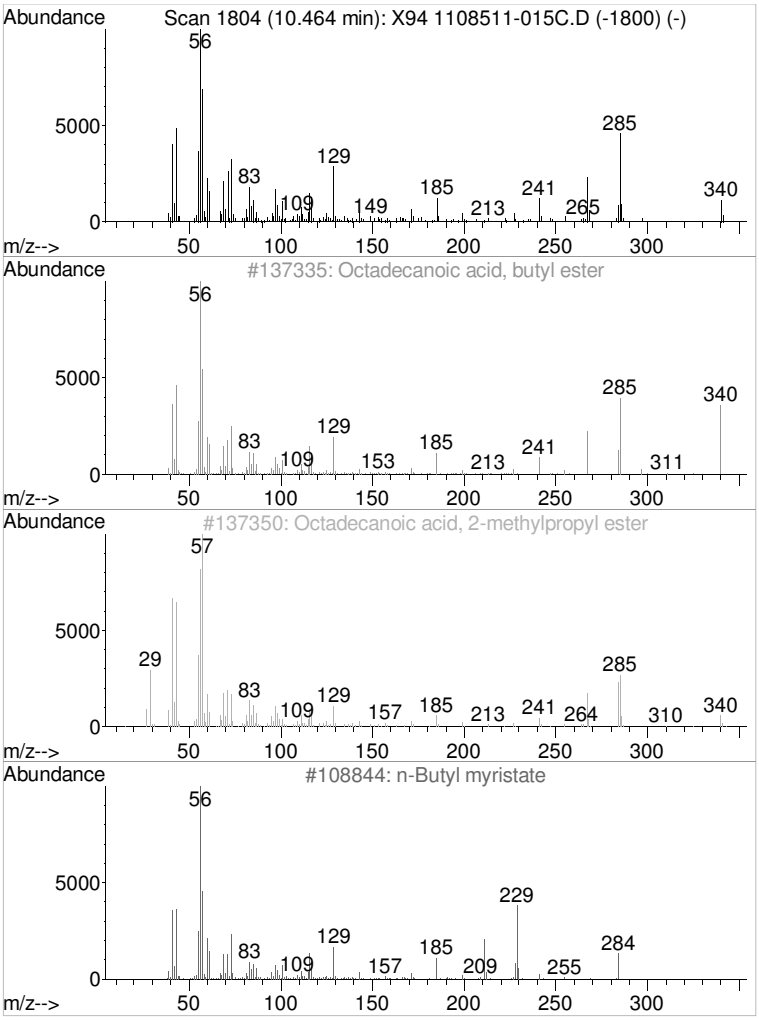
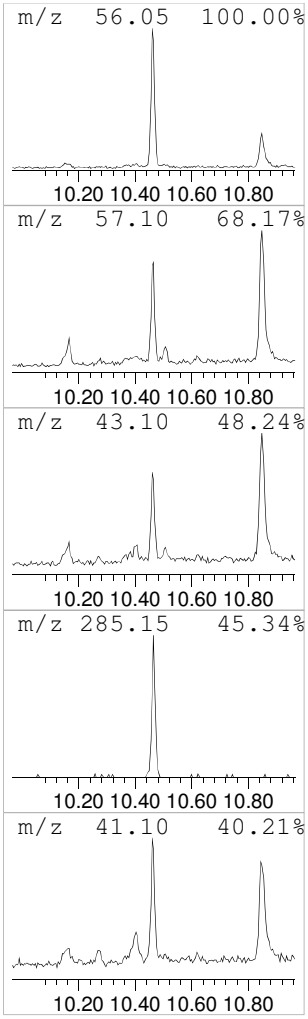
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.46	8.03 ug/l	149676	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	98
2	Octadecanoic acid, 2-methylpropy...	340	C22H44O2	000646-13-9	93
3	n-Butyl myristate	284	C18H36O2	000110-36-1	46
4	Nipecotic acid	129	C6H11NO2	000498-95-3	38
5	Propan-2-one O-(2-chloro-1-methy...	149	C6H12ClNO	1000186-05-6	35





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X94 1108511-015C.D
Acq On : 7 Sep 2011 3:11 am
Operator : ALICIA HABERLE
Sample : 1108511-015C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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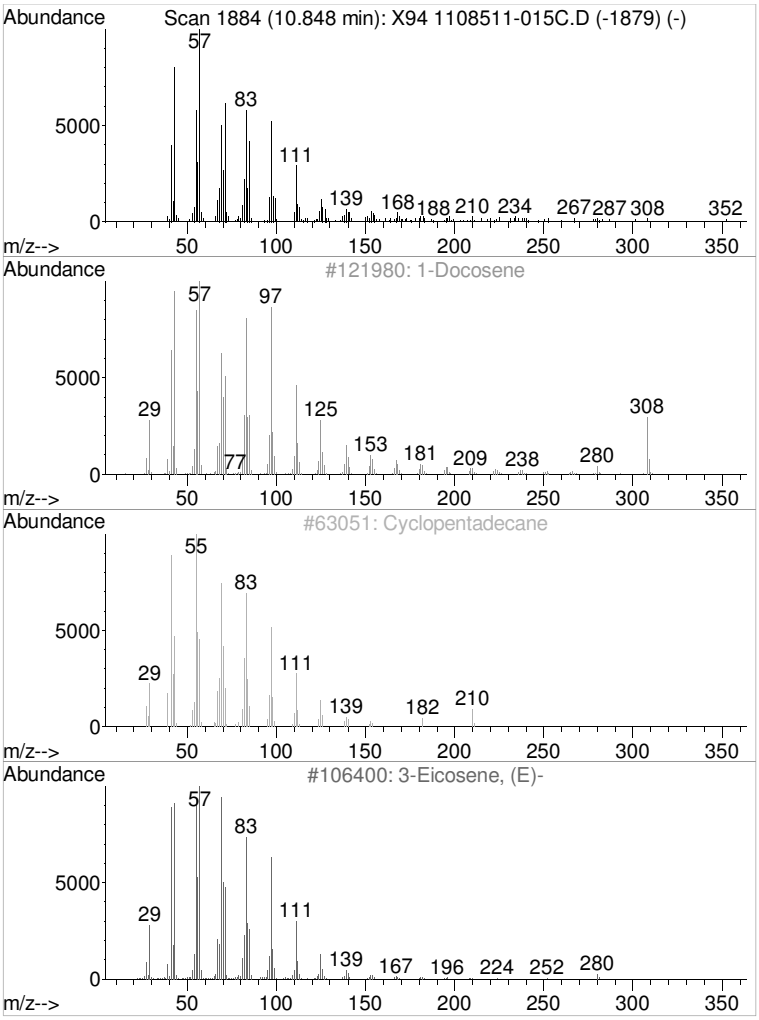
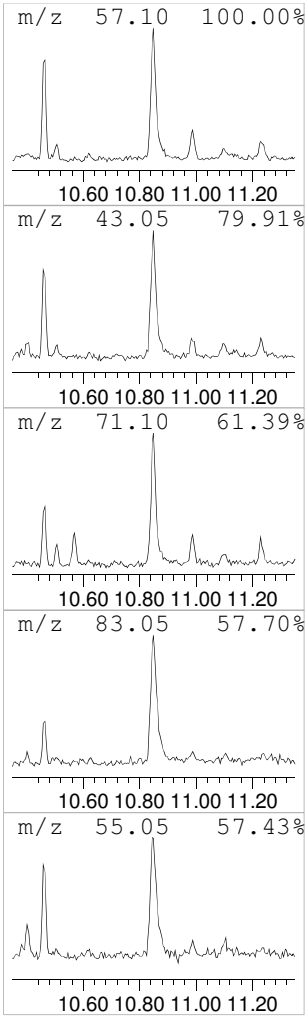
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.85	12.17 ug/l	226835	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Docosene	308	C22H44	001599-67-3	98
2	Cyclopentadecane	210	C15H30	000295-48-7	96
3	3-Eicosene, (E)-	280	C20H40	074685-33-9	95
4	Cycloeicosane	280	C20H40	000296-56-0	92
5	1-Eicosene	280	C20H40	003452-07-1	91





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X94 1108511-015C.D
Acq On : 7 Sep 2011 3:11 am
Operator : ALICIA HABERLE
Sample : 1108511-015C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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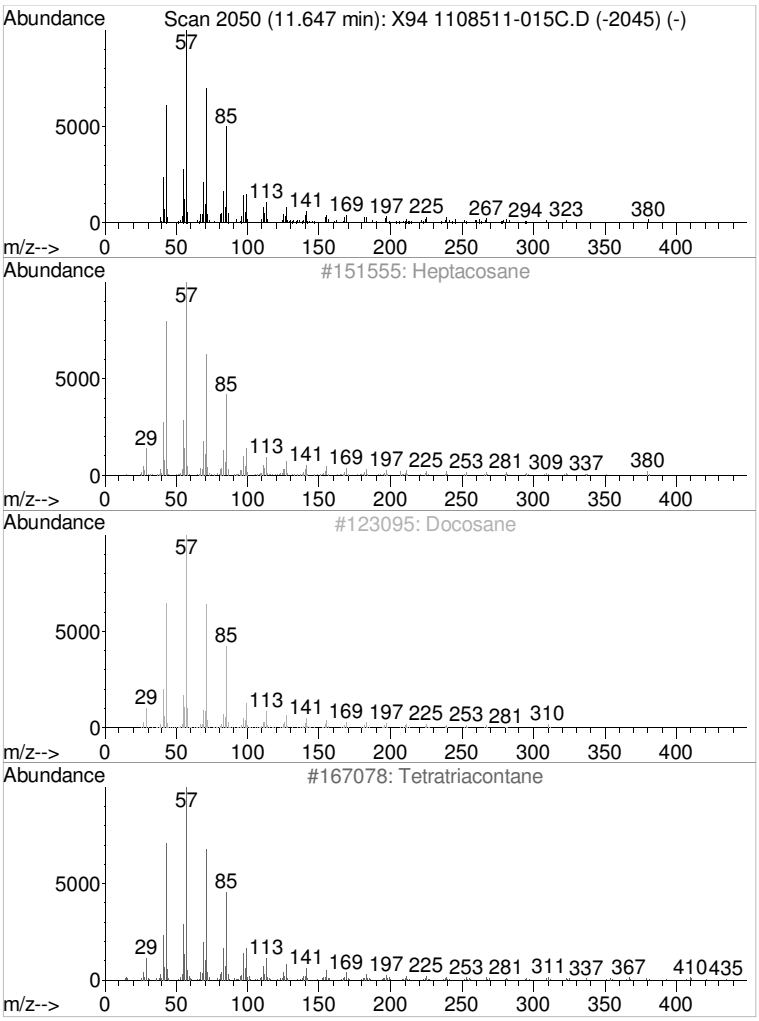
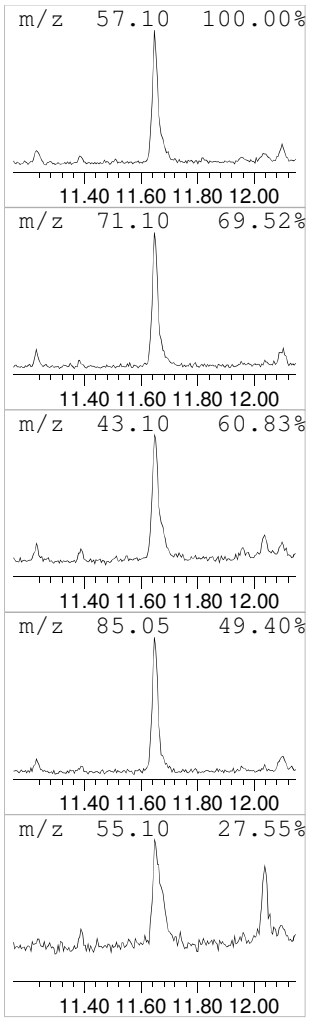
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.65	13.51 ug/l	251872	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptacosane	380	C27H56	000593-49-7	95
2	Docosane	310	C22H46	000629-97-0	90
3	Tetratriacontane	479	C34H70	014167-59-0	90
4	Tetratetracontane	619	C44H90	007098-22-8	90
5	Eicosane	282	C20H42	000112-95-8	90





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X94 1108511-015C.D
Acq On : 7 Sep 2011 3:11 am
Operator : ALICIA HABERLE
Sample : 1108511-015C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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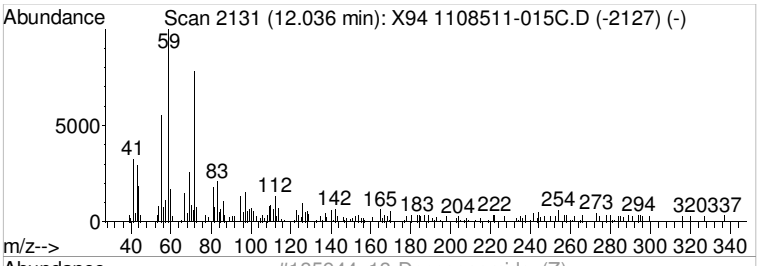
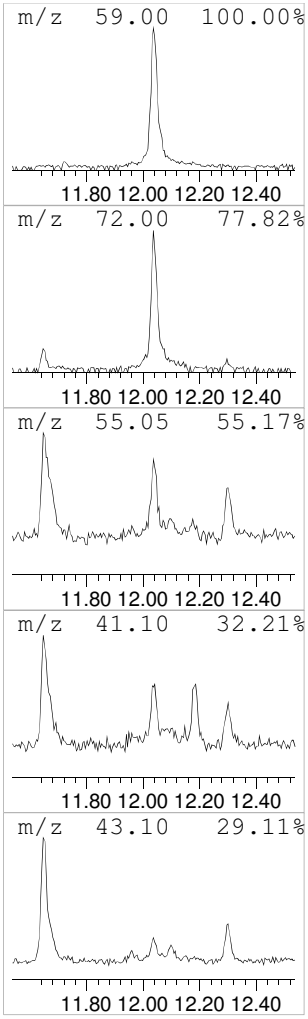
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.04	6.17 ug/l	74244	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	13-Docosenamide, (Z)-	337	C22H43NO	000112-84-5	87
2	9-Octadecenamide, (Z)-	281	C18H35NO	000301-02-0	72
3	Cyclohexanecarboxamide	127	C7H13NO	001122-56-1	53
4	Tetradecanamide	227	C14H29NO	000638-58-4	43
5	Dodecanamide	199	C12H25NO	001120-16-7	38





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X94 1108511-015C.D
Acq On : 7 Sep 2011 3:11 am
Operator : ALICIA HABERLE
Sample : 1108511-015C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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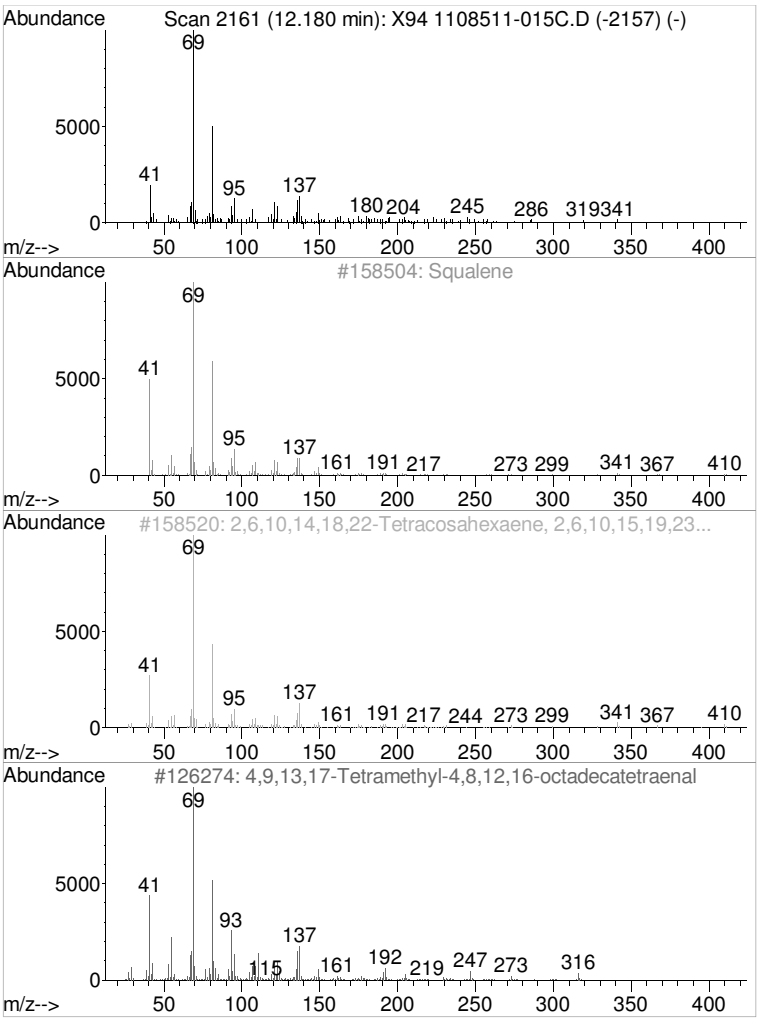
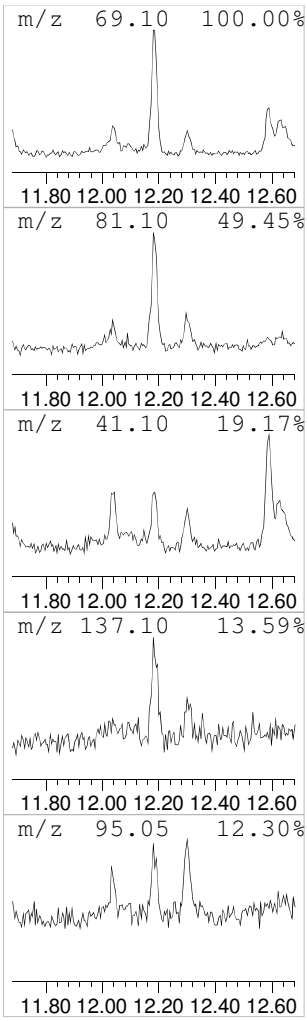
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.18	8.16 ug/l	98229	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Squalene	410	C30H50	007683-64-9	87
2	2,6,10,14,18,22-Tetracosahexaene...	410	C30H50	000111-02-4	78
3	4,9,13,17-Tetramethyl-4,8,12,16-...	316	C22H36O	056882-09-8	78
4	.psi.,.psi.-Carotene, 7,7',8,8',...	547	C40H66	000502-62-5	72
5	2,6,10-Dodecatrien-1-ol, 3,7,11-...	264	C17H28O2	004128-17-0	64





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X94 1108511-015C.D
Acq On : 7 Sep 2011 3:11 am
Operator : ALICIA HABERLE
Sample : 1108511-015C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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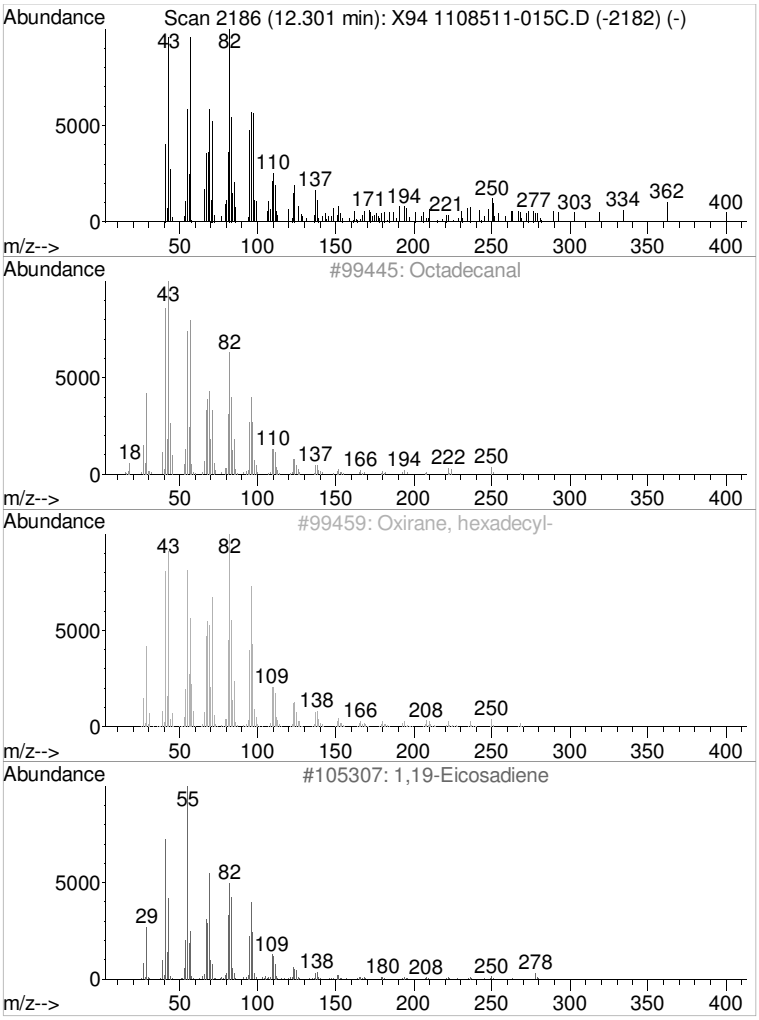
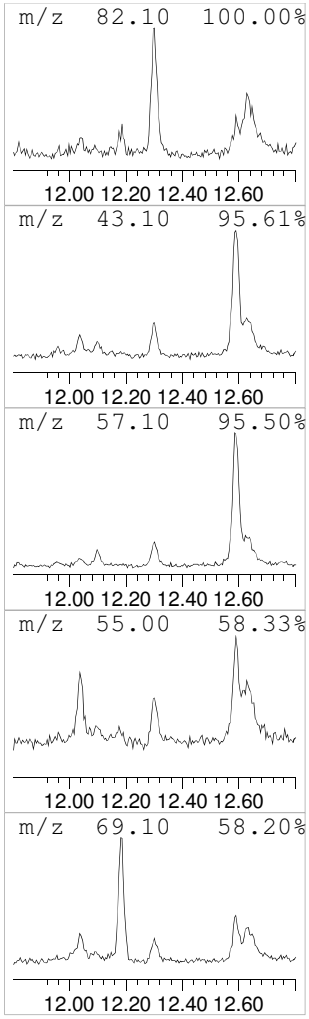
R.T.	EstConc	Area	Relative to ISTD	R.T.
12.30	7.17 ug/l	86343	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanal	268	C18H36O	000638-66-4	95
2	Oxirane, hexadecyl-	268	C18H36O	007390-81-0	91
3	1,19-Eicosadiene	278	C20H38	014811-95-1	87
4	E-8-Octadecacen-1-ol acetate	310	C20H38O2	002195-90-6	87
5	11-Tetradecyn-1-ol acetate	252	C16H28O2	033925-72-3	86





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X94 1108511-015C.D
Acq On : 7 Sep 2011 3:11 am
Operator : ALICIA HABERLE
Sample : 1108511-015C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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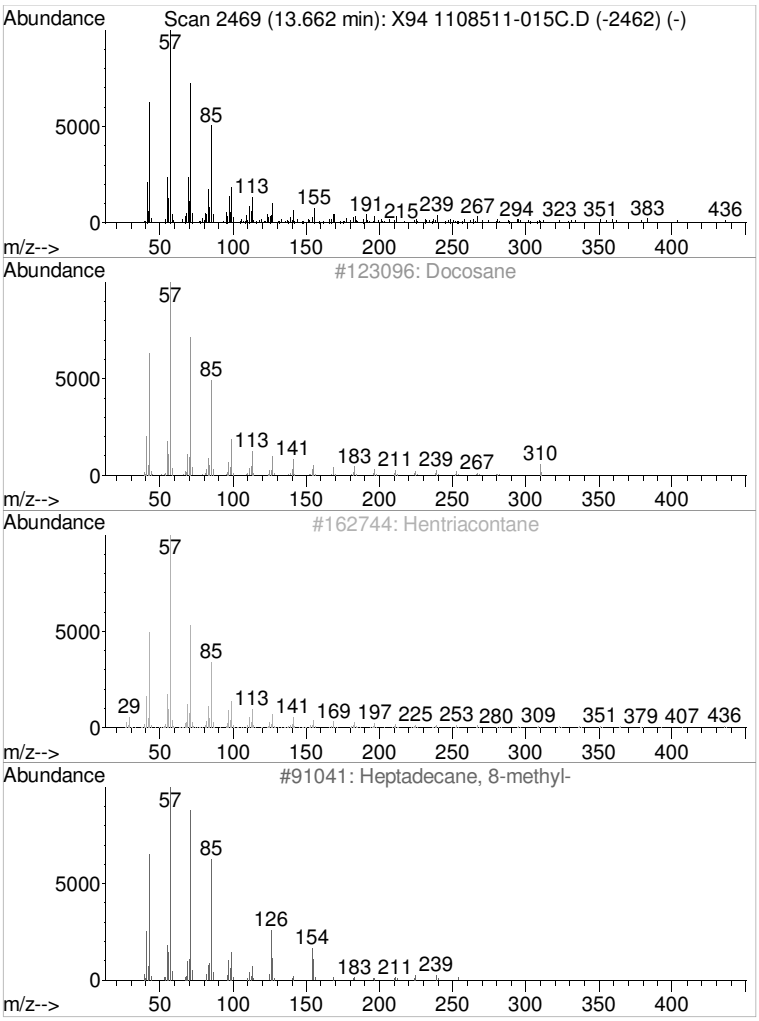
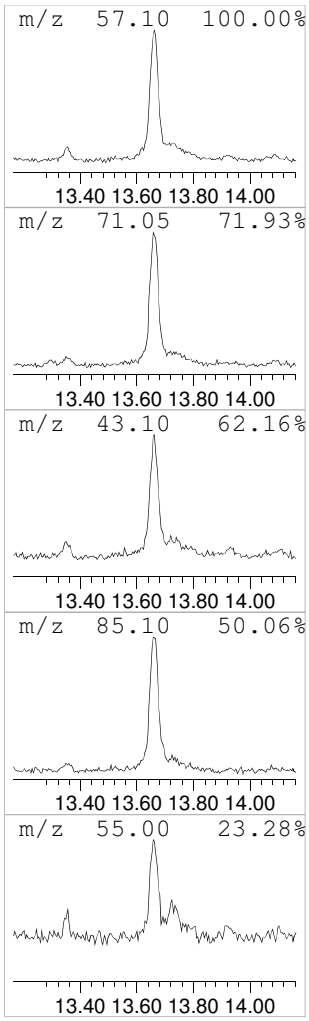
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.66	18.23 ug/l	219376	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Docosane	310	C22H46	000629-97-0	96
2	Hentriacontane	437	C31H64	000630-04-6	94
3	Heptadecane, 8-methyl-	254	C18H38	013287-23-5	93
4	Pentacosane	352	C25H52	000629-99-2	91
5	Tetratetracontane	619	C44H90	007098-22-8	91





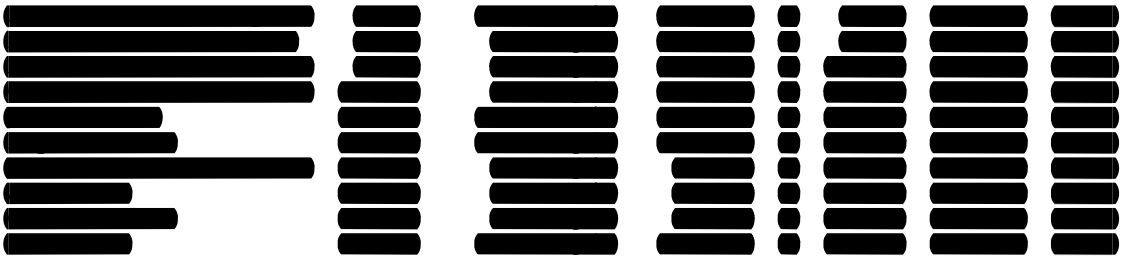
Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X94 1108511-015C.D
Acq On : 7 Sep 2011 3:11 am
Operator : ALICIA HABERLE
Sample : 1108511-015C
Misc : SAMP
ALS Vial : 9 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc



LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X95 1108511-017C.D
Acq On : 7 Sep 2011 3:37 am
Operator : ALICIA HABERLE
Sample : 1108511-017C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.029	44	50	54	rVB	13939	12800	1.16%	0.113%
2	2.154	73	76	79	rBV	21007	13174	1.19%	0.116%
3	2.298	96	106	117	rBV4	26024	86928	7.86%	0.769%
4	2.443	133	136	140	rBV2	27566	19891	1.80%	0.176%
5	2.693	178	188	191	rBV	1338365	1058782	95.75%	9.363%
6	2.774	202	205	208	rVB	44527	28362	2.57%	0.251%
7	2.818	210	214	218	rVB	39356	30370	2.75%	0.269%
8	2.861	219	223	226	rBV	61751	40687	3.68%	0.360%
9	2.943	234	240	252	rBV2	818329	695013	62.86%	6.146%
10	3.020	252	256	267	rVB3	26117	39440	3.57%	0.349%
11	3.395	328	334	336	rBV	13952	13584	1.23%	0.120%
12	3.693	392	396	405	rBV	718893	652925	59.05%	5.774%
13	3.996	455	459	468	rBV	875585	712102	64.40%	6.297%
14	4.486	554	561	575	rBV	313871	360807	32.63%	3.191%
15	5.150	694	699	718	rBV	1049420	985972	89.17%	8.719%
16	6.193	911	916	922	rBV	946983	808901	73.16%	7.153%
17	6.843	1041	1051	1056	rBV	1266489	1105725	100.00%	9.778%
18	7.617	1204	1212	1227	rVB	580881	547384	49.50%	4.841%
19	7.862	1260	1263	1267	rBV2	36459	31419	2.84%	0.278%
20	8.227	1334	1339	1342	rBV2	11699	13267	1.20%	0.117%
21	8.300	1347	1354	1362	rVB	1073835	978146	88.46%	8.650%
22	8.588	1410	1414	1423	rVB7	9349	14114	1.28%	0.125%
23	8.814	1455	1461	1465	rBV4	19917	29921	2.71%	0.265%
24	8.886	1470	1476	1488	rVV2	156656	181919	16.45%	1.609%
25	9.492	1598	1602	1607	rVB	35400	32541	2.94%	0.288%
26	9.584	1618	1621	1623	rBV3	13217	13191	1.19%	0.117%
27	9.603	1623	1625	1630	rVV2	21592	21156	1.91%	0.187%
28	9.665	1634	1638	1644	rVV7	36776	44528	4.03%	0.394%
29	9.709	1644	1647	1653	rVV	39530	44420	4.02%	0.393%
30	9.757	1653	1657	1662	rVB	174670	154388	13.96%	1.365%
31	9.887	1677	1684	1691	rVB	733297	678815	61.39%	6.003%
32	10.161	1736	1741	1745	rBV7	18369	29370	2.66%	0.260%
33	10.276	1760	1765	1770	rBV9	9903	16954	1.53%	0.150%
34	10.401	1785	1791	1797	rBV3	37094	49246	4.45%	0.435%
35	10.464	1800	1804	1807	rBV	143429	129157	11.68%	1.142%
36	10.848	1879	1884	1891	rBV3	82577	138382	12.52%	1.224%
37	10.925	1895	1900	1910	rVV	739054	786231	71.11%	6.953%
38	10.988	1910	1913	1918	rVB	32887	35636	3.22%	0.315%

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X95 1108511-017C.D
Acq On : 7 Sep 2011 3:37 am
Operator : ALICIA HABERLE
Sample : 1108511-017C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

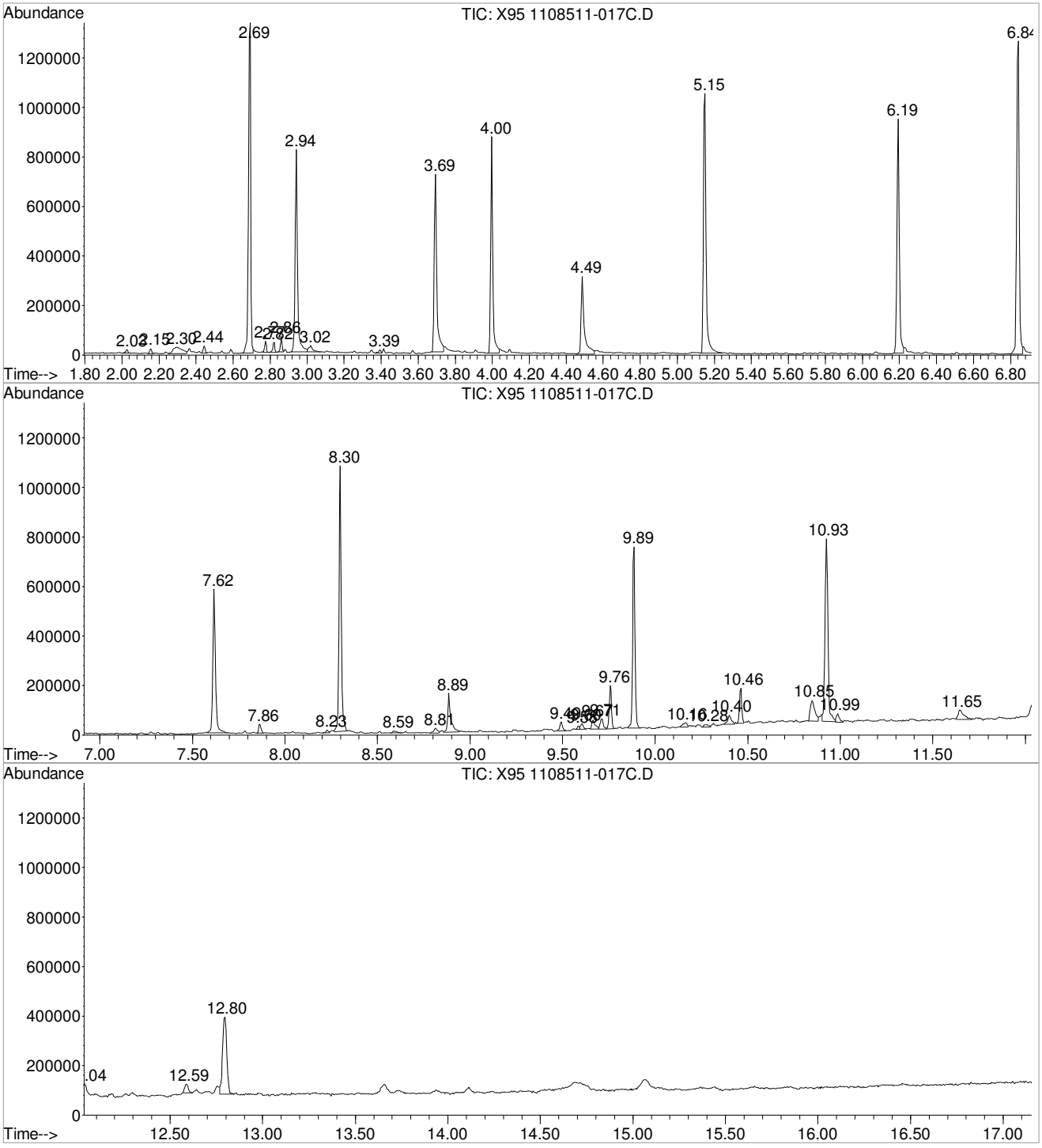
39	11.647	2046	2050	2063	rVB4	38400	81601	7.38%	0.722%
40	12.036	2127	2131	2138	rVB2	45951	63396	5.73%	0.561%
41	12.589	2242	2246	2252	rVB4	34442	46641	4.22%	0.412%
42	12.796	2283	2289	2299	rVB	313162	480966	43.50%	4.253%

Sum of corrected areas: 11308252

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X95 1108511-017C.D
Acq On : 7 Sep 2011 3:37 am
Operator : ALICIA HABERLE
Sample : 1108511-017C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X95 1108511-017C.D
Acq On : 7 Sep 2011 3:37 am
Operator : ALICIA HABERLE
Sample : 1108511-017C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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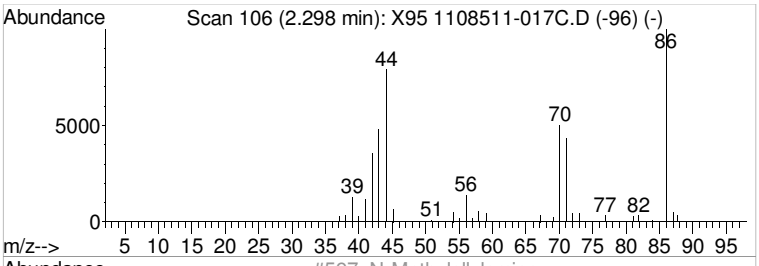
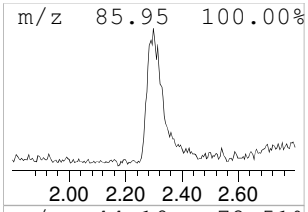
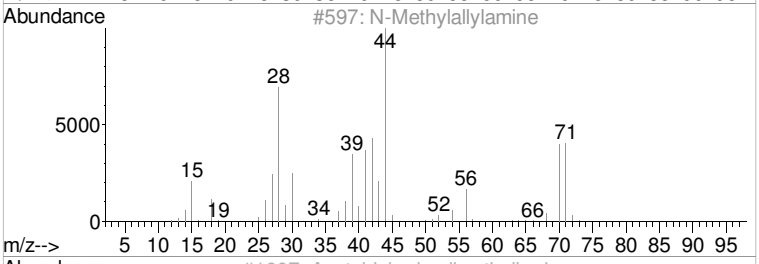
[redacted]

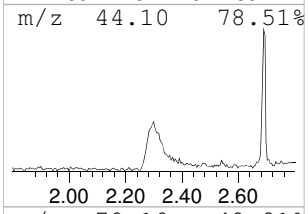
R.T.	EstConc	Area	Relative to ISTD	R.T.
2.30	4.88 ug/l	86928	ISTD 1,4-Dichlorobenzene-d4	4.00

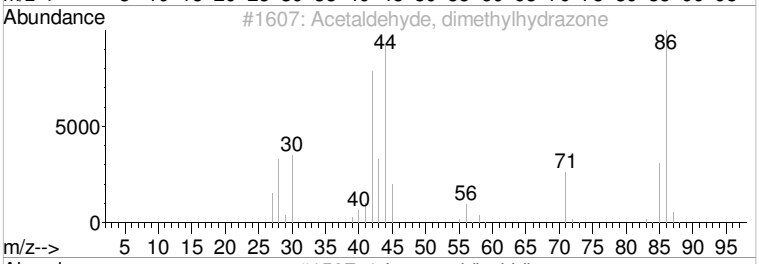
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	N-Methylallylamine	71	C4H9N	000627-37-2	50
2	Acetaldehyde, dimethylhydrazone	86	C4H10N2	007422-90-4	45
3	1-Isopropyldiaziridine	86	C4H10N2	033657-26-0	37
4	D-Leucine	131	C6H13NO2	000328-38-1	28
5	1,3-Propanediamine, N-methyl-	88	C4H12N2	006291-84-5	23

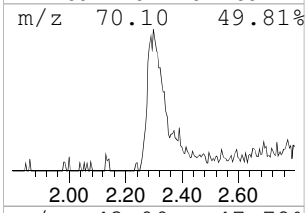


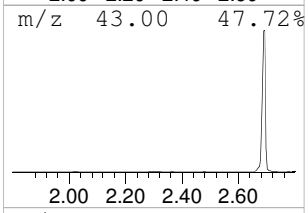


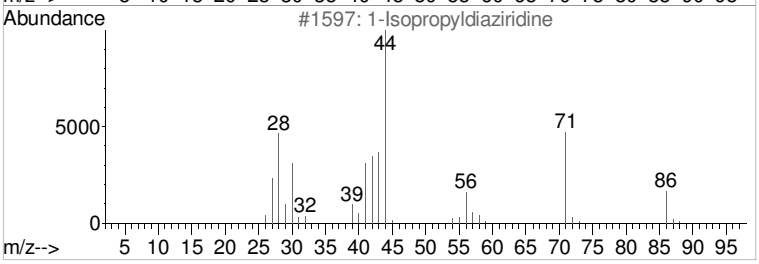


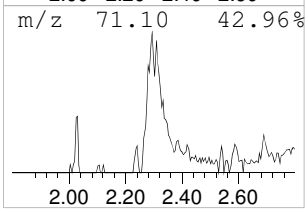












Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X95 1108511-017C.D
Acq On : 7 Sep 2011 3:37 am
Operator : ALICIA HABERLE
Sample : 1108511-017C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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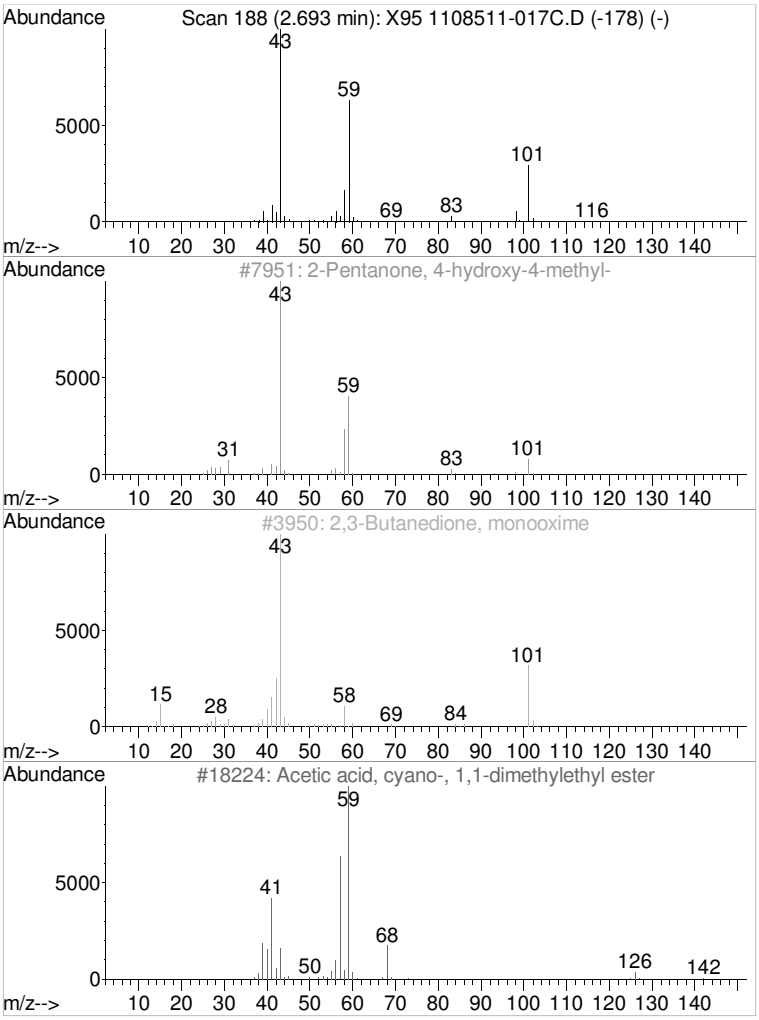
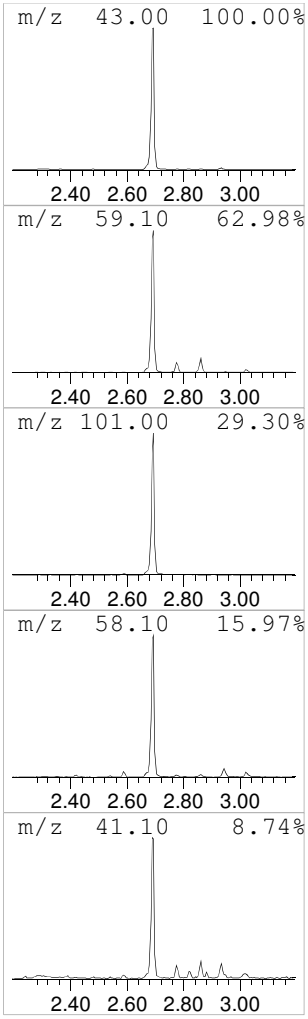
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.69	59.47 ug/l	1058780	ISTD 1,4-Dichlorobenzene-d4	4.00

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	56
2	2,3-Butanedione, monooxime	101	C4H7NO2	000057-71-6	17
3	Acetic acid, cyano-, 1,1-dimethy...	141	C7H11NO2	001116-98-9	17
4	(+-)-4-Amino-4,5-dihydro-2(3H)-f...	101	C4H7NO2	016504-58-8	9
5	Butane, 1-ethoxy-	102	C6H14O	000628-81-9	9





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X95 1108511-017C.D
Acq On : 7 Sep 2011 3:37 am
Operator : ALICIA HABERLE
Sample : 1108511-017C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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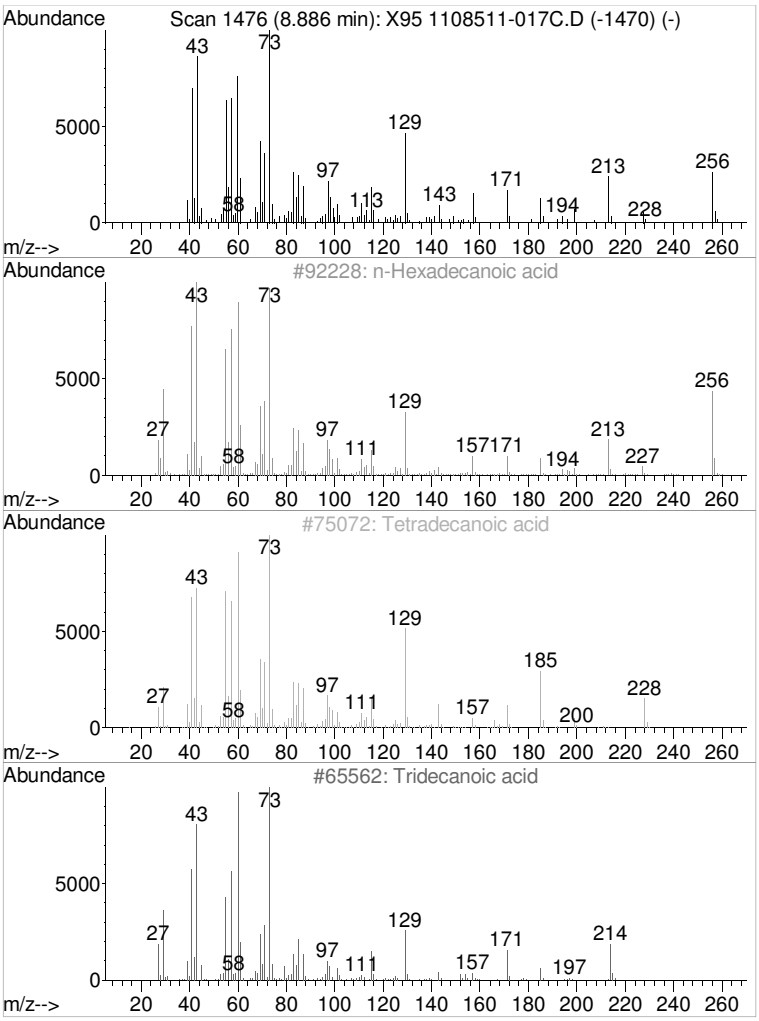
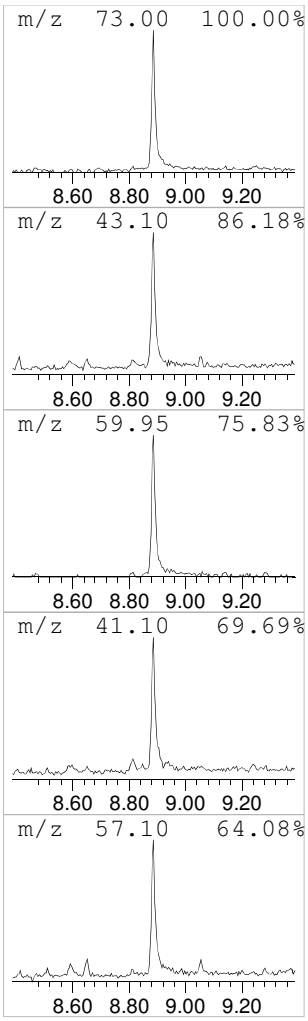
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.89	7.44 ug/l	181919	ISTD-Phenanthrene-d10	8.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	98
2	Tetradecanoic acid	228	C14H28O2	000544-63-8	68
3	Tridecanoic acid	214	C13H26O2	000638-53-9	64
4	n-Decanoic acid	172	C10H20O2	000334-48-5	64
5	Undecanoic acid	186	C11H22O2	000112-37-8	50





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X95 1108511-017C.D
Acq On : 7 Sep 2011 3:37 am
Operator : ALICIA HABERLE
Sample : 1108511-017C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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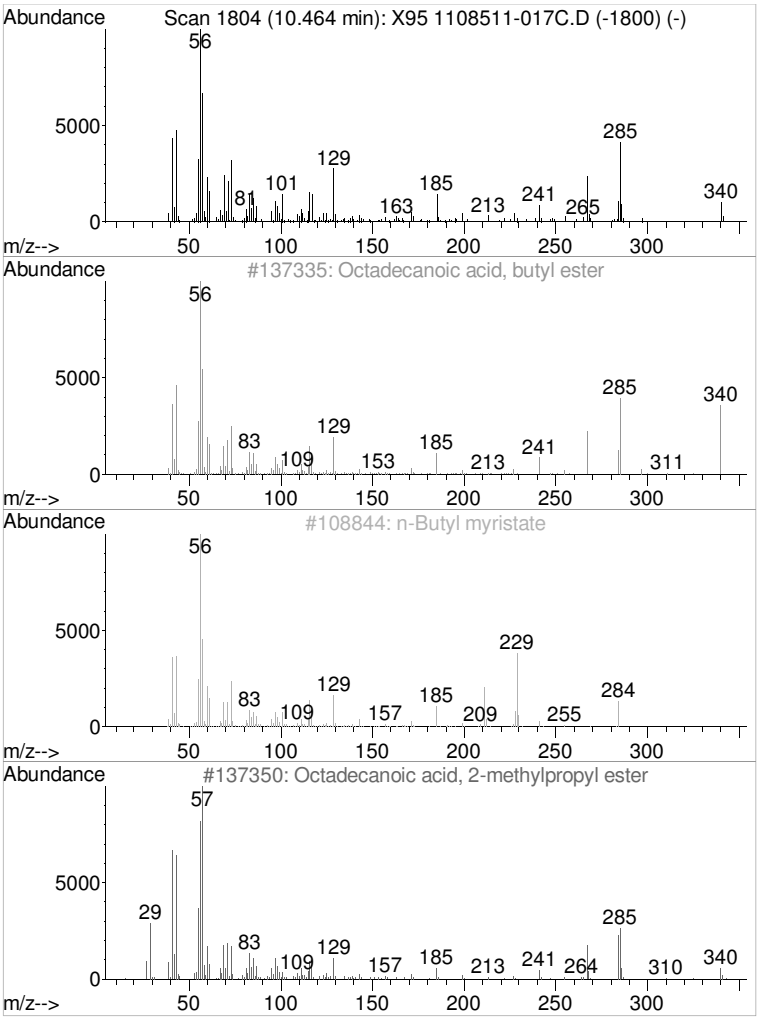
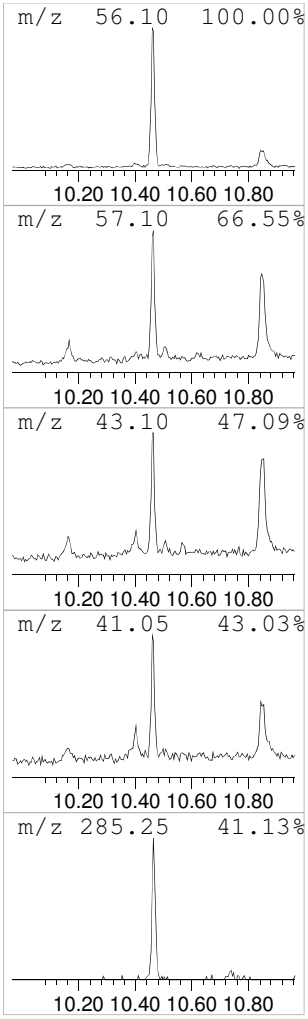
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.46	6.57 ug/l	129157	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	99
2	n-Butyl myristate	284	C18H36O2	000110-36-1	90
3	Octadecanoic acid, 2-methylpropy...	340	C22H44O2	000646-13-9	89
4	Nipecotic acid	129	C6H11NO2	000498-95-3	38
5	Cyclohexane, (1,1-dimethylethyl)-	140	C10H20	003178-22-1	25





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X95 1108511-017C.D
Acq On : 7 Sep 2011 3:37 am
Operator : ALICIA HABERLE
Sample : 1108511-017C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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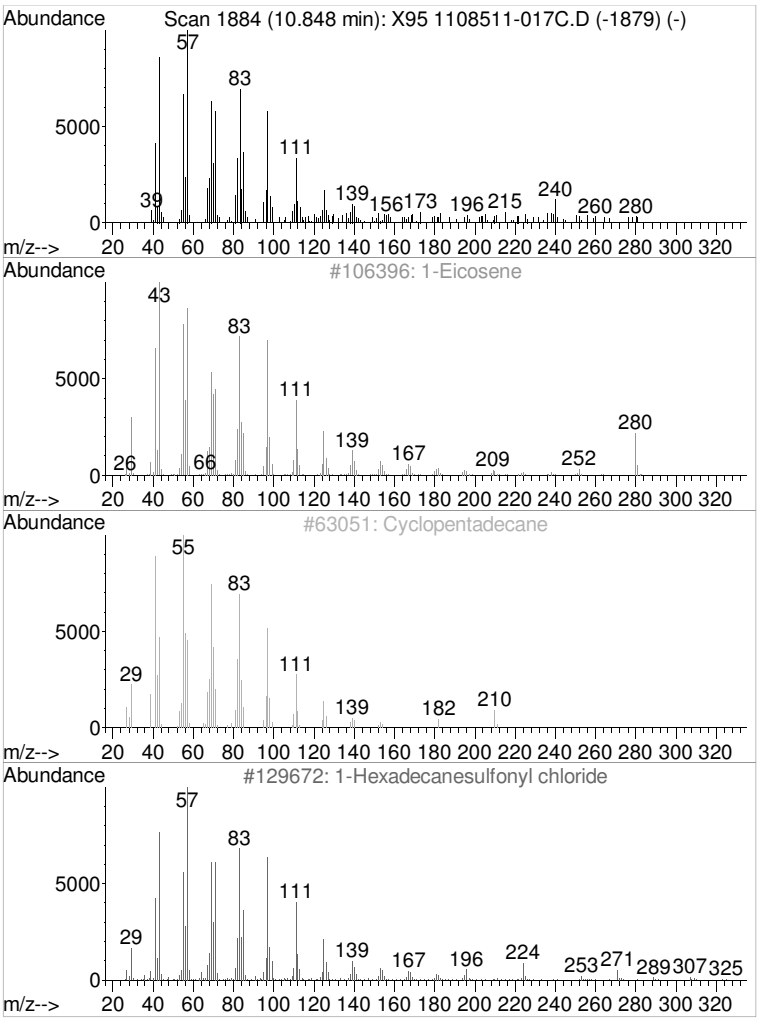
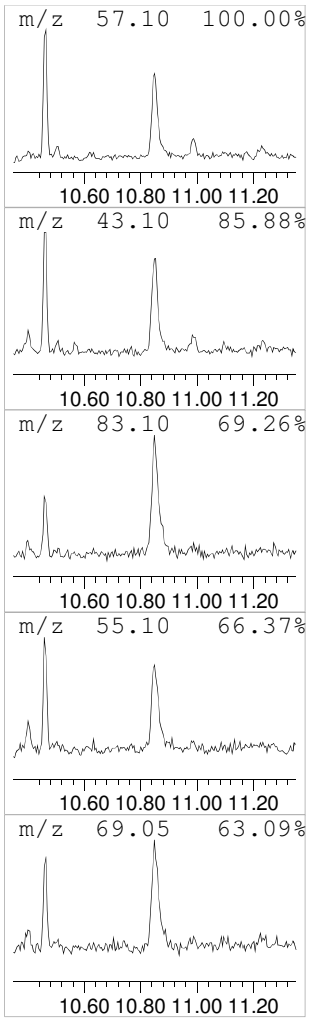
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.85	7.04 ug/l	138382	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Eicosene	280	C20H40	003452-07-1	93
2	Cyclopentadecane	210	C15H30	000295-48-7	91
3	1-Hexadecanesulfonyl chloride	324	C16H33ClO2S	038775-38-1	87
4	17-Pentatriacontene	491	C35H70	006971-40-0	87
5	Pentafluoropropionic acid, hepta...	402	C20H35F5O2	1000283-04-2	76





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X95 1108511-017C.D
Acq On : 7 Sep 2011 3:37 am
Operator : ALICIA HABERLE
Sample : 1108511-017C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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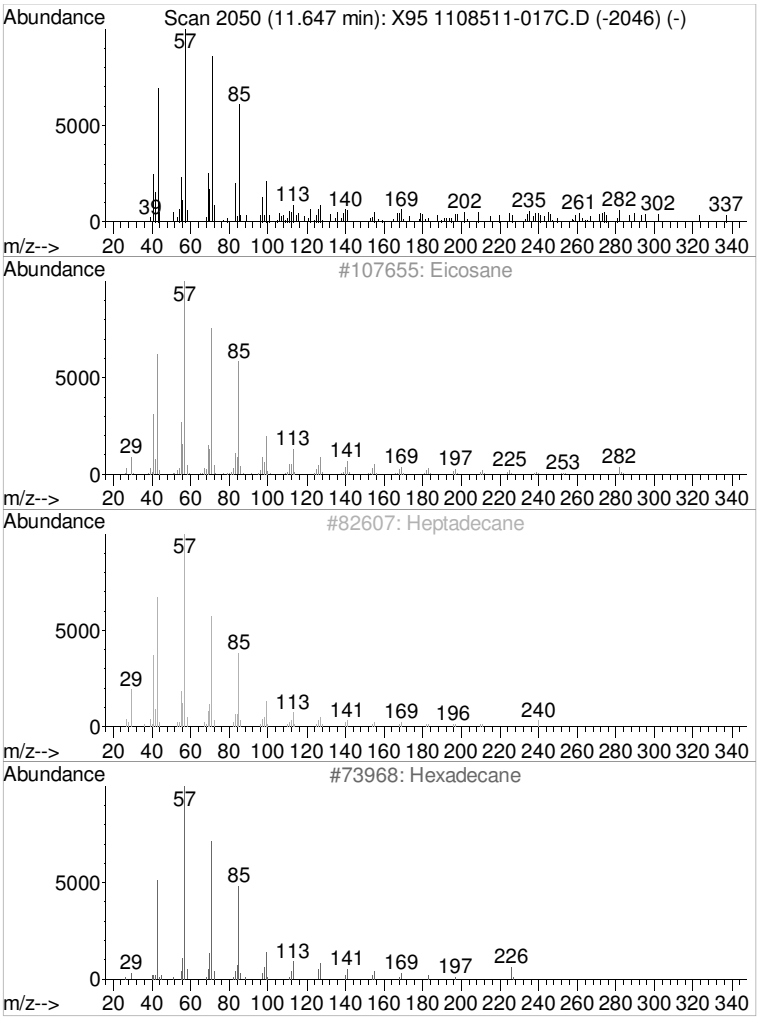
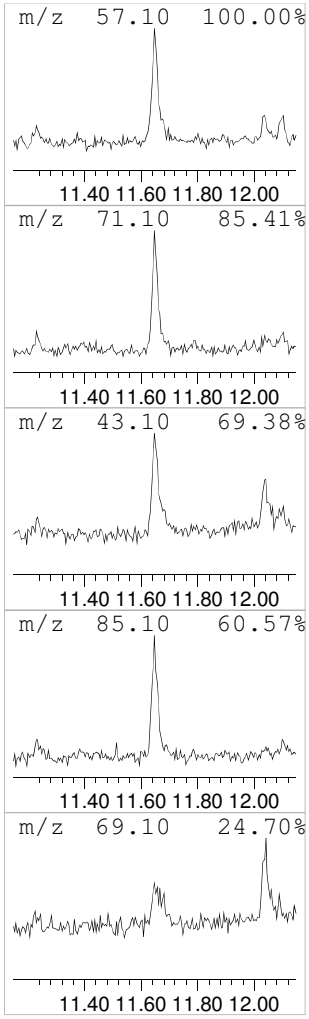
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.65	4.15 ug/l	81601	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Eicosane	282	C20H42	000112-95-8	90
2	Heptadecane	240	C17H36	000629-78-7	81
3	Hexadecane	226	C16H34	000544-76-3	76
4	Hexadecane, 2-methyl-	240	C17H36	001560-92-5	72
5	Octacosane	394	C28H58	000630-02-4	72





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X95 1108511-017C.D
Acq On : 7 Sep 2011 3:37 am
Operator : ALICIA HABERLE
Sample : 1108511-017C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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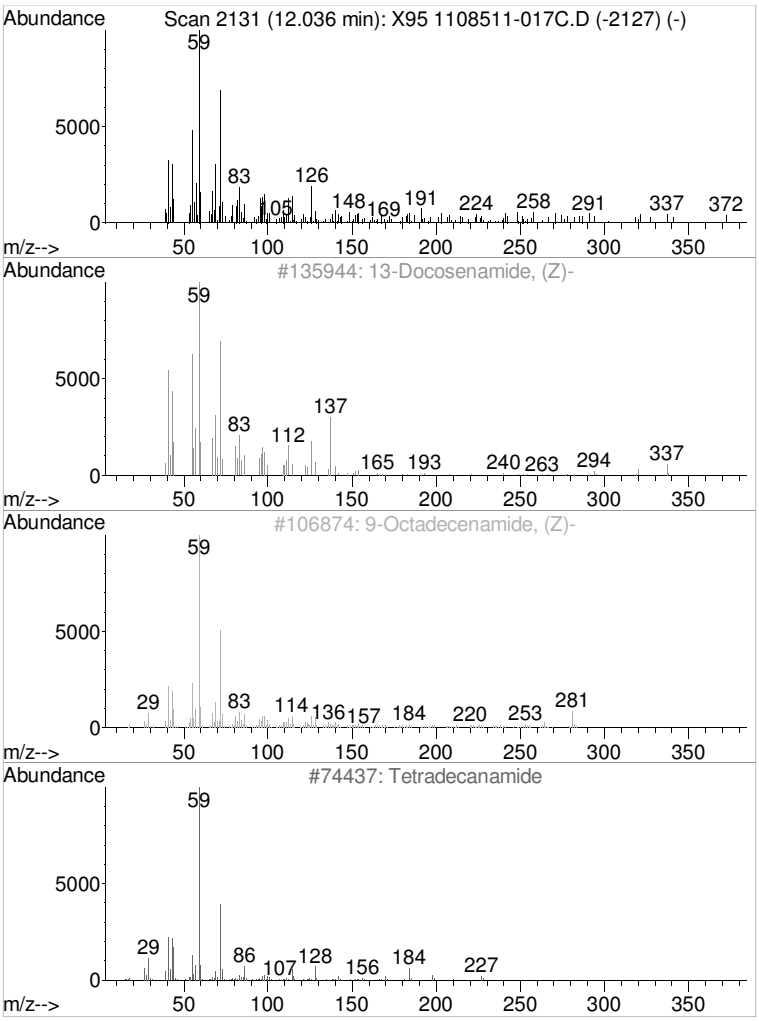
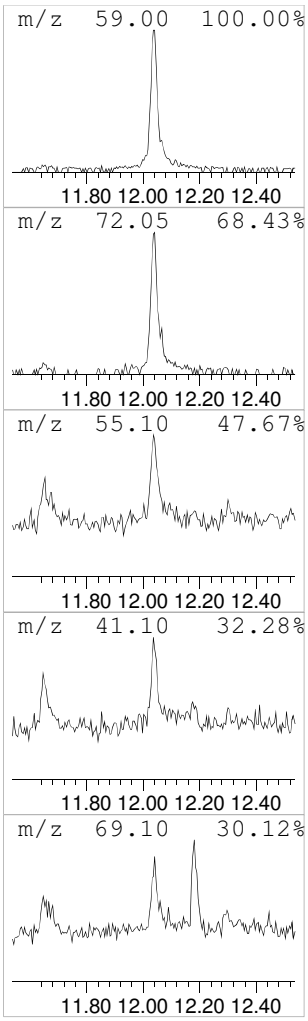
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.04	5.27 ug/l	63396	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	13-Docosenamide, (Z)-	337	C22H43NO	000112-84-5	94
2	9-Octadecenamide, (Z)-	281	C18H35NO	000301-02-0	68
3	Tetradecanamide	227	C14H29NO	000638-58-4	59
4	Heptanamide, 4-ethyl-5-methyl-	171	C10H21NO	054789-40-1	58
5	Pentanamide, 4-methyl-	115	C6H13NO	001119-29-5	47





Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X95 1108511-017C.D
Acq On : 7 Sep 2011 3:37 am
Operator : ALICIA HABERLE
Sample : 1108511-017C
Misc : SAMP
ALS Vial : 10 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
[redacted]								

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X96 1108511-018C.D
Acq On : 7 Sep 2011 4:03 am
Operator : ALICIA HABERLE
Sample : 1108511-018C
Misc : SAMP
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.303	98	107	118	rBV3	20084	69169	4.42%	0.529%
2	2.365	118	120	123	rVB	35016	21037	1.34%	0.161%
3	2.447	134	137	141	rVB2	29043	21657	1.38%	0.166%
4	2.692	180	188	191	rBV	1922414	1564611	100.00%	11.973%
5	2.779	202	206	209	rVB	43613	33281	2.13%	0.255%
6	2.822	209	215	218	rBV	45391	32378	2.07%	0.248%
7	2.860	220	223	226	rBV	62509	42811	2.74%	0.328%
8	2.942	230	240	251	rBV2	918625	782118	49.99%	5.985%
9	3.024	252	257	263	rVB3	19360	27800	1.78%	0.213%
10	3.692	392	396	405	rBV	809998	697261	44.56%	5.336%
11	3.995	455	459	476	rBV	871195	725349	46.36%	5.551%
12	4.486	555	561	576	rBV	365292	403849	25.81%	3.090%
13	5.149	694	699	716	rBV	1110835	977537	62.48%	7.481%
14	6.193	909	916	923	rBV	1040560	859608	54.94%	6.578%
15	6.342	944	947	957	rVB2	19209	28944	1.85%	0.221%
16	6.842	1037	1051	1056	rBV	1209471	1097951	70.17%	8.402%
17	7.616	1201	1212	1226	rVB	600289	595109	38.04%	4.554%
18	7.785	1243	1247	1253	rBV4	15813	20489	1.31%	0.157%
19	7.866	1260	1264	1268	rBV2	43499	39826	2.55%	0.305%
20	8.174	1321	1328	1335	rBV	180307	173290	11.08%	1.326%
21	8.299	1346	1354	1363	rVB	1089956	972566	62.16%	7.443%
22	8.886	1472	1476	1487	rBV2	214651	219853	14.05%	1.682%
23	9.588	1614	1622	1623	rBV7	19125	28451	1.82%	0.218%
24	9.602	1623	1625	1631	rVV3	27023	28424	1.82%	0.218%
25	9.665	1634	1638	1645	rVV2	110918	121972	7.80%	0.933%
26	9.713	1645	1648	1653	rVV	27486	26610	1.70%	0.204%
27	9.761	1653	1658	1662	rVV	200406	186143	11.90%	1.424%
28	9.800	1662	1666	1672	rVV4	20058	35806	2.29%	0.274%
29	9.886	1680	1684	1689	rVB	861415	681654	43.57%	5.216%
30	10.165	1736	1742	1746	rBV4	33954	44171	2.82%	0.338%
31	10.401	1789	1791	1798	rVB2	33337	35599	2.28%	0.272%
32	10.463	1800	1804	1808	rBV	178979	149253	9.54%	1.142%
33	10.848	1880	1884	1892	rBV2	144708	218940	13.99%	1.675%
34	10.925	1896	1900	1909	rVV	640145	715718	45.74%	5.477%
35	10.987	1910	1913	1921	rVB	55040	61737	3.95%	0.472%
36	11.103	1934	1937	1942	rVB2	37958	38585	2.47%	0.295%
37	11.651	2046	2051	2062	rVB4	124147	243558	15.57%	1.864%
38	12.036	2129	2131	2137	rVB4	39111	52244	3.34%	0.400%

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X96 1108511-018C.D
Acq On : 7 Sep 2011 4:03 am
Operator : ALICIA HABERLE
Sample : 1108511-018C
Misc : SAMP
ALS Vial : 11 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

39	12.300	2183	2186	2192	rVB5	48504	59009	3.77%	0.452%
40	12.589	2241	2246	2251	rBV	197138	306693	19.60%	2.347%
41	12.795	2284	2289	2297	rVB	265224	405329	25.91%	3.102%
42	13.661	2463	2469	2476	rVB2	120768	221070	14.13%	1.692%

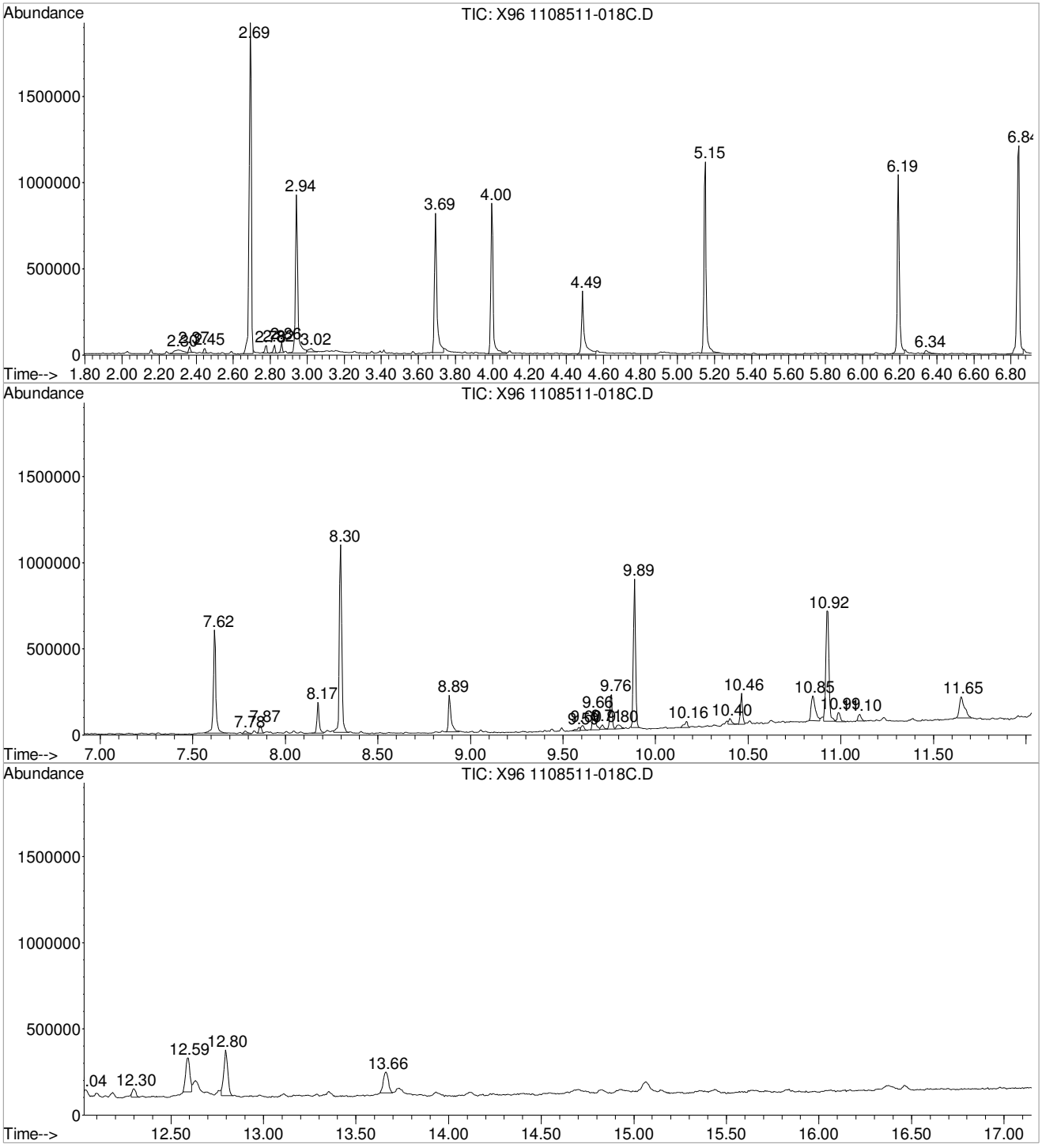
Sum of corrected areas: 13067460

LSC Report - Integrated Chromatogram

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X96 1108511-018C.D
Acq On : 7 Sep 2011 4:03 am
Operator : ALICIA HABERLE
Sample : 1108511-018C
Misc : SAMP
ALS Vial : 11 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X96 1108511-018C.D
Acq On : 7 Sep 2011 4:03 am
Operator : ALICIA HABERLE
Sample : 1108511-018C
Misc : SAMP
ALS Vial : 11 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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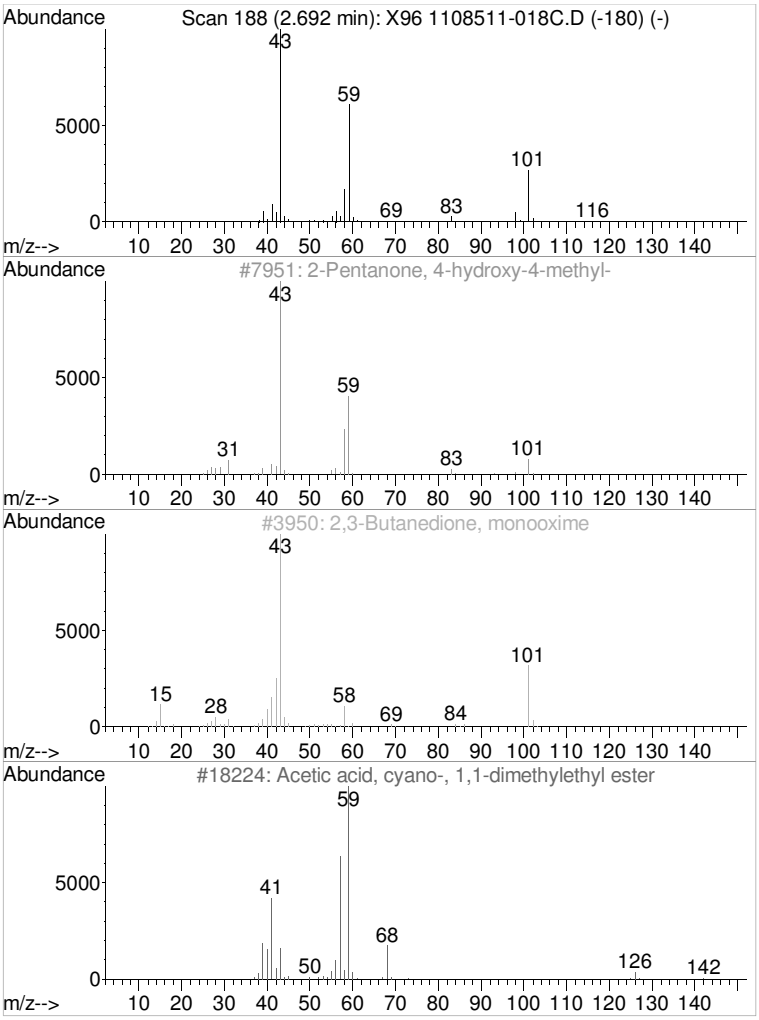
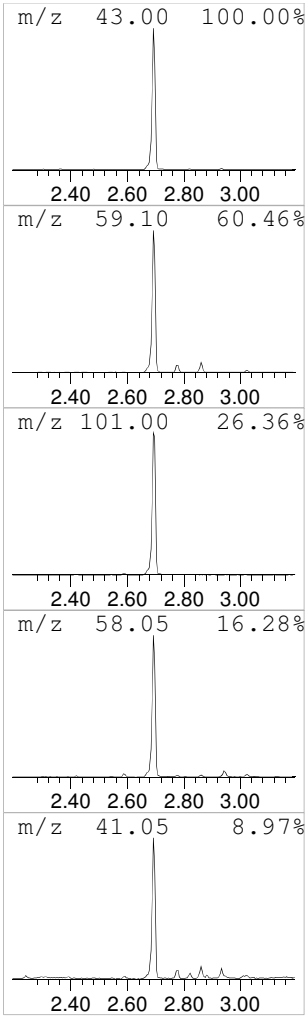
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.69	86.28 ug/l	1564610	ISTD 1,4-Dichlorobenzene-d4	4.00

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	56
2	2,3-Butanedione, monooxime	101	C4H7NO2	000057-71-6	17
3	Acetic acid, cyano-, 1,1-dimethy...	141	C7H11NO2	001116-98-9	17
4	Morpholine, 4-methyl-	101	C5H11NO	000109-02-4	9
5	Butane, 1-ethoxy-	102	C6H14O	000628-81-9	9





Library Search Compound Report

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Data File : X96 1108511-018C.D
Acq On : 7 Sep 2011 4:03 am
Operator : ALICIA HABERLE
Sample : 1108511-018C
Misc : SAMP
ALS Vial : 11 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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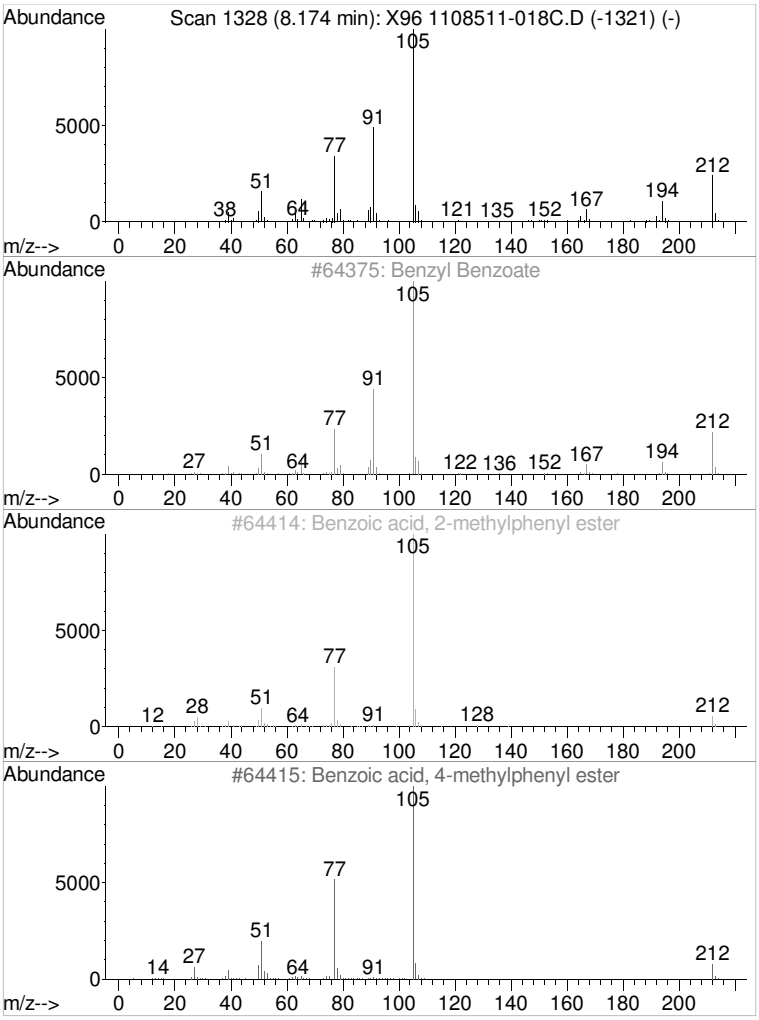
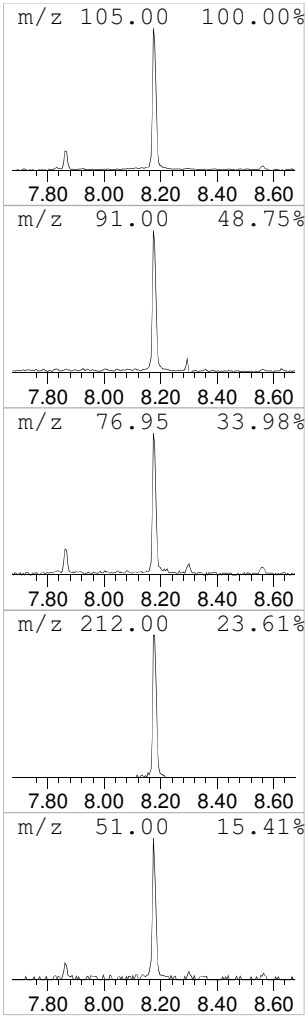
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.17	7.13 ug/l	173290	ISTD-Phenanthrene-d10	8.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzyl Benzoate	212	C14H12O2	000120-51-4	97
2	Benzoic acid, 2-methylphenyl ester	212	C14H12O2	000617-02-7	64
3	Benzoic acid, 4-methylphenyl ester	212	C14H12O2	000614-34-6	59
4	Benzoic acid N2-phenylhydrazide	212	C13H12N2O	000532-96-7	58
5	1-Propanone, 2-bromo-1-phenyl-	212	C9H9BrO	002114-00-3	38





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Data File : X96 1108511-018C.D
Acq On : 7 Sep 2011 4:03 am
Operator : ALICIA HABERLE
Sample : 1108511-018C
Misc : SAMP
ALS Vial : 11 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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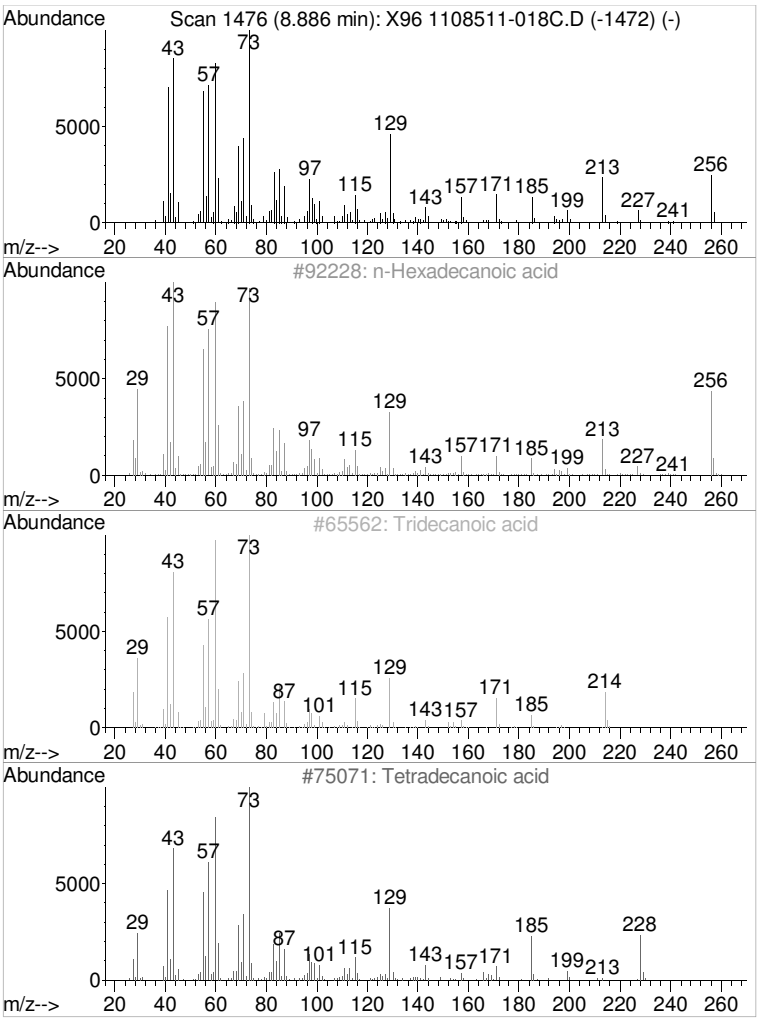
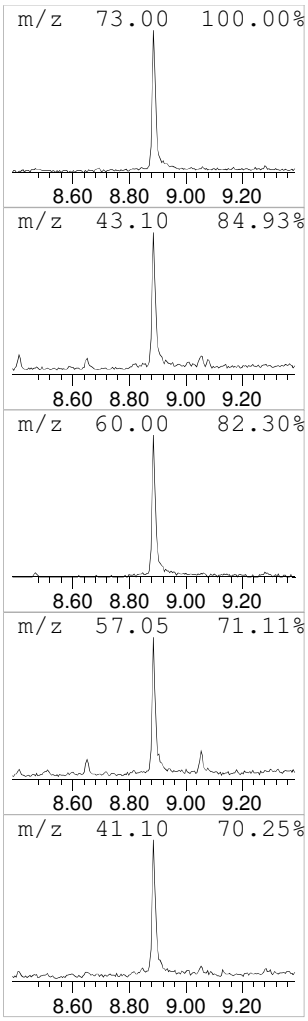
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.89	9.04 ug/l	219853	ISTD-Phenanthrene-d10	8.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	99
2	Tridecanoic acid	214	C13H26O2	000638-53-9	70
3	Tetradecanoic acid	228	C14H28O2	000544-63-8	70
4	n-Decanoic acid	172	C10H20O2	000334-48-5	64
5	2-Butenoic acid, 2-methoxy-3-met...	144	C7H12O3	056009-32-6	18





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Data File : X96 1108511-018C.D
Acq On : 7 Sep 2011 4:03 am
Operator : ALICIA HABERLE
Sample : 1108511-018C
Misc : SAMP
ALS Vial : 11 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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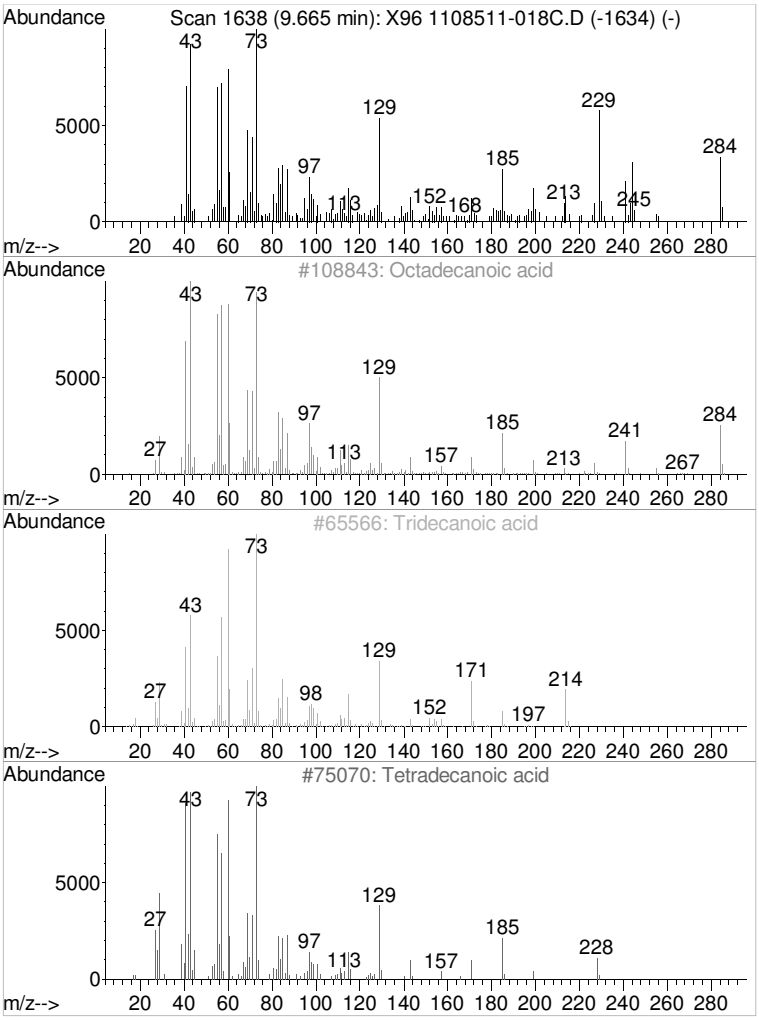
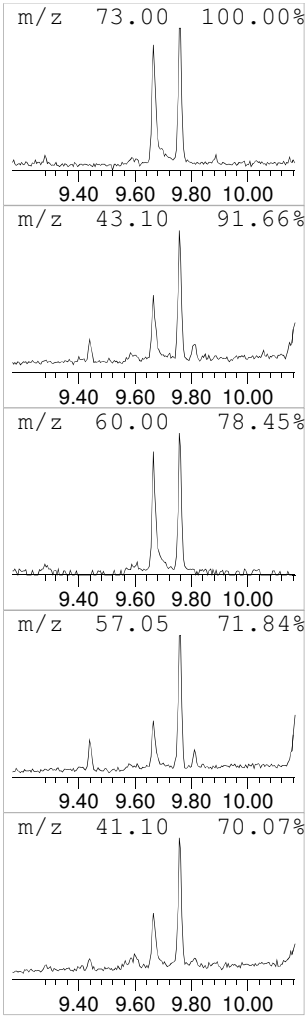
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.66	6.82 ug/l	121972	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid	284	C18H36O2	000057-11-4	99
2	Tridecanoic acid	214	C13H26O2	000638-53-9	50
3	Tetradecanoic acid	228	C14H28O2	000544-63-8	46
4	n-Decanoic acid	172	C10H20O2	000334-48-5	41
5	Dodecanoic acid	200	C12H24O2	000143-07-7	38





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Data File : X96 1108511-018C.D
Acq On : 7 Sep 2011 4:03 am
Operator : ALICIA HABERLE
Sample : 1108511-018C
Misc : SAMP
ALS Vial : 11 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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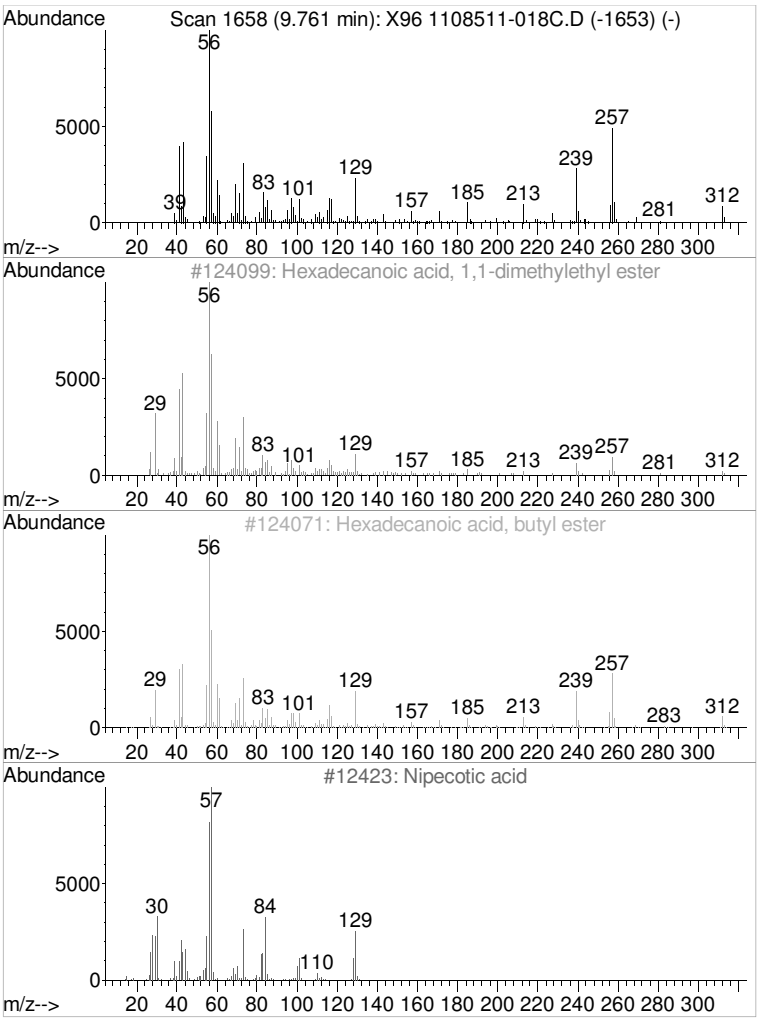
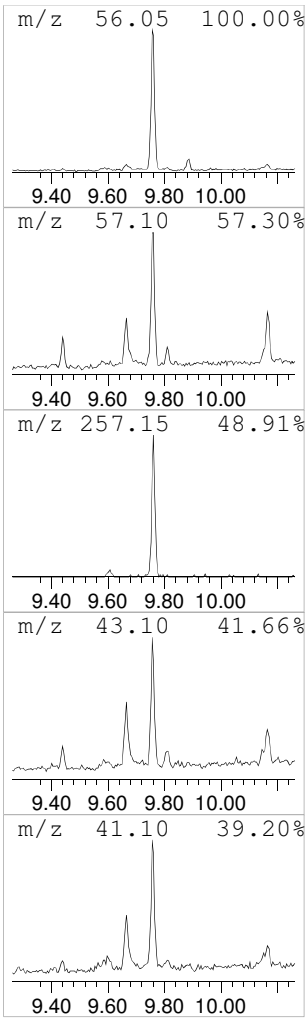
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.76	10.40 ug/l	186143	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexadecanoic acid, 1,1-dimethyle...	312	C20H40O2	031158-91-5	98
2	Hexadecanoic acid, butyl ester	312	C20H40O2	000111-06-8	98
3	Nipecotic acid	129	C6H11NO2	000498-95-3	38
4	Hexadecanoic acid, 2-methylpropy...	312	C20H40O2	000110-34-9	38
5	1-Heptene, 2-methyl-	112	C8H16	015870-10-7	22





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X96 1108511-018C.D
Acq On : 7 Sep 2011 4:03 am
Operator : ALICIA HABERLE
Sample : 1108511-018C
Misc : SAMP
ALS Vial : 11 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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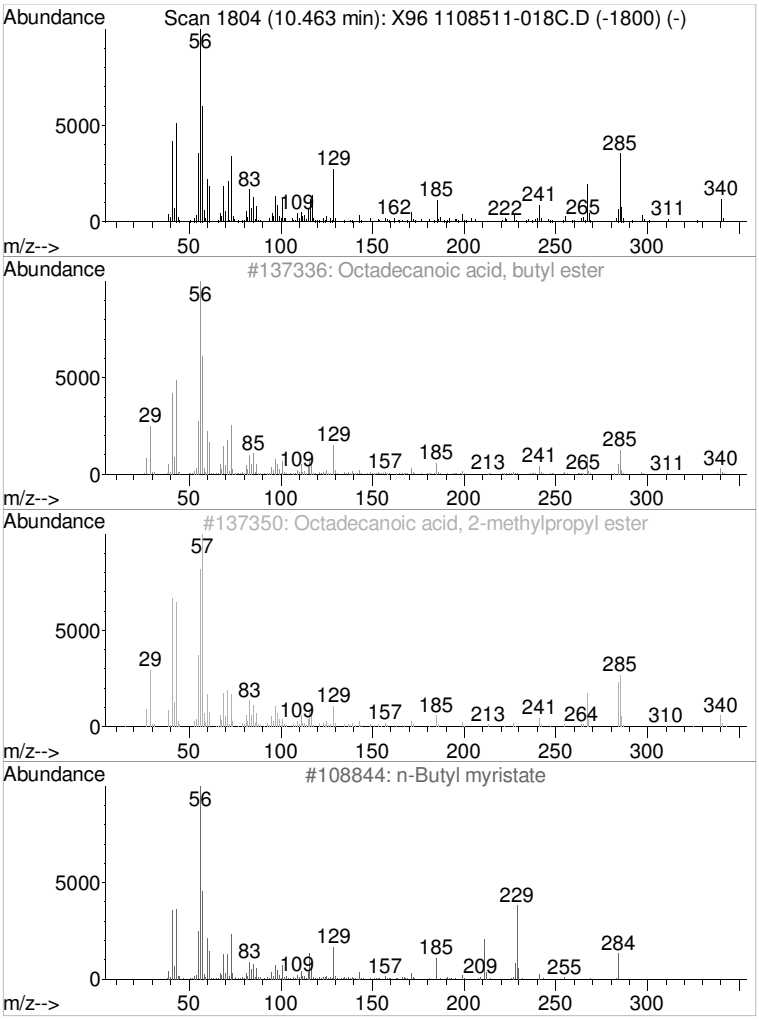
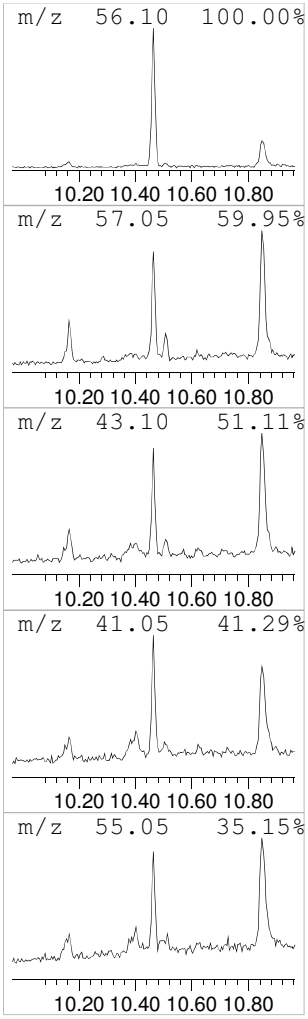
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.46	8.34 ug/l	149253	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	96
2	Octadecanoic acid, 2-methylpropy...	340	C22H44O2	000646-13-9	91
3	n-Butyl myristate	284	C18H36O2	000110-36-1	47
4	Docosanoic acid	340	C22H44O2	000112-85-6	40
5	Octadecanoic acid	284	C18H36O2	000057-11-4	35





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Data File : X96 1108511-018C.D
Acq On : 7 Sep 2011 4:03 am
Operator : ALICIA HABERLE
Sample : 1108511-018C
Misc : SAMP
ALS Vial : 11 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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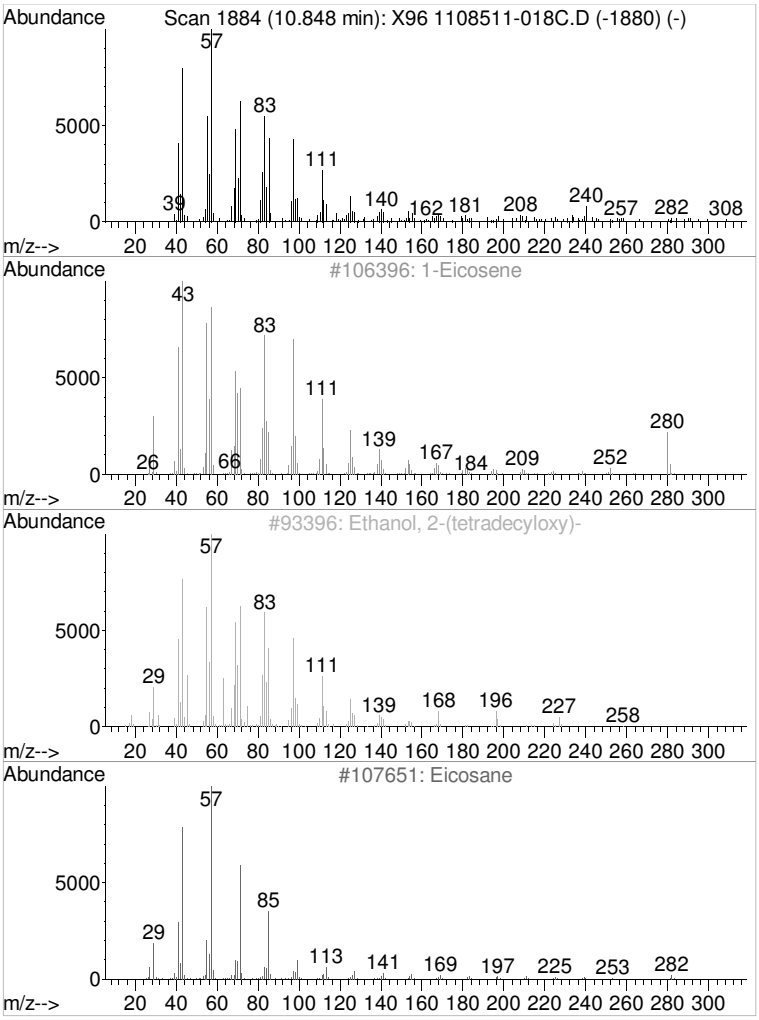
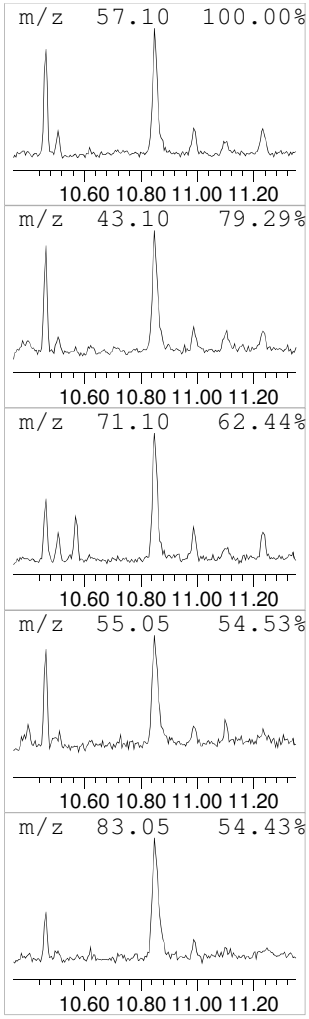
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.85	12.24 ug/l	218940	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Eicosene	280	C20H40	003452-07-1	87
2	Ethanol, 2-(tetradecyloxy)-	258	C16H34O2	002136-70-1	87
3	Eicosane	282	C20H42	000112-95-8	83
4	Trihexadecyl borate	735	C48H99BO3	002665-11-4	81
5	1-Docosene	308	C22H44	001599-67-3	70





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Data File : X96 1108511-018C.D
Acq On : 7 Sep 2011 4:03 am
Operator : ALICIA HABERLE
Sample : 1108511-018C
Misc : SAMP
ALS Vial : 11 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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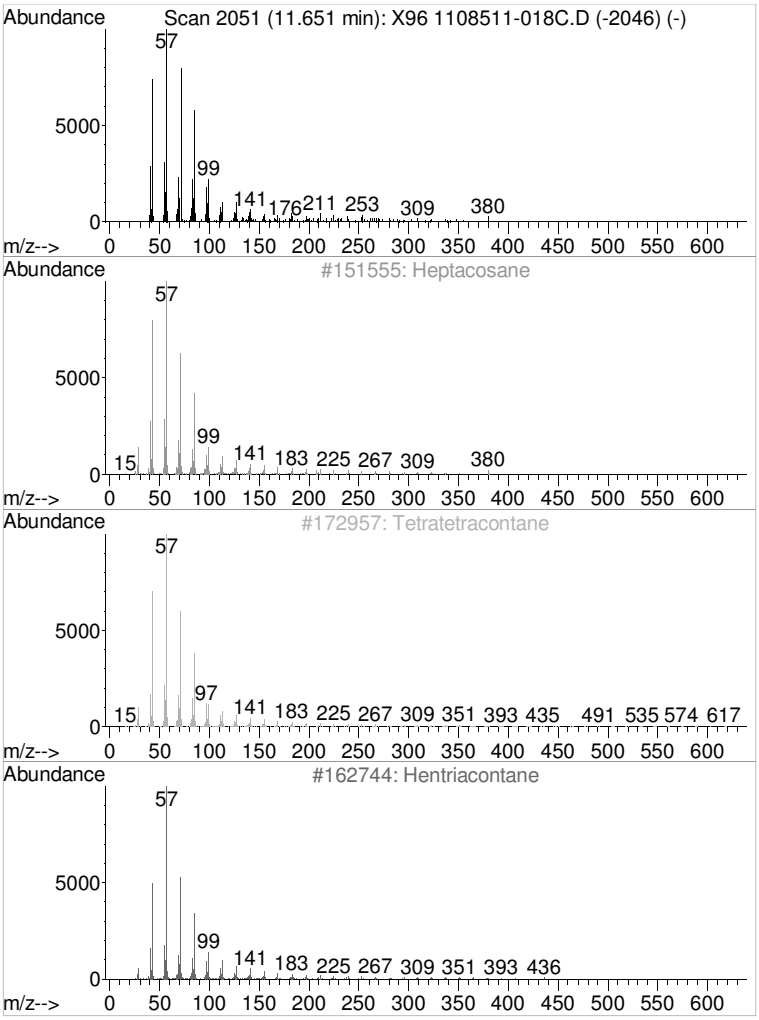
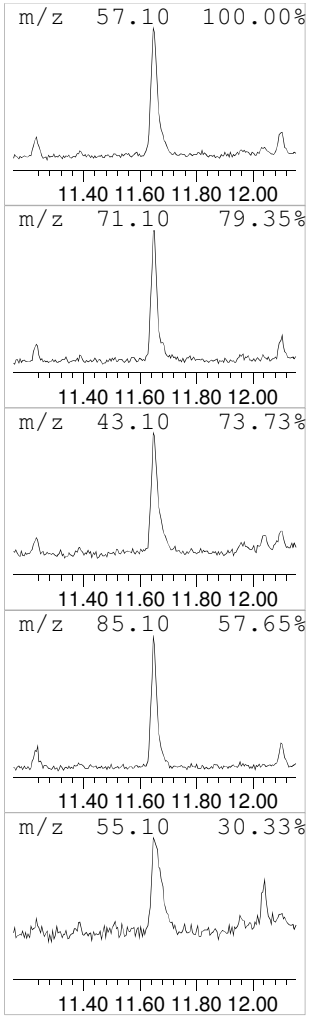
R.T.	EstConc	Area	Relative to ISTD	R.T.
11.65	13.61 ug/l	243558	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptacosane	380	C27H56	000593-49-7	90
2	Tetratetracontane	619	C44H90	007098-22-8	87
3	Hentriacontane	437	C31H64	000630-04-6	87
4	Heneicosane, 11-(1-ethylpropyl)-	366	C26H54	055282-11-6	86
5	Heneicosane, 11-decyl-	437	C31H64	055320-06-4	83





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Data File : X96 1108511-018C.D
Acq On : 7 Sep 2011 4:03 am
Operator : ALICIA HABERLE
Sample : 1108511-018C
Misc : SAMP
ALS Vial : 11 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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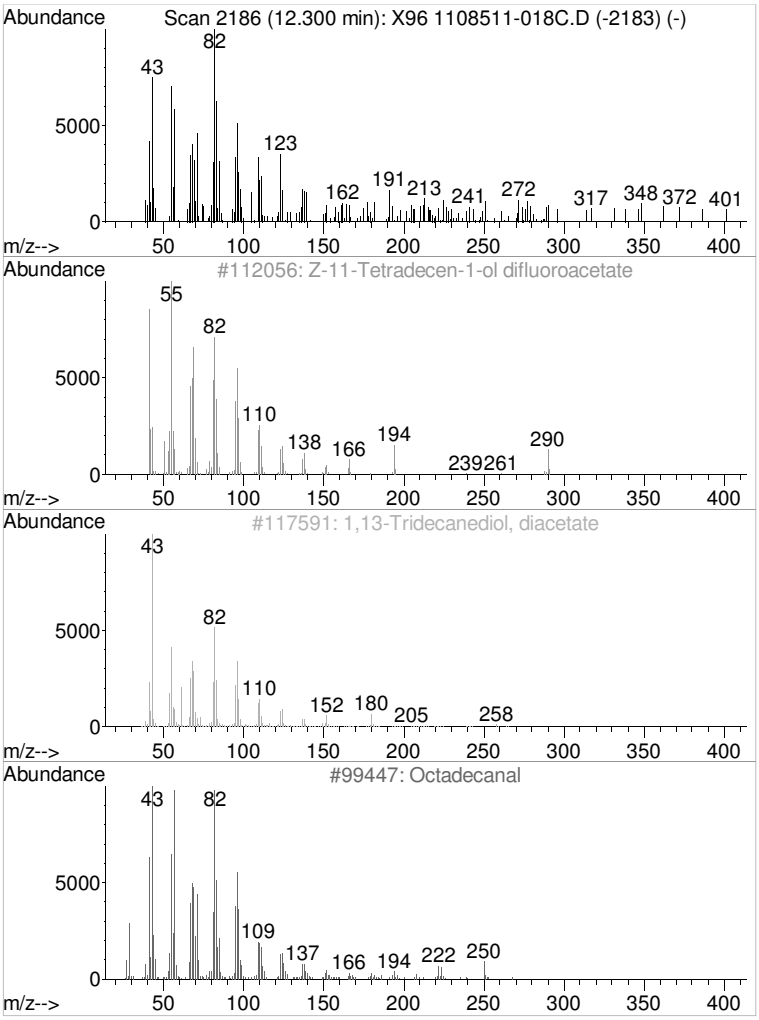
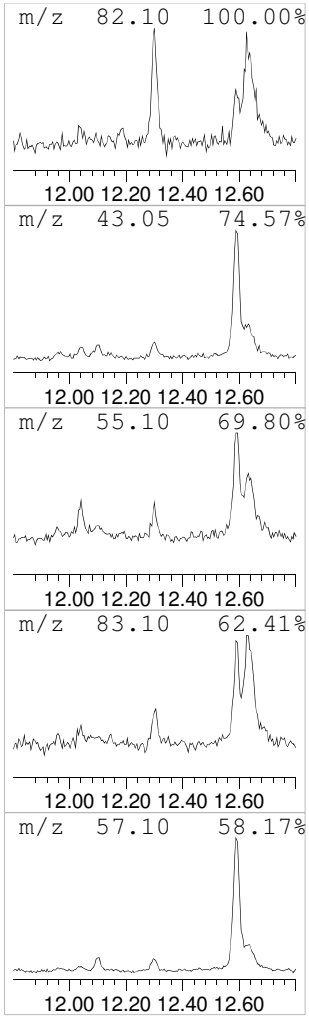
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.30	5.82 ug/l	59009	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Z-11-Tetradecen-1-ol difluoroace...	290	C16H28F2O2	1000130-82-7	62
2	1,13-Tridecanediol, diacetate	300	C17H32O4	042236-70-4	50
3	Octadecanal	268	C18H36O	000638-66-4	50
4	16-Heptadecenal	252	C17H32O	1000144-57-9	47
5	8-Azabicyclo[3.2.1]octan-3-ol, 2...	219	C8H14BrNO	038853-62-2	43





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X96 1108511-018C.D
Acq On : 7 Sep 2011 4:03 am
Operator : ALICIA HABERLE
Sample : 1108511-018C
Misc : SAMP
ALS Vial : 11 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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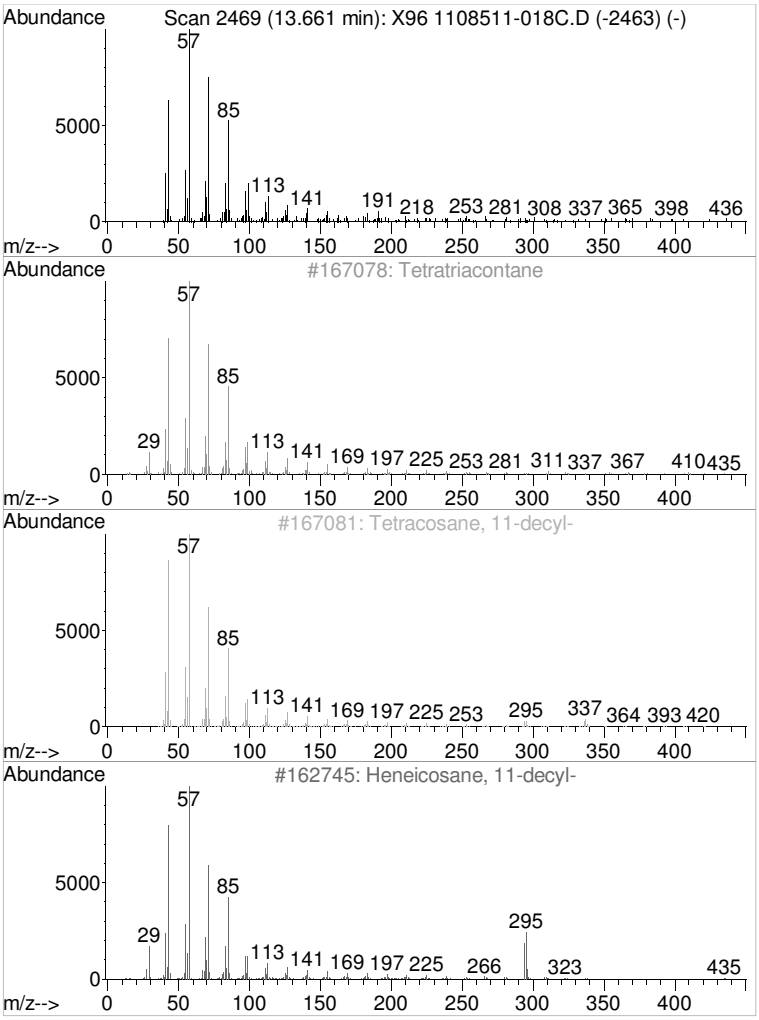
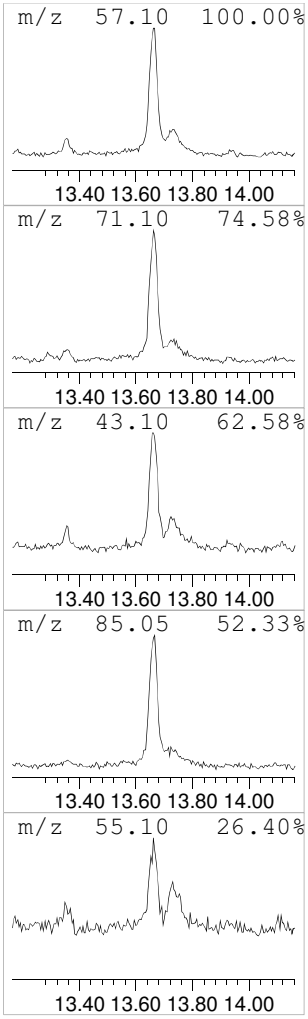
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
13.66	21.82 ug/l	221070	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Tetratriacontane	479	C34H70	014167-59-0	91
2	Tetracosane, 11-decyl-	479	C34H70	055429-84-0	91
3	Heneicosane, 11-decyl-	437	C31H64	055320-06-4	91
4	Tetratetracontane	619	C44H90	007098-22-8	91
5	Octacosane	394	C28H58	000630-02-4	90





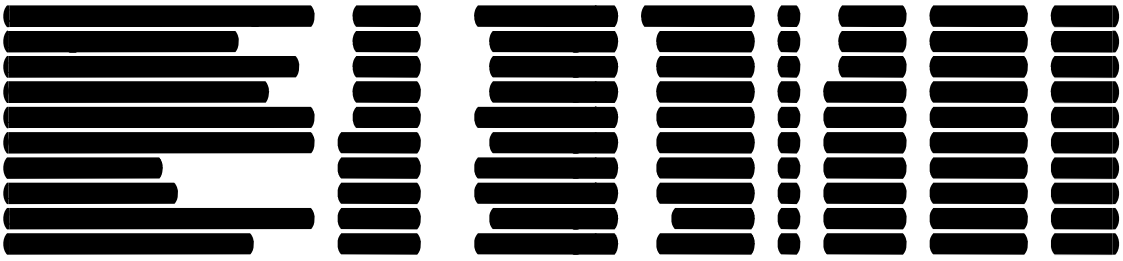
Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X96 1108511-018C.D
Acq On : 7 Sep 2011 4:03 am
Operator : ALICIA HABERLE
Sample : 1108511-018C
Misc : SAMP
ALS Vial : 11 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc



LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X97 1108511-020C.D
Acq On : 7 Sep 2011 4:28 am
Operator : ALICIA HABERLE
Sample : 1108511-020C
Misc : SAMP
ALS Vial : 12 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

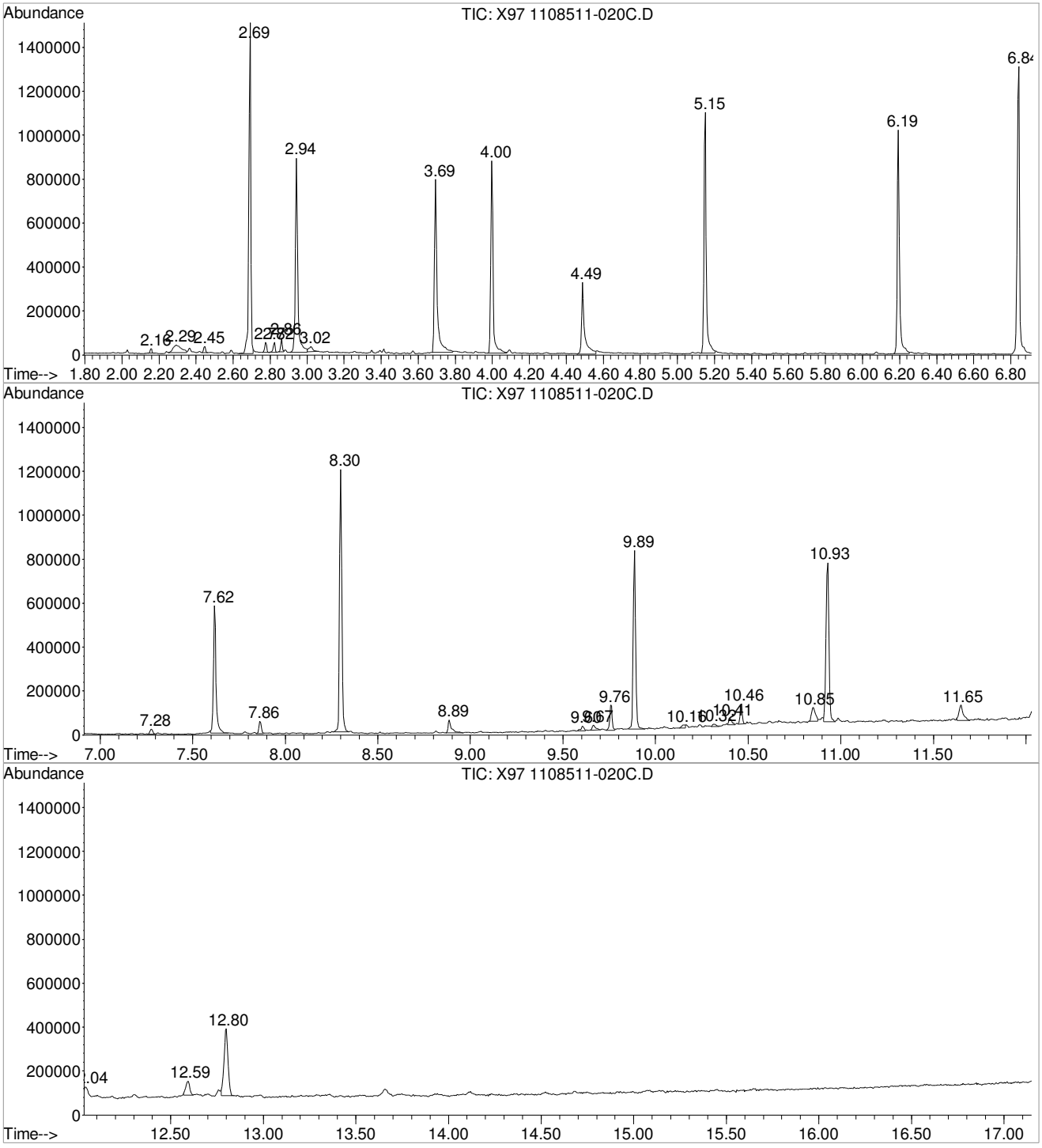
peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.159	73	77	80	rBV	21019	15771	1.35%	0.139%
2	2.294	96	105	117	rBV4	34948	116264	9.96%	1.022%
3	2.447	134	137	140	rBV2	29268	22954	1.97%	0.202%
4	2.693	175	188	191	rBV	1507917	1081044	92.65%	9.507%
5	2.774	202	205	209	rVB	46413	31403	2.69%	0.276%
6	2.823	209	215	218	rBV	45201	31793	2.72%	0.280%
7	2.861	220	223	226	rBV	61480	37989	3.26%	0.334%
8	2.943	233	240	252	rBV2	884313	769711	65.97%	6.769%
9	3.020	252	256	264	rVB2	21753	33654	2.88%	0.296%
10	3.693	392	396	415	rBV	786581	736344	63.11%	6.476%
11	3.996	455	459	476	rBV	876850	739071	63.34%	6.500%
12	4.486	555	561	576	rBV	326105	382126	32.75%	3.361%
13	5.150	694	699	710	rBV	1097439	990743	84.91%	8.713%
14	6.194	911	916	928	rBV	1018822	889472	76.23%	7.822%
15	6.843	1041	1051	1068	rBV	1309608	1166840	100.00%	10.261%
16	7.275	1137	1141	1146	rBV	23650	21132	1.81%	0.186%
17	7.617	1208	1212	1227	rVB	580744	570919	48.93%	5.021%
18	7.862	1259	1263	1267	rBV	54618	45104	3.87%	0.397%
19	8.300	1345	1354	1363	rBV	1194487	1001753	85.85%	8.810%
20	8.886	1472	1476	1491	rVB3	58748	74773	6.41%	0.658%
21	9.603	1620	1625	1629	rBV5	22238	23763	2.04%	0.209%
22	9.665	1634	1638	1645	rVV5	22041	29511	2.53%	0.260%
23	9.757	1652	1657	1662	rBV	114117	107606	9.22%	0.946%
24	9.887	1677	1684	1695	rVB	812165	717062	61.45%	6.306%
25	10.156	1734	1740	1741	rBV6	13324	18786	1.61%	0.165%
26	10.319	1770	1774	1779	rBV8	11129	15674	1.34%	0.138%
27	10.406	1788	1792	1796	rVB2	25012	28588	2.45%	0.251%
28	10.464	1800	1804	1808	rVV	92036	79727	6.83%	0.701%
29	10.848	1880	1884	1890	rBV3	63841	92504	7.93%	0.814%
30	10.930	1896	1901	1909	rVB	724360	753791	64.60%	6.629%
31	11.647	2046	2050	2060	rVB	68553	110585	9.48%	0.973%
32	12.041	2127	2132	2139	rBV3	49478	81370	6.97%	0.716%
33	12.594	2242	2247	2252	rVB2	62420	87513	7.50%	0.770%
34	12.801	2284	2290	2298	rVB	306460	465746	39.92%	4.096%

Sum of corrected areas: 11371086

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X97 1108511-020C.D
Acq On : 7 Sep 2011 4:28 am
Operator : ALICIA HABERLE
Sample : 1108511-020C
Misc : SAMP
ALS Vial : 12 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X97 1108511-020C.D
Acq On : 7 Sep 2011 4:28 am
Operator : ALICIA HABERLE
Sample : 1108511-020C
Misc : SAMP
ALS Vial : 12 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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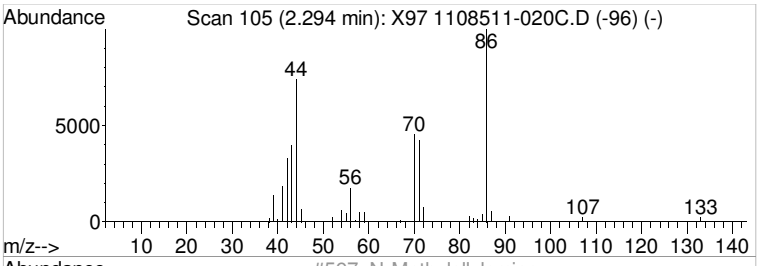
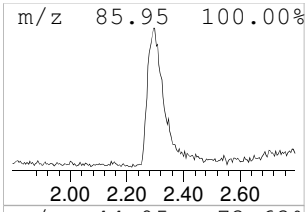
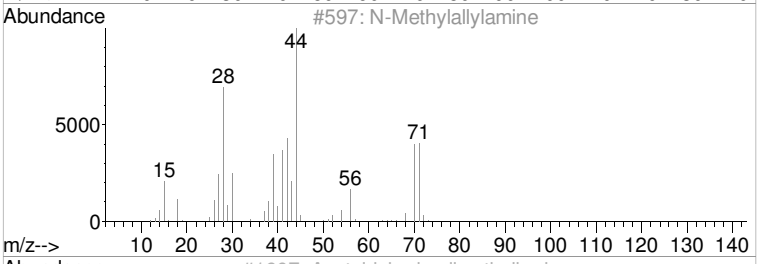
[redacted]

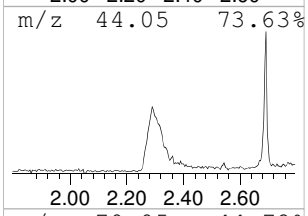
R.T.	EstConc	Area	Relative to ISTD	R.T.
2.29	6.29 ug/l	116264	ISTD 1,4-Dichlorobenzene-d4	4.00

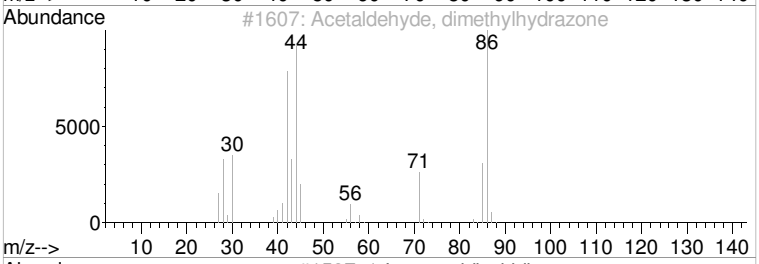
Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	N-Methylallylamine	71	C4H9N	000627-37-2	50
2	Acetaldehyde, dimethylhydrazone	86	C4H10N2	007422-90-4	45
3	1-Isopropyldiaziridine	86	C4H10N2	033657-26-0	43
4	Butylamine, N-methyl-N-propyl-	129	C8H19N	024551-99-3	33
5	D-Leucine	131	C6H13NO2	000328-38-1	28

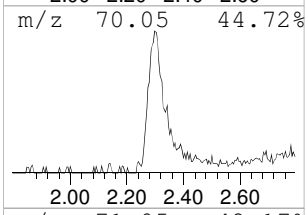


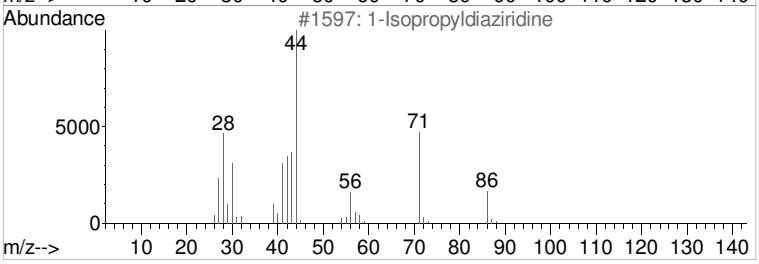


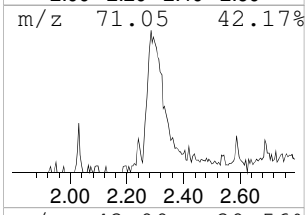


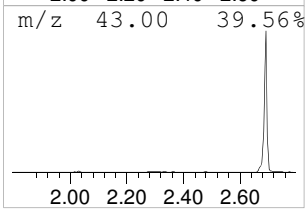












Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X97 1108511-020C.D
Acq On : 7 Sep 2011 4:28 am
Operator : ALICIA HABERLE
Sample : 1108511-020C
Misc : SAMP
ALS Vial : 12 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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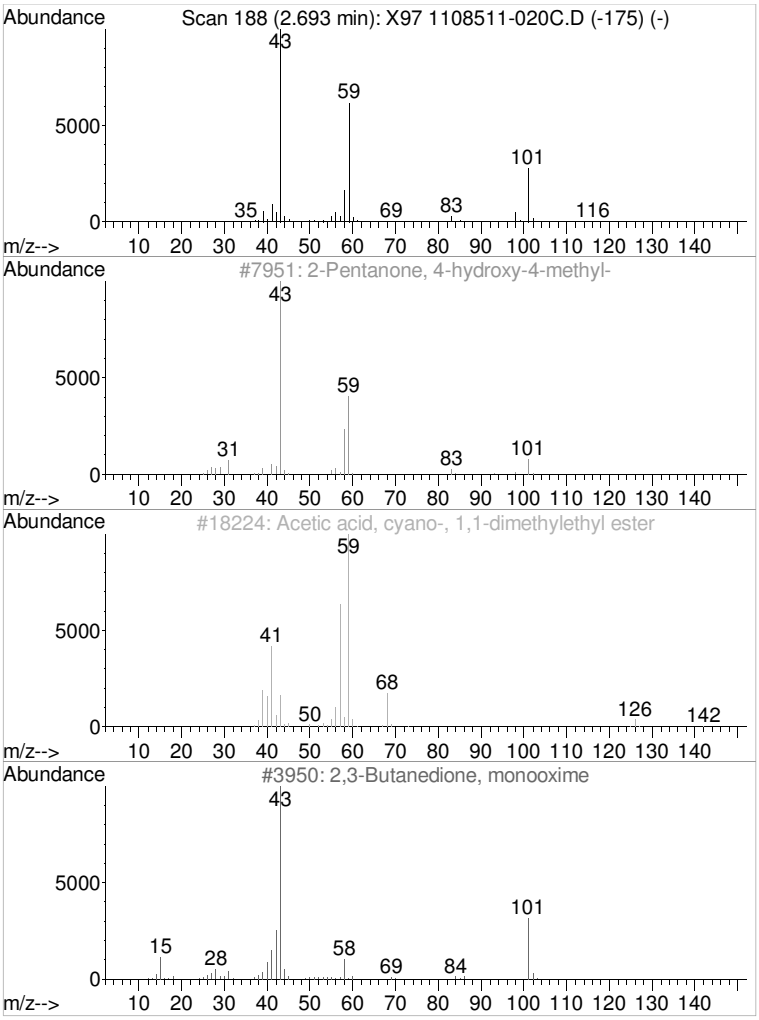
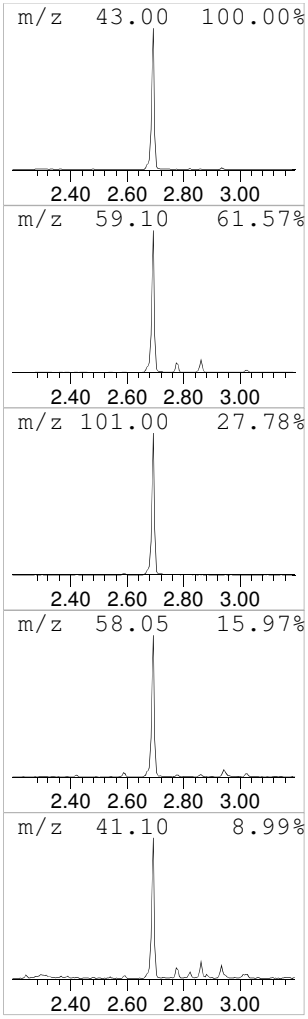
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.69	58.51 ug/l	1081040	ISTD 1,4-Dichlorobenzene-d4	4.00

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	56
2	Acetic acid, cyano-, 1,1-dimethy...	141	C7H11NO2	001116-98-9	17
3	2,3-Butanedione, monooxime	101	C4H7NO2	000057-71-6	17
4	Morpholine, 4-methyl-	101	C5H11NO	000109-02-4	9
5	(+-)-4-Amino-4,5-dihydro-2(3H)-f...	101	C4H7NO2	016504-58-8	9





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X97 1108511-020C.D
Acq On : 7 Sep 2011 4:28 am
Operator : ALICIA HABERLE
Sample : 1108511-020C
Misc : SAMP
ALS Vial : 12 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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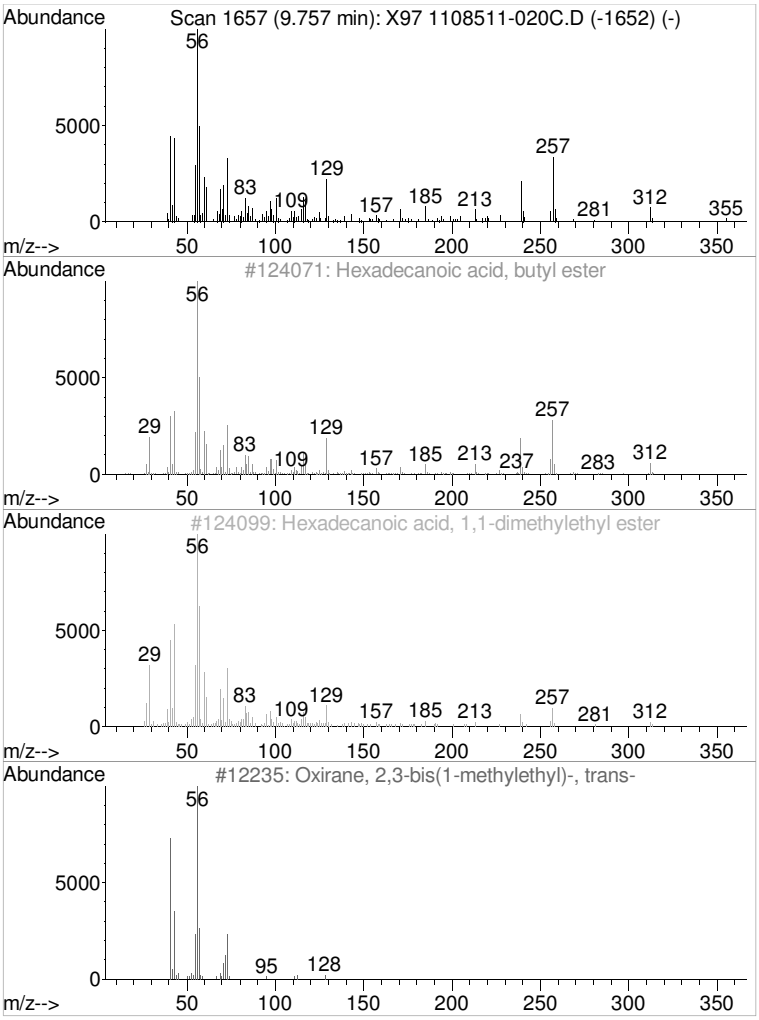
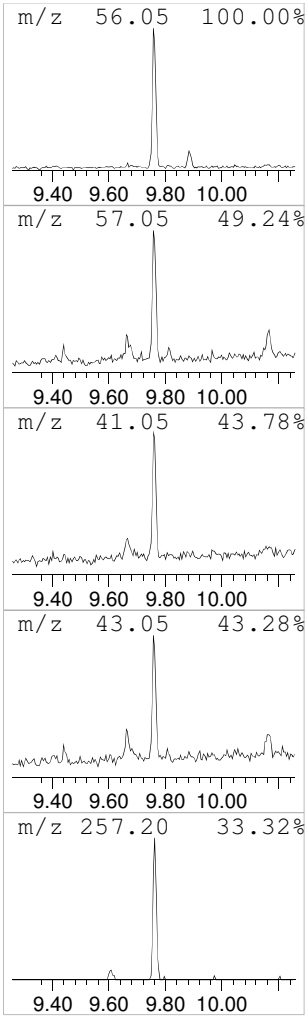
R.T.	EstConc	Area	Relative to ISTD	R.T.
9.76	5.71 ug/l	107606	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexadecanoic acid, butyl ester	312	C20H40O2	000111-06-8	96
2	Hexadecanoic acid, 1,1-dimethyle...	312	C20H40O2	031158-91-5	94
3	Oxirane, 2,3-bis(1-methylethyl)-...	128	C8H16O	054644-32-5	35
4	1-Heptene, 2-methyl-	112	C8H16	015870-10-7	30
5	Cyclobutane, ethyl-	84	C6H12	004806-61-5	30





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X97 1108511-020C.D
Acq On : 7 Sep 2011 4:28 am
Operator : ALICIA HABERLE
Sample : 1108511-020C
Misc : SAMP
ALS Vial : 12 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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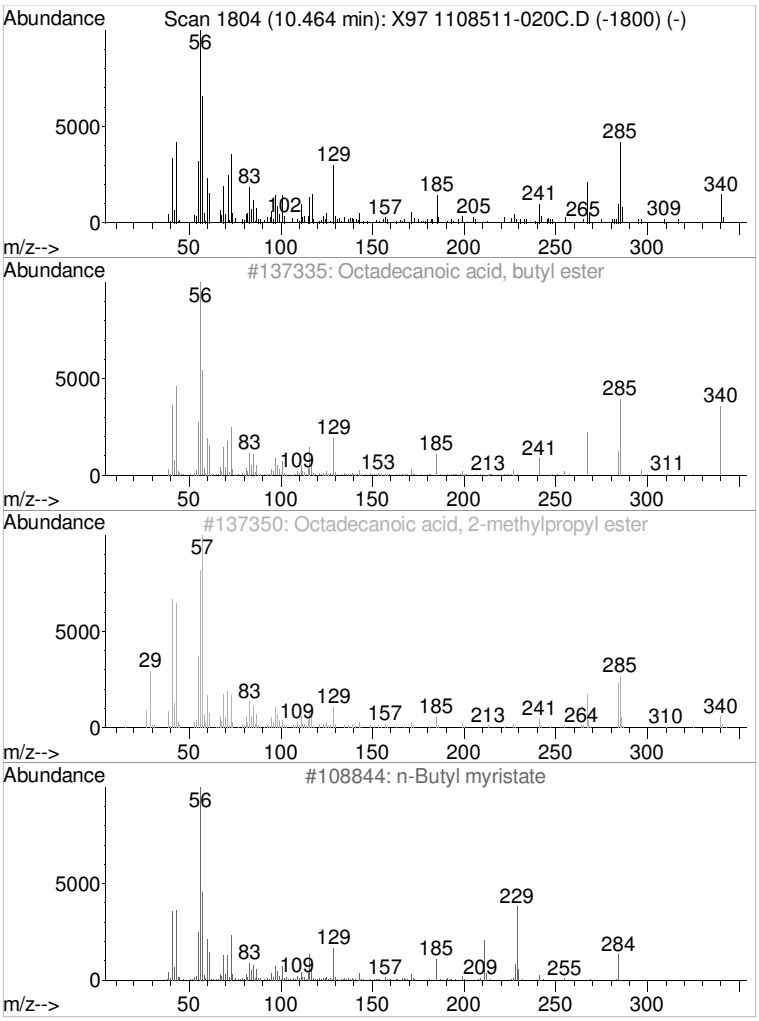
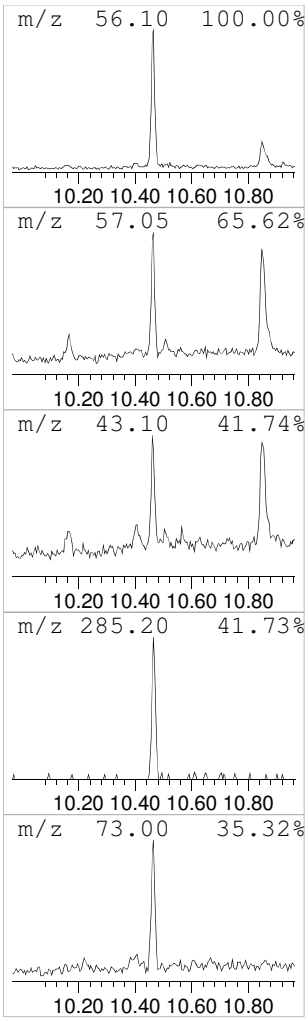
R.T.	EstConc	Area	Relative to ISTD	R.T.
10.46	4.23 ug/l	79727	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	96
2	Octadecanoic acid, 2-methylpropy...	340	C22H44O2	000646-13-9	93
3	n-Butyl myristate	284	C18H36O2	000110-36-1	43
4	Nipecotic acid	129	C6H11NO2	000498-95-3	38
5	Cyclohexane, (1,1-dimethylethyl)-	140	C10H20	003178-22-1	25





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Data File : X97 1108511-020C.D
Acq On : 7 Sep 2011 4:28 am
Operator : ALICIA HABERLE
Sample : 1108511-020C
Misc : SAMP
ALS Vial : 12 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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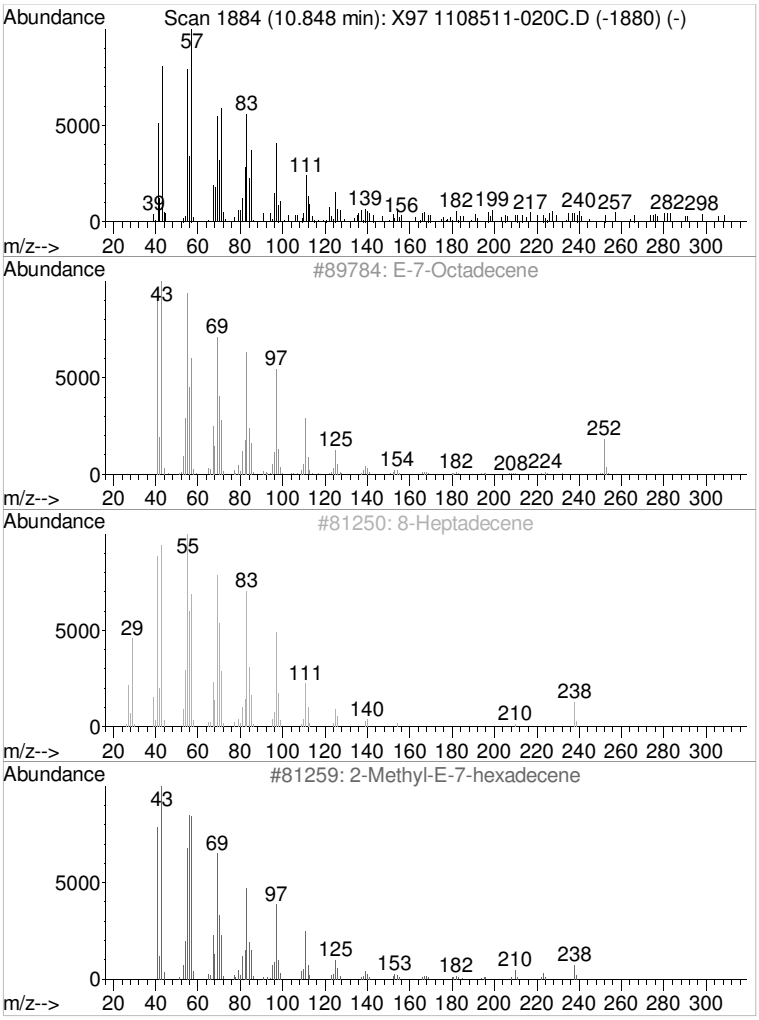
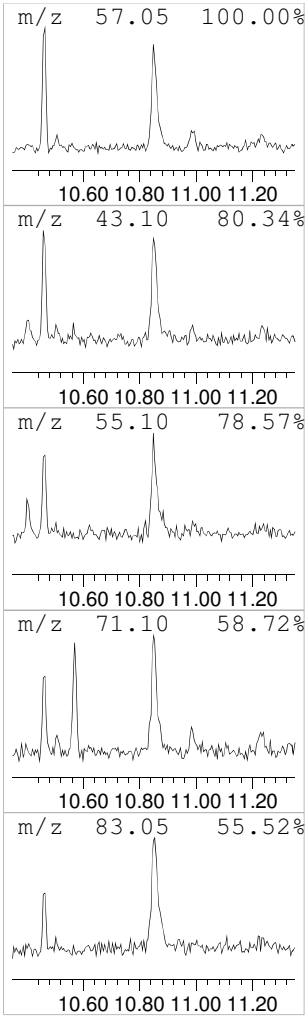
R.T.	EstConc	Area	Relative to ISTD	R.T.
10.85	4.91 ug/l	92504	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	E-7-Octadecene	252	C18H36	1000130-92-0	94
2	8-Heptadecene	238	C17H34	054290-12-9	86
3	2-Methyl-E-7-hexadecene	238	C17H34	064183-52-4	86
4	Cyclohexadecane, 1,2-diethyl-	280	C20H40	1000155-85-3	83
5	2-Methyl-7-nonadecene	280	C20H40	219750-68-2	78





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X97 1108511-020C.D
Acq On : 7 Sep 2011 4:28 am
Operator : ALICIA HABERLE
Sample : 1108511-020C
Misc : SAMP
ALS Vial : 12 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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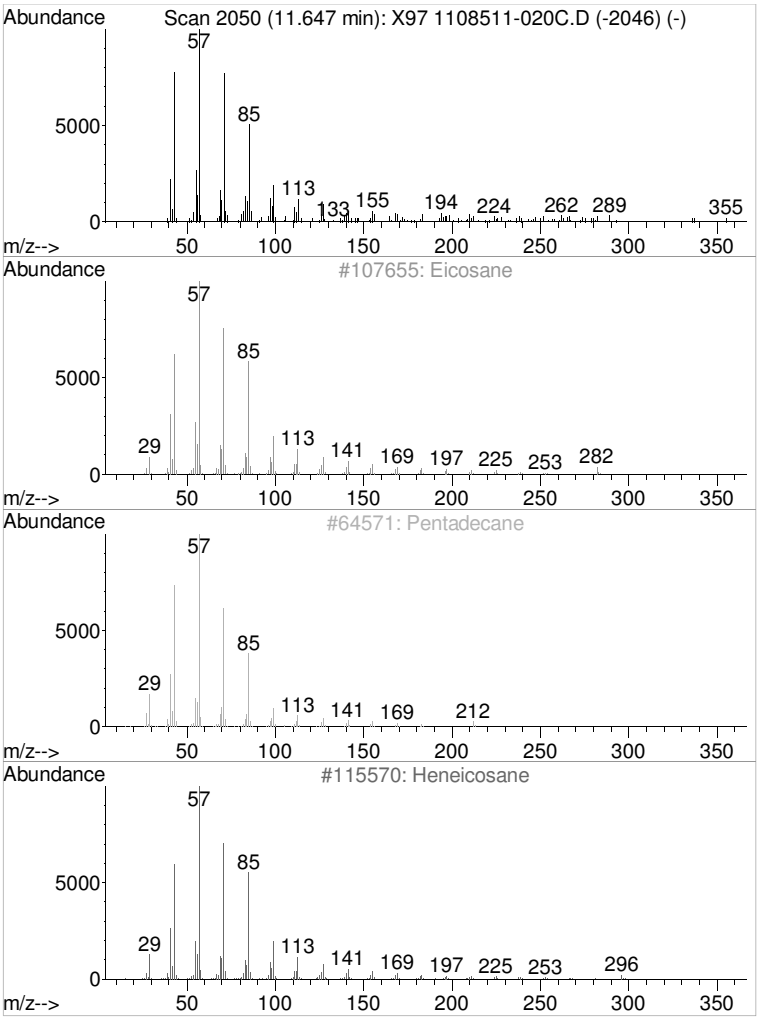
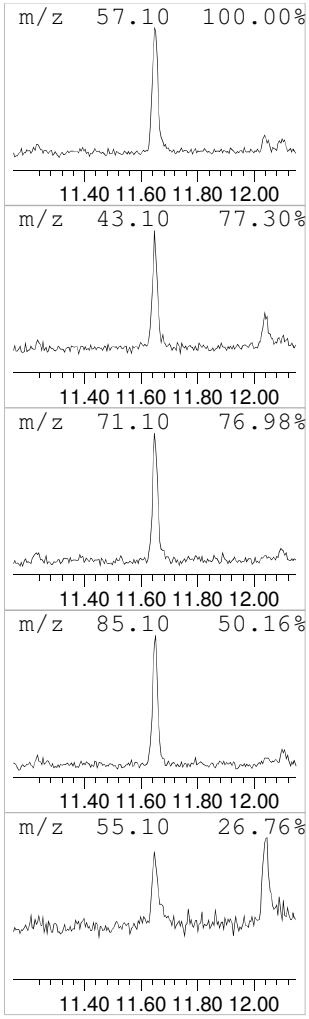
R.T.	EstConc	Area	Relative to ISTD	R.T.
11.65	5.87 ug/l	110585	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Eicosane	282	C20H42	000112-95-8	98
2	Pentadecane	212	C15H32	000629-62-9	94
3	Heneicosane	296	C21H44	000629-94-7	90
4	Hentriacontane	437	C31H64	000630-04-6	90
5	Heptadecane	240	C17H36	000629-78-7	90





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X97 1108511-020C.D
Acq On : 7 Sep 2011 4:28 am
Operator : ALICIA HABERLE
Sample : 1108511-020C
Misc : SAMP
ALS Vial : 12 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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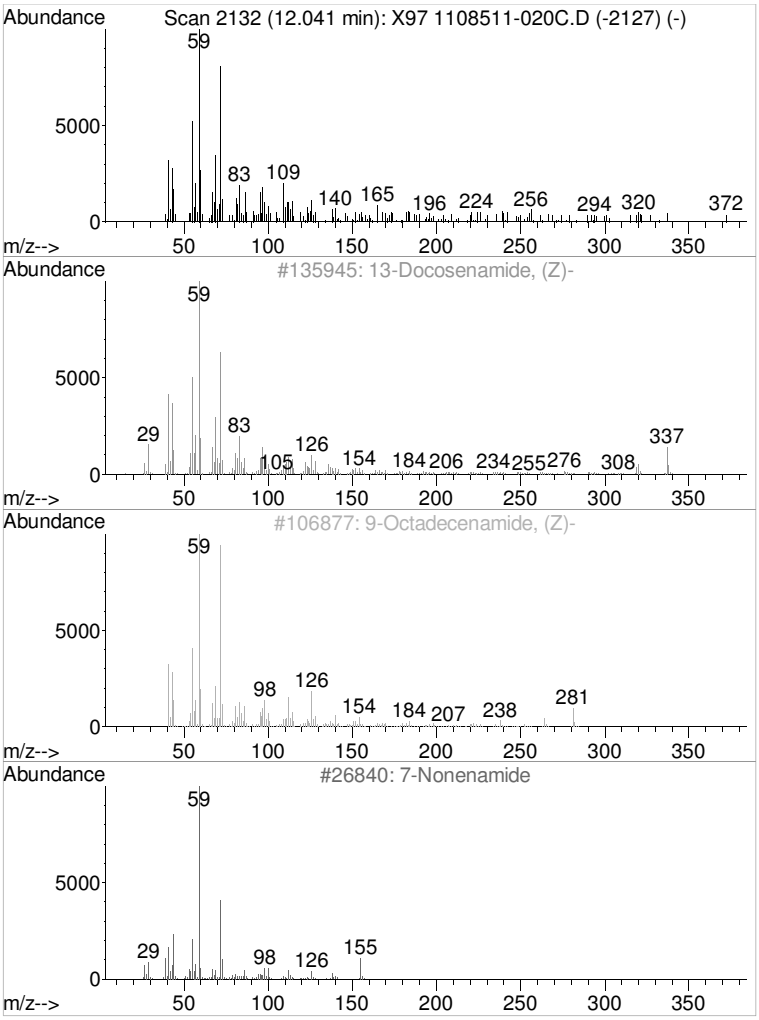
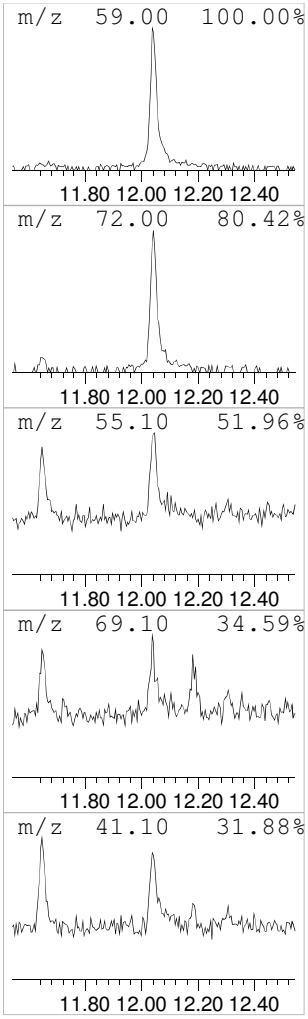
R.T.	EstConc	Area	Relative to ISTD	R.T.
12.04	6.99 ug/l	81370	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	13-Docosenamide, (Z)-	337	C22H43NO	000112-84-5	83
2	9-Octadecenamide, (Z)-	281	C18H35NO	000301-02-0	59
3	7-Nonenamide	155	C9H17NO	090949-53-4	38
4	N-Formyl-.alpha.-alanine	159	C7H13NO3	1000222-03-5	25
5	3-Nitroxy-8-[(2-hydroxy-3-isopro...	326	C15H22N2O6	1000144-23-3	22





Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X97 1108511-020C.D
Acq On : 7 Sep 2011 4:28 am
Operator : ALICIA HABERLE
Sample : 1108511-020C
Misc : SAMP
ALS Vial : 12 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc
[redacted]								

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X98 1108511-021C.D
Acq On : 7 Sep 2011 4:54 am
Operator : ALICIA HABERLE
Sample : 1108511-021C
Misc : SAMP
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.156	72	76	79	rBV	25128	16882	1.47%	0.134%
2	2.445	133	136	139	rBV2	32938	24027	2.10%	0.191%
3	2.589	159	166	169	rBV2	17773	14480	1.26%	0.115%
4	2.690	178	187	190	rBV	1400005	1013106	88.38%	8.071%
5	2.777	202	205	208	rVB	47936	32123	2.80%	0.256%
6	2.820	211	214	217	rVB	49016	31068	2.71%	0.248%
7	2.858	219	222	225	rBV	57583	42682	3.72%	0.340%
8	2.940	233	239	252	rBV2	734447	736497	64.25%	5.867%
9	3.022	252	256	262	rVB3	24328	31500	2.75%	0.251%
10	3.690	392	395	414	rBV	718654	739235	64.49%	5.889%
11	3.912	438	441	447	rBV	34906	31567	2.75%	0.251%
12	3.998	455	459	476	rBV	877675	727181	63.44%	5.793%
13	4.489	557	561	574	rBV	309978	335136	29.24%	2.670%
14	4.566	575	577	586	rVB6	13375	18724	1.63%	0.149%
15	4.931	642	653	655	rBV9	7222	15313	1.34%	0.122%
16	5.147	694	698	708	rBV	1111567	971920	84.79%	7.743%
17	6.191	911	915	928	rBV	972129	855470	74.63%	6.815%
18	6.340	943	946	955	rBV	30118	45857	4.00%	0.365%
19	6.840	1043	1050	1066	rVB	1327148	1146252	100.00%	9.132%
20	7.287	1137	1143	1146	rBV4	8935	13489	1.18%	0.107%
21	7.619	1204	1212	1225	rVB	626426	628409	54.82%	5.006%
22	7.783	1243	1246	1253	rBV6	12097	15844	1.38%	0.126%
23	7.864	1260	1263	1267	rBV3	36330	32005	2.79%	0.255%
24	8.009	1288	1293	1296	rBV4	23901	32269	2.82%	0.257%
25	8.297	1349	1353	1361	rVV2	1084541	999668	87.21%	7.964%
26	8.350	1361	1364	1370	rVB7	14937	17278	1.51%	0.138%
27	8.812	1453	1460	1465	rBV7	22539	40029	3.49%	0.319%
28	8.845	1465	1467	1472	rVV3	25613	30286	2.64%	0.241%
29	8.889	1472	1476	1493	rVB2	181846	219110	19.12%	1.746%
30	9.495	1599	1602	1607	rVB2	13655	14253	1.24%	0.114%
31	9.586	1618	1621	1622	rBV3	23870	20138	1.76%	0.160%
32	9.605	1622	1625	1629	rVB3	31559	33556	2.93%	0.267%
33	9.668	1634	1638	1644	rVV	112174	122959	10.73%	0.980%
34	9.711	1644	1647	1653	rVB2	18038	20937	1.83%	0.167%
35	9.759	1653	1657	1661	rBV	328903	268995	23.47%	2.143%
36	9.884	1679	1683	1689	rVB	787434	729050	63.60%	5.808%
37	10.163	1735	1741	1745	rBV5	20159	36073	3.15%	0.287%
38	10.365	1779	1783	1784	rBV3	21910	20107	1.75%	0.160%

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X98 1108511-021C.D
Acq On : 7 Sep 2011 4:54 am
Operator : ALICIA HABERLE
Sample : 1108511-021C
Misc : SAMP
ALS Vial : 13 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

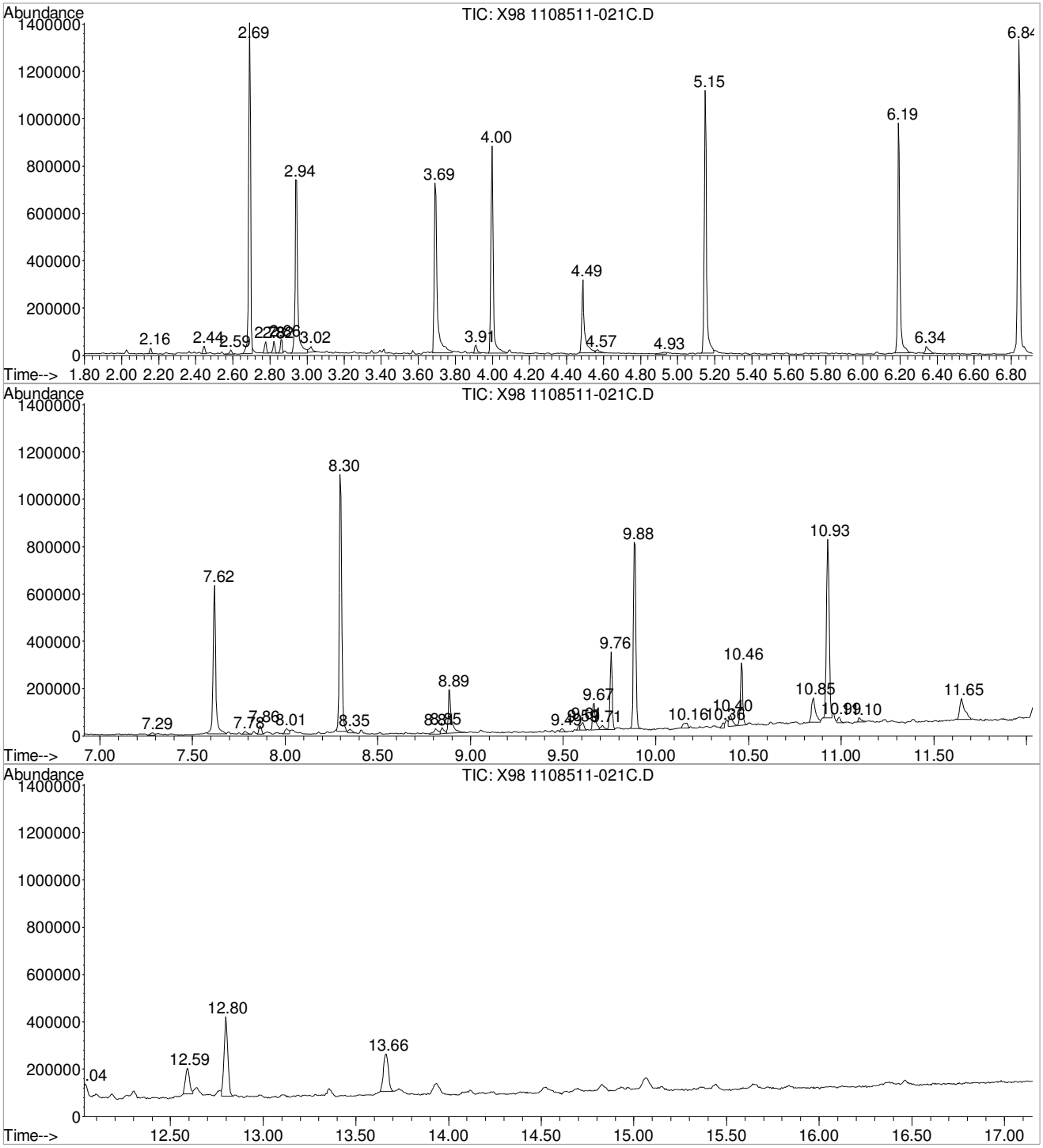
39	10.403	1788	1791	1798	rVV	48575	63298	5.52%	0.504%
40	10.461	1799	1803	1809	rVV	262812	236549	20.64%	1.884%
41	10.851	1879	1884	1892	rBV2	101599	151611	13.23%	1.208%
42	10.928	1895	1900	1905	rBV	756257	747059	65.17%	5.951%
43	10.990	1910	1913	1918	rVB	23968	26593	2.32%	0.212%
44	11.101	1933	1936	1942	rBV7	16141	18449	1.61%	0.147%
45	11.649	2045	2050	2061	rBV4	89240	168951	14.74%	1.346%
46	12.038	2127	2131	2139	rVB3	57314	80070	6.99%	0.638%
47	12.591	2241	2246	2252	rBV2	109113	161813	14.12%	1.289%
48	12.798	2284	2289	2297	rVB	336829	484452	42.26%	3.859%
49	13.664	2462	2469	2476	rVB	159443	290282	25.32%	2.313%

Sum of corrected areas: 12552602

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X98 1108511-021C.D
Acq On : 7 Sep 2011 4:54 am
Operator : ALICIA HABERLE
Sample : 1108511-021C
Misc : SAMP
ALS Vial : 13 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



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Data File : X98 1108511-021C.D
Acq On : 7 Sep 2011 4:54 am
Operator : ALICIA HABERLE
Sample : 1108511-021C
Misc : SAMP
ALS Vial : 13 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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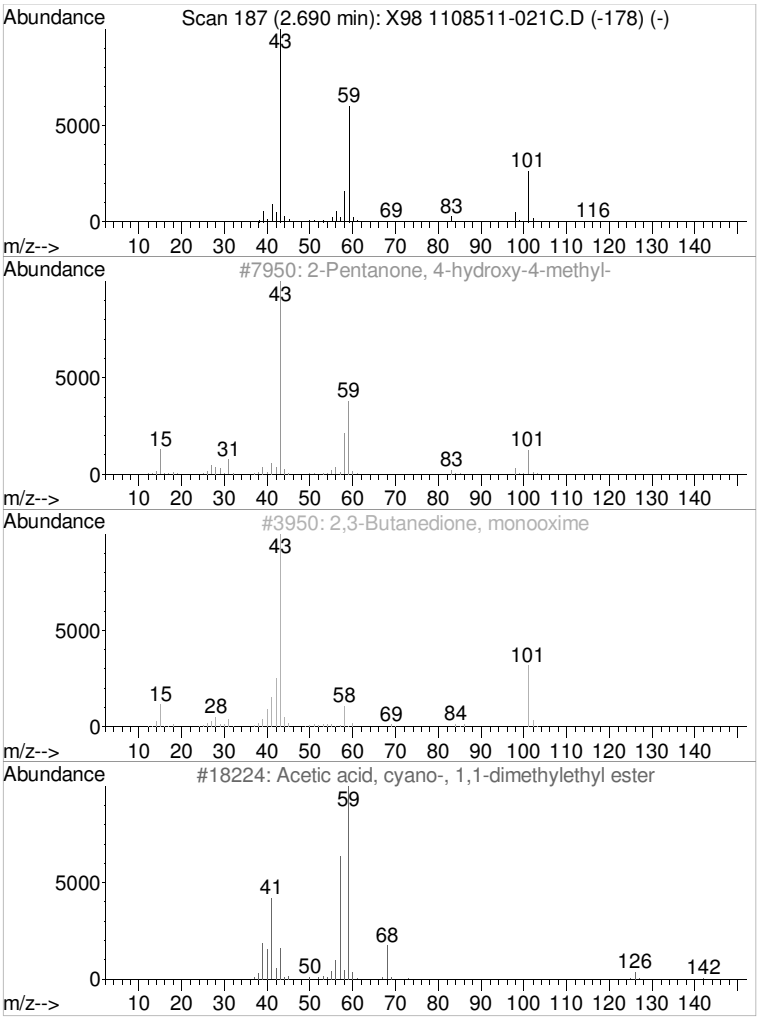
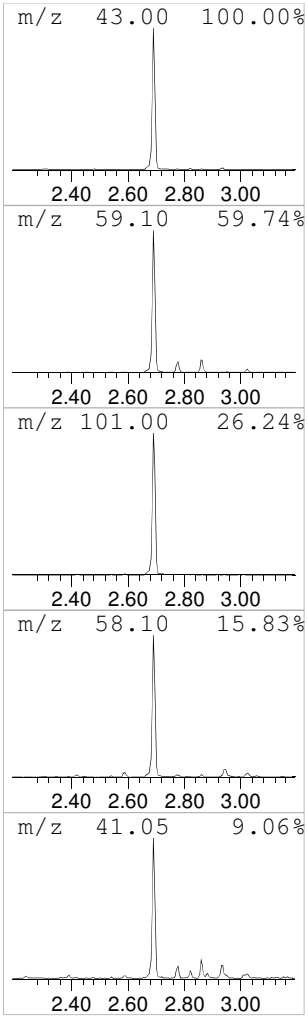
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.69	55.73 ug/l	1013110	ISTD 1,4-Dichlorobenzene-d4	4.00

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	50
2	2,3-Butanedione, monooxime	101	C4H7NO2	000057-71-6	17
3	Acetic acid, cyano-, 1,1-dimethy...	141	C7H11NO2	001116-98-9	17
4	(+-)-4-Amino-4,5-dihydro-2(3H)-f...	101	C4H7NO2	016504-58-8	9
5	Morpholine, 4-methyl-	101	C5H11NO	000109-02-4	9





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X98 1108511-021C.D
Acq On : 7 Sep 2011 4:54 am
Operator : ALICIA HABERLE
Sample : 1108511-021C
Misc : SAMP
ALS Vial : 13 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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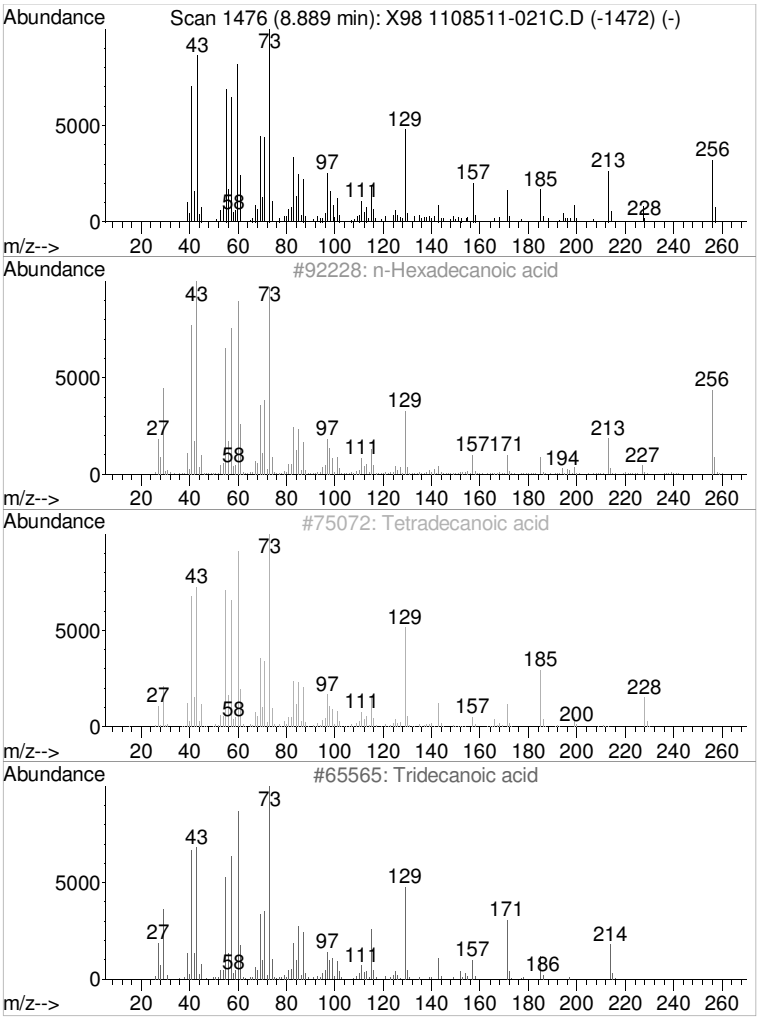
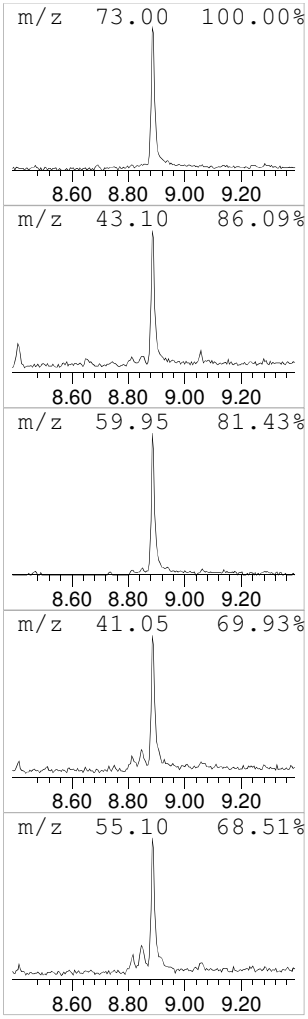
R.T.	EstConc	Area	Relative to ISTD	R.T.
8.89	8.77 ug/l	219110	ISTD-Phenanthrene-d10	8.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	99
2	Tetradecanoic acid	228	C14H28O2	000544-63-8	89
3	Tridecanoic acid	214	C13H26O2	000638-53-9	86
4	Pentadecanoic acid	242	C15H30O2	001002-84-2	74
5	n-Decanoic acid	172	C10H20O2	000334-48-5	64





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X98 1108511-021C.D
Acq On : 7 Sep 2011 4:54 am
Operator : ALICIA HABERLE
Sample : 1108511-021C
Misc : SAMP
ALS Vial : 13 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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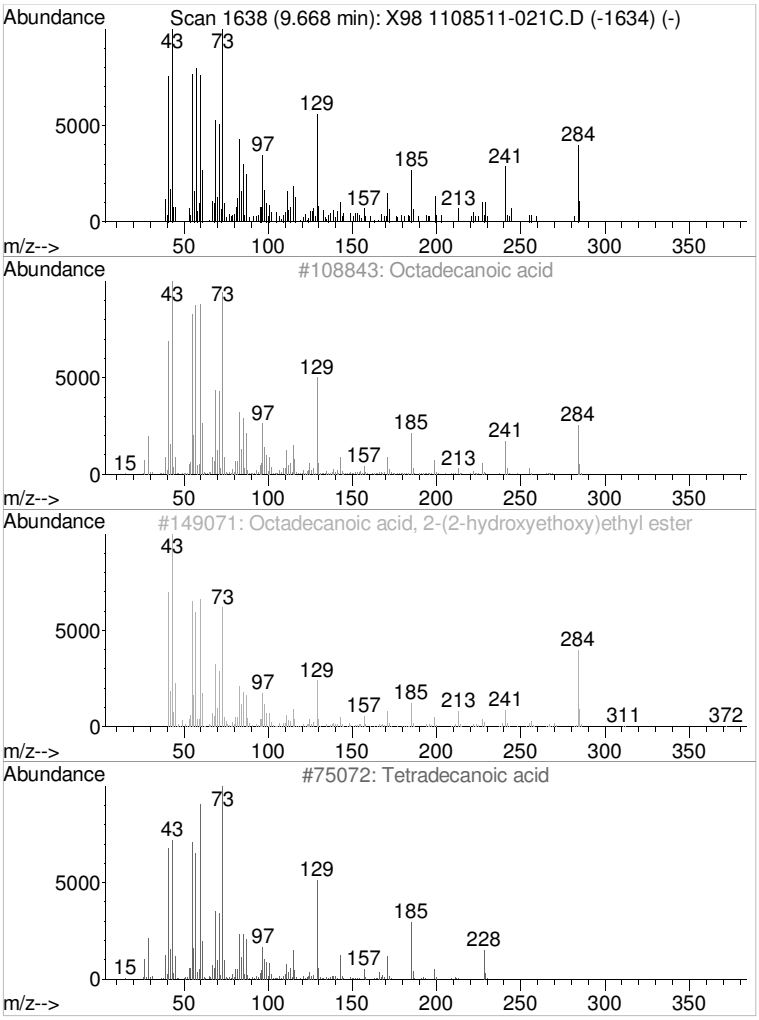
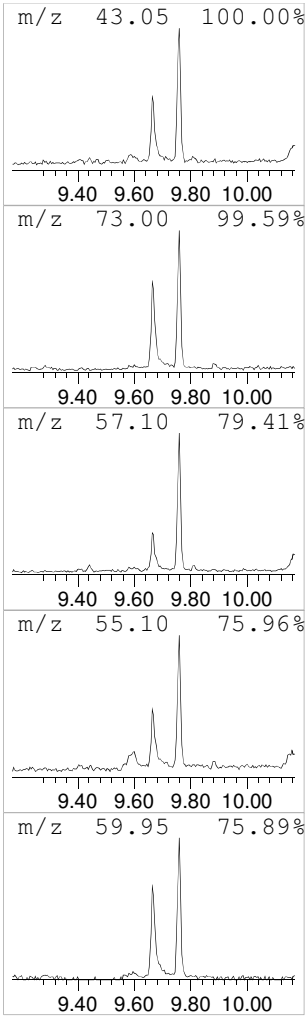
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.67	6.58 ug/l	122959	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid	284	C18H36O2	000057-11-4	99
2	Octadecanoic acid, 2-(2-hydroxye...	372	C22H44O4	000106-11-6	86
3	Tetradecanoic acid	228	C14H28O2	000544-63-8	86
4	n-Decanoic acid	172	C10H20O2	000334-48-5	50
5	Pentadecanoic acid	242	C15H30O2	001002-84-2	46





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X98 1108511-021C.D
Acq On : 7 Sep 2011 4:54 am
Operator : ALICIA HABERLE
Sample : 1108511-021C
Misc : SAMP
ALS Vial : 13 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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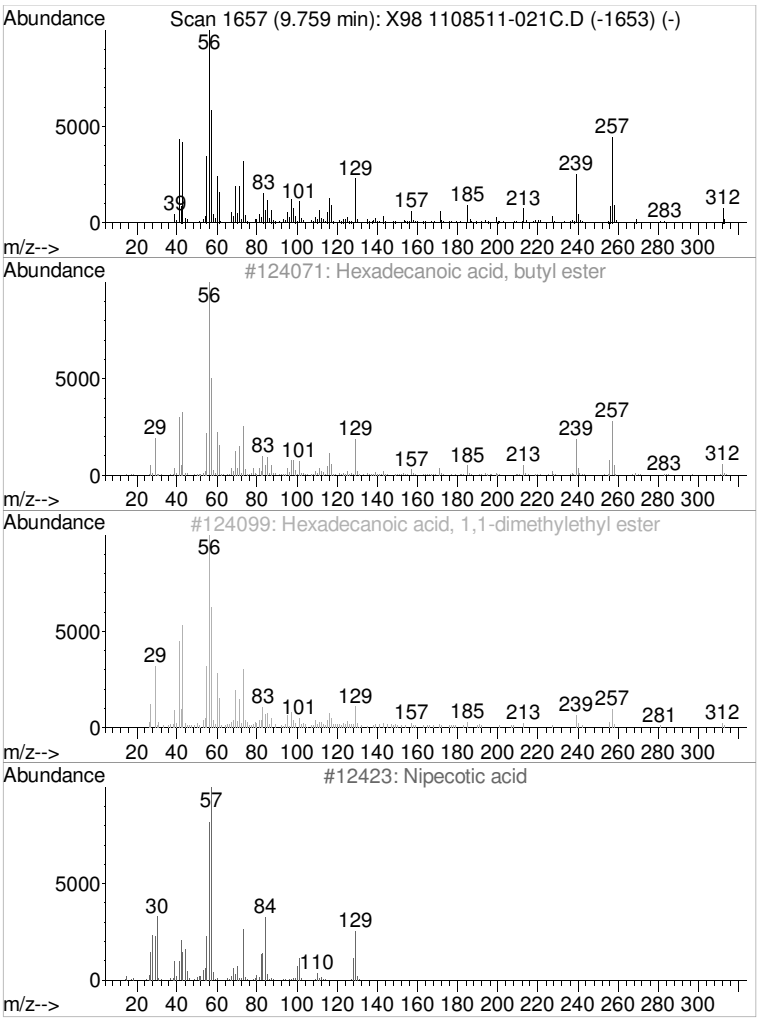
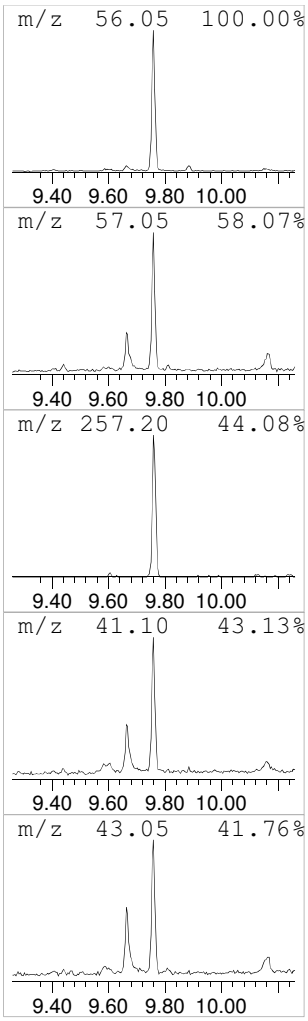
R.T.	EstConc	Area	Relative to ISTD	R.T.
9.76	14.40 ug/l	268995	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexadecanoic acid, butyl ester	312	C20H40O2	000111-06-8	99
2	Hexadecanoic acid, 1,1-dimethyle...	312	C20H40O2	031158-91-5	60
3	Nipecotic acid	129	C6H11NO2	000498-95-3	38
4	Hexadecanoic acid, 2-methylpropy...	312	C20H40O2	000110-34-9	38
5	1-Hexene, 2,5-dimethyl-	112	C8H16	006975-92-4	25





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X98 1108511-021C.D
Acq On : 7 Sep 2011 4:54 am
Operator : ALICIA HABERLE
Sample : 1108511-021C
Misc : SAMP
ALS Vial : 13 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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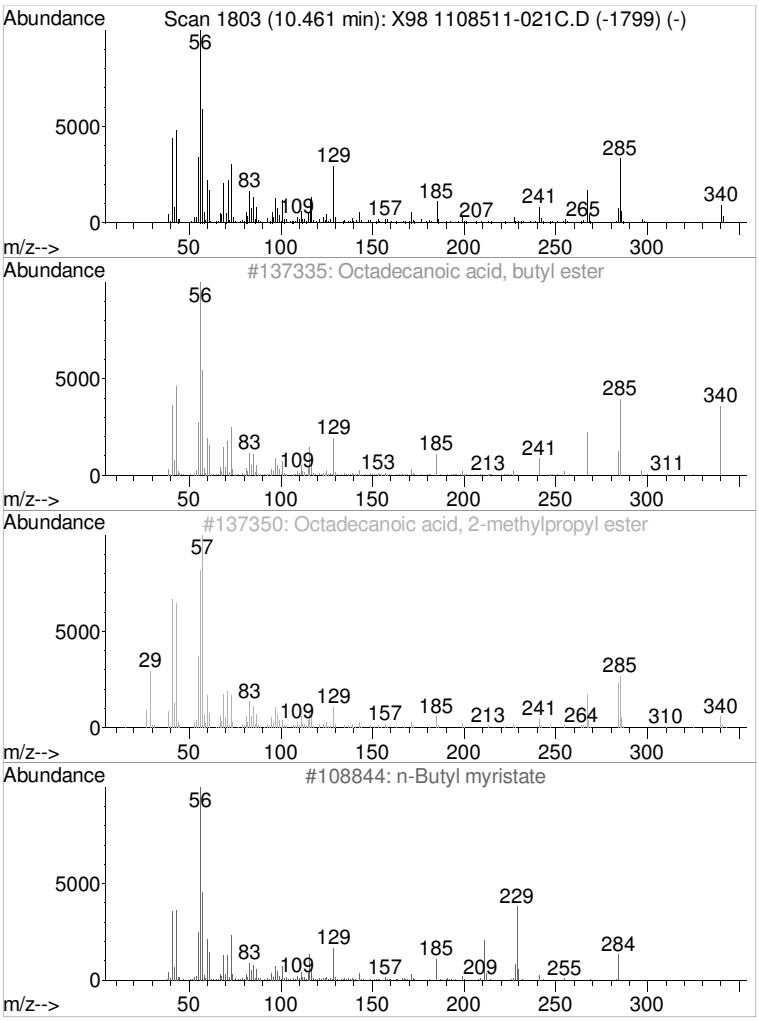
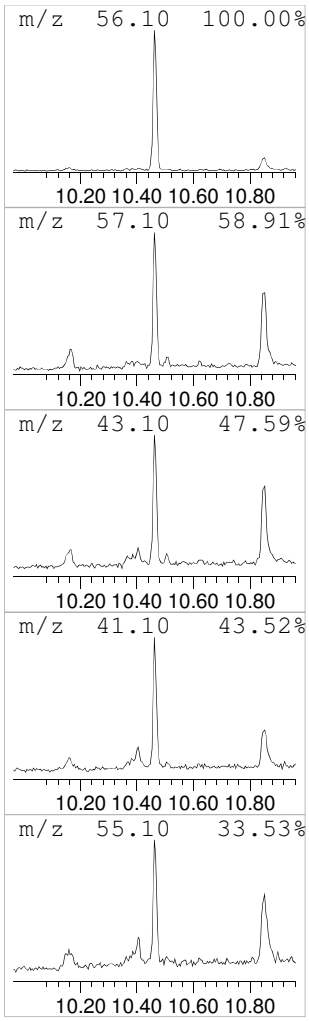
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.46	12.67 ug/l	236549	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	97
2	Octadecanoic acid, 2-methylpropy...	340	C22H44O2	000646-13-9	95
3	n-Butyl myristate	284	C18H36O2	000110-36-1	52
4	3-Amino-2,2-dimethyl-1-propanol	103	C5H13NO	026734-09-8	35
5	1-Pentene, 2,4-dimethyl-	98	C7H14	002213-32-3	27





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X98 1108511-021C.D
Acq On : 7 Sep 2011 4:54 am
Operator : ALICIA HABERLE
Sample : 1108511-021C
Misc : SAMP
ALS Vial : 13 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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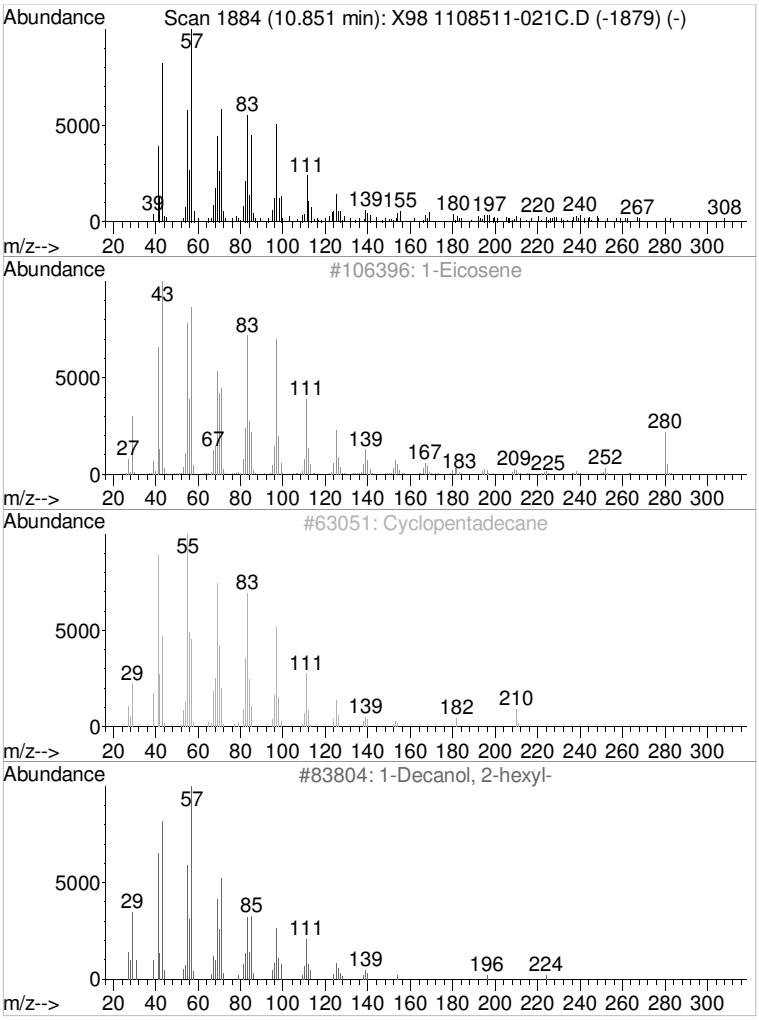
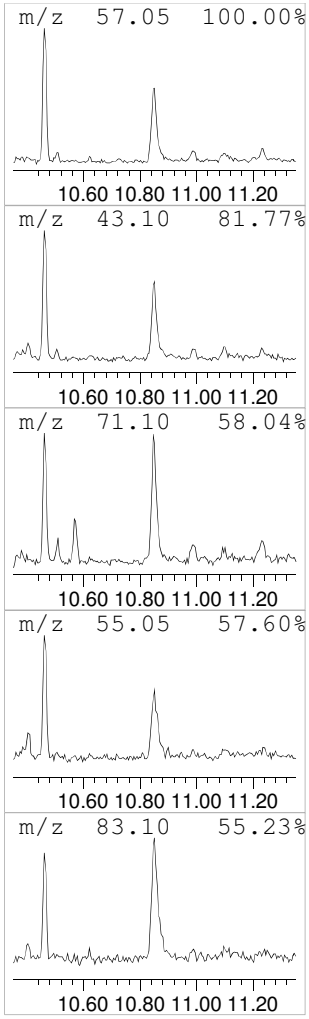
R.T.	EstConc	Area	Relative to ISTD	R.T.
10.85	8.12 ug/l	151611	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	1-Eicosene	280	C20H40	003452-07-1	89
2	Cyclopentadecane	210	C15H30	000295-48-7	87
3	1-Decanol, 2-hexyl-	242	C16H34O	002425-77-6	64
4	1-Pentadecanethiol	244	C15H32S	025276-70-4	64
5	Heptafluorobutanoic acid, heptad...	452	C21H35F7O2	1000282-97-3	60





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X98 1108511-021C.D
Acq On : 7 Sep 2011 4:54 am
Operator : ALICIA HABERLE
Sample : 1108511-021C
Misc : SAMP
ALS Vial : 13 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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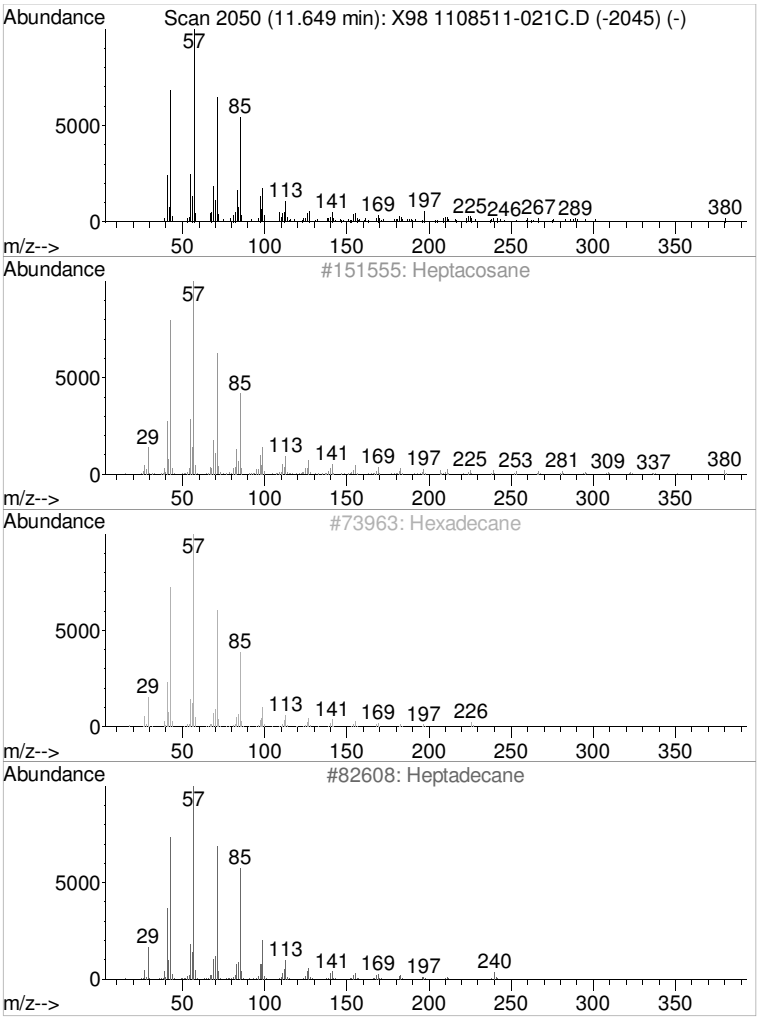
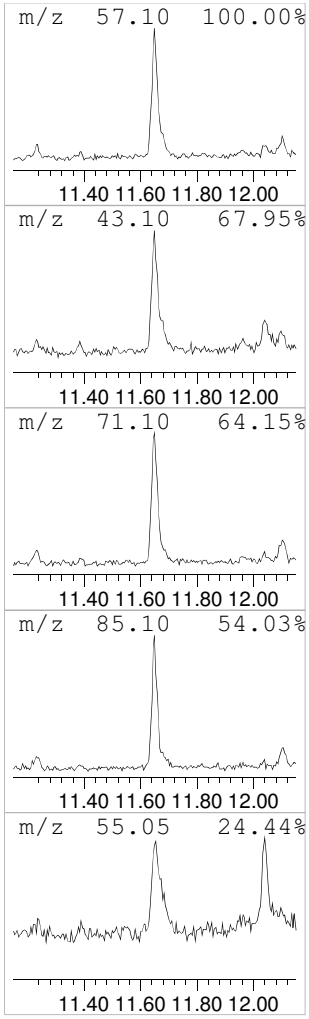
R.T.	EstConc	Area	Relative to ISTD	R.T.
11.65	9.05 ug/l	168951	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptacosane	380	C27H56	000593-49-7	98
2	Hexadecane	226	C16H34	000544-76-3	93
3	Heptadecane	240	C17H36	000629-78-7	90
4	Tetratetracontane	619	C44H90	007098-22-8	90
5	Heneicosane	296	C21H44	000629-94-7	90





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Data File : X98 1108511-021C.D
Acq On : 7 Sep 2011 4:54 am
Operator : ALICIA HABERLE
Sample : 1108511-021C
Misc : SAMP
ALS Vial : 13 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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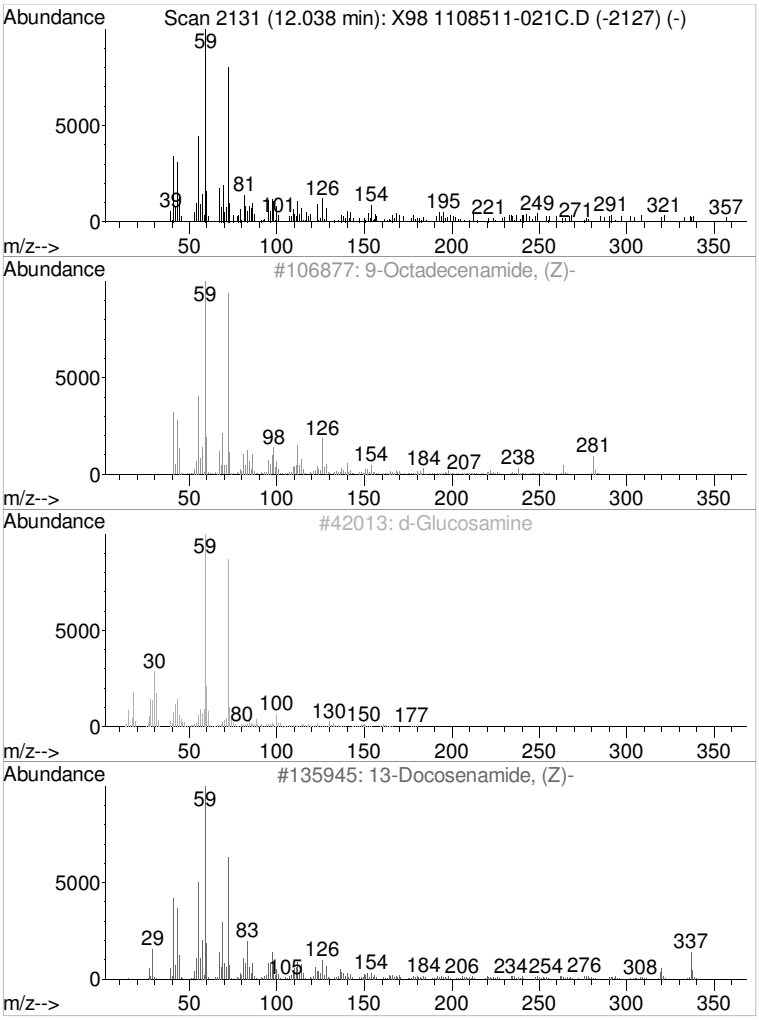
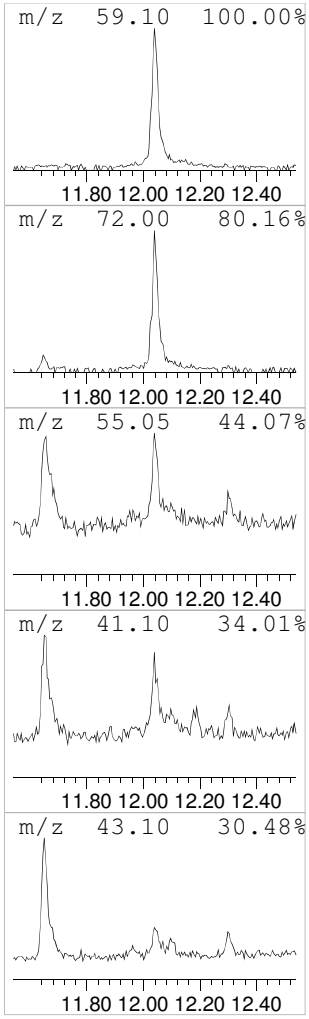
R.T.	EstConc	Area	Relative to ISTD	R.T.
12.04	6.61 ug/l	80070	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	9-Octadecenamide, (Z)-	281	C18H35NO	000301-02-0	64
2	d-Glucosamine	179	C6H13NO5	000090-77-7	53
3	13-Docosenamide, (Z)-	337	C22H43NO	000112-84-5	52
4	Octadecanamide	283	C18H37NO	000124-26-5	47
5	Dodecanamide	199	C12H25NO	001120-16-7	38





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X98 1108511-021C.D
Acq On : 7 Sep 2011 4:54 am
Operator : ALICIA HABERLE
Sample : 1108511-021C
Misc : SAMP
ALS Vial : 13 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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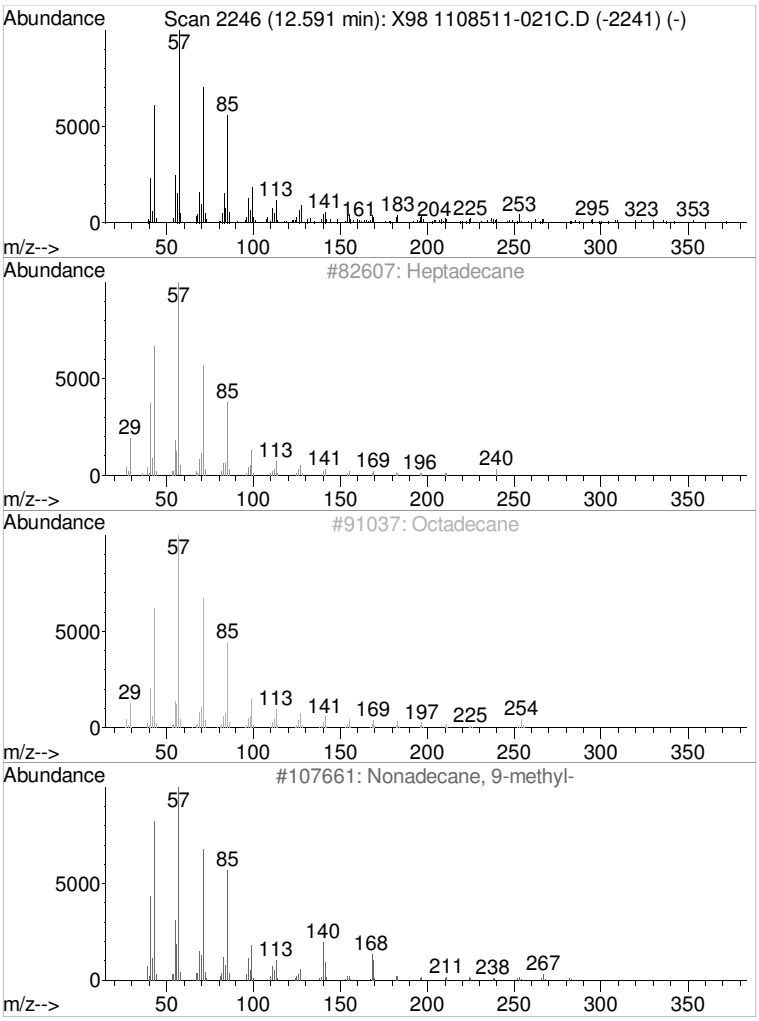
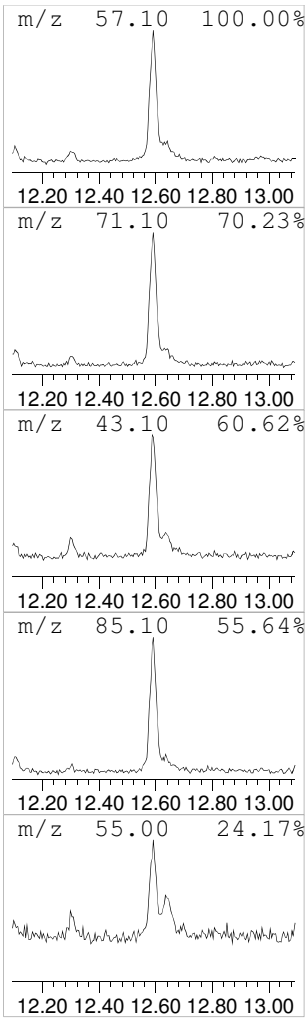
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.59	13.36 ug/l	161813	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptadecane	240	C17H36	000629-78-7	95
2	Octadecane	254	C18H38	000593-45-3	93
3	Nonadecane, 9-methyl-	282	C20H42	013287-24-6	93
4	Heneicosane	296	C21H44	000629-94-7	90
5	Tridecane, 6-propyl-	226	C16H34	055045-10-8	90





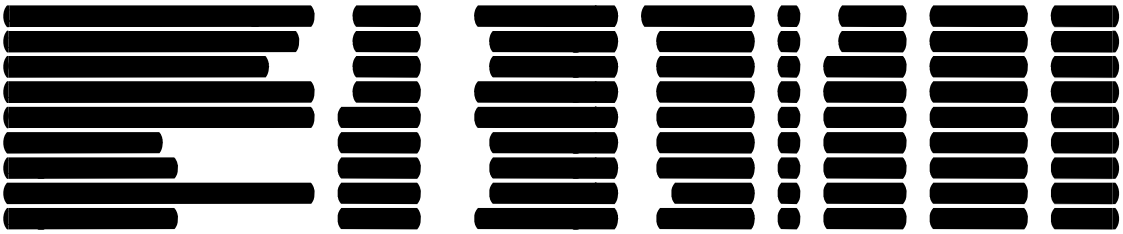
Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X98 1108511-021C.D
Acq On : 7 Sep 2011 4:54 am
Operator : ALICIA HABERLE
Sample : 1108511-021C
Misc : SAMP
ALS Vial : 13 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---		
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc



LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X99 1108511-023C.D
Acq On : 7 Sep 2011 5:20 am
Operator : ALICIA HABERLE
Sample : 1108511-023C
Misc : SAMP
ALS Vial : 14 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.155	73	76	81	rVB	25454	16785	1.41%	0.133%
2	2.294	96	105	118	rBV5	25658	88501	7.42%	0.702%
3	2.443	133	136	140	rBV2	31254	25117	2.11%	0.199%
4	2.693	184	188	191	rVB	1637066	1109669	93.04%	8.806%
5	2.775	202	205	208	rVB	55497	35281	2.96%	0.280%
6	2.823	210	215	218	rBV	50930	36234	3.04%	0.288%
7	2.861	220	223	226	rBV	71700	48082	4.03%	0.382%
8	2.943	232	240	251	rBV2	1026777	887287	74.39%	7.041%
9	3.020	252	256	271	rVB2	32360	52135	4.37%	0.414%
10	3.693	392	396	419	rBV	927784	871811	73.10%	6.918%
11	3.996	455	459	476	rBV	889440	746245	62.57%	5.922%
12	4.487	557	561	576	rBV	362539	421341	35.33%	3.344%
13	5.150	695	699	721	rVB	1091939	1009223	84.62%	8.009%
14	6.194	911	916	923	rBV	1128815	1004925	84.26%	7.975%
15	6.843	1043	1051	1062	rBV	1259465	1192695	100.00%	9.465%
16	6.973	1074	1078	1082	rVB	385120	279707	23.45%	2.220%
17	7.617	1201	1212	1226	rBV	709746	729189	61.14%	5.786%
18	7.863	1260	1263	1267	rBV2	33513	28913	2.42%	0.229%
19	8.190	1325	1331	1335	rBV3	23856	22591	1.89%	0.179%
20	8.300	1349	1354	1362	rVB	1177843	1042023	87.37%	8.269%
21	8.887	1472	1476	1479	rBV	63750	64772	5.43%	0.514%
22	9.608	1622	1626	1630	rVB2	23731	20846	1.75%	0.165%
23	9.666	1634	1638	1645	rBV4	29239	33263	2.79%	0.264%
24	9.757	1653	1657	1662	rBV	166349	149424	12.53%	1.186%
25	9.887	1679	1684	1692	rVB	1005025	857071	71.86%	6.801%
26	10.166	1736	1742	1745	rBV6	12458	21538	1.81%	0.171%
27	10.402	1785	1791	1799	rBV	49454	67959	5.70%	0.539%
28	10.464	1800	1804	1808	rBV	141666	126264	10.59%	1.002%
29	10.849	1880	1884	1891	rBV3	51557	79555	6.67%	0.631%
30	10.926	1895	1900	1909	rVB	783198	813277	68.19%	6.454%
31	11.652	2046	2051	2054	rBV3	24553	37419	3.14%	0.297%
32	12.041	2127	2132	2138	rBV2	70026	108051	9.06%	0.857%
33	12.590	2242	2246	2251	rVB3	21169	29911	2.51%	0.237%
34	12.796	2283	2289	2297	rVB	357906	544562	45.66%	4.321%

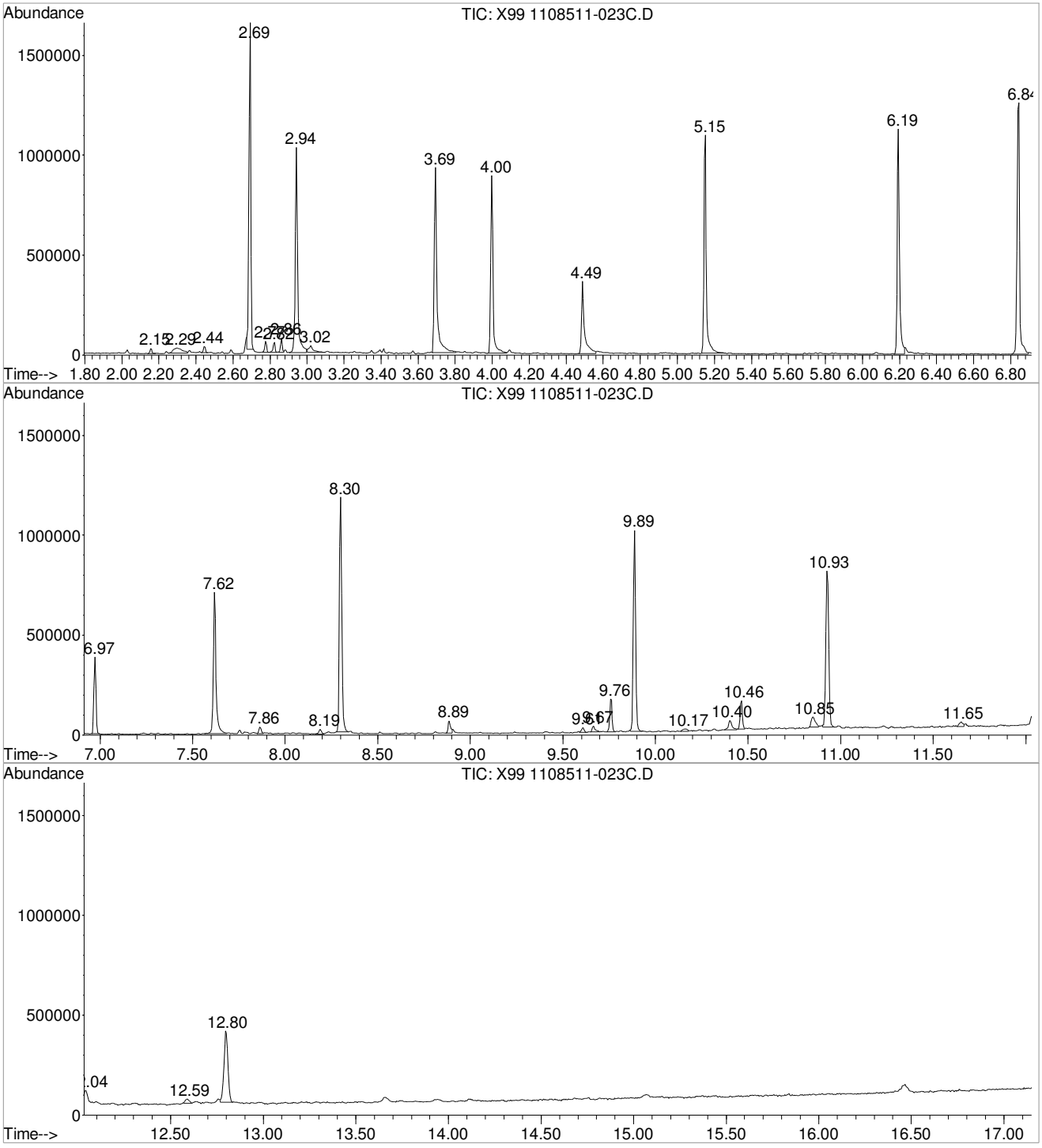
Sum of corrected areas: 12601666

LSC Report - Integrated Chromatogram

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X99 1108511-023C.D
Acq On : 7 Sep 2011 5:20 am
Operator : ALICIA HABERLE
Sample : 1108511-023C
Misc : SAMP
ALS Vial : 14 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X99 1108511-023C.D
Acq On : 7 Sep 2011 5:20 am
Operator : ALICIA HABERLE
Sample : 1108511-023C
Misc : SAMP
ALS Vial : 14 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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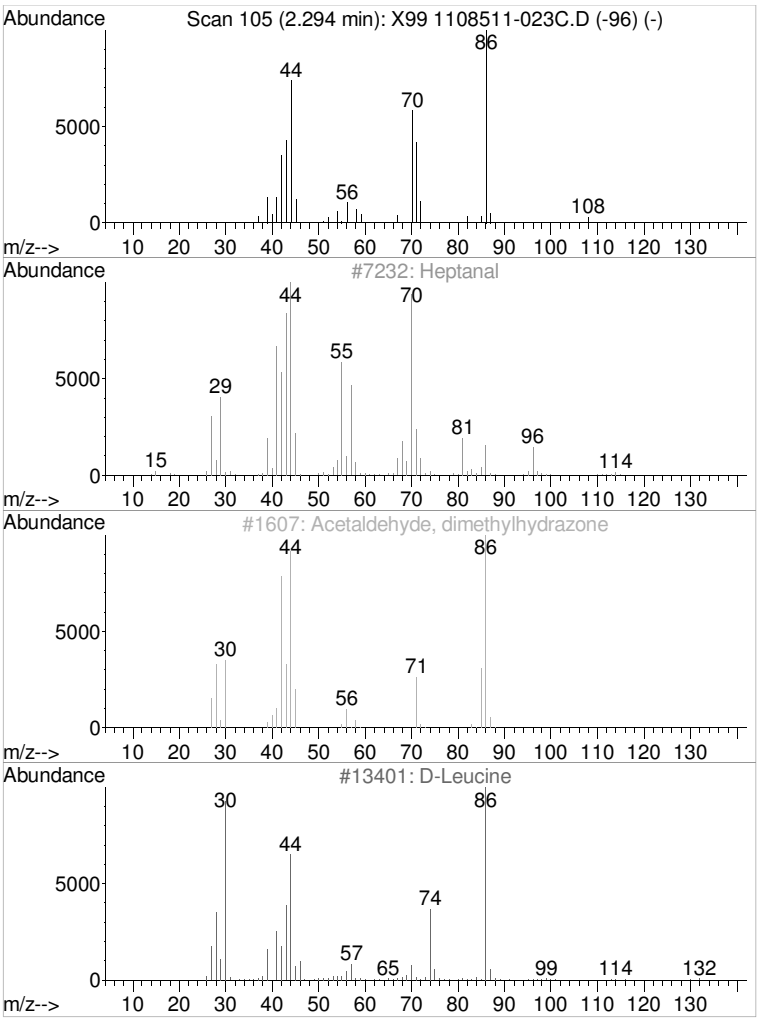
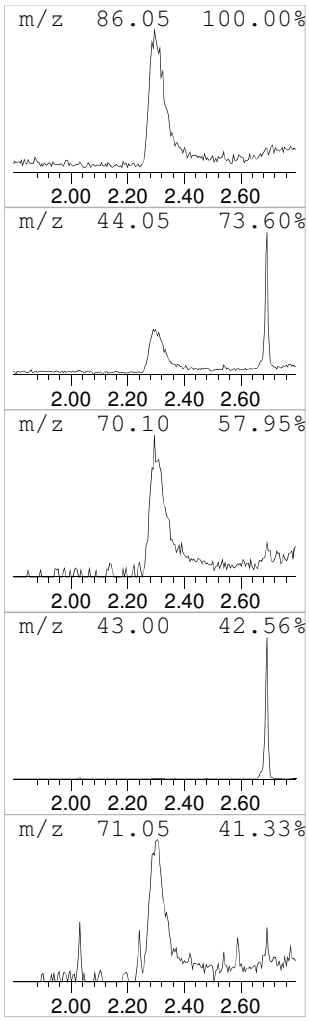
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.29	4.74 ug/l	88501	ISTD 1,4-Dichlorobenzene-d4	4.00

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Heptanal	114	C7H14O	000111-71-7	47
2	Acetaldehyde, dimethylhydrazone	86	C4H10N2	007422-90-4	36
3	D-Leucine	131	C6H13NO2	000328-38-1	33
4	Methylphosphonodithioic acid, S,...	326	C13H31N2OPS2	092030-06-3	23
5	N-Methylallylamine	71	C4H9N	000627-37-2	23





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X99 1108511-023C.D
Acq On : 7 Sep 2011 5:20 am
Operator : ALICIA HABERLE
Sample : 1108511-023C
Misc : SAMP
ALS Vial : 14 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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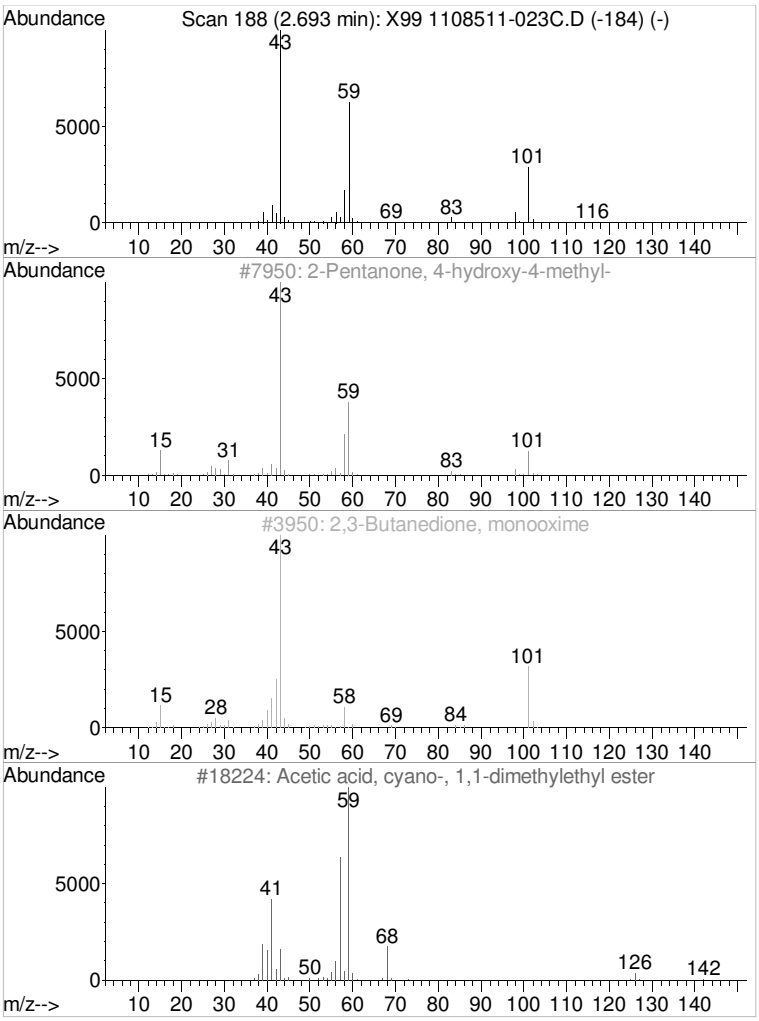
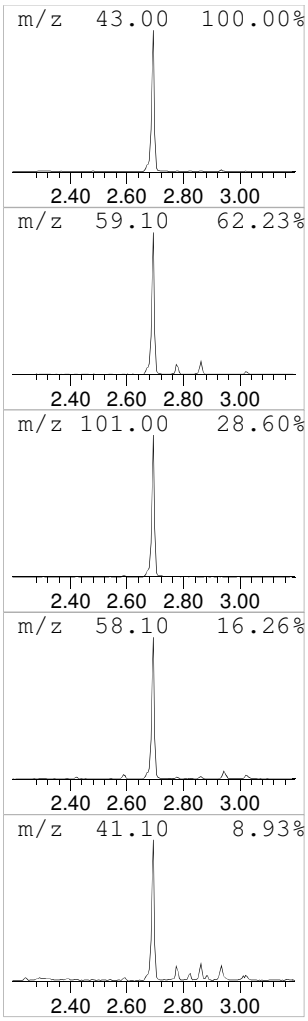
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.69	59.48 ug/l	1109670	ISTD 1,4-Dichlorobenzene-d4	4.00

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	50
2	2,3-Butanedione, monooxime	101	C4H7NO2	000057-71-6	17
3	Acetic acid, cyano-, 1,1-dimethy...	141	C7H11NO2	001116-98-9	17
4	Butane, 1-ethoxy-	102	C6H14O	000628-81-9	9
5	(+-)-4-Amino-4,5-dihydro-2(3H)-f...	101	C4H7NO2	016504-58-8	9





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X99 1108511-023C.D
Acq On : 7 Sep 2011 5:20 am
Operator : ALICIA HABERLE
Sample : 1108511-023C
Misc : SAMP
ALS Vial : 14 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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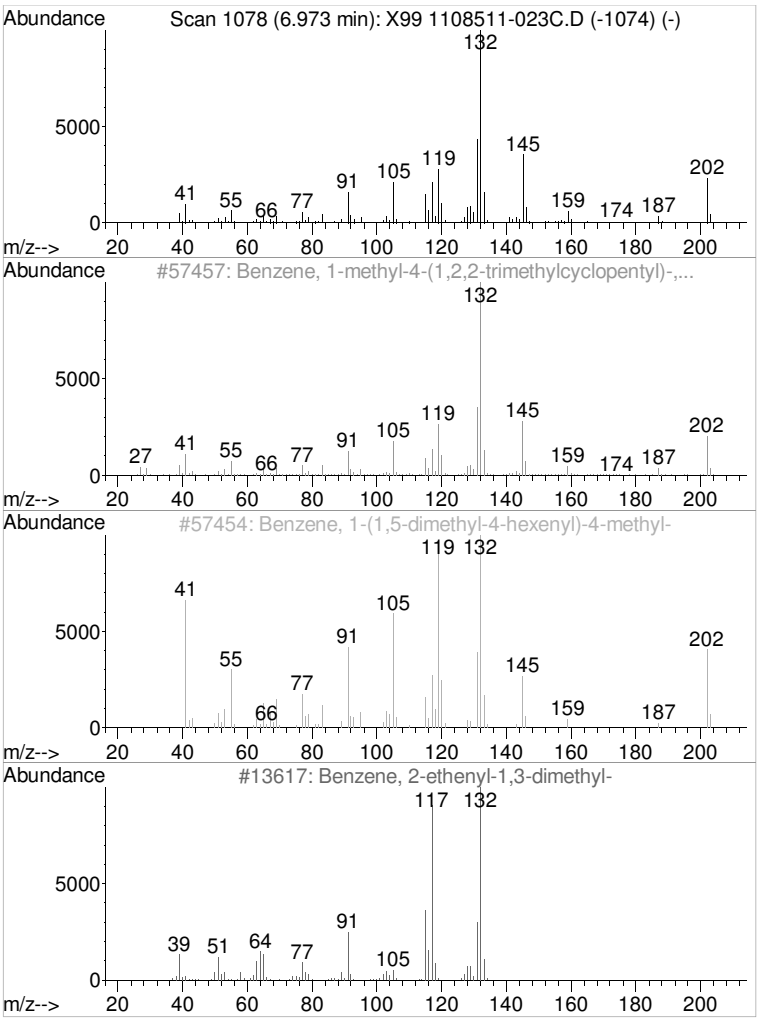
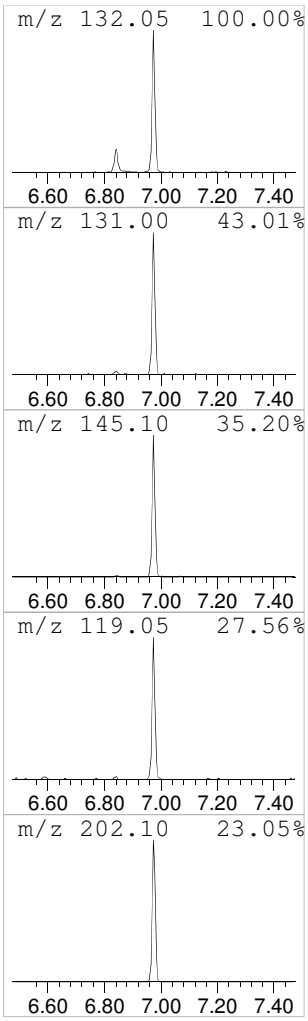
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
6.97	9.38 ug/l	279707	ISTD Acenaphthene-d10	6.84

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Benzene, 1-methyl-4-(1,2,2-trime...	202	C15H22	016982-00-6	98
2	Benzene, 1-(1,5-dimethyl-4-hexen...	202	C15H22	000644-30-4	45
3	Benzene, 2-ethenyl-1,3-dimethyl-	132	C10H12	002039-90-9	43
4	Benzene, 1-ethenyl-3,5-dimethyl-	132	C10H12	005379-20-4	38
5	Benzene, 4-ethenyl-1,2-dimethyl-	132	C10H12	027831-13-6	38





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X99 1108511-023C.D
Acq On : 7 Sep 2011 5:20 am
Operator : ALICIA HABERLE
Sample : 1108511-023C
Misc : SAMP
ALS Vial : 14 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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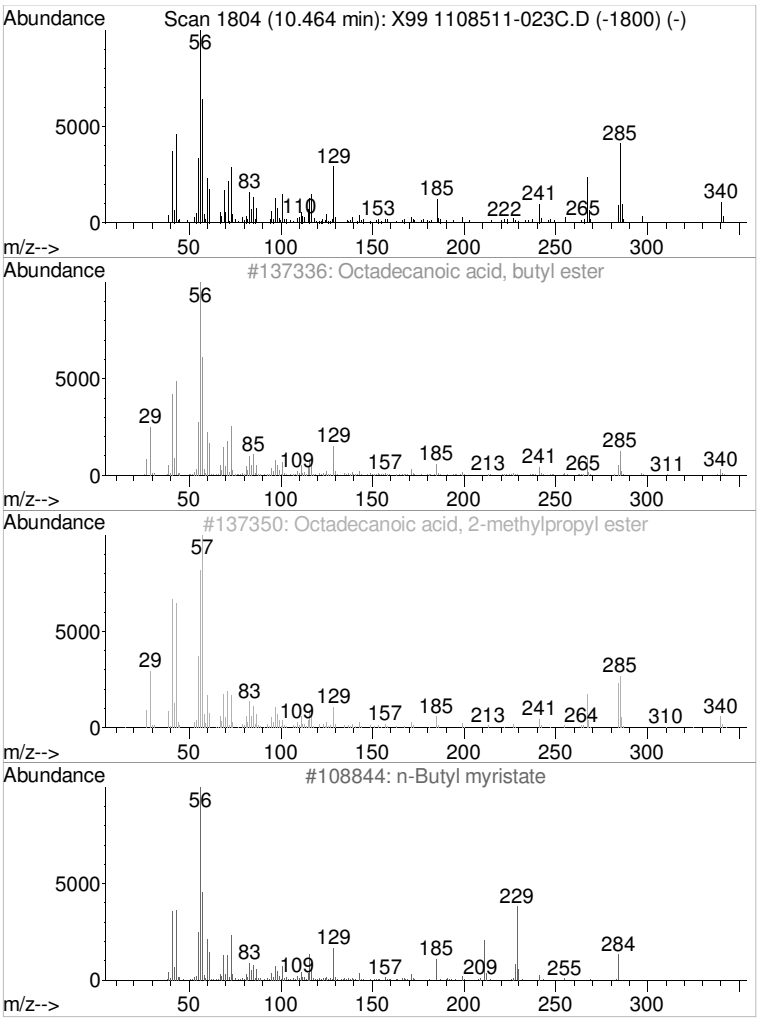
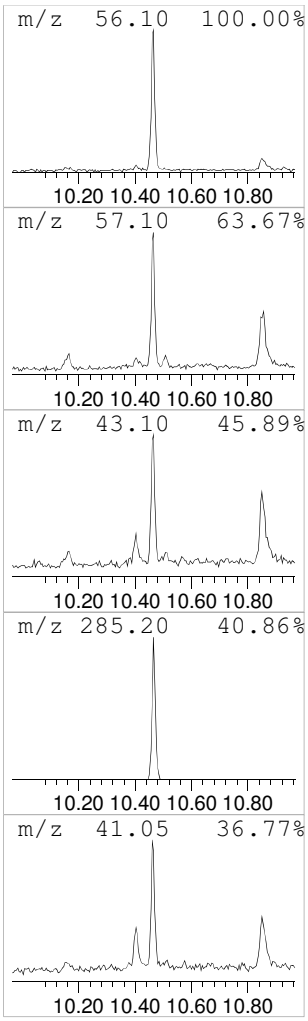
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.46	6.21 ug/l	126264	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	95
2	Octadecanoic acid, 2-methylpropy...	340	C22H44O2	000646-13-9	93
3	n-Butyl myristate	284	C18H36O2	000110-36-1	46
4	1-Hexene, 2,5-dimethyl-	112	C8H16	006975-92-4	25
5	3-Amino-2,2-dimethyl-1-propanol	103	C5H13NO	026734-09-8	22





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X99 1108511-023C.D
Acq On : 7 Sep 2011 5:20 am
Operator : ALICIA HABERLE
Sample : 1108511-023C
Misc : SAMP
ALS Vial : 14 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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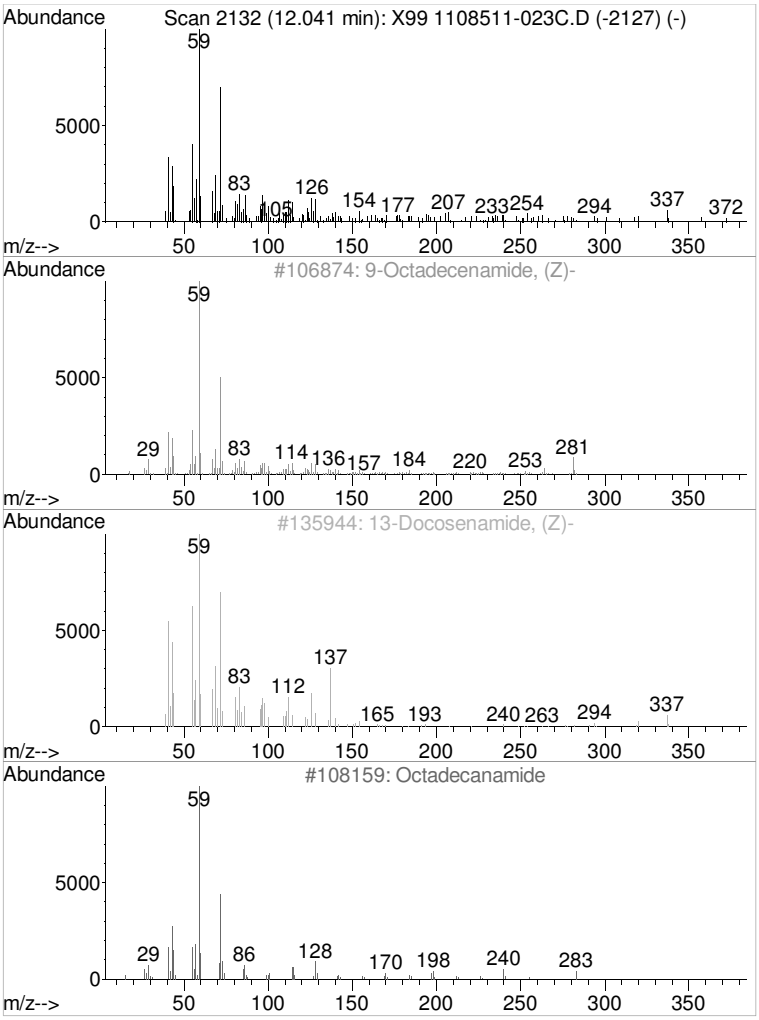
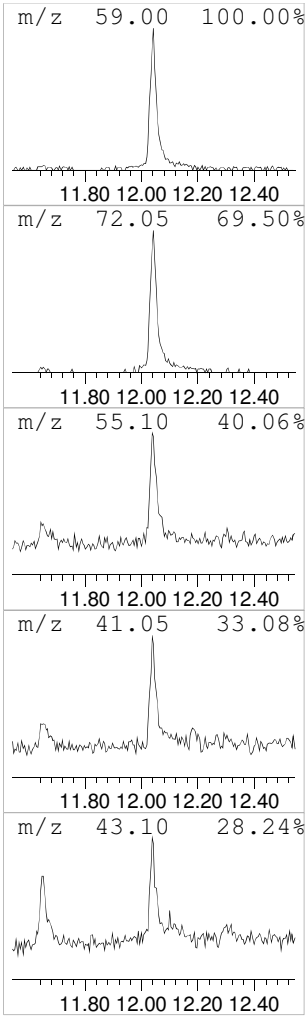
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.04	7.94 ug/l	108051	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	9-Octadecenamide, (Z)-	281	C18H35NO	000301-02-0	91
2	13-Docosenamide, (Z)-	337	C22H43NO	000112-84-5	81
3	Octadecanamide	283	C18H37NO	000124-26-5	64
4	Hexadecanamide	255	C16H33NO	000629-54-9	64
5	Benzeneethanamine, 2-fluoro-.bet...	229	C11H16FNO3	061338-98-5	50





Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : X99 1108511-023C.D
Acq On : 7 Sep 2011 5:20 am
Operator : ALICIA HABERLE
Sample : 1108511-023C
Misc : SAMP
ALS Vial : 14 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

						--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc	
[redacted]									

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : Y00 1108511-024C.D
Acq On : 7 Sep 2011 5:46 am
Operator : ALICIA HABERLE
Sample : 1108511-024C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

Signal : TIC

peak #	R.T. min	first scan	max scan	last scan	PK TY	peak height	corr. area	corr. % max.	% of total
1	2.443	133	136	140	rBV3	26062	19289	1.45%	0.134%
2	2.688	175	187	191	rBV	1205039	941563	70.71%	6.560%
3	2.775	202	205	209	rVB	51221	32153	2.41%	0.224%
4	2.818	209	214	217	rVB	41633	30673	2.30%	0.214%
5	2.861	220	223	225	rBV	64015	41049	3.08%	0.286%
6	2.943	230	240	252	rBV2	817592	751699	56.45%	5.237%
7	3.020	252	256	261	rVB3	24015	28814	2.16%	0.201%
8	3.693	392	396	416	rBV	808787	763619	57.35%	5.320%
9	3.996	455	459	477	rBV	932544	809392	60.78%	5.639%
10	4.487	556	561	576	rBV	303256	377422	28.34%	2.629%
11	5.150	695	699	719	rBV	1218504	1100793	82.67%	7.669%
12	6.194	912	916	935	rBV	1103964	949724	71.32%	6.617%
13	6.348	944	948	951	rBV	14611	17790	1.34%	0.124%
14	6.843	1036	1051	1067	rBV	1483941	1331608	100.00%	9.277%
15	7.617	1208	1212	1226	rVB	732553	697817	52.40%	4.862%
16	7.862	1258	1263	1268	rVB2	31275	30351	2.28%	0.211%
17	8.011	1288	1294	1297	rBV6	13274	19174	1.44%	0.134%
18	8.300	1348	1354	1362	rBV2	1418679	1236877	92.89%	8.617%
19	8.348	1362	1364	1374	rVV6	15981	26447	1.99%	0.184%
20	8.411	1374	1377	1381	rVB2	17539	16111	1.21%	0.112%
21	8.814	1454	1461	1465	rBV5	17339	23829	1.79%	0.166%
22	8.848	1465	1468	1472	rVV2	35917	36595	2.75%	0.255%
23	8.887	1472	1476	1492	rVB2	161532	174828	13.13%	1.218%
24	9.603	1618	1625	1630	rVB6	33745	49008	3.68%	0.341%
25	9.666	1634	1638	1645	rBV	71418	75908	5.70%	0.529%
26	9.757	1653	1657	1662	rVB	119512	106950	8.03%	0.745%
27	9.887	1679	1684	1693	rVB	1036120	872581	65.53%	6.079%
28	10.156	1734	1740	1746	rBV6	20928	40784	3.06%	0.284%
29	10.401	1788	1791	1799	rVB	37378	37227	2.80%	0.259%
30	10.464	1799	1804	1808	rBV	113201	101640	7.63%	0.708%
31	10.623	1832	1837	1841	rBV7	14915	20676	1.55%	0.144%
32	10.849	1879	1884	1892	rBV2	85645	137611	10.33%	0.959%
33	10.926	1895	1900	1910	rVV	933021	977794	73.43%	6.812%
34	10.988	1910	1913	1917	rVB2	16320	17378	1.31%	0.121%
35	11.094	1933	1935	1943	rBV9	11275	16750	1.26%	0.117%
36	11.647	2041	2050	2064	rBV5	94325	222464	16.71%	1.550%
37	12.041	2126	2132	2138	rBV2	76461	118655	8.91%	0.827%
38	12.181	2157	2161	2167	rVB2	27849	40842	3.07%	0.285%

LSC Area Percent Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : Y00 1108511-024C.D
Acq On : 7 Sep 2011 5:46 am
Operator : ALICIA HABERLE
Sample : 1108511-024C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Integration Parameters: RTEINT.P
Integrator: RTE
Smoothing : OFF Filtering: 5
Sampling : 1 Min Area: 1 % of largest Peak
Start Thrs: 0.2 Max Peaks: 100
Stop Thrs : 0 Peak Location: TOP

If leading or trailing edge < 100 prefer < Baseline drop else tangent >
Peak separation: 5

Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Title : Semi-Volatile Compounds HP-GCMS 5973-B

39	12.301	2179	2186	2190	rBV9	19759	31877	2.39%	0.222%
40	12.589	2239	2246	2251	rBV2	152344	244777	18.38%	1.705%
41	12.758	2276	2281	2283	rBV6	13219	18629	1.40%	0.130%
42	12.796	2283	2289	2300	rVB	464466	695655	52.24%	4.847%
43	13.104	2348	2353	2360	rVB6	15990	27783	2.09%	0.194%
44	13.349	2399	2404	2414	rVB9	27049	56837	4.27%	0.396%
45	13.662	2460	2469	2478	rBV	324935	644566	48.41%	4.491%
46	14.080	2553	2556	2567	rVB6	20434	37297	2.80%	0.260%
47	14.518	2643	2647	2656	rVB10	24276	48385	3.63%	0.337%
48	14.825	2706	2711	2719	rVB3	48732	95638	7.18%	0.666%
49	15.066	2754	2761	2772	rVB3	57989	158200	11.88%	1.102%

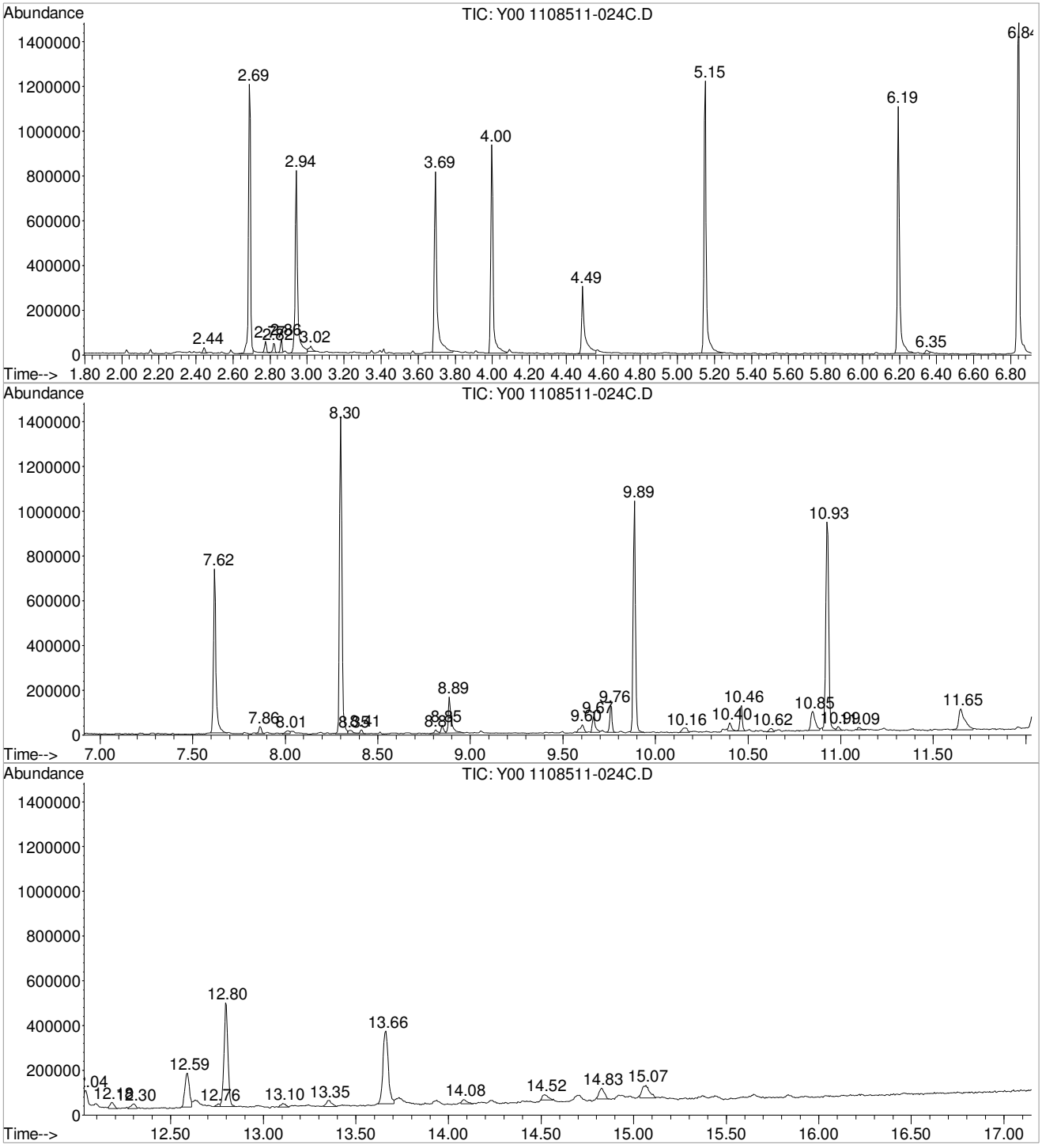
Sum of corrected areas: 14353529

LSC Report - Integrated Chromatogram

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : Y00 1108511-024C.D
Acq On : 7 Sep 2011 5:46 am
Operator : ALICIA HABERLE
Sample : 1108511-024C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P



Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : Y00 1108511-024C.D
Acq On : 7 Sep 2011 5:46 am
Operator : ALICIA HABERLE
Sample : 1108511-024C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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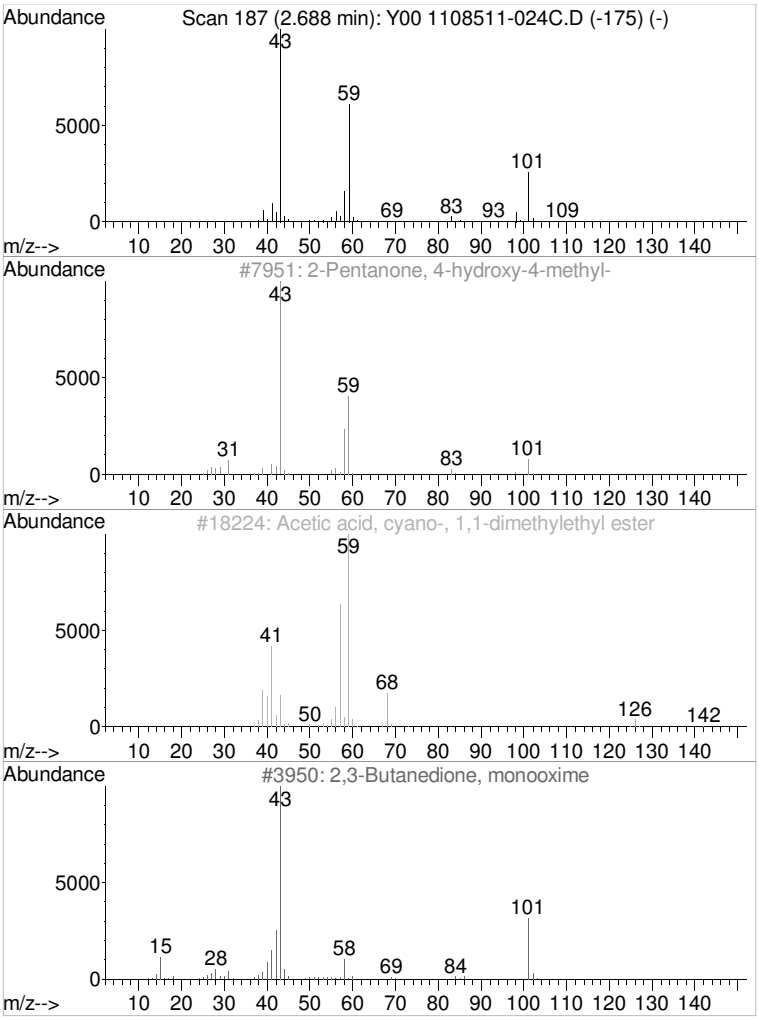
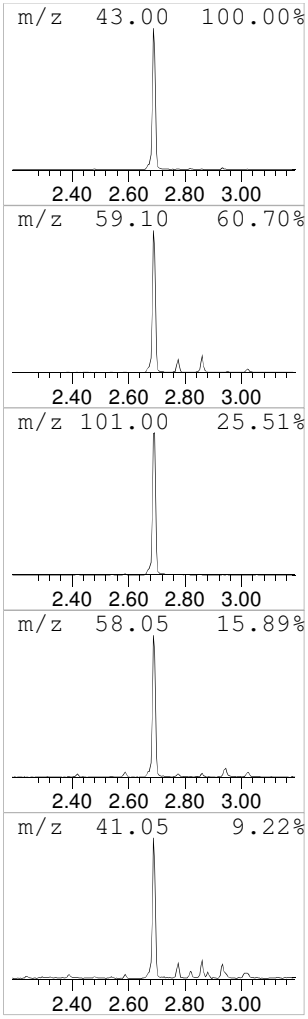
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
2.69	46.53 ug/l	941563	ISTD 1,4-Dichlorobenzene-d4	4.00

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	2-Pentanone, 4-hydroxy-4-methyl-	116	C6H12O2	000123-42-2	56
2	Acetic acid, cyano-, 1,1-dimethy...	141	C7H11NO2	001116-98-9	17
3	2,3-Butanedione, monooxime	101	C4H7NO2	000057-71-6	17
4	Morpholine, 4-methyl-	101	C5H11NO	000109-02-4	9
5	Butane, 1-ethoxy-	102	C6H14O	000628-81-9	9





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : Y00 1108511-024C.D
Acq On : 7 Sep 2011 5:46 am
Operator : ALICIA HABERLE
Sample : 1108511-024C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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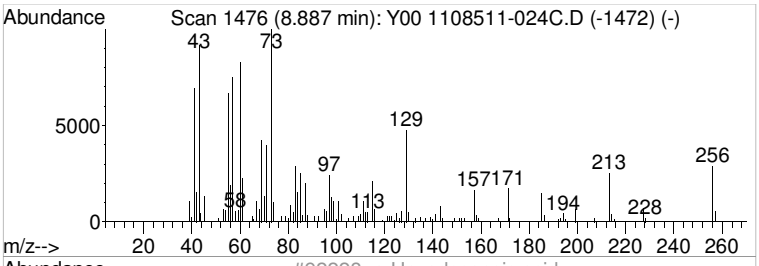
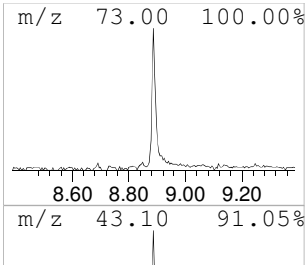
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
8.89	5.65 ug/l	174828	ISTD-Phenanthrene-d10	8.30

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	n-Hexadecanoic acid	256	C16H32O2	000057-10-3	99
2	Tetradecanoic acid	228	C14H28O2	000544-63-8	81
3	Tridecanoic acid	214	C13H26O2	000638-53-9	64
4	Nonanoic acid	158	C9H18O2	000112-05-0	38
5	Undecane	156	C11H24	001120-21-4	11





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : Y00 1108511-024C.D
Acq On : 7 Sep 2011 5:46 am
Operator : ALICIA HABERLE
Sample : 1108511-024C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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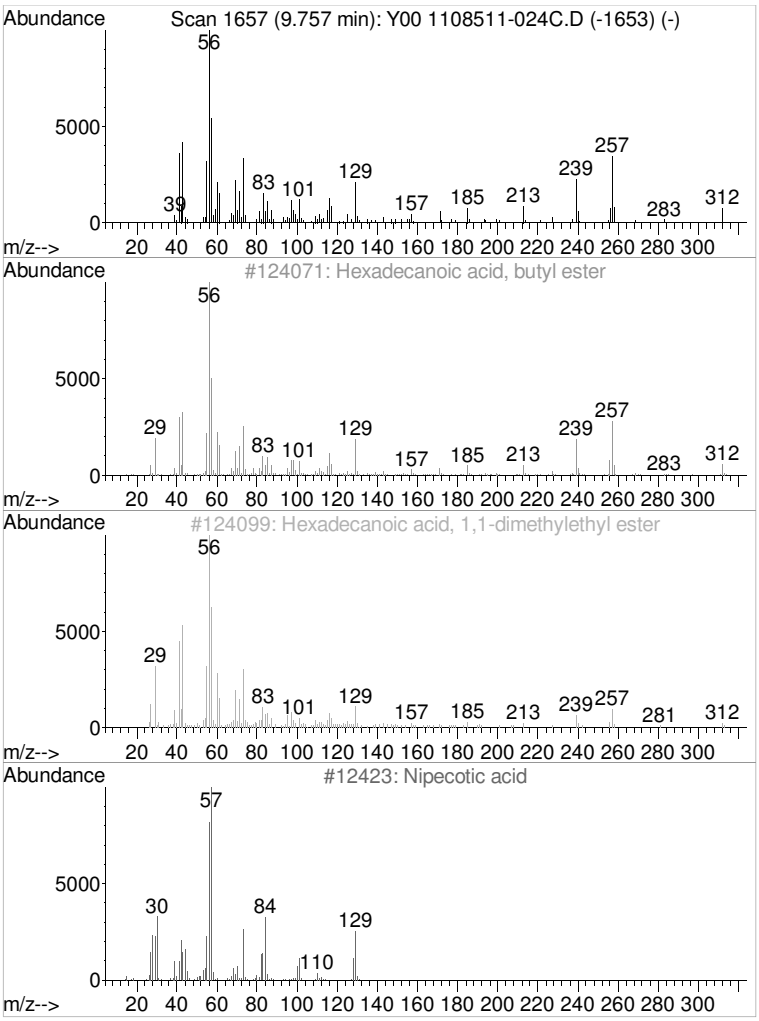
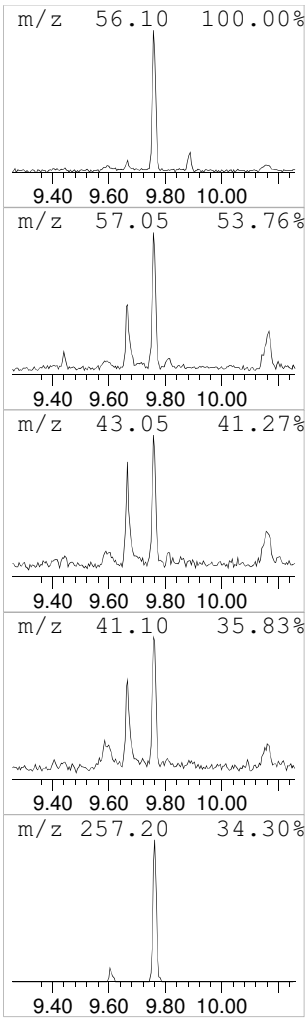
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
9.76	4.38 ug/l	106950	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexadecanoic acid, butyl ester	312	C20H40O2	000111-06-8	99
2	Hexadecanoic acid, 1,1-dimethyle...	312	C20H40O2	031158-91-5	92
3	Nipecotic acid	129	C6H11NO2	000498-95-3	37
4	Oxirane, 2,3-bis(1-methylethyl)-...	128	C8H16O	054644-32-5	35
5	Cyclohexanol, 4-amino-, trans-	115	C6H13NO	027489-62-9	30





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : Y00 1108511-024C.D
Acq On : 7 Sep 2011 5:46 am
Operator : ALICIA HABERLE
Sample : 1108511-024C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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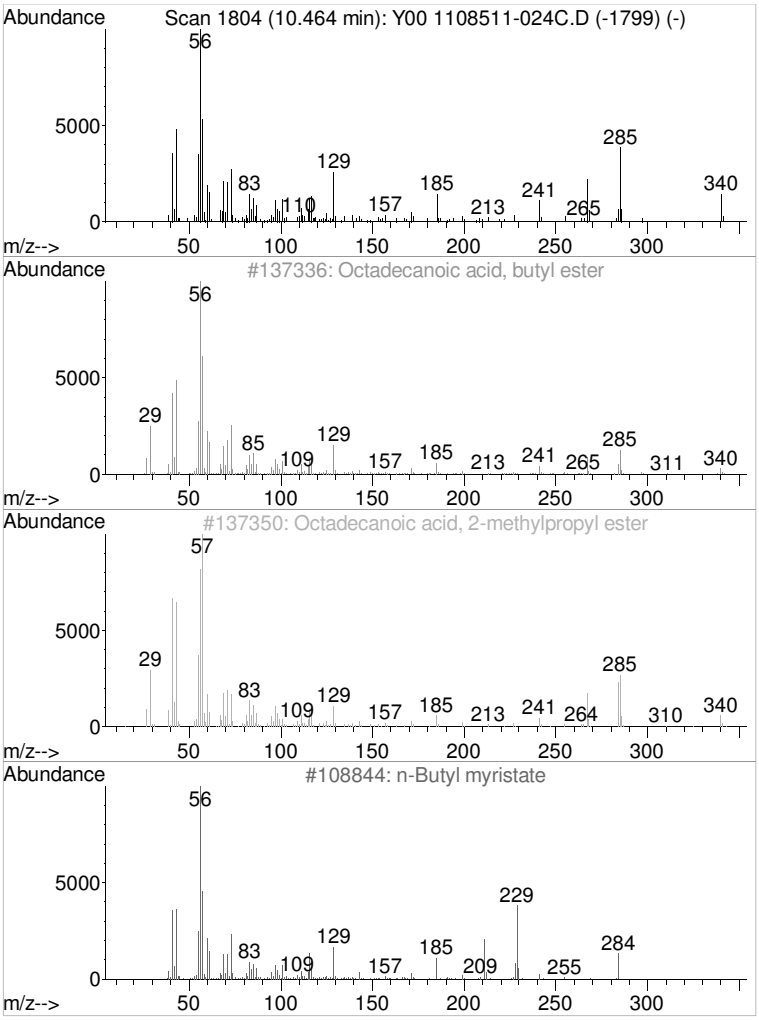
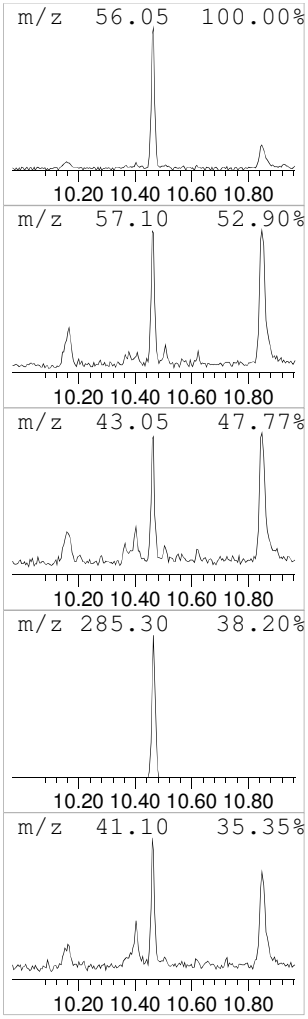
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.46	4.16 ug/l	101640	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Octadecanoic acid, butyl ester	340	C22H44O2	000123-95-5	95
2	Octadecanoic acid, 2-methylpropy...	340	C22H44O2	000646-13-9	93
3	n-Butyl myristate	284	C18H36O2	000110-36-1	43
4	1,3-Pentanediol, 2,2,4-trimethyl-	146	C8H18O2	000144-19-4	35
5	3-Amino-2,2-dimethyl-1-propanol	103	C5H13NO	026734-09-8	27





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : Y00 1108511-024C.D
Acq On : 7 Sep 2011 5:46 am
Operator : ALICIA HABERLE
Sample : 1108511-024C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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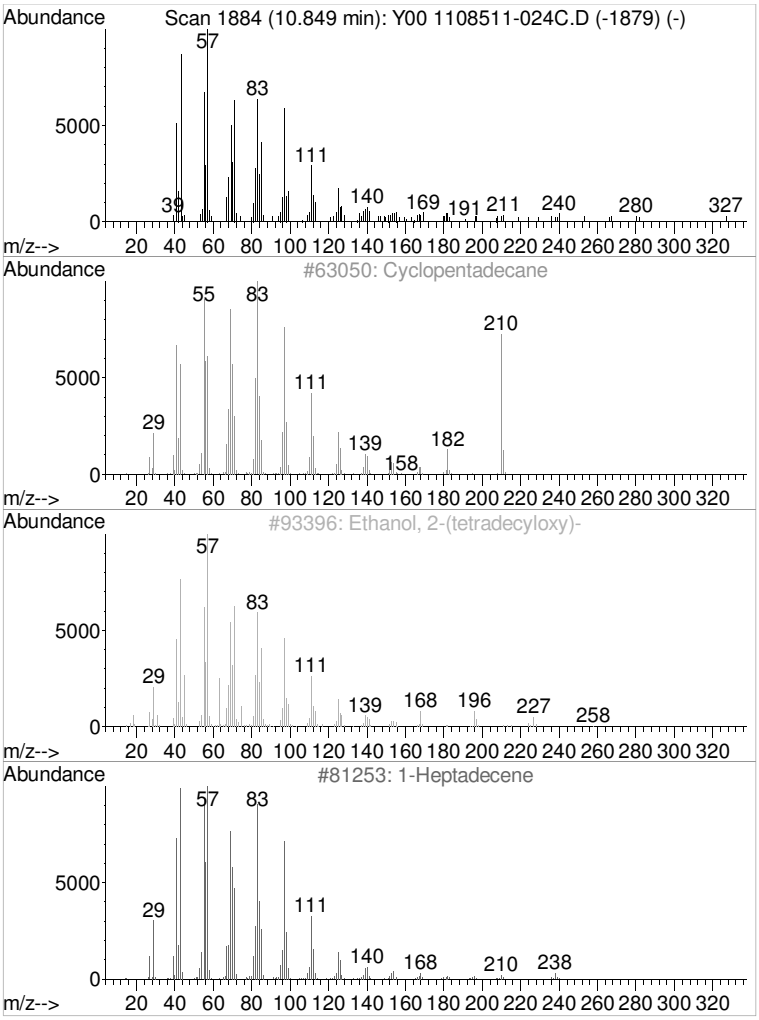
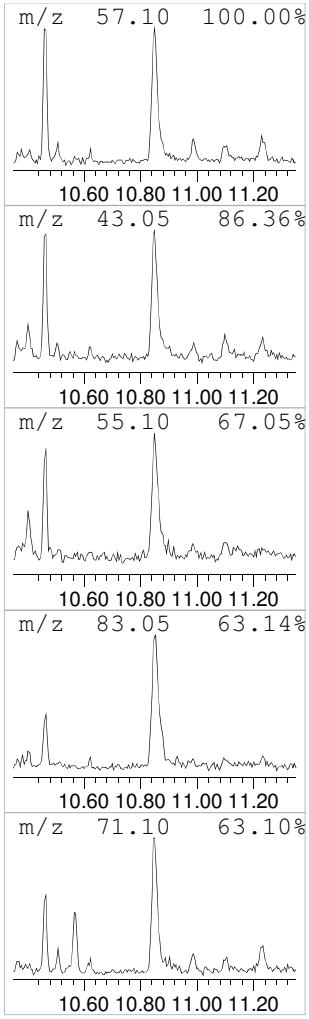
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
10.85	5.63 ug/l	137611	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Cyclopentadecane	210	C15H30	000295-48-7	91
2	Ethanol, 2-(tetradecyloxy)-	258	C16H34O2	002136-70-1	90
3	1-Heptadecene	238	C17H34	006765-39-5	87
4	Pentafluoropropionic acid, hepta...	402	C20H35F5O2	1000283-04-2	87
5	Z-8-Hexadecene	224	C16H32	1000130-87-5	86





Library Search Compound Report

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : Y00 1108511-024C.D
Acq On : 7 Sep 2011 5:46 am
Operator : ALICIA HABERLE
Sample : 1108511-024C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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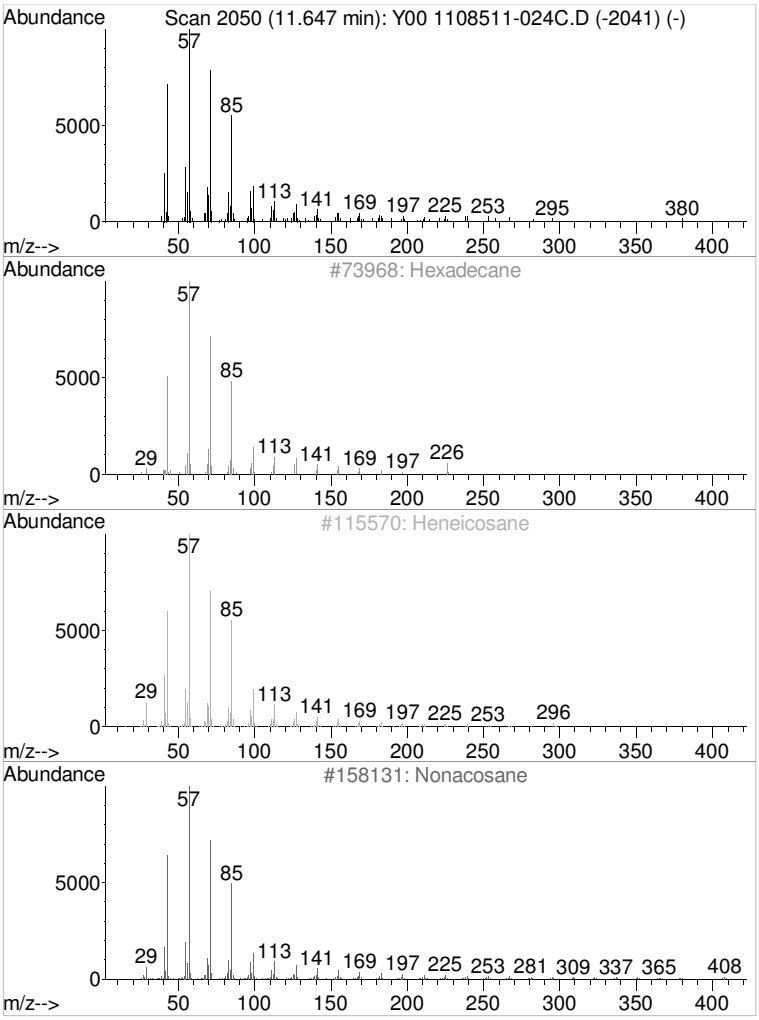
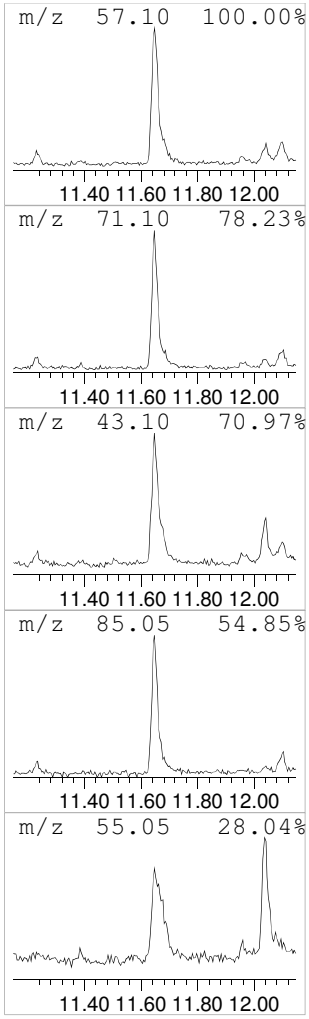
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
11.65	9.10 ug/l	222464	ISTD-Chrysene-d12	10.93

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Hexadecane	226	C16H34	000544-76-3	94
2	Heneicosane	296	C21H44	000629-94-7	91
3	Nonacosane	408	C29H60	000630-03-5	91
4	Heptadecane, 9-octyl-	352	C25H52	007225-64-1	91
5	Tetratetracontane	619	C44H90	007098-22-8	91





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : Y00 1108511-024C.D
Acq On : 7 Sep 2011 5:46 am
Operator : ALICIA HABERLE
Sample : 1108511-024C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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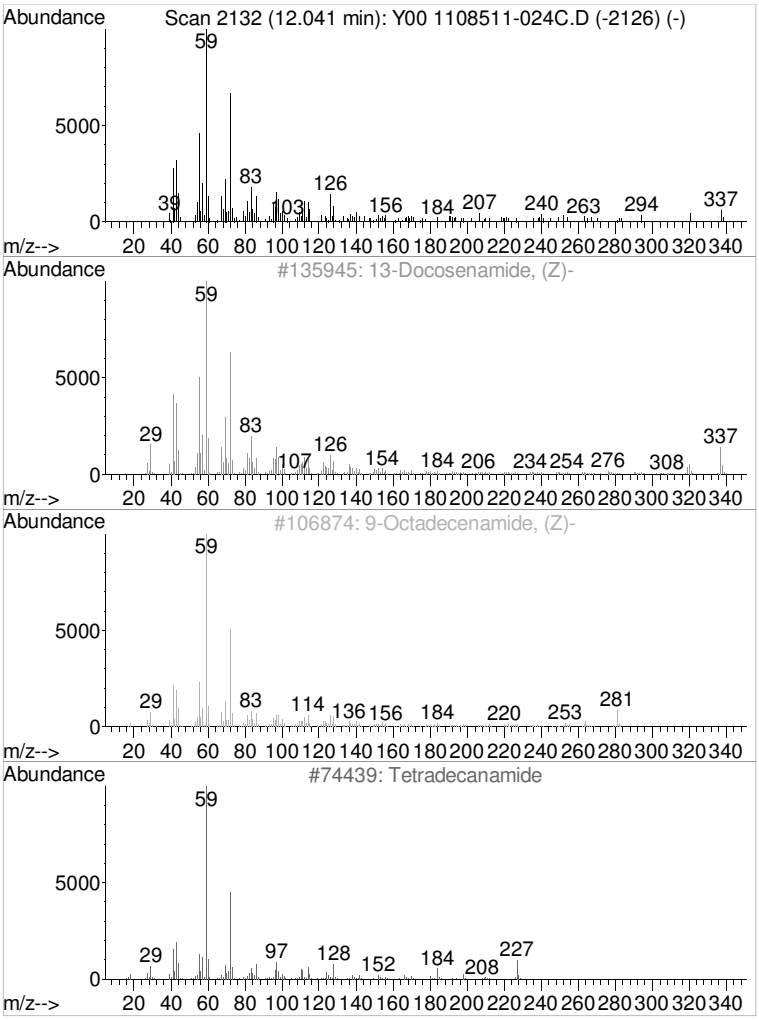
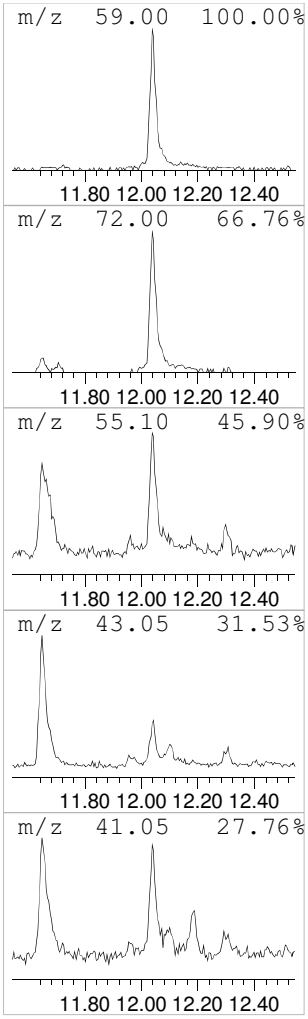
[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
12.04	6.82 ug/l	118655	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	13-Docosenamide, (Z)-	337	C22H43NO	000112-84-5	94
2	9-Octadecenamide, (Z)-	281	C18H35NO	000301-02-0	64
3	Tetradecanamide	227	C14H29NO	000638-58-4	59
4	Benzeneethanamine, 2-fluoro-.bet...	229	C11H16FNO3	061338-98-5	50
5	Dodecanamide	199	C12H25NO	001120-16-7	47





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : Y00 1108511-024C.D
Acq On : 7 Sep 2011 5:46 am
Operator : ALICIA HABERLE
Sample : 1108511-024C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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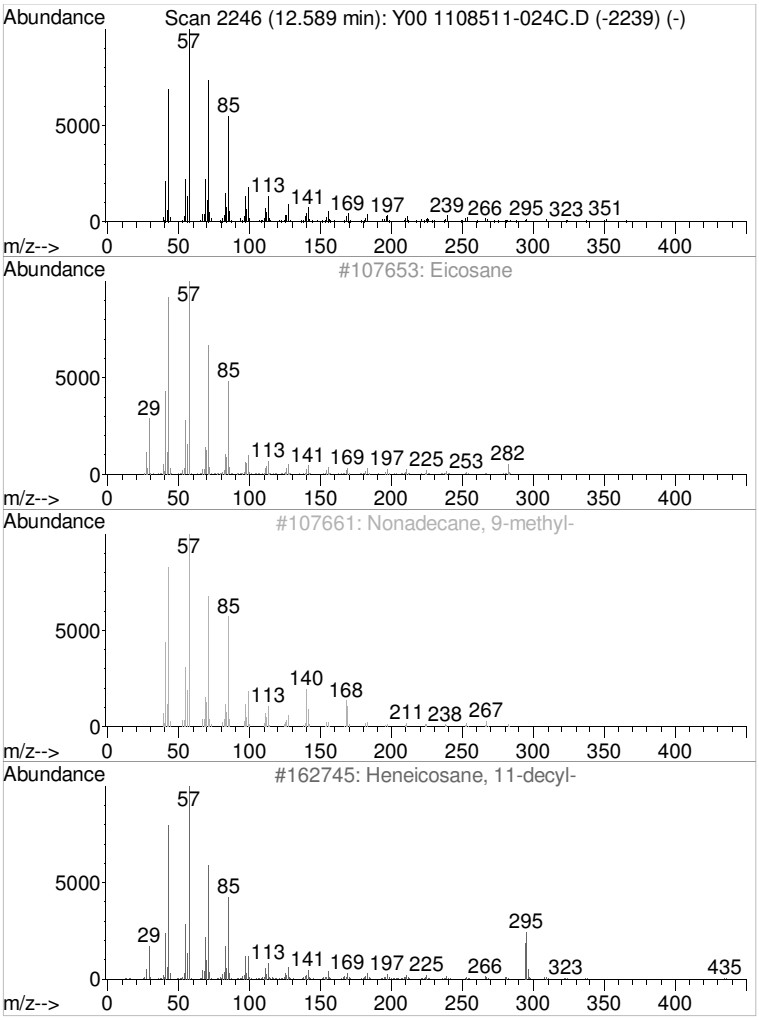
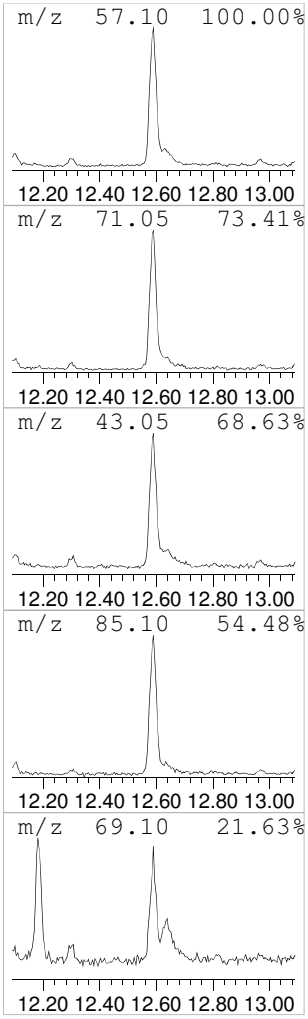
R.T.	EstConc	Area	Relative to ISTD	R.T.
12.59	14.07 ug/l	244777	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Eicosane	282	C20H42	000112-95-8	95
2	Nonadecane, 9-methyl-	282	C20H42	013287-24-6	95
3	Heneicosane, 11-decyl-	437	C31H64	055320-06-4	91
4	Tetratriacontane	479	C34H70	014167-59-0	91
5	Tetratetracontane	619	C44H90	007098-22-8	91





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
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Acq On : 7 Sep 2011 5:46 am
Operator : ALICIA HABERLE
Sample : 1108511-024C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

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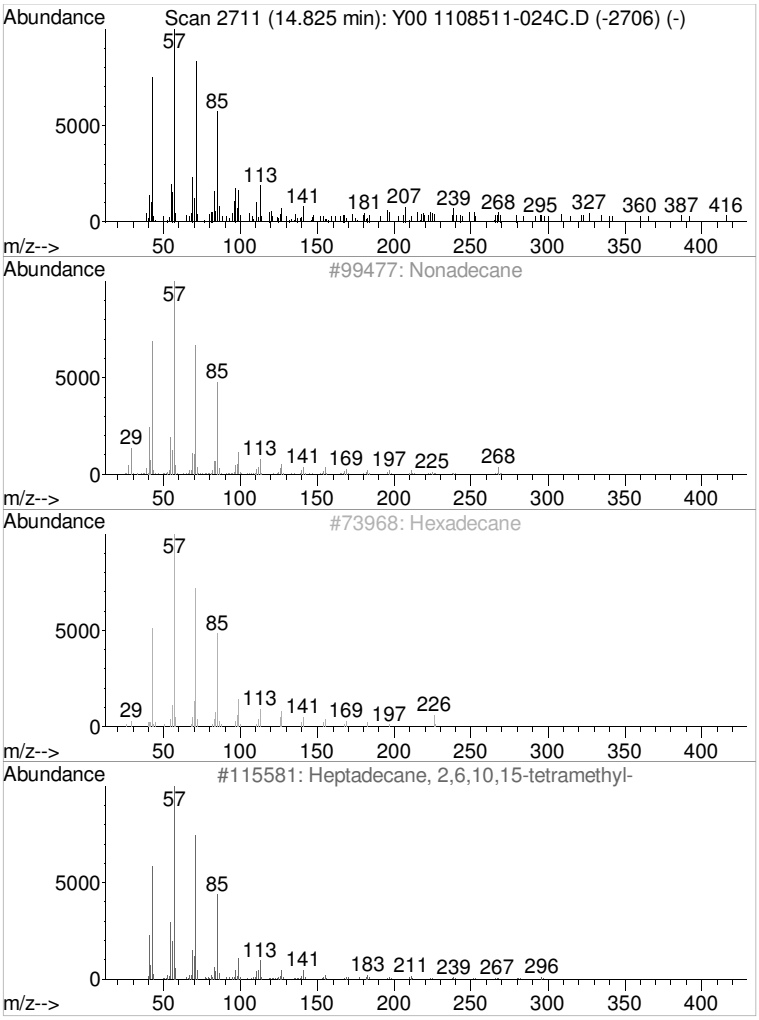
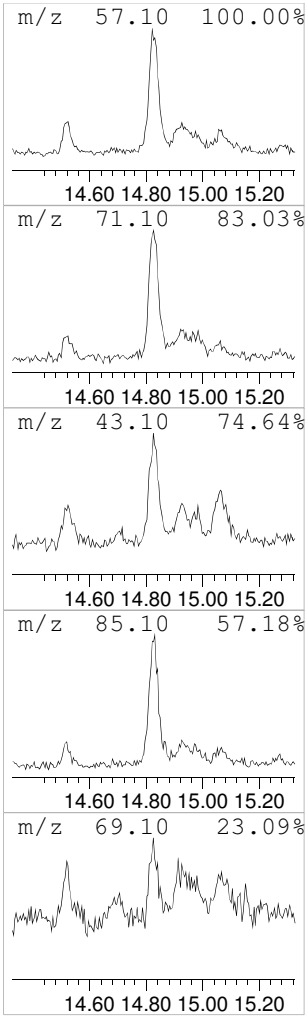
R.T.	EstConc	Area	Relative to ISTD	R.T.
14.83	5.50 ug/l	95638	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	Nonadecane	268	C19H40	000629-92-5	90
2	Hexadecane	226	C16H34	000544-76-3	76
3	Heptadecane, 2,6,10,15-tetramethyl-	296	C21H44	054833-48-6	76
4	Heneicosane	296	C21H44	000629-94-7	76
5	Docosane, 9-butyl-	366	C26H54	055282-14-9	72





Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : Y00 1108511-024C.D
Acq On : 7 Sep 2011 5:46 am
Operator : ALICIA HABERLE
Sample : 1108511-024C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

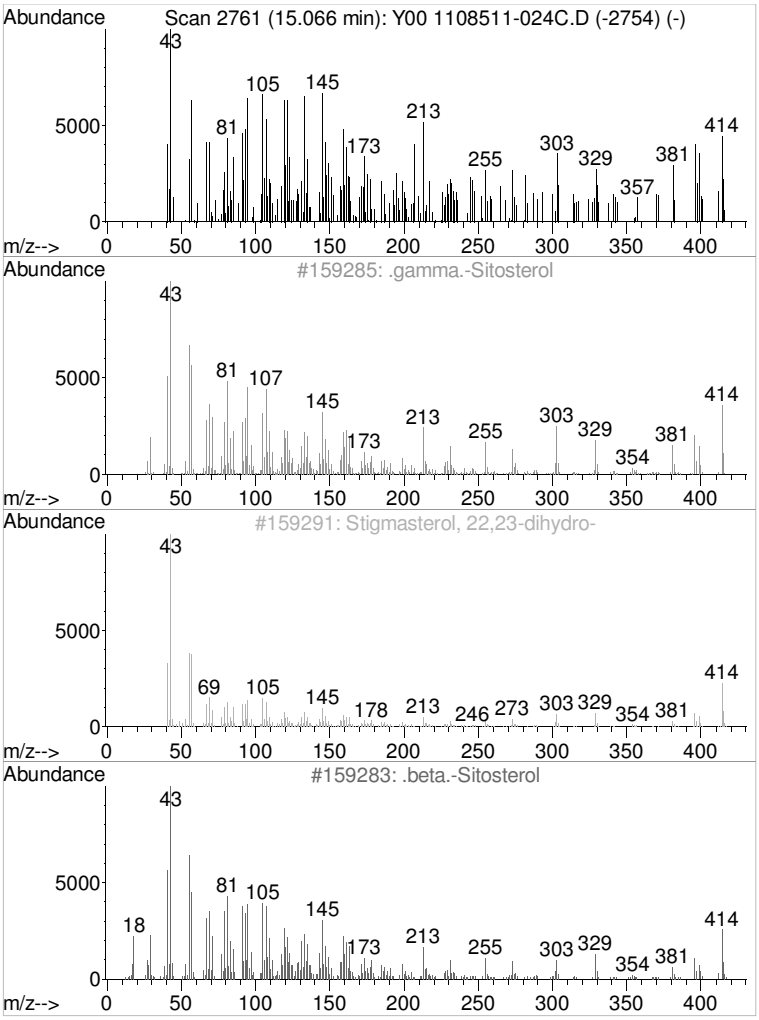
TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

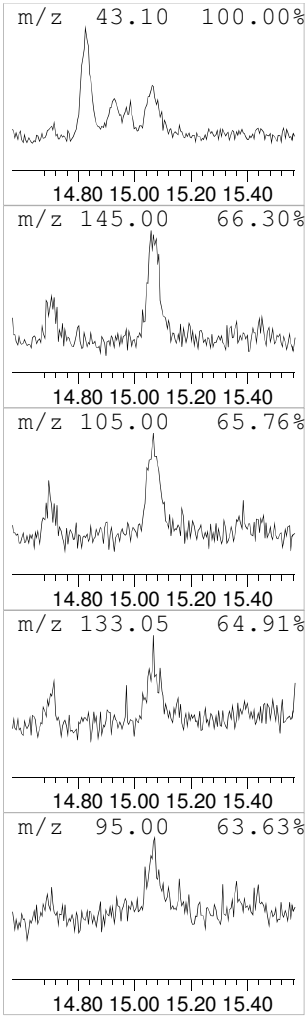
****

[redacted]

R.T.	EstConc	Area	Relative to ISTD	R.T.
15.07	9.10 ug/l	158200	ISTD-Perylene-d12	12.80

Hit# of 5	Tentative ID	MW	MolForm	CAS#	Qual
1	.gamma.-Sitosterol	414	C29H50O	000083-47-6	64
2	Stigmasterol, 22,23-dihydro-	414	C29H50O	1000214-20-7	46
3	.beta.-Sitosterol	414	C29H50O	000083-46-5	43
4	Cholest-7-en-3-ol, 4,4-dimethyl-...	414	C29H50O	006384-28-7	22
5	17-(1,5-Dimethylhexyl)-10,13-dim...	414	C29H50O	1000210-86-9	12





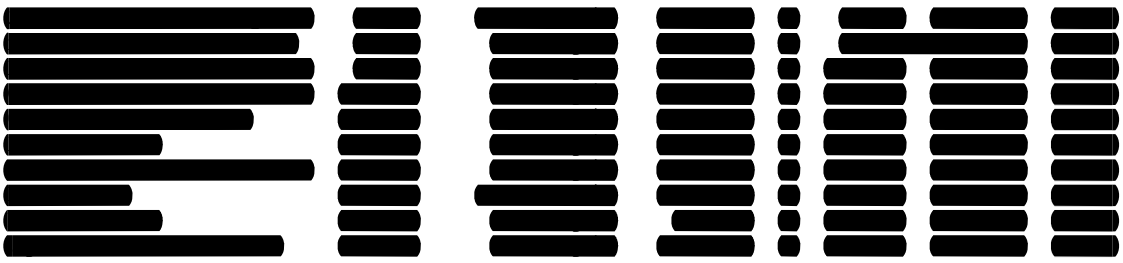
Tentatively Identified Compound (LSC) summary

Data Path : Z:\MSDCHEM\1\DATA\SEP11-B\06SEP11\
Data File : Y00 1108511-024C.D
Acq On : 7 Sep 2011 5:46 am
Operator : ALICIA HABERLE
Sample : 1108511-024C
Misc : SAMP
ALS Vial : 15 Sample Multiplier: 1

Quant Method : M:\SVOAB\METHODS\QUANT-ORIGINAL-PERFECTFULLSV-X2_08-26-11.M
Quant Title : Semi-Volatile Compounds HP-GCMS 5973-B

TIC Library : C:\DATABASE\NIST02.L
TIC Integration Parameters: LSCINT.P

					--Internal Standard---			
TIC Top Hit name	RT	EstConc	Units	Response	#	RT	Resp	Conc



American West Analytical Laboratories

WORK ORDER Summary

Work Order: **1108511**

Client: EarthFax Engineering — Page 1 of 9 — 8/25/2011

Client ID: EAR100 **Contact:** Galen Williams

Project: Red Butte **QC Level:** LEVEL I **WO Type:** Project

Comments: Report out TIC's for Semi's and VOC's. For soil samples, homogonize voc sample. Report out pmoist for all solids. TOC sent to Paragon, Grain Size sent to IGES.;

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1108511-001A	Parleys Cr. Below 1300 E.	8/25/2011 0720h	8/25/2011 1345h	9/8/2011	Aqueous	3510-TPH-PR	☐	Walkin-DRO	2
						8015-W-TPH(1L)	☑	Walkin-DRO	
1108511-001B						3510-ORO-PR	☐	Walkin-ORO	
						8015-W-ORO(1L)	☐	Walkin-ORO	
1108511-001C						3510-SVOA-PR	☐	Walkin-Semi	6
						8270-W	☑	Walkin-Semi	
						8270-W-SIM	☑	Walkin-Semi	
1108511-001D						8260-W	☑	VOCFridge	
1108511-002A	Parleys Cr. Below 1300 E. - Bed				Soil	3546-ORO-PR	☐	Hall-TPH	1
						3546-TPH-PR	☐	Hall-TPH	
						8015-S-ORO	☑	Hall-TPH	
						8015-S-TPH	☑	Hall-TPH	
1108511-002B						8260-S	☑	VOCFridge	
1108511-002C						3546-SVOA-PR	☐	Hall-Semi	2
						8270-S	☑	Hall-Semi	
						8270-S-SIM	☑	Hall-Semi	
						PMOIST	☐	Hall-Semi	
1108511-002D						TS-S-2540B	☐	ww - ts	1
1108511-002E						OUTSIDE LAB	☐	Paragon	
1108511-002F						OUTSIDE LAB	☐	IGES	
1108511-003A	Parleys Cr. Below 1300 E. - Bank					3546-ORO-PR	☐	Hall-TPH	
						3546-TPH-PR	☐	Hall-TPH	
						8015-S-ORO	☑	Hall-TPH	
						8015-S-TPH	☑	Hall-TPH	

WORK ORDER Summary

Work Order: **1108511**

Client: EarthFax Engineering

 8/25/2011

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1108511-003B	Parleys Cr. Below 1300 E. - Bank	8/25/2011 0720h	8/25/2011 1345h	9/8/2011	Soil	8260-S	☑	VOCFridge	1
1108511-003C						3546-SVOA-PR	☐	Hall-Semi	2
						8270-S	☑	Hall-Semi	
						8270-S-SIM	☑	Hall-Semi	
						PMOIST	☐	Hall-Semi	
1108511-003D						TS-S-2540B	☐	ww - ts	1
1108511-003E						OUTSIDE LAB	☐	Paragon	
1108511-003F						OUTSIDE LAB	☐	IGES	
1108511-004A	Parleys Cr. Below 1700 E.	8/25/2011 0820h			Aqueous	3510-TPH-PR	☐	Walkin-DRO	2
						8015-W-TPH(1L)	☑	Walkin-DRO	
1108511-004B						3510-ORO-PR	☐	Walkin-ORO	
						8015-W-ORO(1L)	☐	Walkin-ORO	
1108511-004C						3510-SVOA-PR	☐	Walkin-Semi	6
						8270-W	☑	Walkin-Semi	
						8270-W-SIM	☑	Walkin-Semi	
1108511-004D						8260-W	☑	VOCFridge	
1108511-005A	Parleys Cr. Below 1700 E. - Bed				Soil	3546-ORO-PR	☐	Hall-TPH	1
						3546-TPH-PR	☐	Hall-TPH	
						8015-S-ORO	☑	Hall-TPH	
						8015-S-TPH	☑	Hall-TPH	
1108511-005B						8260-S	☑	VOCFridge	
1108511-005C						3546-SVOA-PR	☐	Hall-Semi	2
						8270-S	☑	Hall-Semi	
						8270-S-SIM	☑	Hall-Semi	
						PMOIST	☐	Hall-Semi	
1108511-005D						TS-S-2540B	☐	ww - ts	1
1108511-005E						OUTSIDE LAB	☐	Paragon	
1108511-005F						OUTSIDE LAB	☐	IGES	
1108511-006A	Parleys Cr. Below 1700 E. - Bank					3546-ORO-PR	☐	Hall-TPH	
						3546-TPH-PR	☐	Hall-TPH	

WORK ORDER Summary

Work Order: **1108511**

Client: EarthFax Engineering

 8/25/2011

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1108511-006A	Parleys Cr. Below 1700 E. - Bank	8/25/2011 0820h	8/25/2011 1345h	9/8/2011	Soil	8015-S-ORO	☑	Hall-TPH	1
						8015-S-TPH	☑	Hall-TPH	
1108511-006B						8260-S	☑	VOCFridge	
1108511-006C						3546-SVOA-PR	☐	Hall-Semi	2
						8270-S	☑	Hall-Semi	
						8270-S-SIM	☑	Hall-Semi	
						PMOIST	☐	Hall-Semi	
1108511-006D						TS-S-2540B	☐	ww - ts	1
1108511-006E						OUTSIDE LAB	☐	Paragon	
1108511-006F						OUTSIDE LAB	☐	IGES	
1108511-007A	Parleys Cr. Above 2000 E.	8/25/2011 0900h			Aqueous	3510-TPH-PR	☐	Walkin-DRO	2
						8015-W-TPH(1L)	☑	Walkin-DRO	
1108511-007B						3510-ORO-PR	☐	Walkin-ORO	
						8015-W-ORO(1L)	☐	Walkin-ORO	
1108511-007C						3510-SVOA-PR	☐	Walkin-Semi	6
						8270-W	☑	Walkin-Semi	
						8270-W-SIM	☑	Walkin-Semi	
1108511-007D						8260-W	☑	VOCFridge	
1108511-008A	Parleys Cr. Above 2000 E. - Bed				Soil	3546-ORO-PR	☐	Hall-TPH	1
						3546-TPH-PR	☐	Hall-TPH	
						8015-S-ORO	☑	Hall-TPH	
						8015-S-TPH	☑	Hall-TPH	
1108511-008B						8260-S	☑	VOCFridge	
1108511-008C						3546-SVOA-PR	☐	Hall-Semi	2
						8270-S	☑	Hall-Semi	
						8270-S-SIM	☑	Hall-Semi	
						PMOIST	☐	Hall-Semi	
1108511-008D						TS-S-2540B	☐	ww - ts	1
1108511-008E						OUTSIDE LAB	☐	Paragon	
1108511-008F						OUTSIDE LAB	☐	IGES	

WORK ORDER Summary

Work Order: **1108511**

Client: EarthFax Engineering

 8/25/2011

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1108511-009A	Parleys Cr. Above 2000 E. - Bank	8/25/2011 0900h	8/25/2011 1345h	9/8/2011	Soil	3546-ORO-PR	☐	Hall-TPH	1
						3546-TPH-PR	☐	Hall-TPH	
						8015-S-ORO	☑	Hall-TPH	
						8015-S-TPH	☑	Hall-TPH	
1108511-009B						8260-S	☑	VOCFridge	
1108511-009C						3546-SVOA-PR	☐	Hall-Semi	2
						8270-S	☑	Hall-Semi	
						8270-S-SIM	☑	Hall-Semi	
						PMOIST	☐	Hall-Semi	
1108511-009D						TS-S-2540B	☐	ww - ts	1
1108511-009E						OUTSIDE LAB	☐	Paragon	
1108511-009F						OUTSIDE LAB	☐	IGES	
1108511-010A	Parleys Cr. Above I-215	8/25/2011 0950h			Aqueous	3510-TPH-PR	☐	Walkin-DRO	2
						8015-W-TPH(1L)	☑	Walkin-DRO	
1108511-010B						3510-ORO-PR	☐	Walkin-ORO	
						8015-W-ORO(1L)	☐	Walkin-ORO	
1108511-010C						3510-SVOA-PR	☐	Walkin-Semi	6
						8270-W	☑	Walkin-Semi	
						8270-W-SIM	☑	Walkin-Semi	
1108511-010D						8260-W	☑	VOCFridge	
1108511-011A	Parleys Cr. Above I-215 - Bed				Soil	3546-ORO-PR	☐	Hall-TPH	1
						3546-TPH-PR	☐	Hall-TPH	
						8015-S-ORO	☑	Hall-TPH	
						8015-S-TPH	☑	Hall-TPH	
1108511-011B						8260-S	☑	VOCFridge	
1108511-011C						3546-SVOA-PR	☐	Hall-Semi	2
						8270-S	☑	Hall-Semi	
						8270-S-SIM	☑	Hall-Semi	
						PMOIST	☐	Hall-Semi	
1108511-011D						TS-S-2540B	☐	ww - ts	1

WORK ORDER Summary

Work Order: **1108511**

Client: EarthFax Engineering

 8/25/2011

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1108511-011E	Parleys Cr. Above I-215 - Bed	8/25/2011 0950h	8/25/2011 1345h	9/8/2011	Soil	OUTSIDE LAB	☐	Paragon	1
1108511-011F						OUTSIDE LAB	☐	IGES	
1108511-012A	Parleys Cr. Above I-215 - Bank					3546-ORO-PR	☐	Hall-TPH	
						3546-TPH-PR	☐	Hall-TPH	
						8015-S-ORO	☑	Hall-TPH	
						8015-S-TPH	☑	Hall-TPH	
1108511-012B						8260-S	☑	VOCFridge	
1108511-012C						3546-SVOA-PR	☐	Hall-Semi	2
						8270-S	☑	Hall-Semi	
						8270-S-SIM	☑	Hall-Semi	
						PMOIST	☐	Hall-Semi	
1108511-012D						TS-S-2540B	☐	ww - ts	1
1108511-012E						OUTSIDE LAB	☐	Paragon	
1108511-012F						OUTSIDE LAB	☐	IGES	
1108511-013A	Emigration Cr. Above 1300 E.	8/25/2011 1045h			Aqueous	3510-TPH-PR	☐	Walkin-DRO	2
						8015-W-TPH(1L)	☑	Walkin-DRO	
1108511-013B						3510-ORO-PR	☐	Walkin-ORO	
						8015-W-ORO(1L)	☐	Walkin-ORO	
1108511-013C						3510-SVOA-PR	☐	Walkin-Semi	6
						8270-W	☑	Walkin-Semi	
						8270-W-SIM	☑	Walkin-Semi	
1108511-013D						8260-W	☑	VOCFridge	
1108511-014A	Emigration Cr. Above 1300 E. - Bed				Soil	3546-ORO-PR	☐	Hall-TPH	1
						3546-TPH-PR	☐	Hall-TPH	
						8015-S-ORO	☑	Hall-TPH	
						8015-S-TPH	☑	Hall-TPH	
1108511-014B						8260-S	☑	VOCFridge	
1108511-014C						3546-SVOA-PR	☐	Hall-Semi	2
						8270-S	☑	Hall-Semi	
						8270-S-SIM	☑	Hall-Semi	

WORK ORDER Summary

Work Order: **1108511**

Client: EarthFax Engineering

 8/25/2011

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1108511-014C	Emigration Cr. Above 1300 E. - Bed	8/25/2011 1045h	8/25/2011 1345h	9/8/2011	Soil	PMOIST	☐	Hall-Semi	2
1108511-014D						TS-S-2540B	☐	ww - ts	1
1108511-014E						OUTSIDE LAB	☐	Paragon	
1108511-014F						OUTSIDE LAB	☐	IGES	
1108511-015A	Emigration Cr. Above 1300 E. - Bank					3546-ORO-PR	☐	Hall-TPH	
						3546-TPH-PR	☐	Hall-TPH	
						8015-S-ORO	☑	Hall-TPH	
						8015-S-TPH	☑	Hall-TPH	
1108511-015B						8260-S	☑	VOCFridge	
1108511-015C						3546-SVOA-PR	☐	Hall-Semi	2
						8270-S	☑	Hall-Semi	
						8270-S-SIM	☑	Hall-Semi	
						PMOIST	☐	Hall-Semi	
1108511-015D						TS-S-2540B	☐	ww - ts	1
1108511-015E						OUTSIDE LAB	☐	Paragon	
1108511-015F						OUTSIDE LAB	☐	IGES	
1108511-016A	Emigration Cr. Above 1900 E.	8/25/2011 1135h			Aqueous	3510-TPH-PR	☐	Walkin-DRO	2
						8015-W-TPH(1L)	☑	Walkin-DRO	
1108511-016B						3510-ORO-PR	☐	Walkin-ORO	
						8015-W-ORO(1L)	☐	Walkin-ORO	
1108511-016C						3510-SVOA-PR	☐	Walkin-Semi	6
						8270-W	☑	Walkin-Semi	
						8270-W-SIM	☑	Walkin-Semi	
1108511-016D						8260-W	☑	VOCFridge	
1108511-017A	Emigration Cr. Above 1900 E. - Bed				Soil	3546-ORO-PR	☐	Hall-TPH	1
						3546-TPH-PR	☐	Hall-TPH	
						8015-S-ORO	☑	Hall-TPH	
						8015-S-TPH	☑	Hall-TPH	
1108511-017B						8260-S	☑	VOCFridge	
1108511-017C						3546-SVOA-PR	☐	Hall-Semi	2

WORK ORDER Summary

Work Order: **1108511**

Client: EarthFax Engineering

 8/25/2011

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1108511-017C	Emigration Cr. Above 1900 E. - Bed	8/25/2011 1135h	8/25/2011 1345h	9/8/2011	Soil	8270-S	☑	Hall-Semi	2
						8270-S-SIM	☑	Hall-Semi	
						PMOIST	☐	Hall-Semi	
1108511-017D						TS-S-2540B	☐	ww - ts	1
1108511-017E						OUTSIDE LAB	☐	Paragon	
1108511-017F						OUTSIDE LAB	☐	IGES	
1108511-018A	Emigration Cr. Above 1900 E. - Bank					3546-ORO-PR	☐	Hall-TPH	
						3546-TPH-PR	☐	Hall-TPH	
						8015-S-ORO	☑	Hall-TPH	
						8015-S-TPH	☑	Hall-TPH	
1108511-018B						8260-S	☑	VOCFridge	
1108511-018C						3546-SVOA-PR	☐	Hall-Semi	2
						8270-S	☑	Hall-Semi	
						8270-S-SIM	☑	Hall-Semi	
						PMOIST	☐	Hall-Semi	
1108511-018D						TS-S-2540B	☐	ww - ts	1
1108511-018E						OUTSIDE LAB	☐	Paragon	
1108511-018F						OUTSIDE LAB	☐	IGES	
1108511-019A	Emigration Cr. Above 2100 E.	8/25/2011 1215h			Aqueous	3510-TPH-PR	☐	Walkin-DRO	2
						8015-W-TPH(1L)	☑	Walkin-DRO	
1108511-019B						3510-ORO-PR	☐	Walkin-ORO	
						8015-W-ORO(1L)	☐	Walkin-ORO	
1108511-019C						3510-SVOA-PR	☐	Walkin-Semi	6
						8270-W	☑	Walkin-Semi	
						8270-W-SIM	☑	Walkin-Semi	
1108511-019D						8260-W	☑	VOCFridge	
1108511-020A	Emigration Cr. Above 2100 E. - Bed				Soil	3546-ORO-PR	☐	Hall-TPH	1
						3546-TPH-PR	☐	Hall-TPH	
						8015-S-ORO	☑	Hall-TPH	
						8015-S-TPH	☑	Hall-TPH	

WORK ORDER Summary

Work Order: **1108511**

Client: EarthFax Engineering

 8/25/2011

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1108511-020B	Emigration Cr. Above 2100 E. - Bed	8/25/2011 1215h	8/25/2011 1345h	9/8/2011	Soil	8260-S	☑	VOCFridge	1
1108511-020C						3546-SVOA-PR	☐	Hall-Semi	2
						8270-S	☑	Hall-Semi	
						8270-S-SIM	☑	Hall-Semi	
						PMOIST	☐	Hall-Semi	
1108511-020D						TS-S-2540B	☐	ww - ts	1
1108511-020E						OUTSIDE LAB	☐	Paragon	
1108511-020F						OUTSIDE LAB	☐	IGES	
1108511-021A	Emigration Cr. Above 2100 E. - Bank					3546-ORO-PR	☐	Hall-TPH	
						3546-TPH-PR	☐	Hall-TPH	
						8015-S-ORO	☑	Hall-TPH	
						8015-S-TPH	☑	Hall-TPH	
1108511-021B						8260-S	☑	VOCFridge	
1108511-021C						3546-SVOA-PR	☐	Hall-Semi	2
						8270-S	☑	Hall-Semi	
						8270-S-SIM	☑	Hall-Semi	
						PMOIST	☐	Hall-Semi	
1108511-021D						TS-S-2540B	☐	ww - ts	1
1108511-021E						OUTSIDE LAB	☐	Paragon	
1108511-021F						OUTSIDE LAB	☐	IGES	
1108511-022A	Emigration Cr. @ Donner Hill Marker	8/25/2011 1300h			Aqueous	3510-TPH-PR	☐	Walkin-DRO	2
						8015-W-TPH(1L)	☑	Walkin-DRO	
1108511-022B						3510-ORO-PR	☐	Walkin-ORO	
						8015-W-ORO(1L)	☐	Walkin-ORO	
1108511-022C						3510-SVOA-PR	☐	Walkin-Semi	6
						8270-W	☑	Walkin-Semi	
						8270-W-SIM	☑	Walkin-Semi	
1108511-022D						8260-W	☑	VOCFridge	
1108511-023A	Emigration Cr. @ Donner Hill Marker - Bed				Soil	3546-ORO-PR	☐	Hall-TPH	1
						3546-TPH-PR	☐	Hall-TPH	

WORK ORDER Summary

Client: EarthFax Engineering

Work Order: 1108511

8/25/2011

Sample ID	Client Sample ID	Collected Date	Received Date	Date Due	Matrix	Test Code	Sel	Storage	
1108511-023A	Emigration Cr. @ Donner Hill Marker - Bed	8/25/2011 1300h	8/25/2011 1345h	9/8/2011	Soil	8015-S-ORO	☑	Hall-TPH	1
						8015-S-TPH	☑	Hall-TPH	
1108511-023B						8260-S	☑	VOCFridge	
1108511-023C						3546-SVOA-PR	☐	Hall-Semi	2
						8270-S	☑	Hall-Semi	
						8270-S-SIM	☑	Hall-Semi	
						PMOIST	☐	Hall-Semi	
1108511-023D						TS-S-2540B	☐	ww - ts	1
1108511-023E						OUTSIDE LAB	☐	Paragon	
1108511-023F						OUTSIDE LAB	☐	IGES	
1108511-024A	Emigration Cr. @ Donner Hill Marker - Bank					3546-ORO-PR	☐	Hall-TPH	
						3546-TPH-PR	☐	Hall-TPH	
						8015-S-ORO	☑	Hall-TPH	
						8015-S-TPH	☑	Hall-TPH	
1108511-024B						8260-S	☑	VOCFridge	
1108511-024C						3546-SVOA-PR	☐	Hall-Semi	2
						8270-S	☑	Hall-Semi	
						8270-S-SIM	☑	Hall-Semi	
						PMOIST	☐	Hall-Semi	
1108511-024D						TS-S-2540B	☐	ww - ts	1
1108511-024E						OUTSIDE LAB	☐	Paragon	
1108511-024F						OUTSIDE LAB	☐	IGES	

Client EARTH FAX ENGINEERING

Address 7324 S UNION PARK AVE STE 100

MIDVALE (City) UT (State) 84047 (Zip)

Phone (801) 561-1555 Fax (801) 561-1861

Contact GALEN WILLIAMS

E-mail gwilliams@earthfax.com

Project Name RED BUTTE

Project Number/P.O.# 1300-02

Sampler Name RB White / TA Jimenez

AMERICAN WEST ANALYTICAL LABORATORIES
463 West 3600 South
Salt Lake City, Utah 84115
(801) 263-8686
(888) 263-8686
Fax (801) 263-8687
Email:awal@awal-labs.com

CHAIN OF CUSTODY

Lab Sample Set # 1108511

Page 1 of 2

Turn Around Time (Circle One)

1 day 2 day 3 day 4 day 5 day (Standard)

	Sample ID	Date/Time Collected	Matrix	Number of Containers (Total)	TPH-DRO	TPH-ORO	BTEX	PAHs	TOC	Grain Size	Total Solids	Moisture	SVOAs w/ TICs	VOAs w/ TICs	COMMENTS
1	Perleys Cr below 1300 E	8/25/11 07:20	W	15	✓	✓	✓	✓					✓	✓	
2*	Perleys Cr below 1300 E - Bed	8/25/11 07:20	S	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3*	Perleys Cr below 1300 E - Bank	8/25/11 07:20	S	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4	Perleys Cr below 1700 E	8/25/11 08:20	W	15	✓	✓	✓	✓					✓	✓	
5*	Perleys Cr below 1700 E - Bed	8/25/11 08:20	S	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
6*	Perleys Cr below 1700 E - Bank	8/25/11 08:20	S	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
7	Perleys Cr above 2000 E	8/25/11 09:00	W	15	✓	✓	✓	✓					✓	✓	
8*	Perleys Cr above 2000 E - Bed	8/25/11 09:00	S	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
9*	Perleys Cr above 2000 E - Bank	8/25/11 09:00	S	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
10	Perleys Cr above I-215	8/25/11 09:50	W	15	✓	✓	✓	✓					✓	✓	
11*	Perleys Cr above I-215 - Bed	8/25/11 09:50	S	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
12*	Perleys Cr above I-215 - Bank	8/25/11 09:50	S	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

TESTS REQUIRED

QC LEVEL: 1 2 2+ 3 3+ 4

Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME: Rich White	Time: 13:45	PRINT NAME: Silma Hajdarpasic	Time: 13:45
Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME	Time	PRINT NAME	Time
Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME	Time	PRINT NAME	Time
Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME	Time	PRINT NAME	Time

Special Instructions:

- TPH-DRO (8015D GC/FID, ext. range)
- TPH-ORO (8015D GC/FID, ext. range)
- BTEX (8260C GC/MS/[redacted] to MDL)
- PAHs (8270D GC/MS/SIM)
- TOC (WALKLEY BLACK)
- GRAIN SIZE (ASTM D422)
- TOTAL SOLIDS (SM 2540B)
- MOISTURE ~~ASTM D2216-10~~ (SM 2540B)
- SVOAs & VOAs (TENTATIVELY IDENTIFIED COMPOUNDS)

* composit samples for VOAs in lab

LABORATORY USE ONLY

SAMPLES WERE:
1 Shipped or hand delivered
Notes:
2 Ambient or (Chilled)
Notes:
3 Temperature 8.0
4 Received Broken/Leaking (Improperly Sealed) Y (N)
Notes:
5 Properly Preserved Y N
Checked at Bench Y N
Notes:
6 Received Within Holding Times Y N
Notes:

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)
Notes:

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CHAIN OF CUSTODY

Lab Sample Set # 1108511

Page 2 of 2

Turn Around Time (Circle One)

1 day 2 day 3 day 4 day 5 day (Standard)

	Sample ID	Date/Time Collected	Matrix	Number of Containers (Total)	TPH-DRO	TPH-ORO	BTEX	PAHs	TOC	Grain Size	Total Solids	Moisture	SVOAs w/ TICs	VOAs w/ TICs	COMMENTS
13	Emigration Cr above 1300 E	8/25/11 10:45	W	15	✓	✓	✓	✓					✓	✓	
14*	Emigration Cr above 1300 E - Bed	8/25/11 10:45	S	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
15*	Emigration Cr above 1300 E - Bank	8/25/11 10:45	S	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
16	Emigration Cr above 1900 E	8/25/11 11:35	W	15	✓	✓	✓	✓					✓	✓	
17*	Emigration Cr above 1900 E - Bed	8/25/11 11:35	S	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
18*	Emigration Cr above 1900 E - Bank	8/25/11 11:35	S	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
19	Emigration Cr above 2100 E	8/25/11 12:15	W	15	✓	✓	✓	✓					✓	✓	
20*	Emigration Cr above 2100 E - Bed	8/25/11 12:15	S	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
21*	Emigration Cr above 2100 E - Bank	8/25/11 12:15	S	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
22	Emigration Cr @ Donner Hill Marker	8/25/11 13:00	W	15	✓	✓	✓	✓					✓	✓	
23*	Emigration Cr @ Donner Hill Marker - Bed	8/25/11 13:00	S	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
24*	Emigration Cr @ Donner Hill Marker - Bank	8/25/11 13:00	S	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

TESTS REQUIRED

QC LEVEL

1 2 2+ 3 3+ 4

Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME: Rich White	Time: 13:45	PRINT NAME: Elma Hayden	Time: 13:45
Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME	Time	PRINT NAME	Time
Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME	Time	PRINT NAME	Time
Relinquished By: Signature	Date	Received By: Signature	Date
PRINT NAME	Time	PRINT NAME	Time

Special Instructions:

TPH-DRO & TPH-ORO (8015D GC/FID ext. range)
BTEX (8260C GC/MS/to MDL)
PAHs (8270D GC/MS/SIM)
TOC (Walkley Black)
Grain Size (ASTM D422)
Total Solids & Moisture (SM 2540B)
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* Composit samples for VOAs in lab

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Notes:
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Notes:
3 Temperature 8.0
4 Received Broken/Leaking (Improperly Sealed) Y (N)
Notes:
5 Properly Preserved (Y) N
Checked at Bench Y N
Notes:
6 Received Within Holding Times (Y) N
Notes:

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)
Notes: