TDI - BROOKS INTERNATIONAL, INC.
B&B Laboratories, Inc.
College Station, TX

Arcadis
Mayflower AR Project
(Contract # B0086003.1302)
July 30, 2013 through August 4, 2013
Collection Dates

Determination of:
Aliphatic Hydrocarbons (ALI), Total Petroleum Hydrocarbons (TPH), and Polycyclic Aromatic Hydrocarbons (PAHs) in Sediment Samples

(QC Batch ENV 3079)

September 11, 2013

Technical Report 13-3096

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Introduction

B&B Laboratories received a shipment of two (2) ice chests that were sent by Daniel Mays of Arcadis using FedEx on July 30, 2013 and arrived on July 31, 2013 in College Station, Texas. The ice chests arrived sealed and in good condition.

Cooler Number	Temperature	Samples Received
1	6.6°C 2.9°C (Temp Blank)	Nineteen (19) sediments in 8oz or 4oz jars Two (2) 1L water samples in B/R amber bottles.
2	4.9°C 3.6°C (Temp Blank)	Nineteen (19) sediments in 8oz or 4oz jars Two (2) 1L water samples in B/R amber bottles.

B&B Laboratories received a shipment of two (2) ice chests that were sent by Daniel Mays of Arcadis using FedEx on July 31, 2013 and arrived on August 1, 2013 in College Station, Texas. The ice chests arrived sealed and in good condition.

Cooler Number	Temperature	Samples Received
1	4.9°C 1.0°C (Temp Blank)	Seven (7) sediments in 8oz or 4oz jars Two (2) 1L water samples in B/R amber bottles.

B&B Laboratories received a shipment of three (3) ice chests that were sent by Daniel Mays of Arcadis using FedEx on August 5, 2013 and arrived on August 6, 2013 in College Station, Texas. The ice chests arrived sealed and in good condition.

Cooler Number	Temperature	Samples Received
1	5.0°C 1.6°C (Temp Blank)	Twenty-one (21) sediments in 8oz or 4oz jars
2	0.2°C 1.2°C (Temp Blank)	Twenty (20) sediments in 8oz or 4oz jars Two (2) 1L water samples in B/R amber bottles.
3	0.0°C 1.1°C (Temp Blank)	Twenty-one (21) sediments in 8oz or 4oz jars Two (2) 1L water samples in B/R amber bottles.

The water and sediment samples were collected between July 29, 2013 and July 31, 2013 in support of the Mayflower AR, Project (Arcadis-US Contract # B0086003.1302). The water samples were logged in according to B&B Laboratories standard operating procedure (B&B 1009) and were stored in an access-controlled refrigerator (4.0°C) prior to analysis. The sediment samples were logged in according to B&B Laboratories standard operating procedure (B&B 1009) and were stored in an access-controlled freezer (<-16.0°C) prior to analysis. Selected sediment samples were analyzed for Total Petroleum Hydrocarbons (TPH) and C_9 to C_{40} Aliphatic Hydrocarbons (ALI) by GC/FID, Polycyclic Aromatic Hydrocarbons (PAH) by GC/MS-SIM, and selected biological markers by GC/MS-SIM.

The analytical results for TPH, ALI, PAH, selected hopane's, and TAS compounds in the sediment samples are included in this report.

Analytical Methods

The standard operating procedures for TPH, ALI, PAH, hopanes, and TAS are listed in Table 1.

Table 1. Standard Operating Procedures for each analytical test.

Matrix	Extraction	ALI/TPH	PAH
Sediment	B&B 1003	B&B 1016	B&B 1006

Data Reporting

The reporting units for each analyte are listed in Table 2. Analytes that are detected below the method detection limit are qualified as "J". Analytes that are detected in the procedural blanks greater than 3X MDL are qualified with a "B". Analytical interference's that are detected in the sample are qualified with an "I". Analytes not detected in the samples are qualified with a "U". The RPD for analytes in duplicate samples that are <3X MDL are qualified with a "X". Spiked levels of analytes in matrix spikes that are <50% of the native levels are considered invalid spikes and are qualified with a "Y". Any QC result reported to be outside the corresponding QC criteria is discussed in the QA/QC variance section of this report. Data Qualifier Definitions are listed in Table 3. The method detection limits (MDL) for each analyte are listed in Table 4.

Table 2. Analytical reporting units.

Matrix	TPH	ALI	PAH
Sediment	µg/dry g	µg/dry g	ng/dry g

Table 3. Data Qualifier Definitions.

Qualifier	Definition
B	Analyte detected in the procedural blank greater than 3X MDL
D	Diluted Value
E	Analyte concentration exceeds the calibration range of the GC/MS for that specific analysis.
I	Analytical interference
J	Analyte detected below the method detection limit
L	Loss due to matrix effect
NA	Not Applicable
U	Analyte not detected
X	Analyte <3X MDL
Y	Spiked level of analyte <50% of the native concentration
*	Outside QA limits, refer to narrative

Table 4. Method Detection Limits.

Aliphatics	**Sediment MDLs**
Sample size	15 g, 1ml final extract volume
Unit of measure	µg/g
n-C9	0.012
n-C10	0.021
n-C11	0.016
n-C12	0.019
n-C13	0.045
i-c15	0.016
n-C14	0.013
i-c16	0.004
n-C15	0.016
n-C16	0.004
i-c18	0.004
n-C17	0.003
Pristane	0.003
n-C18	0.004
Phytane	0.006
n-C19	0.005
n-C20	0.012
n-C21	0.004
n-C22	0.003
n-C23	0.008
n-C24	0.005
n-C25	0.007
n-C26	0.008
n-C27	0.011
n-C28	0.011
n-C29	0.021
n-C30	0.013
n-C31	0.015
n-C32	0.012
n-C33	0.021
n-C34	0.016
n-C35	0.015
n-C36	0.016
n-C37	0.017
n-C38	0.019
n-C39	0.019
n-C40	0.019
Total Petroleum Hydrocarbons	1.4
Total Resolved Hydrocarbons	1.4
Unresolved Complex Mixture	1.4
Extractable Organic Matter	100

Table 4. Continued. Method Detection Limits.

PAH Sample size Unit of measure	**Sediment MDLs** 15.0 g, 1ml final extract volume ng/g
cis/trans Decalin	0.132
C1-Decalins	0.263
C2-Decalins	0.263
C3-Decalins	0.263
C4-Decalins	0.263
Naphthalene	0.342
C1-Naphthalenes	1.03
C2-Naphthalenes	0.684
C3-Naphthalenes	0.684
C4-Naphthalenes	0.684
Benzothiophene	0.090
C1-Benzothiophenes	0.180
C2-Benzothiophenes	0.180
C3-Benzothiophenes	0.180
C4-Benzothiophenes	0.180
Biphenyl	0.294
Acenaphthylene	0.041
Acenaphthene	0.103
Dibenzofuran	0.204
Fluorene	0.183
C1-Fluorenes	0.367
C2-Fluorenes	0.367
C3-Fluorenes	0.367
Carbazole	0.150
Anthracene	0.115
Phenanthrene	0.208
C1-Phenanthrenes/Anthracenes	0.077
C2-Phenanthrenes/Anthracenes	0.285
C3-Phenanthrenes/Anthracenes	0.285
C4-Phenanthrenes/Anthracenes	0.285
Dibenzothiophene	0.116
C1-Dibenzothiophenes	0.064
C2-Dibenzothiophenes	0.232
C3-Dibenzothiophenes	0.232
C4-Dibenzothiophenes	0.232
Fluoranthene	0.333
Pyrene	0.136
C1-Fluoranthenes/Pyrenes	0.469
C2-Fluoranthenes/Pyrenes	0.469
C3-Fluoranthenes/Pyrenes	0.469
C4-Fluoranthenes/Pyrenes	0.469
Naphthobenzothiophene	0.128
C1-Naphthobenzothiophenes	0.256
C2-Naphthobenzothiophenes	0.256
C3-Naphthobenzothiophenes	0.256
C4-Naphthobenzothiophenes	0.256
Benz(a)anthracene	0.192
Chrysene/Triphenylene	0.116
C1-Chrysenes	0.232

PAH (continued) Sample size Unit of measure	**Sediment MDLs** 15.0 g, 1ml final extract volume ng/g
C2-Chrysenes	0.232
C3-Chrysenes	0.232
C4-Chrysenes	0.232
Benzo(b)fluoranthene	0.203
Benzo(k,j)fluoranthene	0.098
Benzo(a)fluoranthene	0.098
Benzo(e)pyrene	0.177
Benzo(a)pyrene	0.101
Perylene	1.27
Indeno(1,2,3-c,d)pyrene	0.050
Dibenzo(a,h)anthracene	0.064
Benzo(g,h,i)perylene	0.088
Individual Alkyl Isomers,TAS, and Hopanes	
2-Methylnaphthalene	1.30
1-Methylnaphthalene	0.546
2,6-Dimethylnaphthalene	0.261
1,6,7-Trimethylnaphthalene	0.127
1-Methylfluorene	0.191
4-Methyldibenzothiophene	0.091
2/3-Methyldibenzothiophene	0.091
1-Methyldibenzothiophene	0.091
3-Methylphenanthrene	0.097
2/4-Methylphenanthrene	0.097
2-Methylanthracene	0.097
9-Methylphenanthrene	0.097
1-Methylphenanthrene	0.097
3,6-Dimethylphenanthrene	0.110
Retene	0.231
2-Methylfluoranthene	0.223
Benzo(b)fluorene	0.125
C29-Hopane	0.575
18a-Oleanane	0.575
C30-Hopane	0.575
C20-TAS	0.575
C21-TAS	0.575
C26(20S)-TAS	0.575
C26(20R)/C27(20S)-TAS	0.575
C28(20S)-TAS	0.575
C27(20R)-TAS	0.575
C28(20R)-TAS	0.575

Quality Assurance/Quality Control - Sediment

Total Petroleum Hydrocarbons (TPH) and Aliphatic Hydrocarbons (ALI)

The quality assurance/quality control procedure for this program included the analyses of a procedural blank, laboratory duplicate, and a matrix spike/matrix spike duplicate per analytical batch of no more than 20 samples. Additionally, a standard reference material (SRM) was analyzed with each data set. The SRM is a petroleum sample (NIST SRM 2779) that is analyzed with each TPH/ALI run and for which controls are established based on performance. Procedural blanks are used to determine that sample preparation and analyses are free of contaminants. The laboratory duplicate sample is used to determine the precision of the analysis. The matrix spike/matrix spike duplicate are used to measure accuracy and precision of the analysis. All QC samples are subject to the identical preparation and analysis steps as samples. The QC criterion for blanks specifies no more than 2 analytes to exceed 3x target MDL unless analyte not detected in associated sample(s) or analyte concentration >10x blank value. The QC criteria for spike recoveries are between 40-120%. The QC criterion for RPDs in valid spiked duplicates is ≤30%. The QA criterion for RPDs for valid laboratory duplicates is ≤30%. The QC criterion for the NIST SRM 2779 is <20% of the laboratory determined mean.

Surrogate solutions equivalent to 5-10X the MDL are prepared for various hydrocarbon analyses. The appropriate surrogate solution is added to every sample including quality control samples. The data are corrected based on surrogate recovery up to 100%. The QC criteria for surrogate recoveries are between 40-120%. Refer to Table 5 for Method Performance Criteria for Aliphatic Hydrocarbons and TPH.

Polycyclic Aromatic Hydrocarbons (PAH)

The quality assurance/quality control procedure for this program included the analyses of a procedural blank, laboratory duplicate, a matrix spike/matrix spike duplicate, and a sediment SRM (NIST SRM 1941b) of no more than 19 samples. A standard reference oil (NIST 2779) was analyzed with this data set. Procedural blanks are used to determine that sample preparation and analyses are free of contaminants. The laboratory duplicate sample is used to determine the precision of the analysis. The matrix spike/matrix spike duplicate is used to measure accuracy and precision of the analysis. A SRM is a material for which a mean and confidence interval are certified for specific analytes. SRMs are selected based on matrix similarities as well as type and level of certified analytes. All SRMs are traceable to NIST. SRMs are used to verify analytical accuracy. All QC samples are subject to the identical preparation and analysis steps as samples. The QC criterion for blanks specifies no more than 2 analytes to exceed 3x target MDL unless analyte not detected in associated sample(s) or analyte concentration >10x blank value. The QC criteria for spike recoveries are between 40-120% (except for Biphenyl which is 40% to 140%, Decalin which is 25% to 120%, and Perylene which is 10-120%). The QC criterion for RPDs for valid spiked duplicates is ≤30%. The QC criterion for RPDs for valid laboratory duplicates is ≤30%. The QC criterion for the reference sediment 1941b SRM is ± 30% the NIST certified concentration range for those compounds whose concentration is greater than the laboratory method detection limit. The QC criterion for the reference oil 2779 SRM is ± 20% the NIST reference range for those compounds whose concentration is greater than the detection limit of10 ng/g.

Surrogate solutions equivalent to 5-10X the MDL are prepared for various hydrocarbon analyses. The appropriate surrogate solution is added to every sample including quality control samples. The data are corrected based on surrogate recovery up to 100%. The QC criteria for surrogate recoveries are between 40-120%, except d12-perylene whose recovery criteria are 10-120%. Refer to Table 6 for Method Performance Criteria for PAH.

Quality Assurance/Quality Control Variances - Sediments

Aliphatic Hydrocarbons (ALI) and Total Petroleum Hydrocarbons (TPH)

Initial Calibration (Six Point)

Observation

- No variances were observed.

Initial Calibration Verification

Observation

- No variances were observed.

Mass Discrimination Ratio

Observation

- No variances were observed.

Internal Standard Area Response

Observation

- No variances were observed.

Continuing Calibration Checks

Observation

- No variances were observed.

Surrogate Recoveries

Observation

- No variances were observed.

Procedural Blank

Observation

- No variances were observed.

Matrix Spike/Matrix Spike Duplicate

Observation

- No variances were observed.

Laboratory Duplicate

Observation

- No variances were observed.

Laboratory Control Standard (Petroleum)

Observation

- No variances were observed.

Additional QC Batch Information

Observation

- No variances were observed.

Polycyclic Aromatic Hydrocarbons (PAH)

Initial Calibration (Six Point)

Observation

- No variances were observed.

Initial Calibration Verification

Observation

- No variances were observed.

Mass Discrimination Ratio

Observation

- No variances were observed.

Internal Standard Area Response

Observation

- No variances were observed.

Continuing Calibration Checks

Observation

- No variances were observed.

Surrogate Recoveries

Observation

- d12-Perylene was detected outside of the QC% recovery limits of 10 to 120% in seven (7) client submitted samples and three (3) internal QC samples (which used client submitted samples; MS, MSD, and Duplicate).

Comment

- The recovery of this surrogate outside the QC limits is due to a matrix effect and is qualified with an "L" when appropriate.

Procedural Blank

Observation

- No variances were observed.

Matrix Spike/Matrix Spike Duplicate

Observation

- Carbazole, Benzo(a)pyrene and Perylene were detected outside of the QC %recovery limits of 40% to 120% in ENV3079C MS (SED-DA-008 (0-0.5) MS/MSD)). Carbazole, Benzo(a)pyrene, Benzo(g,h,i)Perylene, and Perylene were detected outside of the QC %recovery limits of 40% to 120% in ENV3079D MSD (SED-DA-008 (0-0.5) MS/MSD)).

Comment

- The poor recovery of analytes outside the QC limits is due to a matrix effect in the sediment samples. These analytes are qualified with an "L".

Laboratory Duplicate

Observation

- No variances were observed.

Laboratory Control Standard (Solution, Sediment, and Petroleum)

Observation

- 2-Methylphenanthrene was detected outside of the certified concentration limits of ±20% in MS60141K (AR-SRM2779-WK-4.0-002).

Comment

- It is unknown as to why this analyte was detected outside of the certified concentration limits of ±20% in the reference oil material.

Additional QC Batch Information

Observation

- When d-12 Perylene was detected below the lower QC recovery limit of 10%, Carbazole, Anthracene, Benzo(a)pyrene, Benzo(g,h,i)Perylene, and Perylene were qualified with an "L" due to the matrix effect. Unless these compounds were non-detects ("U" qualified") the "L" qualifier was not applied.

- The concentrations reported for the C1-Naphthalenes, C1-Dibenzothiophenes, and the C1-Phenanthrene/Anthracenes are calculated using the RRF of the parent compound (Naphthalene, Dibenzothiophene, and Phenanthrene). The concentration of these individual isomers is based on their RRF or an individual isomer from the same family.

- Labeling of Perylene outside of the calibration range of the GC/MS with an "E" code was made in consultation with Dr. Ted Sauer.

- Labeling of d12- Perylene outside of the laboratory recovery limits is labeled with the "L" qualifier to indicate a loss due to matrix effect was made in consultation with Dr. Ted Sauer.

Table 5. Method Performance Criteria for Alkanes/Isoprenoids Compounds and Total Petroleum Hydrocarbons

Element or Sample Type	Minimum Frequency	Measurement Quality Objective/ Acceptance Criteria	Corrective Action
Initial Calibration (all target analytes, except i-C13, i-C14, i-C15 and i-C18)	Prior to every sequence, or as needed based on continuing calibration/verification check.	6-point calibration curve %RSD ≤ 15	Resolve before proceeding.
Continuing Calibration Verification (CCV)	Every 12 hours or every 10 field samples, whichever is more frequent	%D ≤ 25	Perform Instrument Maintenance. Re-analyze affected samples.
Initial Calibration Verification (Second Source or can be met if CCAL is second source)	Per initial calibration	%R target analytes 80-120%	Resolve before proceeding.
SRM 2779 Reference Oil (Instrument SRM)	One per batch per GC sequence	Baseline resolution of n-C17 from pristane and analytes must be <20% of laboratory derived mean	Resolve before proceeding.
Performance Evaluation Mixture (PEM)	One per batch per GC sequence	%R 75-125%	Resolve before proceeding.
Matrix Spike/Matrix Spike Duplicate (Sediments, Soils, Tissues only)	One per batch/every 20 field samples	%R 40% - 120% for target analytes; average %R 60-120% for valid spikes, RPD ≤30%. No more than 2 analytes may exceed 40-120%	Evaluate impact to data, discuss with manager to determine if corrective action is needed.
Blank Spike/Blank Spike Duplicate	One per batch/every 20 field samples	%R 40% - 120% for target analytes; RPD ≤30%. No more than 2 analytes may exceed 40-120%	Evaluate impact to data, discuss with lab manager to determine if corrective action is needed.
Procedural Blank	One per batch/every 20 field samples	No more than 2 analytes to exceed 3x MDL unless analyte not detected in associated sample(s) or analyte concentration >10x blank value	Resolve before proceeding. QA coordinator may be contacted to resolve issues.
Laboratory Duplicate (not required for aqueous samples)	One per batch/every 20 field samples	RPD ≤ 30% if analyte concentration is 3x greater than the MDL, no more than 2 individual analyte RPDs with conc. 3x MDL can exceed 35%.	Evaluate impact to data, discuss with lab manager to determine if corrective action is needed.
Mass Discrimination	Initial calibration and CCVs (mid-level)	Ratio for the raw areas of n-C36 / n-C20 ≥0.70	Resolve before proceeding.
Internal Standard (IS)	Every sample	50% - 200% of the area of the IS in the associated calibration standard	Resolve before proceeding.
Surrogates	Every sample	%R 40-120%	Re-extract affected samples. Evaluate impact to data, discuss with lab manager to determine if corrective action is needed.

Table 6. Method Performance Criteria for Extended PAH (Parent and Alkyl Homologs) and Related Compounds.

Element or Sample Type	Minimum Frequency	Measurement Quality Objective/ Acceptance Criteria	Corrective Action
Tuning	Prior to every sequence	Tune as specified in laboratory SOP	Resolve before proceeding.
Initial Calibration (All parent PAH and selected alkyl homologue PAH)	Prior to every sequence, or as needed based on continuing calibration/verification check.	6-point calibration curve over two orders of magnitude RPD ≤ 20%	Resolve before proceeding.
Continuing Calibration Verification (CCV)	Every 12 hours or 6-9 field samples	RPD ≤ 25%, No more than 2 analytes can be between 25% and 35% RPD.	Perform instrument maintenance. Re-analyze affected samples.
Initial Calibration Verification (Second Source or can be met if CCV is second source)	Per initial calibration	%R target analytes 80-120%	Resolve before proceeding.
SRM 1941b for sediment; SRM 1974c for tissue If available use SRMs for appropriate matrices	One per batch/every 20 field samples	Within ±30% of NIST 95% uncertainty range for analytes within the quantitation range. No more than 2 analytes may exceed this criterion.	Resolve before proceeding.
SRM 2779 Reference Oil	One per batch/every 20 field samples	Peak resolution >70% of 4/9-methylphenanthrene from 1-methylphenanthrene (m/z 192). Within ±20% of NIST 95% uncertainty range for analytes within the quantitation range. No more than 2 analytes may exceed this criterion.	Resolve before proceeding.
Matrix Spike/Matrix Spike Duplicate (Sediments, Soils, Tissues only)	One per batch/every 20 field samples	%R 40% - 120% for target analytes, except biphenyl (40-140%), decalin (25-120%) and perylene (10-120%); RPD ≤30%, average %R 60-120% for valid spikes. No more than 2 analytes may exceed 40-120% recovery or >35% RPD.	Evaluate impact to data, discuss with lab manager to determine if corrective action is needed.
Blank Spike/Blank Spike Duplicate	One per batch/every 20 field samples	See MS/MSD criteria above.	Evaluate impact to data, discuss with lab manager to determine if corrective action is needed.
Procedural Blank	One per batch/every 20 field samples	No more than 2 analytes to exceed 3x target MDL unless analyte not detected in associated sample(s) or analyte concentration >10x blank value	Resolve before proceeding. Lab manager may be contacted to resolve issues.
Laboratory Duplicate (not required for aqueous samples)	One per batch/every 20 field samples	RPD ≤ 30% if analyte concentration is 3x greater than the MDL, no more than 2 individual analyte RPDs with conc. 3x MDL can exceed 35%.	Evaluate impact to data, discuss with lab manager, and determine if corrective action is needed.

Table 6. Continued. Method Performance Criteria for Extended PAH (Parent and Alkyl Homologs) and Related Compounds.

Element or Sample Type	Minimum Frequency	Measurement Quality Objective/ Acceptance Criteria	Corrective Action
Mass Discrimination	Initial calibration and CCVs (mid-level)	Ratio for the concentration of Benzo[g,h,i]perylene to phenanthrene ≥0.70	Resolve before proceeding.
Internal Standard (IS)	Every sample	50% - 200% of the area of the IS in the associated calibration standard	Resolve before proceeding.
Surrogates	Every sample	%R 40-120% except d12-perylene which is 10-120%	Re-extract affected samples. Evaluate impact to data, discuss with lab manager, if corrective action is needed.

We appreciate the opportunity to serve your analytical needs and please do not hesitate to contact us should you have any questions.

Juan A. Ramirez
Environmental Laboratory Manager

Donell S. Frank
Project Quality Manager

Sample/Analyses Description

B&B Laboratories
Project J13034
Report 13-3096

Arcadis - Mayflower AR
Sample Inventory

Client Project #B0086003.1302

#	File Number	Client Identification	Collection Date	Received Date	Analysis	Matrix	Comments	B&B SDG	Client Project #
1	ARC1602	SED-DA-BG-007 (0-0.5)	07/30/13	07/31/13	PAH, TPH, ALI	Sediment		13073101	B0086003.1302
2	ARC1603	SED-DA-DUP-02-073013	07/30/13	07/31/13	PAH, TPH, ALI	Sediment	no wet sample remaining	13073101	B0086003.1302
3	ARC1611	SED-DA-BG-011 (0-0.5)	07/31/13	08/01/13	PAH, TPH, ALI	Sediment		13080101	B0086003.1302
4	ARC1612	SED-DA-BG-010 (0-0.5)	07/31/13	08/01/13	PAH, TPH, ALI	Sediment		13080101	B0086003.1302
5	ARC1616	SED-DA-DUP-03-073113	07/31/13	08/01/13	PAH, TPH, ALI	Sediment		13080101	B0086003.1302
6	ARC1617	SED-DA-BG-009 (0-0.5)	07/31/13	08/01/13	PAH, TPH, ALI	Sediment		13080101	B0086003.1302
7	ARC1633	SED-DA-009 (0-0.5)	08/02/13	08/06/13	PAH, TPH, ALI	Sediment		13080601	B0086003.1302
8	ARC1634	SED-DA-008 (0-0.5)	08/03/13	08/06/13	PAH, TPH, ALI	Sediment		13080601	B0086003.1302
9	ARC1635	SED-DA-008 (0-0.5) MS/MSD	08/03/13	08/06/13	PAH, TPH, ALI	Sediment	1 of 2	13080601	B0086003.1302
10	ARC1637	SED-DA-007 (0-0.5)	08/03/13	08/06/13	PAH, TPH, ALI	Sediment		13080601	B0086003.1302
11	ARC1638	SED-DA-006 (0-0.5)	08/03/13	08/06/13	PAH, TPH, ALI	Sediment		13080601	B0086003.1302
12	ARC1639	SED-DA-005 (0-0.5)	08/03/13	08/06/13	PAH, TPH, ALI	Sediment		13080601	B0086003.1302
13	ARC1640	SED-DA-010 (0-0.5)	08/03/13	08/06/13	PAH, TPH, ALI	Sediment		13080601	B0086003.1302
14	ARC1645	SED-DA-BG-004 (0-0.5)	08/04/13	08/06/13	PAH, TPH, ALI	Sediment		13080601	B0086003.1302
15	ARC1646	SED-DA-BG-005 (0-0.5)	08/04/13	08/06/13	PAH, TPH, ALI	Sediment		13080601	B0086003.1302
16	ARC1647	SED-DA-BG-006 (0-0.5)	08/04/13	08/06/13	PAH, TPH, ALI	Sediment		13080601	B0086003.1302
17	ARC1653	SED-DA-DUP-04-080313	08/03/13	08/06/13	PAH, TPH, ALI	Sediment	not listed on COC	13080601	B0086003.1302

Sediment Samples

Aliphatic Hydrocarbons (C9 – C40)/ Total Petroleum Hydrocarbons/ Extractable Organic Matter Concentrations

Arcadis-Mayflower AR
Aliphatic Hydrocarbon and Total Petroleum Hydrocarbon Data
Client Submitted Samples

Sample Name	ARC1602.D	ARC1603.D	ARC1611 D	ARC1612.D
Client Name	SED-DA-BG-007 (0-0.5)	SED-DA-DUP-02-073013	SED-DA-BG-011 (0-0.5)	SED-DA-BG-010 (0-0.5)
Matrix	Sediment	Sediment	Sediment	Sediment
Collection Date	07/30/13	07/30/13	07/31/13	07/31/13
Received Date	07/31/13	07/31/13	08/01/13	08/01/13
Extraction Date	08/12/13	08/12/13	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079	ENV 3079	ENV 3079
Date Acquired	16-Aug-2013, 08:04:24	16-Aug-2013, 10:26:04	16-Aug-2013, 11:36:47	16-Aug-2013, 12:47:23
Method	ALI2012.M	ALI2012.M	ALI2012.M	ALI2012.M
Sample Dry Weight (g)	15.0	15.0	15.0	15.0
Sample Wet Weight (g)	31.6	120.2	27.0	26.1
% Dry	47	13	56	58
% Moisture	53	88	44	42
% Lipid (dry)	NA	NA	NA	NA
% Lipid (wet)	NA	NA	NA	NA
Dilution	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q
n-C9	<0.012	U	<0.012	U	<0.012	U	<0.012	U
n-C10	<0.021	U	0.015	J	0.021	J	0.025	
n-C11	0.017		0.030		0.027		0.030	
n-C12	0.087		0.066		0.110		0.077	
n-C13	0.043	J	0.060		0.054		0.050	
i-C15	0.017		0.041		0.022		0.029	
n-C14	0.094		0.128		0.073		0.069	
i-C16	0.044		0.138		0.010		0.024	
n-C15	0.262		0.860		0.212		0.178	
n-C16	0.206		0.206		0.205		0.159	
i-C18	0.030		0.087		0.078		0.085	
n-C17	0.630		0.442		0.512		0.330	
Pristane	0.138		0.570		0.258		0.254	
n-C18	0.710		1.985		0.623		0.511	
Phytane	0.185		0.849		0.367		0.353	
n-C19	0.900		1.811		0.358		0.465	
n-C20	0.280		0.466		0.113		0.111	
n-C21	2.501		5.189		0.878		0.770	
n-C22	0.242		0.643		0.144		0.109	
n-C23	1.492		6.179		0.419		0.360	
n-C24	0.428		1.226		0.202		0.157	
n-C25	1.453		6.543		0.692		0.721	
n-C26	0.421		0.631		0.236		0.192	
n-C27	2.912		7.425		1.725		1.512	
n-C28	0.862		0.725		0.619		0.558	
n-C29	4.426		8.765		1.556		3.522	
n-C30	0.444		0.417		0.474		0.403	
n-C31	3.698		11.120		1.687		3.137	
n-C32	0.360		1.141		0.388		0.291	
n-C33	1.833		8.700		1.817		1.991	
n-C34	0.079		1.184		0.226		0.074	
n-C35	1.116		9.146		1.801		1.737	
n-C36	0.125		0.806		0.382		0.209	
n-C37	1.011		2.642		1.553		0.974	
n-C38	0.124		0.655		0.140		0.086	
n-C39	0.172		1.641		0.252		0.127	
n-C40	<0.019	U	<0.019	U	0.238		0.151	
Total Alkanes	27.3		82.5		18.5		19.8	
Total Petroleum Hydrocarbons	467		1774		853		802	
Total Resolved Hydrocarbons	218		940		196		165	
Unresolved Complex Mixture	249		834		657		637	
EOM (µg/dry g)	1660		6627		1930		1813	

Surrogate (Su)	Su Recovery (%)	Su Recovery (%)	Su Recovery (%)	Su Recovery (%)
n-dodecane-d26	87	84	84	85
n-eicosane-d42	91	88	92	88
n-triacontane-d62	84	83	91	85

Arcadis-Mayflower AR
Aliphatic Hydrocarbon and Total Petroleum Hydrocarbon Data
Client Submitted Samples

Sample Name	ARC1616.D	ARC1617.D	ARC1633.D	ARC1634.D
Client Name	SED-DA-DUP-03-073113	SED-DA-BG-009 (0-0.5)	SED-DA-009 (0-0.5)	SED-DA-008 (0-0.5)
Matrix	Sediment	Sediment	Sediment	Sediment
Collection Date	07/31/13	07/31/13	08/02/13	08/03/13
Received Date	08/01/13	08/01/13	08/06/13	08/06/13
Extraction Date	08/12/13	08/12/13	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079	ENV 3079	ENV 3079
Date Acquired	16-Aug-2013, 13:58:00	16-Aug-2013, 15:08:47	16-Aug-2013, 16:19:32	16-Aug-2013, 17:30:16
Method	ALI2012.M	ALI2012.M	ALI2012.M	ALI2012.M
Sample Dry Weight (g)	15.1	15.1	15.0	15.2
Sample Wet Weight (g)	25.7	26.9	18.6	18.0
% Dry	59	56	81	84
% Moisture	41	44	19	16
% Lipid (dry)	NA	NA	NA	NA
% Lipid (wet)	NA	NA	NA	NA
Dilution	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q
n-C9	<0.012	U	<0.012	U	<0.012	U	<0.012	U
n-C10	0.011	J	0.009	J	<0.021	U	<0.021	U
n-C11	0.016	J	0.016	J	<0.016	U	<0.016	U
n-C12	0.056		0.052		0.007	J	0.009	J
n-C13	0.020	J	0.018	J	0.002	J	0.002	J
i-C15	0.011	J	0.010	J	<0.016	U	<0.016	U
n-C14	0.036		0.037		0.004	J	0.004	J
i-C16	0.046		0.007		<0.004	U	<0.004	U
n-C15	0.112		0.109		0.003	J	0.020	
n-C16	0.090		0.085		0.008		0.010	
i-C18	0.020		0.013		<0.004	U	<0.004	U
n-C17	0.221		0.226		0.005		0.008	
Pristane	0.026		0.071		0.005		0.005	
n-C18	0.340		0.347		0.016		0.011	
Phytane	0.080		0.080		0.003	J	0.003	J
n-C19	0.389		0.349		0.010		0.010	
n-C20	0.098		0.099		0.002	J	0.003	J
n-C21	0.805		1.071		0.010		0.010	
n-C22	0.095		0.103		0.005		0.006	
n-C23	0.744		0.833		0.011		0.010	
n-C24	0.310		0.318		0.009		0.010	
n-C25	0.750		0.831		0.017		0.016	
n-C26	0.173		0.186		0.010		0.010	
n-C27	1.477		1.597		0.026		0.047	
n-C28	0.419		0.314		0.012		0.011	J
n-C29	2.959		2.964		0.091		0.069	
n-C30	0.363		0.355		0.012	J	0.009	J
n-C31	1.783		2.019		0.050		0.043	
n-C32	0.222		0.176		0.006	J	0.008	J
n-C33	1.092		1.177		0.048		0.034	
n-C34	0.072		0.112		0.003	J	0.003	J
n-C35	0.999		1.062		<0.015	U	<0.015	U
n-C36	0.103		0.148		<0.016	U	<0.016	U
n-C37	0.820		0.889		<0.017	U	<0.017	U
n-C38	0.096		0.110		<0.019	U	<0.019	U
n-C39	0.089		0.093		<0.019	U	<0.019	U
n-C40	<0.019	U	<0.019	U	<0.019	U	<0.019	U
Total Alkanes	14.9		15.9		0.4		0.4	
Total Petroleum Hydrocarbons	301		300		51		29	
Total Resolved Hydrocarbons	140		140		14		14	
Unresolved Complex Mixture	161		160		37		15	
EOM (µg/dry g)	837		799		64	J	49	J

Surrogate (Su)	Su Recovery (%)	Su Recovery (%)	Su Recovery (%)	Su Recovery (%)
n-dodecane-d26	80	84	81	82
n-eicosane-d42	92	90	97	93
n-triacontane-d62	94	96	97	92

Arcadis-Mayflower AR
Aliphatic Hydrocarbon and Total Petroleum Hydrocarbon Data
Client Submitted Samples

Sample Name	ARC1637.D	ARC1638.D	ARC1639.D	ARC1640.D
Client Name	SED-DA-007 (0-0.5)	SED-DA-006 (0-0.5)	SED-DA-005 (0-0.5)	SED-DA-010 (0-0.5)
Matrix	Sediment	Sediment	Sediment	Sediment
Collection Date	08/03/13	08/03/13	08/03/13	08/03/13
Received Date	08/06/13	08/06/13	08/06/13	08/06/13
Extraction Date	08/12/13	08/12/13	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079	ENV 3079	ENV 3079
Date Acquired	16-Aug-2013, 18:40:48	16-Aug-2013, 19:51:56	16-Aug-2013, 22:12:59	16-Aug-2013, 23:23:32
Method	ALI2012.M	ALI2012.M	ALI2012.M	ALI2012.M
Sample Dry Weight (g)	15.1	15.1	15.2	15.2
Sample Wet Weight (g)	18.3	19.9	18.1	18.0
% Dry	83	84	84	84
% Moisture	17	16	16	16
% Lipid (dry)	NA	NA	NA	NA
% Lipid (wet)	NA	NA	NA	NA
Dilution	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q
n-C9	<0.012	U	<0.012	U	<0.012	U	<0.012	U
n-C10	0.003	J	<0.021	U	0.004	J	<0.021	U
n-C11	0.002	J	<0.016	U	0.002	J	0.004	J
n-C12	0.012	J	0.009	J	0.017	J	0.018	J
n-C13	0.006	J	0.004	J	0.012	J	0.008	J
i-C15	0.009	J	<0.016	U	<0.016	U	<0.016	U
n-C14	0.017		0.007	J	0.025		0.015	
i-C16	0.009		<0.004	U	<0.004	U	<0.004	U
n-C15	0.016	J	0.005	J	0.021		0.012	J
n-C16	0.022		0.010		0.030		0.020	
i-C18	0.024		<0.004	U	<0.004	U	<0.004	U
n-C17	0.025		0.004		0.025		0.018	
Pristane	0.052		0.003	J	0.039		0.017	
n-C18	0.041		0.008		0.030		0.029	
Phytane	0.069		0.003	J	0.046		0.021	
n-C19	0.039		0.004	J	0.024		0.019	
n-C20	0.021		0.003	J	0.018		0.006	J
n-C21	0.022		0.004	J	0.016		0.018	
n-C22	0.021		0.005		0.013		0.007	
n-C23	0.027		0.008	J	0.018		0.019	
n-C24	0.028		0.007		0.025		0.012	
n-C25	0.035		0.013		0.031		0.028	
n-C26	0.018		0.007	J	0.017		0.012	
n-C27	0.052		0.022		0.042		0.058	
n-C28	0.021		0.006	J	0.023		0.025	
n-C29	0.117		0.026		0.120		0.203	
n-C30	0.027		0.005	J	0.026		0.015	
n-C31	0.115		0.013	J	0.181		0.179	
n-C32	0.014		0.002	J	0.013		0.018	
n-C33	0.079		<0.021	U	0.112		0.176	
n-C34	0.007	J	<0.016	U	0.007	J	0.005	J
n-C35	<0.015	U	<0.015	U	<0.015	U	0.042	
n-C36	<0.016	U	<0.016	U	<0.016	U	<0.016	U
n-C37	<0.017	U	<0.017	U	<0.017	U	<0.017	U
n-C38	<0.019	U	<0.019	U	<0.019	U	<0.019	U
n-C39	<0.019	U	<0.019	U	<0.019	U	<0.019	U
n-C40	<0.019	U	<0.019	U	<0.019	U	<0.019	U
Total Alkanes	1.0		0.2		0.9		1.0	
Total Petroleum Hydrocarbons	69		10		59		54	
Total Resolved Hydrocarbons	26		3		11		8	
Unresolved Complex Mixture	43		7		48		45	
EOM (µg/dry g)	121		28	J	103		75	J

Surrogate (Su)	Su Recovery (%)	Su Recovery (%)	Su Recovery (%)	Su Recovery (%)
n-dodecane-d26	88	89	89	83
n-eicosane-d42	95	97	98	95
n-triacontane-d62	98	93	99	96

Arcadis-Mayflower AR
Aliphatic Hydrocarbon and Total Petroleum Hydrocarbon Data
Client Submitted Samples

Sample Name	ARC1645.D	ARC1646.D	ARC1647.D	ARC1653.D
Client Name	SED-DA-BG-004 (0-0.5)	SED-DA-BG-005 (0-0.5)	SED-DA-BG-006 (0-0.5)	SED-DA-DUP-04-080313
Matrix	Sediment	Sediment	Sediment	Sediment
Collection Date	08/04/13	08/04/13	08/04/13	08/03/13
Received Date	08/06/13	08/06/13	08/06/13	08/06/13
Extraction Date	08/12/13	08/12/13	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079	ENV 3079	ENV 3079
Date Acquired	17-Aug-2013, 00:34:15	17-Aug-2013, 01:44:48	17-Aug-2013, 14:53:02	17-Aug-2013, 16:03:37
Method	ALI2012.M	ALI2012.M	ALI2012.M	ALI2012.M
Sample Dry Weight (g)	15.1	15.0	15.1	15.2
Sample Wet Weight (g)	21.7	18.8	19.8	19.6
% Dry	70	80	79	78
% Moisture	30	20	21	22
% Lipid (dry)	NA	NA	NA	NA
% Lipid (wet)	NA	NA	NA	NA
Dilution	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q
n-C9	<0.012	U	<0.012	U	<0.012	U	<0.012	U
n-C10	0.019	J	<0.021	U	<0.021	U	<0.021	U
n-C11	0.023		0.006	J	0.006	J	0.007	J
n-C12	0.019		0.024		0.023		0.021	
n-C13	0.014	J	0.017	J	0.021	J	0.029	J
i-C15	0.008	J	0.009	J	0.010	J	0.113	
n-C14	0.017		0.029		0.041		0.090	
i-C16	0.006		0.008		0.003	J	0.075	
n-C15	0.071		0.023		0.030		0.100	
n-C16	0.021		0.032		0.048		0.152	
i-C18	0.009		0.007		0.009		0.253	
n-C17	0.072		0.045		0.020		0.207	
Pristane	0.103		0.009		0.020		0.417	
n-C18	0.269		0.047		0.041		0.228	
Phytane	0.047		0.004	J	0.009		0.483	
n-C19	0.013		0.032		0.014		0.183	
n-C20	0.009	J	0.008	J	0.009	J	0.139	
n-C21	0.234		0.021		0.013		0.160	
n-C22	0.044		0.012		0.010		0.123	
n-C23	0.191		0.029		0.017		0.140	
n-C24	0.063		0.020		0.013		0.146	
n-C25	0.367		0.045		0.030		0.160	
n-C26	0.189		0.029		0.014		0.098	
n-C27	0.493		0.085		0.049		0.229	
n-C28	0.258		0.040		0.008	J	0.121	
n-C29	0.874		0.180		0.048		0.655	
n-C30	0.155		0.025		0.007	J	0.193	
n-C31	1.229		0.177		0.042		0.844	
n-C32	0.129		0.007	J	0.005	J	0.064	
n-C33	1.130		0.120		0.034		1.122	
n-C34	0.112		0.004	J	0.001	J	0.068	
n-C35	0.542		0.113		0.030		0.311	
n-C36	0.096		0.002	J	<0.016	U	0.068	
n-C37	0.261		0.069		<0.017	U	0.141	
n-C38	0.070		<0.019	U	<0.019	U	<0.019	U
n-C39	0.177		<0.019	U	<0.019	U	<0.019	U
n-C40	0.142		<0.019	U	<0.019	U	<0.019	U
Total Alkanes	7.5		1.3		0.6		7.1	
Total Petroleum Hydrocarbons	313		62		15		293	
Total Resolved Hydrocarbons	106		17		12		81	
Unresolved Complex Mixture	207		45		3		212	
EOM (µg/dry g)	1074		104		36	J	746	

Surrogate (Su)	Su Recovery (%)	Su Recovery (%)	Su Recovery (%)	Su Recovery (%)
n-dodecane-d26	87	85	77	87
n-eicosane-d42	98	97	86	87
n-triacontane-d62	96	96	84	93

Arcadis-Mayflower AR
Aliphatic Hydrocarbon and Total Petroleum Hydrocarbon Data
Procedural Blank Report

Sample Name	ENV3079A.D
Client Name	Procedural Blank
Matrix	Sediment
Collection Date	NA
Received Date	NA
Extraction Date	08/12/13
Extraction Batch	ENV 3079
Date Acquired	16-Aug-2013, 03:21:21
Method	ALI2012.M
Sample Dry Weight (g)	15.0
Sample Wet Weight (g)	NA
% Dry	NA
% Moisture	NA
% Lipid (dry)	NA
% Lipid (wet)	NA
Dilution	1X

Target Compounds	Su. Corrected Conc. (µg/dry g)	Q	Q	3X MDL Conc. (µg/dry g)	Actual MDL Conc. (µg/dry g)
n-C9	<0.012	U		0.037	0.012
n-C10	<0.021	U		0.064	0.021
n-C11	<0.016	U		0.049	0.016
n-C12	<0.019	U		0.056	0.019
n-C13	<0.045	U		0.134	0.045
i-C15	<0.016	U		0.049	0.016
n-C14	<0.013	U		0.039	0.013
i-C16	<0.004	U		0.013	0.004
n-C15	<0.016	U		0.049	0.016
n-C16	<0.004	U		0.013	0.004
i-C18	<0.004	U		0.011	0.004
n-C17	<0.003	U		0.010	0.003
Pristane	<0.003	U		0.008	0.003
n-C18	<0.004	U		0.011	0.004
Phytane	<0.006	U		0.018	0.006
n-C19	<0.005	U		0.015	0.005
n-C20	<0.012	U		0.037	0.012
n-C21	<0.004	U		0.012	0.004
n-C22	<0.003	U		0.010	0.003
n-C23	<0.008	U		0.024	0.008
n-C24	<0.005	U		0.016	0.005
n-C25	<0.007	U		0.021	0.007
n-C26	<0.008	U		0.023	0.008
n-C27	<0.011	U		0.032	0.011
n-C28	<0.011	U		0.033	0.011
n-C29	<0.021	U		0.064	0.021
n-C30	<0.013	U		0.038	0.013
n-C31	<0.015	U		0.044	0.015
n-C32	<0.012	U		0.035	0.012
n-C33	<0.021	U		0.064	0.021
n-C34	<0.016	U		0.049	0.016
n-C35	<0.015	U		0.044	0.015
n-C36	<0.016	U		0.047	0.016
n-C37	<0.017	U		0.052	0.017
n-C38	<0.019	U		0.057	0.019
n-C39	<0.019	U		0.056	0.019
n-C40	<0.019	U		0.056	0.019
Total Alkanes		U			
Total Petroleum Hydrocarbons	<1.4	U		4.20	1.40
Total Resolved Hydrocarbons	<1.4	U		4.20	1.40
Unresolved Complex Mixture	<1.4	U		4.20	1.40
EOM (µg/dry g)	<100	U		300	100

Surrogate (Su)	Su Recovery (%)
n-dodecane-d26	92
n-eicosane-d42	96
n-triacontane-d62	98

Arcadis-Mayflower AR
Aliphatic Hydrocarbon and Total Petroleum Hydrocarbon Data
Matrix Spike Report

Sample Name	ARC1634.D	ENV3079C.D	ENV3079D.D
Client Name	SED-DA-008 (0-0.5)	MS (SED-DA-008 (0-0.5))	MSD (SED-DA-008 (0-0.5))
Matrix	Sediment	Sediment	Sediment
Collection Date	08/03/13	08/03/13	08/03/13
Received Date	08/06/13	08/06/13	08/06/13
Extraction Date	08/12/13	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079	ENV 3079
Date Acquired	16-Aug-2013, 17:30:16	16-Aug-2013, 04:32:05	16-Aug-2013, 05:42:46
Method	ALI2012.M	ALI2012.M	ALI2012.M
Sample Dry Weight (g)	15.2	15.0	15.1
Sample Wet Weight (g)	18.0	17.9	18.0
% Dry	84	84	84
% Moisture	16	16	16
% Lipid (dry)	NA	NA	NA
% Lipid (wet)	NA	NA	NA
Dilution	1X	1X	1X

Target Compounds	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q	Recovery (%)	Q	Q	Su. Corrected Conc. (µg/dry g)	Q	Recovery (%)	Q	Q	RPD (%)	Q	Spike Amount (µg)
n-C9	<0.012	U	0.489		74			0.480		73			2		9.95
n-C10	<0.021	U	0.570		86			0.540		81			5		10.0
n-C11	<0.016	U	0.606		92			0.580		88			4		9.90
n-C12	0.009	J	0.620		92			0.594		88			4		10.0
n-C13	0.002	J	0.640		96			0.622		94			3		10.0
i-C15	<0.016	U	NA					NA							
n-C14	0.004	J	0.653		99			0.637		97			2		9.86
i-C16	<0.004	U	NA					NA							
n-C15	0.020		0.677		99			0.666		98			2		9.98
n-C16	0.010		0.687		102			0.683		102			1		10.0
i-C18	<0.004	U	NA					NA							
n-C17	0.008		0.689		103			0.687		103			0		9.94
Pristane	0.005		0.671		101			0.663		100			1		9.90
n-C18	0.011		0.696		103			0.688		102			1		10.0
Phytane	0.003	J	0.684		103			0.676		102			1		9.91
n-C19	0.010		0.706		105			0.694		104			2		10.0
n-C20	0.003	J	0.701		105			0.693		104			1		10.0
n-C21	0.010		0.697		103			0.700		104			0		10.0
n-C22	0.006		0.707		106			0.706		106			0		9.95
n-C23	0.010		0.706		105			0.700		105			1		9.91
n-C24	0.010		0.703		104			0.698		104			1		10.0
n-C25	0.016		0.716		105			0.711		105			1		10.0
n-C26	0.010		0.708		105			0.703		105			1		10.0
n-C27	0.047		0.743		106			0.746		107			0		9.89
n-C28	0.011	J	0.721		106			0.713		106			1		10.0
n-C29	0.069		0.796		109			0.780		107			2		10.0
n-C30	0.009	J	0.691		103			0.681		102			1		10.0
n-C31	0.043		0.734		104			0.727		103			1		10.0
n-C32	0.008	J	0.675		100			0.664		99			2		10.0
n-C33	0.034		0.815		117			0.753		108			8		10.0
n-C34	0.003	J	0.690		103			0.662		99			4		10.0
n-C35	<0.015	U	0.695		104			0.680		102			2		10.0
n-C36	<0.016	U	0.652		99			0.632		96			3		9.90
n-C37	<0.017	U	0.668		100			0.648		98			3		10.0
n-C38	<0.019	U	0.626		94			0.628		95			0		10.0
n-C39	<0.019	U	0.622		93			0.626		94			1		10.0
n-C40	<0.019	U	0.618		93			0.617		93			0		10.0
Average %Recovery					101					99					

Surrogate (Su)	Su Recovery (%)	Su Recovery (%)	Su Recovery (%)
n-dodecane-d26	82	85	83
n-eicosane-d42	93	96	97
n-triacontane-d62	92	96	97

Arcadis-Mayflower AR
Aliphatic Hydrocarbon and Total Petroleum Hydrocarbon Data
Laboratory Duplicate Report

Sample Name	ARC1638.D	ENV3079E.D
Client Name	SED-DA-006 (0-0.5)	Dupl (SED-DA-006 (0-0.5))
Matrix	Sediment	Sediment
Collection Date	08/03/13	08/03/13
Received Date	08/06/13	08/06/13
Extraction Date	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079
Date Acquired	16-Aug-2013, 19:51:56	16-Aug-2013, 06:53:32
Method	ALI2012.M	ALI2012.M
Sample Dry Weight (g)	15.1	15.0
Sample Wet Weight (g)	19.9	17.9
% Dry	84	84
% Moisture	16	16
% Lipid (dry)	NA	NA
% Lipid (wet)	NA	NA
Dilution	1X	1X

Target Compounds	Su. Corrected Conc. (µg/dry g)	Q	Su. Corrected Conc. (µg/dry g)	Q	RPD (%)	Q	Q	MDL (µg/dry g)	3X MDL (µg/dry g)
n-C9	<0.012	U	<0.012	U	0			0.012	0.037
n-C10	<0.021	U	<0.021	U	0			0.021	0.064
n-C11	<0.016	U	<0.016	U	0			0.016	0.049
n-C12	0.009	J	0.009	J	0		X	0.019	0.056
n-C13	0.004	J	0.004	J	0		X	0.045	0.134
i-C15	<0.016	U	<0.016	U	0			0.016	0.049
n-C14	0.007	J	0.007	J	0		X	0.013	0.039
i-C16	<0.004	U	<0.004	U	0			0.004	0.013
n-C15	0.005	J	0.006	J	18		X	0.016	0.049
n-C16	0.010		0.009		11		X	0.004	0.013
i-C18	<0.004	U	<0.004	U	0			0.004	0.011
n-C17	0.004		0.004		0		X	0.003	0.010
Pristane	0.003	J	0.003	J	0		X	0.003	0.008
n-C18	0.008		0.008		0		X	0.004	0.011
Phytane	0.003	J	0.003	J	0		X	0.006	0.018
n-C19	0.004	J	0.004	J	0		X	0.005	0.015
n-C20	0.003	J	0.003	J	0		X	0.012	0.037
n-C21	0.004	J	0.004	J	0		X	0.004	0.012
n-C22	0.005		0.004		22		X	0.003	0.010
n-C23	0.008	J	0.008	J	0		X	0.008	0.024
n-C24	0.007		0.006		15		X	0.005	0.016
n-C25	0.013		0.011		17		X	0.007	0.021
n-C26	0.007	J	0.006	J	15		X	0.008	0.023
n-C27	0.022		0.024		9		X	0.011	0.032
n-C28	0.006	J	0.006	J	0		X	0.011	0.033
n-C29	0.026		0.030		14		X	0.021	0.064
n-C30	0.005	J	0.004	J	22		X	0.013	0.038
n-C31	0.013	J	0.017		27		X	0.015	0.044
n-C32	0.002	J	0.002	J	0		X	0.012	0.035
n-C33	<0.021	U	<0.021	U	0			0.021	0.064
n-C34	<0.016	U	<0.016	U	0			0.016	0.049
n-C35	<0.015	U	<0.015	U	0			0.015	0.044
n-C36	<0.016	U	<0.016	U	0			0.016	0.047
n-C37	<0.017	U	<0.017	U	0			0.017	0.052
n-C38	<0.019	U	<0.019	U	0			0.019	0.057
n-C39	<0.019	U	<0.019	U	0			0.019	0.056
n-C40	<0.019	U	<0.019	U	0			0.019	0.056
Total Alkanes	0.2		0.2		2				
Total Petroleum Hydrocarbons	10.1		10.3		2			1.40	4.20
Total Resolved Hydrocarbons	3.4		2.9		16		X	1.40	4.20
Unresolved Complex Mixture	6.7		7.4		10			1.40	4.20
EOM (µg/dry g)	28	J	26	J	7				

Surrogate (Su)	Su Recovery (%)	Su Recovery (%)
n-dodecane-d26	89	90
n-eicosane-d42	97	96
n-triacontane-d62	93	95

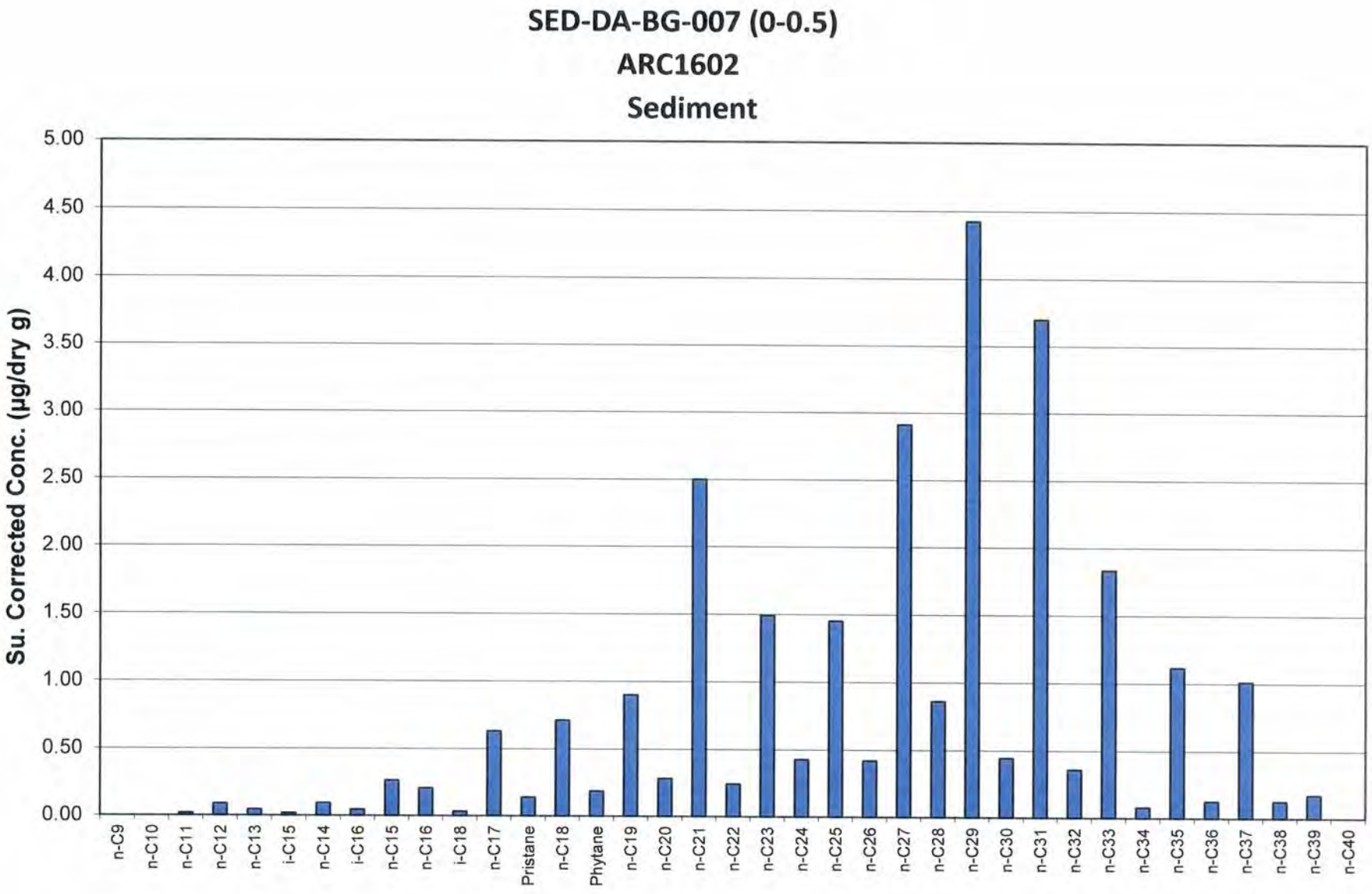
Arcadis-Mayflower AR
Aliphatic Hydrocarbon and Total Petroleum Hydrocarbon Data
Standard Reference Material Report

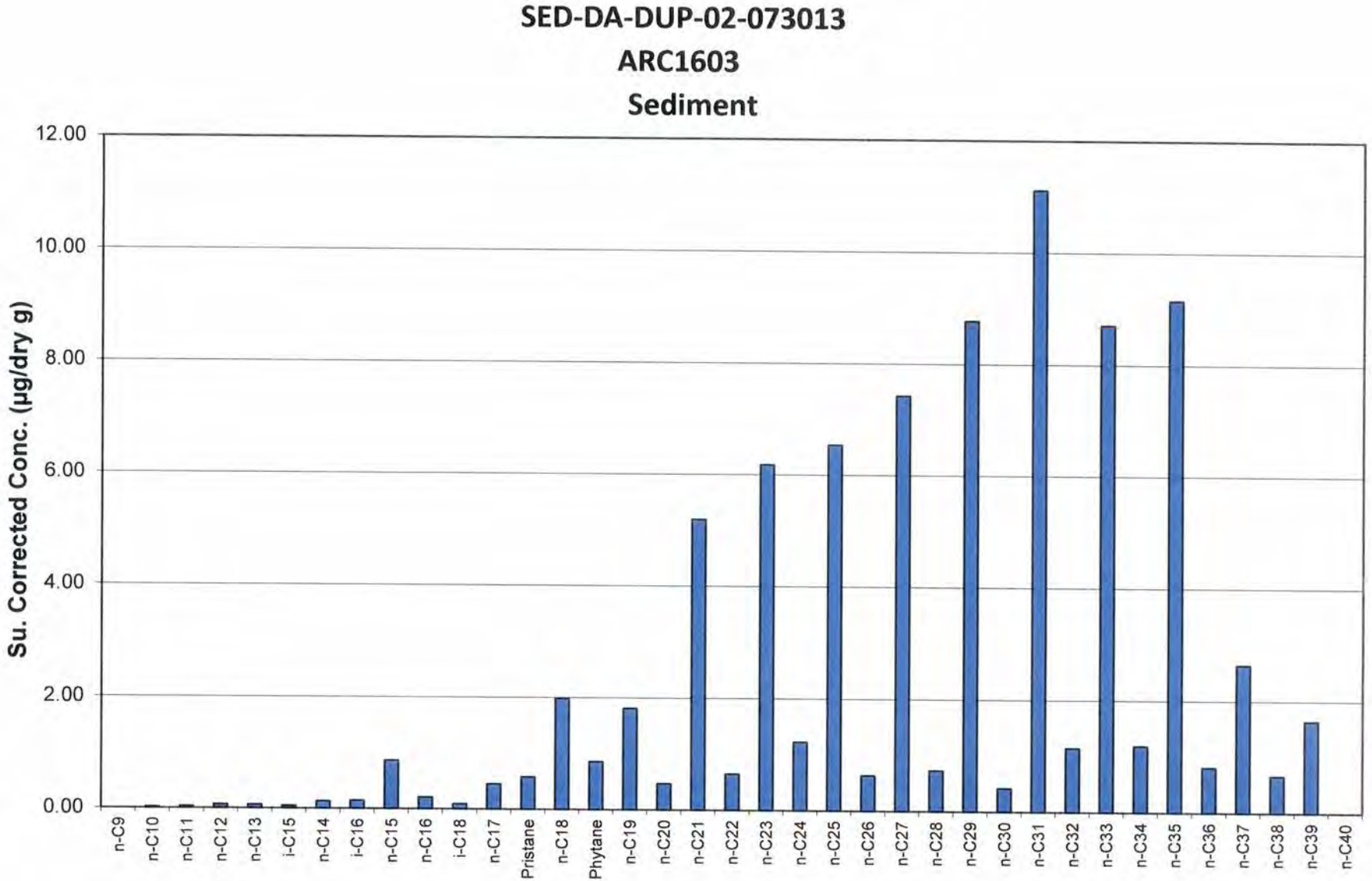
Sample Name	FID10078C.D
Client Name	AL-SRM2779-20-01
Matrix	Reference Oil
Collection Date	NA
Received Date	NA
Extraction Date	08/12/13
Extraction Batch	ENV 3079
Date Acquired	15-Aug-2013, 22:38:15
Method	ALI2012.M
Sample Dry Weight (mg)	20.0
Sample Wet Weight (mg)	NA
% Dry	NA
% Moisture	NA
% Lipid (dry)	NA
% Lipid (wet)	NA
Dilution	1X

Target Compounds	Su. Corrected Conc. (µg/mg)	Q	Q.	RPD (%)	B&B Average	-20% Conc. (µg/mg)	+20% Conc. (µg/mg)
n-C9	13.3			1	13.5	10.8	16.2
n-C10	11.7			2	12.0	9.60	14.4
n-C11	10.9			0	10.8	8.64	13.0
n-C12	9.33			5	9.82	7.86	11.8
n-C13	8.44			0	8.41	6.73	10.1
i-C15	1.93			1	1.95	1.56	2.34
n-C14	7.43			4	7.70	6.16	9.24
i-C16	2.68			10	2.95	2.36	3.54
n-C15	7.27			1	7.23	5.78	8.68
n-C16	6.06			1	6.15	4.92	7.38
i-C18	1.56			0	1.56	1.25	1.87
n-C17	4.95			5	4.69	3.75	5.63
Pristane	2.69			11	2.42	1.94	2.90
n-C18	4.16			8	3.84	3.07	4.61
Phytane	1.52			0	1.51	1.21	1.81
n-C19	3.51			1	3.47	2.78	4.16
n-C20	3.08			8	2.84	2.27	3.41
n-C21	2.67			12	2.37	1.90	2.84
n-C22	2.30			12	2.04	1.63	2.45
n-C23	1.95			6	1.84	1.47	2.21
n-C24	1.71			3	1.66	1.33	1.99
n-C25	1.38			1	1.37	1.10	1.64
n-C26	1.20			6	1.13	0.904	1.36
n-C27	0.963			8	0.892	0.714	1.07
n-C28	0.786			1	0.776	0.621	0.931
n-C29	0.756			2	0.739	0.591	0.887
n-C30	0.696	J		4	0.666	0.533	0.799
n-C31	0.578	J		7	0.539	0.431	0.647
n-C32	0.489	J		10	0.443	0.354	0.532
n-C33	0.478	J		2	0.467	0.374	0.560
n-C34	0.387	J		10	0.428	0.342	0.514
n-C35	0.318	J		7	0.342	0.274	0.410
n-C36	0.197	J		7	0.211	0.169	0.253
n-C37	0.196	J		5	0.206	0.165	0.247
n-C38	0.163	J		5	0.172	0.138	0.206
n-C39	0.153	J		10	0.169	0.135	0.203
n-C40	0.177	J		1	0.176	0.141	0.211
Total Petroleum Hydrocarbons	602			1	607	484	726

Surrogate (Su)	Su Recovery (%)
n-dodecane-d26	100
n-eicosane-d42	98
n-triacontane-d62	98

Aliphatic Hydrocarbon Histograms


SED-DA-BG-007 (0-0.5)
ARC1602
Sediment
Su. Corrected Conc. (µg/dry g)
5.00
4.50
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
n-C9
n-C10
n-C11
n-C12
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pristane
n-C18
Phytane
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
n-C31
n-C32
n-C33
n-C34
n-C35
n-C36
n-C37
n-C38
n-C39
n-C40


SED-DA-DUP-02-073013
ARC1603
Sediment
Su. Corrected Conc. (µg/dry g)
12.00
10.00
8.00
6.00
4.00
2.00
0.00
n-C9
n-C10
n-C11
n-C12
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pristane
n-C18
Phytane
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
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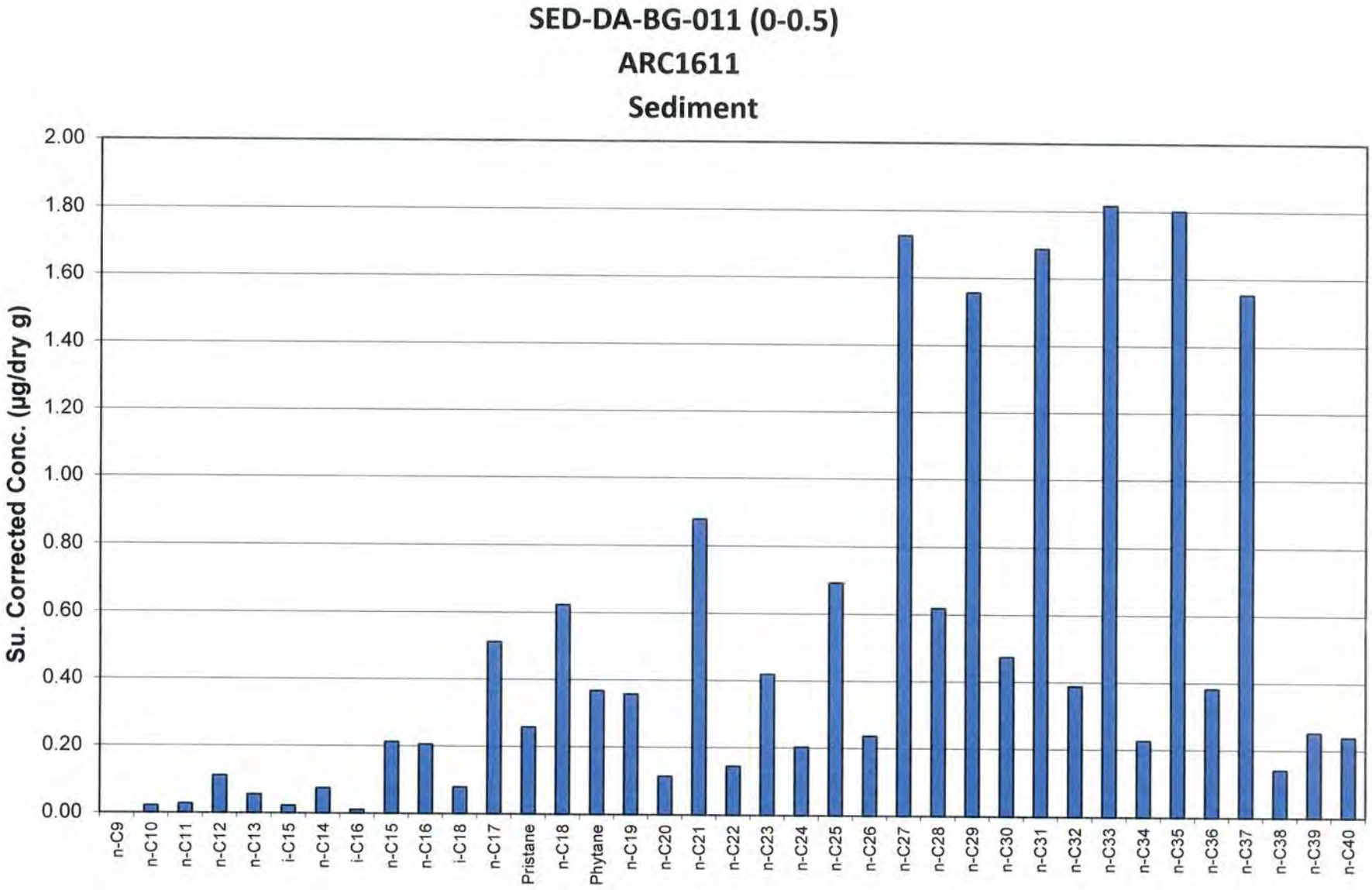
n-C36
n-C37
n-C38
n-C39
n-C40


SED-DA-BG-011 (0-0.5)
ARC1611
Sediment
Su. Corrected Conc. (µg/dry g)
2.00
1.80
1.60
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
n-C9
n-C10
n-C11
n-C12
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pristane
n-C18
Phytane
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
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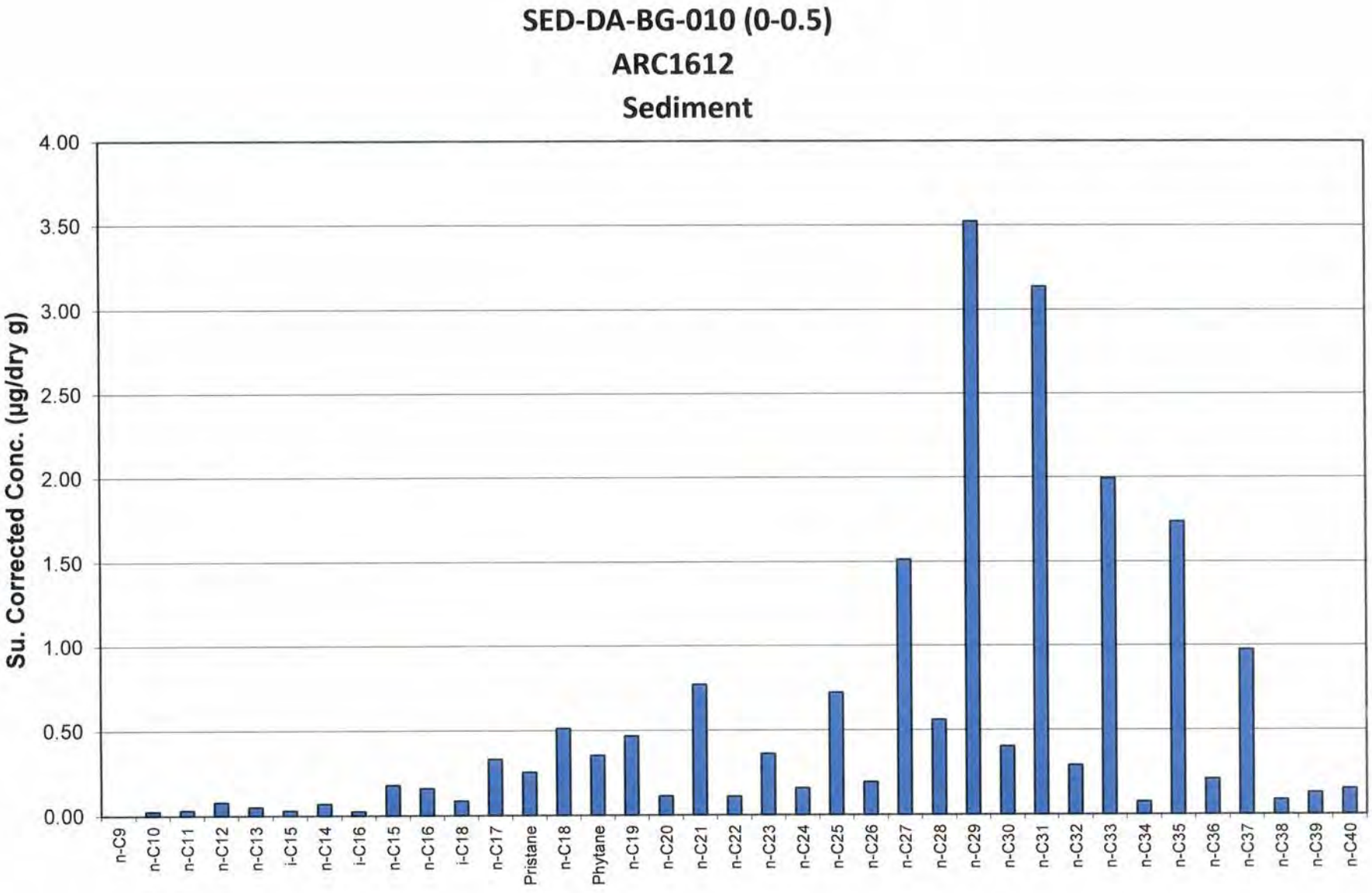
n-C36
n-C37
n-C38
n-C39
n-C40


SED-DA-BG-010 (0-0.5)
ARC1612
Sediment
Su. Corrected Conc. (µg/dry g)
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
n-C9
n-C10
n-C11
n-C12
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pristane
n-C18
Phytane
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
n-C31
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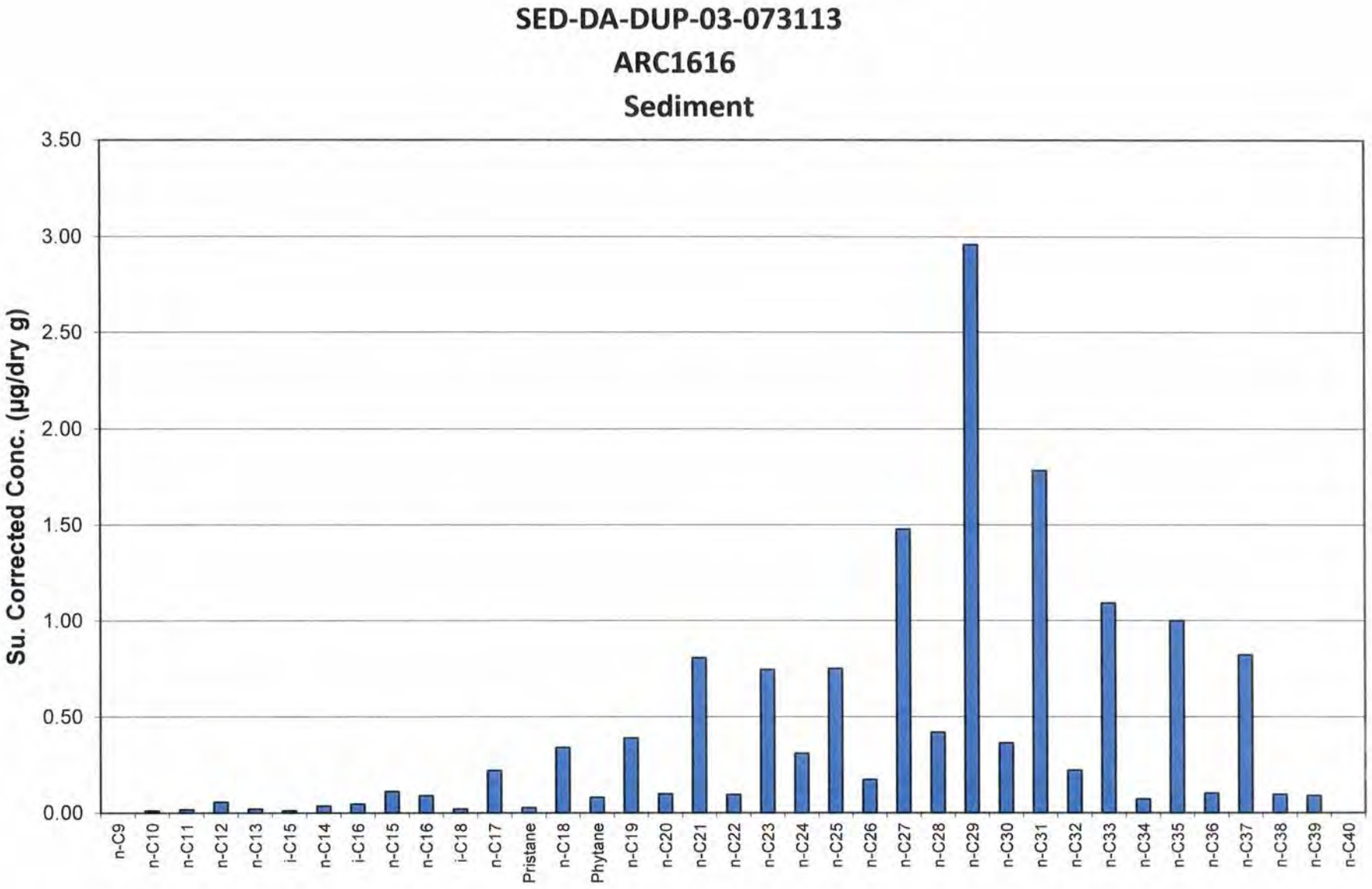
n-C36
n-C37
n-C38
n-C39
n-C40


SED-DA-DUP-03-073113
ARC1616
Sediment
Su. Corrected Conc. (µg/dry g)
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
n-C9
n-C10
n-C11
n-C12
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pristane
n-C18
Phytane
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
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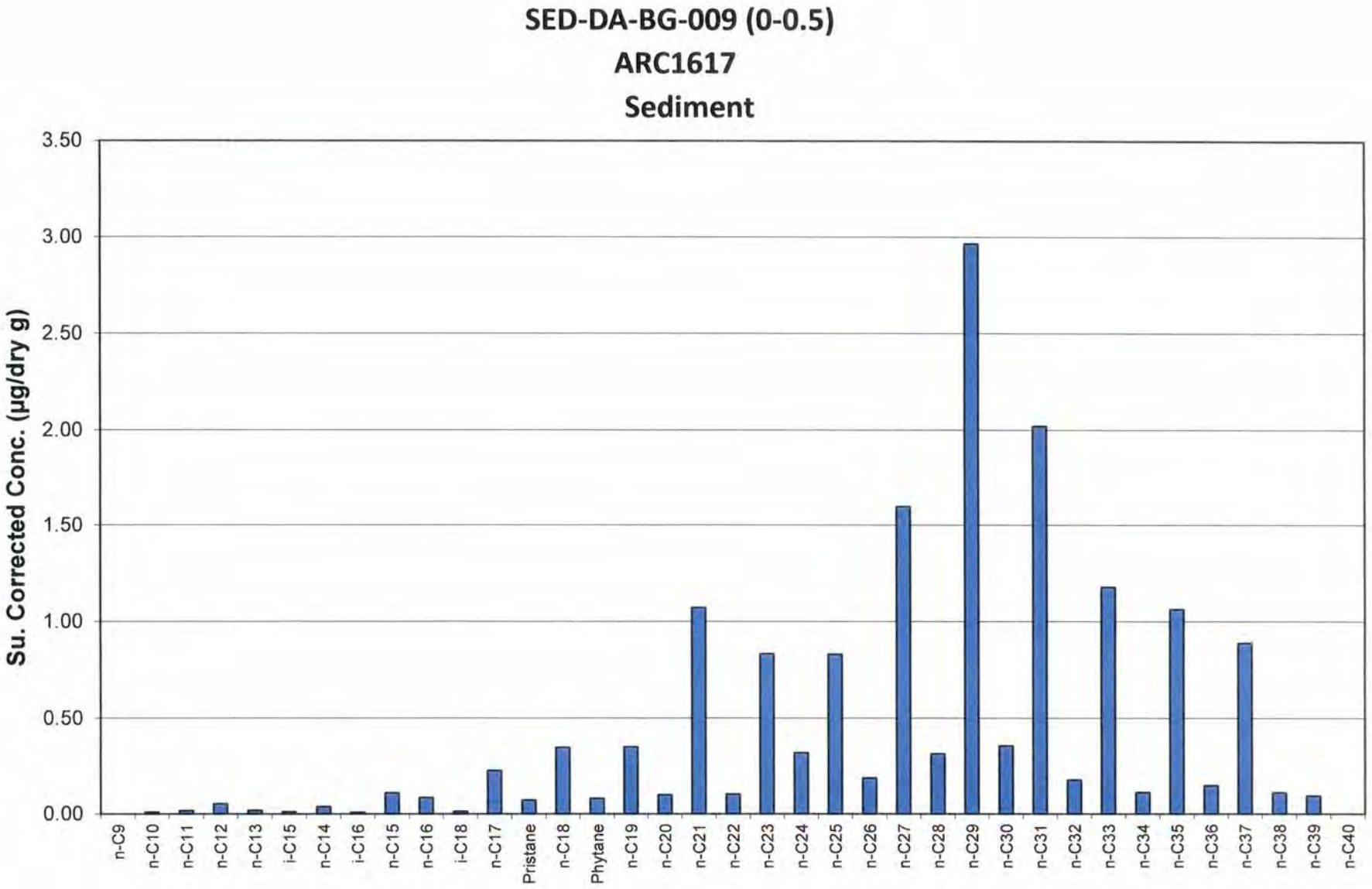
n-C36
n-C37
n-C38
n-C39
n-C40


SED-DA-BG-009 (0-0.5)
ARC1617
Sediment
Su. Corrected Conc. (µg/dry g)
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
n-C9
n-C10
n-C11
n-C12
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pristane
n-C18
Phytane
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
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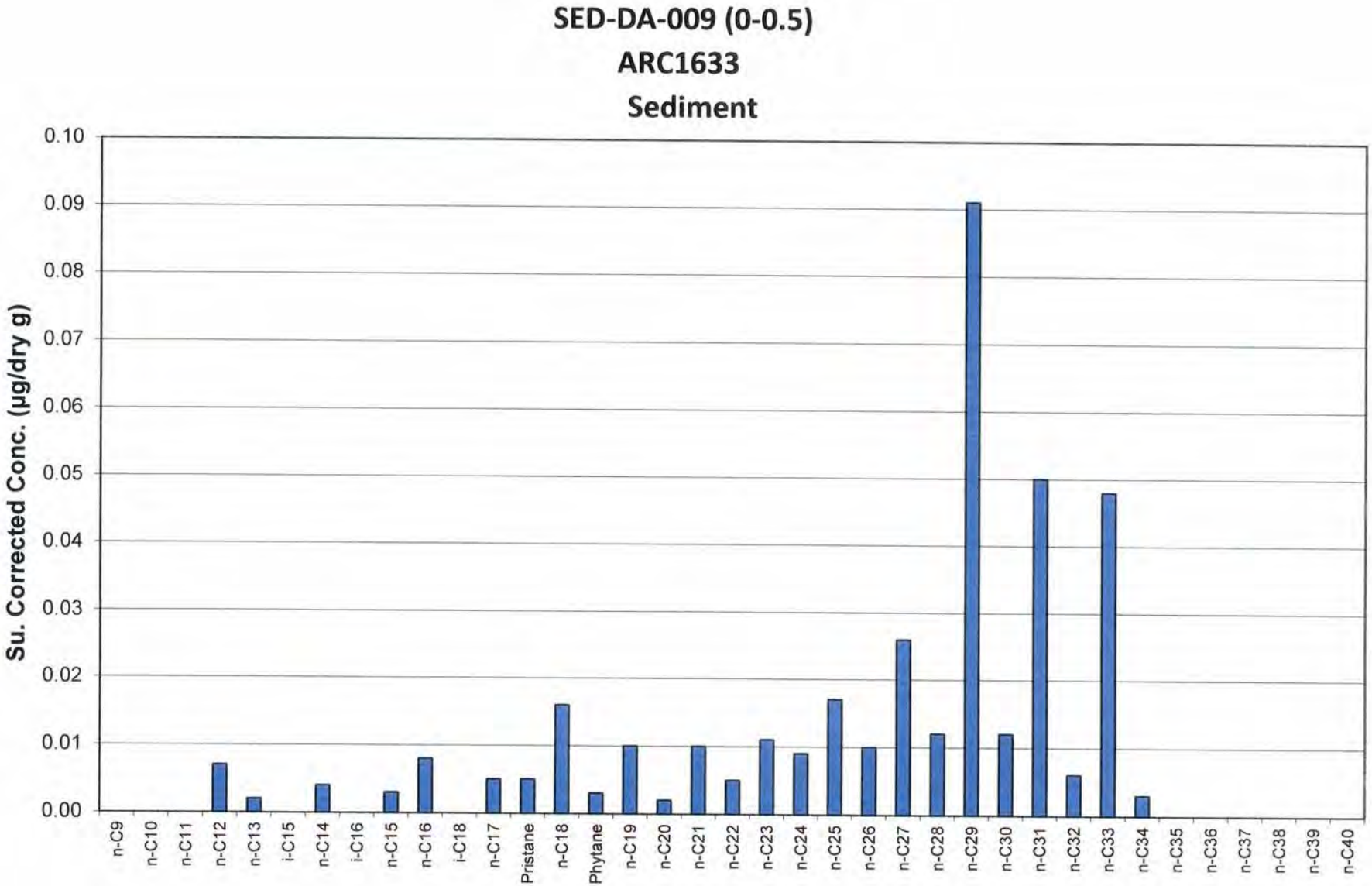
n-C36
n-C37
n-C38
n-C39
n-C40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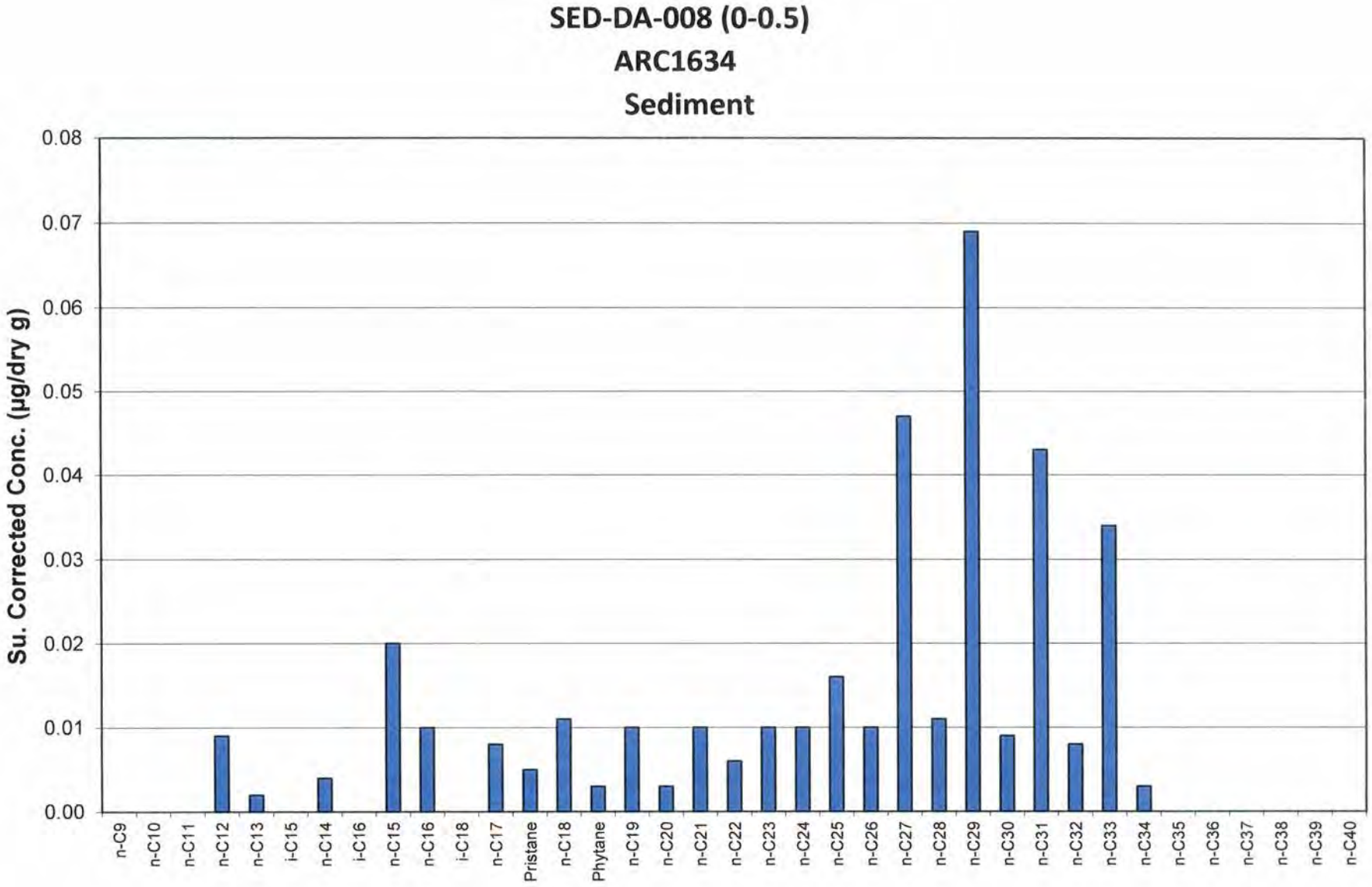
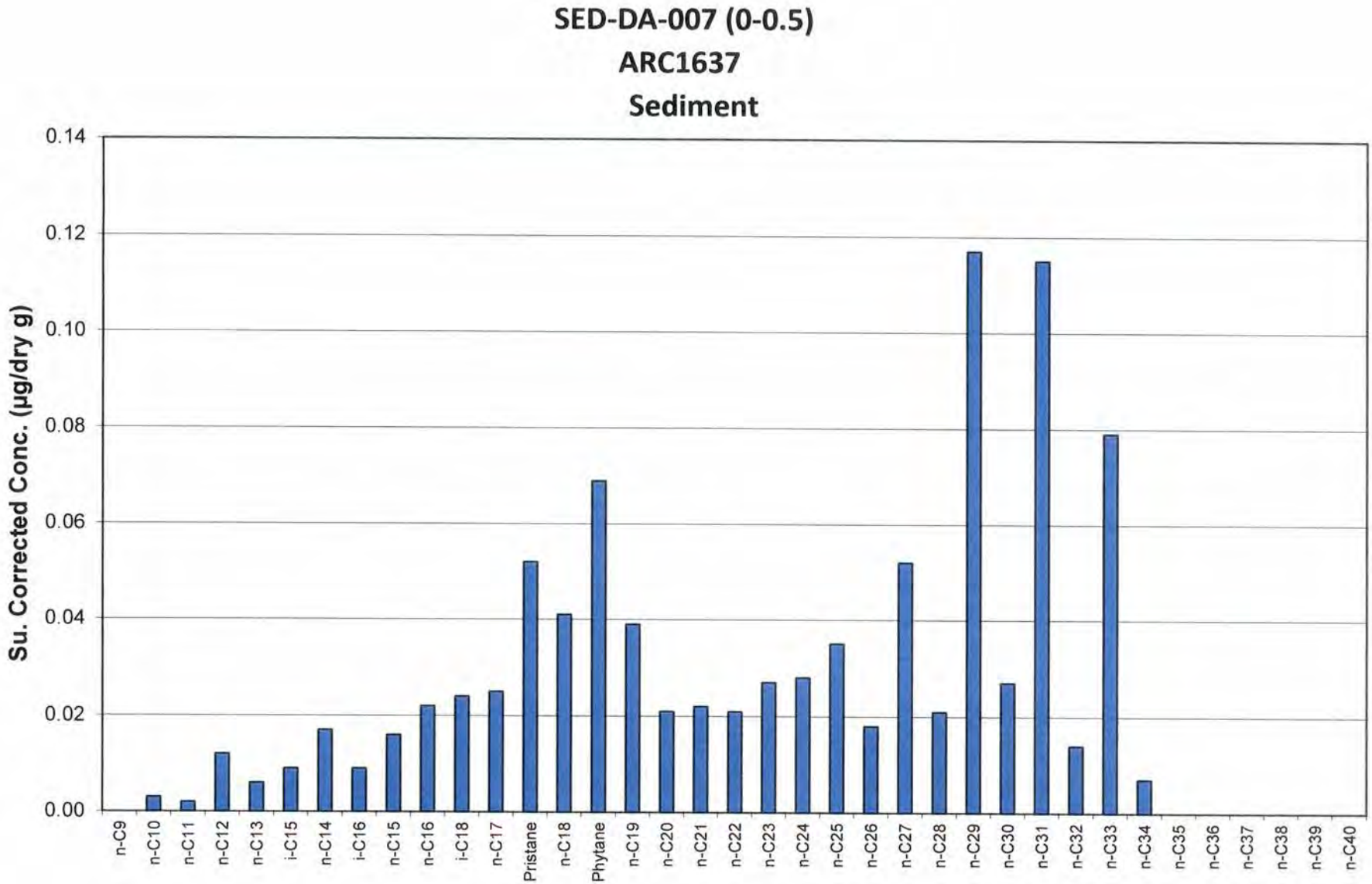
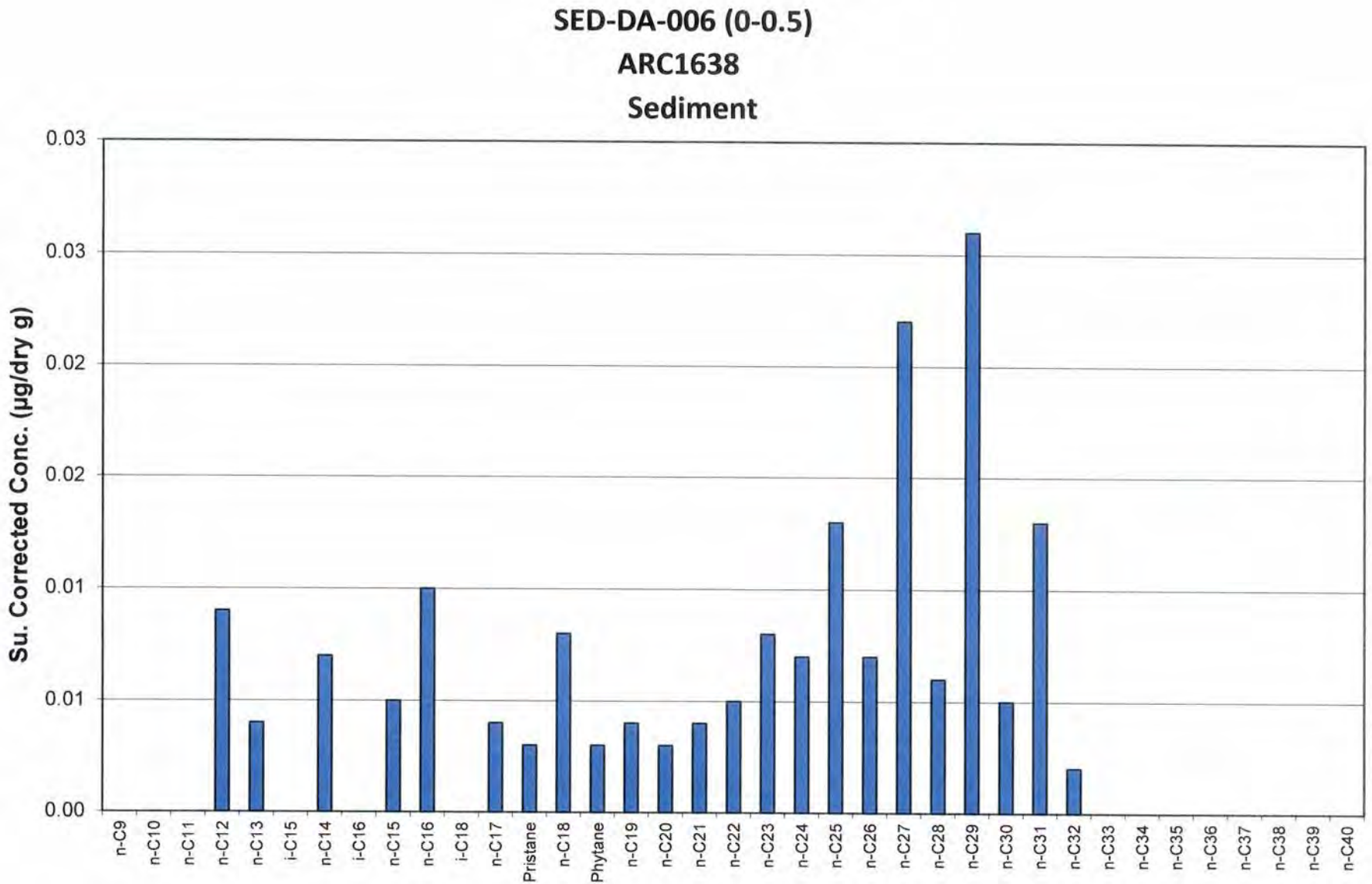
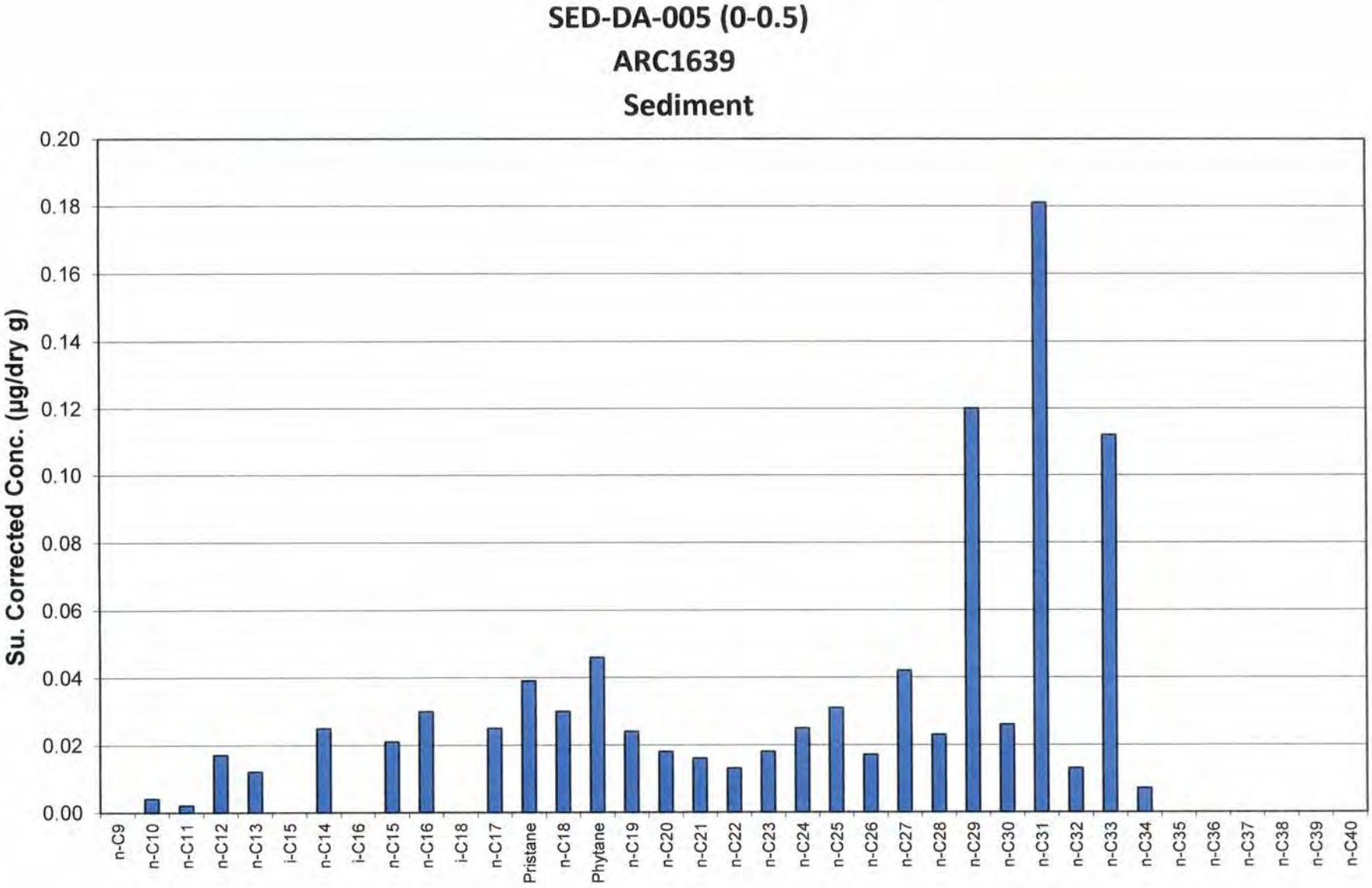
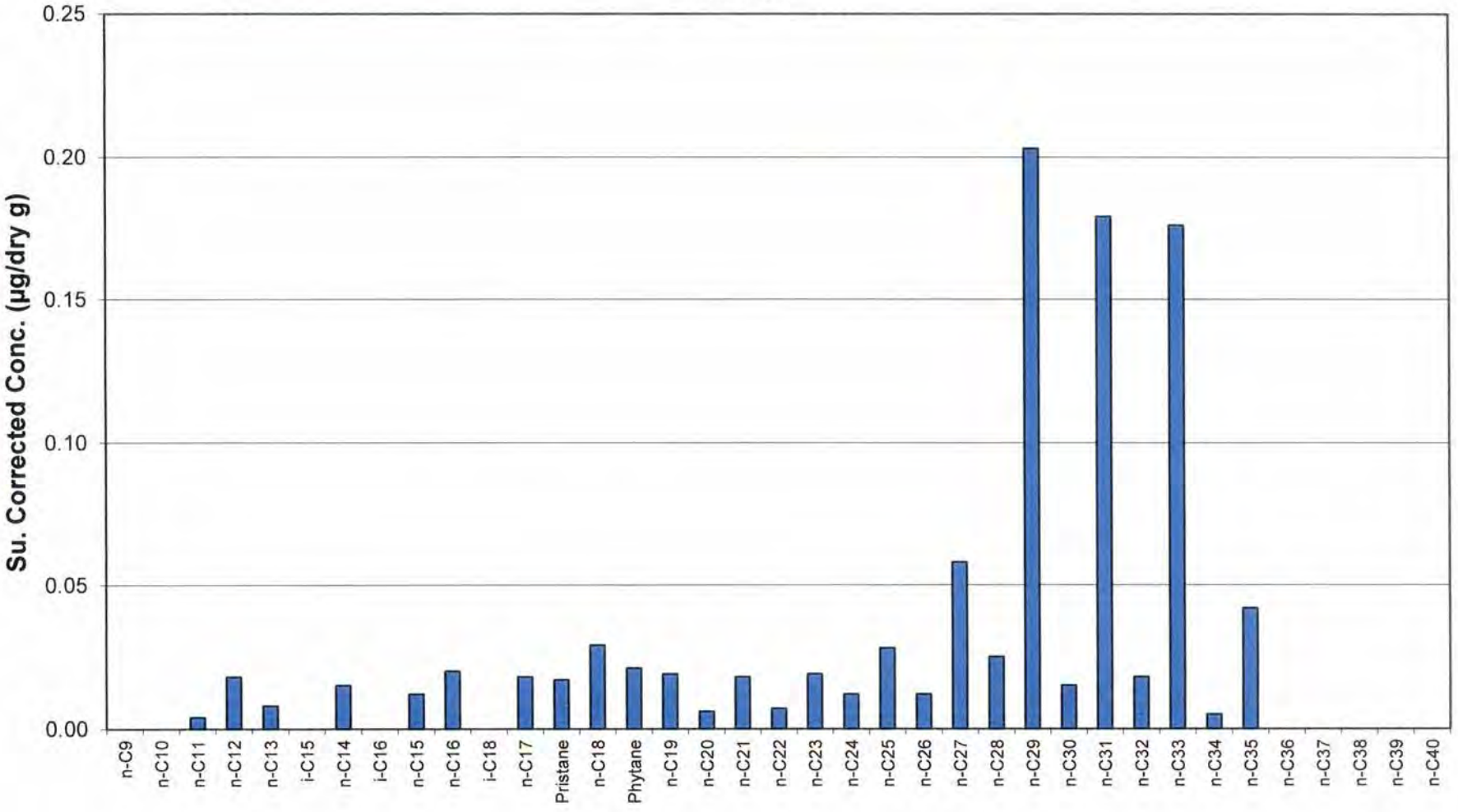
ARC1633
Sediment
Su. Corrected Conc. (µg/dry g)
0.10
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
n-C9
n-C10
n-C11
n-C12
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pristane
n-C18
Phytane
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
n-C31
n-C32
n-C33
n-C34
n-C35
n-C36
n-C37
n-C38
n-C39
n-C40

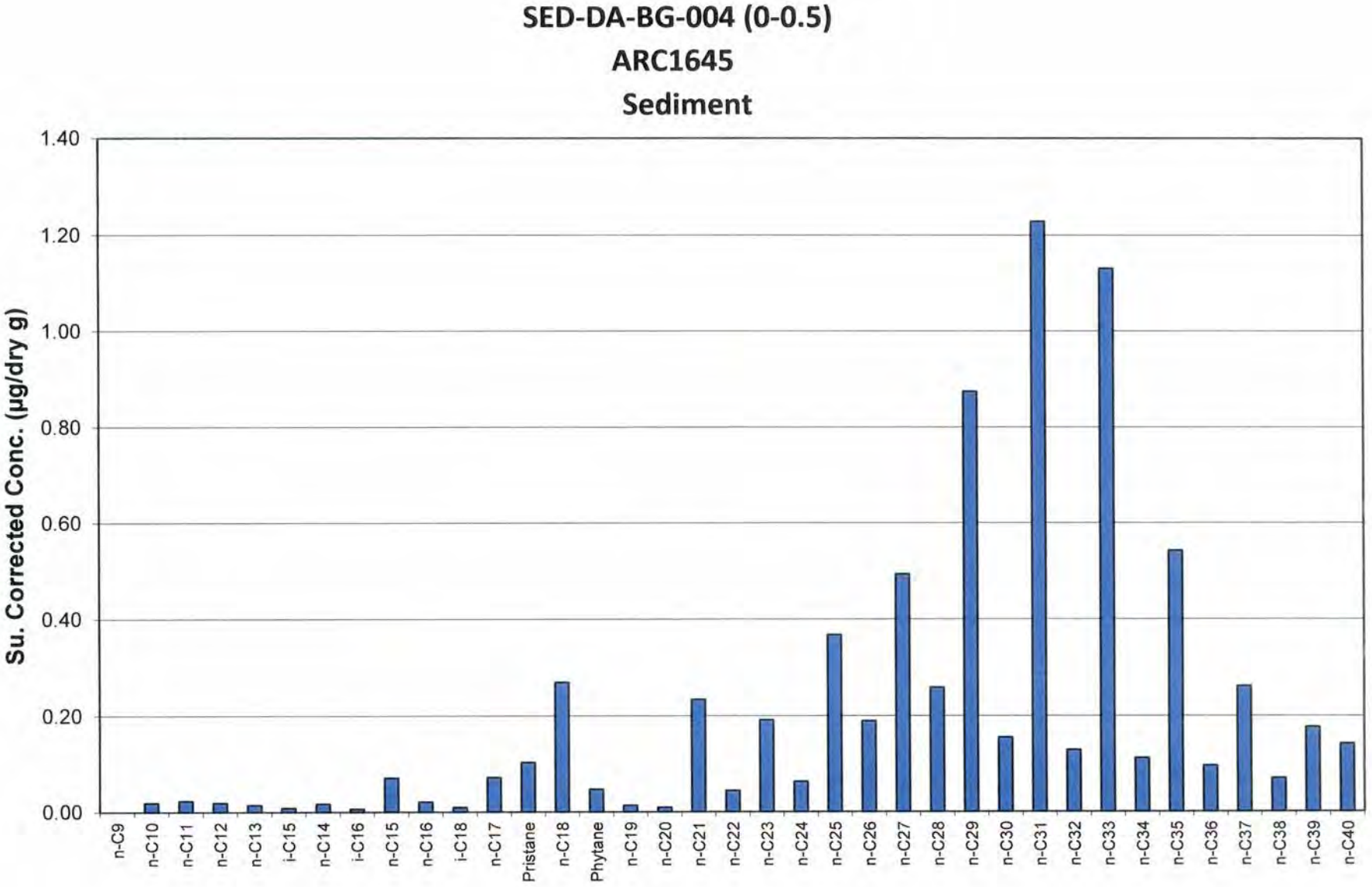

SED-DA-008 (0-0.5)
ARC1634
Sediment
Su. Corrected Conc. (µg/dry g)
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0.00
n-C9
n-C10
n-C11
n-C12
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pristane
n-C18
Phytane
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
n-C31
n-C32
n-C33
n-C34
n-C35
n-C36
n-C37
n-C38
n-C39
n-C40

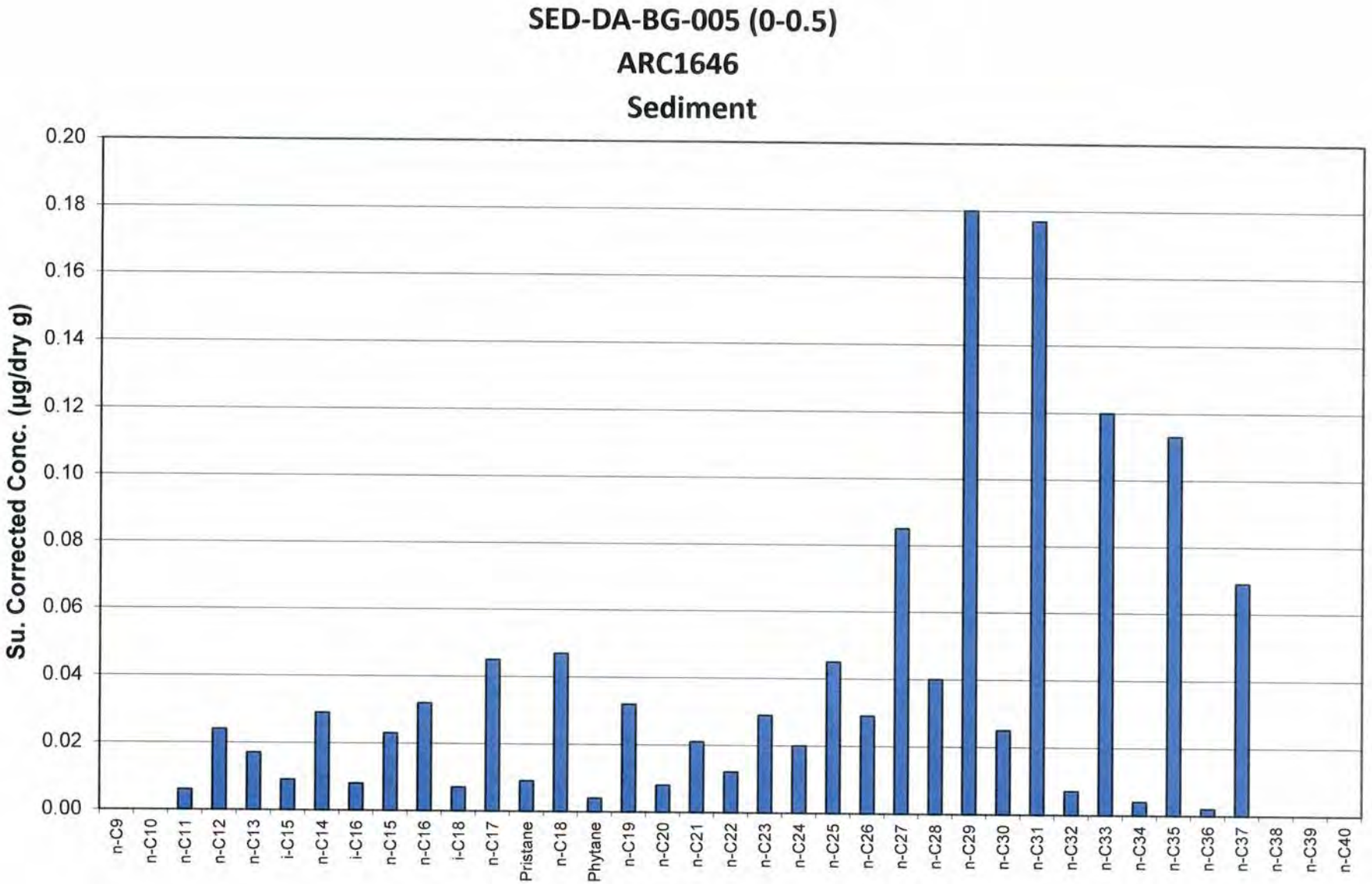

SED-DA-007 (0-0.5)
ARC1637
Sediment
Su. Corrected Conc. (µg/dry g)
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
n-C9
n-C10
n-C11
n-C12
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pristane
n-C18
Phytane
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
n-C31
n-C32
n-C33
n-C34
n-C35
n-C36
n-C37
n-C38
n-C39
n-C40

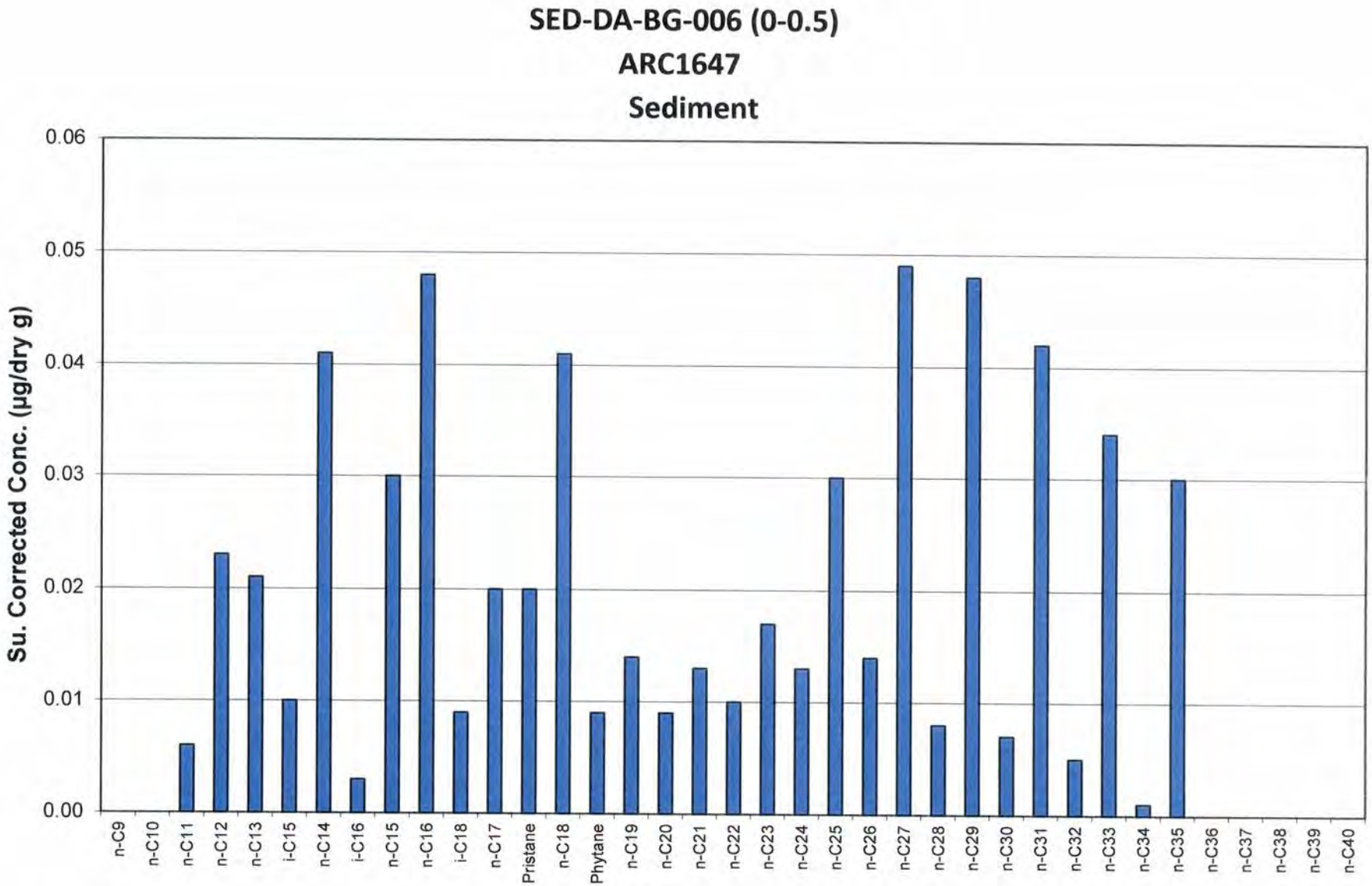

SED-DA-006 (0-0.5)
ARC1638
Sediment
Su. Corrected Conc. (µg/dry g)
0.03
0.03
0.02
0.02
0.01
0.01
0.00
n-C9
n-C10
n-C11
n-C12
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pristane
n-C18
Phytane
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
n-C31
n-C32
n-C33
n-C34
n-C35
n-C36
n-C37
n-C38
n-C39
n-C40

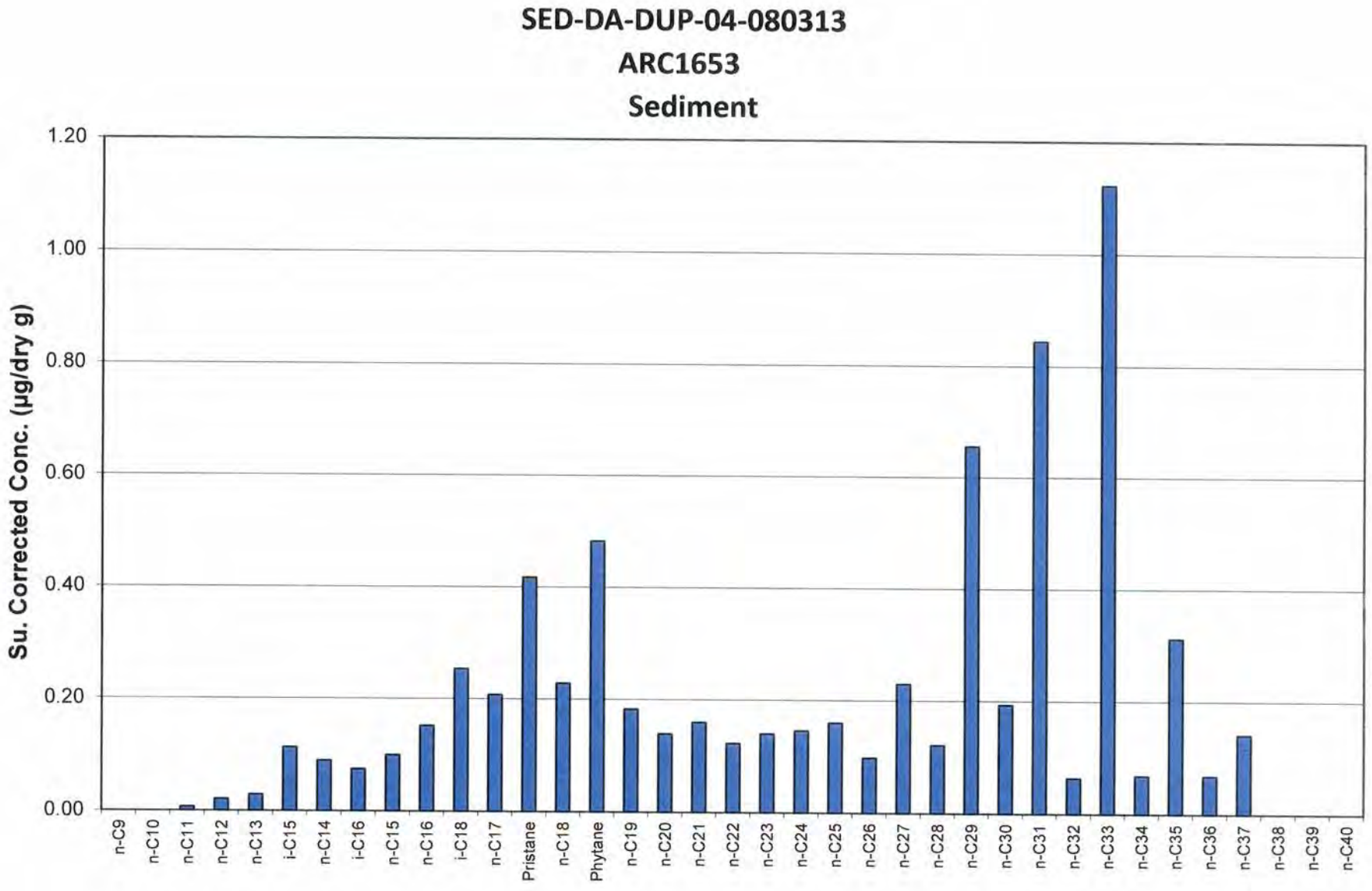

SED-DA-005 (0-0.5)
ARC1639
Sediment
Su. Corrected Conc. (µg/dry g)
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
n-C9
n-C10
n-C11
n-C12
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pristane
n-C18
Phytane
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
n-C31
n-C32
n-C33
n-C34
n-C35
n-C36
n-C37
n-C38
n-C39
n-C40


SED-DA-010 (0-0.5)
ARC1640
Sediment
Su. Corrected Conc. (µg/dry g)
0.25
0.20
0.15
0.10
0.05
0.00
n-C9
n-C10
n-C11
n-C12
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pristane
n-C18
Phytane
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
n-C31
n-C32
n-C33
n-C34
n-C35
n-C36
n-C37
n-C38
n-C39
n-C40


SED-DA-BG-004 (0-0.5)
ARC1645
Sediment
Su. Corrected Conc. (µg/dry g)
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
n-C9
n-C10
n-C11
n-C12
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pristane
n-C18
Phytane
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
n-C31
n-C32
n-C33
n-C34
n-C35
n-C36
n-C37
n-C38
n-C39
n-C40

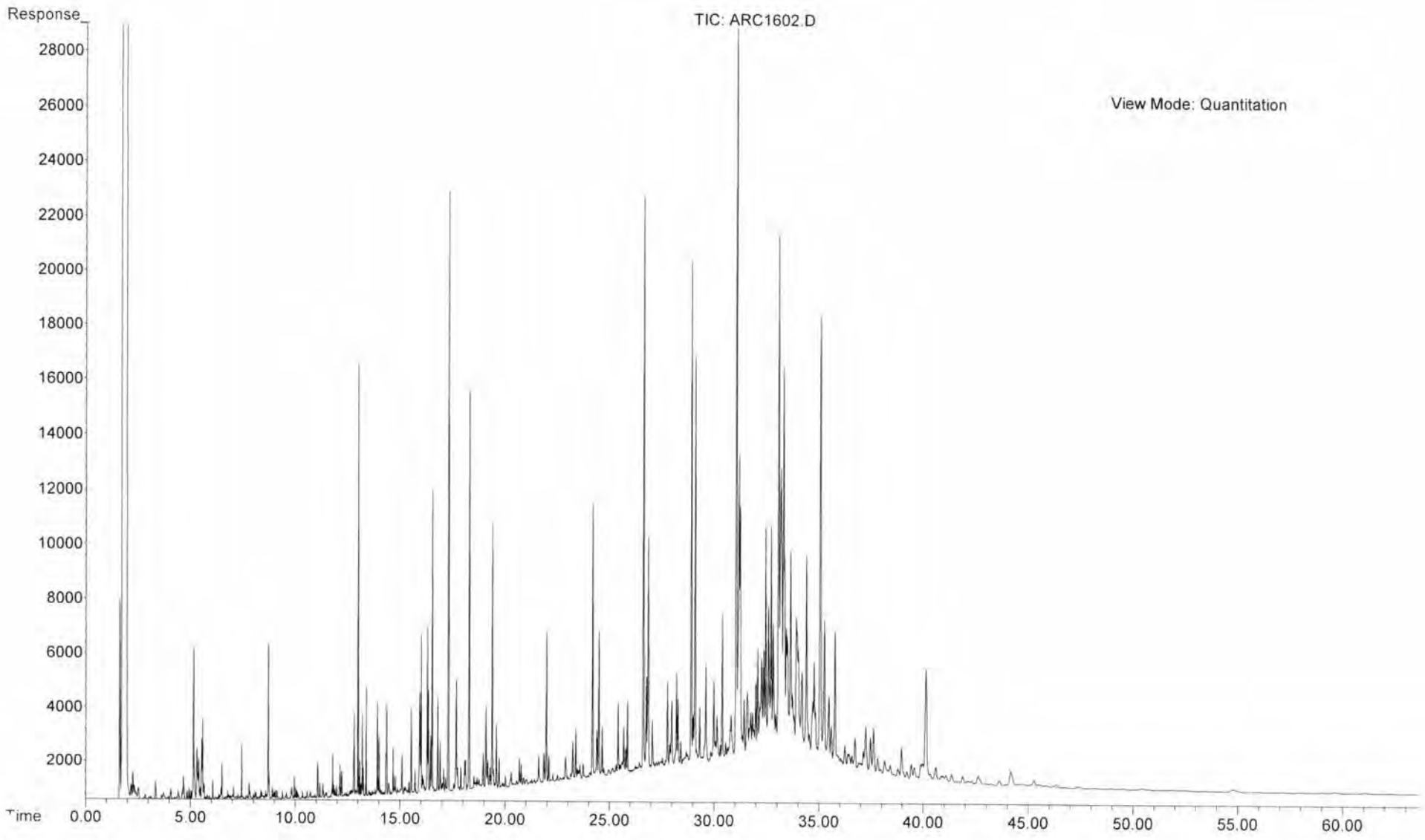

SED-DA-BG-005 (0-0.5)
ARC1646
Sediment
Su. Corrected Conc. (µg/dry g)
0.20
0.18
0.16
0.14
0.12
0.10
0.08
0.06
0.04
0.02
0.00
n-C9
n-C10
n-C11
n-C12
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pristane
n-C18
Phytane
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
n-C31
n-C32
n-C33
n-C34
n-C35
n-C36
n-C37
n-C38
n-C39
n-C40


SED-DA-BG-006 (0-0.5)
ARC1647
Sediment
Su. Corrected Conc. (µg/dry g)
0.06
0.05
0.04
0.03
0.02
0.01
0.00
n-C9
n-C10
n-C11
n-C12
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pristane
n-C18
Phytane
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
n-C31
n-C32
n-C33
n-C34
n-C35
n-C36
n-C37
n-C38
n-C39
n-C40

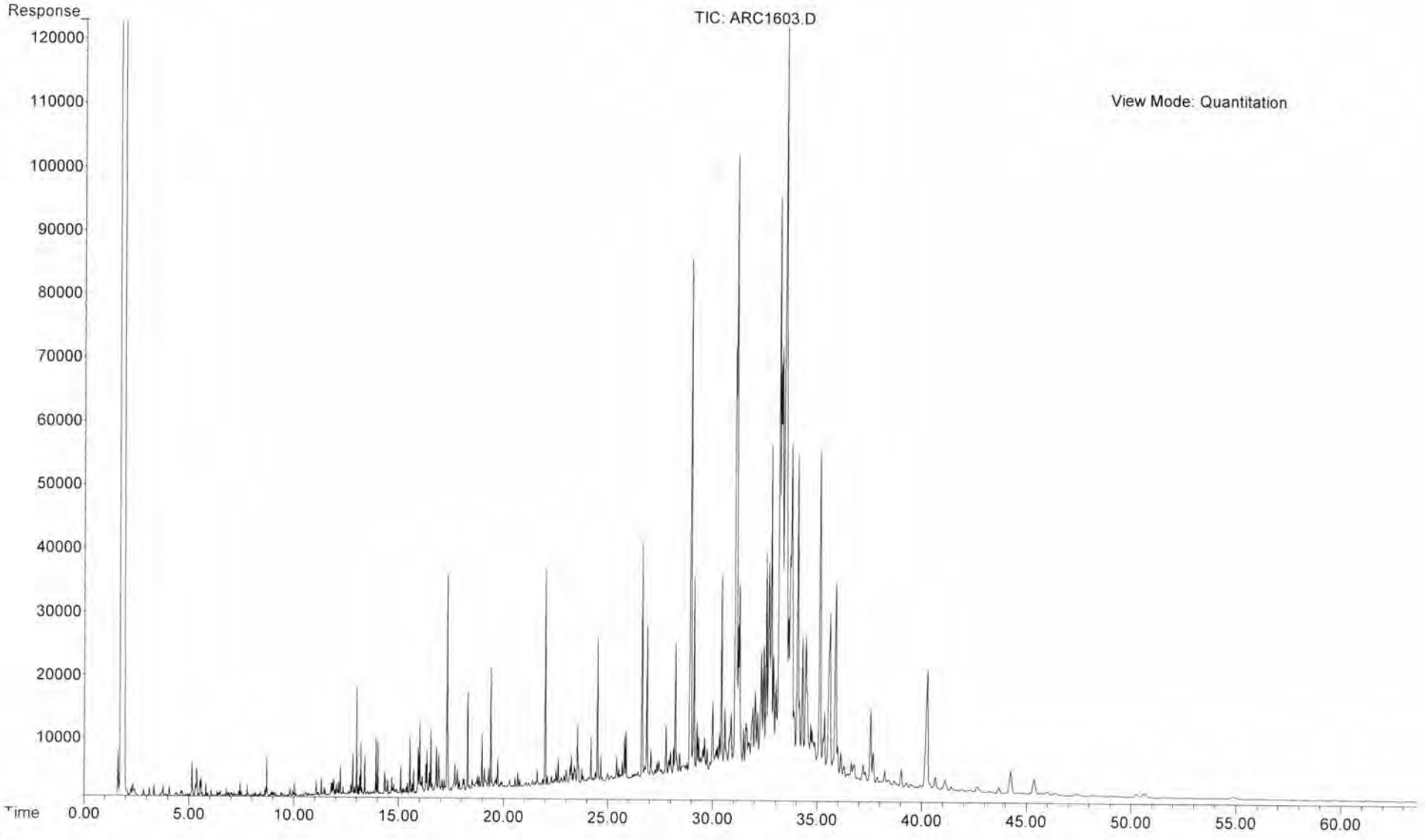

SED-DA-DUP-04-080313
ARC1653
Sediment
Su. Corrected Conc. (µg/dry g)
1.20
1.00
0.80
0.60
0.40
0.20
0.00
n-C9
n-C10
n-C11
n-C12
n-C13
i-C15
n-C14
i-C16
n-C15
n-C16
i-C18
n-C17
Pristane
n-C18
Phytane
n-C19
n-C20
n-C21
n-C22
n-C23
n-C24
n-C25
n-C26
n-C27
n-C28
n-C29
n-C30
n-C31
n-C32
n-C33
n-C34
n-C35
n-C36
n-C37
n-C38
n-C39
n-C40

Total Petroleum Hydrocarbons Chromatograms

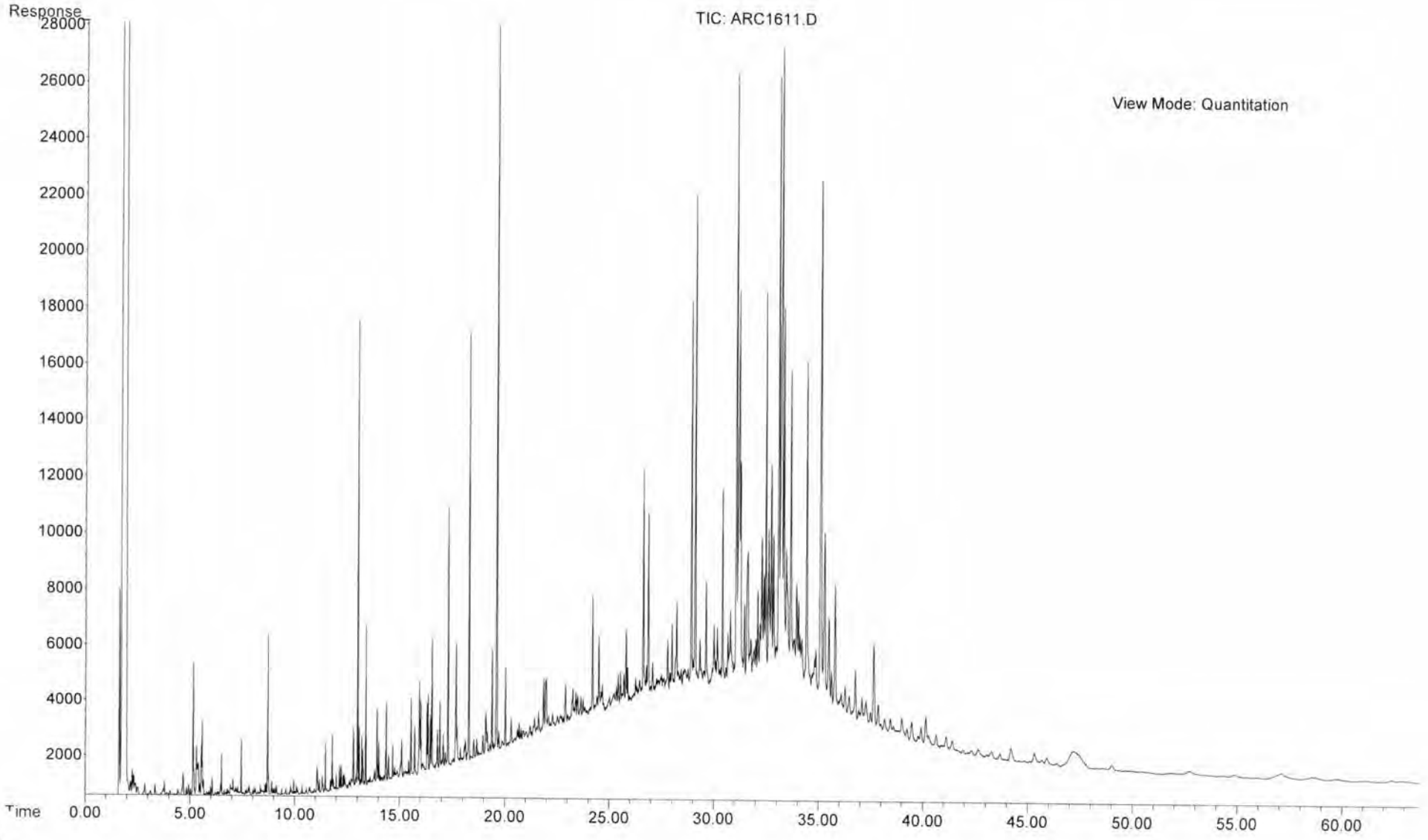
File :P:\2013\J13034\Aliphatics\ENV 3079\FID10078\ARC1602.D
Operator : Meghan Dailey
Acquired : 16-Aug-2013, 08:04 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-BG-007 (0-0.5)
Misc Info :
Vial Number: 10



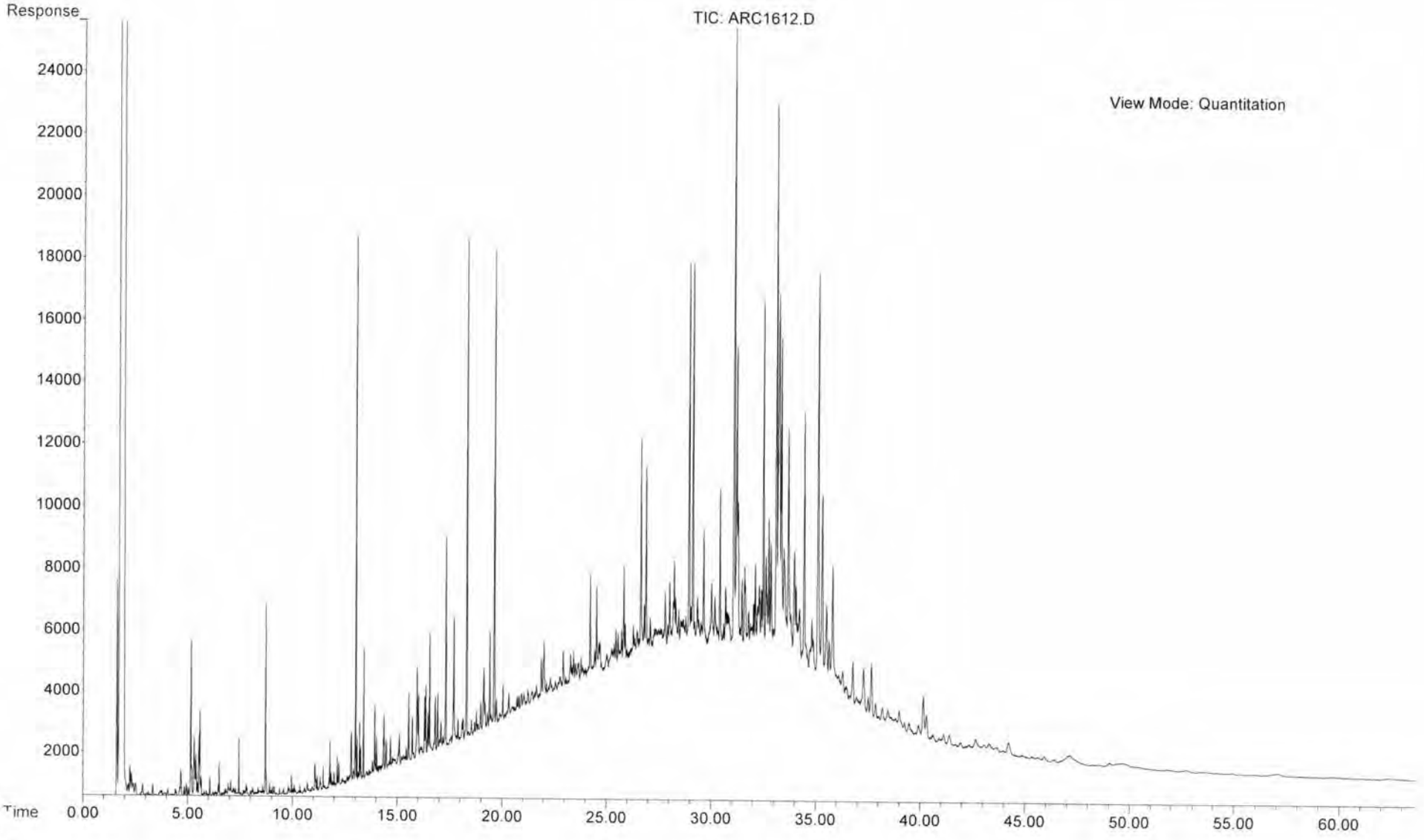
File :P:\2013\J13034\Aliphatics\ENV 3079\FID10078\ARC1603.D
Operator : Meghan Dailey
Acquired : 16-Aug-2013, 10:26 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-DUP-02-073013
Misc Info :
Vial Number: 12



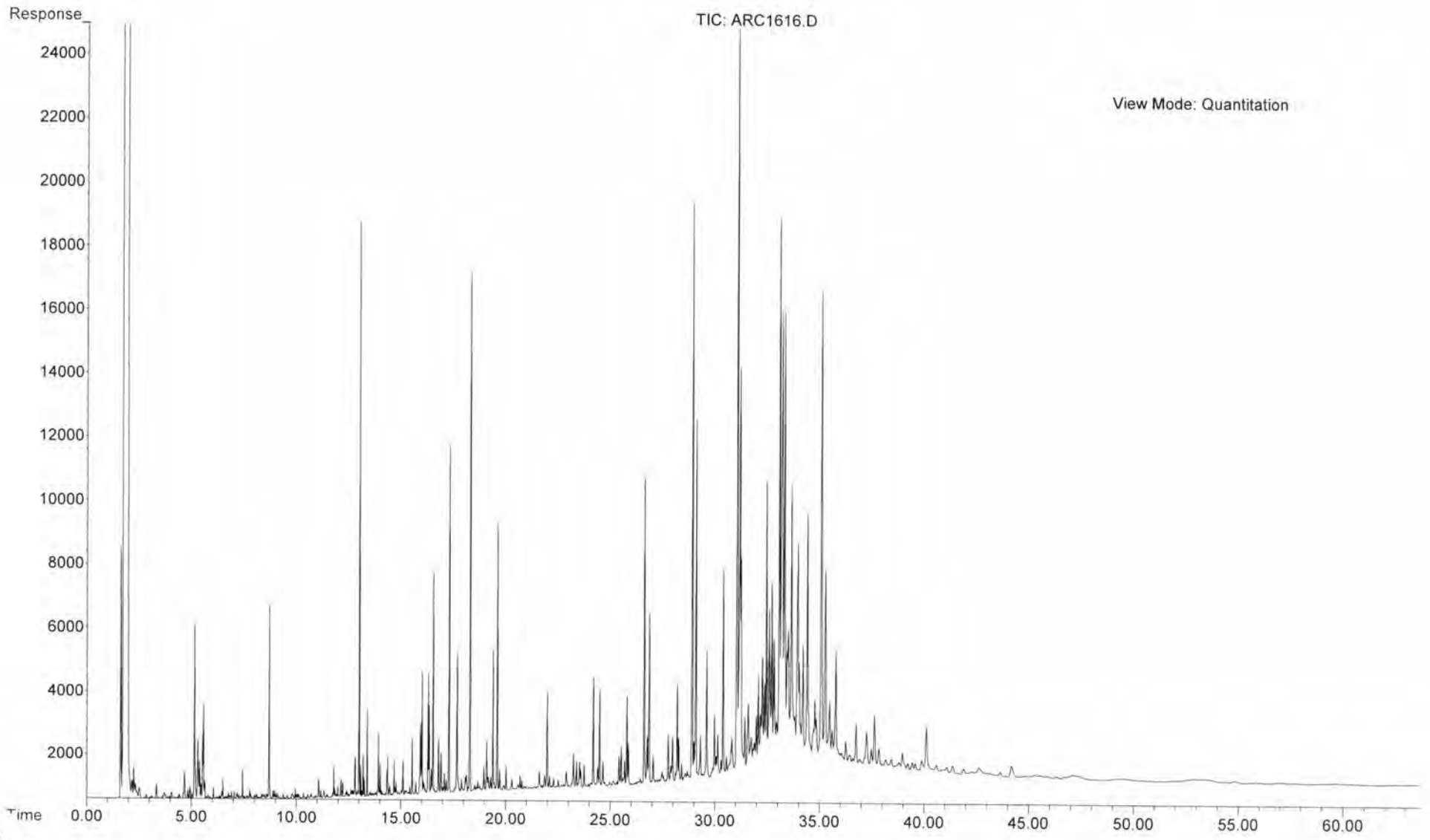
File :P:\2013\J13034\Aliphatics\ENV 3079\FID10078\ARC1611.D
Operator : Meghan Dailey
Acquired : 16-Aug-2013, 11:36 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-BG-011 (0-0.5)
Misc Info :
Vial Number: 13



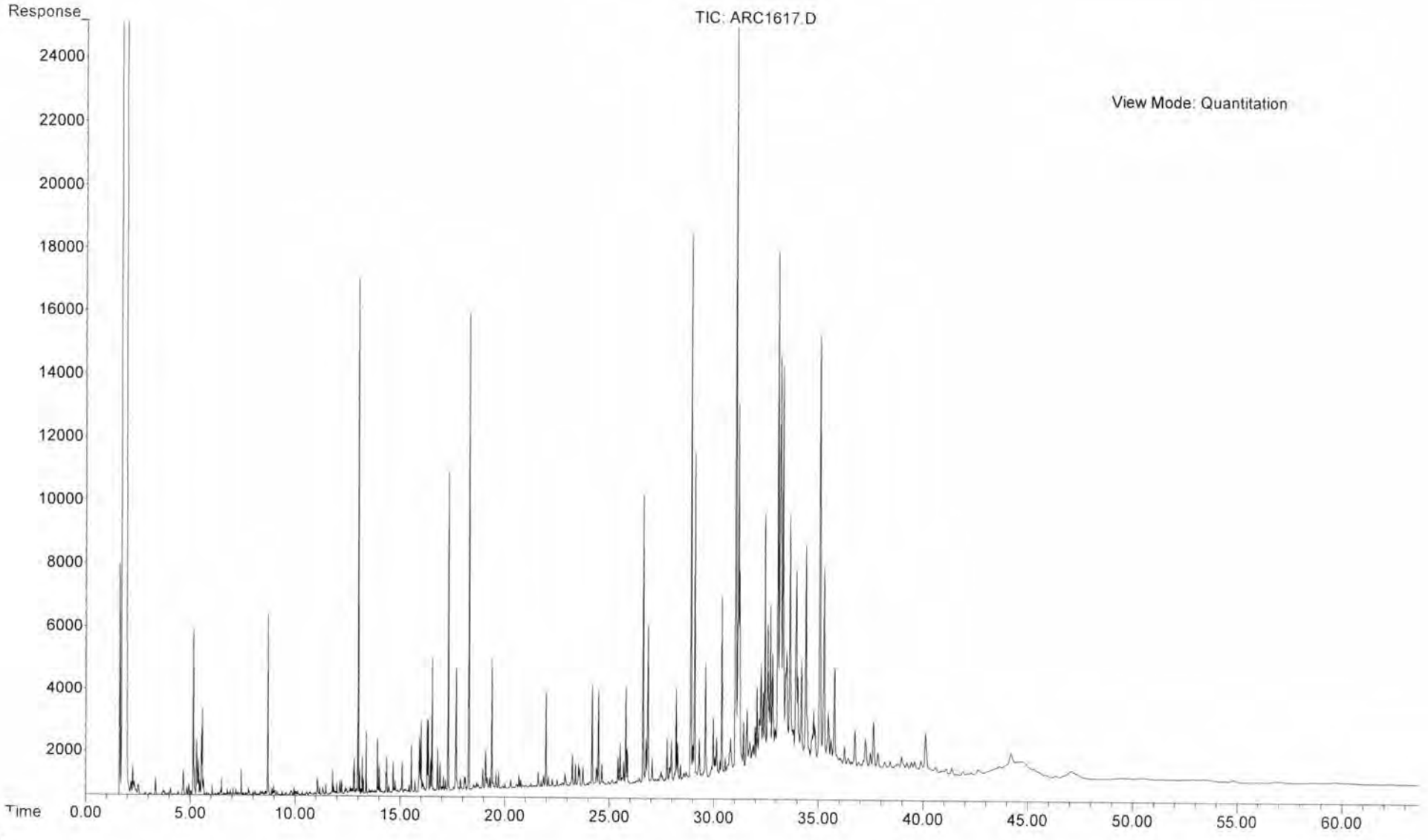
File :P:\2013\J13034\Aliphatics\ENV 3079\FID10078\ARC1612.D
Operator : Meghan Dailey
Acquired : 16-Aug-2013, 12:47 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-BG-010 (0-0.5)
Misc Info :
Vial Number: 14



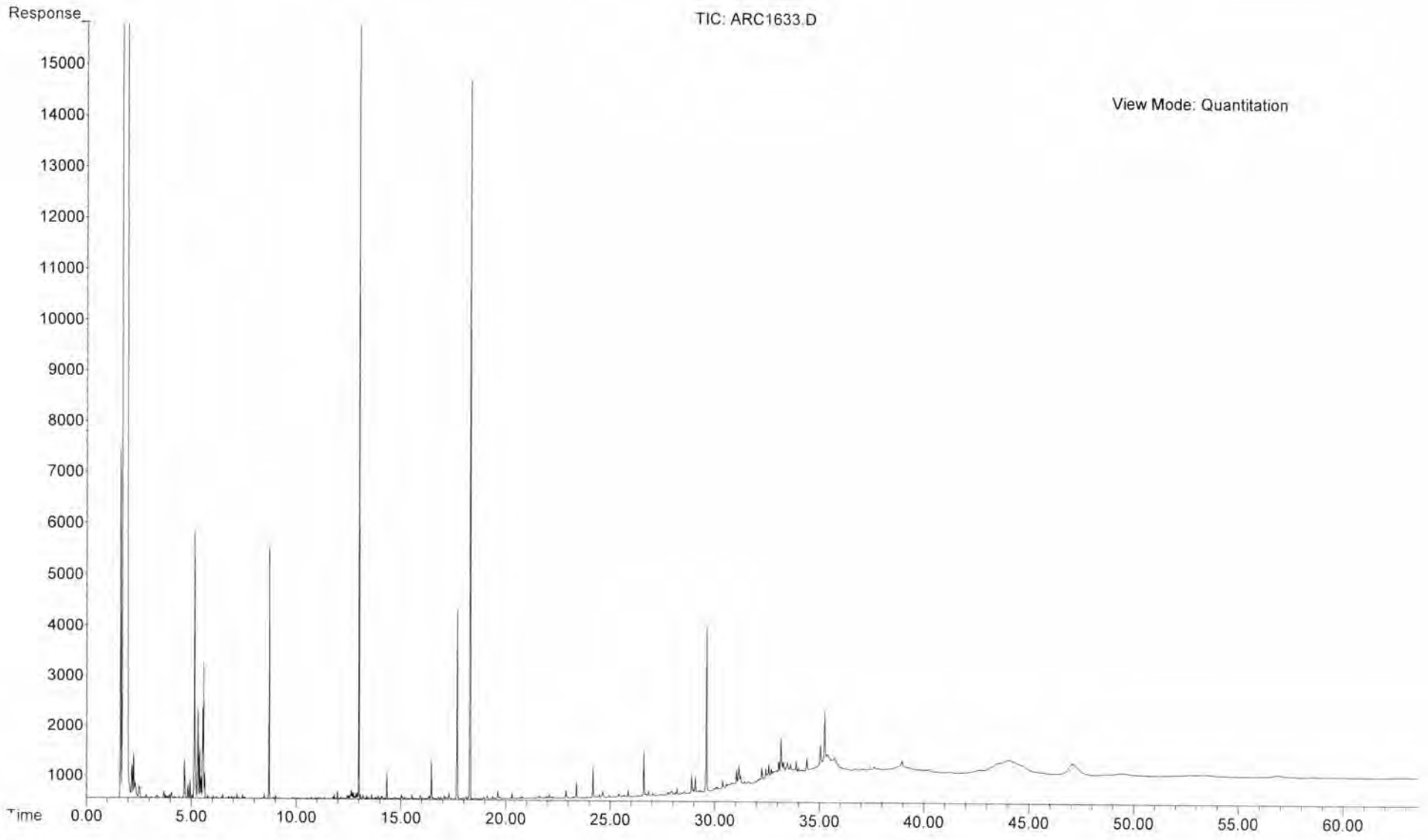
File :P:\2013\J13034\Aliphatics\ENV 3079\FID10078\ARC1616.D
Operator : Meghan Dailey
Acquired : 16-Aug-2013, 13:58 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-DUP-03-073113
Misc Info :
Vial Number: 15



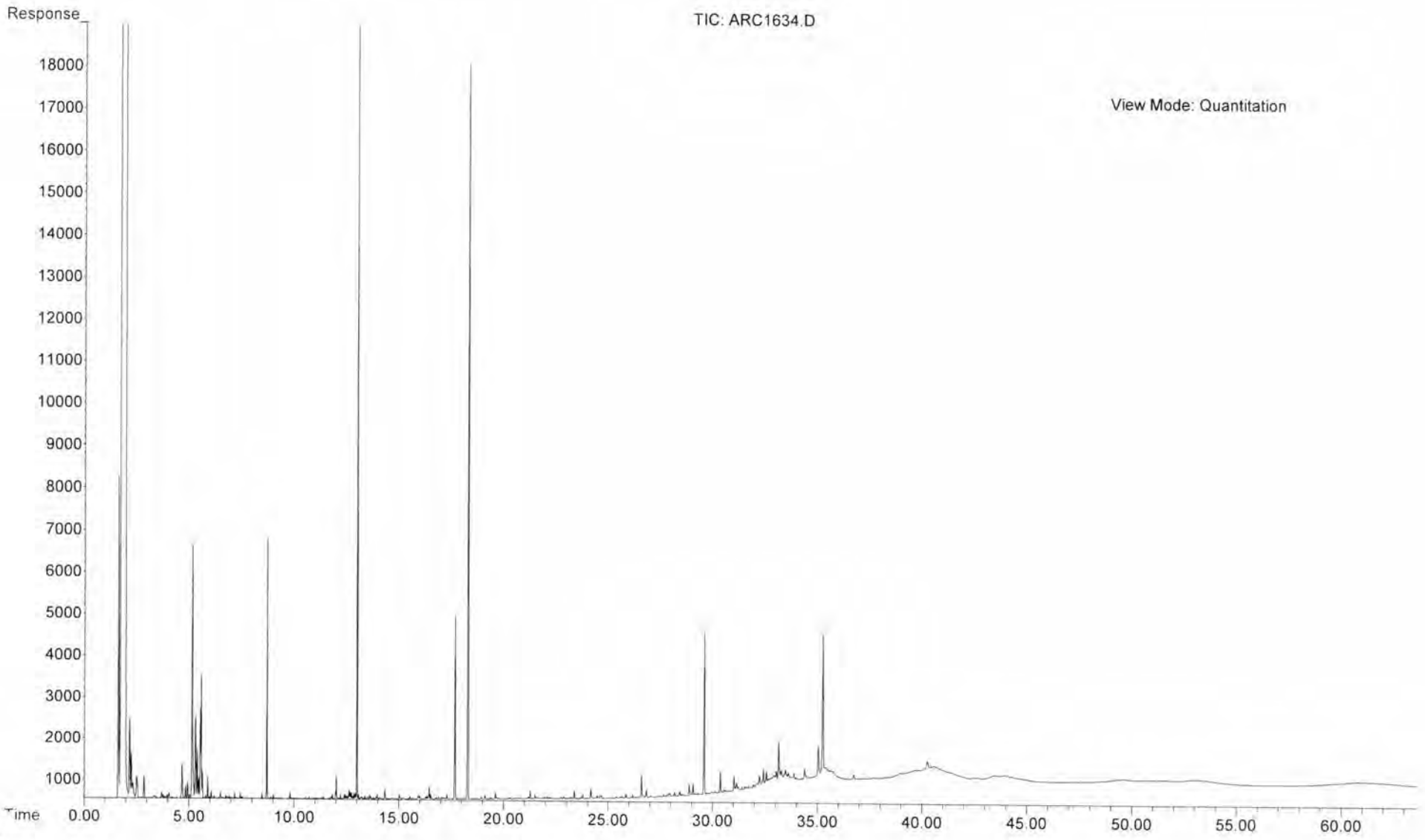
File :P:\2013\J13034\Aliphatics\ENV 3079\FID10078\ARC1617.D
Operator : Meghan Dailey
Acquired : 16-Aug-2013, 15:08 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-BG-009 (0-0.5)
Misc Info :
Vial Number: 16



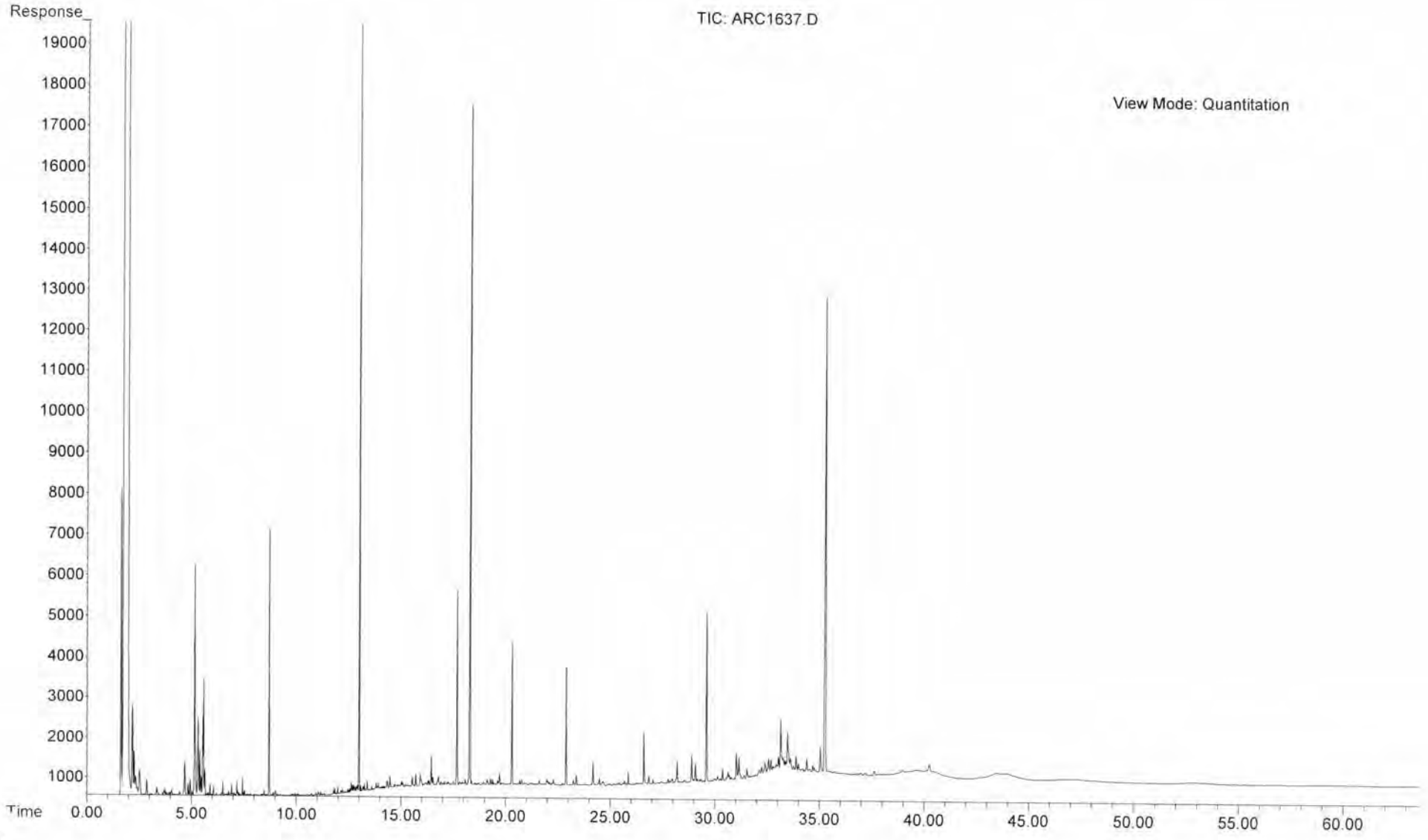
File :P:\2013\J13034\Aliphatics\ENV 3079\FID10078\ARC1633.D
Operator : Meghan Dailey
Acquired : 16-Aug-2013, 16:19 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-009 (0-0.5)
Misc Info :
Vial Number: 17



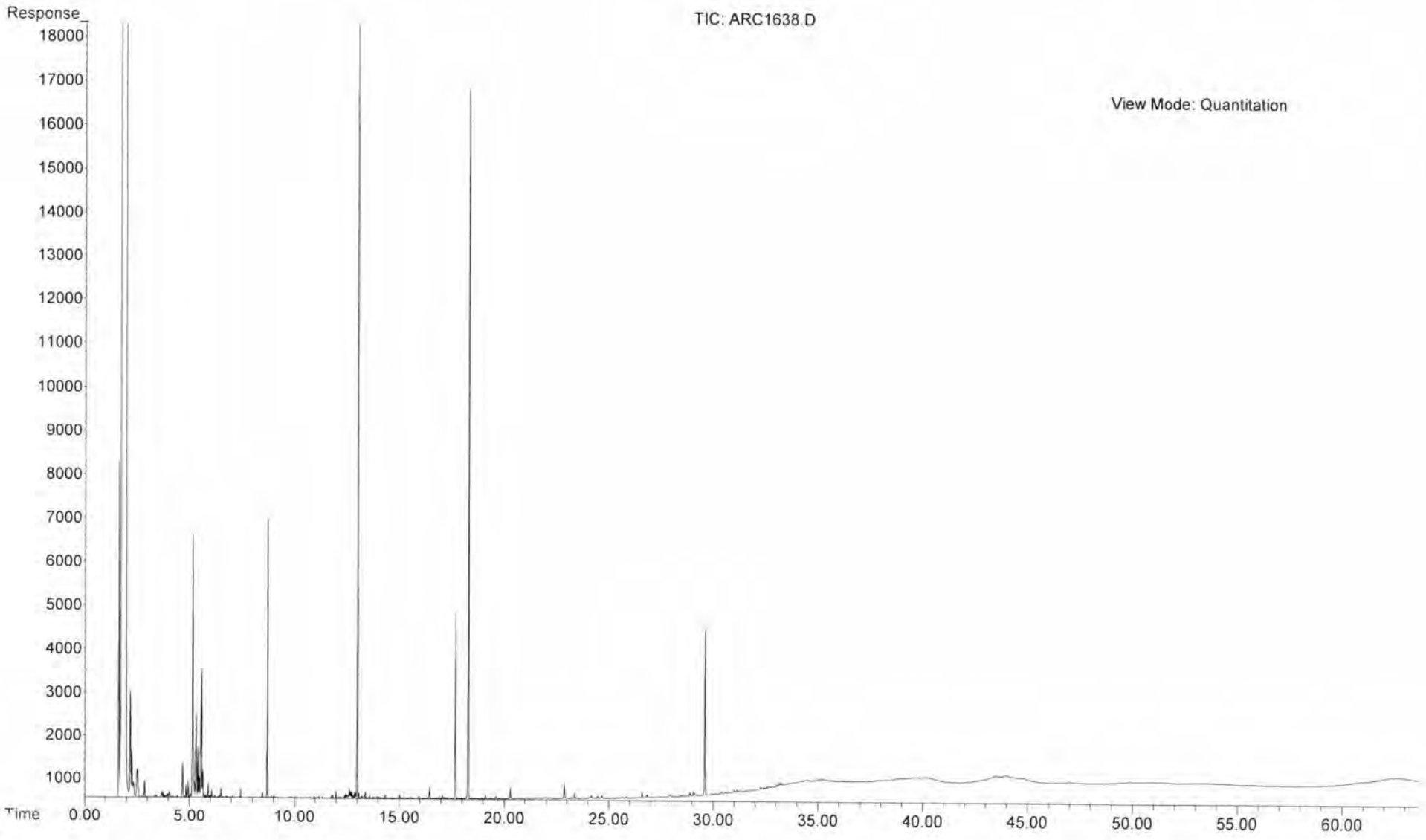
File :P:\2013\J13034\Aliphatics\ENV 3079\FID10078\ARC1634.D
Operator : Meghan Dailey
Acquired : 16-Aug-2013, 17:30 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-008 (0-0.5)
Misc Info :
Vial Number: 18



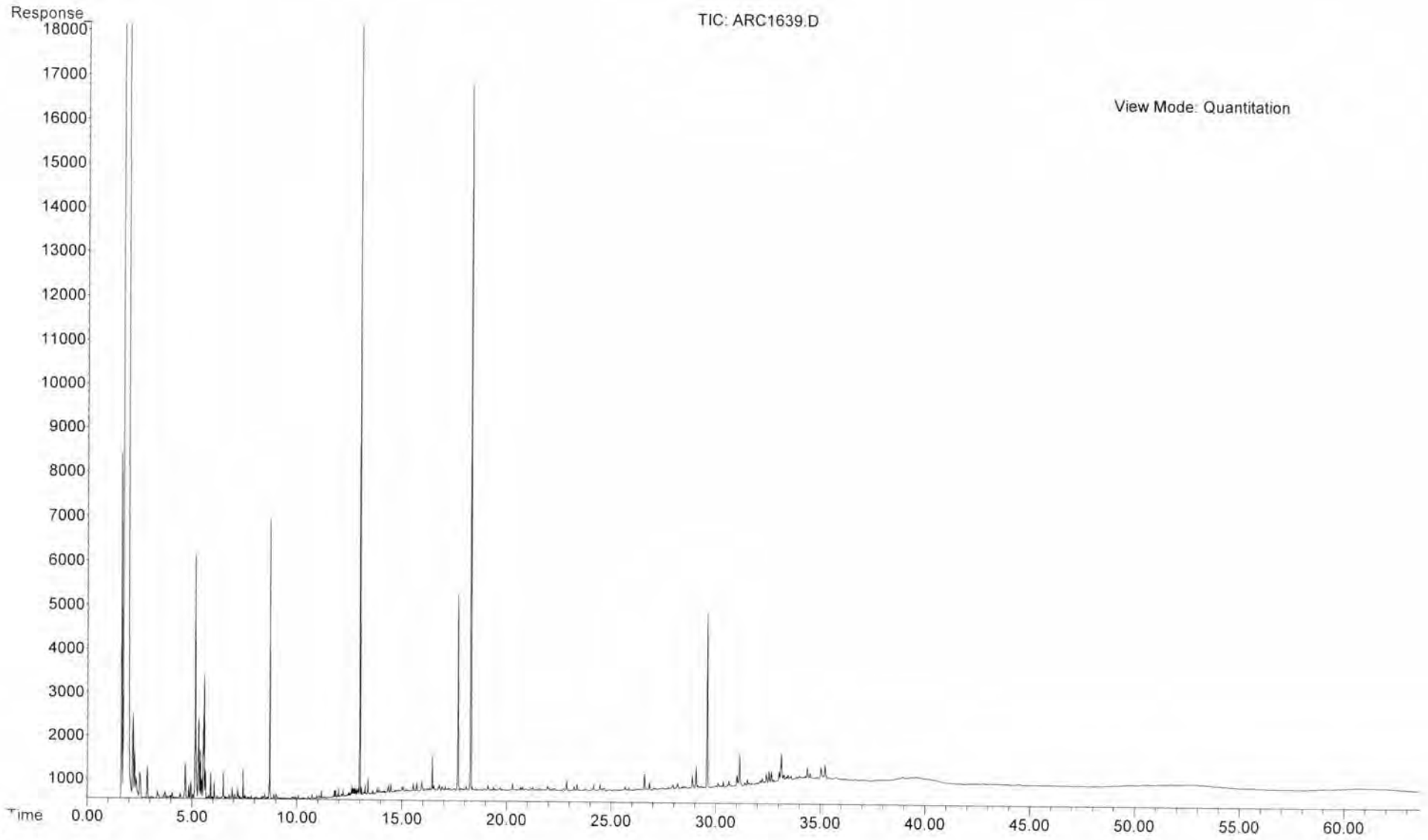
File :P:\2013\J13034\Aliphatics\ENV 3079\FID10078\ARC1637.D
Operator : Meghan Dailey
Acquired : 16-Aug-2013, 18:40 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-007 (0-0.5)
Misc Info :
Vial Number: 19



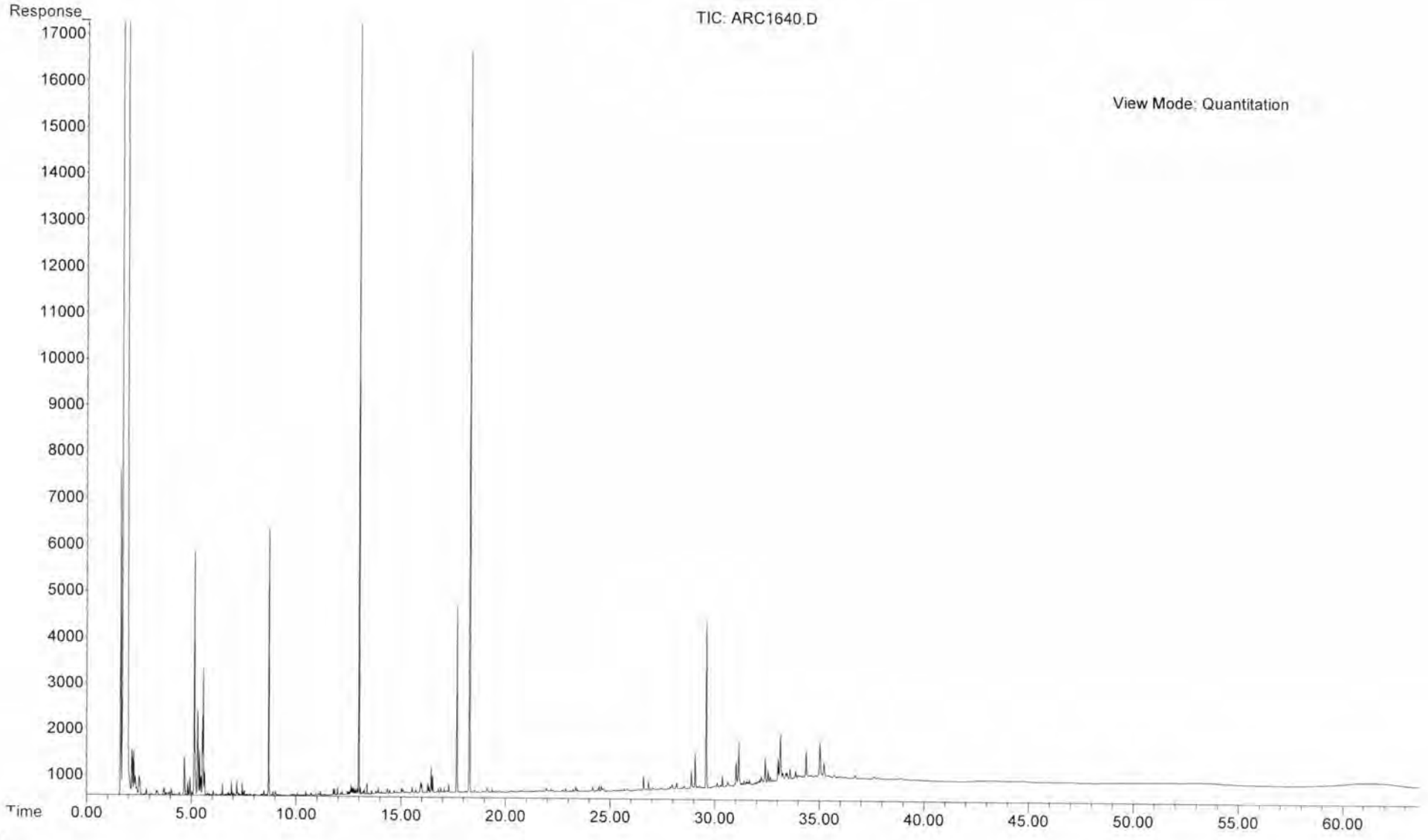
File :P:\2013\J13034\Aliphatics\ENV 3079\FID10078\ARC1638.D
Operator : Meghan Dailey
Acquired : 16-Aug-2013, 19:51 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-006 (0-0.5)
Misc Info :
Vial Number: 20



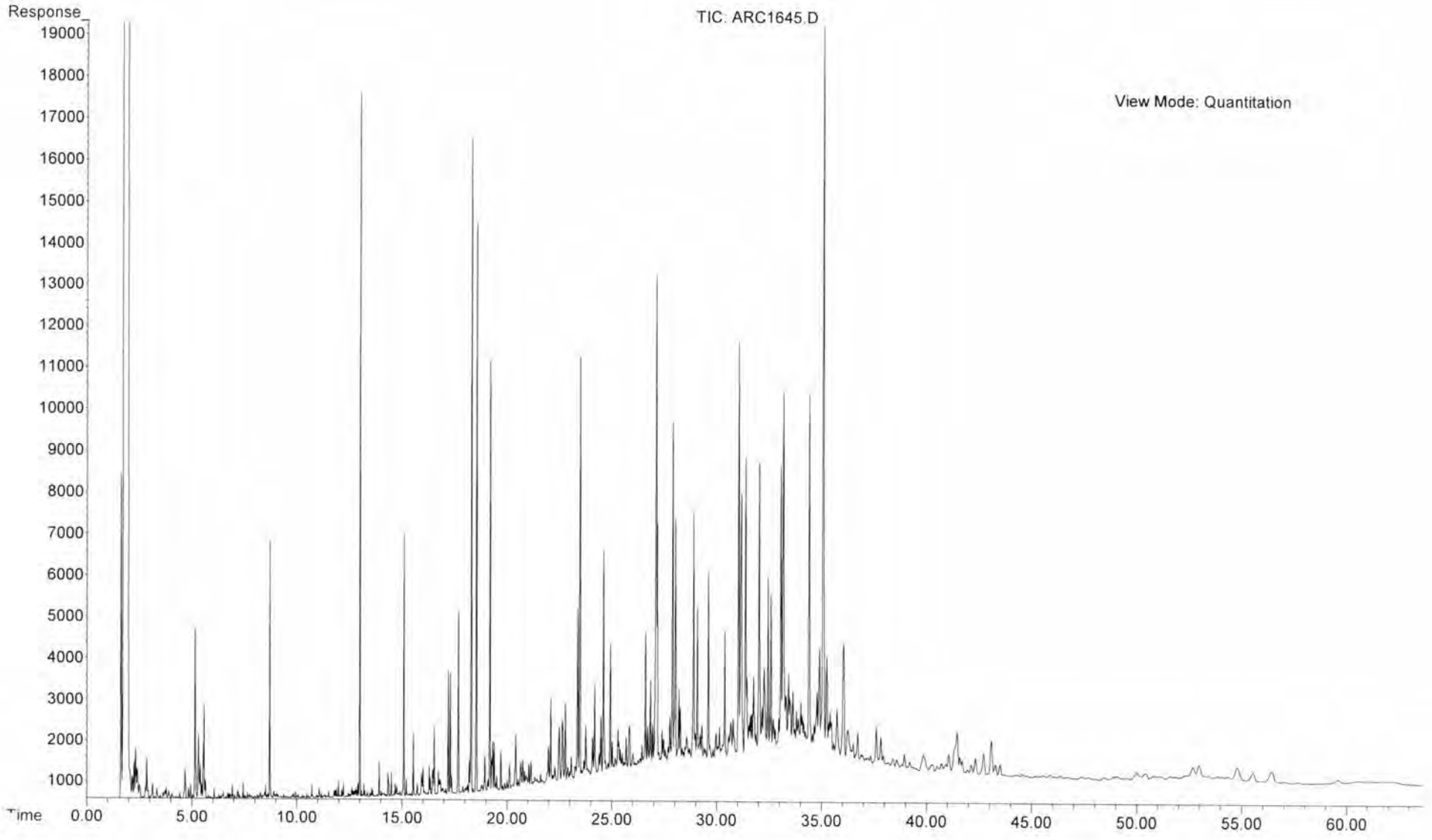
File :P:\2013\J13034\Aliphatics\ENV 3079\FID10078\ARC1639.D
Operator : Meghan Dailey
Acquired : 16-Aug-2013, 22:12 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-005 (0-0.5)
Misc Info :
Vial Number: 22



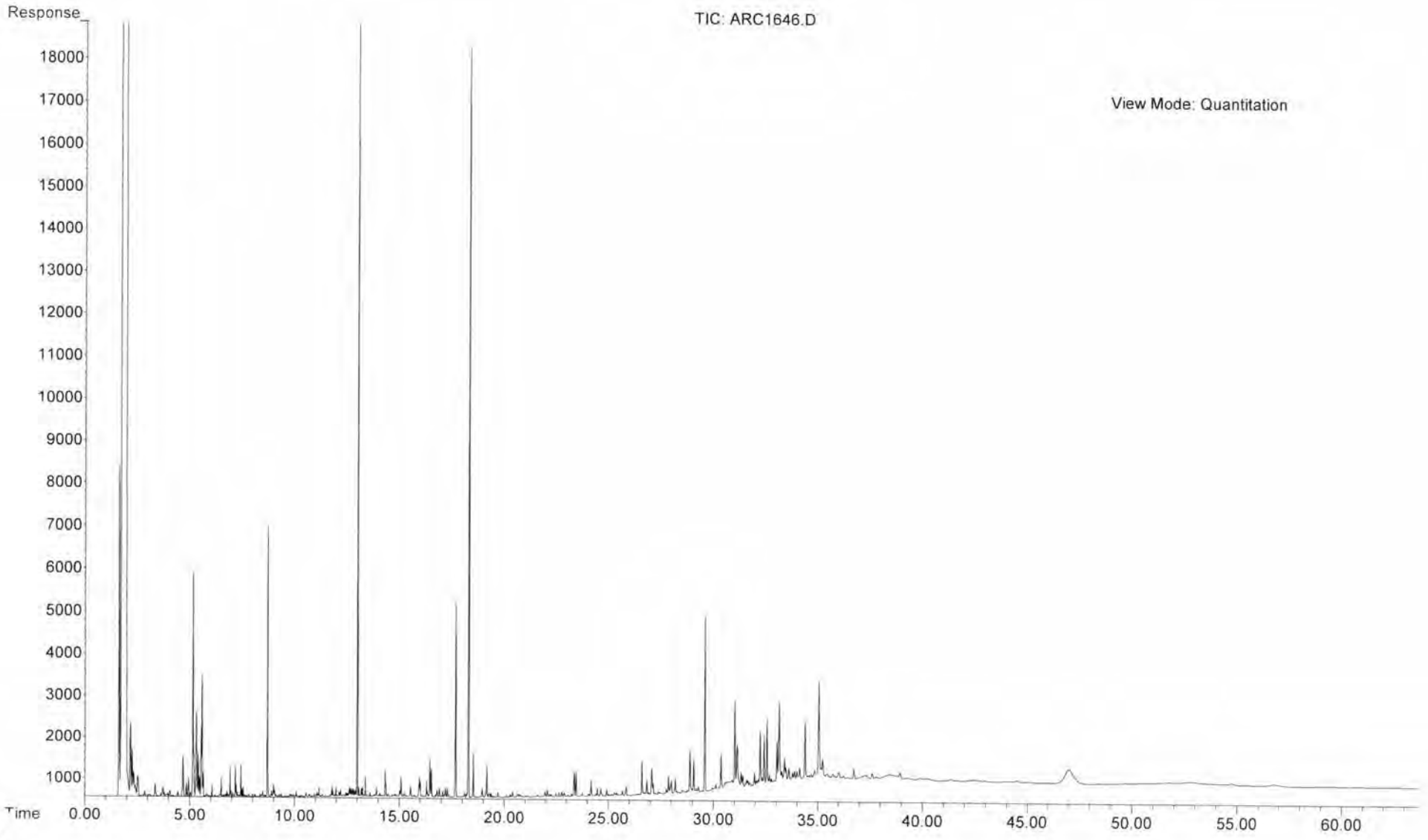
File :P:\2013\J13034\Aliphatics\ENV 3079\FID10078\ARC1640.D
Operator : Meghan Dailey
Acquired : 16-Aug-2013, 23:23 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-010 (0-0.5)
Misc Info :
Vial Number: 23



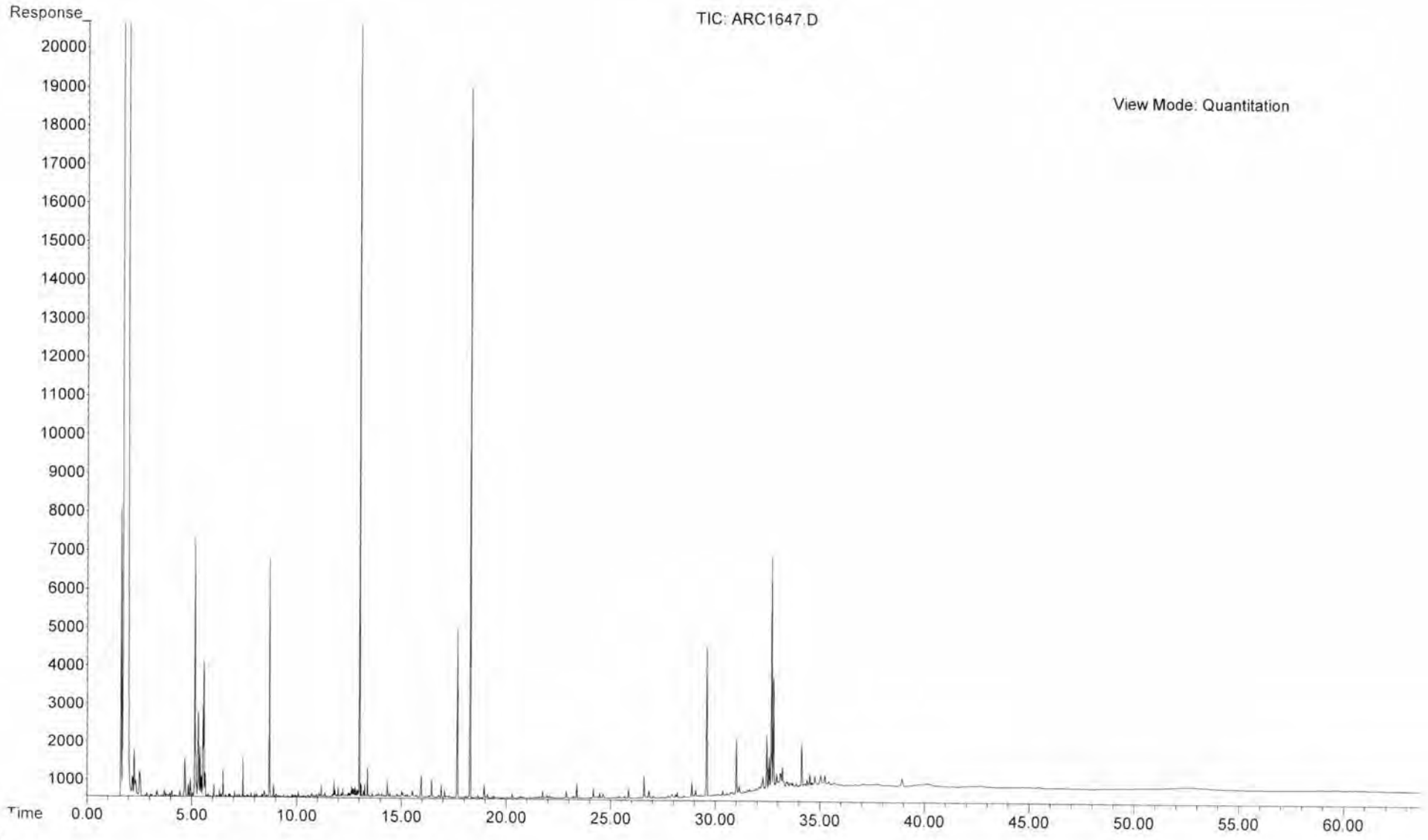
File :P:\2013\J13034\Aliphatics\ENV 3079\FID10078\ARC1645.D
Operator : Meghan Dailey
Acquired : 17-Aug-2013, 00:34 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-BG-004 (0-0.5)
Misc Info :
Vial Number: 24



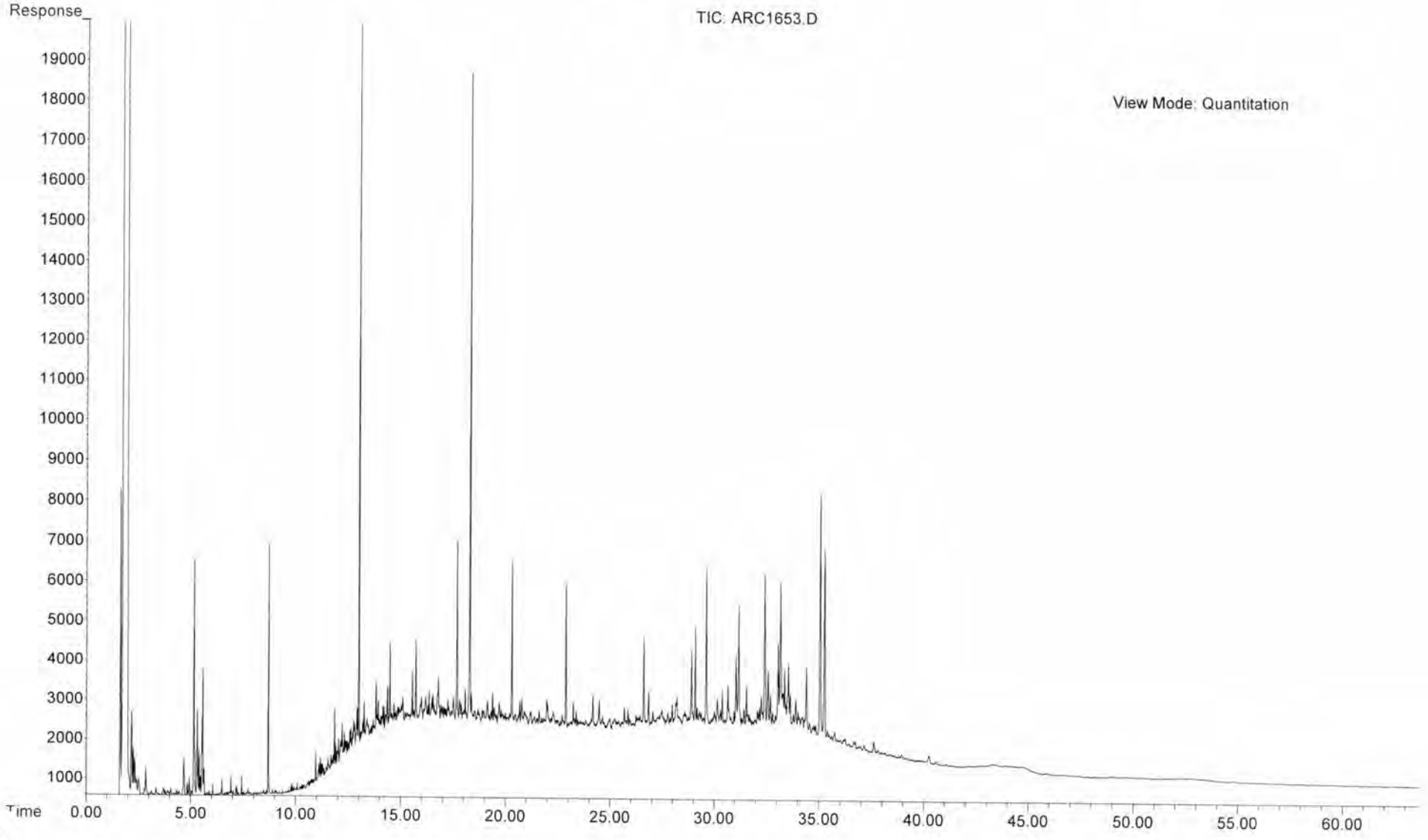
File :P:\2013\J13034\Aliphatics\ENV 3079\FID10078\ARC1646.D
Operator : Meghan Dailey
Acquired : 17-Aug-2013, 01:44 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-BG-005 (0-0.5)
Misc Info :
Vial Number: 25



File :P:\2013\J13034\Aliphatics\ENV 3079\FID10078\ARC1647.D
Operator : Meghan Dailey
Acquired : 17-Aug-2013, 14:53 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-BG-006 (0-0.5)
Misc Info :
Vial Number: 27



File :P:\2013\J13034\Aliphatics\ENV 3079\FID10078\ARC1653.D
Operator : Meghan Dailey
Acquired : 17-Aug-2013, 16:03 using AcqMethod ALI2012.M
Instrument : HP5890
Sample Name: SED-DA-DUP-04-080313
Misc Info :
Vial Number: 28



Polycyclic Aromatic Hydrocarbon Concentration

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ARC1602.D	ARC1603.D	ARC1611.D	ARC1612.D
Client Name	SED-DA-BG-007 (0-0.5)	SED-DA-DUP-02-073013	SED-DA-BG-011 (0-0.5)	SED-DA-BG-010 (0-0.5)
Matrix	Sediment	Sediment	Sediment	Sediment
Collection Date	07/30/13	07/30/13	07/31/13	07/31/13
Received Date	07/31/13	07/31/13	08/01/13	08/01/13
Extraction Date	08/12/13	08/12/13	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079	ENV 3079	ENV 3079
Date Acquired	8/16/13 5:40	8/16/13 7:59	8/16/13 9:08	8/16/13 10:18
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.0	15.0	15.0	15.0
% Dry	47	13	56	58
% Moisture	53	88	44	42
Dilution	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
cis/trans Decalin	14.5		87.5		<0.1	U	<0.1	U
C1-Decalins	<0.3	U	<0.3	U	<0.3	U	<0.3	U
C2-Decalins	<0.3	U	<0.3	U	<0.3	U	<0.3	U
C3-Decalins	<0.3	U	<0.3	U	<0.3	U	<0.3	U
C4-Decalins	<0.3	U	<0.3	U	<0.3	U	<0.3	U
Naphthalene	10.5		15.1		10.9		10.7	
C1-Naphthalenes	8.8		14.7		12.3		13.1	
C2-Naphthalenes	17.0		38.9		23.8		25.3	
C3-Naphthalenes	40.6		46.0		28.0		27.9	
C4-Naphthalenes	23.0		37.3		41.8		35.3	
Benzothiophene	0.67		<0.1	U	1.65		1.65	
C1-Benzothiophenes	<0.2	U	<0.2	U	<0.2	U	<0.2	U
C2-Benzothiophenes	<0.2	U	<0.2	U	<0.2	U	<0.2	U
C3-Benzothiophenes	<0.2	U	<0.2	U	<0.2	U	<0.2	U
C4-Benzothiophenes	<0.2	U	<0.2	U	<0.2	U	<0.2	U
Biphenyl	4.16		7.33		7.38		7.55	
Acenaphthylene	19.2		13.6		7.54		6.13	
Acenaphthene	3.229		8.73		2.58		2.49	
Dibenzofuran	11.7		15.8		13.3		10.6	
Fluorene	21.3		28.0		20.1		18.5	
C1-Fluorenes	8.14		16.2		14.4		14.1	
C2-Fluorenes	21.4		54.7		34.7		31.5	
C3-Fluorenes	<0.4	U	70.6		52.8		57.4	
Carbazole	6.75		7.18		7.27		5.14	
Anthracene	30.3		32.9		15.5		13.8	
Phenanthrene	56.3		109		106		77.9	
C1-Phenanthrenes/Anthracenes	27.7		61.8		57.3		46.0	
C2-Phenanthrenes/Anthracenes	33.5		79.7		82.7		73.9	
C3-Phenanthrenes/Anthracenes	32.8		85.8		93.6		103	
C4-Phenanthrenes/Anthracenes	25.3		61.4		<0.3	U	89.4	
Dibenzothiophene	5.4		15.6		17.9		11.4	
C1-Dibenzothiophenes	3.8		20.2		34.4		19.0	
C2-Dibenzothiophenes	6.64		41.7		50.6		40.6	
C3-Dibenzothiophenes	8.65		49.9		68.6		74.8	
C4-Dibenzothiophenes	11.4		62.2		60.8		78.3	
Fluoranthene	88.1		90.7		152		103	
Pyrene	77.0		49.8		81.7		64.0	
C1-Fluoranthenes/Pyrenes	50.6		55.5		63.9		67.9	
C2-Fluoranthenes/Pyrenes	53.1		122		116		98.6	
C3-Fluoranthenes/Pyrenes	24.5		59.8		37.5		34.5	
C4-Fluoranthenes/Pyrenes	23.7		54.2		36.1		35.0	
Naphthobenzothiophene	18.6		21.9		32.1		24.5	
C1-Naphthobenzothiophenes	14.1		60.9		50.6		45.8	
C2-Naphthobenzothiophenes	16.1		92.1		62.2		65.6	
C3-Naphthobenzothiophenes	14.3		91.6		39.1		63.1	
C4-Naphthobenzothiophenes	7.97		35.4		18.8		30.3	
Benz(a)anthracene	49.0		20.6		32.9		26.6	
Chrysene/Triphenylene	64.0		42.3		78.9		58.6	
C1-Chrysenes	35.7		80.6		50.6		45.3	
C2-Chrysenes	19.7		52.3		29.7		33.9	
C3-Chrysenes	11.4		34.7		17.4		22.4	
C4-Chrysenes	8.45		<0.2	U	<0.2	U	12.5	
Benzo(b)fluoranthene	101		97		138		94.5	
Benzo(k,j)fluoranthene	37.2		24.3		30.8		31.1	
Benzo(a)fluoranthene	14.1		27.9		11.3		9.30	
Benzo(e)pyrene	51.7		44.8		70.4		51.8	
Benzo(a)pyrene	35.8		28.0		44.2		32.7	
Perylene	621	E	567		54.8		256	
Indeno(1,2,3-c,d)pyrene	31.5		30.3		41.0		27.4	
Dibenzo(a,h)anthracene	9.5		8.17		10.9		8.96	
Benzo(g,h,i)perylene	31.8		69.3		42.3		30.1	
Total PAHs	1963		2943		2209		2269	

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ARC1602.D	ARC1603.D	ARC1611.D	ARC1612.D
Client Name	SED-DA-BG-007 (0-0.5)	SED-DA-DUP-02-073013	SED-DA-BG-011 (0-0.5)	SED-DA-BG-010 (0-0.5)
Matrix	Sediment	Sediment	Sediment	Sediment
Collection Date	07/30/13	07/30/13	07/31/13	07/31/13
Received Date	07/31/13	07/31/13	08/01/13	08/01/13
Extraction Date	08/12/13	08/12/13	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079	ENV 3079	ENV 3079
Date Acquired	8/16/13 5:40	8/16/13 7:59	8/16/13 9:08	8/16/13 10:18
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.0	15.0	15.0	15.0
% Dry	47	13	56	58
% Moisture	53	88	44	42
Dilution	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
Individual Alkyl Isomers and Hopanes								
2-Methylnaphthalene	9.72		16.6		13.8		15.1	
1-Methylnaphthalene	4.12		6.64		5.54		5.55	
2,6-Dimethylnaphthalene	8.55		21.0		13.3		16.1	
1,6,7-Trimethylnaphthalene	3.38		8.90		4.17		4.46	
1-Methylfluorene	4.72		10.3		8.19		7.39	
4-Methyldibenzothiophene	2.39		12.1		24.1		11.7	
2/3-Methyldibenzothiophene	1.61		10.2		11.4		8.40	
1-Methyldibenzothiophene	0.826		3.31		8.07		4.05	
3-Methylphenanthrene	7.39		16.9		18.1		13.5	
2-Methylphenanthrene	6.67		16.5		18.8		16.0	
2-Methylanthracene	7.31		13.2		6.02		6.01	
4/9-Methylphenanthrene	6.01		14.8		13.4		10.8	
1-Methylphenanthrene	4.80		10.5		10.2		7.08	
3,6-Dimethylphenanthrene	1.83		5.94		8.94		5.98	
Retene	9.98		13.1		<0.2	U	15.3	
2-Methylfluoranthene	9.66		6.26		8.37		6.61	
Benzo(b)fluorene	14.1		12.1		14.8		13.9	
C29-Hopane	<0.6	U	<0.6	U	<0.6	U	<0.6	U
18a-Oleanane	<0.6	U	<0.6	U	<0.6	U	<0.6	U
C30-Hopane	<0.6	U	<0.6	U	<0.6	U	<0.6	U
C20-TAS	<0.6	U	<0.6	U	<0.6	U	<0.6	U
C21-TAS	<0.6	U	<0.6	U	<0.6	U	<0.6	U
C26(20S)-TAS	<0.6	U	<0.6	U	<0.6	U	<0.6	U
C26(20R)/C27(20S)-TAS	<0.6	U	<0.6	U	<0.6	U	<0.6	U
C28(20S)-TAS	<0.6	U	<0.6	U	<0.6	U	<0.6	U
C27(20R)-TAS	<0.6	U	<0.6	U	<0.6	U	<0.6	U
C28(20R)-TAS	<0.6	U	<0.6	U	<0.6	U	<0.6	U
Surrogate Recovery								
Naphthalene-d8	82		76		98		76	
Acenaphthene-d10	89		83		87		88	
Phenanthrene-d10	95		98		95		94	
Chrysene-d12	93		77		81		88	
Perylene-d12	77		78		90		85	

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ARC1616.D	ARC1617.D	ARC1633.D	ARC1634.D	ARC1637.D
Client Name	SED-DA-DUP-03-073113	SED-DA-BG-009 (0-0.5)	SED-DA-009 (0-0.5)	SED-DA-008 (0-0.5)	SED-DA-007 (0-0.5)
Matrix	Sediment	Sediment	Sediment	Sediment	Sediment
Collection Date	07/31/13	07/31/13	08/02/13	08/03/13	08/03/13
Received Date	08/01/13	08/01/13	08/06/13	08/06/13	08/06/13
Extraction Date	08/12/13	08/12/13	08/12/13	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079	ENV 3079	ENV 3079	ENV 3079
Date Acquired	8/16/13 11:27	8/16/13 12:36	8/16/13 13:46	8/16/13 14:55	8/16/13 16:05
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.1	15.1	15.0	15.2	15.1
% Dry	59	56	81	84	83
% Moisture	41	44	19	16	17
Dilution	1X	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
cis/trans Decalin	<0.1	U	<0.1	U	<0.1	U	<0.1	U	<0.1	U
C1-Decalins	<0.3	U	<0.3	U	<0.3	U	<0.3	U	<0.3	U
C2-Decalins	<0.3	U	<0.3	U	<0.3	U	<0.3	U	<0.3	U
C3-Decalins	<0.3	U	<0.3	U	<0.3	U	<0.3	U	<0.3	U
C4-Decalins	<0.3	U	<0.3	U	<0.3	U	<0.3	U	<0.3	U
Naphthalene	6.08		6.10		0.771		0.439		1.41	
C1-Naphthalenes	5.99		6.03		0.721	J	0.354	J	2.19	
C2-Naphthalenes	10.7		9.95		1.46		0.771		6.15	
C3-Naphthalenes	18.2		16.2		1.50		1.04		16.9	
C4-Naphthalenes	13.3		11.5		<0.7	U	<0.7	U	20.9	
Benzothiophene	0.542		0.455		0.142		<0.1	U	0.111	
C1-Benzothiophenes	<0.2	U	<0.2	U	<0.2	U	<0.2	U	0.820	
C2-Benzothiophenes	<0.2	U	<0.2	U	<0.2	U	<0.2	U	1.76	
C3-Benzothiophenes	<0.2	U	<0.2	U	<0.2	U	<0.2	U	<0.2	U
C4-Benzothiophenes	<0.2	U	<0.2	U	<0.2	U	<0.2	U	<0.2	U
Biphenyl	2.76		2.88		0.831		0.342		0.749	
Acenaphthylene	3.18		2.88		0.155		0.105		0.319	
Acenaphthene	1.61		1.55		<0.1	U	0.039	J	<0.1	U
Dibenzofuran	6.07		5.76		0.625		0.407		1.19	
Fluorene	10.2		10.3		0.549		0.461		1.96	
C1-Fluorenes	6.04		5.51		<0.4	U	0.257	J	5.60	
C2-Fluorenes	16.7		13.6		<0.4	U	<0.4	U	19.5	
C3-Fluorenes	10.9		14.6		<0.4	U	<0.4	U	29.8	
Carbazole	3.43		3.46		0.265		<0.1	U	<0.1	U
Anthracene	7.32		6.99		<0.1	U	0.114	J,L	0.459	
Phenanthrene	33.7		29.8		2.23		1.66		8.37	
C1-Phenanthrenes/Anthracenes	17.6		17.0		<0.1	U	<0.1	U	29.7	
C2-Phenanthrenes/Anthracenes	23.8		21.0		<0.3	U	<0.3	U	58.0	
C3-Phenanthrenes/Anthracenes	22.8		22.6		<0.3	U	<0.3	U	66.1	
C4-Phenanthrenes/Anthracenes	<0.3	U	22.7		<0.3	U	<0.3	U	46.9	
Dibenzothiophene	2.86		2.81		0.360		0.199		6.26	
C1-Dibenzothiophenes	2.71		2.78		0.451		0.252		26.5	
C2-Dibenzothiophenes	5.43		5.23		0.515		0.427		48.7	
C3-Dibenzothiophenes	7.59		7.29		0.447		0.882		70.9	
C4-Dibenzothiophenes	8.49		7.24		<0.2	U	1.21		54.5	
Fluoranthene	28.5		28.8		1.06		1.28		2.74	
Pyrene	24.9		24.5		0.745		0.736		3.39	
C1-Fluoranthenes/Pyrenes	18.8		19.0		0.603		0.813		9.57	
C2-Fluoranthenes/Pyrenes	25.0		26.7		1.419		1.58		14.1	
C3-Fluoranthenes/Pyrenes	9.08		10.8		0.566		0.777		12.3	
C4-Fluoranthenes/Pyrenes	16.9		15.5		<0.5	U	<0.5	U	9.11	
Naphthobenzothiophene	9.05		8.06		0.366		0.433		10.2	
C1-Naphthobenzothiophenes	9.11		8.66		<0.3	U	0.850		22.5	
C2-Naphthobenzothiophenes	10.4		11.0		<0.3	U	1.49		28.4	
C3-Naphthobenzothiophenes	15.3		12.5		<0.3	U	1.32		23.2	
C4-Naphthobenzothiophenes	6.40		6.62		<0.3	U	<0.3	U	12.1	
Benz(a)anthracene	10.2		9.46		0.326		0.378		1.35	
Chrysene/Triphenylene	17.6		16.7		1.05		1.08		4.60	
C1-Chrysenes	24.2		27.1		<0.2	U	<0.2	U	8.21	
C2-Chrysenes	9.20		10.5		<0.2	U	<0.2	U	12.1	
C3-Chrysenes	5.24		7.09		<0.2	U	<0.2	U	7.87	
C4-Chrysenes	<0.2	U	<0.2	U	<0.2	U	<0.2	U	3.76	
Benzo(b)fluoranthene	26.3		21.3		1.29		1.49		3.97	
Benzo(k,j)fluoranthene	6.08		4.78		0.417		0.589		0.786	
Benzo(a)fluoranthene	5.17		5.04		<0.1	U	<0.1	U	<0.1	U
Benzo(e)pyrene	11.8		9.60		0.631		0.956		2.82	
Benzo(a)pyrene	6.84		5.27		0.139		0.331	L	0.678	
Perylene	316		292		0.327	J	1.34	L	0.151	J
Indeno(1,2,3-c,d)pyrene	6.43		5.20		0.366		0.527		0.898	
Dibenzo(a,h)anthracene	2.89		2.40		0.124		0.171		0.478	
Benzo(g,h,i)perylene	7.14		5.84		0.325		0.418	L	1.32	
Total PAHs	876		851		20.8		25.5		722	

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ARC1616.D	ARC1617.D	ARC1633.D	ARC1634.D	ARC1637.D
Client Name	SED-DA-DUP-03-073113	SED-DA-BG-009 (0-0.5)	SED-DA-009 (0-0.5)	SED-DA-008 (0-0.5)	SED-DA-007 (0-0.5)
Matrix	Sediment	Sediment	Sediment	Sediment	Sediment
Collection Date	07/31/13	07/31/13	08/02/13	08/03/13	08/03/13
Received Date	08/01/13	08/01/13	08/06/13	08/06/13	08/06/13
Extraction Date	08/12/13	08/12/13	08/12/13	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079	ENV 3079	ENV 3079	ENV 3079
Date Acquired	8/16/13 11:27	8/16/13 12:36	8/16/13 13:46	8/16/13 14:55	8/16/13 16:05
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.1	15.1	15.0	15.2	15.1
% Dry	59	56	81	84	83
% Moisture	41	44	19	16	17
Dilution	1X	1X	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
Individual Alkyl Isomers and Hopanes										
2-Methylnaphthalene	6.82		6.89		0.772	J	0.383	J	2.31	
1-Methylnaphthalene	2.62		2.61		0.368	J	0.176	J	1.16	
2,6-Dimethylnaphthalene	5.72		5.35		0.603		0.337		2.84	
1,6,7-Trimethylnaphthalene	1.57		1.71		0.206		0.100	J	3.15	
1-Methylfluorene	2.31		2.37		<0.2	U	0.181	J	5.07	
4-Methyldibenzothiophene	1.73		1.63		0.282		0.109		14.6	
2/3-Methyldibenzothiophene	1.29		1.41		0.194		0.158		9.89	
1-Methyldibenzothiophene	0.413		0.487		0.097		0.053	J	9.19	
3-Methylphenanthrene	4.95		4.54		<0.1	U	<0.1	U	6.69	
2-Methylphenanthrene	4.76		4.51		<0.1	U	<0.1	U	7.88	
2-Methylanthracene	4.26		4.26		<0.1	U	<0.1	U	3.18	
4/9-Methylphenanthrene	3.09		3.13		<0.1	U	<0.1	U	9.06	
1-Methylphenanthrene	3.39		3.34		<0.1	U	<0.1	U	7.70	
3,6-Dimethylphenanthrene	1.62		1.38		<0.1	U	<0.1	U	3.15	
Retene	<0.2	U	<0.2	U	<0.2	U	<0.2	U	4.13	
2-Methylfluoranthene	2.79		2.64		0.084	J	0.084	J	1.12	
Benzo(b)fluorene	5.59		5.39		0.069	J	0.098	J	0.880	
C29-Hopane	<0.6	U	<0.6	U	<0.6	U	4.45		27.6	
18a-Oleanane	<0.6	U	<0.6	U	<0.6	U	<0.6	U	<0.6	U
C30-Hopane	<0.6	U	<0.6	U	<0.6	U	5.33		52.2	
C20-TAS	<0.6	U	<0.6	U	<0.6	U	<0.6	U	<0.6	U
C21-TAS	<0.6	U	<0.6	U	<0.6	U	<0.6	U	<0.6	U
C26(20S)-TAS	<0.6	U	<0.6	U	<0.6	U	<0.6	U	<0.6	U
C26(20R)/C27(20S)-TAS	<0.6	U	<0.6	U	<0.6	U	<0.6	U	<0.6	U
C28(20S)-TAS	<0.6	U	<0.6	U	<0.6	U	<0.6	U	<0.6	U
C27(20R)-TAS	<0.6	U	<0.6	U	<0.6	U	<0.6	U	<0.6	U
C28(20R)-TAS	<0.6	U	<0.6	U	<0.6	U	<0.6	U	<0.6	U
Surrogate Recovery										
Naphthalene-d8	77		79		72		72		75	
Acenaphthene-d10	83		82		76		73		67	
Phenanthrene-d10	94		91		84		81		92	
Chrysene-d12	97		94		86		85		97	
Perylene-d12	91		85		1	L	1	L	5	L

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ARC1638.D	ARC1639.D	ARC1640.D	ARC1645.D	ARC1646.D
Client Name	SED-DA-006 (0-0.5)	SED-DA-005 (0-0.5)	SED-DA-010 (0-0.5)	SED-DA-BG-004 (0-0.5)	SED-DA-BG-005 (0-0.5)
Matrix	Sediment	Sediment	Sediment	Sediment	Sediment
Collection Date	08/03/13	08/03/13	08/03/13	08/04/13	08/04/13
Received Date	08/06/13	08/06/13	08/06/13	08/06/13	08/06/13
Extraction Date	08/12/13	08/12/13	08/12/13	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079	ENV 3079	ENV 3079	ENV 3079
Date Acquired	8/16/13 18:23	8/16/13 19:32	8/16/13 20:41	9/5/13 11:56	8/16/13 22:59
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.1	15.2	15.2	15.1	15.0
% Dry	84	84	84	70	80
% Moisture	16	16	16	30	20
Dilution	1X	1X	1X	10X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
cis/trans Decalin	<0.1	U	<0.1	U	<0.1	U	<1.3	U	3.72	
C1-Decalins	<0.3	U	<0.3	U	<0.3	U	<2.6	U	1.65	
C2-Decalins	<0.3	U	<0.3	U	<0.3	U	<2.6	U	<0.3	U
C3-Decalins	<0.3	U	<0.3	U	<0.3	U	<2.6	U	<0.3	U
C4-Decalins	<0.3	U	<0.3	U	<0.3	U	<2.6	U	<0.3	U
Naphthalene	0.354		1.58		1.55		39.8		4.36	
C1-Naphthalenes	0.245	J	2.20		1.74		14.1		3.39	
C2-Naphthalenes	0.498	J	5.14		3.39		15.8		4.57	
C3-Naphthalenes	<0.7	U	8.78		6.45		12.2		2.63	
C4-Naphthalenes	<0.7	U	14.8		6.27		9.70		2.64	
Benzothiophene	<0.1	U	0.143		0.076	J	<0.9	U	0.224	
C1-Benzothiophenes	<0.2	U	0.704		<0.2	U	<1.8	U	<0.2	U
C2-Benzothiophenes	<0.2	U	1.28		<0.2	U	<1.8	U	<0.2	U
C3-Benzothiophenes	<0.2	U	2.06		<0.2	U	<1.8	U	<0.2	U
C4-Benzothiophenes	<0.2	U	2.36		<0.2	U	<1.8	U	<0.2	U
Biphenyl	0.195	J	1.02		0.802		8.57		1.49	
Acenaphthylene	<0.04	U	0.246		0.403		34.8		2.14	
Acenaphthene	<0.1	U	0.114		0.175		27.1		1.12	
Dibenzofuran	0.435		1.52		1.31		38.0		3.52	
Fluorene	0.464		2.17		1.62		41.2		4.70	
C1-Fluorenes	0.143	J	2.34		1.16		15.0		0.973	
C2-Fluorenes	<0.4	U	12.5		<0.4	U	30.1		<0.4	U
C3-Fluorenes	<0.4	U	17.4		<0.4	U	38.5		<0.4	U
Carbazole	0.029	J	0.328		1.15		176		13.7	
Anthracene	<0.1	U	0.480		0.689		65.1		3.39	
Phenanthrene	1.47		6.43		7.16		966		63.2	
C1-Phenanthrenes/Anthracenes	<0.1	U	15.0		8.38		219		22.0	
C2-Phenanthrenes/Anthracenes	<0.3	U	31.6		16.8		128		15.3	
C3-Phenanthrenes/Anthracenes	<0.3	U	37.8		17.1		94.4		7.81	
C4-Phenanthrenes/Anthracenes	<0.3	U	29.3		13.9		64.3		3.44	
Dibenzothiophene	0.155		2.87		1.17		40.2		3.31	
C1-Dibenzothiophenes	0.145		12.3		4.15		17.3		1.66	
C2-Dibenzothiophenes	<0.2	U	26.4		10.8		21.9		1.60	
C3-Dibenzothiophenes	<0.2	U	40.6		17.3		30.6		1.29	
C4-Dibenzothiophenes	<0.2	U	30.3		14.0		21.1		0.615	
Fluoranthene	0.195	J	2.04		11.5		2671		191	
Pyrene	0.013	J	2.60		9.23		2201		149	
C1-Fluoranthenes/Pyrenes	<0.5	U	7.01		7.14		705		66.5	
C2-Fluoranthenes/Pyrenes	<0.5	U	11.9		12.2		1011		59.9	
C3-Fluoranthenes/Pyrenes	<0.5	U	10.5		8.32		302		13.4	
C4-Fluoranthenes/Pyrenes	<0.5	U	8.75		6.51		175		18.7	
Naphthobenzothiophene	<0.1	U	4.96		4.34		390		27.5	
C1-Naphthobenzothiophenes	<0.3	U	13.8		8.01		159		8.81	
C2-Naphthobenzothiophenes	<0.3	U	21.1		12.8		122		4.50	
C3-Naphthobenzothiophenes	<0.3	U	16.1		10.1		99.8		2.75	
C4-Naphthobenzothiophenes	<0.3	U	9.44		6.60		29.4		<0.3	U
Benz(a)anthracene	<0.2	U	0.714		3.79		687		80.0	
Chrysene/Triphenylene	<0.1	U	3.24		9.65		2601		135	
C1-Chrysenes	<0.2	U	6.54		5.99		527		28.7	
C2-Chrysenes	<0.2	U	9.11		5.98		225		9.36	
C3-Chrysenes	<0.2	U	6.73		4.24		107		2.84	
C4-Chrysenes	<0.2	U	3.64		2.86		50.1		<0.2	U
Benzo(b)fluoranthene	<0.2	U	2.15		13.6		4056		<0.2	U
Benzo(k,j)fluoranthene	<0.1	U	0.891		5.35		1409		215	
Benzo(a)fluoranthene	<0.1	U	<0.1	U	1.06		154		82.9	
Benzo(e)pyrene	<0.2	U	2.03		8.02		1899		94.1	
Benzo(a)pyrene	<0.1	U	0.596		5.88		1448		65.6	
Perylene	<1.3	U	0.242	J	1.65		254		8.40	
Indeno(1,2,3-c,d)pyrene	<0.1	U	0.646		4.67		1878		61.5	
Dibenzo(a,h)anthracene	<0.1	U	0.349		1.49		441		19.6	
Benzo(g,h,i)perylene	<0.1	U	1.32		5.78		2121		55.0	
Total PAHs	4.34		456		314		27893		1574	

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ARC1638.D	ARC1639.D	ARC1640.D	ARC1645.D	ARC1646.D
Client Name	SED-DA-006 (0-0.5)	SED-DA-005 (0-0.5)	SED-DA-010 (0-0.5)	SED-DA-BG-004 (0-0.5)	SED-DA-BG-005 (0-0.5)
Matrix	Sediment	Sediment	Sediment	Sediment	Sediment
Collection Date	08/03/13	08/03/13	08/03/13	08/04/13	08/04/13
Received Date	08/06/13	08/06/13	08/06/13	08/06/13	08/06/13
Extraction Date	08/12/13	08/12/13	08/12/13	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079	ENV 3079	ENV 3079	ENV 3079
Date Acquired	8/16/13 18:23	8/16/13 19:32	8/16/13 20:41	9/5/13 11:56	8/16/13 22:59
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.1	15.2	15.2	15.1	15.0
% Dry	84	84	84	70	80
% Moisture	16	16	16	30	20
Dilution	1X	1X	1X	10X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
Individual Alkyl Isomers and Hopanes										
2-Methylnaphthalene	0.264	J	2.37		1.87		13.9		3.64	
1-Methylnaphthalene	0.123	J	1.11		0.882		6.94		1.72	
2,6-Dimethylnaphthalene	0.162	J	2.39		1.72		5.82		2.51	
1,6,7-Trimethylnaphthalene	<0.1	U	1.90		0.773		2.35		0.420	
1-Methylfluorene	0.109	J	0.78		0.312		4.21		0.492	
4-Methyldibenzothiophene	0.100		6.67		2.36		9.32		0.975	
2/3-Methyldibenzothiophene	0.059	J	4.71		1.62		9.72		0.808	
1-Methyldibenzothiophene	0.025	J	4.28		1.29		2.96		0.318	
3-Methylphenanthrene	<0.1	U	3.27		1.53		95.9		6.14	
2-Methylphenanthrene	<0.1	U	3.70		2.07		111		7.56	
2-Methylanthracene	<0.1	U	2.87		2.87		12.5		3.28	
4/9-Methylphenanthrene	<0.1	U	4.24		1.72		59.1		3.85	
1-Methylphenanthrene	<0.1	U	3.40		1.54		57.3		4.77	
3,6-Dimethylphenanthrene	<0.1	U	1.64		0.730		15.4		1.08	
Retene	<0.2	U	2.26		0.989		4.30		0.468	
2-Methylfluoranthene	<0.2	U	0.648		0.791		171		10.2	
Benzo(b)fluorene	<0.1	U	0.523		1.00		158		21.0	
C29-Hopane	<0.6	U	31.7		22.1		57.0		4.75	
18a-Oleanane	<0.6	U	<0.6	U	<0.6	U	<5.7	U	<0.6	U
C30-Hopane	<0.6	U	39.9		26.4		62.4		4.91	
C20-TAS	<0.6	U	<0.6	U	<0.6	U	<5.7	U	<0.6	U
C21-TAS	<0.6	U	<0.6	U	<0.6	U	<5.7	U	<0.6	U
C26(20S)-TAS	<0.6	U	<0.6	U	<0.6	U	<5.7	U	<0.6	U
C26(20R)/C27(20S)-TAS	<0.6	U	<0.6	U	<0.6	U	<5.7	U	<0.6	U
C28(20S)-TAS	<0.6	U	<0.6	U	<0.6	U	<5.7	U	<0.6	U
C27(20R)-TAS	<0.6	U	<0.6	U	<0.6	U	<5.7	U	<0.6	U
C28(20R)-TAS	<0.6	U	<0.6	U	<0.6	U	<5.7	U	<0.6	U
Surrogate Recovery										
Naphthalene-d8	78		75		75		91	D	73	
Acenaphthene-d10	54		75		78		92	D	69	
Phenanthrene-d10	86		89		88		75	D	87	
Chrysene-d12	86		92		94		88	D	95	
Perylene-d12	0	L	5	L	33		91	D	1	L

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ARC1647.D	ARC1653.D
Client Name	SED-DA-BG-006 (0-0.5)	SED-DA-DUP-04-080313
Matrix	Sediment	Sediment
Collection Date	08/04/13	08/03/13
Received Date	08/06/13	08/06/13
Extraction Date	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079
Date Acquired	8/17/13 0:08	8/17/13 1:17
Method	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.1	15.2
% Dry	76	78
% Moisture	24	22
Dilution	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
cis/trans Decalin	<0.1	U	1.89	
C1-Decalins	<0.3	U	3.43	
C2-Decalins	<0.3	U	5.36	
C3-Decalins	<0.3	U	16.1	
C4-Decalins	<0.3	U	42.2	
Naphthalene	2.13		4.83	
C1-Naphthalenes	2.29		13.4	
C2-Naphthalenes	4.23		53.1	
C3-Naphthalenes	3.10		124	
C4-Naphthalenes	3.50		215	
Benzothiophene	<0.1	U	0.494	
C1-Benzothiophenes	<0.2	U	5.24	
C2-Benzothiophenes	<0.2	U	15.7	
C3-Benzothiophenes	<0.2	U	30.0	
C4-Benzothiophenes	<0.2	U	64.1	
Biphenyl	0.983		3.02	
Acenaphthylene	0.376		1.55	
Acenaphthene	<0.1	U	1.39	
Dibenzofuran	2.75		4.59	
Fluorene	3.85		8.40	
C1-Fluorenes	0.189	J	40.3	
C2-Fluorenes	<0.4	U	110	
C3-Fluorenes	<0.4	U	151	
Carbazole	0.19		<0.1	U
Anthracene	<0.1	U	5.70	
Phenanthrene	9.05		51.9	
C1-Phenanthrenes/Anthracenes	4.66		168	
C2-Phenanthrenes/Anthracenes	<0.3	U	318	
C3-Phenanthrenes/Anthracenes	<0.3	U	350	
C4-Phenanthrenes/Anthracenes	<0.3	U	253	
Dibenzothiophene	1.11		32.0	
C1-Dibenzothiophenes	0.903		163	
C2-Dibenzothiophenes	0.870		335	
C3-Dibenzothiophenes	0.308		430	
C4-Dibenzothiophenes	<0.2	U	324	
Fluoranthene	1.65		16.1	
Pyrene	0.585		20.4	
C1-Fluoranthenes/Pyrenes	0.931		77.4	
C2-Fluoranthenes/Pyrenes	0.442	J	112	
C3-Fluoranthenes/Pyrenes	<0.5	U	80.9	
C4-Fluoranthenes/Pyrenes	<0.5	U	78.6	
Naphthobenzothiophene	<0.1	U	35.0	
C1-Naphthobenzothiophenes	<0.3	U	103.4	
C2-Naphthobenzothiophenes	<0.3	U	167.5	
C3-Naphthobenzothiophenes	<0.3	U	113.9	
C4-Naphthobenzothiophenes	<0.3	U	42.7	
Benz(a)anthracene	0.185	J	5.32	
Chrysene/Triphenylene	0.438		19.8	
C1-Chrysenes	<0.2	U	60.6	
C2-Chrysenes	<0.2	U	68.5	
C3-Chrysenes	<0.2	U	49.9	
C4-Chrysenes	<0.2	U	23.0	
Benzo(b)fluoranthene	0.682		20.7	
Benzo(k,j)fluoranthene	0.243		6.88	
Benzo(a)fluoranthene	<0.1	U	<0.1	U
Benzo(e)pyrene	0.362		16.7	
Benzo(a)pyrene	0.153		7.46	
Perylene	0.211	J	2.66	
Indeno(1,2,3-c,d)pyrene	0.321		5.21	
Dibenzo(a,h)anthracene	0.100		2.48	
Benzo(g,h,i)perylene	0.316		9.93	
Total PAHs	47.1		4492	

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ARC1647.D	ARC1653.D
Client Name	SED-DA-BG-006 (0-0.5)	SED-DA-DUP-04-080313
Matrix	Sediment	Sediment
Collection Date	08/04/13	08/03/13
Received Date	08/06/13	08/06/13
Extraction Date	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079
Date Acquired	8/17/13 0:08	8/17/13 1:17
Method	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.1	15.2
% Dry	76	78
% Moisture	24	22
Dilution	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q
Individual Alkyl Isomers and Hopanes				
2-Methylnaphthalene	2.41		13.6	
1-Methylnaphthalene	1.21		7.69	
2,6-Dimethylnaphthalene	2.38		22.2	
1,6,7-Trimethylnaphthalene	0.640		28.8	
1-Methylfluorene	0.351		30.3	
4-Methyldibenzothiophene	0.659		90.3	
2/3-Methyldibenzothiophene	0.312		68.0	
1-Methyldibenzothiophene	0.176		48.4	
3-Methylphenanthrene	0.695		40.3	
2-Methylphenanthrene	0.875		46.3	
2-Methylanthracene	2.72		7.81	
4/9-Methylphenanthrene	0.602		64.1	
1-Methylphenanthrene	0.524		36.9	
3,6-Dimethylphenanthrene	<0.1	U	22.1	
Retene	<0.2	U	21.8	
2-Methylfluoranthene	0.054	J	5.83	
Benzo(b)fluorene	0.082	J	7.17	
C29-Hopane	<0.6	U	229	
18a-Oleanane	<0.6	U	<0.6	U
C30-Hopane	<0.6	U	274	
C20-TAS	<0.6	U	<0.6	U
C21-TAS	<0.6	U	<0.6	U
C26(20S)-TAS	<0.6	U	<0.6	U
C26(20R)/C27(20S)-TAS	<0.6	U	<0.6	U
C28(20S)-TAS	<0.6	U	<0.6	U
C27(20R)-TAS	<0.6	U	<0.6	U
C28(20R)-TAS	<0.6	U	<0.6	U
Surrogate Recovery				
Naphthalene-d8	69		60	
Acenaphthene-d10	71		66	
Phenanthrene-d10	80		96	
Chrysene-d12	76		71	
Perylene-d12	2	L	16	

Sample Name	ENV3079A.D
Client Name	Procedural Blank
Matrix	Sediment
Collection Date	NA
Received Date	NA
Extraction Date	08/12/13
Extraction Batch	ENV 3079
Date Acquired	8/15/13 23:54
Method	PAH-2012.M
Sample Dry Weight (g)	15.0
% Dry	NA
% Moisture	NA
Dilution	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	3X MDL	Actual MDL
cis/trans Decalin	<0.1	U	0.395	0.132
C1-Decalins	<0.3	U	0.790	0.263
C2-Decalins	<0.3	U	0.790	0.263
C3-Decalins	<0.3	U	0.790	0.263
C4-Decalins	<0.3	U	0.790	0.263
Naphthalene	0.146	J	1.03	0.342
C1-Naphthalenes	<1	U	3.09	1.03
C2-Naphthalenes	<0.7	U	2.05	0.684
C3-Naphthalenes	<0.7	U	2.05	0.684
C4-Naphthalenes	<0.7	U	2.05	0.684
Benzothiophene	<0.1	U	0.270	0.090
C1-Benzothiophenes	<0.2	U	0.540	0.180
C2-Benzothiophenes	<0.2	U	0.540	0.180
C3-Benzothiophenes	<0.2	U	0.540	0.180
C4-Benzothiophenes	<0.2	U	0.540	0.180
Biphenyl	0.138	J	0.881	0.294
Acenaphthylene	<0	U	0.122	0.041
Acenaphthene	<0.1	U	0.308	0.103
Dibenzofuran	0.050	J	0.613	0.204
Fluorene	0.012	J	0.550	0.183
C1-Fluorenes	<0.4	U	1.10	0.367
C2-Fluorenes	<0.4	U	1.10	0.367
C3-Fluorenes	<0.4	U	1.10	0.367
Carbazole	0.014	J	0.449	0.150
Anthracene	<0.1	U	0.346	0.115
Phenanthrene	<0.2	U	0.624	0.208
C1-Phenanthrenes/Anthracenes	<0.1	U	0.232	0.077
C2-Phenanthrenes/Anthracenes	<0.3	U	0.855	0.285
C3-Phenanthrenes/Anthracenes	<0.3	U	0.855	0.285
C4-Phenanthrenes/Anthracenes	<0.3	U	0.855	0.285
Dibenzothiophene	<0.1	U	0.348	0.116
C1-Dibenzothiophenes	<0.1	U	0.191	0.064
C2-Dibenzothiophenes	<0.2	U	0.696	0.232
C3-Dibenzothiophenes	<0.2	U	0.696	0.232
C4-Dibenzothiophenes	<0.2	U	0.696	0.232
Fluoranthene	<0.3	U	1.00	0.333
Pyrene	<0.1	U	0.408	0.136
C1-Fluoranthenes/Pyrenes	<0.5	U	1.41	0.469
C2-Fluoranthenes/Pyrenes	<0.5	U	1.41	0.469
C3-Fluoranthenes/Pyrenes	<0.5	U	1.41	0.469
C4-Fluoranthenes/Pyrenes	<0.5	U	1.41	0.469
Naphthobenzothiophene	<0.1	U	0.383	0.128
C1-Naphthobenzothiophenes	<0.3	U	0.767	0.256
C2-Naphthobenzothiophenes	<0.3	U	0.767	0.256
C3-Naphthobenzothiophenes	<0.3	U	0.767	0.256
C4-Naphthobenzothiophenes	<0.3	U	0.767	0.256
Benz(a)anthracene	<0.2	U	0.577	0.192
Chrysene/Triphenylene	<0.1	U	0.347	0.116
C1-Chrysenes	<0.2	U	0.695	0.232
C2-Chrysenes	<0.2	U	0.695	0.232
C3-Chrysenes	<0.2	U	0.695	0.232
C4-Chrysenes	<0.2	U	0.695	0.232
Benzo(b)fluoranthene	<0.2	U	0.609	0.203
Benzo(k,j)fluoranthene	<0.1	U	0.294	0.098
Benzo(a)fluoranthene	<0.1	U	0.294	0.098
Benzo(e)pyrene	<0.2	U	0.530	0.177
Benzo(a)pyrene	<0.1	U	0.304	0.101
Perylene	0.2	J	3.80	1.27
indeno(1,2,3-c,d)pyrene	<0.1	U	0.151	0.050
Dibenzo(a,h)anthracene	<0.1	U	0.193	0.064
Benzo(g,h,i)perylene	<0.1	U	0.264	0.088
Total PAHs	0.572			

Sample Name	ENV3079A.D
Client Name	Procedural Blank
Matrix	Sediment
Collection Date	NA
Received Date	NA
Extraction Date	08/12/13
Extraction Batch	ENV 3079
Date Acquired	8/15/13 23:54
Method	PAH-2012.M
Sample Dry Weight (g)	15.0
% Dry	NA
% Moisture	NA
Dilution	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	3X MDL	Actual MDL
Individual Alkyl Isomers and Hopanes				
2-Methylnaphthalene	<1.3	U	3.89	1.30
1-Methylnaphthalene	<0.5	U	1.64	0.546
2,6-Dimethylnaphthalene	<0.3	U	0.782	0.261
1,6,7-Trimethylnaphthalene	<0.1	U	0.382	0.127
1-Methylfluorene	<0.2	U	0.574	0.191
4-Methyldibenzothiophene	<0.1	U	0.274	0.091
2/3-Methyldibenzothiophene	<0.1	U	0.274	0.091
1-Methyldibenzothiophene	<0.1	U	0.274	0.091
3-Methylphenanthrene	<0.1	U	0.291	0.097
2-Methylphenanthrene	<0.1	U	0.291	0.097
2-Methylanthracene	<0.1	U	0.291	0.097
4/9-Methylphenanthrene	<0.1	U	0.291	0.097
1-Methylphenanthrene	<0.1	U	0.291	0.097
3,6-Dimethylphenanthrene	<0.1	U	0.329	0.110
Retene	<0.2	U	0.694	0.231
2-Methylfluoranthene	<0.2	U	0.668	0.223
Benzo(b)fluorene	<0.1	U	0.374	0.125
C29-Hopane	<0.6	U	1.72	0.575
18a-Oleanane	<0.6	U	1.72	0.575
C30-Hopane	<0.6	U	1.72	0.575
C20-TAS	<0.6	U	1.72	0.575
C21-TAS	<0.6	U	1.72	0.575
C26(20S)-TAS	<0.6	U	1.72	0.575
C26(20R)/C27(20S)-TAS	<0.6	U	1.72	0.575
C28(20S)-TAS	<0.6	U	1.72	0.575
C27(20R)-TAS	<0.6	U	1.72	0.575
C28(20R)-TAS	<0.6	U	1.72	0.575

Surrogate Recovery	
Naphthalene-d8	89
Acenaphthene-d10	86
Phenanthrene-d10	89
Chrysene-d12	81
Perylene-d12	93

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Matrix Spike Report

Sample Name	ARC1634.D	ENV3079C.D	ENV3079D.D
Client Name	SED-DA-008 (0-0.5)	MS (SED-DA-008 (0-0.5) MS/MSD)	MSD (SED-DA-008 (0-0.5) MS/MSD)
Matrix	Sediment	Sediment	Sediment
Collection Date	08/03/13	08/03/13	08/03/13
Received Date	08/06/13	08/06/13	08/06/13
Extraction Date	08/12/13	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079	ENV 3079
Date Acquired	8/16/13 14:55	8/16/13 2:13	8/16/13 3:22
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.2	15.0	15.1
% Dry	84	84	84
% Moisture	16	16	16
Dilution	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Recovery (%)	Q	Q1	Su. Corrected Conc. (ng/dry g)	Q	Recovery (%)	Q	Q1	RPD (%)	Q	Spike Amount (ng)
cis/trans Decalin	<0.1	U	6.54		99			6.24		95			5		98.9
C1-Decalins	<0.3	U	NA					NA							
C2-Decalins	<0.3	U	NA					NA							
C3-Decalins	<0.3	U	NA					NA							
C4-Decalins	<0.3	U	NA					NA							
Naphthalene	0.439		6.29		88			6.00		84			5		100
C1-Naphthalenes	0.354	J	NA					NA							
C2-Naphthalenes	0.771		NA					NA							
C3-Naphthalenes	1.04		NA					NA							
C4-Naphthalenes	<0.7	U	NA					NA							
Benzothiophene	<0.1	U	5.81		88			5.40		82			7		99.4
C1-Benzothiophenes	<0.2	U	NA					NA							
C2-Benzothiophenes	<0.2	U	NA					NA							
C3-Benzothiophenes	<0.2	U	NA					NA							
C4-Benzothiophenes	<0.2	U	NA					NA							
Biphenyl	0.342		8.28		120			7.84		114			5		99.1
Acenaphthylene	0.105		5.85		87			5.27		79			10		99.2
Acenaphthene	0.039	J	5.72		85			5.12		77			11		100
Dibenzofuran	0.407		6.29		89			6.15		87			2		100
Fluorene	0.461		6.80		95			6.47		91			5		100
C1-Fluorenes	0.257	J	NA					NA							
C2-Fluorenes	<0.4	U	NA					NA							
C3-Fluorenes	<0.4	U	NA					NA							
Carbazole	<0.1	U	1.20	L	18	*		0.81	L	12	*		39	*	99.1
Anthracene	0.114	J,L	3.31	L	48			2.79	L	40			17		100
Phenanthrene	1.66		7.45		88			7.15		84			4		99.1
C1-Phenanthrenes/Anthracenes	<0.1	U	NA					NA							
C2-Phenanthrenes/Anthracenes	<0.3	U	NA					NA							
C3-Phenanthrenes/Anthracenes	<0.3	U	NA					NA							
C4-Phenanthrenes/Anthracenes	<0.3	U	NA					NA							
Dibenzothiophene	0.199		6.76		100			7.75		116			14		98.6
C1-Dibenzothiophenes	0.252		NA					NA							
C2-Dibenzothiophenes	0.427		NA					NA							
C3-Dibenzothiophenes	0.882		NA					NA							
C4-Dibenzothiophenes	1.21		NA					NA							
Fluoranthene	1.28		7.84		98			7.63		96			3		100
Pyrene	0.736		5.85		77			4.85		62			19		100
C1-Fluoranthenes/Pyrenes	0.813		NA					NA							
C2-Fluoranthenes/Pyrenes	1.581		NA					NA							
C3-Fluoranthenes/Pyrenes	0.777		NA					NA							
C4-Fluoranthenes/Pyrenes	<0.5	U	NA					NA							
Naphthobenzothiophene	0.433		NA					NA							
C1-Naphthobenzothiophenes	0.850		NA					NA							
C2-Naphthobenzothiophenes	1.49		NA					NA							
C3-Naphthobenzothiophenes	1.32		NA					NA							
C4-Naphthobenzothiophenes	<0.3	U	NA					NA							
Benz(a)anthracene	0.378		5.91		83			5.33		75			10		100
Chrysene/Triphenylene	1.1		7.61		99			6.99		90			9		99.4
C1-Chrysenes	<0.2	U	NA					NA							
C2-Chrysenes	<0.2	U	NA					NA							
C3-Chrysenes	<0.2	U	NA					NA							
C4-Chrysenes	<0.2	U	NA					NA							
Benzo(b)fluoranthene	1.49		9.06		113			9.44		120			4		100
Benzo(k,j)fluoranthene	0.589		7.29		101			7.88		111			8		100
Benzo(a)fluoranthene	<0.1	U	NA					NA							
Benzo(e)pyrene	0.956		7.80		103			7.69		102			1		100
Benzo(a)pyrene	0.331	L	0.32	L	0	*		0.30	L	-1	*		9		100
Perylene	1.337	L	1.38	L	0	*		1.36	L	0	*		1		100
Indeno(1,2,3-c,d)pyrene	0.527		6.69		94			6.50		92			3		98.3
Dibenzo(a,h)anthracene	0.171		7.10		105			7.20		107			2		99.1
Benzo(g,h,i)perylene	0.418	L	3.07	L	40			2.89	L	38	*		6		99.1
Average % Recovery					84					81					

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Matrix Spike Report

Sample Name	ARC1634.D	ENV3079C.D	ENV3079D.D
Client Name	SED-DA-008 (0-0.5)	MS (SED-DA-008 (0-0.5) MS/MSD)	MSD (SED-DA-008 (0-0.5) MS/MSD)
Matrix	Sediment	Sediment	Sediment
Collection Date	08/03/13	08/03/13	08/03/13
Received Date	08/06/13	08/06/13	08/06/13
Extraction Date	08/12/13	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079	ENV 3079
Date Acquired	8/16/13 14:55	8/16/13 2:13	8/16/13 3:22
Method	PAH-2012.M	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.2	15.0	15.1
% Dry	84	84	84
% Moisture	16	16	16
Dilution	1X	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	Recovery (%)	Q	Q1	Su. Corrected Conc. (ng/dry g)	Q	Recovery (%)	Q	Q1	RPD (%)	Q	Spike Amount (ng)
Individual Alkyl Isomers and Hopanes															
2-Methylnaphthalene	0.383	J	6.33		89			5.91		83			7		100
1-Methylnaphthalene	0.176	J	6.08		89			5.63		82			8		100
2,6-Dimethylnaphthalene	0.337		6.10		87			5.81		83			5		100
1,6,7-Trimethylnaphthalene	0.100	J	6.32		94			6.04		90			5		100
1-Methylfluorene	0.181	J	6.45		93			6.28		91			3		101
4-Methyldibenzothiophene	0.109		5.86		86			5.44		80			7		101
2/3-Methyldibenzothiophene	0.158		NA					NA							
1-Methyldibenzothiophene	0.053	J	NA					NA							
3-Methylphenanthrene	<0.1	U	NA					NA							
2-Methylphenanthrene	<0.1	U	NA					NA							
2-Methylanthracene	<0.1	U	NA					NA							
4/9-Methylphenanthrene	<0.1	U	NA					NA							
1-Methylphenanthrene	<0.1	U	6.43		98			6.09		93			5		98.9
3,6-Dimethylphenanthrene	<0.1	U	6.73		101			6.21		94			8		100
Retene	<0.2	U	5.33		90			4.87		82			9		89
2-Methylfluoranthene	0.084	J	5.89		87			5.37		79			9		101
Benzo(b)fluorene	0.098	J	6.29		92			5.93		87			6		101
C29-Hopane	4.45		NA					NA							
18a-Oleanane	<0.6	U	NA					NA							
C30-Hopane	5.33		NA					NA							
C20-TAS	<0.6	U	NA					NA							
C21-TAS	<0.6	U	NA					NA							
C26(20S)-TAS	<0.6	U	NA					NA							
C26(20R)/C27(20S)-TAS	<0.6	U	7.52		113			7.93		120			5		100
C28(20S)-TAS	<0.6	U	NA					NA							
C27(20R)-TAS	<0.6	U	NA					NA							
C28(20R)-TAS	<0.6	U	NA					NA							
Surrogate Recovery															
Naphthalene-d8	72		82					80							
Acenaphthene-d10	73		83					81							
Phenanthrene-d10	81		88					91							
Chrysene-d12	85		87					86							
Perylene-d12	1	L	1	L				1	L						

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Laboratory Duplicate Report

Sample Name	ARC1638.D	ENV3079E.D
Client Name	SED-DA-006 (0-0.5)	Dupl. (SED-DA-006 (0-0.5))
Matrix	Sediment	Sediment
Collection Date	08/03/13	08/03/13
Received Date	08/06/13	08/06/13
Extraction Date	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079
Date Acquired	8/16/13 18:23	8/16/13 4:31
Method	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.1	15.0
% Dry	84	84
% Moisture	16	16
Dilution	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	RPD %	Q	Q1	3X MDL	MDL
cis/trans Decalin	<0.1	U	<0.1	U				0.395	0.132
C1-Decalins	<0.3	U	<0.3	U				0.790	0.263
C2-Decalins	<0.3	U	<0.3	U				0.790	0.263
C3-Decalins	<0.3	U	<0.3	U				0.790	0.263
C4-Decalins	<0.3	U	<0.3	U				0.790	0.263
Naphthalene	0.354		0.389		10		X	1.03	0.342
C1-Naphthalenes	0.245	J	0.266	J	8		X	3.09	1.03
C2-Naphthalenes	0.50	J	0.42	J	16		X	2.05	0.684
C3-Naphthalenes	<0.7	U	<0.7	U				2.05	0.684
C4-Naphthalenes	<0.7	U	<0.7	U				2.05	0.684
Benzothiophene	<0.1	U	<0.1	U				0.270	0.090
C1-Benzothiophenes	<0.2	U	<0.2	U				0.540	0.180
C2-Benzothiophenes	<0.2	U	<0.2	U				0.540	0.180
C3-Benzothiophenes	<0.2	U	<0.2	U				0.540	0.180
C4-Benzothiophenes	<0.2	U	<0.2	U				0.540	0.180
Biphenyl	0.195	J	0.173	J	12		X	0.881	0.294
Acenaphthylene	<0.04	U	<0.04	U				0.122	0.041
Acenaphthene	<0.1	U	<0.1	U				0.308	0.103
Dibenzofuran	0.435		0.404		8		X	0.613	0.204
Fluorene	0.46		0.51		10		X	0.55	0.183
C1-Fluorenes	0.143	J	0.147	J	2		X	1.10	0.367
C2-Fluorenes	<0.4	U	<0.4	U				1.10	0.367
C3-Fluorenes	<0.4	U	<0.4	U				1.10	0.367
Carbazole	0.029	J	0.026	J	8		X	0.449	0.150
Anthracene	<0.1	U	<0.1	U				0.346	0.115
Phenanthrene	1.47		1.47		0			0.624	0.208
C1-Phenanthrenes/Anthracenes	<0.1	U	<0.1	U				0.232	0.077
C2-Phenanthrenes/Anthracenes	<0.3	U	<0.3	U				0.855	0.285
C3-Phenanthrenes/Anthracenes	<0.3	U	<0.3	U				0.855	0.285
C4-Phenanthrenes/Anthracenes	<0.3	U	<0.3	U				0.855	0.285
Dibenzothiophene	0.155		0.152		2		X	0.348	0.116
C1-Dibenzothiophenes	0.145		0.132		10		X	0.191	0.064
C2-Dibenzothiophenes	<0.2	U	<0.2	U				0.696	0.232
C3-Dibenzothiophenes	<0.2	U	<0.2	U				0.696	0.232
C4-Dibenzothiophenes	<0.2	U	<0.2	U				0.696	0.232
Fluoranthene	0.195	J	0.209	J	7		X	1.00	0.333
Pyrene	0.013	J	0.014	J	4		X	0.408	0.136
C1-Fluoranthenes/Pyrenes	<0.5	U	<0.5	U				1.41	0.469
C2-Fluoranthenes/Pyrenes	<0.5	U	<0.5	U				1.41	0.469
C3-Fluoranthenes/Pyrenes	<0.5	U	<0.5	U				1.41	0.469
C4-Fluoranthenes/Pyrenes	<0.5	U	<0.5	U				1.41	0.469
Naphthobenzothiophene	<0.1	U	<0.1	U				0.383	0.128
C1-Naphthobenzothiophenes	<0.3	U	<0.3	U				0.767	0.256
C2-Naphthobenzothiophenes	<0.3	U	<0.3	U				0.767	0.256
C3-Naphthobenzothiophenes	<0.3	U	<0.3	U				0.767	0.256
C4-Naphthobenzothiophenes	<0.3	U	<0.3	U				0.767	0.256
Benz(a)anthracene	<0.2	U	<0.2	U				0.577	0.192
Chrysene/Triphenylene	<0.1	U	<0.1	U				0.347	0.116
C1-Chrysenes	<0.2	U	<0.2	U				0.695	0.232
C2-Chrysenes	<0.2	U	<0.2	U				0.695	0.232
C3-Chrysenes	<0.2	U	<0.2	U				0.695	0.232
C4-Chrysenes	<0.2	U	<0.2	U				0.695	0.232
Benzo(b)fluoranthene	<0.2	U	<0.2	U				0.609	0.203
Benzo(k,j)fluoranthene	<0.1	U	<0.1	U				0.294	0.098
Benzo(a)fluoranthene	<0.1	U	<0.1	U				0.294	0.098
Benzo(e)pyrene	<0.2	U	<0.2	U				0.530	0.177
Benzo(a)pyrene	<0.1	U	<0.1	U				0.304	0.101
Perylene	<1.3	U	<1.3	U				3.800	1.267
Indeno(1,2,3-c,d)pyrene	<0.1	U	<0.1	U				0.151	0.050
Dibenzo(a,h)anthracene	<0.1	U	<0.1	U				0.193	0.064
Benzo(g,h,i)perylene	<0.1	U	<0.1	U				0.264	0.088
Total PAHs	4.34		4.32		1				

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Laboratory Duplicate Report

Sample Name	ARC1638.D	ENV3079E.D
Client Name	SED-DA-006 (0-0.5)	Dupl. (SED-DA-006 (0-0.5))
Matrix	Sediment	Sediment
Collection Date	08/03/13	08/03/13
Received Date	08/06/13	08/06/13
Extraction Date	08/12/13	08/12/13
Extraction Batch	ENV 3079	ENV 3079
Date Acquired	8/16/13 18:23	8/16/13 4:31
Method	PAH-2012.M	PAH-2012.M
Sample Dry Weight (g)	15.1	15.0
% Dry	84	84
% Moisture	16	16
Dilution	1X	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	Su. Corrected Conc. (ng/dry g)	Q	RPD %	Q	Q1	3X MDL	MDL
Individual Alkyl Isomers and Hopanes									
2-Methylnaphthalene	0.264	J	0.294	J	11		X	3.89	1.30
1-Methylnaphthalene	0.123	J	0.127	J	3		X	1.64	0.546
2,6-Dimethylnaphthalene	0.162	J	0.164	J	1		X	0.782	0.261
1,6,7-Trimethylnaphthalene	<0.1	U	<0.1	U				0.382	0.127
1-Methylfluorene	0.109	J	0.125	J	14		X	0.574	0.191
4-Methyldibenzothiophene	0.100		0.099		1		X	0.274	0.091
2/3-Methyldibenzothiophene	0.059	J	0.047	J	22		X	0.274	0.091
1-Methyldibenzothiophene	0.025	J	0.021	J	17		X	0.274	0.091
3-Methylphenanthrene	<0.1	U	<0.1	U				0.291	0.097
2-Methylphenanthrene	<0.1	U	<0.1	U				0.291	0.097
2-Methylanthracene	<0.1	U	<0.1	U				0.291	0.097
4/9-Methylphenanthrene	<0.1	U	<0.1	U				0.291	0.097
1-Methylphenanthrene	<0.1	U	<0.1	U				0.291	0.097
3,6-Dimethylphenanthrene	<0.1	U	<0.1	U				0.329	0.110
Retene	<0.2	U	<0.2	U				0.694	0.231
2-Methylfluoranthene	<0.2	U	<0.2	U				0.668	0.223
Benzo(b)fluorene	<0.1	U	<0.1	U				0.374	0.125
C29-Hopane	<0.6	U	<0.6	U				1.72	0.575
18a-Oleanane	<0.6	U	<0.6	U				1.72	0.575
C30-Hopane	<0.6	U	<0.6	U				1.72	0.575
C20-TAS	<0.6	U	<0.6	U				1.72	0.575
C21-TAS	<0.6	U	<0.6	U				1.72	0.575
C26(20S)-TAS	<0.6	U	<0.6	U				1.72	0.575
C26(20R)/C27(20S)-TAS	<0.6	U	<0.6	U				1.72	0.575
C28(20S)-TAS	<0.6	U	<0.6	U				1.72	0.575
C27(20R)-TAS	<0.6	U	<0.6	U				1.72	0.575
C28(20R)-TAS	<0.6	U	<0.6	U				1.72	0.575

Surrogate Recovery				
Naphthalene-d8	78		87	
Acenaphthene-d10	54		59	
Phenanthrene-d10	86		87	
Chrysene-d12	86		71	
Perylene-d12	0	L	0	L

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Standard Reference Material Report

Sample Name	ENV3079B.D
Client Name	SRM 1941b
Matrix	Sediment
Collection Date	NA
Received Date	NA
Extraction Date	08/12/13
Extraction Batch	ENV 3079
Date Acquired	8/16/13 1:04
Method	PAH-2012.M
Sample Dry Weight (g)	4.0
% Dry	98
% Moisture	2
Dilution	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	RPD (%)	SRM 1941b Certified Conc. (ng/dry g)	-30% Certified Conc. (ng/dry g)	+30% Certified Conc. (ng/dry g)
cis/trans Decalin	36.0					
C1-Decalins	8.60					
C2-Decalins	10.8					
C3-Decalins	22.2					
C4-Decalins	33.4					
Naphthalene	674		23	848 ± 95	527	1226
C1-Naphthalenes	203					
C2-Naphthalenes	187					
C3-Naphthalenes	124					
C4-Naphthalenes	96.5					
Benzothiophene	27.4					
C1-Benzothiophenes	27.2					
C2-Benzothiophenes	13.6					
C3-Benzothiophenes	15.0					
C4-Benzothiophenes	16.7					
Biphenyl	60.6					
Acenaphthylene	69.6					
Acenaphthene	27.2					
Dibenzofuran	78.0					
Fluorene	53.4		46	85 ± 15	49.0	130
C1-Fluorenes	42.7					
C2-Fluorenes	105					
C3-Fluorenes	150					
Carbazole	19.4					
Anthracene	172		7	184 ± 18	116	263
Phenanthrene	379		7	406 ± 44	253	585
C1-Phenanthrenes/Anthracenes	319					
C2-Phenanthrenes/Anthracenes	313					
C3-Phenanthrenes/Anthracenes	185					
C4-Phenanthrenes/Anthracenes	149					
Dibenzothiophene	52.7					
C1-Dibenzothiophenes	59.6					
C2-Dibenzothiophenes	98.9					
C3-Dibenzothiophenes	120					
C4-Dibenzothiophenes	67.0					
Fluoranthene	626		4	651 ± 50	421	911
Pyrene	507		14	581 ± 39	379	806
C1-Fluoranthenes/Pyrenes	384					
C2-Fluoranthenes/Pyrenes	399					
C3-Fluoranthenes/Pyrenes	194					
C4-Fluoranthenes/Pyrenes	143					
Naphthobenzothiophene	119					
C1-Naphthobenzothiophenes	99					
C2-Naphthobenzothiophenes	104					
C3-Naphthobenzothiophenes	78.3					
C4-Naphthobenzothiophenes	32.8					
Benz(a)anthracene	349		4	335 ± 25	217	468
Chrysene/Triphenylene	423		6	399 ± 36	254	566
C1-Chrysenes	240					
C2-Chrysenes	149					
C3-Chrysenes	88.3					
C4-Chrysenes	46.2					
Benzo(b)fluoranthene	309		38	453 ± 21	302	616
Benzo(k,j)fluoranthene	542		20	442 ± 23	293	605
Benzo(a)fluoranthene	69.8					
Benzo(e)pyrene	316		3	325 ± 25	210	455
Benzo(a)pyrene	257		33	358 ± 17	239	488
Perylene	318		22	397 ± 45	246	575
Indeno(1,2,3-c,d)pyrene	273		22	341 ± 57	199	517
Dibenzo(a,h)anthracene	47.7		11	53 ± 10	30.1	81.9
Benzo(g,h,i)perylene	243		23	307 ± 45	183	458
Total PAHs	10373					

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Standard Reference Material Report

Sample Name	ENV3079B.D
Client Name	SRM 1941b
Matrix	Sediment
Collection Date	NA
Received Date	NA
Extraction Date	08/12/13
Extraction Batch	ENV 3079
Date Acquired	8/16/13 1:04
Method	PAH-2012.M
Sample Dry Weight (g)	4.0
% Dry	98
% Moisture	2
Dilution	1X

Target Compounds	Su. Corrected Conc. (ng/dry g)	Q	RPD (%)	SRM 1941b Certified Conc. (ng/dry g)	-30% Certified Conc. (ng/dry g)	+30% Certified Conc. (ng/dry g)
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	217					
1-Methylnaphthalene	103					
2,6-Dimethylnaphthalene	103					
1,6,7-Trimethylnaphthalene	28.0					
1-Methylfluorene	32.3					
4-Methyldibenzothiophene	40.4					
2/3-Methyldibenzothiophene	23.7					
1-Methyldibenzothiophene	11.6					
3-Methylphenanthrene	82.5		24	105 ± 13	64.4	153
2-Methylphenanthrene	88.1					
2-Methylanthracene	60.3					
4/9-Methylphenanthrene	72.3					
1-Methylphenanthrene	68.0		7	73.2 ± 5.9	47.1	103
3,6-Dimethylphenanthrene	21.0					
Retene	26.3					
2-Methylfluoranthene	69.4					
Benzo(b)fluorene	80.3					
C29-Hopane	262					
18a-Oleanane	49.9					
C30-Hopane	342					
C20-TAS	9.70					
C21-TAS	6.41					
C26(20S)-TAS	2.50					
C26(20R)/C27(20S)-TAS	8.32					
C28(20S)-TAS	5.05					
C27(20R)-TAS	6.64					
C28(20R)-TAS	5.08					

Surrogate Recovery	
Naphthalene-d8	73
Acenaphthene-d10	88
Phenanthrene-d10	92
Chrysene-d12	97
Perylene-d12	92

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Standard Reference Material Report

Sample Name	MS60141K.D
Client Name	AR-SRM2779-WK-4.0-002
Matrix	Gulf of Mexico Crude Oil
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3079
Date Acquired	8/15/13 22:45
Method	PAH-2012.M
Sample Weight (mg)	4.1

Target Compounds	Su. Corrected Conc. (ng/mg)	Q	Q1	RPD (%)	SRM 2779 Certified Value (ug/g)	-20% Certified Value (ug/g)	+20% Certified Value (ug/g)
cis/trans Decalin	700						
C1-Decalins	936						
C2-Decalins	699						
C3-Decalins	743						
C4-Decalins	424						
Naphthalene	661			26	855 ± 46	647	1081
C1-Naphthalenes	1436						
C2-Naphthalenes	1728						
C3-Naphthalenes	1122						
C4-Naphthalenes	645						
Benzothiophene	7.7	J					
C1-Benzothiophenes	33.2						
C2-Benzothiophenes	30.4						
C3-Benzothiophenes	36.1						
C4-Benzothiophenes	26.0						
Biphenyl	151						
Acenaphthylene	8.78	J					
Acenaphthene	17.1						
Dibenzofuran	29.7						
Fluorene	114						
C1-Fluorenes	253						
C2-Fluorenes	360						
C3-Fluorenes	231						
Carbazole	4.5	J					
Anthracene	2.7	J		25	3.42 ± 0.59	2.26	4.81
Phenanthrene	223			15	258 ± 27	185	342
C1-Phenanthrenes/Anthracenes	536						
C2-Phenanthrenes/Anthracenes	615						
C3-Phenanthrenes/Anthracenes	428						
C4-Phenanthrenes/Anthracenes	270						
Dibenzothiophene	41.1			23	51.8 ± 2.1	39.8	64.7
C1-Dibenzothiophenes	117						
C2-Dibenzothiophenes	151						
C3-Dibenzothiophenes	126						
C4-Dibenzothiophenes	65.0						
Fluoranthene	5.21	J		18	4.36 ± 0.40	3.17	5.71
Pyrene	12.4			18	14.81 ± 0.39	11.5	18.2
C1-Fluoranthenes/Pyrenes	77.8						
C2-Fluoranthenes/Pyrenes	132						
C3-Fluoranthenes/Pyrenes	122						
C4-Fluoranthenes/Pyrenes	109						
Naphthobenzothiophene	22.7						
C1-Naphthobenzothiophenes	47.7						
C2-Naphthobenzothiophenes	56.8						
C3-Naphthobenzothiophenes	44.9						
C4-Naphthobenzothiophenes	17.5						
Benz(a)anthracene	7.33	J		4	7.03 ± 0.85	4.94	9.5
Chrysene/Triphenylene	40.2			16	47.4 ± 1.7	36.6	58.9
C1-Chrysenes	89.4						
C2-Chrysenes	113						
C3-Chrysenes	77.2						
C4-Chrysenes	48.2						
Benzo(b)fluoranthene	4.49	J		22	5.62 ± 0.34	4.22	7.15
Benzo(k,j)fluoranthene	0.69	J					
Benzo(a)fluoranthene	<10	U					
Benzo(e)pyrene	8.95	J		19	10.78 ± 0.60	8.14	13.7
Benzo(a)pyrene	1.39	J					
Perylene	0.761	J					
Indeno(1,2,3-c,d)pyrene	0.705	J					
Dibenzo(a,h)anthracene	0.731	J		24	0.574 ± 0.091	0.386	0.798
Benzo(g,h,i)perylene	1.55	J		31	2.11 ± 0.26	1.48	2.84
Total PAHs	14016						

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Standard Reference Material Report

Sample Name	MS60141K.D
Client Name	AR-SRM2779-WK-4.0-002
Matrix	Gulf of Mexico Crude Oil
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3079
Date Acquired	8/15/13 22:45
Method	PAH-2012.M
Sample Weight (mg)	4.1

Target Compounds	Su. Corrected Conc. (ng/mg)	Q	RPD (%)	SRM 2779 Certified Value (ug/g)	-20% Certified Value (ug/g)	+20% Certified Value (ug/g)
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	1366		18	1630 ± 50	1264	2016
1-Methylnaphthalene	919		21	1140 ± 20	896	1392
2,6-Dimethylnaphthalene	817					
1,6,7-Trimethylnaphthalene	249					
1-Methylfluorene	216					
4-Methyldibenzothiophene	85.9					
2/3-Methyldibenzothiophene	35.7					
1-Methyldibenzothiophene	27.5					
3-Methylphenanthrene	155		28	206 ± 32	139	286
2-Methylphenanthrene	150	*	42	230 ± 14	173	293
2-Methylanthracene	10.2					
4/9-Methylphenanthrene	172		30	232 ± 19	170	301
1-Methylphenanthrene	135		22	169 ± 10	127	215
3,6-Dimethylphenanthrene	45.0					
Retene	7.60	J				
2-Methylfluoranthene	5.90	J				
Benzo(b)fluorene	15.7					
C29-Hopane	18.3					
18a-Oleanane	<10	U				
C30-Hopane	45.9					
C20-TAS	3.62	J				
C21-TAS	7.29	J				
C26(20S)-TAS	3.42	J				
C26(20R)/C27(20S)-TAS	11.0					
C28(20S)-TAS	7.12	J				
C27(20R)-TAS	6.02	J				
C28(20R)-TAS	5.34	J				

Surrogate Recovery	
Naphthalene-d8	88
Acenaphthene-d10	95
Phenanthrene-d10	89
Chrysene-d12	95
Perylene-d12	95

Peak Resolution	
4/9-Methylphenanthrene from 1-Methylphenanthrene (m/z 192)	93%

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Standard Reference Material Report

Sample Name	MS60147K.D
Client Name	AR-SRM2779-WK-4.0-002
Matrix	Gulf of Mexico Crude Oil
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3079
Date Acquired	9/5/13 18:54
Method	PAH-2012.M
Sample Weight (mg)	4.1

Target Compounds	Su. Corrected Conc. (ng/mg)	Q	Q1	RPD (%)	SRM 2779 Certified Value (ug/g)	-20% Certified Value (ug/g)	+20% Certified Value (ug/g)
cis/trans Decalin	736						
C1-Decalins	949						
C2-Decalins	826						
C3-Decalins	908						
C4-Decalins	584						
Naphthalene	691			21	855 ± 46	647	1081
C1-Naphthalenes	1618						
C2-Naphthalenes	2061						
C3-Naphthalenes	1321						
C4-Naphthalenes	751						
Benzothiophene	9.1	J					
C1-Benzothiophenes	38.1						
C2-Benzothiophenes	31.5						
C3-Benzothiophenes	38.8						
C4-Benzothiophenes	34.8						
Biphenyl	167						
Acenaphthylene	8.69	J					
Acenaphthene	9.6	J					
Dibenzofuran	26.1						
Fluorene	110						
C1-Fluorenes	240						
C2-Fluorenes	333						
C3-Fluorenes	320						
Carbazole	4.2	J					
Anthracene	4.7	J		32	3.42 ± 0.59	2.26	4.81
Phenanthrene	199			26	258 ± 27	185	342
C1-Phenanthrenes/Anthracenes	467						
C2-Phenanthrenes/Anthracenes	558						
C3-Phenanthrenes/Anthracenes	440						
C4-Phenanthrenes/Anthracenes	175						
Dibenzothiophene	40.5			25	51.8 ± 2.1	39.8	64.7
C1-Dibenzothiophenes	113.1						
C2-Dibenzothiophenes	156						
C3-Dibenzothiophenes	142						
C4-Dibenzothiophenes	68.2						
Fluoranthene	3.56	J		20	4.36 ± 0.40	3.17	5.71
Pyrene	11.9			21	14.81 ± 0.39	11.5	18.2
C1-Fluoranthenes/Pyrenes	68.7						
C2-Fluoranthenes/Pyrenes	100						
C3-Fluoranthenes/Pyrenes	129						
C4-Fluoranthenes/Pyrenes	97.9						
Naphthobenzothiophene	17.5						
C1-Naphthobenzothiophenes	41.3						
C2-Naphthobenzothiophenes	59.0						
C3-Naphthobenzothiophenes	41.6						
C4-Naphthobenzothiophenes	20.1						
Benz(a)anthracene	5.33	J		28	7.03 ± 0.85	4.94	9.5
Chrysene/Triphenylene	38.1			22	47.4 ± 1.7	36.6	58.9
C1-Chrysenes	103.1						
C2-Chrysenes	126						
C3-Chrysenes	91.7						
C4-Chrysenes	50.9						
Benzo(b)fluoranthene	4.68	J		18	5.62 ± 0.34	4.22	7.15
Benzo(k,j)fluoranthene	1.00	J					
Benzo(a)fluoranthene	<10	U					
Benzo(e)pyrene	9.96	J		8	10.78 ± 0.60	8.14	13.7
Benzo(a)pyrene	1.76	J					
Perylene	0.888	J					
Indeno(1,2,3-c,d)pyrene	0.633	J					
Dibenzo(a,h)anthracene	0.776	J		30	0.574 ± 0.091	0.386	0.798
Benzo(g,h,i)perylene	1.98	J		7	2.11 ± 0.26	1.48	2.84
Total PAHs	15208						

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Standard Reference Material Report

Sample Name	MS60147K.D
Client Name	AR-SRM2779-WK-4.0-002
Matrix	Gulf of Mexico Crude Oil
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3079
Date Acquired	9/5/13 18:54
Method	PAH-2012.M
Sample Weight (mg)	4.1

Target Compounds	Su. Corrected Conc. (ng/mg)	Q	RPD (%)	SRM 2779 Certified Value (ug/g)	-20% Certified Value (ug/g)	+20% Certified Value (ug/g)
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	1426		13	1630 ± 50	1264	2016
1-Methylnaphthalene	983		15	1140 ± 20	896	1392
2,6-Dimethylnaphthalene	862					
1,6,7-Trimethylnaphthalene	275					
1-Methylfluorene	174					
4-Methyldibenzothiophene	78.0					
2/3-Methyldibenzothiophene	38.5					
1-Methyldibenzothiophene	27.1					
3-Methylphenanthrene	155		28	206 ± 32	139	286
2-Methylphenanthrene	181		24	230 ± 14	173	293
2-Methylanthracene	12.3					
4/9-Methylphenanthrene	214		8	232 ± 19	170	301
1-Methylphenanthrene	154		9	169 ± 10	127	215
3,6-Dimethylphenanthrene	39.1					
Retene	16.5					
2-Methylfluoranthene	5.24	J				
Benzo(b)fluorene	12.6					
C29-Hopane	21.9					
18a-Oleanane	<10	U				
C30-Hopane	45.1					
C20-TAS	4.39	J				
C21-TAS	4.97	J				
C26(20S)-TAS	3.93	J				
C26(20R)/C27(20S)-TAS	12.4					
C28(20S)-TAS	8.99	J				
C27(20R)-TAS	7.98	J				
C28(20R)-TAS	5.70	J				

Surrogate Recovery	
Naphthalene-d8	83
Acenaphthene-d10	95
Phenanthrene-d10	83
Chrysene-d12	65
Perylene-d12	100

Peak Resolution	
4/9-Methylphenanthrene from 1-Methylyphenanthrene (m/z 192)	91%

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Laboratory Control Material Report

Sample Name	MS60141J.D
Client Name	AR-WKCC-250-038
Matrix	Solution
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3079
Date Acquired	8/15/13 21:36
Method	PAH-2012.M
Sample Volume (mL)	1.0

Target Compounds	Concentration (ng/mL)	Q	RPD (%)	LCM Certified Conc. (ng/mL)	-15% Certified Conc. (ng/mL)	+15% Certified Conc. (ng/mL)
cis/trans Decalin	250		1.1	247	210	284
C1-Decalins	NA					
C2-Decalins	NA					
C3-Decalins	NA					
C4-Decalins	NA					
Naphthalene	239		4.4	250	213	288
C1-Naphthalenes	NA					
C2-Naphthalenes	NA					
C3-Naphthalenes	NA					
C4-Naphthalenes	NA					
Benzothiophene	240		3.4	249	211	286
C1-Benzothiophenes	NA					
C2-Benzothiophenes	NA					
C3-Benzothiophenes	NA					
C4-Benzothiophenes	NA					
Biphenyl	229		7.9	248	211	285
Acenaphthylene	219		12.3	248	211	285
Acenaphthene	234		6.9	251	213	288
Dibenzofuran	228		8.7	249	211	286
Fluorene	230		8.3	251	213	288
C1-Fluorenes	NA					
C2-Fluorenes	NA					
C3-Fluorenes	NA					
Carbazole	259		4.3	248	211	285
Anthracene	230		8.5	251	213	288
Phenanthrene	235		5.2	248	211	285
C1-Phenanthrenes/Anthracenes	NA					
C2-Phenanthrenes/Anthracenes	NA					
C3-Phenanthrenes/Anthracenes	NA					
C4-Phenanthrenes/Anthracenes	NA					
Dibenzothiophene	268		8.5	247	210	283
C1-Dibenzothiophenes	NA					
C2-Dibenzothiophenes	NA					
C3-Dibenzothiophenes	NA					
C4-Dibenzothiophenes	NA					
Fluoranthene	260		3.9	250	213	288
Pyrene	233		7.2	250	213	288
C1-Fluoranthenes/Pyrenes	NA					
C2-Fluoranthenes/Pyrenes	NA					
C3-Fluoranthenes/Pyrenes	NA					
C4-Fluoranthenes/Pyrenes	NA					
Naphthobenzothiophene	226		10.7	252	214	289
C1-Naphthobenzothiophenes	NA					
C2-Naphthobenzothiophenes	NA					
C3-Naphthobenzothiophenes	NA					
C4-Naphthobenzothiophenes	NA					
Benz(a)anthracene	219		13.2	250	212	287
Chrysene/Triphenylene	251		1.1	249	211	286
C1-Chrysenes	NA					
C2-Chrysenes	NA					
C3-Chrysenes	NA					
C4-Chrysenes	NA					
Benzo(b)fluoranthene	236		6.1	251	213	288
Benzo(k,j)fluoranthene	240		3.7	249	212	286
Benzo(a)fluoranthene	NA					
Benzo(e)pyrene	236		5.3	249	212	286
Benzo(a)pyrene	233		6.7	250	212	287
Perylene	237		5.4	250	213	288
Indeno(1,2,3-c,d)pyrene	220		10.9	246	209	283
Dibenzo(a,h)anthracene	222		10.9	248	211	285
Benzo(g,h,i)perylene	226		9.1	248	211	285

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Laboratory Control Material Report

Sample Name	MS60141J.D
Client Name	AR-WKCC-250-038
Matrix	Solution
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3079
Date Acquired	8/15/13 21:36
Method	PAH-2012.M
Sample Volume (mL)	1.0

Target Compounds	Concentration (ng/mL)	Q	RPD (%)	LCM Certified Conc. (ng/mL)	-15% Certified Conc. (ng/mL)	+15% Certified Conc. (ng/mL)
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	233		7.0	250	213	288
1-Methylnaphthalene	238		4.7	250	212	287
2,6-Dimethylnaphthalene	230		8.4	250	213	288
1,6,7-Trimethylnaphthalene	233		7.1	250	213	288
1-Methylfluorene	217		15.0	252	214	290
4-Methyldibenzothiophene	228		10.0	252	214	290
2/3-Methyldibenzothiophene	NA					
1-Methyldibenzothiophene	NA					
3-Methylphenanthrene	NA					
2-Methylphenanthrene	NA					
2-Methylanthracene	NA					
4/9-Methylphenanthrene	NA					
1-Methylphenanthrene	245		1.1	247	210	284
3,6-Dimethylphenanthrene	260		3.6	250	213	288
Retene	192		15.3	223	190	257
2-Methylfluoranthene	218		14.5	252	214	289
Benzo(b)fluorene	218		14.4	252	214	290
C29-Hopane	NA					
18a-Oleanane	NA					
C30-Hopane	241		3.8	250	213	288
C20-TAS	NA					
C21-TAS	NA					
C26(20S)-TAS	NA					
C26(20R)/C27(20S)-TAS	230		8.3	250	213	288
C28(20S)-TAS	NA					
C27(20R)-TAS	NA					
C28(20R)-TAS	NA					

Surrogate Recovery	
Naphthalene-d8	95
Acenaphthene-d10	91
Phenanthrene-d10	106
Chrysene-d12	99
Perylene-d12	90

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Laboratory Control Material Report

Sample Name	MS60147J.D
Client Name	AR-WKCC-250-038
Matrix	Solution
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3079
Date Acquired	9/5/13 7:16
Method	PAH-2012.M
Sample Volume (mL)	1.0

Target Compounds	Concentration (ng/mL)	Q	RPD (%)	LCM Certified Conc. (ng/mL)	-15% Certified Conc. (ng/mL)	+15% Certified Conc (ng/mL)
cis/trans Decalin	269		8.5	247	210	284
C1-Decalins	NA					
C2-Decalins	NA					
C3-Decalins	NA					
C4-Decalins	NA					
Naphthalene	238		5.0	250	213	288
C1-Naphthalenes	NA					
C2-Naphthalenes	NA					
C3-Naphthalenes	NA					
C4-Naphthalenes	NA					
Benzothiophene	238		4.2	249	211	286
C1-Benzothiophenes	NA					
C2-Benzothiophenes	NA					
C3-Benzothiophenes	NA					
C4-Benzothiophenes	NA					
Biphenyl	231		7.2	248	211	285
Acenaphthylene	224		10.0	248	211	285
Acenaphthene	233		7.3	251	213	288
Dibenzofuran	227		9.0	249	211	286
Fluorene	221		12.5	251	213	288
C1-Fluorenes	NA					
C2-Fluorenes	NA					
C3-Fluorenes	NA					
Carbazole	215		14.0	248	211	285
Anthracene	240		4.4	251	213	288
Phenanthrene	239		3.4	248	211	285
C1-Phenanthrenes/Anthracenes	NA					
C2-Phenanthrenes/Anthracenes	NA					
C3-Phenanthrenes/Anthracenes	NA					
C4-Phenanthrenes/Anthracenes	NA					
Dibenzothiophene	230		7.1	247	210	283
C1-Dibenzothiophenes	NA					
C2-Dibenzothiophenes	NA					
C3-Dibenzothiophenes	NA					
C4-Dibenzothiophenes	NA					
Fluoranthene	215		15.0	250	213	288
Pyrene	267		6.4	250	213	288
C1-Fluoranthenes/Pyrenes	NA					
C2-Fluoranthenes/Pyrenes	NA					
C3-Fluoranthenes/Pyrenes	NA					
C4-Fluoranthenes/Pyrenes	NA					
Naphthobenzothiophene	220		13.6	252	214	289
C1-Naphthobenzothiophenes	NA					
C2-Naphthobenzothiophenes	NA					
C3-Naphthobenzothiophenes	NA					
C4-Naphthobenzothiophenes	NA					
Benz(a)anthracene	214		15.1	250	212	287
Chrysene/Triphenylene	263		5.7	249	211	286
C1-Chrysenes	NA					
C2-Chrysenes	NA					
C3-Chrysenes	NA					
C4-Chrysenes	NA					
Benzo(b)fluoranthene	214		15.8	251	213	288
Benzo(k,j)fluoranthene	260		4.3	249	212	286
Benzo(a)fluoranthene	NA					
Benzo(e)pyrene	260		4.3	249	212	286
Benzo(a)pyrene	229		8.5	250	212	287
Perylene	237		5.4	250	213	288
Indeno(1,2,3-c,d)pyrene	235		4.5	246	209	283
Dibenzo(a,h)anthracene	233		6.0	248	211	285
Benzo(g,h,i)perylene	238		3.8	248	211	285

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Laboratory Control Material Report

Sample Name	MS60147J.D
Client Name	AR-WKCC-250-038
Matrix	Solution
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3079
Date Acquired	9/5/13 7:16
Method	PAH-2012.M
Sample Volume (mL)	1.0

Target Compounds	Concentration (ng/mL)	Q	RPD (%)	LCM Certified Conc. (ng/mL)	-15% Certified Conc. (ng/mL)	+15% Certified Conc (ng/mL)
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	232		7.6	250	213	288
1-Methylnaphthalene	238		4.9	250	212	287
2,6-Dimethylnaphthalene	230		8.1	250	213	288
1,6,7-Trimethylnaphthalene	237		5.4	250	213	288
1-Methylfluorene	227		10.3	252	214	290
4-Methyldibenzothiophene	272		7.7	252	214	290
2/3-Methyldibenzothiophene	NA					
1-Methyldibenzothiophene	NA					
3-Methylphenanthrene	NA					
2-Methylphenanthrene	NA					
2-Methylanthracene	NA					
4/9-Methylphenanthrene	NA					
1-Methylphenanthrene	240		3.0	247	210	284
3,6-Dimethylphenanthrene	215		15.2	250	213	288
Retene	220		1.4	223	190	257
2-Methylfluoranthene	261		3.6	252	214	289
Benzo(b)fluorene	219		14.3	252	214	290
C29-Hopane	NA					
18a-Oleanane	NA					
C30-Hopane	257		2.6	250	213	288
C20-TAS	NA					
C21-TAS	NA					
C26(20S)-TAS	NA					
C26(20R)/C27(20S)-TAS	252		0.7	250	213	288
C28(20S)-TAS	NA					
C27(20R)-TAS	NA					
C28(20R)-TAS	NA					

Surrogate Recovery	
Naphthalene-d8	95
Acenaphthene-d10	92
Phenanthrene-d10	92
Chrysene-d12	97
Perylene-d12	100

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Laboratory Control Material Report

Sample Name	MS60141I.D
Client Name	AR-WKICV-250-004
Matrix	Solution
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3079
Date Acquired	8/15/13 20:26
Method	PAH-2012.M
Sample Volume (mL)	1.0

Target Compounds	Concentration (ng/mL)	Q	RPD (%)	ICV Certified Conc. (ng/mL)	-20% Certified Conc. (ng/mL)	+20% Certified Conc. (ng/mL)
cis/trans Decalin	266		6.1	250	200	300
C1-Decalins	NA					
C2-Decalins	NA					
C3-Decalins	NA					
C4-Decalins	NA					
Naphthalene	285		13.0	250	200	300
C1-Naphthalenes	NA					
C2-Naphthalenes	NA					
C3-Naphthalenes	NA					
C4-Naphthalenes	NA					
Benzothiophene	288		13.9	250	200	300
C1-Benzothiophenes	NA					
C2-Benzothiophenes	NA					
C3-Benzothiophenes	NA					
C4-Benzothiophenes	NA					
Biphenyl	280		11.1	251	201	301
Acenaphthylene	276					
Acenaphthene	287		13.6	250	200	300
Dibenzofuran	286		13.2	250	200	300
Fluorene	284		12.8	250	200	300
C1-Fluorenes	NA					
C2-Fluorenes	NA					
C3-Fluorenes	NA					
Carbazole	286		13.4	250	200	300
Anthracene	254		1.7	250	200	300
Phenanthrene	257		2.8	250	200	300
C1-Phenanthrenes/Anthracenes	NA					
C2-Phenanthrenes/Anthracenes	NA					
C3-Phenanthrenes/Anthracenes	NA					
C4-Phenanthrenes/Anthracenes	NA					
Dibenzothiophene	290		14.6	250	200	300
C1-Dibenzothiophenes	NA					
C2-Dibenzothiophenes	NA					
C3-Dibenzothiophenes	NA					
C4-Dibenzothiophenes	NA					
Fluoranthene	282		11.9	250	200	300
Pyrene	266		6.3	250	200	300
C1-Fluoranthenes/Pyrenes	NA					
C2-Fluoranthenes/Pyrenes	NA					
C3-Fluoranthenes/Pyrenes	NA					
C4-Fluoranthenes/Pyrenes	NA					
Naphthobenzothiophene	NA					
C1-Naphthobenzothiophenes	NA					
C2-Naphthobenzothiophenes	NA					
C3-Naphthobenzothiophenes	NA					
C4-Naphthobenzothiophenes	NA					
Benz(a)anthracene	255		1.8	250	200	300
Chrysene/Triphenylene	283		12.4	250	200	300
C1-Chrysenes	NA					
C2-Chrysenes	NA					
C3-Chrysenes	NA					
C4-Chrysenes	NA					
Benzo(b)fluoranthene	276		10.0	250	200	300
Benzo(k,j)fluoranthene	293		15.8	250	200	300
Benzo(a)fluoranthene	NA					
Benzo(e)pyrene	280		11.3	250	200	300
Benzo(a)pyrene	283		12.4	250	200	300
Perylene	285		12.9	251	200	301
Indeno(1,2,3-c,d)pyrene	279		10.8	250	200	300
Dibenzo(a,h)anthracene	284		12.8	250	200	300
Benzo(g,h,i)perylene	280		11.1	250	200	300

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Laboratory Control Material Report

Sample Name	MS60141I.D
Client Name	AR-WKICV-250-004
Matrix	Solution
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3079
Date Acquired	8/15/13 20:26
Method	PAH-2012.M
Sample Volume (mL)	1.0

Target Compounds	Concentration (ng/mL)	Q	RPD (%)	ICV Certified Conc. (ng/mL)	-20% Certified Conc. (ng/mL)	+20% Certified Conc. (ng/mL)
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	291		14.9	250	200	301
1-Methylnaphthalene	292		15.4	251	200	301
2,6-Dimethylnaphthalene	284		12.7	250	200	300
1,6,7-Trimethylnaphthalene	287		13.5	250	200	301
1-Methylfluorene	NA					
4-Methyldibenzothiophene	NA					
2/3-Methyldibenzothiophene	NA					
1-Methyldibenzothiophene	NA					
3-Methylphenanthrene	NA					
2-Methylphenanthrene	NA					
2-Methylanthracene	NA					
4/9-Methylphenanthrene	NA					
1-Methylphenanthrene	274		9.1	250	200	300
3,6-Dimethylphenanthrene	NA					
Retene	NA					
2-Methylfluoranthene	NA					
Benzo(b)fluorene	NA					
C29-Hopane	NA					
18a-Oleanane	NA					
C30-Hopane	NA					
C20-TAS	NA					
C21-TAS	NA					
C26(20S)-TAS	NA					
C26(20R)/C27(20S)-TAS	NA					
C28(20S)-TAS	NA					
C27(20R)-TAS	NA					
C28(20R)-TAS	NA					
Surrogate Recovery						
Naphthalene-d8	231		7.9	250	200	300
Acenaphthene-d10	227		9.6	250	200	300
Phenanthrene-d10	232		7.7	250	200	300
Chrysene-d12	222		12.0	250	200	300
Perylene-d12	222		12.1	250	200	300

Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Laboratory Control Material Report

Sample Name	MS60147I.D
Client Name	AR-WKICV-250-004
Matrix	Solution
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3079
Date Acquired	9/5/13 6:07
Method	PAH-2012.M
Sample Volume (mL)	1.0

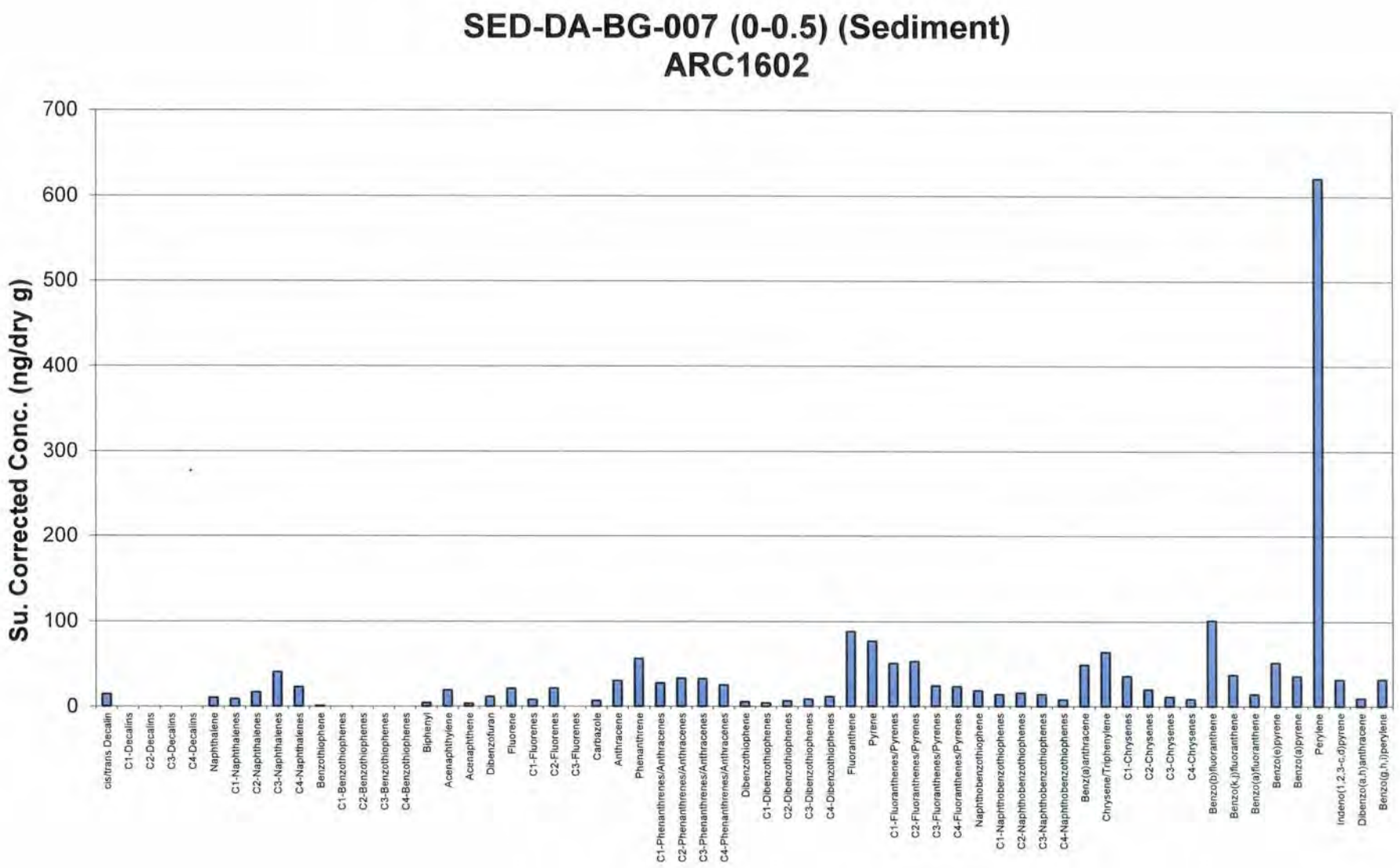
Target Compounds	Concentration (ng/mL)	Q	RPD (%)	ICV Certified Conc. (ng/mL)	-20% Certified Conc. (ng/mL)	+20% Certified Conc. (ng/mL)
cis/trans Decalin	287		13.6	250	200	300
C1-Decalins	NA					
C2-Decalins	NA					
C3-Decalins	NA					
C4-Decalins	NA					
Naphthalene	291		15.0	250	200	300
C1-Naphthalenes	NA					
C2-Naphthalenes	NA					
C3-Naphthalenes	NA					
C4-Naphthalenes	NA					
Benzothiophene	291		15.0	250	200	300
C1-Benzothiophenes	NA					
C2-Benzothiophenes	NA					
C3-Benzothiophenes	NA					
C4-Benzothiophenes	NA					
Biphenyl	280		10.9	251	201	301
Acenaphthylene	275					
Acenaphthene	285		12.9	250	200	300
Dibenzofuran	283		12.2	250	200	300
Fluorene	272		8.5	250	200	300
C1-Fluorenes	NA					
C2-Fluorenes	NA					
C3-Fluorenes	NA					
Carbazole	257		2.6	250	200	300
Anthracene	281		11.6	250	200	300
Phenanthrene	274		9.3	250	200	300
C1-Phenanthrenes/Anthracenes	NA					
C2-Phenanthrenes/Anthracenes	NA					
C3-Phenanthrenes/Anthracenes	NA					
C4-Phenanthrenes/Anthracenes	NA					
Dibenzothiophene	264		5.2	250	200	300
C1-Dibenzothiophenes	NA					
C2-Dibenzothiophenes	NA					
C3-Dibenzothiophenes	NA					
C4-Dibenzothiophenes	NA					
Fluoranthene	254		1.6	250	200	300
Pyrene	291		14.9	250	200	300
C1-Fluoranthenes/Pyrenes	NA					
C2-Fluoranthenes/Pyrenes	NA					
C3-Fluoranthenes/Pyrenes	NA					
C4-Fluoranthenes/Pyrenes	NA					
Naphthobenzothiophene	NA					
C1-Naphthobenzothiophenes	NA					
C2-Naphthobenzothiophenes	NA					
C3-Naphthobenzothiophenes	NA					
C4-Naphthobenzothiophenes	NA					
Benz(a)anthracene	258		3.0	250	200	300
Chrysene/Triphenylene	289		14.4	250	200	300
C1-Chrysenes	NA					
C2-Chrysenes	NA					
C3-Chrysenes	NA					
C4-Chrysenes	NA					
Benzo(b)fluoranthene	275		9.5	250	200	300
Benzo(k,j)fluoranthene	221		12.4	250	200	300
Benzo(a)fluoranthene	NA					
Benzo(e)pyrene	296		16.7	250	200	300
Benzo(a)pyrene	282		12.1	250	200	300
Perylene	286		13.1	251	200	301
Indeno(1,2,3-c,d)pyrene	298		17.4	250	200	300
Dibenzo(a,h)anthracene	287		13.8	250	200	300
Benzo(g,h,i)perylene	294		16.1	250	200	300

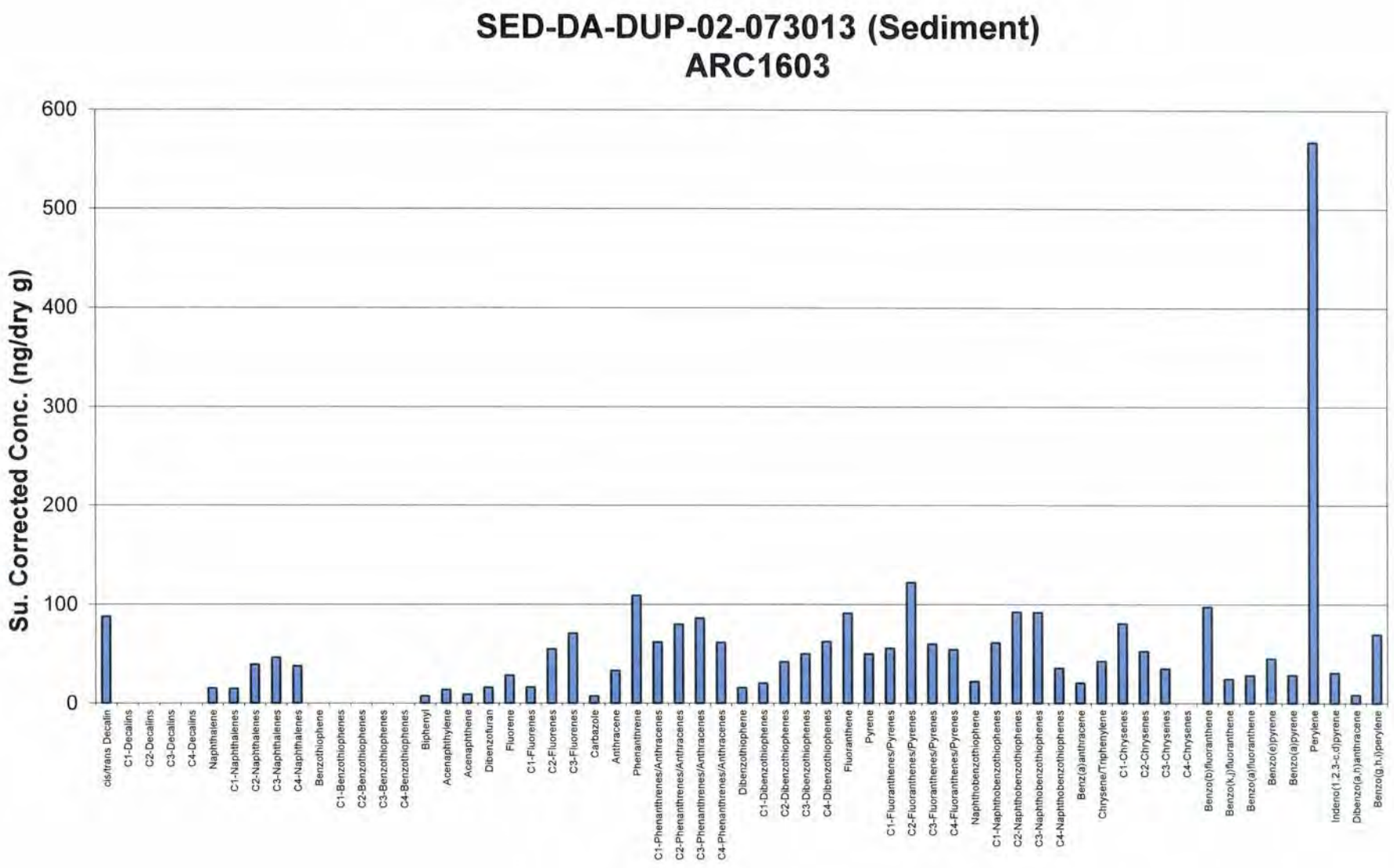
Arcadis - Mayflower AR
Polycyclic Aromatic Hydrocarbon Data
Laboratory Control Material Report

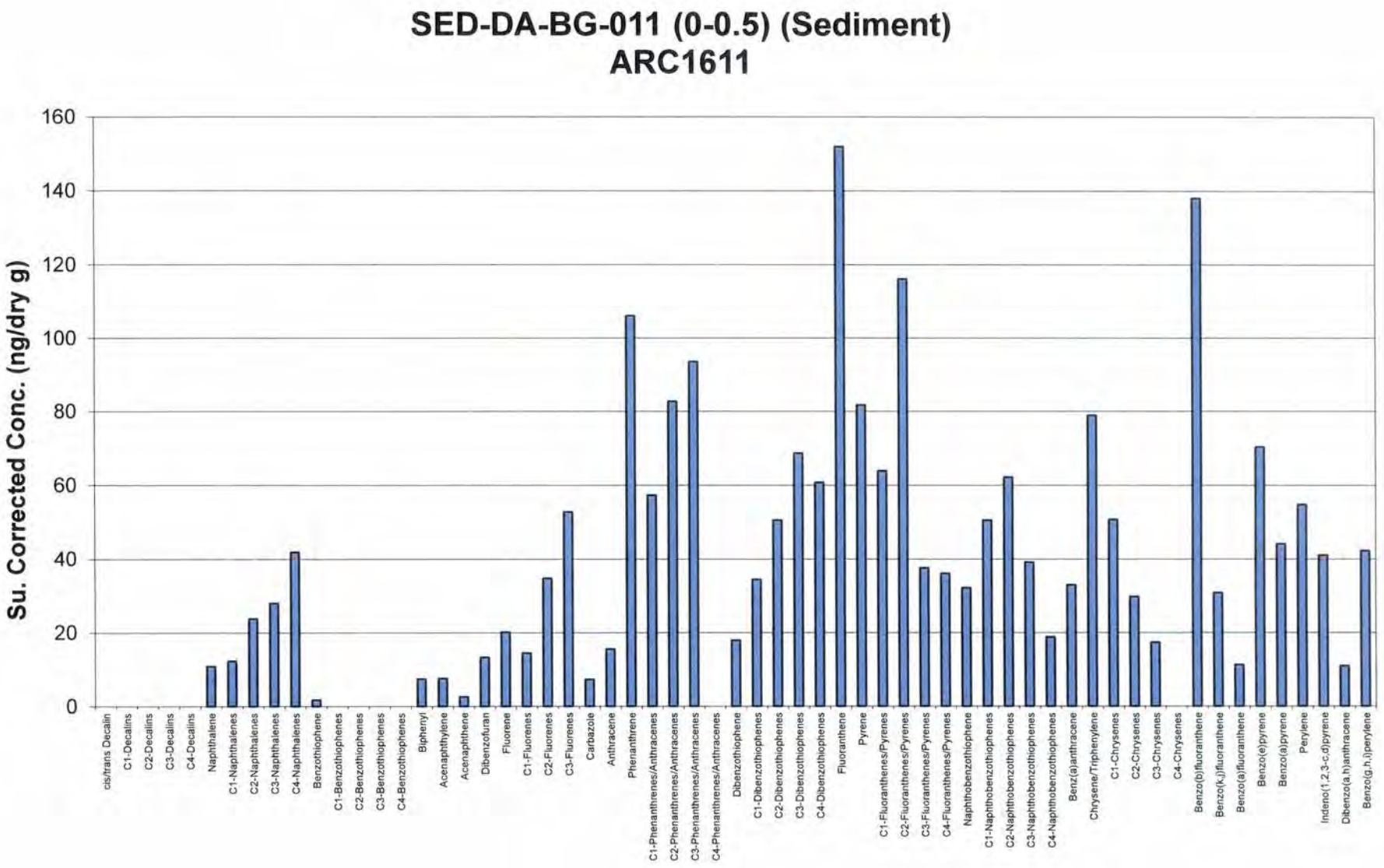
Sample Name	MS60147I.D
Client Name	AR-WKICV-250-004
Matrix	Solution
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 3079
Date Acquired	9/5/13 6:07
Method	PAH-2012.M
Sample Volume (mL)	1.0

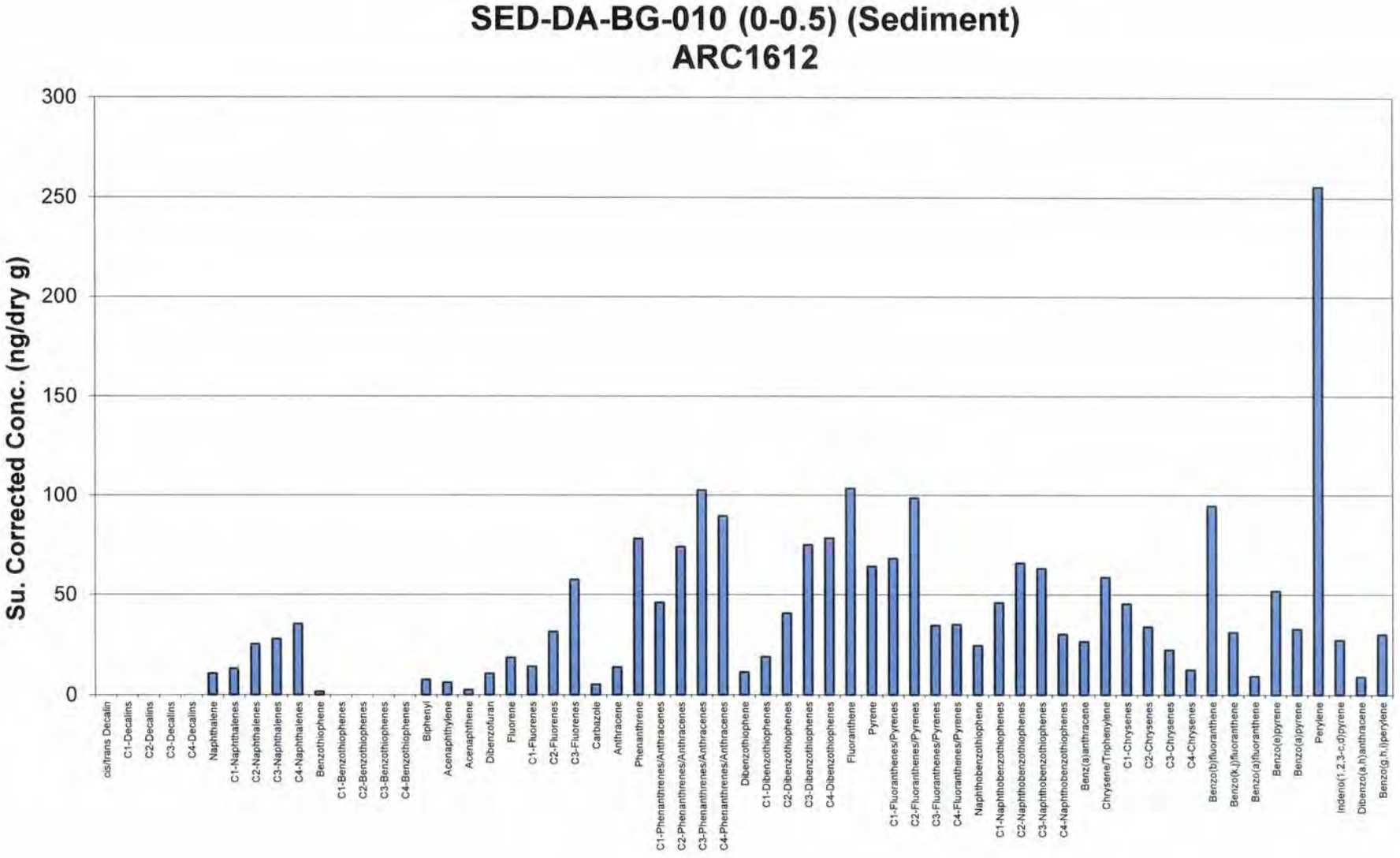
Target Compounds	Concentration (ng/mL)	Q	RPD (%)	ICV Certified Conc. (ng/mL)	-20% Certified Conc. (ng/mL)	+20% Certified Conc. (ng/mL)
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	294		16.0	250	200	301
1-Methylnaphthalene	297		17.1	251	200	301
2,6-Dimethylnaphthalene	281		11.6	250	200	300
1,6,7-Trimethylnaphthalene	297		16.9	250	200	301
1-Methylfluorene	NA					
4-Methyldibenzothiophene	NA					
2/3-Methyldibenzothiophene	NA					
1-Methyldibenzothiophene	NA					
3-Methylphenanthrene	NA					
2-Methylphenanthrene	NA					
2-Methylanthracene	NA					
4/9-Methylphenanthrene	NA					
1-Methylphenanthrene	280		11.1	250	200	300
3,6-Dimethylphenanthrene	NA					
Retene	NA					
2-Methylfluoranthene	NA					
Benzo(b)fluorene	NA					
C29-Hopane	NA					
18a-Oleanane	NA					
C30-Hopane	NA					
C20-TAS	NA					
C21-TAS	NA					
C26(20S)-TAS	NA					
C26(20R)/C27(20S)-TAS	NA					
C28(20S)-TAS	NA					
C27(20R)-TAS	NA					
C28(20R)-TAS	NA					
Surrogate Recovery						
Naphthalene-d8	222		12.1	250	200	300
Acenaphthene-d10	229		8.9	250	200	300
Phenanthrene-d10	212		16.5	250	200	300
Chrysene-d12	226		10.1	250	200	300
Perylene-d12	247		1.0	250	200	300

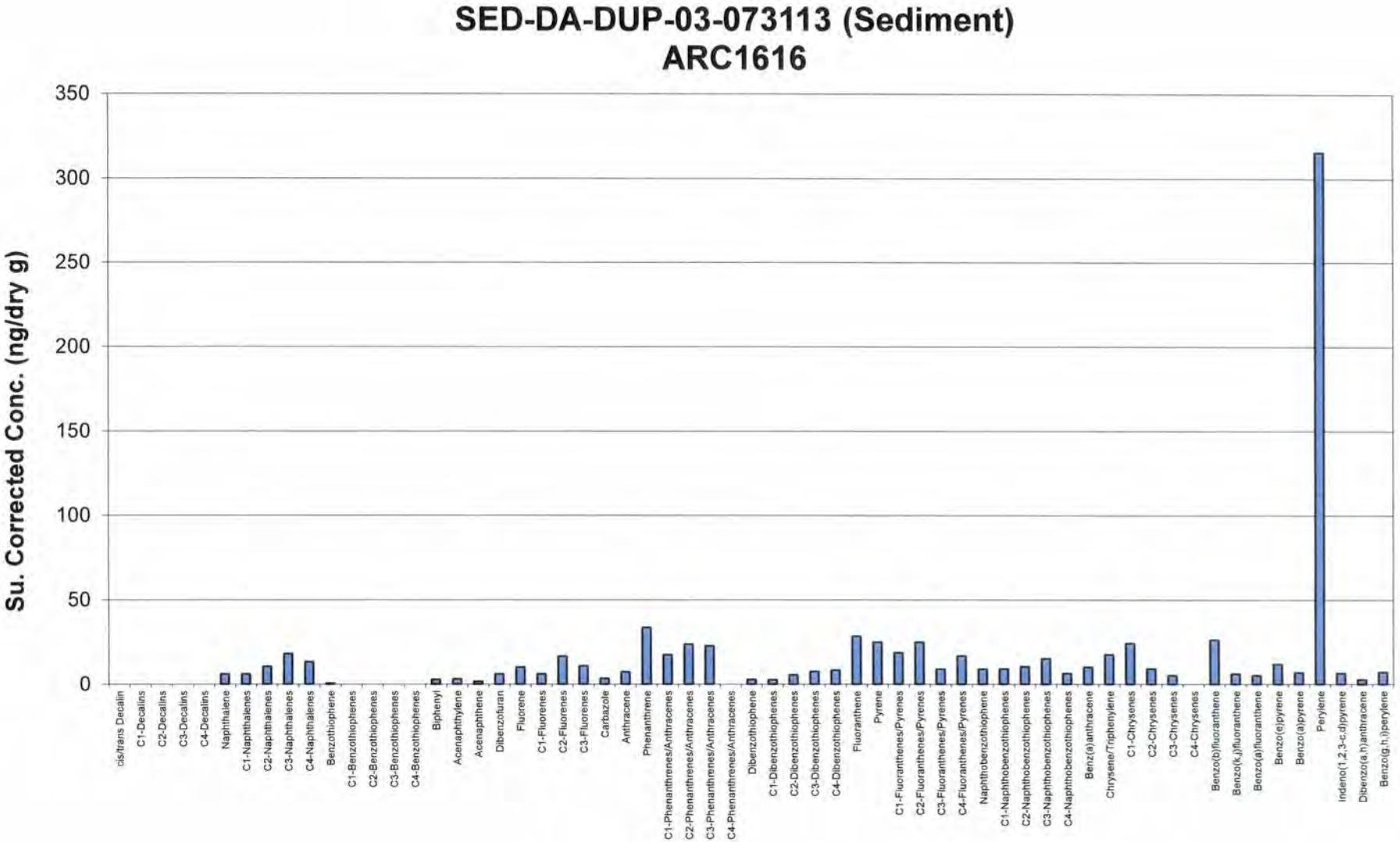
Polycyclic Aromatic Hydrocarbon Histograms

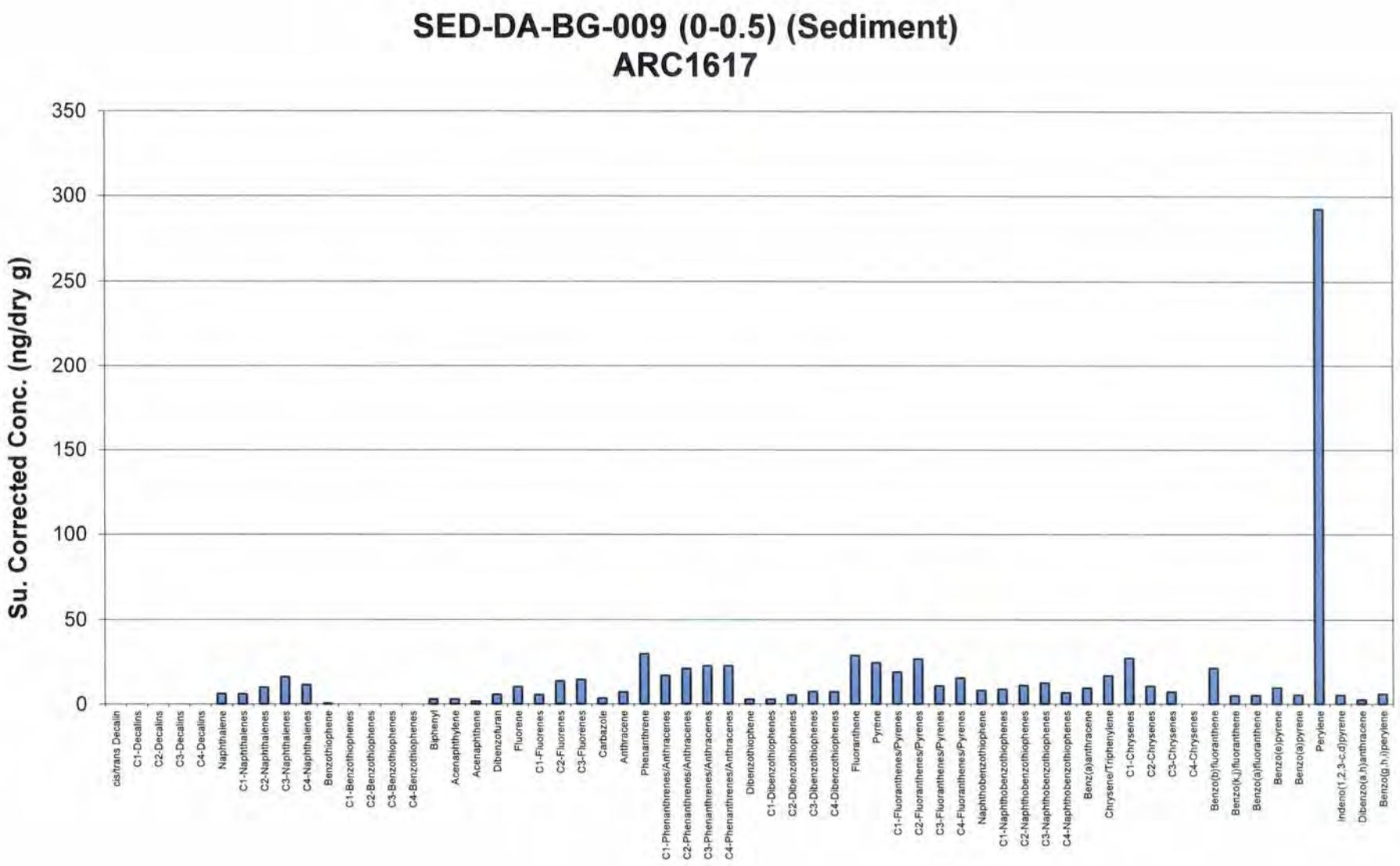

SED-DA-BG-007 (0-0.5) (Sediment)
ARC1602
Su. Corrected Conc. (ng/dry g)
700
600
500
400
300
200
100
0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

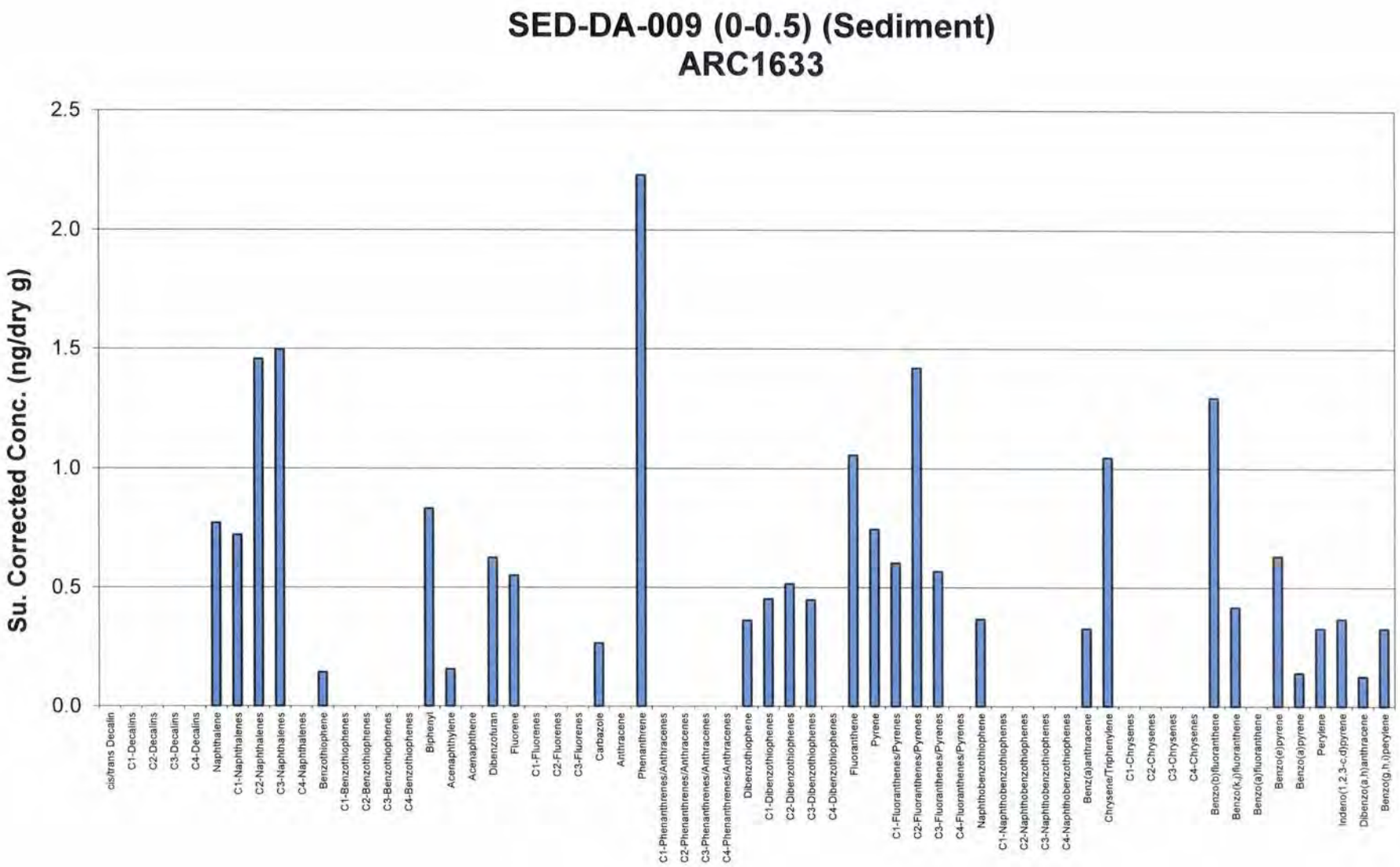

SED-DA-DUP-02-073013 (Sediment)
ARC1603
Su. Corrected Conc. (ng/dry g)
600
500
400
300
200
100
0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene


SED-DA-BG-011 (0-0.5) (Sediment)
ARC1611
Su. Corrected Conc. (ng/dry g)
0
20
40
60
80
100
120
140
160
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

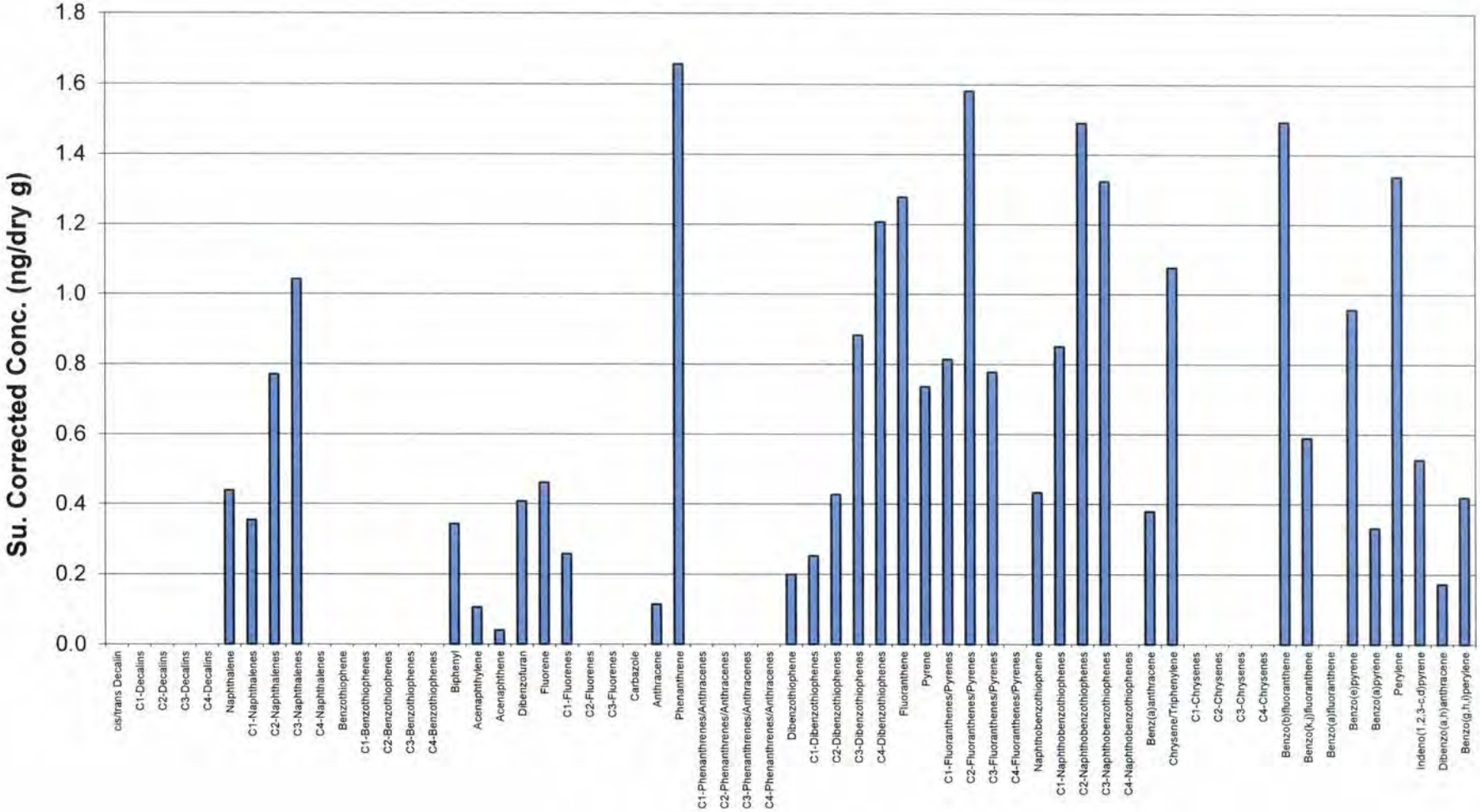

SED-DA-BG-010 (0-0.5) (Sediment)
ARC1612
Su. Corrected Conc. (ng/dry g)
300
250
200
150
100
50
0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

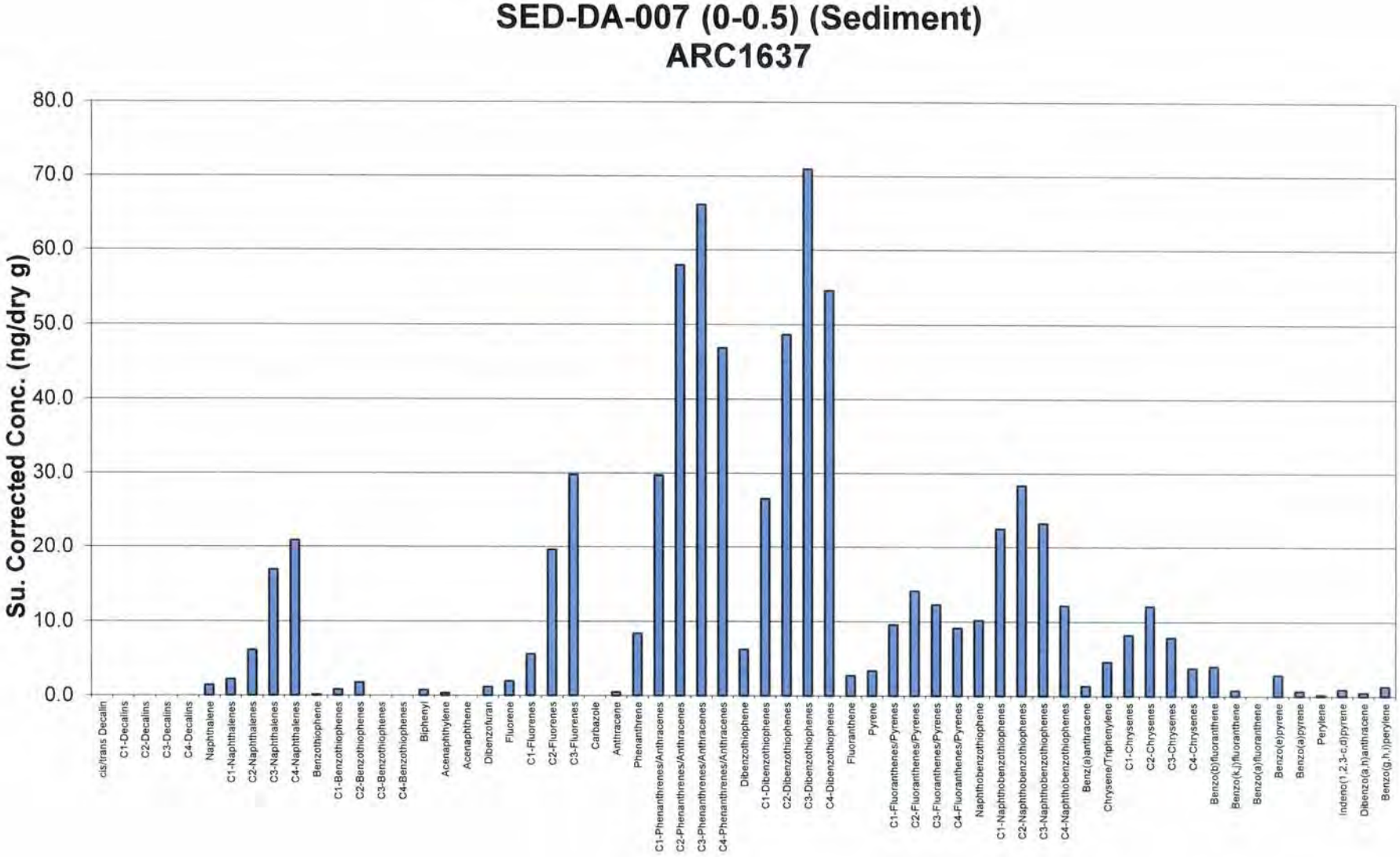

SED-DA-DUP-03-073113 (Sediment)
ARC1616
Su. Corrected Conc. (ng/dry g)
350
300
250
200
150
100
50
0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

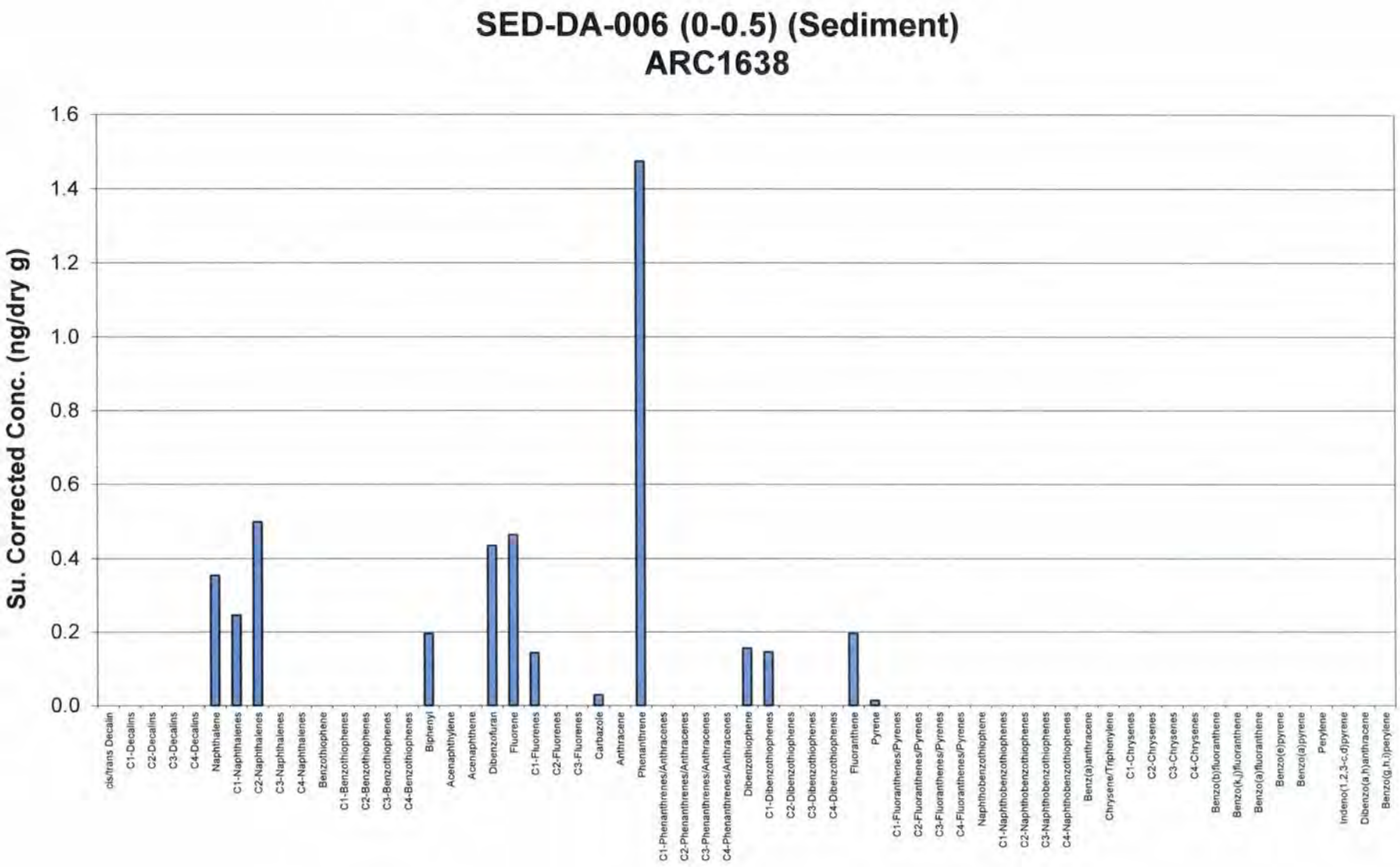

SED-DA-BG-009 (0-0.5) (Sediment)
ARC1617
Su. Corrected Conc. (ng/dry g)
350
300
250
200
150
100
50
0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

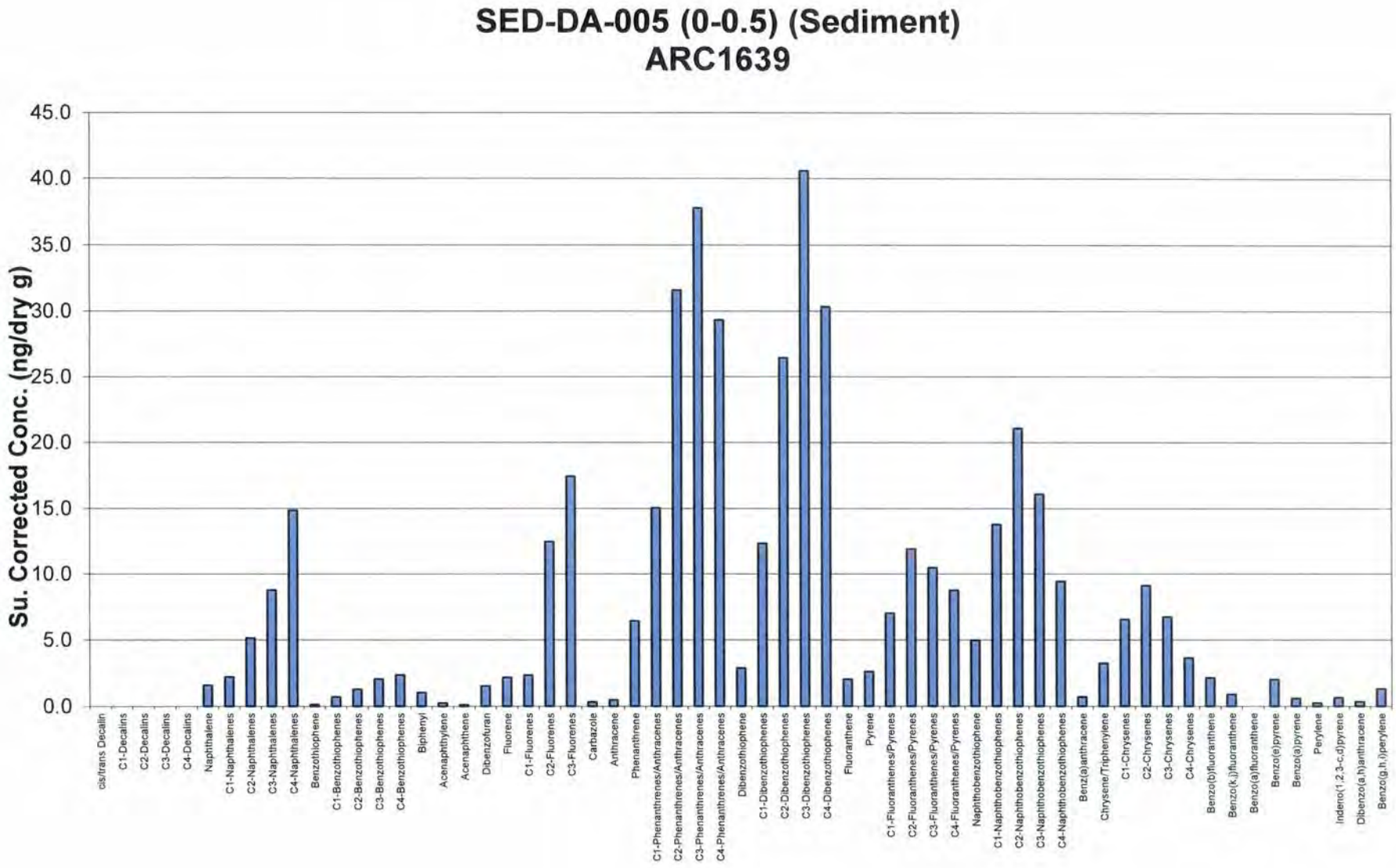

SED-DA-009 (0-0.5) (Sediment)
ARC1633
Su. Corrected Conc. (ng/dry g)
2.5
2.0
1.5
1.0
0.5
0.0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

SED-DA-008 (0-0.5) (Sediment)
ARC1634

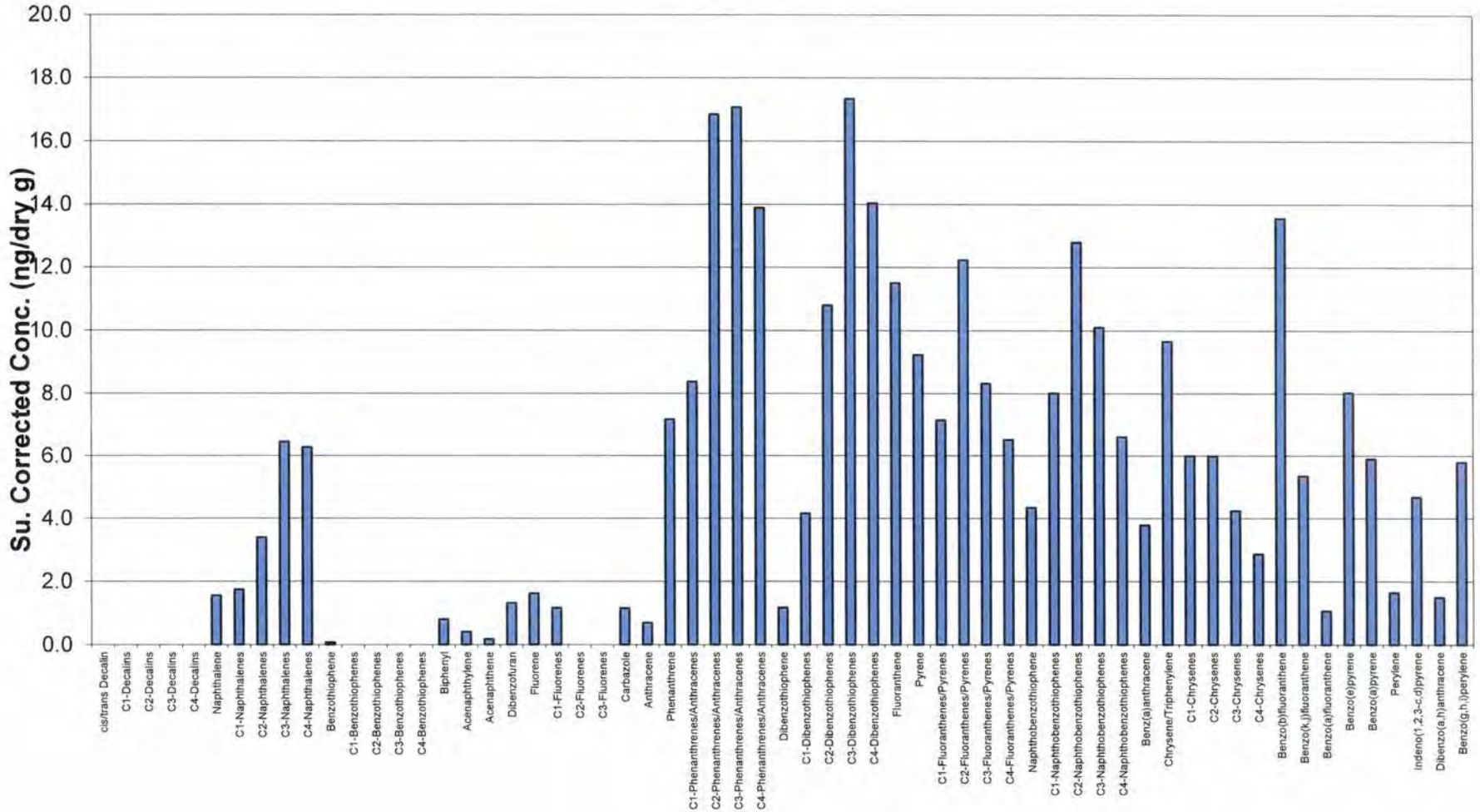


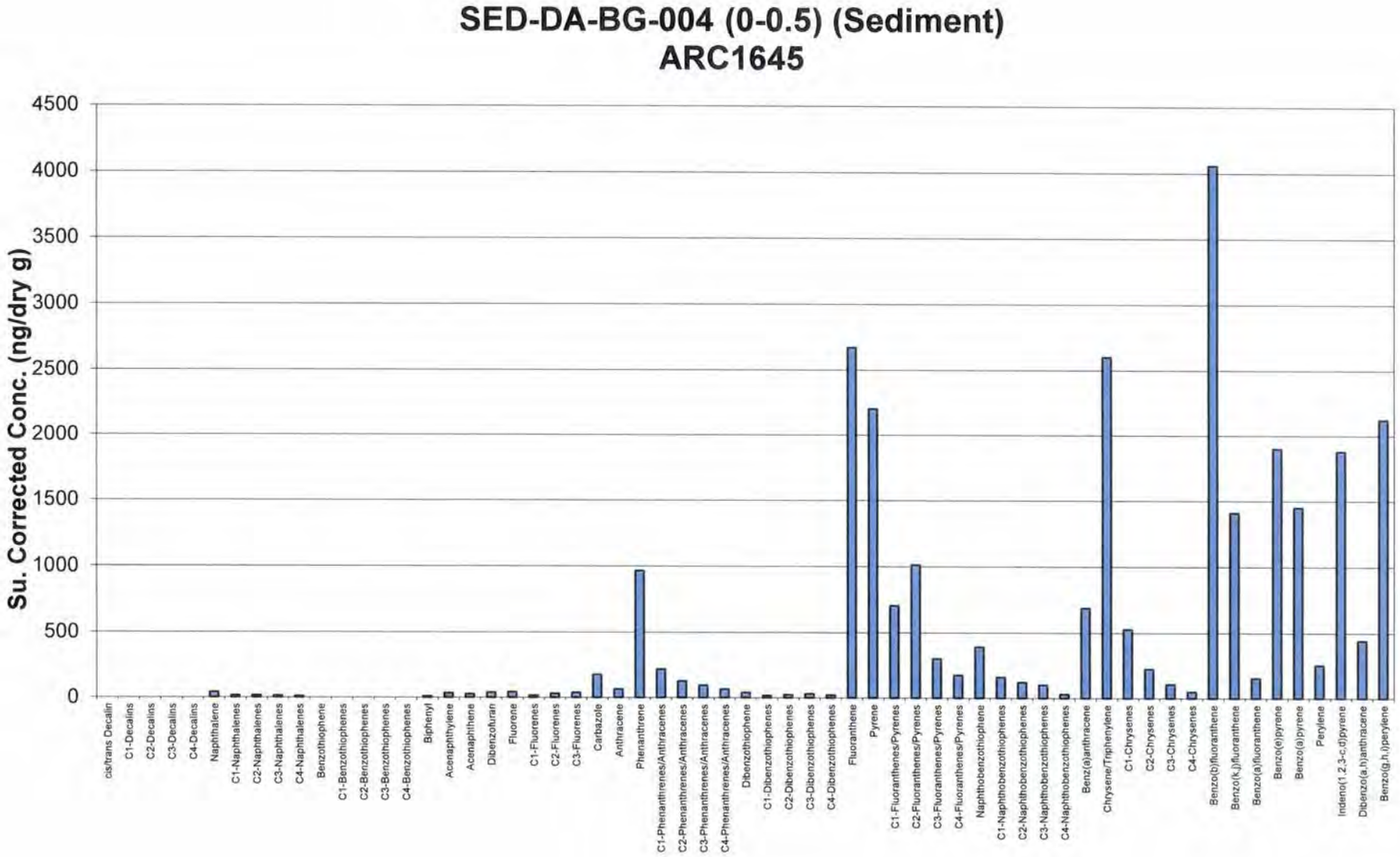

SED-DA-007 (0-0.5) (Sediment)
ARC1637
Su. Corrected Conc. (ng/dry g)
80.0
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

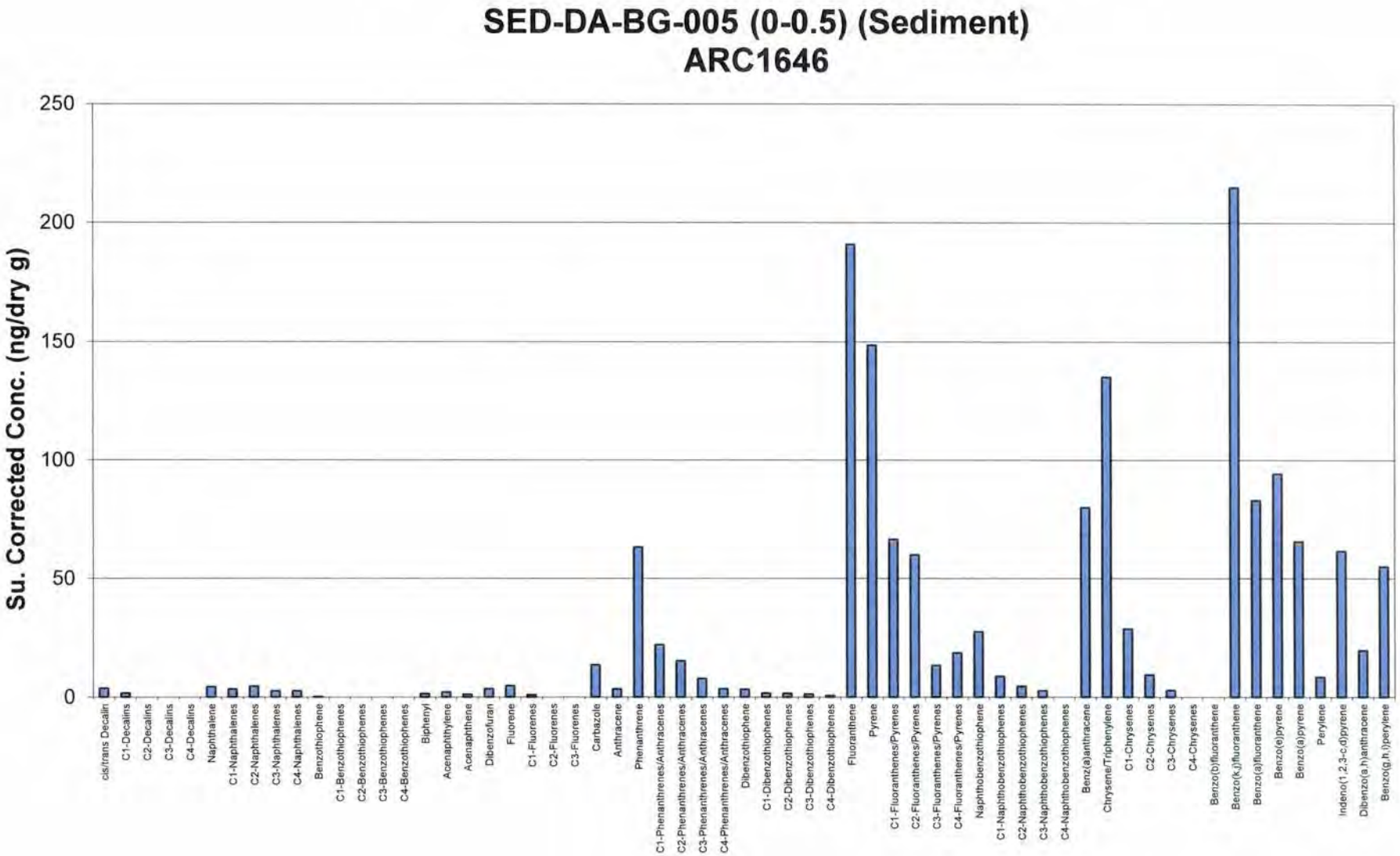

SED-DA-006 (0-0.5) (Sediment)
ARC1638
Su. Corrected Conc. (ng/dry g)
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

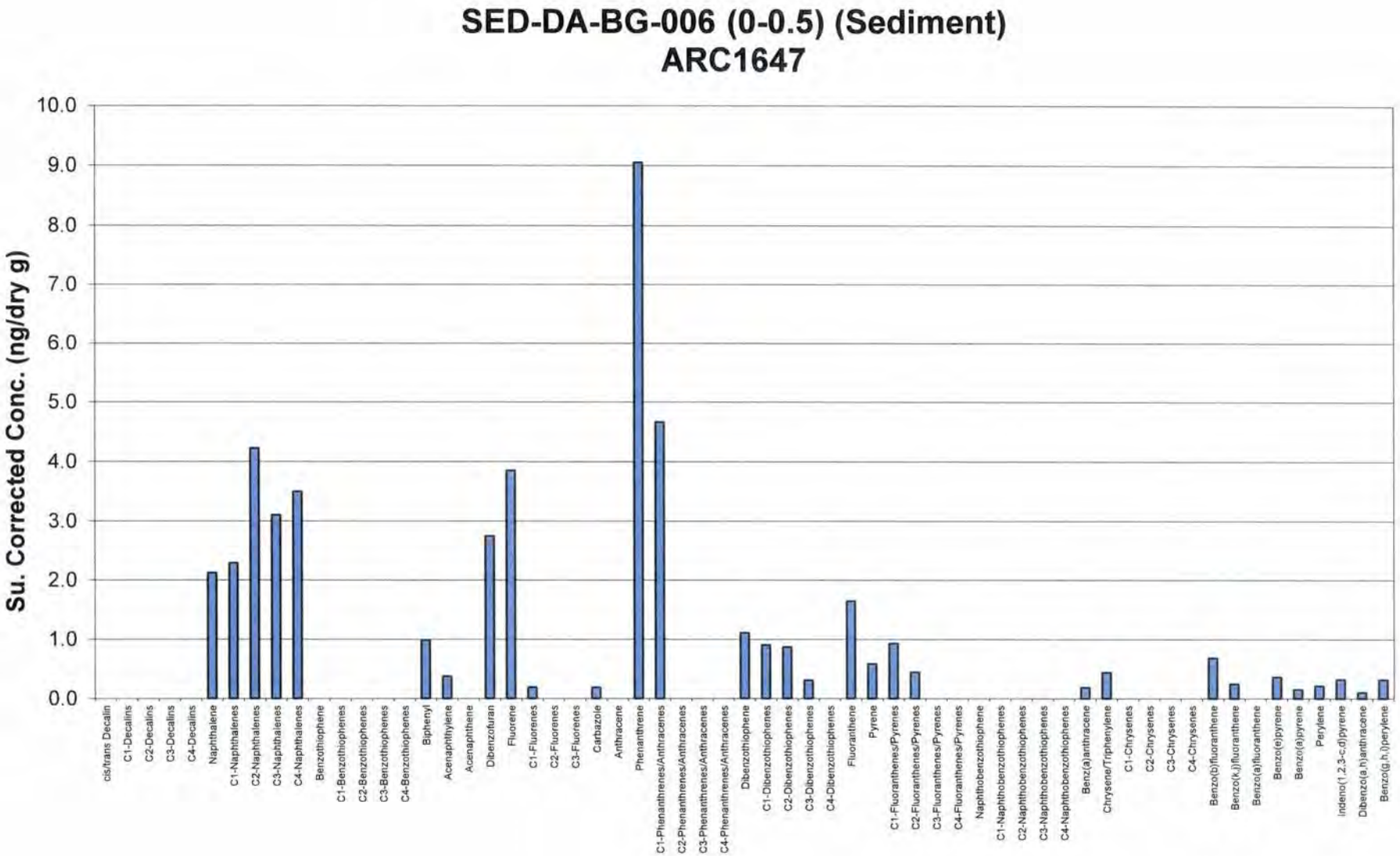

SED-DA-005 (0-0.5) (Sediment)
ARC1639
Su. Corrected Conc. (ng/dry g)
45.0
40.0
35.0
30.0
25.0
20.0
15.0
10.0
5.0
0.0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

SED-DA-010 (0-0.5) (Sediment)
ARC1640

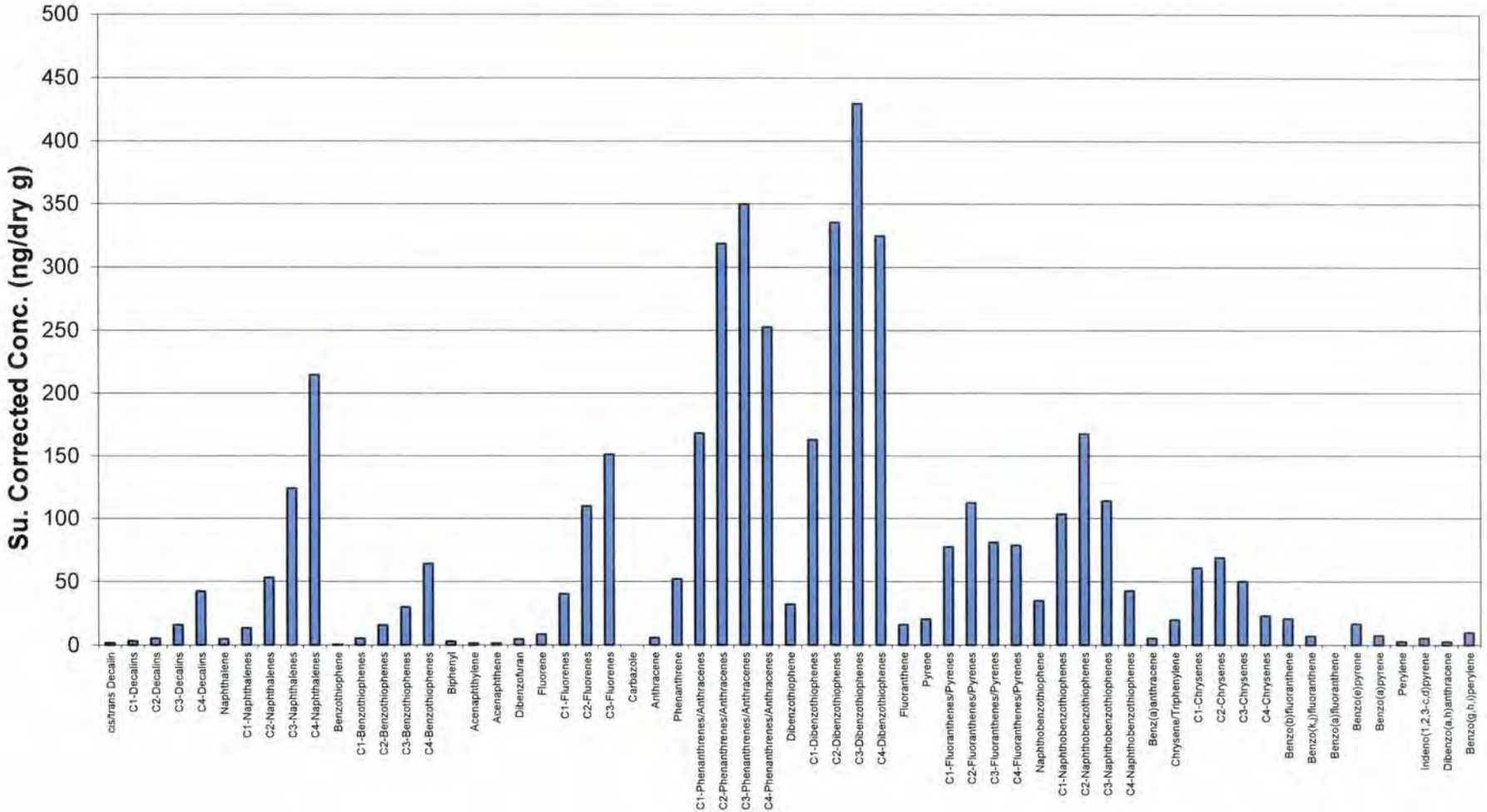



SED-DA-BG-004 (0-0.5) (Sediment)
ARC1645
Su. Corrected Conc. (ng/dry g)
4500
4000
3500
3000
2500
2000
1500
1000
500
0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene


SED-DA-BG-005 (0-0.5) (Sediment)
ARC1646
Su. Corrected Conc. (ng/dry g)
250
200
150
100
50
0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

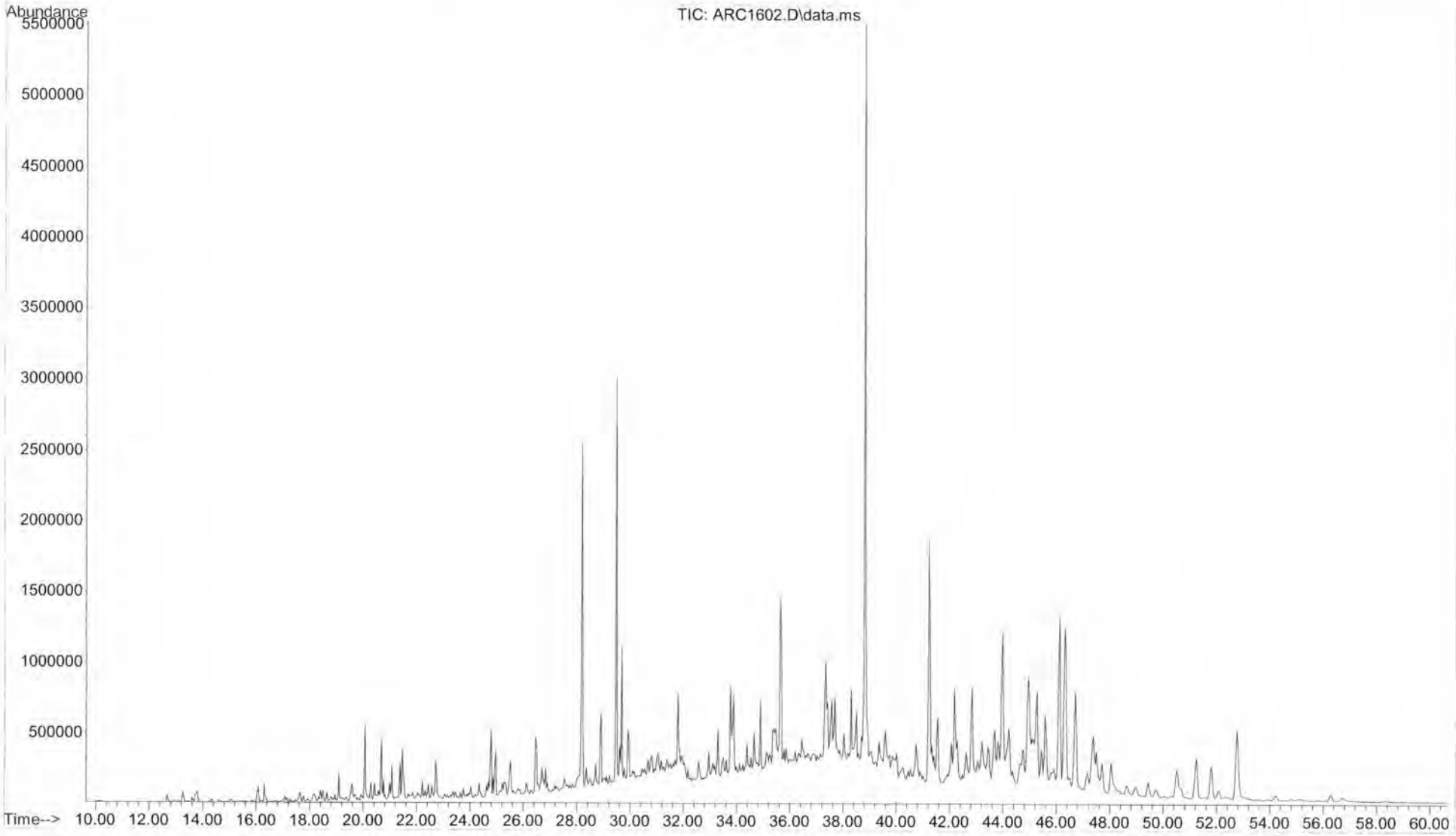

SED-DA-BG-006 (0-0.5) (Sediment)
ARC1647
Su. Corrected Conc. (ng/dry g)
10.0
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
cis/trans Decalin
C1-Decalins
C2-Decalins
C3-Decalins
C4-Decalins
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
C4-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrenes/Anthracenes
C2-Phenanthrenes/Anthracenes
C3-Phenanthrenes/Anthracenes
C4-Phenanthrenes/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
C4-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
C4-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
C4-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene/Triphenylene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k,j)fluoranthene
Benzo(a)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

SED-DA-DUP-04-080313 (Sediment)
ARC1653

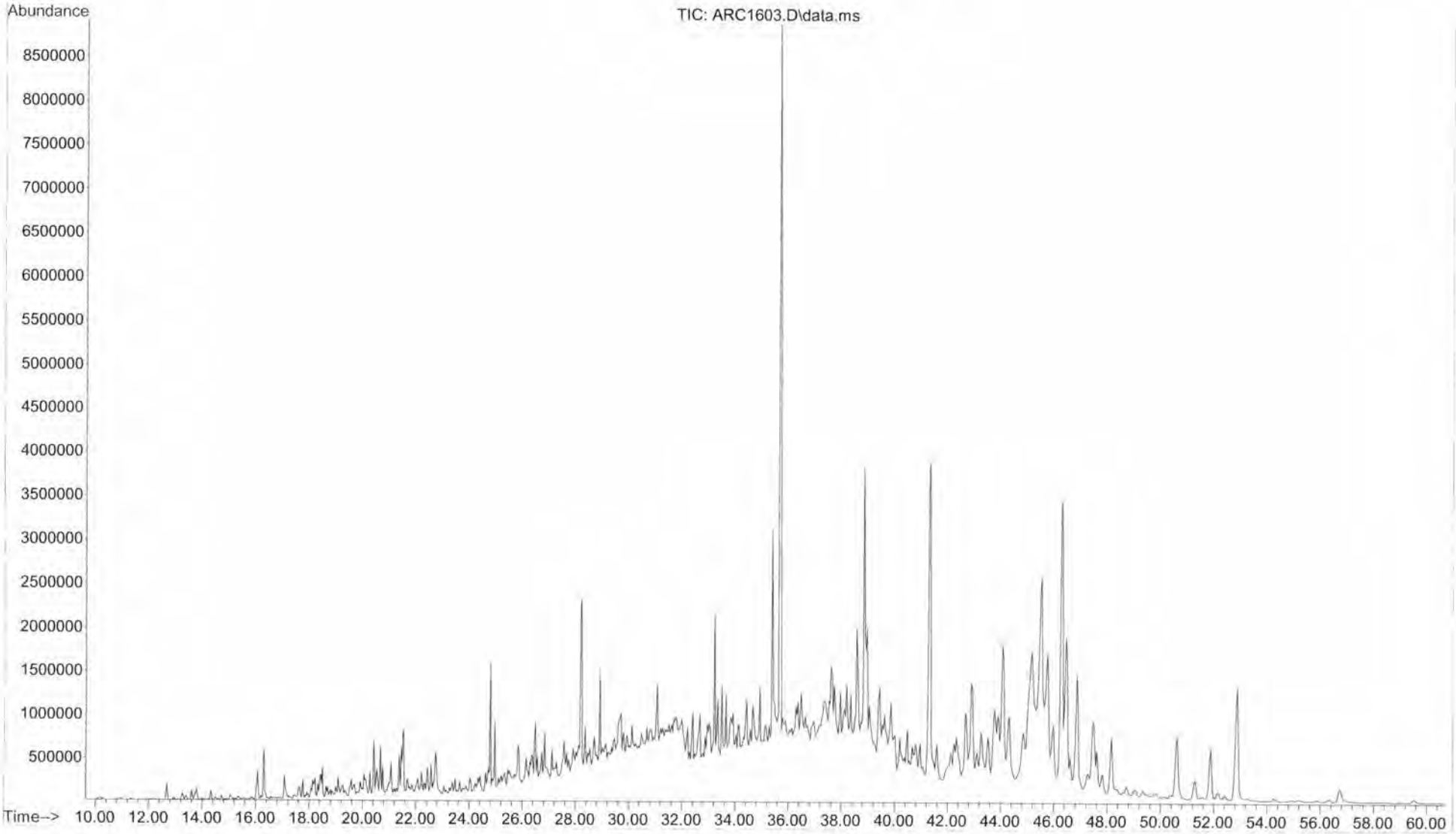


Polycyclic Aromatic Hydrocarbon Total Ion Chromatograms

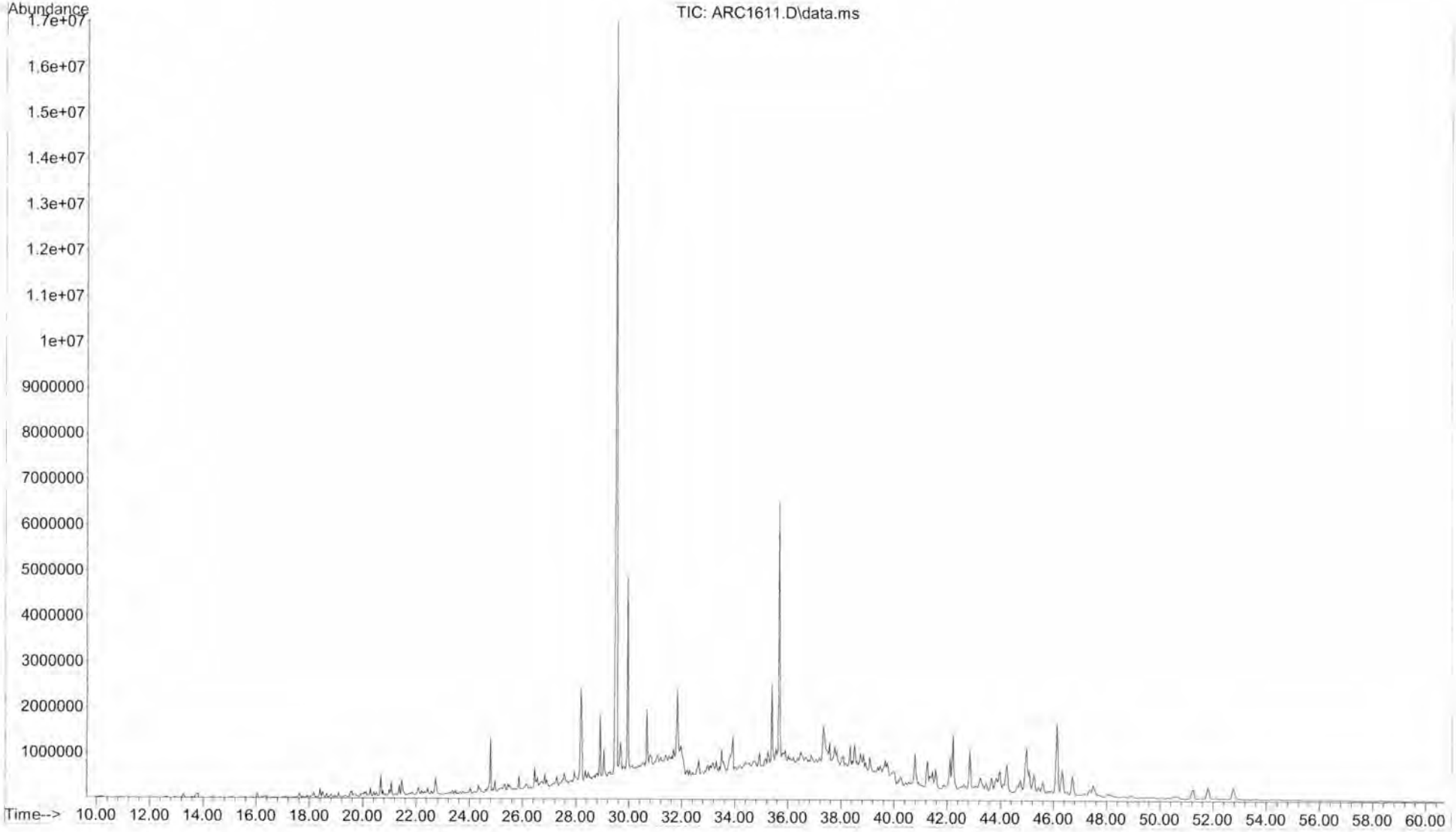
File :C:\GCMS6\MS60141\ARC1602.D
Operator : YM
Acquired : 16 Aug 2013 5:40 using AcqMethod PAH-2012.M
Instrument : GCMS6
Sample Name: SED-DA-BG-007 (0-0.5)
Misc Info :
Vial Number: 18



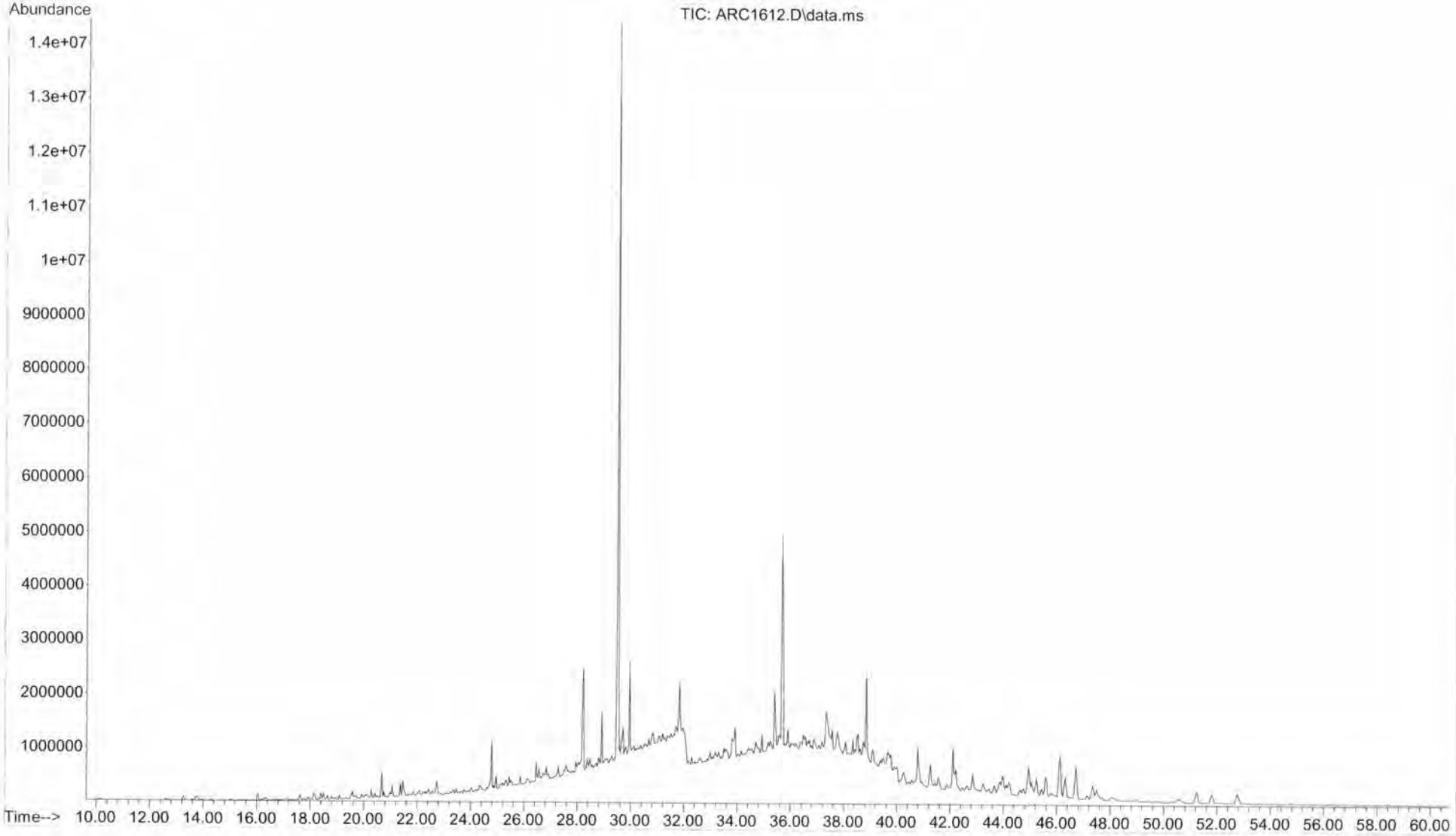
File :C:\GCMS6\MS60141\ARC1603.D
Operator : YM
Acquired : 16 Aug 2013 7:59 using AcqMethod PAH-2012.M
Instrument : GCMS6
Sample Name: SED-DA-DUP-02-073013
Misc Info :
Vial Number: 20



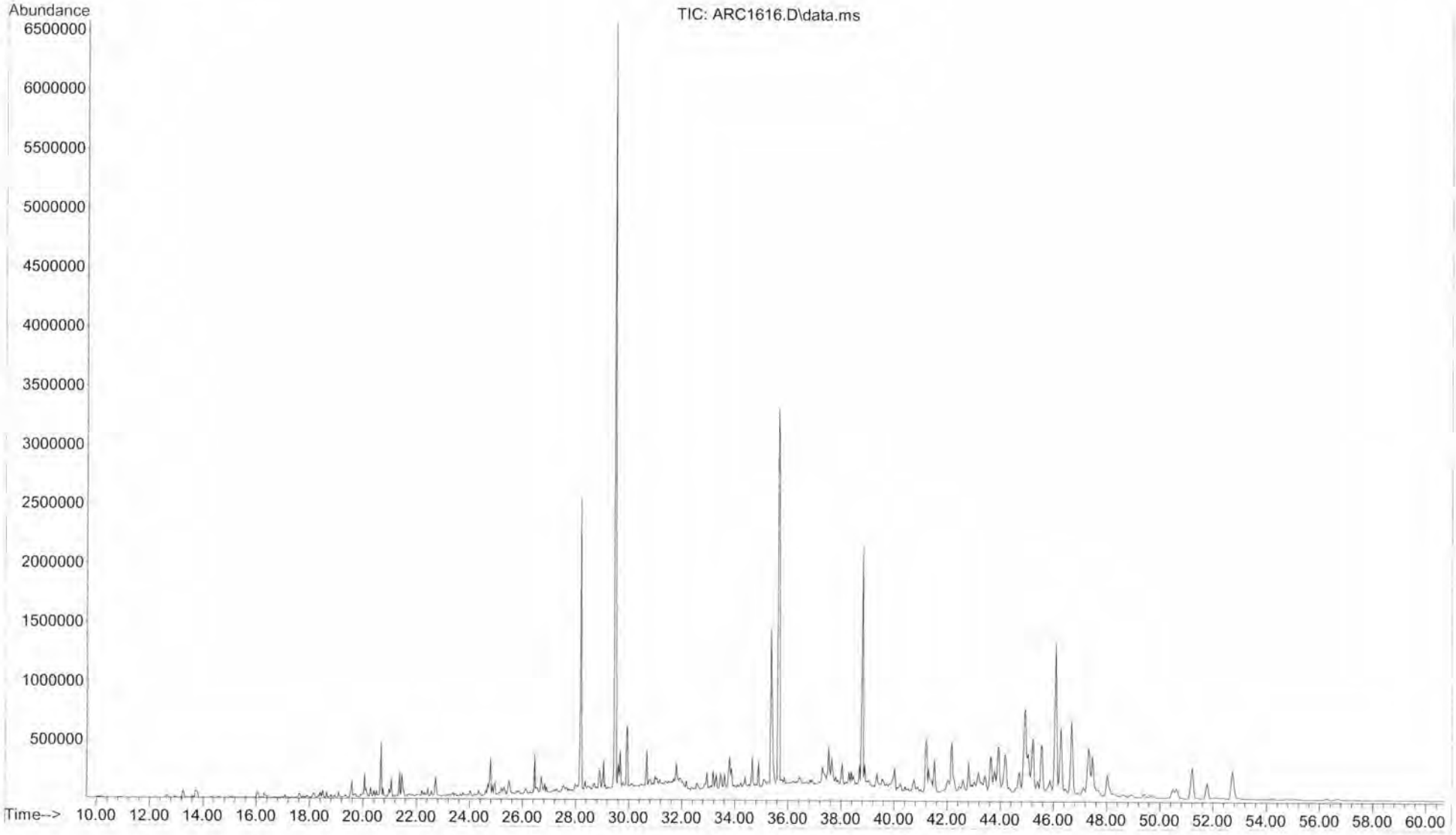
File :C:\GCMS6\MS60141\ARC1611.D
Operator : YM
Acquired : 16 Aug 2013 9:08 using AcqMethod PAH-2012.M
Instrument : GCMS6
Sample Name: SED-DA-BG-011 (0-0.5)
Misc Info :
Vial Number: 21



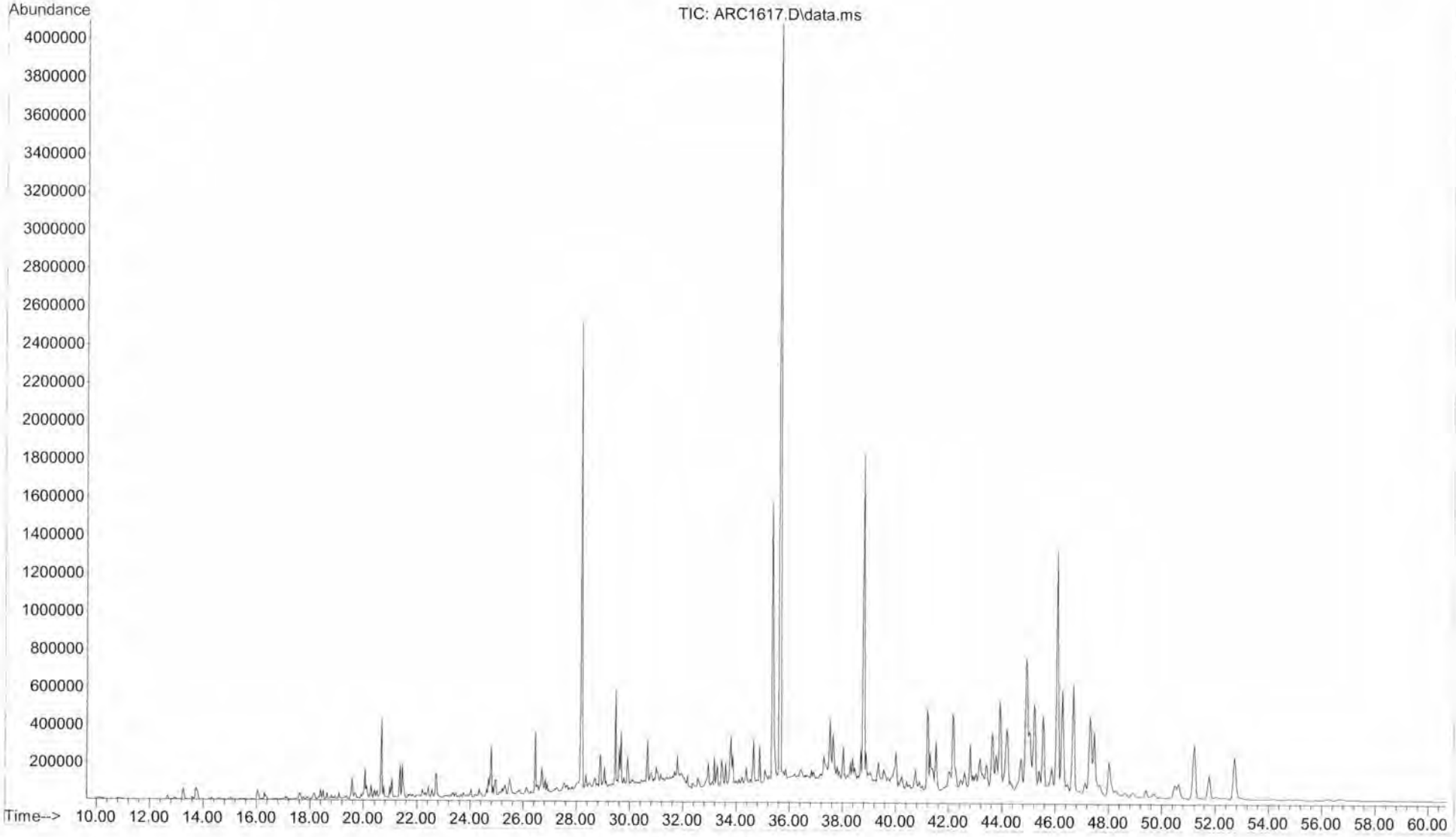
File :C:\GCMS6\MS60141\ARC1612.D
Operator : YM
Acquired : 16 Aug 2013 10:18 using AcqMethod PAH-2012.M
Instrument : GCMS6
Sample Name: SED-DA-BG-010 (0-0.5)
Misc Info :
Vial Number: 22



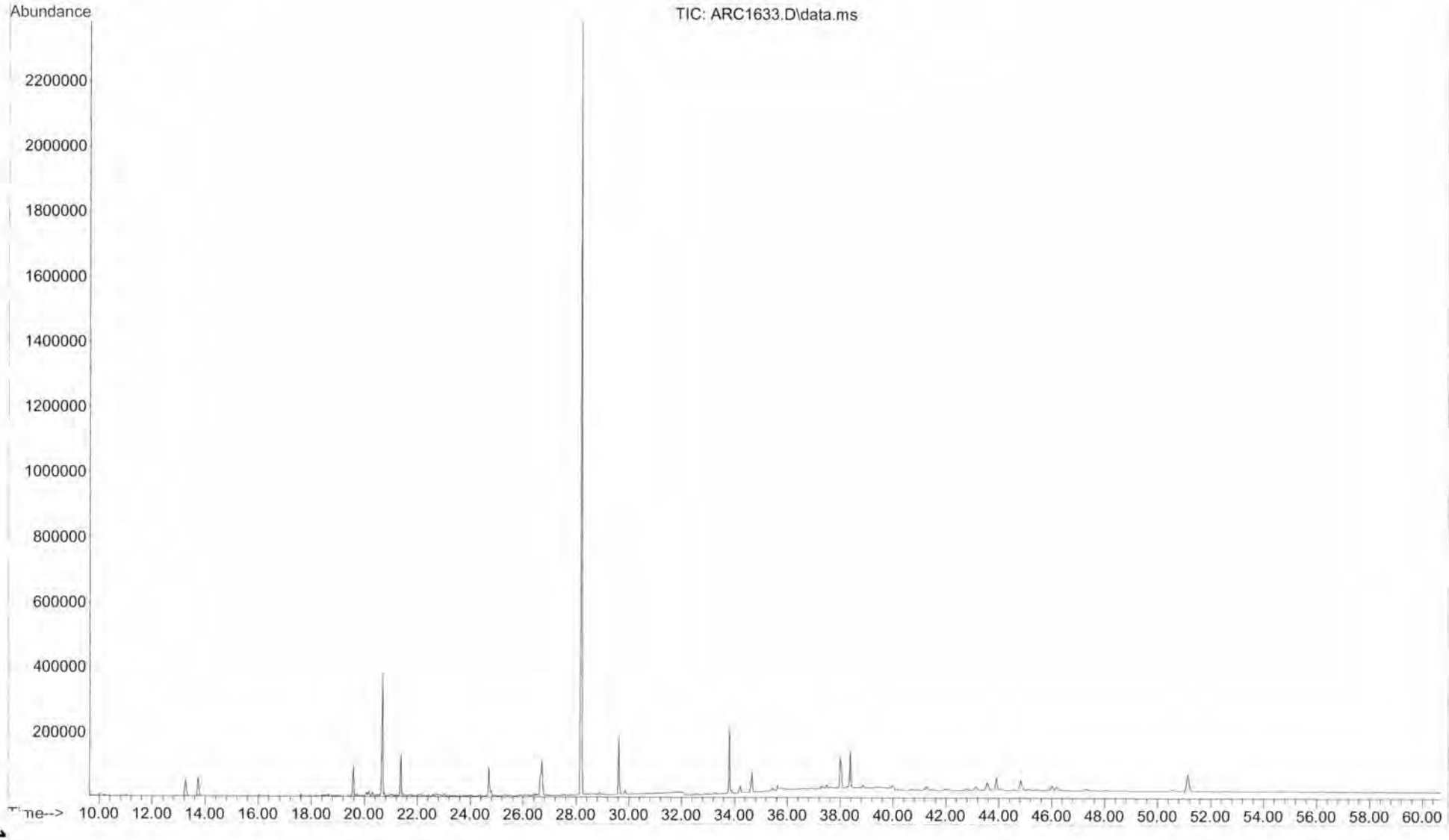
File :C:\GCMS6\MS60141\ARC1616.D
Operator : YM
Acquired : 16 Aug 2013 11:27 using AcqMethod PAH-2012.M
Instrument : GCMS6
Sample Name: SED-DA-DUP-03-073113
Misc Info :
Vial Number: 23



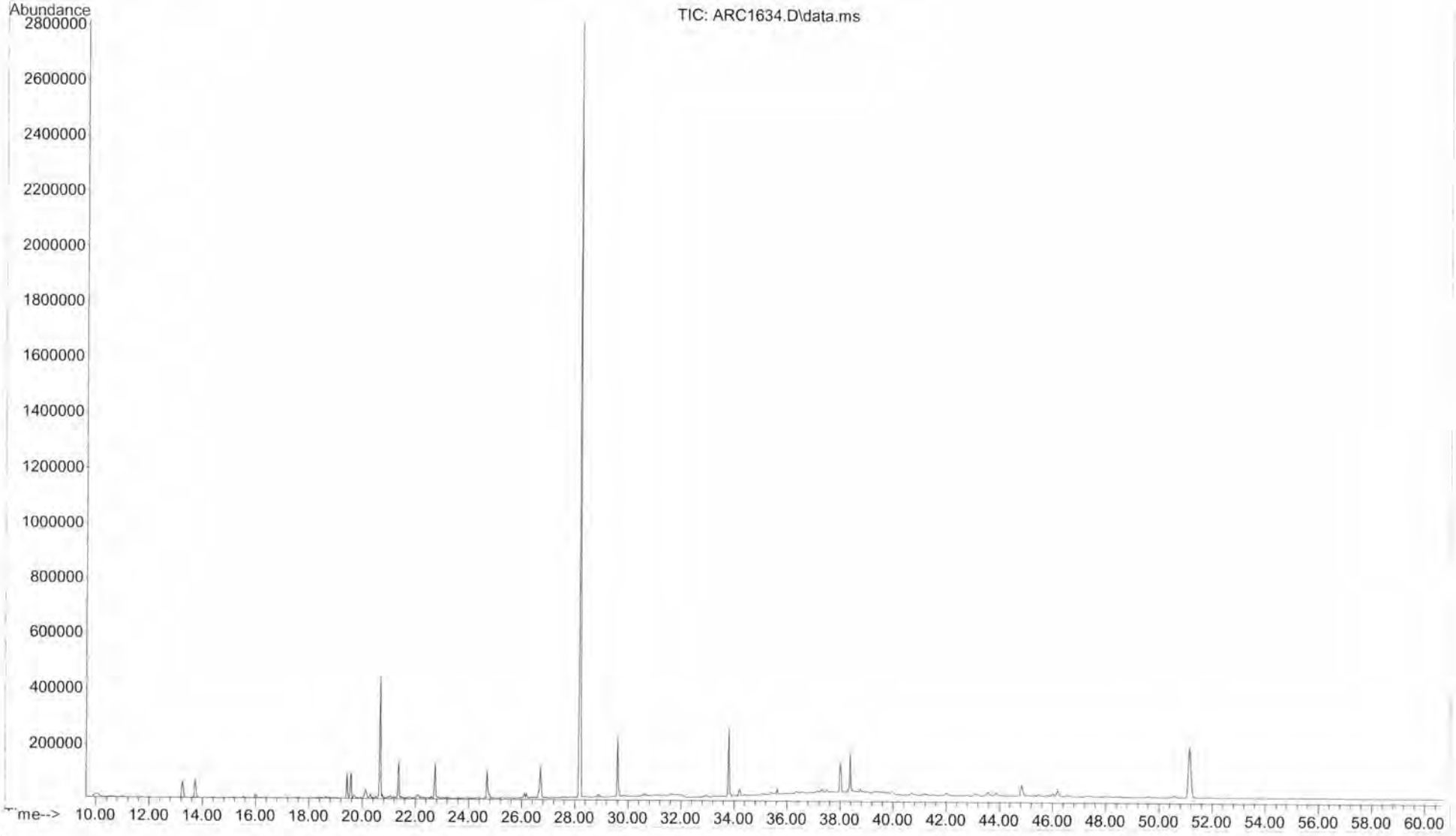
File :C:\GCMS6\MS60141\ARC1617.D
Operator : YM
Acquired : 16 Aug 2013 12:36 using AcqMethod PAH-2012.M
Instrument : GCMS6
Sample Name: SED-DA-BG-009 (0-0.5)
Misc Info :
Vial Number: 24



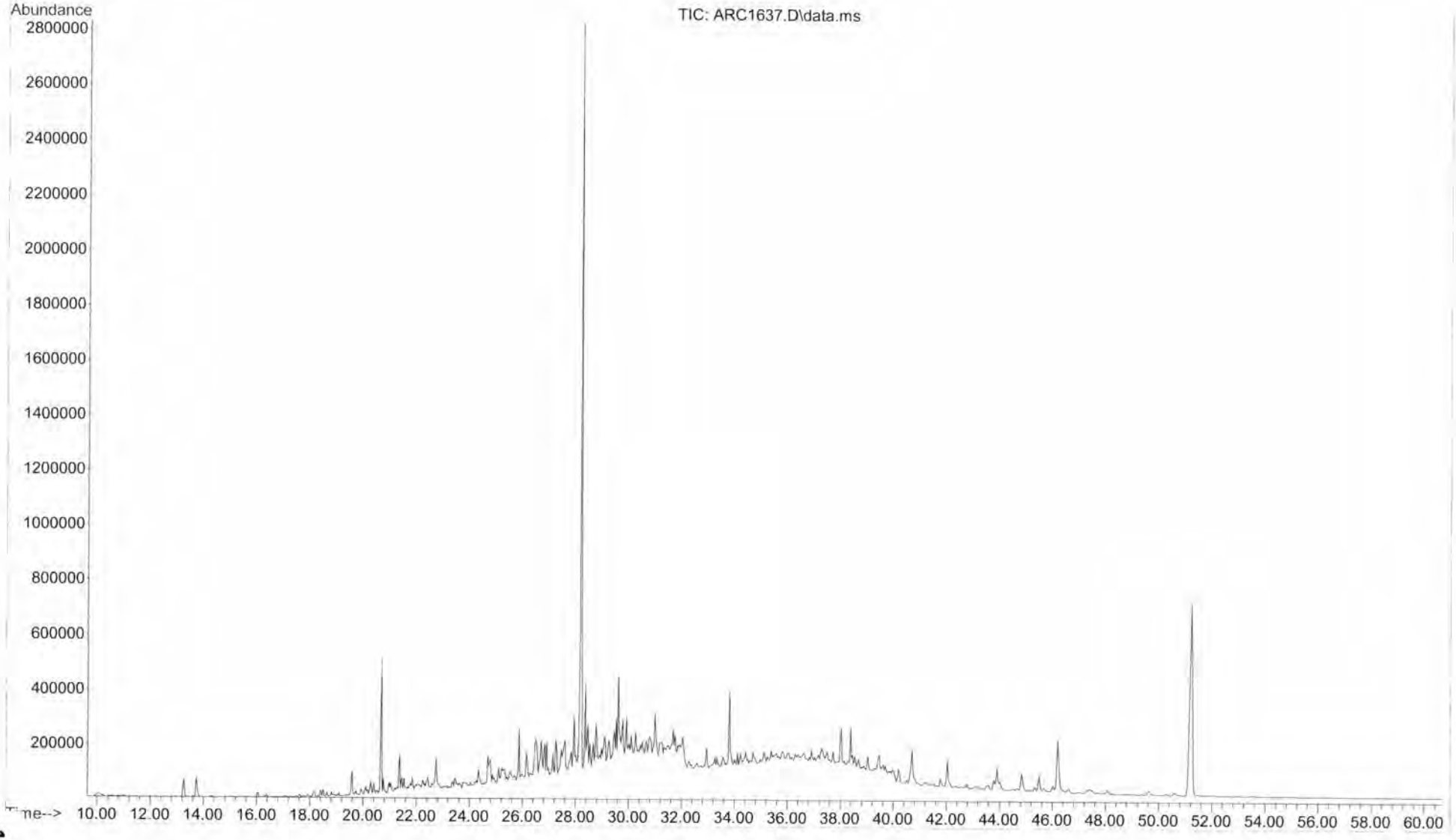
File :C:\GCMS6\MS60141\ARC1633.D
Operator : YM
Acquired : 16 Aug 2013 13:46 using AcqMethod PAH-2012.M
Instrument : GCMS6
Sample Name: SED-DA-009 (0-0.5)
Misc Info :
Vial Number: 25



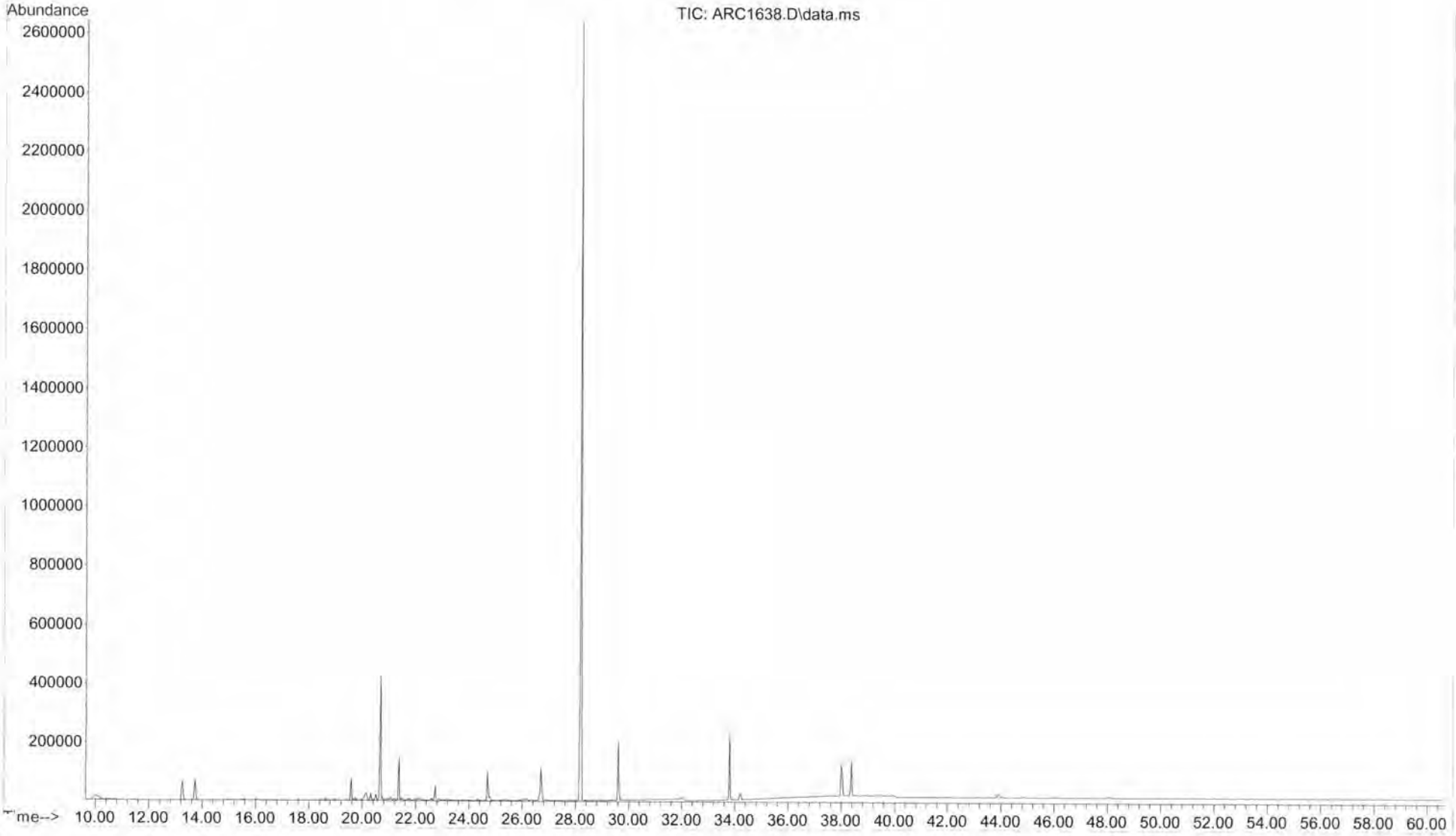
File :C:\GCMS6\MS60141\ARC1634.D
Operator : YM
Acquired : 16 Aug 2013 14:55 using AcqMethod PAH-2012.M
Instrument : GCMS6
Sample Name: SED-DA-008 (0-0.5)
Misc Info :
Vial Number: 26



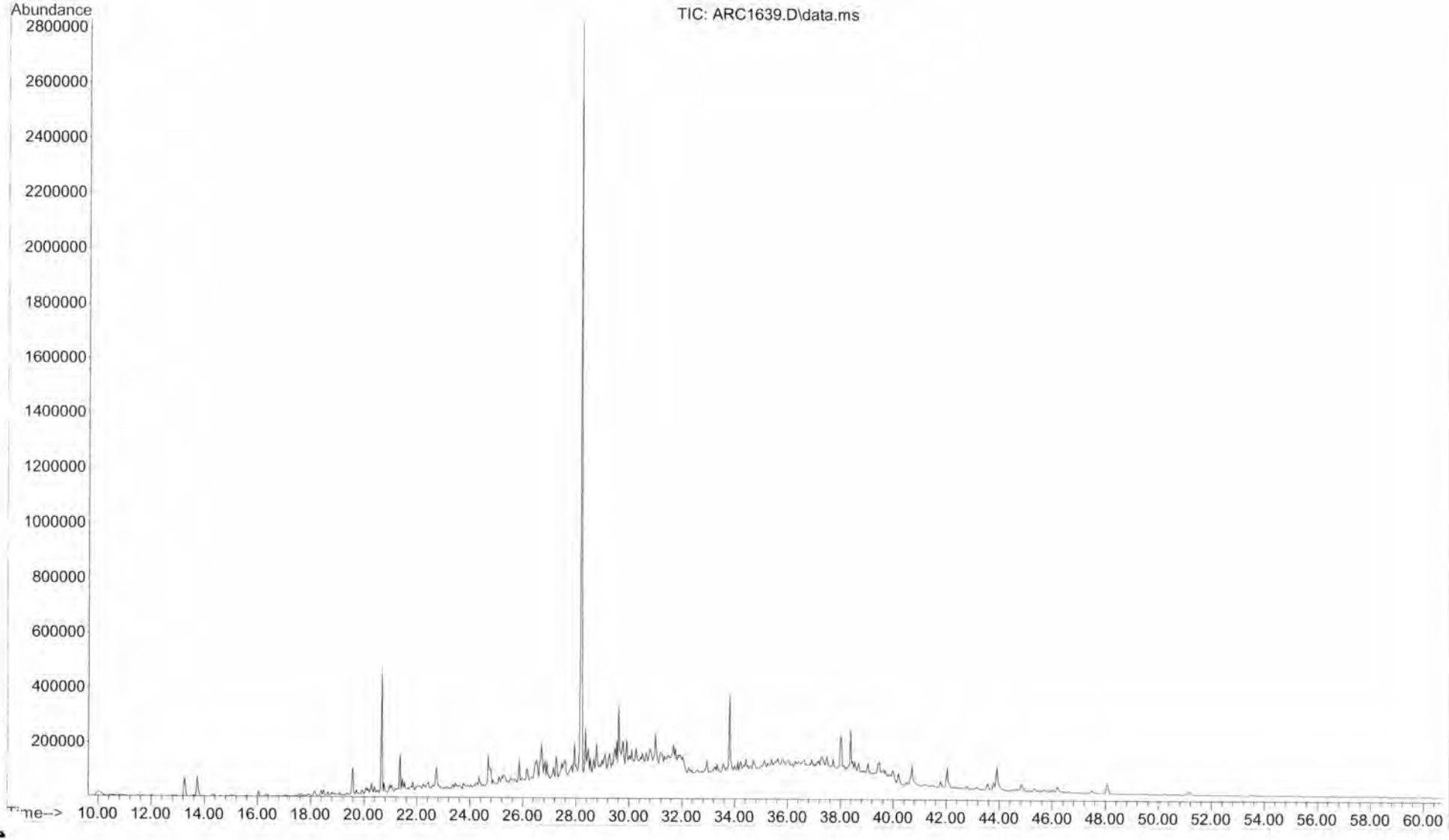
File :C:\GCMS6\MS60141\ARC1637.D
Operator : YM
Acquired : 16 Aug 2013 16:05 using AcqMethod PAH-2012.M
Instrument : GCMS6
Sample Name: SED-DA-007 (0-0.5)
Misc Info :
Vial Number: 27



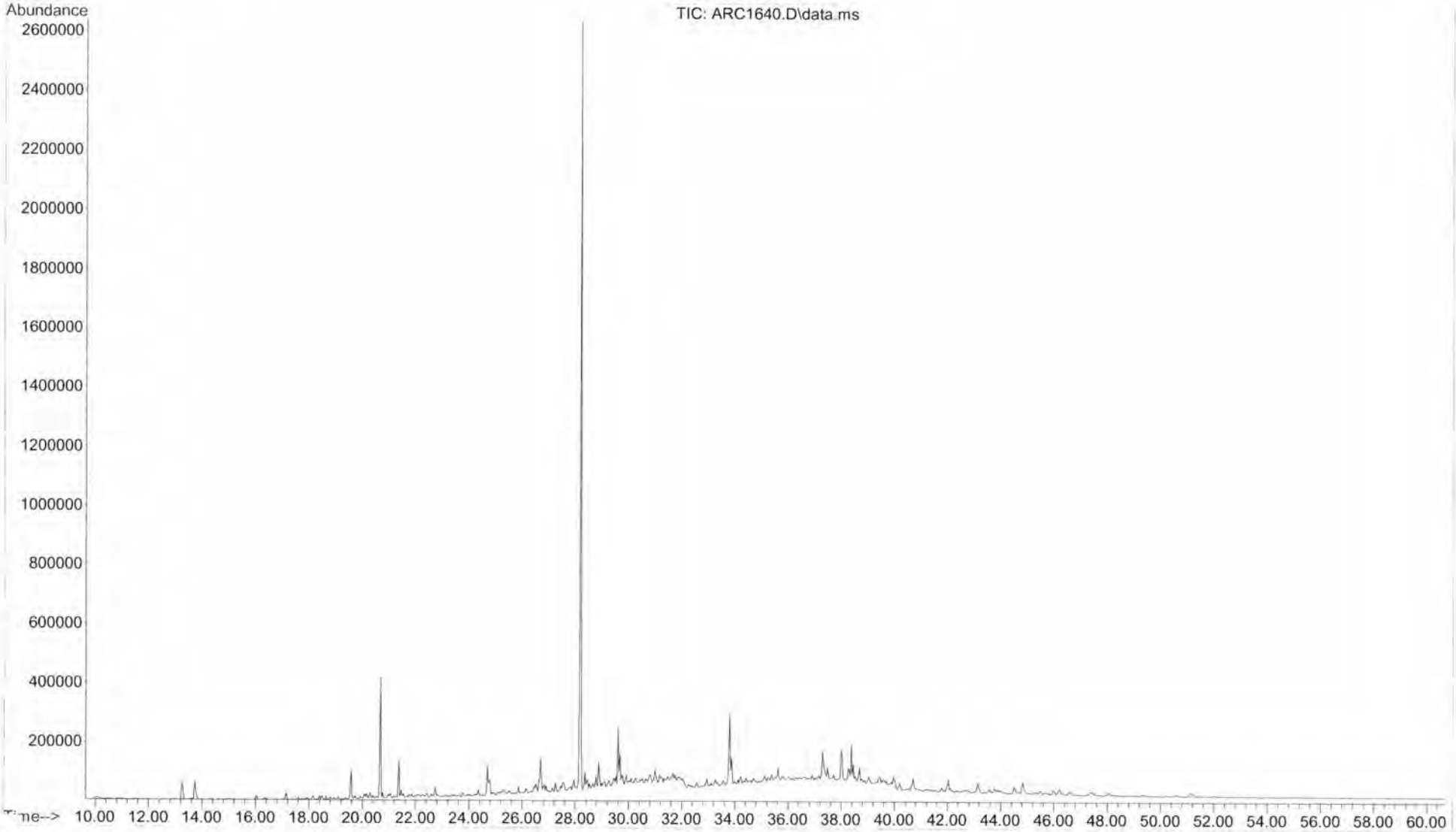
File :C:\GCMS6\MS60141\ARC1638.D
Operator : YM
Acquired : 16 Aug 2013 18:23 using AcqMethod PAH-2012.M
Instrument : GCMS6
Sample Name: SED-DA-006 (0-0.5)
Misc Info :
Vial Number: 29



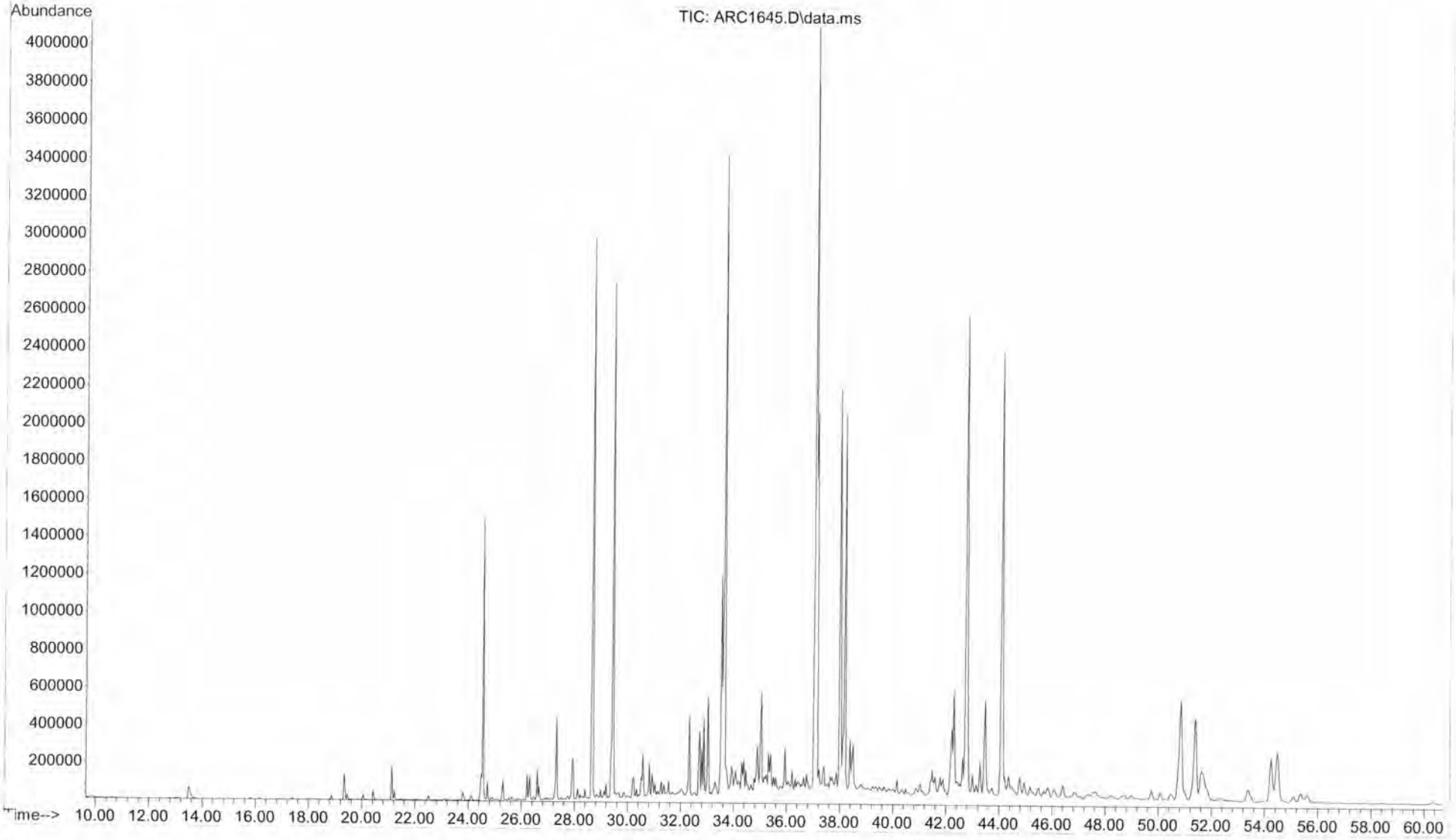
File :C:\GCMS6\MS60141\ARC1639.D
Operator : YM
Acquired : 16 Aug 2013 19:32 using AcqMethod PAH-2012.M
Instrument : GCMS6
Sample Name: SED-DA-005 (0-0.5)
Misc Info :
Vial Number: 30



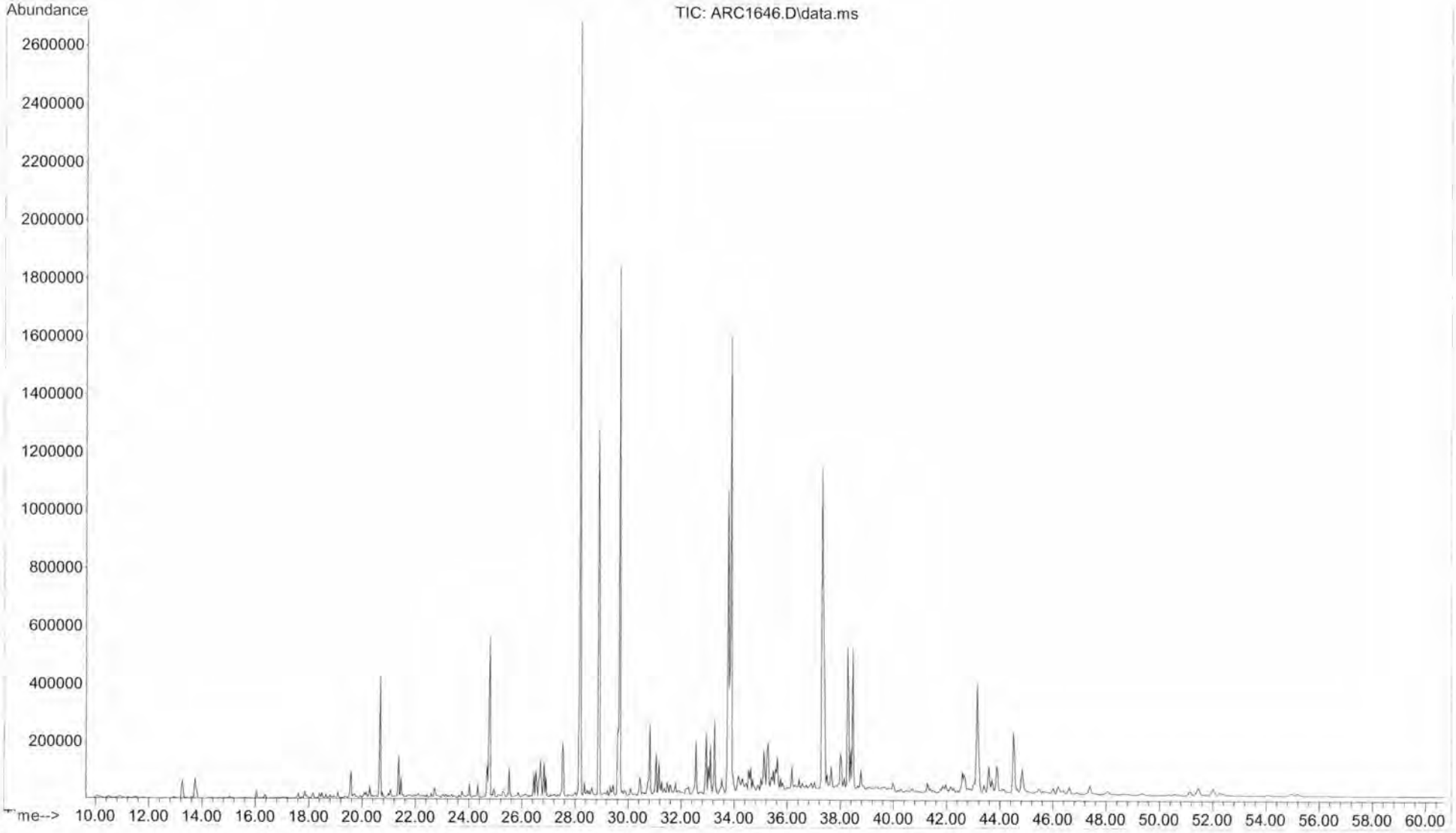
File :C:\GCMS6\MS60141\ARC1640.D
Operator : YM
Acquired : 16 Aug 2013 20:41 using AcqMethod PAH-2012.M
Instrument : GCMS6
Sample Name: SED-DA-010 (0-0.5)
Misc Info :
Vial Number: 31



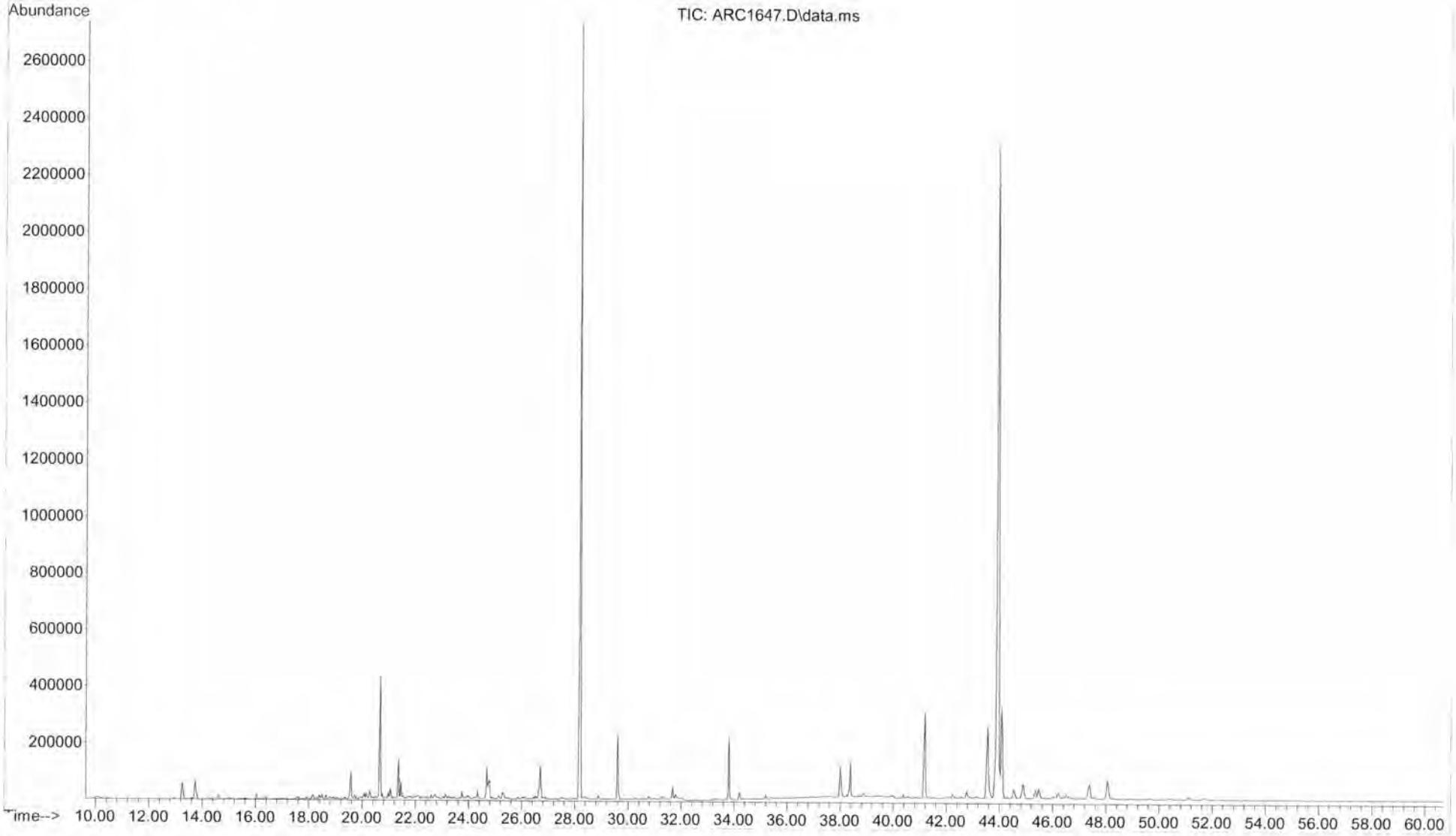
File :C:\GCMS6\MS60147\ARC1645.D
Operator : YM
Acquired : 5 Sep 2013 11:56 using AcqMethod PAH-2012.M
Instrument : GCMS6
Sample Name: SED-DA-BG-004 (0-0.5)
Misc Info :
Vial Number: 35



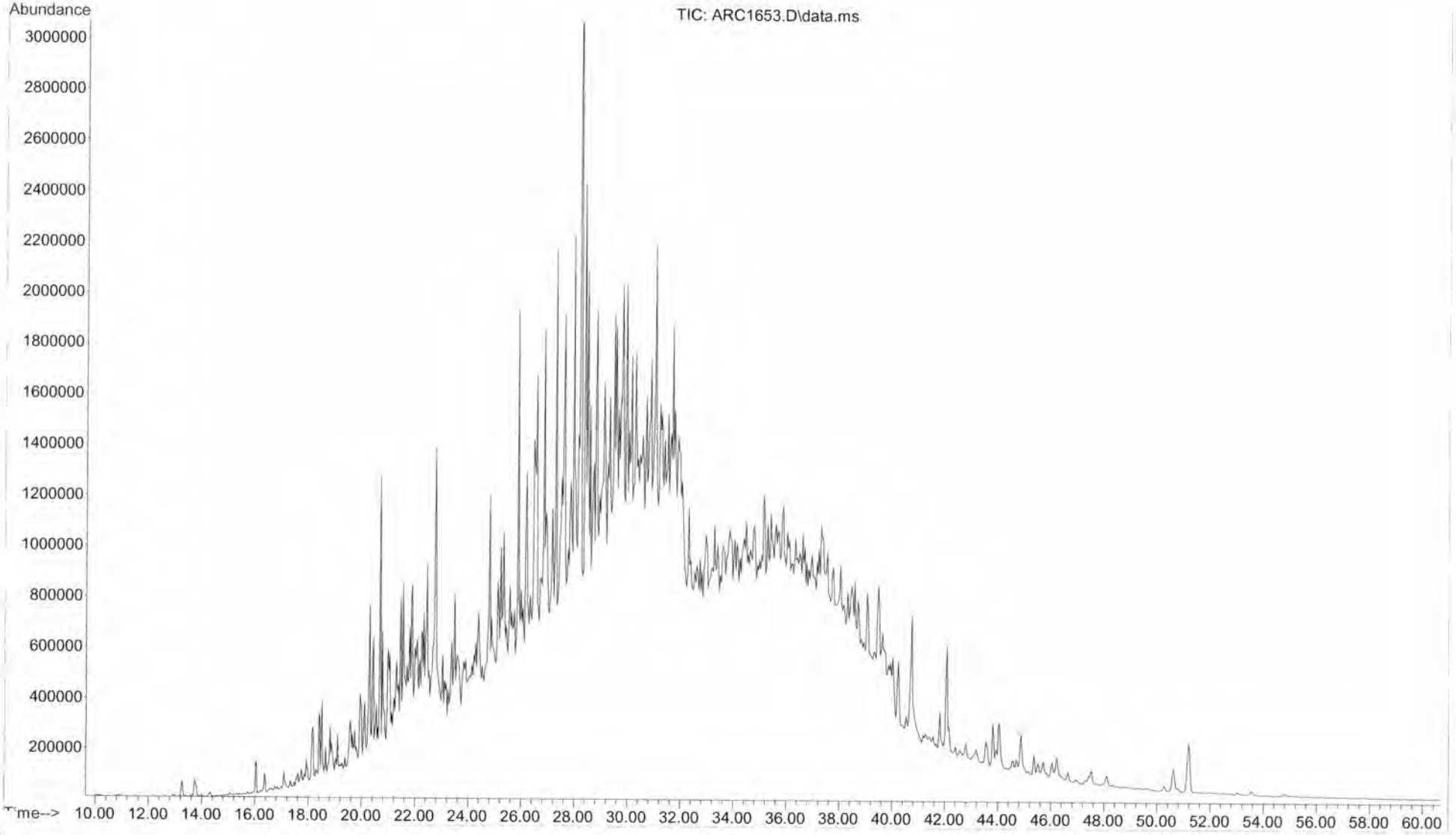
File :C:\GCMS6\MS60141\ARC1646.D
Operator : YM
Acquired : 16 Aug 2013 22:59 using AcqMethod PAH-2012.M
Instrument : GCMS6
Sample Name: SED-DA-BG-005 (0-0.5)
Misc Info :
Vial Number: 33



File :C:\GCMS6\MS60141\ARC1647.D
Operator : YM
Acquired : 17 Aug 2013 00:08 using AcqMethod PAH-2012.M
Instrument : GCMS6
Sample Name: SED-DA-BG-006 (0-0.5)
Misc Info :
Vial Number: 34



File :C:\GCMS6\MS60141\ARC1653.D
Operator : YM
Acquired : 17 Aug 2013 1:17 using AcqMethod PAH-2012.M
Instrument : GCMS6
Sample Name: SED-DA-DUP-04-080313
Misc Info :
Vial Number: 35



Total Petroleum Hydrocarbons/ Aliphatic Hydrocarbons Raw Data

B&B LABORATORIES ALIPHATICS/TEH QA FORM

Extraction Page: ENV 3079	Analyst: Meghan Dailey
Client: Arcadis Mayflower Project	Date: Sepember 11, 2013
Job: #: J13034	Project Quality Manager:
SDG #: various	Date: 09/12/13

Initial Calibration: No failures	ICV No failures
Surrogate Recoveries: No failures	
Procedural Blank: No failures	
Blank Spike: NA	
Blank Spike Duplicate: NA	
Laboratory Duplicate: No failures	
Matrix Spike: No failures	
Matirx Spike Duplicate: No failures	
SRM 2779 Reference Oil No failures	
Mass Discrimination Check (n-C36/n-C20 >0.7) No failures	

FID Sequence Summary Report

B&B Laboratories, Inc.

Sequence name: FID10078 2013-08-15 16-37-34

Acquisition date: 8/15/2013 4:37:35 PM

Acquired by: Meghan Dailey

Data Directory C:\CHEM32\3\DATA\FID10078 2013-08-15 16-37-34

Line	Location	Sample Name	Datafile	Method	Injection Date
4	Vial 1	Solvent Blank	FID10078A.D	ALI2012.M	08/15/2013 20:16:53
5	Vial 2	AL-WKCC-25-024	FID10078B.D	ALI2012.M	08/15/2013 21:27:36
6	Vial 3	AL-SRM2779-20-01	FID10078C.D	ALI2012.M	08/15/2013 22:38:15
7	Vial 1	Solvent Blank	FID10078D.D	ALI2012.M	08/15/2013 23:49:09
8	Vial 4	AL-RetWin-001	FID10078E.D	ALI2012.M	08/16/2013 00:59:51
9	Vial 5	AL-WKPem-001	FID10078F.D	ALI2012.M	08/16/2013 02:10:37
10	Vial 6		ENV3079A.D	ALI2012.M	08/16/2013 03:21:21
11	Vial 7		ENV3079C.D	ALI2012.M	08/16/2013 04:32:05
12	Vial 8		ENV3079D.D	ALI2012.M	08/16/2013 05:42:46
13	Vial 9		ENV3079E.D	ALI2012.M	08/16/2013 06:53:32
14	Vial 10		ARC1602.D	ALI2012.M	08/16/2013 08:04:24
15	Vial 11	AL-WKCC-25-024	FID10078G.D	ALI2012.M	08/16/2013 09:15:19
16	Vial 12		ARC1603.D	ALI2012.M	08/16/2013 10:26:04
17	Vial 13		ARC1611.D	ALI2012.M	08/16/2013 11:36:47
18	Vial 14		ARC1612.D	ALI2012.M	08/16/2013 12:47:23
19	Vial 15		ARC1616.D	ALI2012.M	08/16/2013 13:58:00
20	Vial 16		ARC1617.D	ALI2012.M	08/16/2013 15:08:47
21	Vial 17		ARC1633.D	ALI2012.M	08/16/2013 16:19:32
22	Vial 18		ARC1634.D	ALI2012.M	08/16/2013 17:30:16
23	Vial 19		ARC1637.D	ALI2012.M	08/16/2013 18:40:48
24	Vial 20		ARC1638.D	ALI2012.M	08/16/2013 19:51:56
25	Vial 21	AL-WKCC-25-024	FID10078H.D	ALI2012.M	08/16/2013 21:02:27
26	Vial 22		ARC1639.D	ALI2012.M	08/16/2013 22:12:59
27	Vial 23		ARC1640.D	ALI2012.M	08/16/2013 23:23:32
28	Vial 24		ARC1645.D	ALI2012.M	08/17/2013 00:34:15
29	Vial 25		ARC1646.D	ALI2012.M	08/17/2013 01:44:48

↑ injection error after this

FID Sequence Summary Report

B&B Laboratories, Inc.

Sequence name: FID10078 2013-08-17 13-37-31

Acquisition date: 8/17/2013 1:39:19 PM

Acquired by: Meghan Dailey

Data Directory C:\CHEM32\3\DATA\FID10078 2013-08-17 13-37-31

Line	Location	Sample Name	Datafile	Method	Injection Date
30	Vial 26	AL-WKCC-25-024	FID10078I.D	ALI2012.M	08/17/2013 13:42:23
31	Vial 27		ARC1647.D	ALI2012.M	08/17/2013 14:53:02
32	Vial 28		ARC1653.D	ALI2012.M	08/17/2013 16:03:37
33	Vial 29	AL-WKCC-25-024	FID10078J.D	ALI2012.M	08/17/2013 17:14:16

Evaluate Continuing Calibration Report

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078B.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 21:27:36
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 16:35:00 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	n-hexadecane-d34	1.000	1.000	0.0	89	-0.02
2		n-C8	0.945	0.988	-4.6	91	0.00
3		n-C9	1.010	1.039	-2.9	90	0.00
4		n-C10	1.087	1.102	-1.4	89	0.00
5		n-C11	1.105	1.109	-0.4	88	0.00
6	S	n-dodecane-d26	1.033	1.026	0.7	88	-0.01
7		n-C12	1.156	1.159	-0.3	88	0.00
10		n-C13	1.154	1.156	-0.2	88	0.00
12		n-C14	1.185	1.191	-0.5	88	0.00
14		n-C15	1.196	1.204	-0.7	88	-0.01
15		n-C16	1.200	1.220	-1.7	89	-0.01
16	I	5a-androstane	1.000	1.000	0.0	93	-0.02
18		n-C17	0.991	0.977	1.4	90	-0.02
19		Pristane	0.986	0.972	1.4	90	-0.02
20		n-C18	0.971	0.967	0.4	91	-0.02
21		Phytane	0.989	0.983	0.6	91	-0.02
22		n-C19	0.965	0.967	-0.2	91	-0.02
23	S	n-eicosane-d42	0.769	0.769	0.0	92	-0.02
24		n-C20	0.967	0.973	-0.6	92	-0.02
25		n-C21	0.972	0.987	-1.5	92	-0.02
26		n-C22	0.972	0.992	-2.1	93	-0.02
27		n-C23	0.973	0.999	-2.7	93	-0.02
28		n-C24	0.972	1.002	-3.1	93	-0.02
29		n-C25	0.973	1.003	-3.1	93	-0.02
30		n-C26	0.973	1.004	-3.2	93	-0.03
31		n-C27	0.950	0.978	-2.9	93	-0.02
32		n-C28	0.963	0.991	-2.9	93	-0.03
33		n-C29	0.967	0.991	-2.5	93	-0.03
34	S	n-triacontane-d62	0.749	0.760	-1.5	93	-0.04
35		n-C30	0.959	0.980	-2.2	93	-0.03
36		n-C31	0.945	0.962	-1.8	92	-0.03
37		n-C32	0.937	0.947	-1.1	91	-0.03
38		n-C33	0.916	0.915	0.1	90	-0.03
39		n-C34	0.926	0.926	0.0	90	-0.03
40		n-C35	0.904	0.885	2.1	88	-0.04
41		n-C36	0.975	0.940	3.6	86	-0.04
42		n-C37	0.890	0.837	6.0	84	-0.05
43		n-C38	0.876	0.823	6.1	83	-0.06

44	n-C39	0.839	0.782	6.8	82	-0.07
45	n-C40	0.786	0.713	9.3	80	-0.08

Evaluate Continuing Calibration Report - Not Founds

8	i-13	0.019	0.000	100.0#	0#	-9.11#
9	i-14	0.019	0.000	100.0#	0#	-9.81#
11	i-15	0.019	0.000	100.0#	0#	-10.97#
13	i-16	0.020	0.000	100.0#	0#	-11.87#
17	i-18	0.019	0.000	100.0#	0#	-13.84#
46	TPH	0.019	0.000	100.0#	0#	-29.72#
47	TRH1	0.019	0.000	100.0#	0#	-7.93#
48	TRH2	0.019	0.000	100.0#	0#	-16.29#
49	TRH3	0.019	0.000	100.0#	0#	-23.92#
50	TRH4	0.019	0.000	100.0#	0#	-29.06#
51	TRH5	0.019	0.000	100.0#	0#	-34.15#
52	TRH6	0.019	0.000	100.0#	0#	-45.88#
53	GRO	0.019	0.000	100.0#	0#	-5.39#
54	DRO	0.019	0.000	100.0#	0#	-14.64#
55	RRO	0.019	0.000	100.0#	0#	-33.77#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

FID1C08FRONT081213.M Mon Aug 19 16:35:42 2013

Quantitation Report (QT Reviewed)

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078B.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 21:27:36
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 16:35:00 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1)	I n-hexadecane-d34	13.000	279891	50.000	ug/mlm
16)	I 5a-androstane	18.297	357475	50.072	ug/mlm
	System Monitoring Compounds				
6)	S n-dodecane-d26	8.704	143598	24.841	ug/mlm
23)	S n-eicosane-d42	17.684	138083	25.138	ug/mlm
34)	S n-triacontane-d62	29.602	135814	25.400	ug/mlm
	Target Compounds				
2)	n-C8	3.560	138391	26.151	ug/mlm
3)	n-C9	4.884	145412	25.711	ug/mlm
4)	n-C10	6.296	154209	25.338	ug/mlm
5)	n-C11	7.650	155333	25.113	ug/mlm
7)	n-C12	8.911	159403	24.626	ug/mlm
8)	i-13	0.000	0	N.D.	ug/ml
9)	i-14	0.000	0	N.D.	ug/mld
10)	n-C13	10.083	161979	25.070	ug/mlm
11)	i-15	0.000	0	N.D.	ug/mld
12)	n-C14	11.180	165672	24.972	ug/mlm
13)	i-16	0.000	0	N.D.	ug/mld
14)	n-C15	12.211	167683	25.039	ug/mlm
15)	n-C16	13.254	169009	25.156	ug/mlm
17)	i-18	0.000	0	N.D.	ug/mld
18)	n-C17	14.366	172243	24.348	ug/mlm
19)	Pristane	14.485	171919	24.424	ug/mlm
20)	n-C18	15.552	172640	24.901	ug/mlm
21)	Phytane	15.716	175093	24.799	ug/mlm
22)	n-C19	16.798	172521	25.035	ug/mlm
24)	n-C20	18.085	173856	25.194	ug/mlm
25)	n-C21	19.390	174638	25.160	ug/mlm
26)	n-C22	20.696	177229	25.532	ug/mlm
27)	n-C23	21.985	176495	25.406	ug/mlm
28)	n-C24	23.251	176679	25.454	ug/mlm
29)	n-C25	24.485	178358	25.666	ug/mlm
30)	n-C26	25.686	179489	25.845	ug/mlm
31)	n-C27	26.853	174549	25.735	ug/mlm
32)	n-C28	27.981	176917	25.729	ug/mlm
33)	n-C29	29.078	177142	25.652	ug/mlm
35)	n-C30	30.140	174285	25.467	ug/mlm
36)	n-C31	31.168	171692	25.460	ug/mlm
37)	n-C32	32.168	166904	24.958	ug/mlm
38)	n-C33	33.136	163226	24.972	ug/mlm
39)	n-C34	34.084	164945	24.959	ug/mlm
40)	n-C35	35.116	158083	24.491	ug/mlm

Quantitation Report (QT Reviewed)

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078B.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 21:27:36
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 16:35:00 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.291	164399	23.611	ug/mlm
42)	n-C37	37.648	149467	23.520	ug/mlm
43)	n-C38	39.231	147087	23.512	ug/mlm
44)	n-C39	41.098	139671	23.313	ug/mlm
45)	n-C40	43.300	127063	22.633	ug/mlm
46)	TPH	0.000	0	N.D.	ug/mld
47)	TRH1	0.000	0	N.D.	ug/mld
48)	TRH2	0.000	0	N.D.	ug/mld
49)	TRH3	0.000	0	N.D.	ug/mld
50)	TRH4	0.000	0	N.D.	ug/mld
51)	TRH5	0.000	0	N.D.	ug/mld
52)	TRH6	0.000	0	N.D.	ug/mld
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

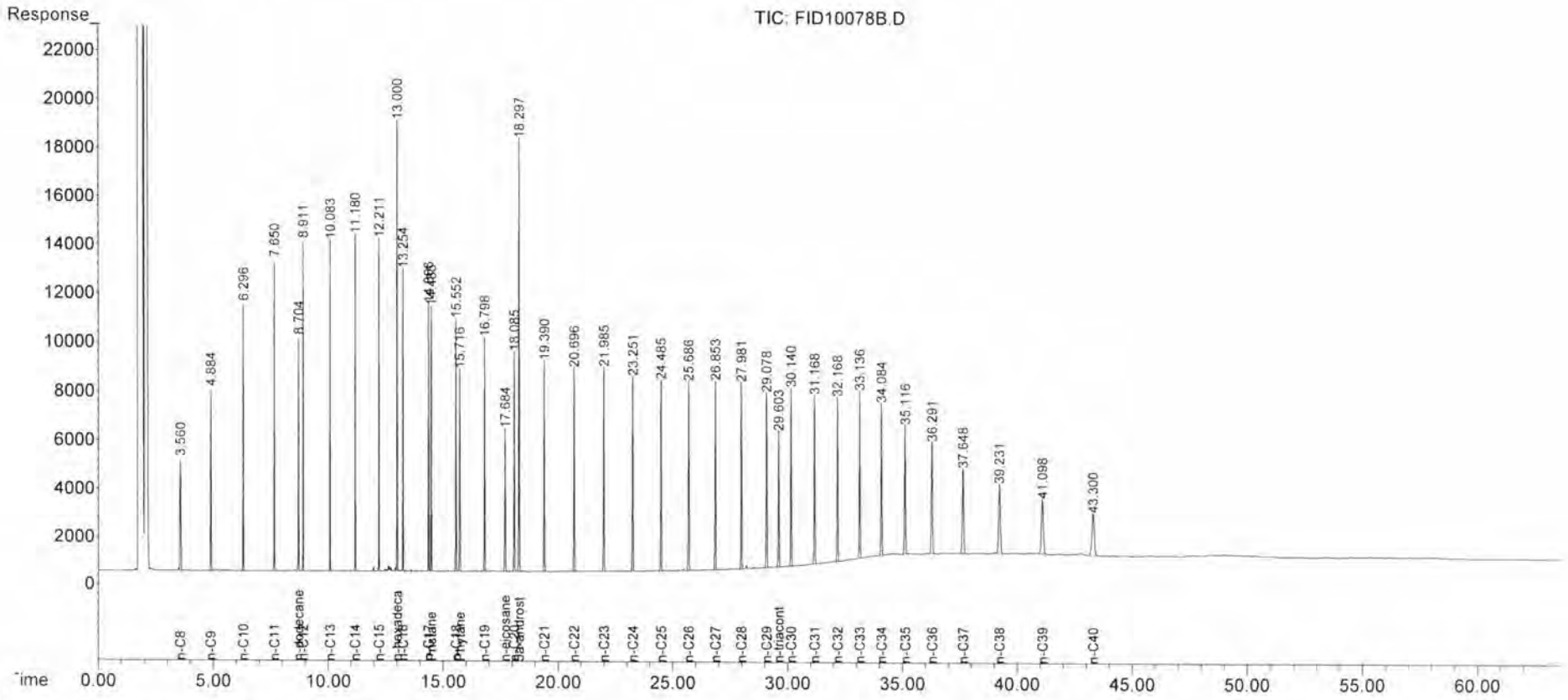
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078B.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 21:27:36
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 2 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 16:35:00 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Evaluate Continuing Calibration Report

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078G.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 09:15:19
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 16:46:40 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	n-hexadecane-d34	1.000	1.000	0.0	85	-0.02
2		n-C8	0.945	0.991	-4.9	87	0.00
3		n-C9	1.010	1.037	-2.7	85	0.00
4		n-C10	1.087	1.101	-1.3	84	0.00
5		n-C11	1.105	1.109	-0.4	84	0.00
6	S	n-dodecane-d26	1.033	1.027	0.6	83	-0.01
7		n-C12	1.156	1.159	-0.3	83	0.00
10		n-C13	1.154	1.156	-0.2	83	-0.01
12		n-C14	1.185	1.193	-0.7	84	-0.01
14		n-C15	1.196	1.205	-0.8	84	-0.01
15		n-C16	1.200	1.218	-1.5	85	-0.02
16	I	5a-androstane	1.000	1.000	0.0	87	-0.03
18		n-C17	0.991	0.983	0.8	85	-0.02
19		Pristane	0.986	0.977	0.9	85	-0.02
20		n-C18	0.971	0.970	0.1	86	-0.02
21		Phytane	0.989	0.989	0.0	86	-0.02
22		n-C19	0.965	0.972	-0.7	86	-0.02
23	S	n-eicosane-d42	0.769	0.773	-0.5	87	-0.03
24		n-C20	0.967	0.980	-1.3	87	-0.02
25		n-C21	0.972	0.991	-2.0	87	-0.03
26		n-C22	0.972	0.991	-2.0	87	-0.03
27		n-C23	0.973	0.998	-2.6	87	-0.03
28		n-C24	0.972	0.997	-2.6	87	-0.03
29		n-C25	0.973	0.998	-2.6	88	-0.03
30		n-C26	0.973	0.997	-2.5	87	-0.03
31		n-C27	0.950	0.971	-2.2	87	-0.03
32		n-C28	0.963	0.982	-2.0	87	-0.04
33		n-C29	0.967	0.985	-1.9	87	-0.04
34	S	n-triacontane-d62	0.749	0.755	-0.8	87	-0.05
35		n-C30	0.959	0.971	-1.3	86	-0.04
36		n-C31	0.945	0.963	-1.9	87	-0.04
37		n-C32	0.937	0.944	-0.7	86	-0.04
38		n-C33	0.916	0.915	0.1	85	-0.04
39		n-C34	0.926	0.919	0.8	84	-0.05
40		n-C35	0.904	0.889	1.7	83	-0.05
41		n-C36	0.975	0.945	3.1	81	-0.05
42		n-C37	0.890	0.840	5.6	79	-0.07
43		n-C38	0.876	0.814	7.1	78	-0.08

44	n-C39	0.839	0.781	6.9	77	-0.10
45	n-C40	0.786	0.712	9.4	75	-0.12

Evaluate Continuing Calibration Report - Not Founds

8	i-13	0.019	0.000	100.0#	0#	-9.11#
9	i-14	0.019	0.000	100.0#	0#	-9.81#
11	i-15	0.019	0.000	100.0#	0#	-10.97#
13	i-16	0.020	0.000	100.0#	0#	-11.87#
17	i-18	0.019	0.000	100.0#	0#	-13.84#
46	TPH	0.019	0.000	100.0#	0#	-29.72#
47	TRH1	0.019	0.000	100.0#	0#	-7.93#
48	TRH2	0.019	0.000	100.0#	0#	-16.29#
49	TRH3	0.019	0.000	100.0#	0#	-23.92#
50	TRH4	0.019	0.000	100.0#	0#	-29.06#
51	TRH5	0.019	0.000	100.0#	0#	-34.15#
52	TRH6	0.019	0.000	100.0#	0#	-45.88#
53	GRO	0.019	0.000	100.0#	0#	-5.39#
54	DRO	0.019	0.000	100.0#	0#	-14.64#
55	RRO	0.019	0.000	100.0#	0#	-33.77#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

FID1C08FRONT081213.M Mon Aug 19 16:46:45 2013

Quantitation Report (QT Reviewed)

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078G.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 09:15:19
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 16:46:40 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1)	I n-hexadecane-d34	12.997	265216	50.000	ug/mlm
16)	I 5a-androstane	18.289	336554	50.072	ug/mlm
	System Monitoring Compounds				
6)	S n-dodecane-d26	8.702	136243	24.872	ug/mlm
23)	S n-eicosane-d42	17.677	130708	25.274	ug/mlm
34)	S n-triacontane-d62	29.592	126945	25.218	ug/mlm
	Target Compounds				
2)	n-C8	3.563	131481	26.220	ug/mlm
3)	n-C9	4.884	137512	25.659	ug/mlm
4)	n-C10	6.294	145946	25.307	ug/mlm
5)	n-C11	7.648	147215	25.118	ug/mlm
7)	n-C12	8.909	151105	24.636	ug/mlm
8)	i-13	0.000	0	N.D.	ug/mld
9)	i-14	0.000	0	N.D.	ug/mld
10)	n-C13	10.081	153539	25.079	ug/mlm
11)	i-15	0.000	0	N.D.	ug/mld
12)	n-C14	11.176	157302	25.022	ug/mlm
13)	i-16	0.000	0	N.D.	ug/mld
14)	n-C15	12.208	159035	25.062	ug/mlm
15)	n-C16	13.251	159940	25.124	ug/mlm
17)	i-18	0.000	0	N.D.	ug/mld
18)	n-C17	14.362	163267	24.514	ug/mlm
19)	Pristane	14.480	162750	24.559	ug/mlm
20)	n-C18	15.547	163098	24.988	ug/mlm
21)	Phytane	15.712	165764	24.938	ug/mlm
22)	n-C19	16.793	163145	25.146	ug/mlm
24)	n-C20	18.079	164949	25.389	ug/mlm
25)	n-C21	19.382	165001	25.250	ug/mlm
26)	n-C22	20.686	166759	25.517	ug/mlm
27)	n-C23	21.976	166051	25.388	ug/mlm
28)	n-C24	23.242	165620	25.344	ug/mlm
29)	n-C25	24.476	167067	25.536	ug/mlm
30)	n-C26	25.677	167715	25.650	ug/mlm
31)	n-C27	26.843	163184	25.555	ug/mlm
32)	n-C28	27.971	165093	25.502	ug/mlm
33)	n-C29	29.068	165684	25.484	ug/mlm
35)	n-C30	30.130	162592	25.235	ug/mlm
36)	n-C31	31.158	161822	25.488	ug/mlm
37)	n-C32	32.156	156609	24.875	ug/mlm
38)	n-C33	33.125	153769	24.987	ug/mlm
39)	n-C34	34.072	154081	24.765	ug/mlm
40)	n-C35	35.103f	149479	24.597	ug/mlm

Quantitation Report (QT Reviewed)

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078G.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 09:15:19
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 16:46:40 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.278f	155662	23.746	ug/mlm
42)	n-C37	37.628	141247	23.608	ug/mlm
43)	n-C38	39.210f	136974	23.257	ug/mlm
44)	n-C39	41.069f	131289	23.276	ug/mlm
45)	n-C40	43.262f	119404	22.591	ug/mlm
46)	TPH	0.000	0	N.D.	ug/mld
47)	TRH1	0.000	0	N.D.	ug/mld
48)	TRH2	0.000	0	N.D.	ug/mld
49)	TRH3	0.000	0	N.D.	ug/mld
50)	TRH4	0.000	0	N.D.	ug/mld
51)	TRH5	0.000	0	N.D.	ug/mld
52)	TRH6	0.000	0	N.D.	ug/mld
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

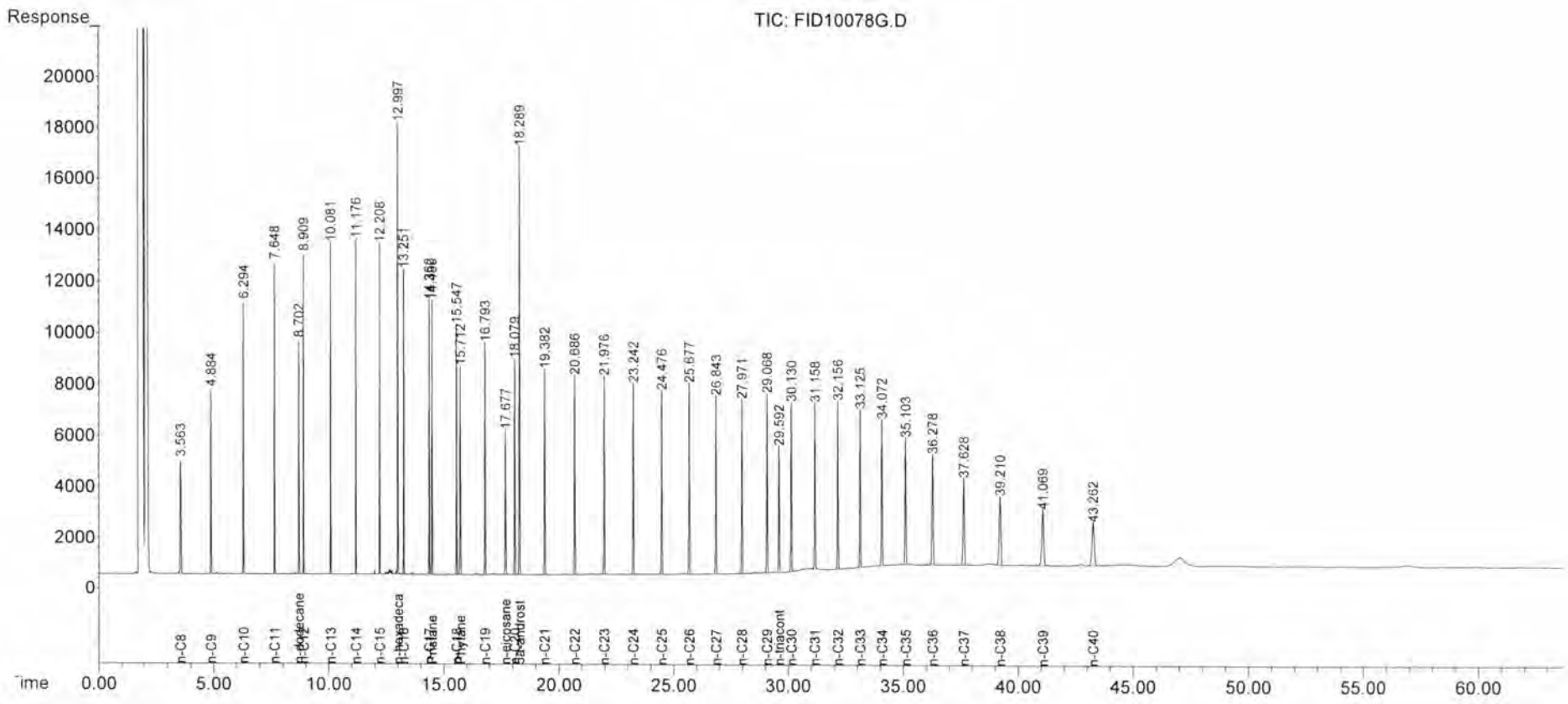
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078G.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 09:15:19
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 11 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 16:46:40 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Evaluate Continuing Calibration Report

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078H.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 21:02:27
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 16:58:59 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	n-hexadecane-d34	1.000	1.000	0.0	94	-0.02
2		n-C8	0.945	0.975	-3.2	95	0.00
3		n-C9	1.010	1.038	-2.8	95	0.00
4		n-C10	1.087	1.103	-1.5	94	0.00
5		n-C11	1.105	1.113	-0.7	93	0.00
6	S	n-dodecane-d26	1.033	1.028	0.5	92	-0.01
7		n-C12	1.156	1.160	-0.3	92	-0.01
10		n-C13	1.154	1.158	-0.3	92	-0.01
12		n-C14	1.185	1.194	-0.8	93	-0.01
14		n-C15	1.196	1.210	-1.2	93	-0.02
15		n-C16	1.200	1.220	-1.7	94	-0.02
16	I	5a-androstane	1.000	1.000	0.0	97	-0.03
18		n-C17	0.991	0.985	0.6	94	-0.02
19		Pristane	0.986	0.980	0.6	94	-0.02
20		n-C18	0.971	0.971	0.0	95	-0.02
21		Phytane	0.989	0.989	0.0	95	-0.02
22		n-C19	0.965	0.974	-0.9	96	-0.02
23	S	n-eicosane-d42	0.769	0.775	-0.8	96	-0.03
24		n-C20	0.967	0.980	-1.3	96	-0.03
25		n-C21	0.972	0.990	-1.9	96	-0.03
26		n-C22	0.972	0.990	-1.9	96	-0.03
27		n-C23	0.973	0.996	-2.4	97	-0.03
28		n-C24	0.972	0.995	-2.4	96	-0.03
29		n-C25	0.973	0.993	-2.1	96	-0.03
30		n-C26	0.973	0.991	-1.8	96	-0.04
31		n-C27	0.950	0.965	-1.6	96	-0.04
32		n-C28	0.963	0.976	-1.3	96	-0.04
33		n-C29	0.967	0.973	-0.6	95	-0.04
34	S	n-triacontane-d62	0.749	0.743	0.8	94	-0.05
35		n-C30	0.959	0.958	0.1	94	-0.04
36		n-C31	0.945	0.940	0.5	94	-0.04
37		n-C32	0.937	0.928	1.0	93	-0.04
38		n-C33	0.916	0.895	2.3	92	-0.04
39		n-C34	0.926	0.901	2.7	91	-0.05
40		n-C35	0.904	0.874	3.3	90	-0.05
41		n-C36	0.975	0.927	4.9	88	-0.06
42		n-C37	0.890	0.827	7.1	86	-0.08
43		n-C38	0.876	0.803	8.3	85	-0.08

44	n-C39	0.839	0.761	9.3	83	-0.10
45	n-C40	0.786	0.695	11.6	81	-0.12

Evaluate Continuing Calibration Report - Not Founds

8	i-13	0.019	0.000	100.0#	0#	-9.11#
9	i-14	0.019	0.000	100.0#	0#	-9.81#
11	i-15	0.019	0.000	100.0#	0#	-10.97#
13	i-16	0.020	0.000	100.0#	0#	-11.87#
17	i-18	0.019	0.000	100.0#	0#	-13.84#
46	TPH	0.019	0.000	100.0#	0#	-29.72#
47	TRH1	0.019	0.000	100.0#	0#	-7.93#
48	TRH2	0.019	0.000	100.0#	0#	-16.29#
49	TRH3	0.019	0.000	100.0#	0#	-23.92#
50	TRH4	0.019	0.000	100.0#	0#	-29.06#
51	TRH5	0.019	0.000	100.0#	0#	-34.15#
52	TRH6	0.019	0.000	100.0#	0#	-45.88#
53	GRO	0.019	0.000	100.0#	0#	-5.39#
54	DRO	0.019	0.000	100.0#	0#	-14.64#
55	RRO	0.019	0.000	100.0#	0#	-33.77#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

FID1C08FRONT081213.M Mon Aug 19 16:59:47 2013

Quantitation Report (QT Reviewed)

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078H.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 21:02:27
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 16:58:59 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1)	I n-hexadecane-d34	12.996	293976	50.000	ug/mlm
16)	I 5a-androstane	18.288	372565	50.072	ug/mlm
	System Monitoring Compounds				
6)	S n-dodecane-d26	8.701	151163	24.897	ug/mlm
23)	S n-eicosane-d42	17.677	145162	25.356	ug/mlm
34)	S n-triacontane-d62	29.593	138286	24.815	ug/mlm
	Target Compounds				
2)	n-C8	3.567	143441	25.806	ug/mlm
3)	n-C9	4.885	152534	25.678	ug/mlm
4)	n-C10	6.294	162113	25.361	ug/mlm
5)	n-C11	7.647	163759	25.207	ug/mlm
7)	n-C12	8.907	167518	24.640	ug/mlm
8)	i-13	0.000	0	N.D.	ug/mld
9)	i-14	0.000	0	N.D.	ug/mld
10)	n-C13	10.080	170424	25.114	ug/mlm
11)	i-15	0.000	0	N.D.	ug/mld
12)	n-C14	11.176	174421	25.031	ug/mlm
13)	i-16	0.000	0	N.D.	ug/mld
14)	n-C15	12.206	176939	25.155	ug/mlm
15)	n-C16	13.249	177525	25.158	ug/mlm
17)	i-18	0.000	0	N.D.	ug/mld
18)	n-C17	14.361	181092	24.562	ug/mlm
19)	Pristane	14.479	180616	24.621	ug/mlm
20)	n-C18	15.545	180851	25.029	ug/mlm
21)	Phytane	15.709	183569	24.947	ug/mlm
22)	n-C19	16.792	180943	25.194	ug/mlm
24)	n-C20	18.077	182505	25.376	ug/mlm
25)	n-C21	19.382	182563	25.237	ug/mlm
26)	n-C22	20.687	184450	25.496	ug/mlm
27)	n-C23	21.976	183351	25.324	ug/mlm
28)	n-C24	23.241	182934	25.287	ug/mlm
29)	n-C25	24.477	184104	25.420	ug/mlm
30)	n-C26	25.675	184713	25.519	ug/mlm
31)	n-C27	26.841	179545	25.400	ug/mlm
32)	n-C28	27.972	181466	25.322	ug/mlm
33)	n-C29	29.068	181138	25.168	ug/mlm
35)	n-C30	30.128	177564	24.895	ug/mlm
36)	n-C31	31.155	174848	24.877	ug/mlm
37)	n-C32	32.155	170336	24.440	ug/mlm
38)	n-C33	33.124	166498	24.441	ug/mlm
39)	n-C34	34.071	167308	24.292	ug/mlm
40)	n-C35	35.100f	162589	24.168	ug/mlm

Quantitation Report (QT Reviewed)

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078H.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 21:02:27
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 16:58:59 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.277f	168999	23.289	ug/mlm
42)	n-C37	37.621f	153883	23.234	ug/mlm
43)	n-C38	39.211f	149567	22.940	ug/mlm
44)	n-C39	41.071f	141549	22.669	ug/mlm
45)	n-C40	43.259f	129001	22.047	ug/mlm
46)	TPH	0.000	0	N.D.	ug/mld
47)	TRH1	0.000	0	N.D.	ug/mld
48)	TRH2	0.000	0	N.D.	ug/mld
49)	TRH3	0.000	0	N.D.	ug/mld
50)	TRH4	0.000	0	N.D.	ug/mld
51)	TRH5	0.000	0	N.D.	ug/mld
52)	TRH6	0.000	0	N.D.	ug/mld
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

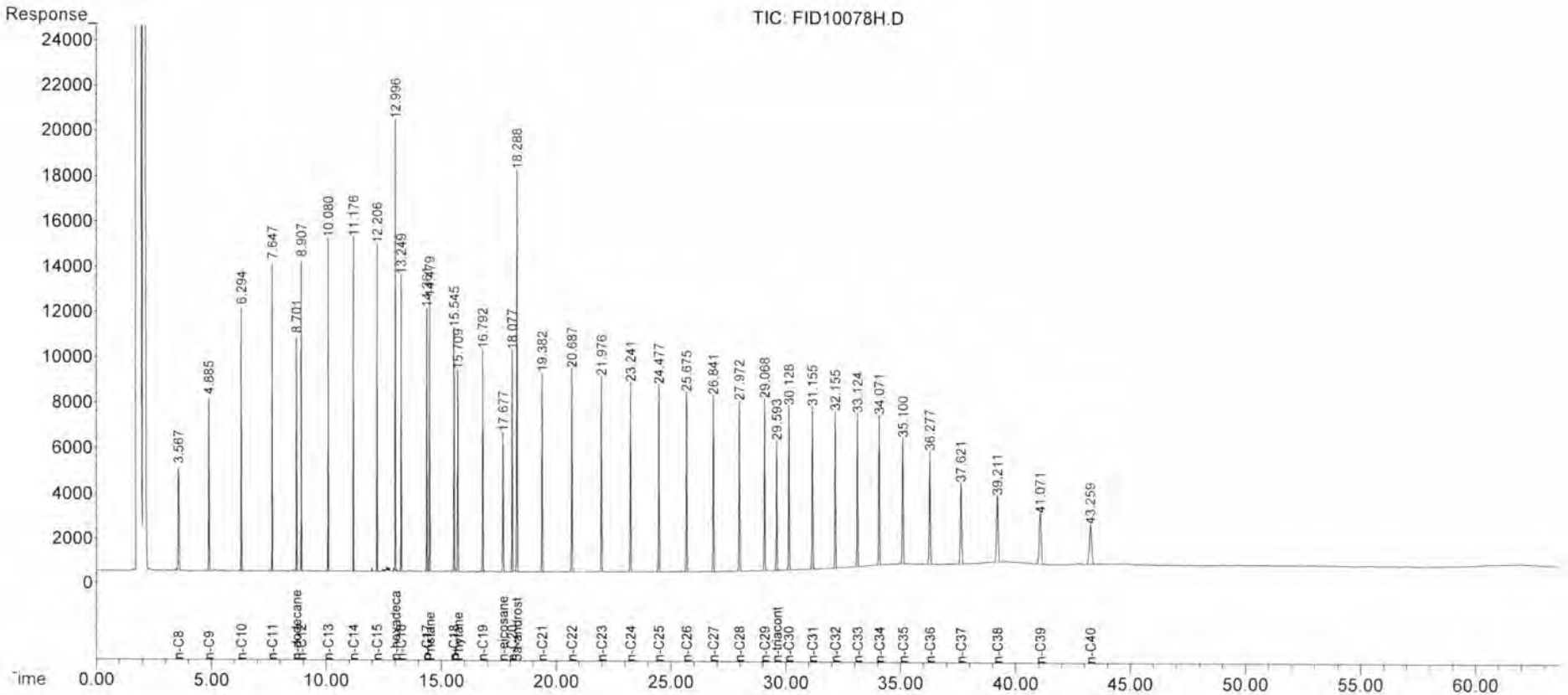
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078H.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 21:02:27
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 21 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 16:58:59 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Evaluate Continuing Calibration Report

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078I.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 13:42:23
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 17:11:17 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	n-hexadecane-d34	1.000	1.000	0.0	98	-0.02
2		n-C8	0.945	1.011	-7.0	102	-0.01
3		n-C9	1.010	1.055	-4.5	101	0.00
4		n-C10	1.087	1.111	-2.2	99	0.00
5		n-C11	1.105	1.112	-0.6	97	-0.01
6	S	n-dodecane-d26	1.033	1.025	0.8	96	-0.01
7		n-C12	1.156	1.157	-0.1	96	-0.01
10		n-C13	1.154	1.150	0.3	96	-0.01
12		n-C14	1.185	1.189	-0.3	96	-0.01
14		n-C15	1.196	1.205	-0.8	97	-0.02
15		n-C16	1.200	1.224	-2.0	98	-0.02
16	I	5a-androstane	1.000	1.000	0.0	104	-0.03
18		n-C17	0.991	0.963	2.8	99	-0.02
19		Pristane	0.986	0.959	2.7	99	-0.02
20		n-C18	0.971	0.957	1.4	101	-0.02
21		Phytane	0.989	0.975	1.4	101	-0.02
22		n-C19	0.965	0.962	0.3	102	-0.02
23	S	n-eicosane-d42	0.769	0.765	0.5	102	-0.03
24		n-C20	0.967	0.978	-1.1	103	-0.03
25		n-C21	0.972	1.001	-3.0	105	-0.03
26		n-C22	0.972	1.003	-3.2	105	-0.03
27		n-C23	0.973	1.016	-4.4	106	-0.03
28		n-C24	0.972	1.019	-4.8	106	-0.03
29		n-C25	0.973	1.022	-5.0	107	-0.03
30		n-C26	0.973	1.015	-4.3	106	-0.04
31		n-C27	0.950	0.993	-4.5	106	-0.04
32		n-C28	0.963	0.996	-3.4	105	-0.04
33		n-C29	0.967	0.988	-2.2	104	-0.04
34	S	n-triacontane-d62	0.749	0.747	0.3	102	-0.05
35		n-C30	0.959	0.966	-0.7	102	-0.04
36		n-C31	0.945	0.955	-1.1	102	-0.04
37		n-C32	0.937	0.915	2.3	99	-0.04
38		n-C33	0.916	0.877	4.3	97	-0.04
39		n-C34	0.926	0.875	5.5	95	-0.05
40		n-C35	0.904	0.852	5.8	94	-0.05
41		n-C36	0.975	0.902	7.5	92	-0.06
42		n-C37	0.890	0.799	10.2	90	-0.07
43		n-C38	0.876	0.784	10.5	89	-0.07

44	n-C39	0.839	0.746	11.1	88	-0.09
45	n-C40	0.786	0.692	12.0	87	-0.12

Evaluate Continuing Calibration Report - Not Founds

8	i-13	0.019	0.000	100.0#	0#	-9.11#
9	i-14	0.019	0.000	100.0#	0#	-9.81#
11	i-15	0.019	0.000	100.0#	0#	-10.97#
13	i-16	0.020	0.000	100.0#	0#	-11.87#
17	i-18	0.019	0.000	100.0#	0#	-13.84#
46	TPH	0.019	0.000	100.0#	0#	-29.72#
47	TRH1	0.019	0.000	100.0#	0#	-7.93#
48	TRH2	0.019	0.000	100.0#	0#	-16.29#
49	TRH3	0.019	0.000	100.0#	0#	-23.92#
50	TRH4	0.019	0.000	100.0#	0#	-29.06#
51	TRH5	0.019	0.000	100.0#	0#	-34.15#
52	TRH6	0.019	0.000	100.0#	0#	-45.88#
53	GRO	0.019	0.000	100.0#	0#	-5.39#
54	DRO	0.019	0.000	100.0#	0#	-14.64#
55	RRO	0.019	0.000	100.0#	0#	-33.77#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

FID1C08FRONT081213.M Mon Aug 19 17:11:43 2013

Quantitation Report (QT Reviewed)

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078I.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 13:42:23
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 17:11:17 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1)	I n-hexadecane-d34	12.996	307169	50.000	ug/mlm
16)	I 5a-androstane	18.289	400683	50.072	ug/mlm
	System Monitoring Compounds				
6)	S n-dodecane-d26	8.700	157395	24.810	ug/mlm
23)	S n-eicosane-d42	17.676	153999	25.012	ug/mlm
34)	S n-triacontane-d62	29.591	149633	24.967	ug/mlm
	Target Compounds				
2)	n-C8	3.553	155467	26.769	ug/mlm
3)	n-C9	4.877	161981	26.097	ug/mlm
4)	n-C10	6.291	170701	25.557	ug/mlm
5)	n-C11	7.645	171014	25.193	ug/mlm
7)	n-C12	8.906	174623	24.582	ug/mlm
8)	i-13	0.000	0	N.D.	ug/mld
9)	i-14	0.000	0	N.D.	ug/mld
10)	n-C13	10.079	176980	24.960	ug/mlm
11)	i-15	0.000	0	N.D.	ug/mld
12)	n-C14	11.174	181491	24.927	ug/mlm
13)	i-16	0.000	0	N.D.	ug/mld
14)	n-C15	12.206	184106	25.050	ug/mlm
15)	n-C16	13.249	186068	25.236	ug/mlm
17)	i-18	0.000	0	N.D.	ug/mld
18)	n-C17	14.361	190353	24.007	ug/mlm
19)	Pristane	14.479	190148	24.101	ug/mlm
20)	n-C18	15.546	191692	24.668	ug/mlm
21)	Phytane	15.710	194544	24.583	ug/mlm
22)	n-C19	16.793	192309	24.898	ug/mlm
24)	n-C20	18.077	195904	25.327	ug/mlm
25)	n-C21	19.381	198473	25.511	ug/mlm
26)	n-C22	20.687	200988	25.832	ug/mlm
27)	n-C23	21.977	201206	25.840	ug/mlm
28)	n-C24	23.242	201507	25.900	ug/mlm
29)	n-C25	24.476	203653	26.146	ug/mlm
30)	n-C26	25.675	203332	26.120	ug/mlm
31)	n-C27	26.840	198684	26.135	ug/mlm
32)	n-C28	27.971	199293	25.858	ug/mlm
33)	n-C29	29.067	197908	25.569	ug/mlm
35)	n-C30	30.127	192555	25.102	ug/mlm
36)	n-C31	31.156	191116	25.284	ug/mlm
37)	n-C32	32.153	180652	24.101	ug/mlm
38)	n-C33	33.122	175499	23.954	ug/mlm
39)	n-C34	34.071	174693	23.584	ug/mlm
40)	n-C35	35.100f	170453	23.559	ug/mlm

Quantitation Report (QT Reviewed)

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078I.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 13:42:23
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 17:11:17 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.273f	176866	22.663	ug/mlm
42)	n-C37	37.628	159955	22.456	ug/mlm
43)	n-C38	39.213	157111	22.406	ug/mlm
44)	n-C39	41.075f	149397	22.247	ug/mlm
45)	n-C40	43.263f	138095	21.945	ug/mlm
46)	TPH	0.000	0	N.D.	ug/mld
47)	TRH1	0.000	0	N.D.	ug/mld
48)	TRH2	0.000	0	N.D.	ug/mld
49)	TRH3	0.000	0	N.D.	ug/mld
50)	TRH4	0.000	0	N.D.	ug/mld
51)	TRH5	0.000	0	N.D.	ug/mld
52)	TRH6	0.000	0	N.D.	ug/mld
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

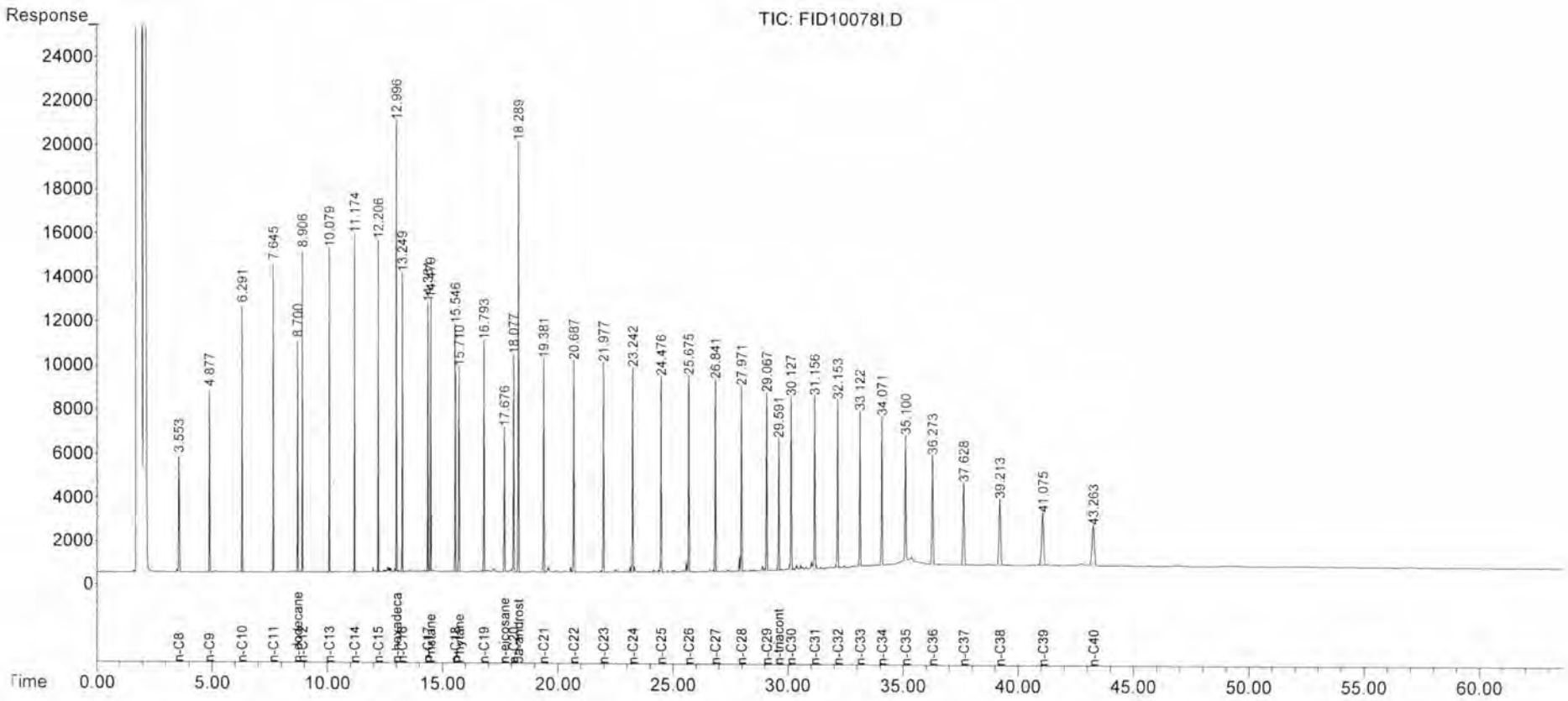
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078I.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 13:42:23
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 26 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 17:11:17 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Evaluate Continuing Calibration Report

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078J.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 17:14:16
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 17:26:18 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(Min)
1	I	n-hexadecane-d34	1.000	1.000	0.0	101	-0.02
2		n-C8	0.945	0.938	0.7	98	0.00
3		n-C9	1.010	1.023	-1.3	100	0.00
4		n-C10	1.087	1.116	-2.7	102	0.00
5		n-C11	1.105	1.111	-0.5	100	0.00
6	S	n-dodecane-d26	1.033	1.030	0.3	99	-0.01
7		n-C12	1.156	1.163	-0.6	99	-0.01
10		n-C13	1.154	1.157	-0.3	99	-0.01
12		n-C14	1.185	1.193	-0.7	99	-0.01
14		n-C15	1.196	1.207	-0.9	100	-0.01
15		n-C16	1.200	1.222	-1.8	101	-0.02
16	I	5a-androstane	1.000	1.000	0.0	104	-0.03
18		n-C17	0.991	0.984	0.7	101	-0.02
19		Pristane	0.986	0.979	0.7	101	-0.02
20		n-C18	0.971	0.972	-0.1	102	-0.02
21		Phytane	0.989	0.989	0.0	102	-0.02
22		n-C19	0.965	0.974	-0.9	103	-0.02
23	S	n-eicosane-d42	0.769	0.775	-0.8	103	-0.03
24		n-C20	0.967	0.981	-1.4	103	-0.03
25		n-C21	0.972	0.993	-2.2	104	-0.03
26		n-C22	0.972	0.993	-2.2	104	-0.03
27		n-C23	0.973	0.998	-2.6	104	-0.03
28		n-C24	0.972	1.002	-3.1	104	-0.03
29		n-C25	0.973	1.000	-2.8	104	-0.03
30		n-C26	0.973	0.997	-2.5	104	-0.03
31		n-C27	0.950	0.969	-2.0	104	-0.04
32		n-C28	0.963	0.978	-1.6	103	-0.04
33		n-C29	0.967	0.980	-1.3	103	-0.04
34	S	n-triacontane-d62	0.749	0.748	0.1	102	-0.05
35		n-C30	0.959	0.966	-0.7	102	-0.04
36		n-C31	0.945	0.947	-0.2	101	-0.04
37		n-C32	0.937	0.932	0.5	101	-0.04
38		n-C33	0.916	0.900	1.7	99	-0.04
39		n-C34	0.926	0.909	1.8	99	-0.05
40		n-C35	0.904	0.883	2.3	98	-0.05
41		n-C36	0.975	0.937	3.9	95	-0.06
42		n-C37	0.890	0.837	6.0	94	-0.07
43		n-C38	0.876	0.805	8.1	91	-0.08

44	n-C39	0.839	0.766	8.7	90	-0.10
45	n-C40	0.786	0.698	11.2	87	-0.11

Evaluate Continuing Calibration Report - Not Founds

8	i-13	0.019	0.000	100.0#	0#	-9.11#
9	i-14	0.019	0.000	100.0#	0#	-9.81#
11	i-15	0.019	0.000	100.0#	0#	-10.97#
13	i-16	0.020	0.000	100.0#	0#	-11.87#
17	i-18	0.019	0.000	100.0#	0#	-13.84#
46	TPH	0.019	0.000	100.0#	0#	-29.72#
47	TRH1	0.019	0.000	100.0#	0#	-7.93#
48	TRH2	0.019	0.000	100.0#	0#	-16.29#
49	TRH3	0.019	0.000	100.0#	0#	-23.92#
50	TRH4	0.019	0.000	100.0#	0#	-29.06#
51	TRH5	0.019	0.000	100.0#	0#	-34.15#
52	TRH6	0.019	0.000	100.0#	0#	-45.88#
53	GRO	0.019	0.000	100.0#	0#	-5.39#
54	DRO	0.019	0.000	100.0#	0#	-14.64#
55	RRO	0.019	0.000	100.0#	0#	-33.77#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

FID1C08FRONT081213.M Mon Aug 19 17:26:23 2013

Quantitation Report (QT Reviewed)

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078J.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 17:14:16
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 17:26:18 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1)	I n-hexadecane-d34	12.995	315447	50.000	ug/mlm
16)	I 5a-androstane	18.290	400388	50.072	ug/mlm
	System Monitoring Compounds				
6)	S n-dodecane-d26	8.701	162484	24.940	ug/mlm
23)	S n-eicosane-d42	17.676	155917	25.342	ug/mlm
34)	S n-triacontane-d62	29.590	149744	25.004	ug/mlm
	Target Compounds				
2)	n-C8	3.567	148060	24.824	ug/mlm
3)	n-C9	4.885	161374	25.317	ug/mlm
4)	n-C10	6.295	176067	25.669	ug/mlm
5)	n-C11	7.647	175490	25.174	ug/mlm
7)	n-C12	8.908	180325	24.718	ug/mlm
8)	i-13	0.000	0	N.D.	ug/mld
9)	i-14	0.000	0	N.D.	ug/mld
10)	n-C13	10.080	182831	25.108	ug/mlm
11)	i-15	0.000	0	N.D.	ug/mld
12)	n-C14	11.175	187112	25.024	ug/mlm
13)	i-16	0.000	0	N.D.	ug/mld
14)	n-C15	12.207	189459	25.102	ug/mlm
15)	n-C16	13.249	190788	25.197	ug/mlm
17)	i-18	0.000	0	N.D.	ug/mld
18)	n-C17	14.361	194251	24.516	ug/mlm
19)	Pristane	14.480	193948	24.601	ug/mlm
20)	n-C18	15.546	194436	25.039	ug/mlm
21)	Phytane	15.710	197220	24.940	ug/mlm
22)	n-C19	16.791	194627	25.216	ug/mlm
24)	n-C20	18.077	196341	25.403	ug/mlm
25)	n-C21	19.382	196710	25.303	ug/mlm
26)	n-C22	20.686	198825	25.573	ug/mlm
27)	n-C23	21.976	197520	25.385	ug/mlm
28)	n-C24	23.241	197920	25.458	ug/mlm
29)	n-C25	24.476	199271	25.602	ug/mlm
30)	n-C26	25.676	199607	25.661	ug/mlm
31)	n-C27	26.840	193782	25.509	ug/mlm
32)	n-C28	27.971	195451	25.378	ug/mlm
33)	n-C29	29.067	196225	25.370	ug/mlm
35)	n-C30	30.129	192321	25.090	ug/mlm
36)	n-C31	31.156	189473	25.085	ug/mlm
37)	n-C32	32.157	183985	24.564	ug/mlm
38)	n-C33	33.123	179976	24.583	ug/mlm
39)	n-C34	34.071	181381	24.505	ug/mlm
40)	n-C35	35.102f	176509	24.414	ug/mlm

Quantitation Report (QT Reviewed)

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078J.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 17:14:16
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 17:26:18 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.274f	183509	23.531	ug/mlm
42)	n-C37	37.627	167514	23.535	ug/mlm
43)	n-C38	39.211f	161198	23.006	ug/mlm
44)	n-C39	41.065f	153233	22.835	ug/mlm
45)	n-C40	43.269f	139355	22.162	ug/mlm
46)	TPH	0.000	0	N.D.	ug/mld
47)	TRH1	0.000	0	N.D.	ug/mld
48)	TRH2	0.000	0	N.D.	ug/mld
49)	TRH3	0.000	0	N.D.	ug/mld
50)	TRH4	0.000	0	N.D.	ug/mld
51)	TRH5	0.000	0	N.D.	ug/mld
52)	TRH6	0.000	0	N.D.	ug/mld
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

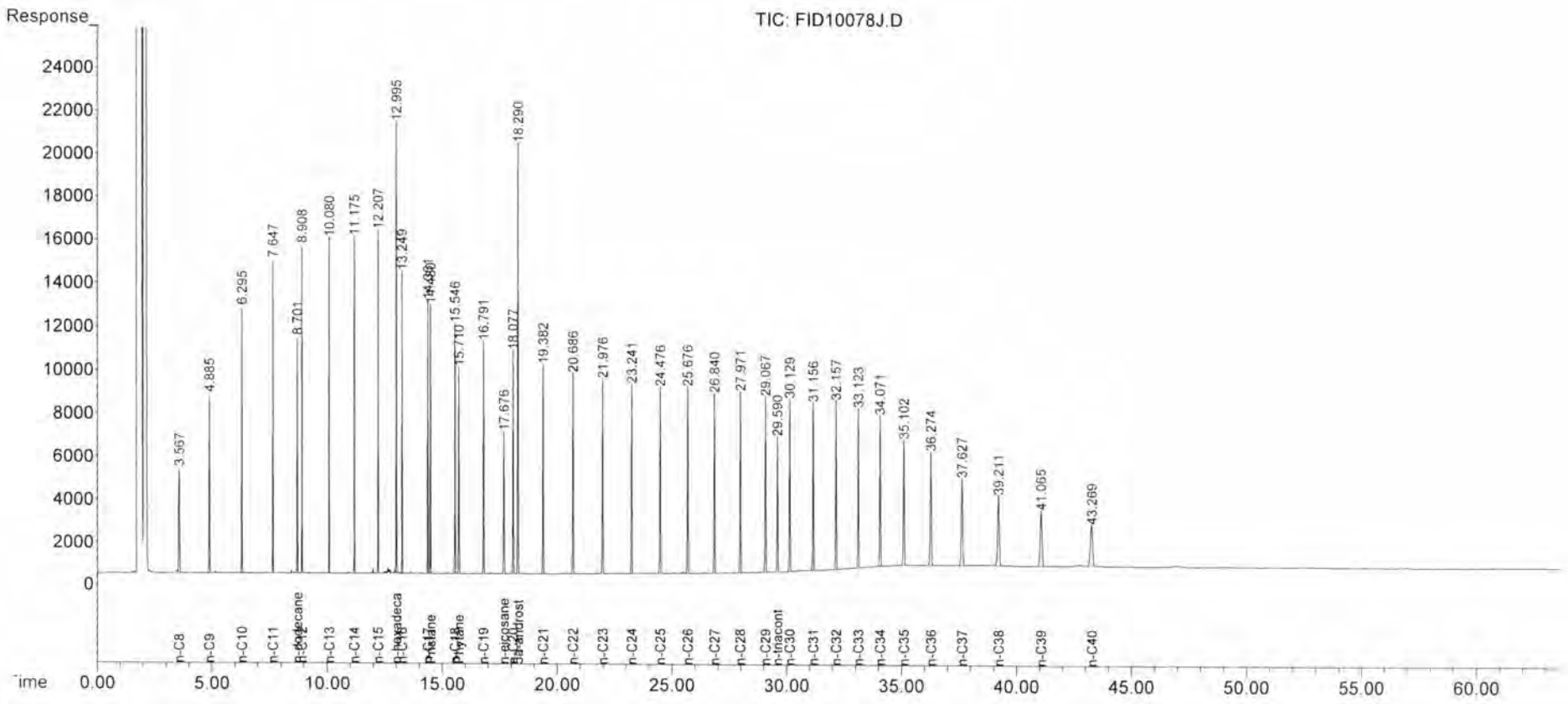
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : P:\2013\J13034\Aliphatics\ENV 3079\FID10078\
Data File : FID10078J.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 17:14:16
Operator : Meghan Dailey
Sample : AL-WKCC-25-024
Misc :
ALS Vial : 29 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 19 17:26:18 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data File Name	**FID10078C.D**		**Concentration**
Sample Name	**AL-SRM2779-20-01**		FID10078C.D
Misc Info	**0**		AL-SRM2779-20-01
Data File Path	**C:\msdchem\2\data\FID10078**		15-Aug-2013, 22:38:15
Operator	**Meghan Dailey**		ALI2012.M
Date Acquired	**15-Aug-2013, 22:38:15**		0.05
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	3
Vial Number	**3**	IS Area 1	306818
Sample Multiplier	**0.05**	IS Area 2	409138

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	3.57	1814380	15.64	15.638
3)	n-C9	4.90	1611250	12.99	12.994
4)	n-C10	6.31	1528400	11.45	11.455
5)	n-C11	7.66	1434960	10.58	10.582
7)	n-C12	8.92	1291190	9.10	9.098
8)	i-13	9.10	300103	2.12	2.119
9)	i-14	9.81	196589	1.35	1.352
10)	n-C13	10.10	1164890	8.22	8.224
11)	i-15	10.96	276464	1.88	1.883
12)	n-C14	11.19	1052910	7.24	7.239
13)	i-16	11.86	385034	2.61	2.614
14)	n-C15	12.23	1041270	7.09	7.092
15)	n-C16	13.27	870428	5.91	5.909
17)	i-18	13.83	241714	1.52	1.523
18)	n-C17	14.38	780597	4.82	4.821
19)	Pristane	14.49	422967	2.63	2.625
20)	n-C18	15.57	642927	4.05	4.051
21)	Phytane	15.73	238827	1.48	1.478
22)	n-C19	16.82	539953	3.42	3.423
24)	n-C20	18.10	475030	3.01	3.007
25)	n-C21	19.41	414094	2.61	2.606
26)	n-C22	20.71	355775	2.24	2.239
27)	n-C23	22.00	301484	1.90	1.896
28)	n-C24	23.26	264725	1.67	1.666
29)	n-C25	24.50	213697	1.34	1.343
30)	n-C26	25.70	186281	1.17	1.172
31)	n-C27	26.86	145795	0.94	0.939
32)	n-C28	27.99	120535	0.77	0.766
33)	n-C29	29.08	116442	0.74	0.737
35)	n-C30	30.15	106425	0.68	0.679
36)	n-C31	31.17	87038.3	0.56	0.564
37)	n-C32	32.17	72976.2	0.48	0.477
38)	n-C33	33.14	69655.2	0.47	0.466
39)	n-C34	34.09	57005.7	0.38	0.377
40)	n-C35	35.12	45866.2	0.31	0.310
41)	n-C36	36.30	30615.4	0.19	0.192
42)	n-C37	37.65	27855.2	0.19	0.191
43)	n-C38	39.23	22701.8	0.16	0.159
44)	n-C39	41.10	20444.5	0.15	0.149
45)	n-C40	43.30	22265.1	0.17	0.173
46)	TPH	7.66	100113000	657.01	657.005
47)	TRH1	7.66	19182000	125.88	125.884
48)	TRH2	12.23	14230200	93.39	93.388
49)	TRH3	22.00	2162260	14.18	14.183
50)	TRH4	27.99	1260710	8.27	8.274
51)	TRH5	33.14	779174	5.11	5.113
52)	TRH6	37.65	407830	2.68	2.676
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.71	126199	1.00	99.6
23)	n-eicosane-d42	17.69	123455	0.98	97.5
34)	n-triacontane-d62	29.61	120387	0.98	98.3
1)	n-hexadecane-d34	13.01	306818	2.50	306818.000
16)	5a-androstane	18.31	409138	2.50	409138.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : FID10078C.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 22:38:15
Operator : Meghan Dailey
Sample : AL-SRM2779-20-01
Misc :
ALS Vial : 3 Sample Multiplier: 0.05

Integration File: autoint1.e
Quant Time: Aug 20 13:49:07 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	n-hexadecane-d34	13.006	306818	50.000 ug/mlm
16) I	5a-androstane	18.312	409138	50.072 ug/mlm
	System Monitoring Compounds			
6) S	n-dodecane-d26	8.707	126199	0.996 ug/mlm
23) S	n-eicosane-d42	17.689	123455	0.982 ug/mlm
34) S	n-triacontane-d62	29.611	120387	0.984 ug/mlm
	Target Compounds			
2)	n-C8	3.571	1814383	15.638 ug/mlm
3)	n-C9	4.897	1611247	12.994 ug/mlm
4)	n-C10	6.309	1528396	11.455 ug/mlm
5)	n-C11	7.664	1434961	10.582 ug/mlm
7)	n-C12	8.925	1291193	9.098 ug/mlm
8)	i-13	9.105	300103	2.119 ug/mlm
9)	i-14	9.807	196589	1.352 ug/mlm
10)	n-C13	10.098	1164889	8.224 ug/mlm
11)	i-15	10.965	276464	1.883 ug/mlm
12)	n-C14	11.195	1052907	7.239 ug/mlm
13)	i-16	11.859	385034	2.614 ug/mlm
14)	n-C15	12.226	1041272	7.092 ug/mlm
15)	n-C16	13.270	870428	5.909 ug/mlm
17)	i-18	13.830	241714	1.523 ug/mlm
18)	n-C17	14.384	780597	4.821 ug/mlm
19)	Pristane	14.491	422967	2.625 ug/mlm
20)	n-C18	15.569	642927	4.051 ug/mlm
21)	Phytane	15.726	238827	1.478 ug/mlm
22)	n-C19	16.816	539953	3.423 ug/mlm
24)	n-C20	18.101	475030	3.007 ug/mlm
25)	n-C21	19.406	414094	2.606 ug/mlm
26)	n-C22	20.710	355775	2.239 ug/mlm
27)	n-C23	21.999	301484	1.896 ug/mlm
28)	n-C24	23.264	264725	1.666 ug/mlm
29)	n-C25	24.497	213697	1.343 ug/mlm
30)	n-C26	25.698	186281	1.172 ug/mlm
31)	n-C27	26.860	145795	0.939 ug/mlm
32)	n-C28	27.990	120535	0.766 ug/mlm
33)	n-C29	29.084	116442	0.737 ug/mlm
35)	n-C30	30.147	106425	0.679 ug/mlm
36)	n-C31	31.172	87038	0.564 ug/mlm
37)	n-C32	32.171	72976	0.477 ug/mlm
38)	n-C33	33.139	69655	0.466 ug/mlm
39)	n-C34	34.087	57006	0.377 ug/mlm
40)	n-C35	35.118	45866	0.310 ug/mlm

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : FID10078C.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 22:38:15
Operator : Meghan Dailey
Sample : AL-SRM2779-20-01
Misc :
ALS Vial : 3 Sample Multiplier: 0.05

Integration File: autoint1.e
Quant Time: Aug 20 13:49:07 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.296	30615	0.192	ug/mlm
42)	n-C37	37.653	27855	0.191	ug/mlm
43)	n-C38	39.233	22702	0.159	ug/mlm
44)	n-C39	41.104	20444	0.149	ug/mlm
45)	n-C40	43.297	22265	0.173	ug/mlm
46)	TPH	7.664f	100113017	657.005	ug/mlm
47)	TRH1	7.664	19181962	125.884	ug/mlm
48)	TRH2	12.226f	14230216	93.388	ug/mlm
49)	TRH3	21.999f	2162257	14.183	ug/mlm
50)	TRH4	27.990	1260712	8.274	ug/mlm
51)	TRH5	33.139	779174	5.113	ug/mlm
52)	TRH6	37.653f	407830	2.676	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

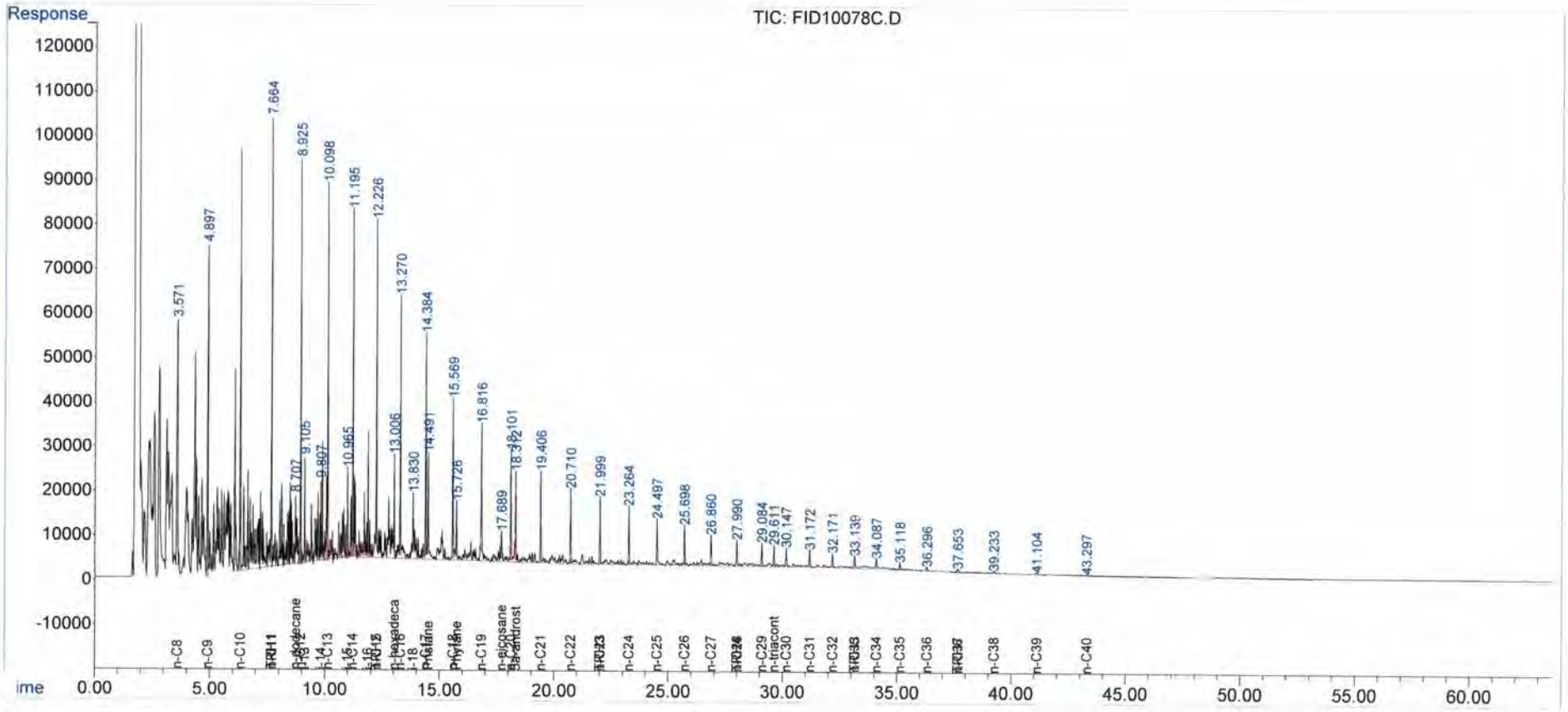
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : FID10078C.D
Signal(s) : FID1A.CH
Acq On : 15-Aug-2013, 22:38:15
Operator : Meghan Dailey
Sample : AL-SRM2779-20-01
Misc :
ALS Vial : 3 Sample Multiplier: 0.05

Integration File: autoint1.e
Quant Time: Aug 20 13:49:07 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



			Concentration
Data File Name	**FID10078F.D**		FID10078F.D
Sample Name	**AL-WKPem-001**		AL-WKPem-001
Misc Info	**0**		16-Aug-2013, 02:10:37
Data File Path	**C:\msdchem\2\data\FID10078**		ALI2012.M
Operator	**Meghan Dailey**		
Date Acquired	**16-Aug-2013, 02:10:37**		1
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	5
Vial Number	**5**	IS Area 1	306717
Sample Multiplier	**1**	IS Area 2	392386

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	0.00	0	0.00	0.000
5)	n-C11	0.00	0	0.00	0.000
7)	n-C12	0.00	0	0.00	0.000
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	0.00	0	0.00	0.000
11)	i-15	0.00	0	0.00	0.000
12)	n-C14	0.00	0	0.00	0.000
13)	i-16	0.00	0	0.00	0.000
14)	n-C15	0.00	0	0.00	0.000
15)	n-C16	0.00	0	0.00	0.000
17)	i-18	0.00	0	0.00	0.000
18)	n-C17	0.00	0	0.00	0.000
19)	Pristane	0.00	0	0.00	0.000
20)	n-C18	0.00	0	0.00	0.000
21)	Phytane	0.00	0	0.00	0.000
22)	n-C19	0.00	0	0.00	0.000
24)	n-C20	0.00	0	0.00	0.000
25)	n-C21	0.00	0	0.00	0.000
26)	n-C22	0.00	0	0.00	0.000
27)	n-C23	0.00	0	0.00	0.000
28)	n-C24	0.00	0	0.00	0.000
29)	n-C25	0.00	0	0.00	0.000
30)	n-C26	0.00	0	0.00	0.000
31)	n-C27	0.00	0	0.00	0.000
32)	n-C28	0.00	0	0.00	0.000
33)	n-C29	0.00	0	0.00	0.000
35)	n-C30	0.00	0	0.00	0.000
36)	n-C31	0.00	0	0.00	0.000
37)	n-C32	0.00	0	0.00	0.000
38)	n-C33	0.00	0	0.00	0.000
39)	n-C34	0.00	0	0.00	0.000
40)	n-C35	0.00	0	0.00	0.000
41)	n-C36	0.00	0	0.00	0.000
42)	n-C37	0.00	0	0.00	0.000
43)	n-C38	0.00	0	0.00	0.000
44)	n-C39	0.00	0	0.00	0.000
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	13.00	10299800	1409.59	1409.590
47)	TRH1	8.70	132056	18.07	18.073
48)	TRH2	13.00	860684	117.79	117.790
49)	TRH3	28.54	66146	9.05	9.048
50)	TRH4	29.59	121385	16.61	16.612
51)	TRH5	39.05	10790	1.48	1.477
52)	TRH6	40.61	58544.7	8.01	8.012
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	123543	19.50	97.5
23)	n-eicosane-d42	17.68	120997	20.07	99.7
34)	n-triacontane-d62	29.59	119481	20.36	101.7
1)	n-hexadecane-d34	13.00	306717	50.00	306717.000
16)	5a-androstane	18.29	392386	50.07	392386.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : FID10078F.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 02:10:37
Operator : Meghan Dailey
Sample : AL-WKPem-001
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 26 18:34:30 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1) I	n-hexadecane-d34	12.999	306717	50.000	ug/mlm
16) I	5a-androstane	18.294	392386	50.072	ug/mlm
	System Monitoring Compounds				
6) S	n-dodecane-d26	8.703	123543	19.502	ug/mlm
23) S	n-eicosane-d42	17.679	120997	20.067	ug/mlm
34) S	n-triacontane-d62	29.594	119481	20.358	ug/mlm
	Target Compounds				
2)	n-C8	0.000	0	N.D.	ug/ml
3)	n-C9	0.000	0	N.D.	ug/mld
4)	n-C10	0.000	0	N.D.	ug/mld
5)	n-C11	0.000	0	N.D.	ug/mld
7)	n-C12	0.000	0	N.D.	ug/mld
8)	i-13	0.000	0	N.D.	ug/mld
9)	i-14	0.000	0	N.D.	ug/mld
10)	n-C13	0.000	0	N.D.	ug/mld
11)	i-15	0.000	0	N.D.	ug/mld
12)	n-C14	0.000	0	N.D.	ug/mld
13)	i-16	0.000	0	N.D.	ug/mld
14)	n-C15	0.000	0	N.D.	ug/mld
15)	n-C16	0.000	0	N.D.	ug/mld
17)	i-18	0.000	0	N.D.	ug/mld
18)	n-C17	0.000	0	N.D.	ug/mld
19)	Pristane	0.000	0	N.D.	ug/mld
20)	n-C18	0.000	0	N.D.	ug/mld
21)	Phytane	0.000	0	N.D.	ug/mld
22)	n-C19	0.000	0	N.D.	ug/mld
24)	n-C20	0.000	0	N.D.	ug/mld
25)	n-C21	0.000	0	N.D.	ug/mld
26)	n-C22	0.000	0	N.D.	ug/mld
27)	n-C23	0.000	0	N.D.	ug/mld
28)	n-C24	0.000	0	N.D.	ug/mld
29)	n-C25	0.000	0	N.D.	ug/mld
30)	n-C26	0.000	0	N.D.	ug/mld
31)	n-C27	0.000	0	N.D.	ug/mld
32)	n-C28	0.000	0	N.D.	ug/mld
33)	n-C29	0.000	0	N.D.	ug/mld
35)	n-C30	0.000	0	N.D.	ug/mld
36)	n-C31	0.000	0	N.D.	ug/mld
37)	n-C32	0.000	0	N.D.	ug/mld
38)	n-C33	0.000	0	N.D.	ug/mld
39)	n-C34	0.000	0	N.D.	ug/mld
40)	n-C35	0.000	0	N.D.	ug/mld

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : FID10078F.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 02:10:37
Operator : Meghan Dailey
Sample : AL-WKPem-001
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 26 18:34:30 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	0.000	0	N.D.	ug/mld
42)	n-C37	0.000	0	N.D.	ug/mld
43)	n-C38	0.000	0	N.D.	ug/mld
44)	n-C39	0.000	0	N.D.	ug/mld
45)	n-C40	0.000	0	N.D.	ug/mld
46)	TPH	12.999f	10299790	1409.590	ug/mlm
47)	TRH1	8.703	132056	18.073	ug/mlm
48)	TRH2	12.999f	860684	117.790	ug/mlm
49)	TRH3	28.537f	66146	9.048	ug/mlm
50)	TRH4	29.594	121385	16.612	ug/mlm
51)	TRH5	39.053f	10790	1.477	ug/mlm
52)	TRH6	40.613f	58545	8.012	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/ml

SemiQuant Compounds - Not Calibrated on this Instrument

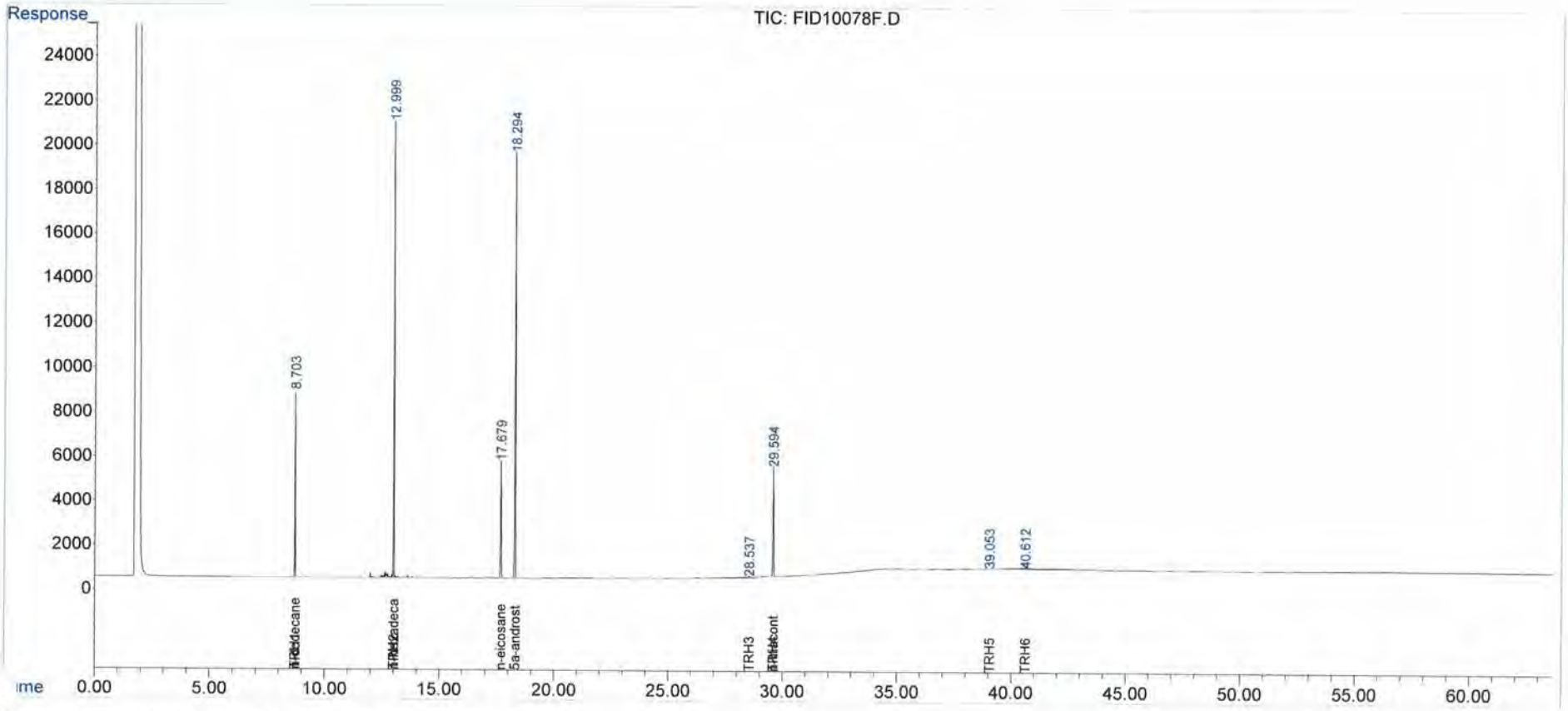
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : FID10078F.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 02:10:37
Operator : Meghan Dailey
Sample : AL-WKPem-001
Misc :
ALS Vial : 5 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Aug 26 18:34:30 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data File Name	**ENV3079A.D**		**Concentration**
Sample Name	**Procedural Blank**		ENV3079A.D
Misc Info	**0**		Procedural Blank
Data File Path	**C:\msdchem\2\data\FID10078**		16-Aug-2013, 03:21:21
Operator	**Meghan Dailey**		ALI2012.M
Date Acquired	**16-Aug-2013, 03:21:21**		0.066667
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	6
Vial Number	**6**	IS Area 1	256978
Sample Multiplier	**0.066667**	IS Area 2	329080

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	0.00	0	0.00	0.000
5)	n-C11	0.00	0	0.00	0.000
7)	n-C12	0.00	0	0.00	0.000
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	0.00	0	0.00	0.000
11)	i-15	0.00	0	0.00	0.000
12)	n-C14	0.00	0	0.00	0.000
13)	i-16	0.00	0	0.00	0.000
14)	n-C15	0.00	0	0.00	0.000
15)	n-C16	0.00	0	0.00	0.000
17)	i-18	0.00	0	0.00	0.000
18)	n-C17	0.00	0	0.00	0.000
19)	Pristane	0.00	0	0.00	0.000
20)	n-C18	0.00	0	0.00	0.000
21)	Phytane	0.00	0	0.00	0.000
22)	n-C19	0.00	0	0.00	0.000
24)	n-C20	0.00	0	0.00	0.000
25)	n-C21	0.00	0	0.00	0.000
26)	n-C22	0.00	0	0.00	0.000
27)	n-C23	0.00	0	0.00	0.000
28)	n-C24	0.00	0	0.00	0.000
29)	n-C25	0.00	0	0.00	0.000
30)	n-C26	0.00	0	0.00	0.000
31)	n-C27	0.00	0	0.00	0.000
32)	n-C28	0.00	0	0.00	0.000
33)	n-C29	0.00	0	0.00	0.000
35)	n-C30	0.00	0	0.00	0.000
36)	n-C31	0.00	0	0.00	0.000
37)	n-C32	0.00	0	0.00	0.000
38)	n-C33	0.00	0	0.00	0.000
39)	n-C34	0.00	0	0.00	0.000
40)	n-C35	0.00	0	0.00	0.000
41)	n-C36	0.00	0	0.00	0.000
42)	n-C37	0.00	0	0.00	0.000
43)	n-C38	0.00	0	0.00	0.000
44)	n-C39	0.00	0	0.00	0.000
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	13.00	8361850	90.97	90.968
47)	TRH1	8.70	116989	1.27	1.273
48)	TRH2	13.00	737407	8.02	8.022
49)	TRH3	23.38	8273.2	0.09	0.090
50)	TRH4	29.59	110267	1.20	1.200
51)	TRH5	34.52	2570.63	0.03	0.028
52)	TRH6	40.12	153605	1.67	1.671
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	98124.8	1.23	92.4
23)	n-eicosane-d42	17.68	97687.5	1.29	96.0
34)	n-triacontane-d62	29.59	96650.8	1.31	98.1
1)	n-hexadecane-d34	13.00	256978	3.33	256978.000
16)	5a-androstane	18.29	329080	3.34	329080.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ENV3079A.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 03:21:21
Operator : Meghan Dailey
Sample : Procedural Blank
Misc :
ALS Vial : 6 Sample Multiplier: 0.066667

Integration File: autoint1.e
Quant Time: Aug 26 18:32:41 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1)	I n-hexadecane-d34	12.997	256978	50.000	ug/mlm
16)	I 5a-androstane	18.290	329080	50.072	ug/mlm
	System Monitoring Compounds				
6)	S n-dodecane-d26	8.702	98125	1.233	ug/mlm
23)	S n-eicosane-d42	17.677	97687	1.288	ug/mlm
34)	S n-triacontane-d62	29.591	96651	1.309	ug/mlm
	Target Compounds				
2)	n-C8	0.000	0	N.D.	ug/mld
3)	n-C9	0.000	0	N.D.	ug/mld
4)	n-C10	0.000	0	N.D.	ug/mld
5)	n-C11	0.000	0	N.D.	ug/mld
7)	n-C12	0.000	0	N.D.	ug/mld
8)	i-13	0.000	0	N.D.	ug/mld
9)	i-14	0.000	0	N.D.	ug/mld
10)	n-C13	0.000	0	N.D.	ug/mld
11)	i-15	0.000	0	N.D.	ug/mld
12)	n-C14	0.000	0	N.D.	ug/mld
13)	i-16	0.000	0	N.D.	ug/mld
14)	n-C15	0.000	0	N.D.	ug/mld
15)	n-C16	0.000	0	N.D.	ug/mld
17)	i-18	0.000	0	N.D.	ug/mld
18)	n-C17	0.000	0	N.D.	ug/mld
19)	Pristane	0.000	0	N.D.	ug/mld
20)	n-C18	0.000	0	N.D.	ug/mld
21)	Phytane	0.000	0	N.D.	ug/mld
22)	n-C19	0.000	0	N.D.	ug/mld
24)	n-C20	0.000	0	N.D.	ug/mld
25)	n-C21	0.000	0	N.D.	ug/mld
26)	n-C22	0.000	0	N.D.	ug/mld
27)	n-C23	0.000	0	N.D.	ug/mld
28)	n-C24	0.000	0	N.D.	ug/mld
29)	n-C25	0.000	0	N.D.	ug/mld
30)	n-C26	0.000	0	N.D.	ug/mld
31)	n-C27	0.000	0	N.D.	ug/mld
32)	n-C28	0.000	0	N.D.	ug/mld
33)	n-C29	0.000	0	N.D.	ug/mld
35)	n-C30	0.000	0	N.D.	ug/mld
36)	n-C31	0.000	0	N.D.	ug/mld
37)	n-C32	0.000	0	N.D.	ug/mld
38)	n-C33	0.000	0	N.D.	ug/mld
39)	n-C34	0.000	0	N.D.	ug/mld
40)	n-C35	0.000	0	N.D.	ug/mld

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ENV3079A.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 03:21:21
Operator : Meghan Dailey
Sample : Procedural Blank
Misc :
ALS Vial : 6 Sample Multiplier: 0.066667

Integration File: autoint1.e
Quant Time: Aug 26 18:32:41 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	0.000	0	N.D.	ug/mld
42)	n-C37	0.000	0	N.D.	ug/mld
43)	n-C38	0.000	0	N.D.	ug/mld
44)	n-C39	0.000	0	N.D.	ug/mld
45)	n-C40	0.000	0	N.D.	ug/mld
46)	TPH	12.997f	8361849	90.968	ug/mlm
47)	TRH1	8.702	116989	1.273	ug/mlm
48)	TRH2	12.997f	737407	8.022	ug/mlm
49)	TRH3	23.376	8273	0.090	ug/mlm
50)	TRH4	29.591	110267	1.200	ug/mlm
51)	TRH5	34.523	2571	0.028	ug/mlm
52)	TRH6	40.121f	153605	1.671	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

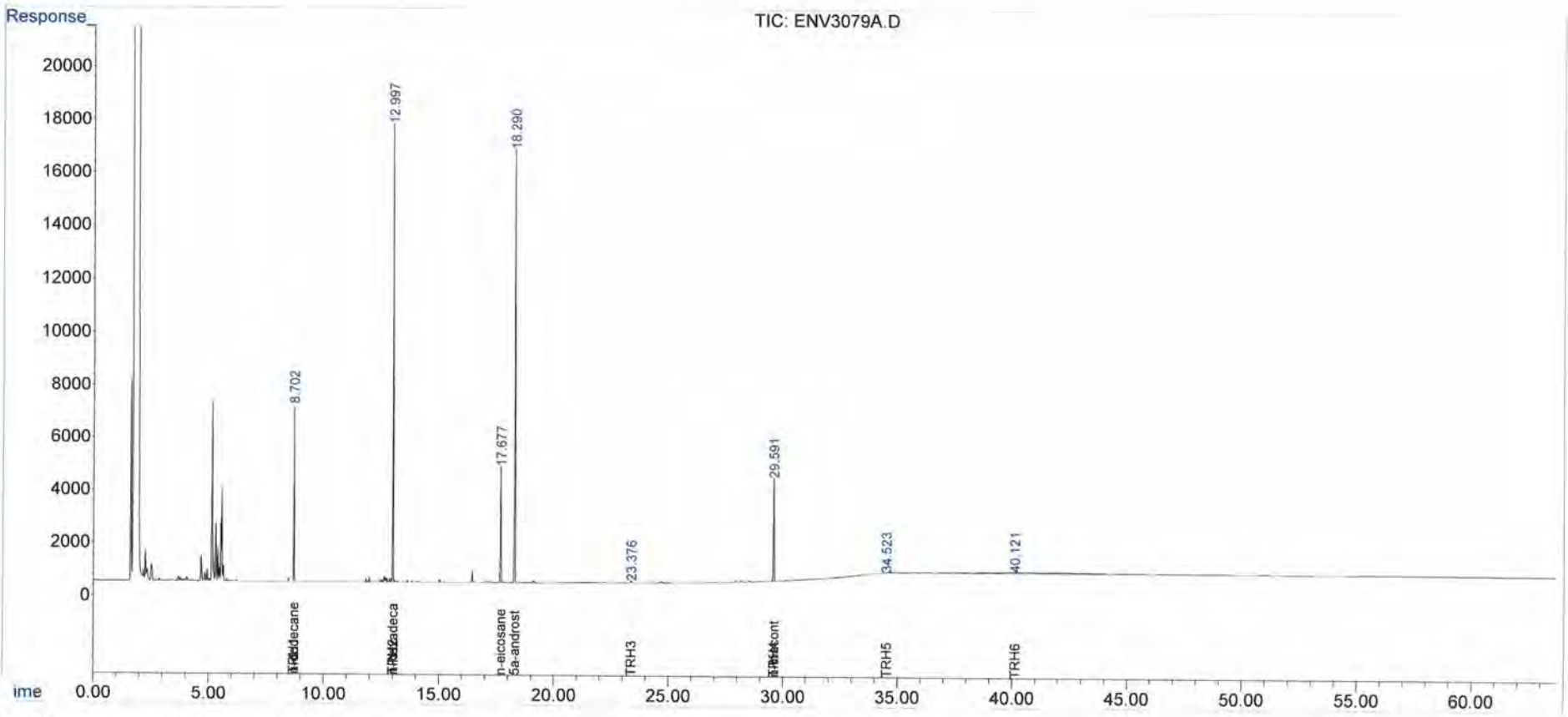
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ENV3079A.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 03:21:21
Operator : Meghan Dailey
Sample : Procedural Blank
Misc :
ALS Vial : 6 Sample Multiplier: 0.066667

Integration File: autoint1.e
Quant Time: Aug 26 18:32:41 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



			Concentration
Data File Name	**ENV3079C.D**		ENV3079C.D
Sample Name	**MS (SED-DA-008 (0-0.5))**		MS (SED-DA-008 (0-0.5))
Misc Info	**0**		16-Aug-2013, 04:32:05
Data File Path	**C:\msdchem\2\data\FID10078**		ALI2012.M
Operator	**Meghan Dailey**		
Date Acquired	**16-Aug-2013, 04:32:05**		0.0665336
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	7
Vial Number	**7**	IS Area 1	269224
Sample Multiplier	**0.0665336**	IS Area 2	343052

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	3.57	18172.9	0.24	0.238
3)	n-C9	4.88	38264.3	0.47	0.468
4)	n-C10	6.29	48001	0.55	0.546
5)	n-C11	7.65	51965	0.58	0.581
7)	n-C12	8.91	55590.3	0.59	0.594
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	10.08	57253	0.61	0.613
11)	i-15	0.00	0	0.00	0.000
12)	n-C14	11.17	60019.3	0.63	0.626
13)	i-16	0.00	0	0.00	0.000
14)	n-C15	12.21	62830	0.65	0.649
15)	n-C16	13.25	63916.8	0.66	0.658
17)	i-18	0.00	0	0.00	0.000
18)	n-C17	14.36	67320	0.66	0.660
19)	Pristane	14.48	65269.8	0.64	0.643
20)	n-C18	15.54	66709.2	0.67	0.667
21)	Phytane	15.71	66712.6	0.66	0.655
22)	n-C19	16.79	67190.6	0.68	0.676
24)	n-C20	18.08	66911.7	0.67	0.672
25)	n-C21	19.38	66925.1	0.67	0.668
26)	n-C22	20.69	67736.3	0.68	0.677
27)	n-C23	21.97	67713.5	0.68	0.676
28)	n-C24	23.24	67407.4	0.67	0.673
29)	n-C25	24.48	68712.9	0.69	0.686
30)	n-C26	25.68	67908.9	0.68	0.678
31)	n-C27	26.84	69625.5	0.71	0.712
32)	n-C28	27.97	68494.8	0.69	0.691
33)	n-C29	29.07	76003.4	0.76	0.763
35)	n-C30	30.13	65377.2	0.66	0.662
36)	n-C31	31.16	68383.6	0.70	0.703
37)	n-C32	32.15	62407	0.65	0.647
38)	n-C33	33.13	73601.7	0.78	0.781
39)	n-C34	34.07	63045.8	0.66	0.661
40)	n-C35	35.10	61998.2	0.67	0.666
41)	n-C36	36.27	62811.5	0.63	0.625
42)	n-C37	37.63	58662.4	0.64	0.640
43)	n-C38	39.21	54104.6	0.60	0.600
44)	n-C39	41.07	51513.1	0.60	0.596
45)	n-C40	43.26	47929.5	0.59	0.592
46)	TPH	0.00	0	0.00	0.000
47)	TRH1	0.00	0	0.00	0.000
48)	TRH2	0.00	0	0.00	0.000
49)	TRH3	0.00	0	0.00	0.000
50)	TRH4	0.00	0	0.00	0.000
51)	TRH5	0.00	0	0.00	0.000
52)	TRH6	0.00	0	0.00	0.000
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	94878.9	1.14	85.3
23)	n-eicosane-d42	17.68	101646	1.28	95.8
34)	n-triacontane-d62	29.59	98201.7	1.27	95.6
1)	n-hexadecane-d34	13.00	269224	3.33	269224.000
16)	5a-androstane	18.29	343052	3.33	343052.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ENV3079C.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 04:32:05
Operator : Meghan Dailey
Sample : MS (SED-DA-008 (0-0.5))
Misc :
ALS Vial : 7 Sample Multiplier: 0.0665336

Integration File: autoint1.e
Quant Time: Aug 20 14:20:13 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1)	I n-hexadecane-d34	12.996	269224	50.000	ug/mlm
16)	I 5a-androstane	18.288	343052	50.072	ug/mlm
	System Monitoring Compounds				
6)	S n-dodecane-d26	8.701	94879	1.135	ug/mlm
23)	S n-eicosane-d42	17.677	101646	1.283	ug/mlm
34)	S n-triacontane-d62	29.593	98202	1.273	ug/mlm
	Target Compounds				
2)	n-C8	3.566	18173	0.238	ug/mlm
3)	n-C9	4.884	38264	0.468	ug/mlm
4)	n-C10	6.294	48001	0.546	ug/mlm
5)	n-C11	7.647	51965	0.581	ug/mlm
7)	n-C12	8.907	55590	0.594	ug/mlm
8)	i-13	0.000	0	N.D.	ug/mld
9)	i-14	0.000	0	N.D.	ug/mld
10)	n-C13	10.079	57253	0.613	ug/mlm
11)	i-15	0.000	0	N.D.	ug/mld
12)	n-C14	11.175	60019	0.626	ug/mlm
13)	i-16	0.000	0	N.D.	ug/mld
14)	n-C15	12.206	62830	0.649	ug/mlm
15)	n-C16	13.249	63917	0.658	ug/mlm
17)	i-18	0.000	0	N.D.	ug/mld
18)	n-C17	14.360	67320	0.660	ug/mlm
19)	Pristane	14.479	65270	0.643	ug/mlm
20)	n-C18	15.545	66709	0.667	ug/mlm
21)	Phytane	15.709	66713	0.655	ug/mlm
22)	n-C19	16.791	67191	0.676	ug/mlm
24)	n-C20	18.076	66912	0.672	ug/mlm
25)	n-C21	19.381	66925	0.668	ug/mlm
26)	n-C22	20.685	67736	0.677	ug/mlm
27)	n-C23	21.973	67713	0.676	ug/mlm
28)	n-C24	23.239	67407	0.673	ug/mlm
29)	n-C25	24.476	68713	0.686	ug/mlm
30)	n-C26	25.675	67909	0.678	ug/mlm
31)	n-C27	26.839	69625	0.712	ug/mlm
32)	n-C28	27.970	68495	0.691	ug/mlm
33)	n-C29	29.067	76003	0.763	ug/mlm
35)	n-C30	30.126	65377	0.662	ug/mlm
36)	n-C31	31.157	68384	0.703	ug/mlm
37)	n-C32	32.155	62407	0.647	ug/mlm
38)	n-C33	33.129	73602	0.781	ug/mlm
39)	n-C34	34.071	63046	0.661	ug/mlm
40)	n-C35	35.100	61998	0.666	ug/mlm

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ENV3079C.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 04:32:05
Operator : Meghan Dailey
Sample : MS (SED-DA-008 (0-0.5))
Misc :
ALS Vial : 7 Sample Multiplier: 0.0665336

Integration File: autoint1.e
Quant Time: Aug 20 14:20:13 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.275	62811	0.625	ug/mlm
42)	n-C37	37.631	58662	0.640	ug/mlm
43)	n-C38	39.210	54105	0.600	ug/mlm
44)	n-C39	41.066	51513	0.596	ug/mlm
45)	n-C40	43.260	47929	0.592	ug/mlm
46)	TPH	0.000	0	N.D.	ug/mld
47)	TRH1	0.000	0	N.D.	ug/mld
48)	TRH2	0.000	0	N.D.	ug/mld
49)	TRH3	0.000	0	N.D.	ug/mld
50)	TRH4	0.000	0	N.D.	ug/mld
51)	TRH5	0.000	0	N.D.	ug/mld
52)	TRH6	0.000	0	N.D.	ug/mld
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

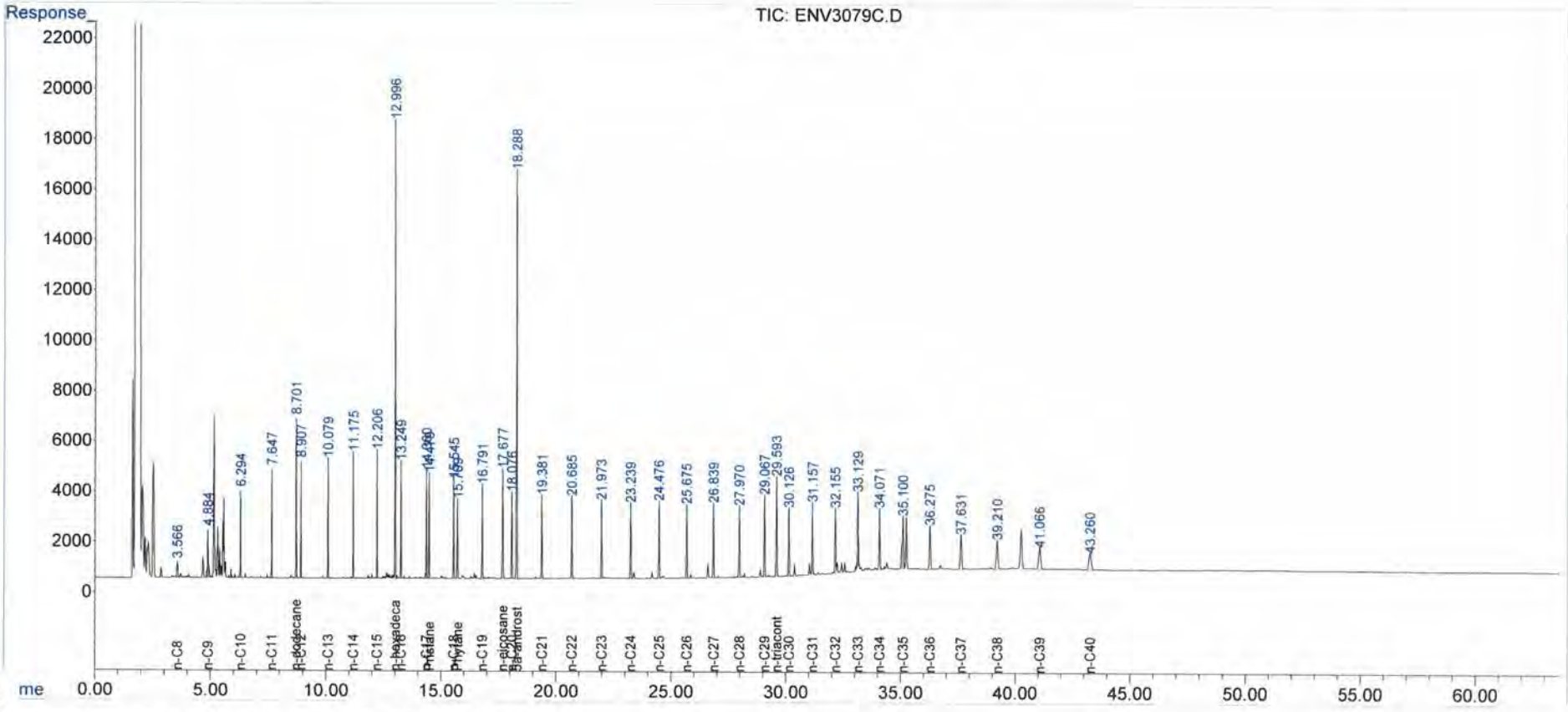
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ENV3079C.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 04:32:05
Operator : Meghan Dailey
Sample : MS (SED-DA-008 (0-0.5))
Misc :
ALS Vial : 7 Sample Multiplier: 0.0665336

Integration File: autoint1.e
Quant Time: Aug 20 14:20:13 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



			Concentration
Data File Name	**ENV3079D.D**		ENV3079D.D
Sample Name	**MSD (SED-DA-008 (0-0.5))**		MSD (SED-DA-008 (0-0.5)
Misc Info	**0**		16-Aug-2013, 05:42:46
Data File Path	**P:\2013\J13034\Aliphatics\ENV 3079\FID10078**		ALI2012.M
Operator	**Meghan Dailey**		
Date Acquired	**16-Aug-2013, 05:42:46**		0.0662252
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	8
Vial Number	**8**	IS Area 1	258164
Sample Multiplier	**0.0662252**	IS Area 2	329574

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	3.56	16647.7	0.23	0.226
3)	n-C9	4.88	36712.2	0.47	0.466
4)	n-C10	6.29	44454.2	0.52	0.524
5)	n-C11	7.65	48510.8	0.56	0.563
7)	n-C12	8.91	52063.6	0.58	0.577
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	10.08	54347.9	0.60	0.604
11)	i-15	0.00	0	0.00	0.000
12)	n-C14	11.18	57166.8	0.62	0.619
13)	i-16	0.00	0	0.00	0.000
14)	n-C15	12.21	60326.9	0.65	0.647
15)	n-C16	13.25	62072.3	0.66	0.663
17)	i-18	0.00	0	0.00	0.000
18)	n-C17	14.36	65660.7	0.67	0.667
19)	Pristane	14.48	63094.2	0.64	0.644
20)	n-C18	15.54	64484.9	0.67	0.668
21)	Phytane	15.71	64492.6	0.66	0.656
22)	n-C19	16.79	64621.4	0.67	0.674
24)	n-C20	18.08	64641.9	0.67	0.673
25)	n-C21	19.38	65719	0.68	0.680
26)	n-C22	20.69	66256.9	0.69	0.686
27)	n-C23	21.97	65805.3	0.68	0.680
28)	n-C24	23.24	65468.8	0.68	0.678
29)	n-C25	24.48	66715.5	0.69	0.690
30)	n-C26	25.67	66075.1	0.68	0.683
31)	n-C27	26.84	68385.2	0.72	0.724
32)	n-C28	27.97	66205	0.69	0.692
33)	n-C29	29.07	72750.7	0.76	0.757
35)	n-C30	30.13	63019.1	0.66	0.661
36)	n-C31	31.15	66234.3	0.71	0.706
37)	n-C32	32.15	60011.5	0.64	0.645
38)	n-C33	33.13	66478.9	0.73	0.731
39)	n-C34	34.07	59122.6	0.64	0.643
40)	n-C35	35.10	59334	0.66	0.660
41)	n-C36	36.27	59552.2	0.61	0.614
42)	n-C37	37.62	55670	0.63	0.629
43)	n-C38	39.20	53136	0.61	0.610
44)	n-C39	41.06	50676.7	0.61	0.608
45)	n-C40	43.26	46800.5	0.60	0.599
46)	TPH	0.00	0	0.00	0.000
47)	TRH1	0.00	0	0.00	0.000
48)	TRH2	0.00	0	0.00	0.000
49)	TRH3	0.00	0	0.00	0.000
50)	TRH4	0.00	0	0.00	0.000
51)	TRH5	0.00	0	0.00	0.000
52)	TRH6	0.00	0	0.00	0.000
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	88381.4	1.10	82.9
23)	n-eicosane-d42	17.68	98959	1.29	97.1
34)	n-triacontane-d62	29.59	96135.6	1.29	97.4
1)	n-hexadecane-d34	13.00	258164	3.31	258164.000
16)	5a-androstane	18.29	329574	3.32	329574.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ENV3079D.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 05:42:46
Operator : Meghan Dailey
Sample : MSD (SED-DA-008 (0-0.5))
Misc :
ALS Vial : 8 Sample Multiplier: 0.0662252

Integration File: autoint1.e
Quant Time: Aug 20 14:36:55 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1) I	n-hexadecane-d34	12.996	258164	50.000	ug/mlm
16) I	5a-androstane	18.289	329574	50.072	ug/mlm
	System Monitoring Compounds				
6) S	n-dodecane-d26	8.701	88381	1.098	ug/mlm
23) S	n-eicosane-d42	17.677	98959	1.294	ug/mlm
34) S	n-triacontane-d62	29.592	96136	1.292	ug/mlm
	Target Compounds				
2)	n-C8	3.563	16648	0.226	ug/mlm
3)	n-C9	4.885	36712	0.466	ug/mlm
4)	n-C10	6.294	44454	0.524	ug/mlm
5)	n-C11	7.647	48511	0.563	ug/mlm
7)	n-C12	8.907	52064	0.577	ug/mlm
8)	i-13	0.000	0	N.D.	ug/mld
9)	i-14	0.000	0	N.D.	ug/mld
10)	n-C13	10.079	54348	0.604	ug/mlm
11)	i-15	0.000	0	N.D.	ug/mld
12)	n-C14	11.175	57167	0.619	ug/mlm
13)	i-16	0.000	0	N.D.	ug/mld
14)	n-C15	12.207	60327	0.647	ug/mlm
15)	n-C16	13.250	62072	0.663	ug/mlm
17)	i-18	0.000	0	N.D.	ug/mld
18)	n-C17	14.361	65661	0.667	ug/mlm
19)	Pristane	14.478	63094	0.644	ug/mlm
20)	n-C18	15.544	64485	0.668	ug/mlm
21)	Phytane	15.709	64493	0.656	ug/mlm
22)	n-C19	16.790	64621	0.674	ug/mlm
24)	n-C20	18.076	64642	0.673	ug/mlm
25)	n-C21	19.381	65719	0.680	ug/mlm
26)	n-C22	20.686	66257	0.686	ug/mlm
27)	n-C23	21.975	65805	0.680	ug/mlm
28)	n-C24	23.239	65469	0.678	ug/mlm
29)	n-C25	24.475	66716	0.690	ug/mlm
30)	n-C26	25.674	66075	0.683	ug/mlm
31)	n-C27	26.839	68385	0.724	ug/mlm
32)	n-C28	27.969	66205	0.692	ug/mlm
33)	n-C29	29.067	72751	0.757	ug/mlm
35)	n-C30	30.125	63019	0.661	ug/mlm
36)	n-C31	31.154	66234	0.706	ug/mlm
37)	n-C32	32.152	60012	0.645	ug/mlm
38)	n-C33	33.127	66479	0.731	ug/mlm
39)	n-C34	34.070	59123	0.643	ug/mlm
40)	n-C35	35.102	59334	0.660	ug/mlm

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ENV3079D.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 05:42:46
Operator : Meghan Dailey
Sample : MSD (SED-DA-008 (0-0.5))
Misc :
ALS Vial : 8 Sample Multiplier: 0.0662252

Integration File: autoint1.e
Quant Time: Aug 20 14:36:55 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.273	59552	0.614	ug/mlm
42)	n-C37	37.621	55670	0.629	ug/mlm
43)	n-C38	39.200	53136	0.610	ug/mlm
44)	n-C39	41.064	50677	0.608	ug/mlm
45)	n-C40	43.258	46801	0.599	ug/mlm
46)	TPH	0.000	0	N.D.	ug/mld
47)	TRH1	0.000	0	N.D.	ug/mld
48)	TRH2	0.000	0	N.D.	ug/mld
49)	TRH3	0.000	0	N.D.	ug/mld
50)	TRH4	0.000	0	N.D.	ug/mld
51)	TRH5	0.000	0	N.D.	ug/mld
52)	TRH6	0.000	0	N.D.	ug/mld
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

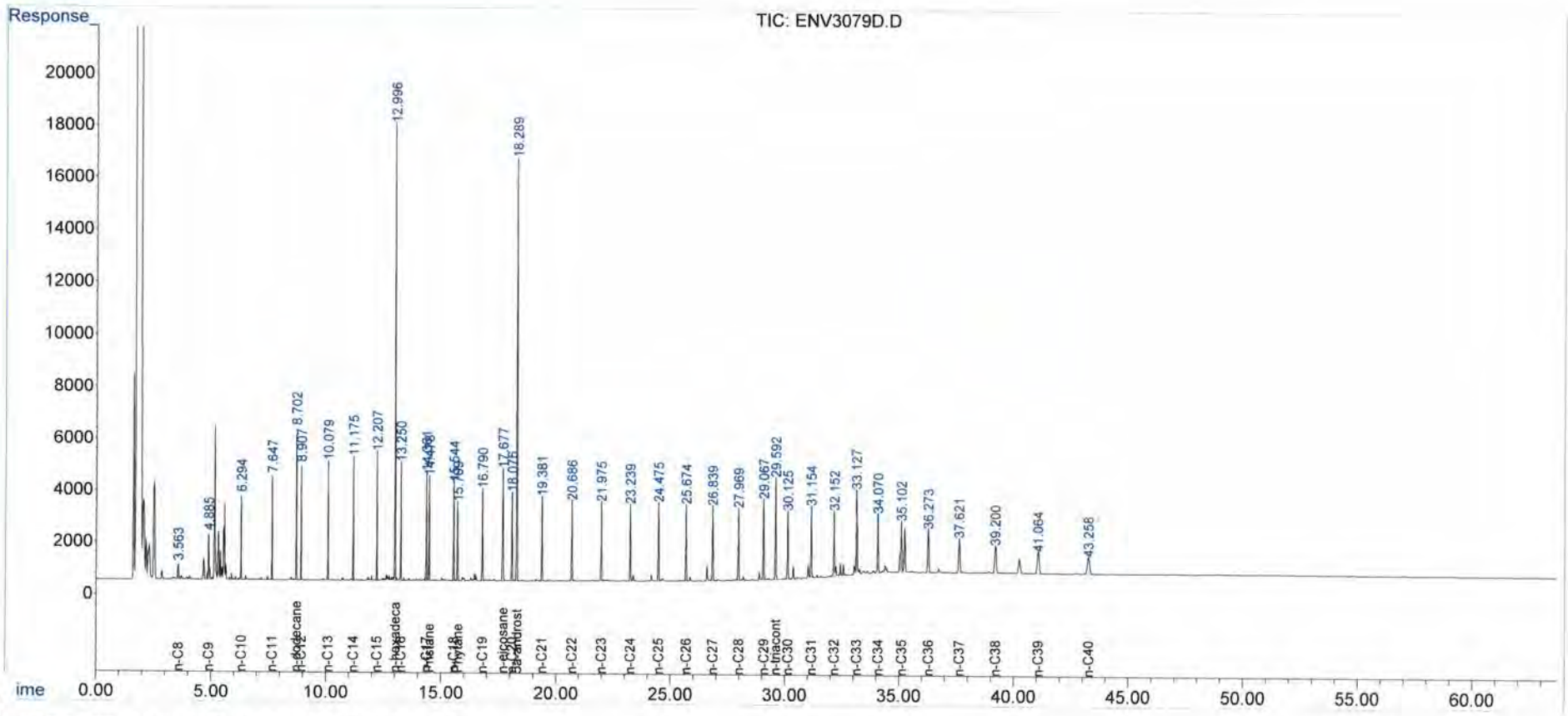
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ENV3079D.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 05:42:46
Operator : Meghan Dailey
Sample : MSD (SED-DA-008 (0-0.5))
Misc :
ALS Vial : 8 Sample Multiplier: 0.0662252

Integration File: autoint1.e
Quant Time: Aug 20 14:36:55 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



			Concentration
Data File Name	**ENV3079E.D**		ENV3079E.D
Sample Name	**Dupl (SED-DA-006 (0-0.5))**		Dupl (SED-DA-006 (0-0.5)
Misc Info	**0**		16-Aug-2013, 06:53:32
Data File Path	**C:\msdchem\2\data\FID10078**		ALI2012.M
Operator	**Meghan Dailey**		
Date Acquired	**16-Aug-2013, 06:53:32**		0.0665336
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	9
Vial Number	**9**	IS Area 1	221489
Sample Multiplier	**0.0665336**	IS Area 2	284732

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	0.00	0	0.00	0.000
5)	n-C11	0.00	0	0.00	0.000
7)	n-C12	8.90	660.969	0.01	0.009
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	10.08	334.122	0.00	0.004
11)	i-15	0.00	0	0.00	0.000
12)	n-C14	11.18	541.454	0.01	0.007
13)	i-16	0.00	0	0.00	0.000
14)	n-C15	12.21	461.08	0.01	0.006
15)	n-C16	13.25	729.084	0.01	0.009
17)	i-18	0.00	0	0.00	0.000
18)	n-C17	14.36	328.609	0.00	0.004
19)	Pristane	14.46	214.52	0.00	0.003
20)	n-C18	15.54	698.547	0.01	0.008
21)	Phytane	15.71	285.874	0.00	0.003
22)	n-C19	16.80	344.931	0.00	0.004
24)	n-C20	18.07	237.875	0.00	0.003
25)	n-C21	19.38	337.824	0.00	0.004
26)	n-C22	20.69	354.366	0.00	0.004
27)	n-C23	21.97	643.718	0.01	0.008
28)	n-C24	23.23	495.442	0.01	0.006
29)	n-C25	24.47	946.206	0.01	0.011
30)	n-C26	25.67	502.56	0.01	0.006
31)	n-C27	26.83	1842.35	0.02	0.023
32)	n-C28	27.95	506.738	0.01	0.006
33)	n-C29	29.06	2437.39	0.03	0.029
35)	n-C30	30.13	320.899	0.00	0.004
36)	n-C31	31.15	1310.74	0.02	0.016
37)	n-C32	32.15	132.494	0.00	0.002
38)	n-C33	0.00	0	0.00	0.000
39)	n-C34	0.00	0	0.00	0.000
40)	n-C35	0.00	0	0.00	0.000
41)	n-C36	0.00	0	0.00	0.000
42)	n-C37	0.00	0	0.00	0.000
43)	n-C38	0.00	0	0.00	0.000
44)	n-C39	0.00	0	0.00	0.000
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	13.00	8262120	103.68	103.675
47)	TRH1	8.70	146632	1.84	1.840
48)	TRH2	13.00	764833	9.60	9.597
49)	TRH3	22.88	27568.9	0.35	0.346
50)	TRH4	29.59	94948.1	1.19	1.191
51)	TRH5	34.97	28112.2	0.35	0.353
52)	TRH6	38.94	65919.1	0.83	0.827
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	82323.6	1.20	90.0
23)	n-eicosane-d42	17.68	84659.2	1.29	96.1
34)	n-triacontane-d62	29.59	81257.8	1.27	95.3
1)	n-hexadecane-d34	13.00	221489	3.33	221489.000
16)	5a-androstane	18.29	284732	3.33	284732.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ENV3079E.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 06:53:32
Operator : Meghan Dailey
Sample : Dupl (SED-DA-006 (0-0.5))
Misc :
ALS Vial : 9 Sample Multiplier: 0.0665336

Integration File: autoint1.e
Quant Time: Aug 28 08:09:09 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1) I	n-hexadecane-d34	12.996	221489	50.000	ug/mlm
16) I	5a-androstane	18.286	284732	50.072	ug/mlm
	System Monitoring Compounds				
6) S	n-dodecane-d26	8.701	82324	1.197	ug/mlm
23) S	n-eicosane-d42	17.676	84659	1.287	ug/mlm
34) S	n-triacontane-d62	29.589	81258	1.269	ug/mlm
	Target Compounds				
2)	n-C8	0.000	0	N.D.	ug/mld
3)	n-C9	0.000	0	N.D.	ug/mld
4)	n-C10	0.000	0	N.D.	ug/mld
5)	n-C11	0.000	0	N.D.	ug/mld
7)	n-C12	8.901	661	0.009	ug/mlm
8)	i-13	0.000	0	N.D.	ug/mld
9)	i-14	0.000	0	N.D.	ug/mld
10)	n-C13	10.078	334	0.004	ug/mlm
11)	i-15	0.000	0	N.D.	ug/mld
12)	n-C14	11.176	541	0.007	ug/mlm
13)	i-16	0.000	0	N.D.	ug/mld
14)	n-C15	12.210	461	0.006	ug/mlm
15)	n-C16	13.248	729	0.009	ug/mlm
17)	i-18	0.000	0	N.D.	ug/mld
18)	n-C17	14.357	329	0.004	ug/mlm
19)	Pristane	14.460	215	0.003	ug/mlm
20)	n-C18	15.539	699	0.008	ug/mlm
21)	Phytane	15.707	286	0.003	ug/mlm
22)	n-C19	16.802	345	0.004	ug/mlm
24)	n-C20	18.074	238	0.003	ug/mlm
25)	n-C21	19.382	338	0.004	ug/mlm
26)	n-C22	20.689	354	0.004	ug/mlm
27)	n-C23	21.973	644	0.008	ug/mlm
28)	n-C24	23.233	495	0.006	ug/mlm
29)	n-C25	24.472	946	0.011	ug/mlm
30)	n-C26	25.673	503	0.006	ug/mlm
31)	n-C27	26.834	1842	0.023	ug/mlm
32)	n-C28	27.953	507	0.006	ug/mlm
33)	n-C29	29.064	2437	0.029	ug/mlm
35)	n-C30	30.125	321	0.004	ug/mlm
36)	n-C31	31.151	1311	0.016	ug/mlm
37)	n-C32	32.148	132	0.002	ug/mlm
38)	n-C33	0.000	0	N.D.	ug/mld
39)	n-C34	0.000	0	N.D.	ug/mld
40)	n-C35	0.000	0	N.D.	ug/mld

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ENV3079E.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 06:53:32
Operator : Meghan Dailey
Sample : Dupl (SED-DA-006 (0-0.5))
Misc :
ALS Vial : 9 Sample Multiplier: 0.0665336

Integration File: autoint1.e
Quant Time: Aug 28 08:09:09 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	0.000	0	N.D.	ug/mld
42)	n-C37	0.000	0	N.D.	ug/mld
43)	n-C38	0.000	0	N.D.	ug/mld
44)	n-C39	0.000	0	N.D.	ug/mld
45)	n-C40	0.000	0	N.D.	ug/mld
46)	TPH	12.996f	8262120	103.675	ug/mlm
47)	TRH1	8.701	146632	1.840	ug/mlm
48)	TRH2	12.996f	764833	9.597	ug/mlm
49)	TRH3	22.876	27569	0.346	ug/mlm
50)	TRH4	29.589	94948	1.191	ug/mlm
51)	TRH5	34.966	28112	0.353	ug/mlm
52)	TRH6	38.944f	65919	0.827	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

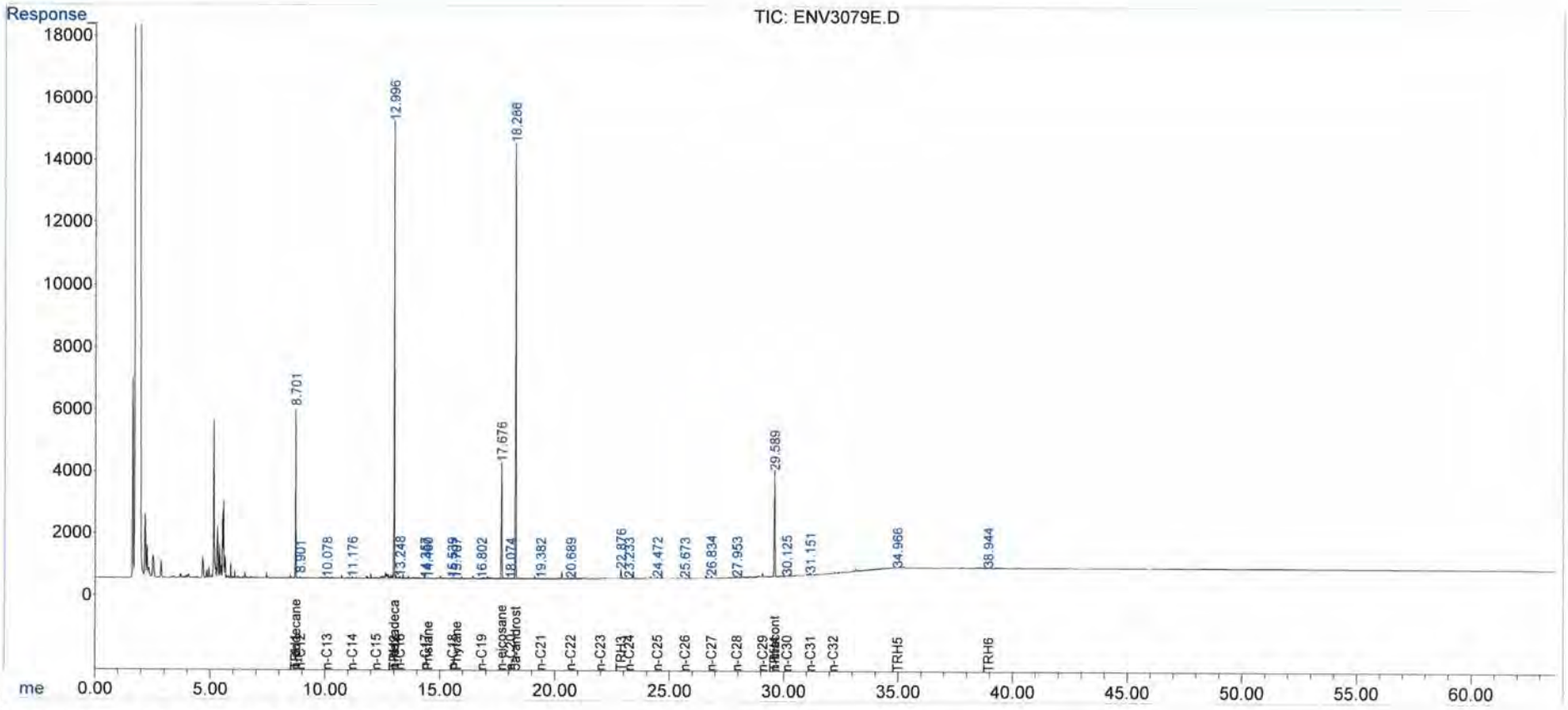
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ENV3079E.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 06:53:32
Operator : Meghan Dailey
Sample : Dupl (SED-DA-006 (0-0.5))
Misc :
ALS Vial : 9 Sample Multiplier: 0.0665336

Integration File: autoint1.e
Quant Time: Aug 28 08:09:09 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data File Name	**ARC1602.D**		ARC1602.D
Sample Name	**SED-DA-BG-007 (0-0.5)**		SED-DA-BG-007 (0-0.5)
Misc Info	**0**		16-Aug-2013, 08:04:24
Data File Path	**C:\msdchem\2\data\FID10078**		ALI2012.M
Operator	**Meghan Dailey**		
Date Acquired	**16-Aug-2013, 08:04:24**		0.0665779
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	10
Vial Number	**10**	IS Area 1	236234
Sample Multiplier	**0.0665779**	IS Area 2	299484

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	0.00	0	0.00	0.000
5)	n-C11	7.65	1185.18	0.02	0.015
7)	n-C12	8.90	6483.79	0.08	0.079
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	10.08	3172.16	0.04	0.039
11)	i-15	10.92	1238.94	0.01	0.015
12)	n-C14	11.18	7158.45	0.09	0.085
13)	i-16	11.91	3380.77	0.04	0.040
14)	n-C15	12.22	20126.4	0.24	0.237
15)	n-C16	13.25	15960.5	0.19	0.187
17)	i-18	13.82	2320	0.03	0.027
18)	n-C17	14.36	50837.8	0.57	0.571
19)	Pristane	14.46	11053.3	0.12	0.125
20)	n-C18	15.54	56082.3	0.64	0.643
21)	Phytane	15.71	14904.2	0.17	0.168
22)	n-C19	16.80	70652.4	0.81	0.815
24)	n-C20	18.08	22023.7	0.25	0.254
25)	n-C21	19.38	197913	2.27	2.266
26)	n-C22	20.68	19097.4	0.22	0.219
27)	n-C23	21.98	118217	1.35	1.352
28)	n-C24	23.24	33931.8	0.39	0.388
29)	n-C25	24.48	115052	1.32	1.316
30)	n-C26	25.68	33332.9	0.38	0.381
31)	n-C27	26.85	225146	2.64	2.638
32)	n-C28	27.97	67583.3	0.78	0.781
33)	n-C29	29.08	348415	4.01	4.010
35)	n-C30	30.14	34631.6	0.40	0.402
36)	n-C31	31.18	284270	3.35	3.350
37)	n-C32	32.17	27416.7	0.33	0.326
38)	n-C33	33.16	136634	1.66	1.661
39)	n-C34	34.07	6013.77	0.07	0.072
40)	n-C35	35.09	82134.5	1.01	1.011
41)	n-C36	36.26	9920.7	0.11	0.113
42)	n-C37	37.62	73282.2	0.92	0.916
43)	n-C38	39.21	8782.04	0.11	0.112
44)	n-C39	41.10	11741.9	0.16	0.156
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	31.06	43306900	517.00	517.001
47)	TRH1	8.70	462140	5.52	5.517
48)	TRH2	17.30	3213480	38.36	38.363
49)	TRH3	26.62	2054630	24.52	24.517
50)	TRH4	31.06	5350120	63.87	63.870
51)	TRH5	33.06	5595610	66.80	66.801
52)	TRH6	40.13	801209	9.56	9.565
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	84999.3	1.16	87.1
23)	n-eicosane-d42	17.68	83931.3	1.21	90.6
34)	n-triacontane-d62	29.60	75046.9	1.12	83.7
1)	n-hexadecane-d34	13.00	236234	3.33	236234.000
16)	5a-androstane	18.29	299484	3.33	299484.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1602.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 08:04:24
Operator : Meghan Dailey
Sample : SED-DA-BG-007 (0-0.5)
Misc :
ALS Vial : 10 Sample Multiplier: 0.0665779

Integration File: autoint1.e
Quant Time: Aug 26 18:40:42 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1)	I n-hexadecane-d34	12.996	236234	50.000	ug/mlm
16)	I 5a-androstane	18.289	299484	50.072	ug/mlm
	System Monitoring Compounds				
6)	S n-dodecane-d26	8.702	84999	1.160	ug/mlm
23)	S n-eicosane-d42	17.677	83931	1.214	ug/mlm
34)	S n-triacontane-d62	29.599	75047	1.115	ug/mlm
	Target Compounds				
2)	n-C8	0.000	0	N.D.	ug/mld
3)	n-C9	0.000	0	N.D.	ug/mld
4)	n-C10	0.000	0	N.D.	ug/mld
5)	n-C11	7.648	1185	0.015	ug/mlm
7)	n-C12	8.905	6484	0.079	ug/mlm
8)	i-13	0.000	0	N.D.	ug/mld
9)	i-14	0.000	0	N.D.	ug/mld
10)	n-C13	10.080	3172	0.039	ug/mlm
11)	i-15	10.923	1239	0.015	ug/mlm
12)	n-C14	11.175	7158	0.085	ug/mlm
13)	i-16	11.909f	3381	0.040	ug/mlm
14)	n-C15	12.222	20126	0.237	ug/mlm
15)	n-C16	13.248	15960	0.187	ug/mlm
17)	i-18	13.820	2320	0.027	ug/mlm
18)	n-C17	14.359	50838	0.571	ug/mlm
19)	Pristane	14.462	11053	0.125	ug/mlm
20)	n-C18	15.537	56082	0.643	ug/mlm
21)	Phytane	15.714	14904	0.168	ug/mlm
22)	n-C19	16.796	70652	0.815	ug/mlm
24)	n-C20	18.076	22024	0.254	ug/mlm
25)	n-C21	19.384	197913	2.266	ug/mlm
26)	n-C22	20.684	19097	0.219	ug/mlm
27)	n-C23	21.977	118217	1.352	ug/mlm
28)	n-C24	23.238	33932	0.388	ug/mlm
29)	n-C25	24.478	115052	1.316	ug/mlm
30)	n-C26	25.678	33333	0.381	ug/mlm
31)	n-C27	26.847	225146	2.638	ug/mlm
32)	n-C28	27.972	67583	0.781	ug/mlm
33)	n-C29	29.081	348415	4.010	ug/mlm
35)	n-C30	30.135	34632	0.402	ug/mlm
36)	n-C31	31.178	284270	3.350	ug/mlm
37)	n-C32	32.168	27417	0.326	ug/mlm
38)	n-C33	33.163	136634	1.661	ug/mlm
39)	n-C34	34.066	6014	0.072	ug/mlm
40)	n-C35	35.091	82134	1.011	ug/mlm

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1602.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 08:04:24
Operator : Meghan Dailey
Sample : SED-DA-BG-007 (0-0.5)
Misc :
ALS Vial : 10 Sample Multiplier: 0.0665779

Integration File: autoint1.e
Quant Time: Aug 26 18:40:42 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.257	9921	0.113	ug/mlm
42)	n-C37	37.616	73282	0.916	ug/mlm
43)	n-C38	39.208	8782	0.112	ug/mlm
44)	n-C39	41.096	11742	0.156	ug/mlm
45)	n-C40	0.000	0	N.D.	ug/mld
46)	TPH	31.057	43306916	517.001	ug/mlm
47)	TRH1	8.702	462140	5.517	ug/mlm
48)	TRH2	17.304	3213478	38.363	ug/mlm
49)	TRH3	26.617f	2054629	24.517	ug/mlm
50)	TRH4	31.057f	5350122	63.870	ug/mlm
51)	TRH5	33.064	5595608	66.801	ug/mlm
52)	TRH6	40.127f	801209	9.565	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

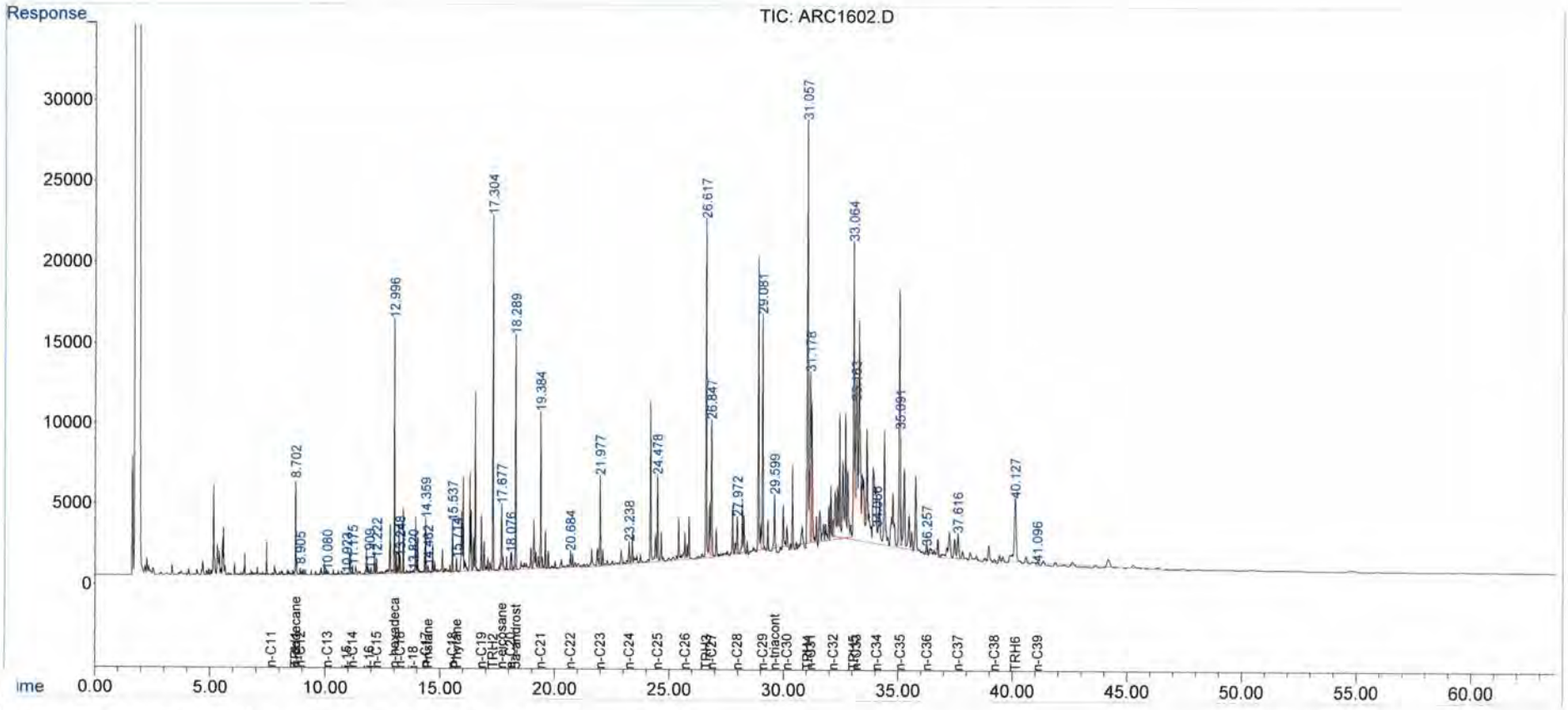
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1602.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 08:04:24
Operator : Meghan Dailey
Sample : SED-DA-BG-007 (0-0.5)
Misc :
ALS Vial : 10 Sample Multiplier: 0.0665779

Integration File: autoint1.e
Quant Time: Aug 26 18:40:42 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



			Concentration
Data File Name	ARC1603.D		ARC1603.D
Sample Name	SED-DA-DUP-02-073013		SED-DA-DUP-02-073013
Misc Info	0		16-Aug-2013, 10:26:04
Data File Path	C:\msdchem\2\data\FID10078\		ALI2012.M
Operator	Meghan Dailey		
Date Acquired	16-Aug-2013, 10:26:04		0.0665336
Instrument Name	HP5890		
Acq. Method File	ALI2012.M	Vial #	12
Vial Number	12	IS Area 1	257016
Sample Multiplier	0.0665336	IS Area 2	311399

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	6.30	1133.75	0.01	0.013
5)	n-C11	7.65	2251.59	0.03	0.026
7)	n-C12	8.91	5206.42	0.06	0.058
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	10.08	4728.52	0.05	0.053
11)	i-15	10.96	3354.62	0.04	0.036
12)	n-C14	11.18	10227.1	0.11	0.112
13)	i-16	11.86	11221.6	0.12	0.121
14)	n-C15	12.22	69680.1	0.75	0.754
15)	n-C16	13.25	16743.2	0.18	0.181
17)	i-18	13.82	6865.48	0.08	0.076
18)	n-C17	14.36	35968	0.39	0.388
19)	Pristane	14.48	46094.1	0.50	0.500
20)	n-C18	15.54	158058	1.74	1.741
21)	Phytane	15.72	68909.3	0.75	0.745
22)	n-C19	16.80	143299	1.59	1.588
24)	n-C20	18.08	36947.6	0.41	0.409
25)	n-C21	19.39	413560	4.55	4.551
26)	n-C22	20.69	51255.7	0.56	0.564
27)	n-C23	22.00	492922	5.42	5.419
28)	n-C24	23.24	97722.4	1.08	1.075
29)	n-C25	24.50	522102	5.74	5.738
30)	n-C26	25.69	50304.8	0.55	0.553
31)	n-C27	26.87	578278	6.51	6.512
32)	n-C28	27.99	57280.6	0.64	0.636
33)	n-C29	29.12	694967	7.69	7.687
35)	n-C30	30.16	32827.9	0.37	0.366
36)	n-C31	31.12	861006	9.75	9.752
37)	n-C32	32.14	87651.1	1.00	1.001
38)	n-C33	33.15	652931	7.63	7.630
39)	n-C34	34.13	89802.9	1.04	1.038
40)	n-C35	35.14	677892	8.02	8.021
41)	n-C36	36.28	64411.3	0.71	0.707
42)	n-C37	37.67	192752	2.32	2.317
43)	n-C38	39.27	47021.7	0.57	0.574
44)	n-C39	41.12	112905	1.44	1.439
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	33.48	143758000	1649.43	1649.428
47)	TRH1	13.00	1883570	21.61	21.611
48)	TRH2	17.31	5464240	62.69	62.695
49)	TRH3	26.64	5537850	63.51	63.509
50)	TRH4	31.15	14970600	171.77	171.767
51)	TRH5	33.48	41759800	479.14	479.138
52)	TRH6	40.27	3234950	37.12	37.117
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	88706.1	1.11	83.6
23)	n-eicosane-d42	17.68	84512	1.18	87.7
34)	n-triacontane-d62	29.61	77475.9	1.11	83.1
1)	n-hexadecane-d34	13.00	257016	3.33	257016.000
16)	5a-androstane	18.29	311399	3.33	311399.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1603.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 10:26:04
Operator : Meghan Dailey
Sample : SED-DA-DUP-02-073013
Misc :
ALS Vial : 12 Sample Multiplier: 0.0665336

Integration File: autoint1.e
Quant Time: Aug 26 18:46:03 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	n-hexadecane-d34	12.997	257016	50.000 ug/mlm
16) I	5a-androstane	18.293	311399	50.072 ug/mlm
	System Monitoring Compounds			
6) S	n-dodecane-d26	8.702	88706	1.112 ug/mlm
23) S	n-eicosane-d42	17.682	84512	1.175 ug/mlm
34) S	n-triacontane-d62	29.615	77476	1.107 ug/mlm
	Target Compounds			
2)	n-C8	0.000	0	N.D. ug/mld
3)	n-C9	0.000	0	N.D. ug/mld
4)	n-C10	6.300	1134	0.013 ug/mlm
5)	n-C11	7.649	2252	0.026 ug/mlm
7)	n-C12	8.906	5206	0.058 ug/mlm
8)	i-13	0.000	0	N.D. ug/mld
9)	i-14	0.000	0	N.D. ug/mld
10)	n-C13	10.081	4729	0.053 ug/mlm
11)	i-15	10.957	3355	0.036 ug/mlm
12)	n-C14	11.177	10227	0.112 ug/mlm
13)	i-16	11.857	11222	0.121 ug/mlm
14)	n-C15	12.223	69680	0.754 ug/mlm
15)	n-C16	13.249	16743	0.181 ug/mlm
17)	i-18	13.818	6865	0.076 ug/mlm
18)	n-C17	14.360	35968	0.388 ug/mlm
19)	Pristane	14.478	46094	0.500 ug/mlm
20)	n-C18	15.541	158058	1.741 ug/mlm
21)	Phytane	15.718	68909	0.745 ug/mlm
22)	n-C19	16.800	143299	1.588 ug/mlm
24)	n-C20	18.078	36948	0.409 ug/mlm
25)	n-C21	19.394	413560	4.551 ug/mlm
26)	n-C22	20.690	51256	0.564 ug/mlm
27)	n-C23	22.000	492922	5.419 ug/mlm
28)	n-C24	23.245	97722	1.075 ug/mlm
29)	n-C25	24.500	522102	5.738 ug/mlm
30)	n-C26	25.686	50305	0.553 ug/mlm
31)	n-C27	26.870	578278	6.512 ug/mlm
32)	n-C28	27.991	57281	0.636 ug/mlm
33)	n-C29	29.118	694967	7.687 ug/mlm
35)	n-C30	30.165	32828	0.366 ug/mlm
36)	n-C31	31.123	861006	9.752 ug/mlm
37)	n-C32	32.143	87651	1.001 ug/mlm
38)	n-C33	33.150	652931	7.630 ug/mlm
39)	n-C34	34.131f	89803	1.038 ug/mlm
40)	n-C35	35.139	677892	8.021 ug/mlm

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1603.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 10:26:04
Operator : Meghan Dailey
Sample : SED-DA-DUP-02-073013
Misc :
ALS Vial : 12 Sample Multiplier: 0.0665336

Integration File: autoint1.e
Quant Time: Aug 26 18:46:03 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.280	64411	0.707	ug/mlm
42)	n-C37	37.673	192752	2.317	ug/mlm
43)	n-C38	39.272	47022	0.574	ug/mlm
44)	n-C39	41.117	112905	1.439	ug/mlm
45)	n-C40	0.000	0	N.D.	ug/mld
46)	TPH	33.480	143757639	1649.427	ug/mlm
47)	TRH1	12.997f	1883568	21.611	ug/mlm
48)	TRH2	17.312	5464238	62.695	ug/mlm
49)	TRH3	26.639f	5537854	63.509	ug/mlm
50)	TRH4	31.146f	14970585	171.767	ug/mlm
51)	TRH5	33.480	41759818	479.138	ug/mlm
52)	TRH6	40.273f	3234947	37.117	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

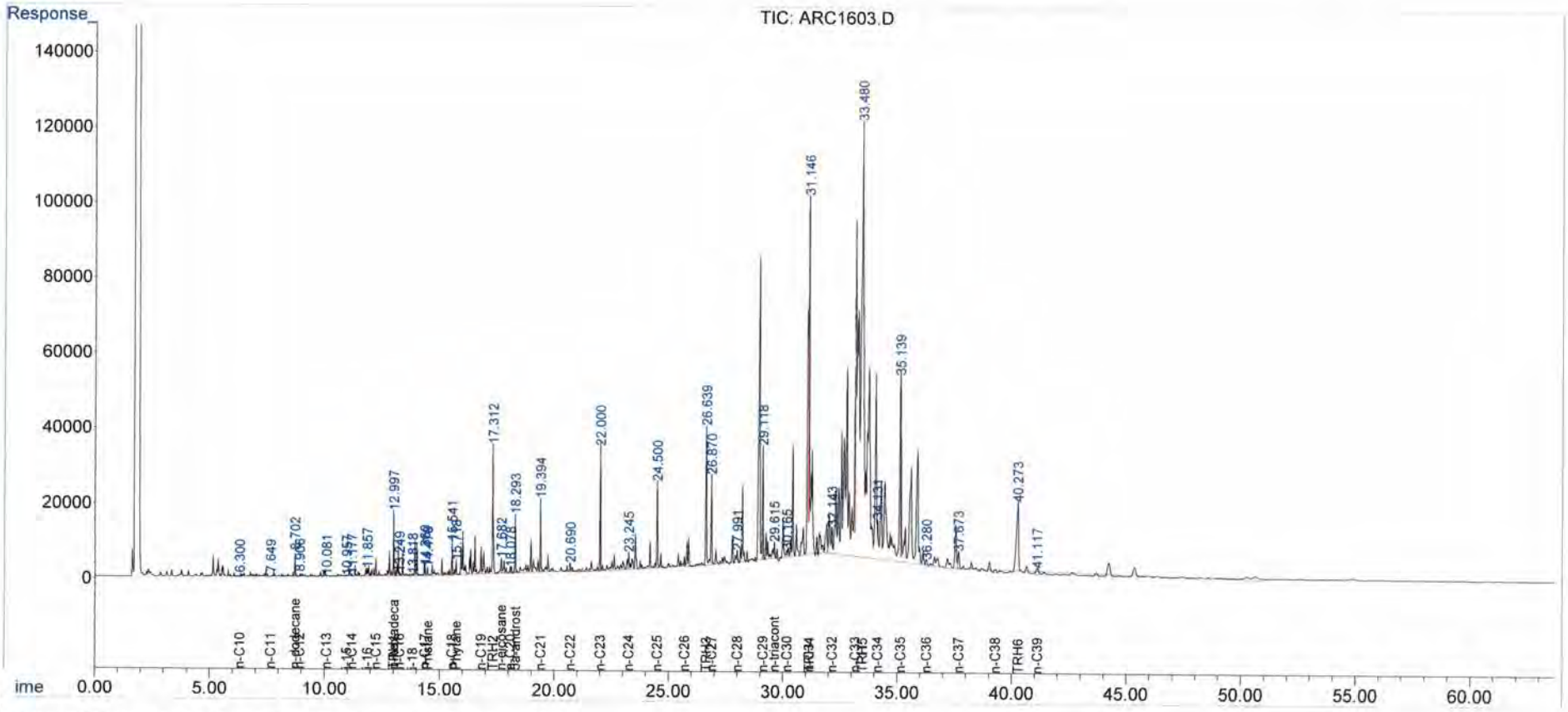
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1603.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 10:26:04
Operator : Meghan Dailey
Sample : SED-DA-DUP-02-073013
Misc :
ALS Vial : 12 Sample Multiplier: 0.0665336

Integration File: autoint1.e
Quant Time: Aug 26 18:46:03 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



			Concentration
Data File Name	ARC1611.D		ARC1611.D
Sample Name	SED-DA-BG-011 (0-0.5)		SED-DA-BG-011 (0-0.5)
Misc Info	0		16-Aug-2013, 11:36:47
Data File Path	C:\msdchem\2\data\FID10078\		ALI2012.M
Operator	Meghan Dailey		
Date Acquired	16-Aug-2013, 11:36:47		0.0666667
Instrument Name	HP5890		
Acq. Method File	ALI2012.M	Vial #	13
Vial Number	13	IS Area 1	245023
Sample Multiplier	0.0666667	IS Area 2	311070

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	6.30	1527.36	0.02	0.019
5)	n-C11	7.65	2061.28	0.03	0.025
7)	n-C12	8.90	8575.31	0.10	0.101
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	10.08	4248.35	0.05	0.050
11)	i-15	10.96	1741.65	0.02	0.020
12)	n-C14	11.18	5816.2	0.07	0.067
13)	i-16	11.88	760.66	0.01	0.009
14)	n-C15	12.21	17191.7	0.20	0.195
15)	n-C16	13.25	16657.9	0.19	0.189
17)	i-18	13.81	6508.33	0.07	0.072
18)	n-C17	14.36	43568.7	0.47	0.472
19)	Pristane	14.47	21852.6	0.24	0.238
20)	n-C18	15.54	51905.7	0.57	0.574
21)	Phytane	15.72	31120.5	0.34	0.338
22)	n-C19	16.80	29661.7	0.33	0.330
24)	n-C20	18.08	9323.04	0.10	0.104
25)	n-C21	19.39	73306.5	0.81	0.809
26)	n-C22	20.69	12023.6	0.13	0.133
27)	n-C23	21.98	35003.9	0.39	0.386
28)	n-C24	23.25	16863	0.19	0.186
29)	n-C25	24.49	57775.5	0.64	0.637
30)	n-C26	25.69	19656.1	0.22	0.217
31)	n-C27	26.86	140648	1.59	1.589
32)	n-C28	27.99	51170.9	0.57	0.570
33)	n-C29	29.09	129147	1.43	1.433
35)	n-C30	30.15	39010	0.44	0.437
36)	n-C31	31.17	136754	1.55	1.554
37)	n-C32	32.18	31161.8	0.36	0.357
38)	n-C33	33.17	142737	1.67	1.673
39)	n-C34	34.09	17981.5	0.21	0.208
40)	n-C35	35.11	139770	1.66	1.659
41)	n-C36	36.27	31998	0.35	0.352
42)	n-C37	37.65	118618	1.43	1.430
43)	n-C38	39.24	10553.6	0.13	0.129
44)	n-C39	41.10	18117.2	0.23	0.232
45)	n-C40	43.28	16079.4	0.22	0.219
46)	TPH	19.61	76387900	879.13	879.134
47)	TRH1	8.70	477436	5.49	5.495
48)	TRH2	19.61	2458890	28.30	28.299
49)	TRH3	26.62	1533080	17.64	17.636
50)	TRH4	31.06	4077400	46.93	46.926
51)	TRH5	33.21	7324800	84.30	84.299
52)	TRH6	37.65	780861	8.99	8.987
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	85262.3	1.12	84.2
23)	n-eicosane-d42	17.68	88637.9	1.24	92.1
34)	n-triacontane-d62	29.61	84611.8	1.21	90.8
1)	n-hexadecane-d34	13.00	245023	3.33	245023.000
16)	5a-androstane	18.29	311070	3.34	311070.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1611.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 11:36:47
Operator : Meghan Dailey
Sample : SED-DA-BG-011 (0-0.5)
Misc :
ALS Vial : 13 Sample Multiplier: 0.0666667

Integration File: autoint1.e
Quant Time: Aug 26 18:48:44 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	n-hexadecane-d34	12.998	245023	50.000 ug/mlm
16) I	5a-androstane	18.293	311070	50.072 ug/mlm
	System Monitoring Compounds			
6) S	n-dodecane-d26	8.702	85262	1.123 ug/mlm
23) S	n-eicosane-d42	17.681	88638	1.236 ug/mlm
34) S	n-triacontane-d62	29.610	84612	1.212 ug/mlm
	Target Compounds			
2)	n-C8	0.000	0	N.D. ug/mld
3)	n-C9	0.000	0	N.D. ug/mld
4)	n-C10	6.301	1527	0.019 ug/mlm
5)	n-C11	7.649	2061	0.025 ug/mlm
7)	n-C12	8.903	8575	0.101 ug/mlm
8)	i-13	0.000	0	N.D. ug/mld
9)	i-14	0.000	0	N.D. ug/mld
10)	n-C13	10.082	4248	0.050 ug/mlm
11)	i-15	10.956	1742	0.020 ug/mlm
12)	n-C14	11.177	5816	0.067 ug/mlm
13)	i-16	11.883	761	0.009 ug/mlm
14)	n-C15	12.212	17192	0.195 ug/mlm
15)	n-C16	13.251	16658	0.189 ug/mlm
17)	i-18	13.814	6508	0.072 ug/mlm
18)	n-C17	14.362	43569	0.472 ug/mlm
19)	Pristane	14.471	21853	0.238 ug/mlm
20)	n-C18	15.541	51906	0.574 ug/mlm
21)	Phytane	15.716	31121	0.338 ug/mlm
22)	n-C19	16.802	29662	0.330 ug/mlm
24)	n-C20	18.081	9323	0.104 ug/mlm
25)	n-C21	19.389	73307	0.809 ug/mlm
26)	n-C22	20.692	12024	0.133 ug/mlm
27)	n-C23	21.982	35004	0.386 ug/mlm
28)	n-C24	23.246	16863	0.186 ug/mlm
29)	n-C25	24.488	57776	0.637 ug/mlm
30)	n-C26	25.686	19656	0.217 ug/mlm
31)	n-C27	26.859	140648	1.589 ug/mlm
32)	n-C28	27.986	51171	0.570 ug/mlm
33)	n-C29	29.087	129147	1.433 ug/mlm
35)	n-C30	30.149	39010	0.437 ug/mlm
36)	n-C31	31.170	136754	1.554 ug/mlm
37)	n-C32	32.181	31162	0.357 ug/mlm
38)	n-C33	33.170	142737	1.673 ug/mlm
39)	n-C34	34.093	17981	0.208 ug/mlm
40)	n-C35	35.107	139770	1.659 ug/mlm

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1611.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 11:36:47
Operator : Meghan Dailey
Sample : SED-DA-BG-011 (0-0.5)
Misc :
ALS Vial : 13 Sample Multiplier: 0.0666667

Integration File: autoint1.e
Quant Time: Aug 26 18:48:44 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.269	31998	0.352	ug/mlm
42)	n-C37	37.647	118618	1.430	ug/mlm
43)	n-C38	39.239	10554	0.129	ug/mlm
44)	n-C39	41.102	18117	0.232	ug/mlm
45)	n-C40	43.284	16079	0.219	ug/mlm
46)	TPH	19.611	76387928	879.131	ug/mlm
47)	TRH1	8.702	477436	5.495	ug/mlm
48)	TRH2	19.611f	2458891	28.299	ug/mlm
49)	TRH3	26.617f	1533081	17.636	ug/mlm
50)	TRH4	31.061f	4077405	46.926	ug/mlm
51)	TRH5	33.207	7324805	84.299	ug/mlm
52)	TRH6	37.647f	780861	8.987	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

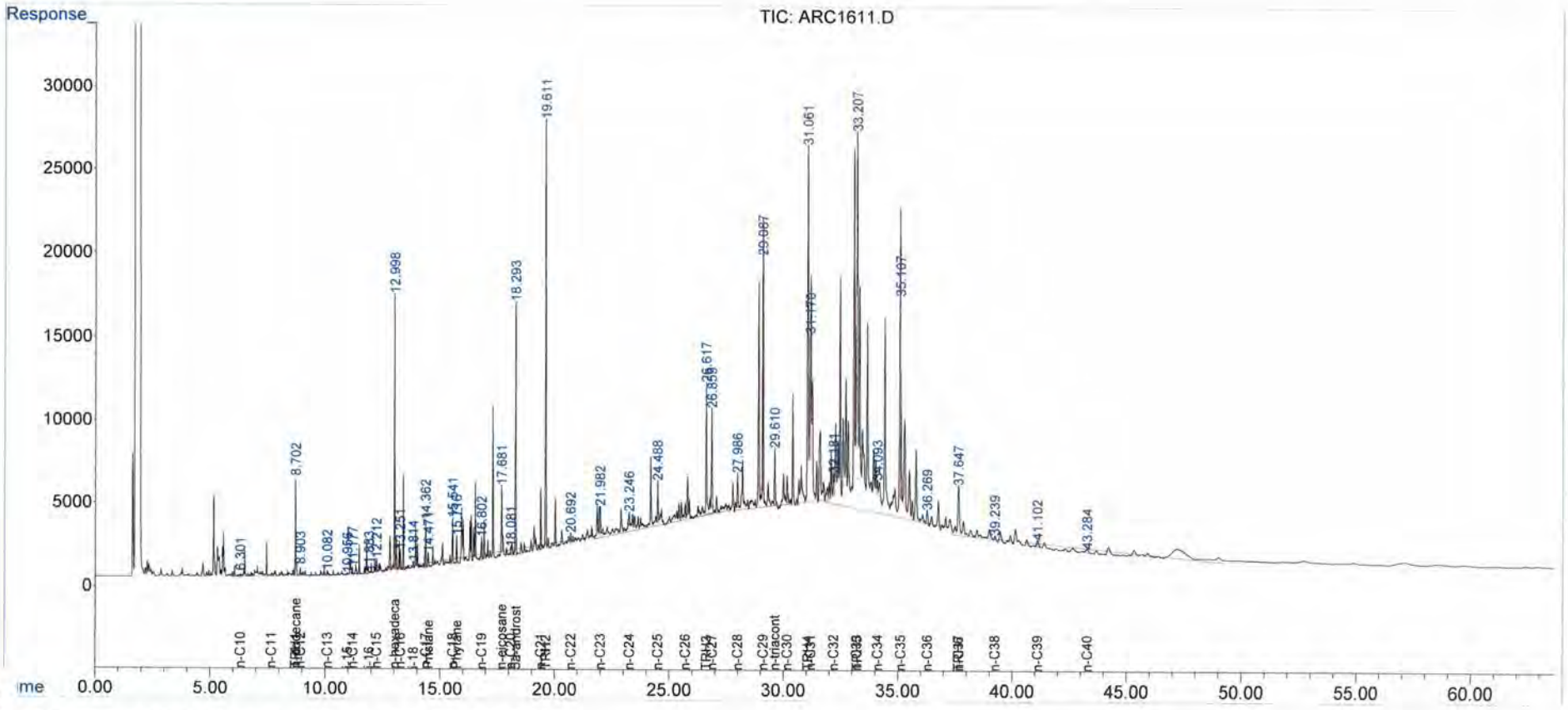
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1611.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 11:36:47
Operator : Meghan Dailey
Sample : SED-DA-BG-011 (0-0.5)
Misc :
ALS Vial : 13 Sample Multiplier: 0.0666667

Integration File: autoint1.e
Quant Time: Aug 26 18:48:44 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



			Concentration
Data File Name	ARC1612.D		ARC1612.D
Sample Name	SED-DA-BG-010 (0-0.5)		SED-DA-BG-010 (0-0.5)
Misc Info	0		16-Aug-2013, 12:47:23
Data File Path	C:\msdchem\2\data\FID10078\		ALI2012.M
Operator	Meghan Dailey		
Date Acquired	16-Aug-2013, 12:47:23		0.0666223
Instrument Name	HP5890		
Acq. Method File	ALI2012.M	Vial #	14
Vial Number	14	IS Area 1	257255
Sample Multiplier	0.0666223	IS Area 2	323134

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	6.30	1814.07	0.02	0.022
5)	n-C11	7.65	2184.32	0.03	0.026
7)	n-C12	8.91	5974.46	0.07	0.067
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	10.08	3940.43	0.04	0.044
11)	i-15	10.93	2323.64	0.03	0.025
12)	n-C14	11.18	5537.45	0.06	0.060
13)	i-16	11.92	1947.42	0.02	0.021
14)	n-C15	12.21	14446.9	0.16	0.156
15)	n-C16	13.25	12886.8	0.14	0.139
17)	i-18	13.82	6969.27	0.07	0.074
18)	n-C17	14.36	27723.7	0.29	0.289
19)	Pristane	14.47	21224.2	0.22	0.222
20)	n-C18	15.54	42026	0.45	0.447
21)	Phytane	15.71	29575	0.31	0.309
22)	n-C19	16.80	38050.2	0.41	0.407
24)	n-C20	18.08	9110.46	0.10	0.097
25)	n-C21	19.39	63493.1	0.67	0.674
26)	n-C22	20.70	8956.74	0.10	0.095
27)	n-C23	21.99	29694.2	0.32	0.315
28)	n-C24	23.25	12859.8	0.14	0.137
29)	n-C25	24.49	59519	0.63	0.631
30)	n-C26	25.70	15840.5	0.17	0.168
31)	n-C27	26.86	121788	1.32	1.323
32)	n-C28	27.99	45547.8	0.49	0.488
33)	n-C29	29.10	288783	3.08	3.082
35)	n-C30	30.16	32791.7	0.35	0.353
36)	n-C31	31.19	251140	2.74	2.745
37)	n-C32	32.19	23121.5	0.25	0.255
38)	n-C33	33.19	154466	1.74	1.742
39)	n-C34	34.09	5805.44	0.06	0.065
40)	n-C35	35.10	133095	1.52	1.520
41)	n-C36	36.27	17270.3	0.18	0.183
42)	n-C37	37.64	73444.8	0.85	0.852
43)	n-C38	39.25	6350.36	0.07	0.075
44)	n-C39	41.13	8991.91	0.11	0.111
45)	n-C40	43.27	10080.3	0.13	0.132
46)	TPH	31.06	71883400	795.87	795.870
47)	TRH1	8.70	406340	4.50	4.499
48)	TRH2	13.00	2405860	26.64	26.637
49)	TRH3	26.62	1415200	15.66	15.661
50)	TRH4	31.06	3638900	40.29	40.289
51)	TRH5	33.08	5598040	61.98	61.980
52)	TRH6	37.64	641450	7.10	7.102
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	90163.3	1.13	84.8
23)	n-eicosane-d42	17.69	87502.6	1.17	87.5
34)	n-triacontane-d62	29.62	82121.2	1.13	84.9
1)	n-hexadecane-d34	13.00	257255	3.33	257255.000
16)	5a-androstane	18.30	323134	3.34	323134.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1612.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 12:47:23
Operator : Meghan Dailey
Sample : SED-DA-BG-010 (0-0.5)
Misc :
ALS Vial : 14 Sample Multiplier: 0.0666223

Integration File: autoint1.e
Quant Time: Aug 28 07:40:49 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	n-hexadecane-d34	12.999	257255	50.000 ug/mlm
16) I	5a-androstane	18.297	323134	50.072 ug/mlm
	System Monitoring Compounds			
6) S	n-dodecane-d26	8.703	90163	1.131 ug/mlm
23) S	n-eicosane-d42	17.685	87503	1.174 ug/mlm
34) S	n-triacontane-d62	29.616	82121	1.132 ug/mlm
	Target Compounds			
2)	n-C8	0.000	0	N.D. ug/mld
3)	n-C9	0.000	0	N.D. ug/mld
4)	n-C10	6.303	1814	0.022 ug/mlm
5)	n-C11	7.649	2184	0.026 ug/mlm
7)	n-C12	8.906	5974	0.067 ug/mlm
8)	i-13	0.000	0	N.D. ug/mld
9)	i-14	0.000	0	N.D. ug/mld
10)	n-C13	10.082	3940	0.044 ug/mlm
11)	i-15	10.928	2324	0.025 ug/mlm
12)	n-C14	11.177	5537	0.060 ug/mlm
13)	i-16	11.916f	1947	0.021 ug/mlm
14)	n-C15	12.213	14447	0.156 ug/mlm
15)	n-C16	13.251	12887	0.139 ug/mlm
17)	i-18	13.818	6969	0.074 ug/mlm
18)	n-C17	14.363	27724	0.289 ug/mlm
19)	Pristane	14.471	21224	0.222 ug/mlm
20)	n-C18	15.541	42026	0.447 ug/mlm
21)	Phytane	15.715	29575	0.309 ug/mlm
22)	n-C19	16.802	38050	0.407 ug/mlm
24)	n-C20	18.081	9110	0.097 ug/mlm
25)	n-C21	19.391	63493	0.674 ug/mlm
26)	n-C22	20.699	8957	0.095 ug/mlm
27)	n-C23	21.987	29694	0.315 ug/mlm
28)	n-C24	23.246	12860	0.137 ug/mlm
29)	n-C25	24.492	59519	0.631 ug/mlm
30)	n-C26	25.695	15840	0.168 ug/mlm
31)	n-C27	26.863	121788	1.323 ug/mlm
32)	n-C28	27.991	45548	0.488 ug/mlm
33)	n-C29	29.097	288783	3.082 ug/mlm
35)	n-C30	30.155	32792	0.353 ug/mlm
36)	n-C31	31.191	251140	2.745 ug/mlm
37)	n-C32	32.190	23122	0.255 ug/mlm
38)	n-C33	33.187f	154466	1.742 ug/mlm
39)	n-C34	34.087	5805	0.065 ug/mlm
40)	n-C35	35.096	133095	1.520 ug/mlm

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1612.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 12:47:23
Operator : Meghan Dailey
Sample : SED-DA-BG-010 (0-0.5)
Misc :
ALS Vial : 14 Sample Multiplier: 0.0666223

Integration File: autoint1.e
Quant Time: Aug 28 07:40:49 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.267	17270	0.183	ug/mlm
42)	n-C37	37.643	73445	0.852	ug/mlm
43)	n-C38	39.249	6350	0.075	ug/mlm
44)	n-C39	41.129	8992	0.111	ug/mlm
45)	n-C40	43.267	10080	0.132	ug/mlm
46)	TPH	31.063	71883353	795.871	ug/mlm
47)	TRH1	8.703	406340	4.499	ug/mlm
48)	TRH2	12.999f	2405862	26.637	ug/mlm
49)	TRH3	26.624f	1415201	15.661	ug/mlm
50)	TRH4	31.063f	3638899	40.289	ug/mlm
51)	TRH5	33.078	5598039	61.980	ug/mlm
52)	TRH6	37.643f	641450	7.102	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

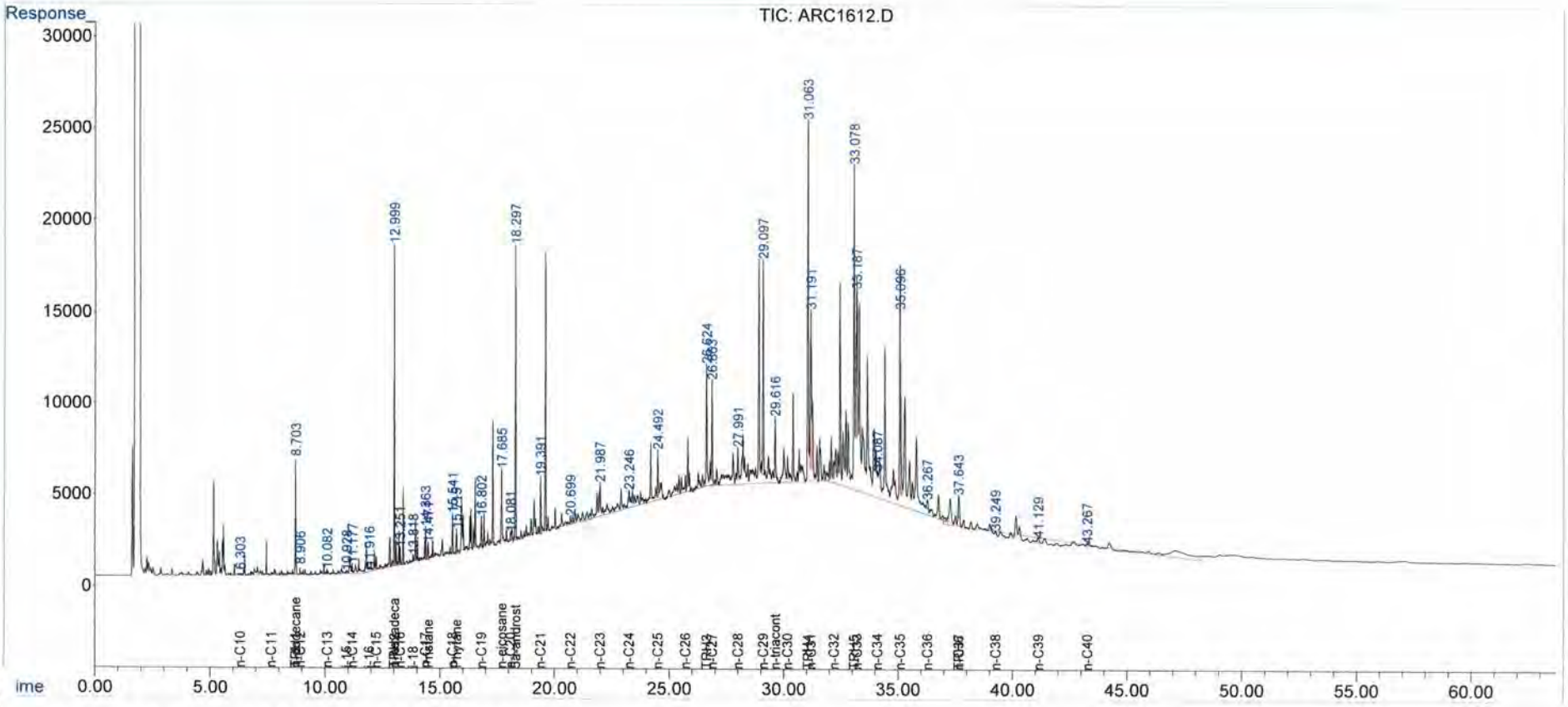
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1612.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 12:47:23
Operator : Meghan Dailey
Sample : SED-DA-BG-010 (0-0.5)
Misc :
ALS Vial : 14 Sample Multiplier: 0.0666223

Integration File: autoint1.e
Quant Time: Aug 28 07:40:49 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



			Concentration
Data File Name	ARC1616.D		ARC1616.D
Sample Name	SED-DA-DUP-03-073113		SED-DA-DUP-03-073113
Misc Info	0		16-Aug-2013, 13:58:00
Data File Path	C:\msdchem\2\data\FID10078\		ALI2012.M
Operator	Meghan Dailey		
Date Acquired	16-Aug-2013, 13:58:00		0.0660939
Instrument Name	HP5890		
Acq. Method File	ALI2012.M	Vial #	15
Vial Number	15	IS Area 1	264981
Sample Multiplier	0.0660939	IS Area 2	335878

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	6.30	843.74	0.01	0.010
5)	n-C11	7.65	1311.52	0.01	0.015
7)	n-C12	8.90	4836.42	0.05	0.052
8)	i-13	0.00	0	0.00	0.000
9)	i-14	9.80	1905.47	0.02	0.020
10)	n-C13	10.08	1673.4	0.02	0.018
11)	i-15	10.96	978.789	0.01	0.010
12)	n-C14	11.18	3169.61	0.03	0.033
13)	i-16	11.84	4066.26	0.04	0.042
14)	n-C15	12.22	9841.66	0.10	0.103
15)	n-C16	13.25	7990.57	0.08	0.083
17)	i-18	13.82	1766.69	0.02	0.018
18)	n-C17	14.36	20503.8	0.20	0.204
19)	Pristane	14.47	2430.99	0.02	0.024
20)	n-C18	15.54	30953	0.31	0.314
21)	Phytane	15.72	7440.68	0.07	0.074
22)	n-C19	16.80	35169.8	0.36	0.359
24)	n-C20	18.08	8861.39	0.09	0.090
25)	n-C21	19.39	73352.1	0.74	0.743
26)	n-C22	20.69	8649.38	0.09	0.088
27)	n-C23	21.98	67891.1	0.69	0.687
28)	n-C24	23.24	28236.5	0.29	0.286
29)	n-C25	24.48	68362.1	0.69	0.692
30)	n-C26	25.68	15811.2	0.16	0.160
31)	n-C27	26.85	131397	1.36	1.363
32)	n-C28	27.97	37796.8	0.39	0.387
33)	n-C29	29.08	268136	2.73	2.731
35)	n-C30	30.14	32603.8	0.34	0.335
36)	n-C31	31.17	157814	1.65	1.646
37)	n-C32	32.18	19462.4	0.20	0.205
38)	n-C33	33.15	93650.6	1.01	1.008
39)	n-C34	34.08	6217.7	0.07	0.066
40)	n-C35	35.09	84573.1	0.92	0.922
41)	n-C36	36.26	9448.13	0.10	0.095
42)	n-C37	37.63	68354.6	0.76	0.757
43)	n-C38	39.23	7897.36	0.09	0.089
44)	n-C39	41.10	6965.19	0.08	0.082
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	31.06	35107900	370.99	370.990
47)	TRH1	8.70	292281	3.09	3.089
48)	TRH2	13.00	2188940	23.13	23.131
49)	TRH3	26.61	1094520	11.56	11.560
50)	TRH4	31.06	2936500	31.03	31.030
51)	TRH5	33.07	6369890	67.31	67.311
52)	TRH6	37.63	453337	4.79	4.790
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	87700.6	1.06	80.1
23)	n-eicosane-d42	17.68	95847.2	1.23	92.3
34)	n-triacontane-d62	29.60	94344.1	1.24	93.8
1)	n-hexadecane-d34	13.00	264981	3.30	264981.000
16)	5a-androstane	18.29	335878	3.31	335878.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1616.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 13:58:00
Operator : Meghan Dailey
Sample : SED-DA-DUP-03-073113
Misc :
ALS Vial : 15 Sample Multiplier: 0.0660939

Integration File: autoint1.e
Quant Time: Aug 28 07:43:09 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	n-hexadecane-d34	12.999	264981	50.000 ug/mlm
16) I	5a-androstane	18.294	335878	50.072 ug/mlm
	System Monitoring Compounds			
6) S	n-dodecane-d26	8.703	87701	1.059 ug/mlm
23) S	n-eicosane-d42	17.681	95847	1.227 ug/mlm
34) S	n-triacontane-d62	29.600	94344	1.241 ug/mlm
	Target Compounds			
2)	n-C8	0.000	0	N.D. ug/mld
3)	n-C9	0.000	0	N.D. ug/mld
4)	n-C10	6.298	844	0.010 ug/mlm
5)	n-C11	7.650	1312	0.015 ug/mlm
7)	n-C12	8.903	4836	0.052 ug/mlm
8)	i-13	0.000	0	N.D. ug/mld
9)	i-14	9.796	1905	0.020 ug/mlm
10)	n-C13	10.081	1673	0.018 ug/mlm
11)	i-15	10.958	979	0.010 ug/mlm
12)	n-C14	11.178	3170	0.033 ug/mlm
13)	i-16	11.844	4066	0.042 ug/mlm
14)	n-C15	12.223	9842	0.103 ug/mlm
15)	n-C16	13.252	7991	0.083 ug/mlm
17)	i-18	13.823	1767	0.018 ug/mlm
18)	n-C17	14.363	20504	0.204 ug/mlm
19)	Pristane	14.470	2431	0.024 ug/mlm
20)	n-C18	15.541	30953	0.314 ug/mlm
21)	Phytane	15.717	7441	0.074 ug/mlm
22)	n-C19	16.799	35170	0.359 ug/mlm
24)	n-C20	18.080	8861	0.090 ug/mlm
25)	n-C21	19.387	73352	0.743 ug/mlm
26)	n-C22	20.688	8649	0.088 ug/mlm
27)	n-C23	21.979	67891	0.687 ug/mlm
28)	n-C24	23.238	28237	0.286 ug/mlm
29)	n-C25	24.482	68362	0.692 ug/mlm
30)	n-C26	25.680	15811	0.160 ug/mlm
31)	n-C27	26.849	131397	1.363 ug/mlm
32)	n-C28	27.974	37797	0.387 ug/mlm
33)	n-C29	29.082	268136	2.731 ug/mlm
35)	n-C30	30.139	32604	0.335 ug/mlm
36)	n-C31	31.173	157814	1.646 ug/mlm
37)	n-C32	32.175	19462	0.205 ug/mlm
38)	n-C33	33.153	93651	1.008 ug/mlm
39)	n-C34	34.077	6218	0.066 ug/mlm
40)	n-C35	35.093	84573	0.922 ug/mlm

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1616.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 13:58:00
Operator : Meghan Dailey
Sample : SED-DA-DUP-03-073113
Misc :
ALS Vial : 15 Sample Multiplier: 0.0660939

Integration File: autoint1.e
Quant Time: Aug 28 07:43:09 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.259	9448	0.095	ug/mlm
42)	n-C37	37.627	68355	0.757	ug/mlm
43)	n-C38	39.233	7897	0.089	ug/mlm
44)	n-C39	41.101	6965	0.082	ug/mlm
45)	n-C40	0.000	0	N.D.	ug/mld
46)	TPH	31.056	35107907	370.990	ug/mlm
47)	TRH1	8.703	292281	3.089	ug/mlm
48)	TRH2	12.999f	2188937	23.131	ug/mlm
49)	TRH3	26.611f	1094519	11.560	ug/mlm
50)	TRH4	31.056f	2936501	31.030	ug/mlm
51)	TRH5	33.066	6369888	67.312	ug/mlm
52)	TRH6	37.627f	453337	4.790	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

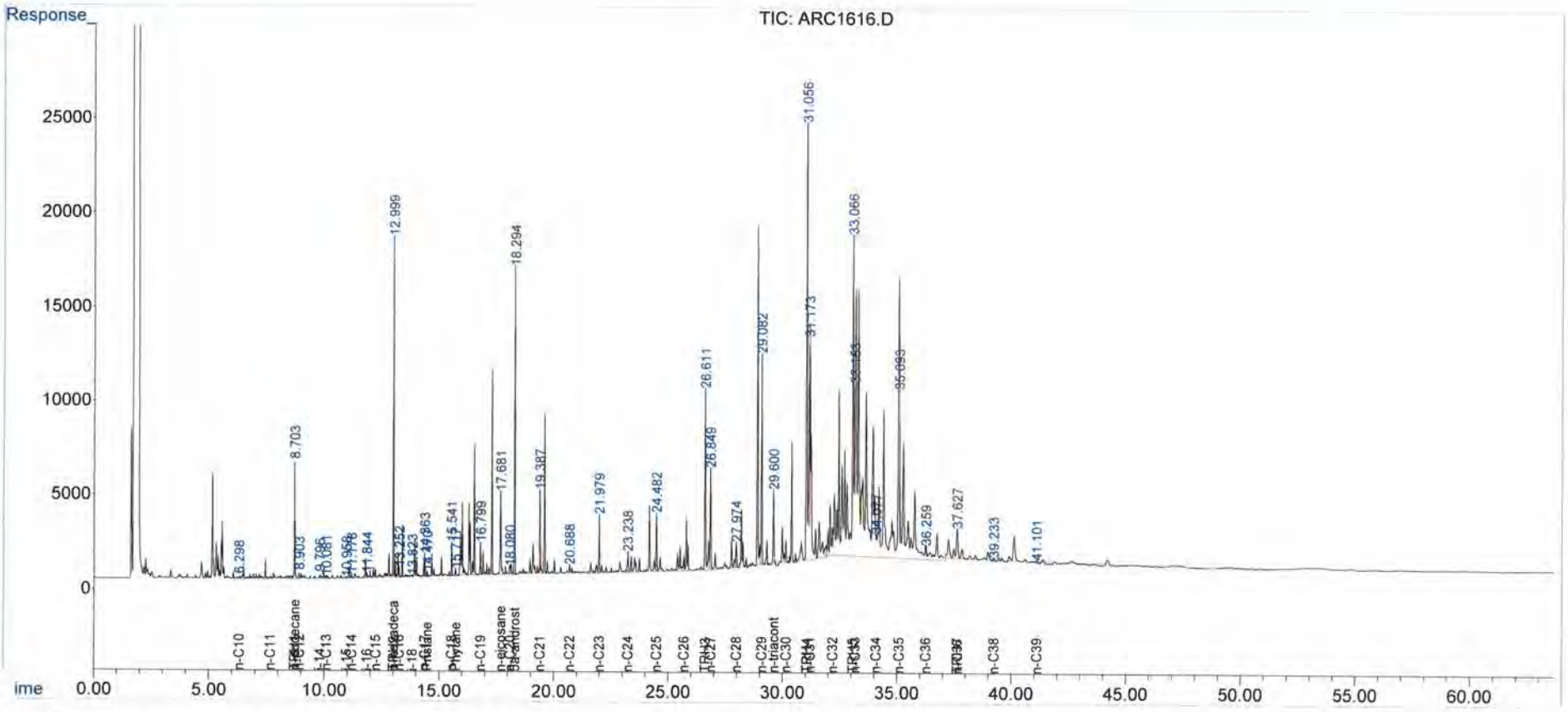
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1616.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 13:58:00
Operator : Meghan Dailey
Sample : SED-DA-DUP-03-073113
Misc :
ALS Vial : 15 Sample Multiplier: 0.0660939

Integration File: autoint1.e
Quant Time: Aug 28 07:43:09 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



			Concentration
Data File Name	**ARC1617.D**		ARC1617.D
Sample Name	**SED-DA-BG-009 (0-0.5)**		SED-DA-BG-009 (0-0.5)
Misc Info	**0**		16-Aug-2013, 15:08:47
Data File Path	**C:\msdchem\2\data\FID10078**		ALI2012.M
Operator	**Meghan Dailey**		
Date Acquired	**16-Aug-2013, 15:08:47**		0.0662691
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	16
Vial Number	**16**	IS Area 1	241007
Sample Multiplier	**0.0662691**	IS Area 2	306289

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	6.30	607.949	0.01	0.008
5)	n-C11	7.65	1133.03	0.01	0.014
7)	n-C12	8.90	3923.75	0.05	0.047
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	10.08	1325.19	0.02	0.016
11)	i-15	10.96	803.646	0.01	0.009
12)	n-C14	11.18	2819.06	0.03	0.033
13)	i-16	11.89	517.364	0.01	0.006
14)	n-C15	12.22	8502.45	0.10	0.098
15)	n-C16	13.25	6662	0.08	0.076
17)	i-18	13.82	1105.04	0.01	0.012
18)	n-C17	14.36	18541.4	0.20	0.203
19)	Pristane	14.47	5820.42	0.06	0.064
20)	n-C18	15.54	27985.4	0.31	0.312
21)	Phytane	15.72	6571.96	0.07	0.072
22)	n-C19	16.80	27961.5	0.31	0.314
24)	n-C20	18.08	7952.01	0.09	0.089
25)	n-C21	19.39	86395.5	0.96	0.963
26)	n-C22	20.69	8360.35	0.09	0.093
27)	n-C23	21.98	67255.9	0.75	0.749
28)	n-C24	23.24	25641.8	0.29	0.286
29)	n-C25	24.48	67080.1	0.75	0.747
30)	n-C26	25.68	14991.5	0.17	0.167
31)	n-C27	26.84	125962	1.44	1.436
32)	n-C28	27.97	25062.7	0.28	0.282
33)	n-C29	29.08	237928	2.66	2.665
35)	n-C30	30.14	28227.7	0.32	0.319
36)	n-C31	31.18	158226	1.81	1.815
37)	n-C32	32.17	13697.2	0.16	0.158
38)	n-C33	33.15	89426.5	1.06	1.058
39)	n-C34	34.08	8644.62	0.10	0.101
40)	n-C35	35.09	79697.8	0.95	0.955
41)	n-C36	36.25	11932	0.13	0.133
42)	n-C37	37.62	65655.9	0.80	0.799
43)	n-C38	39.22	8031.54	0.10	0.099
44)	n-C39	41.10	6512.57	0.08	0.084
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	31.06	31271200	363.33	363.330
47)	TRH1	8.70	287851	3.34	3.344
48)	TRH2	13.00	1725810	20.05	20.052
49)	TRH3	26.61	945390	10.98	10.979
50)	TRH4	31.06	2473580	28.74	28.740
51)	TRH5	33.06	5414920	62.91	62.914
52)	TRH6	37.62	964861	11.21	11.210
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	83810.3	1.12	84.2
23)	n-eicosane-d42	17.68	85190.4	1.20	89.9
34)	n-triacontane-d62	29.60	87847.3	1.27	95.8
1)	n-hexadecane-d34	13.00	241007	3.31	241007.000
16)	5a-androstane	18.29	306289	3.32	306289.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1617.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 15:08:47
Operator : Meghan Dailey
Sample : SED-DA-BG-009 (0-0.5)
Misc :
ALS Vial : 16 Sample Multiplier: 0.0662691

Integration File: autoint1.e
Quant Time: Aug 28 07:45:35 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
Internal Standards					
1) I	n-hexadecane-d34	12.998	241007	50.000	ug/mlm
16) I	5a-androstane	18.292	306289	50.072	ug/mlm
System Monitoring Compounds					
6) S	n-dodecane-d26	8.702	83810	1.116	ug/mlm
23) S	n-eicosane-d42	17.680	85190	1.200	ug/mlm
34) S	n-triacontane-d62	29.600	87847	1.271	ug/mlm
Target Compounds					
2)	n-C8	0.000	0	N.D.	ug/mld
3)	n-C9	0.000	0	N.D.	ug/mld
4)	n-C10	6.299	608	0.008	ug/mlm
5)	n-C11	7.650	1133	0.014	ug/mlm
7)	n-C12	8.902	3924	0.047	ug/mlm
8)	i-13	0.000	0	N.D.	ug/mld
9)	i-14	0.000	0	N.D.	ug/mld
10)	n-C13	10.081	1325	0.016	ug/mlm
11)	i-15	10.957	804	0.009	ug/mlm
12)	n-C14	11.177	2819	0.033	ug/mlm
13)	i-16	11.886	517	0.006	ug/mlm
14)	n-C15	12.222	8502	0.098	ug/mlm
15)	n-C16	13.251	6662	0.076	ug/mlm
17)	i-18	13.822	1105	0.012	ug/mlm
18)	n-C17	14.362	18541	0.203	ug/mlm
19)	Pristane	14.465	5820	0.064	ug/mlm
20)	n-C18	15.540	27985	0.312	ug/mlm
21)	Phytane	15.717	6572	0.072	ug/mlm
22)	n-C19	16.797	27961	0.314	ug/mlm
24)	n-C20	18.080	7952	0.089	ug/mlm
25)	n-C21	19.385	86396	0.963	ug/mlm
26)	n-C22	20.687	8360	0.093	ug/mlm
27)	n-C23	21.980	67256	0.749	ug/mlm
28)	n-C24	23.237	25642	0.286	ug/mlm
29)	n-C25	24.480	67080	0.747	ug/mlm
30)	n-C26	25.680	14991	0.167	ug/mlm
31)	n-C27	26.845	125962	1.436	ug/mlm
32)	n-C28	27.971	25063	0.282	ug/mlm
33)	n-C29	29.079	237928	2.665	ug/mlm
35)	n-C30	30.137	28228	0.319	ug/mlm
36)	n-C31	31.179	158226	1.815	ug/mlm
37)	n-C32	32.173	13697	0.158	ug/mlm
38)	n-C33	33.153	89427	1.058	ug/mlm
39)	n-C34	34.076	8645	0.101	ug/mlm
40)	n-C35	35.092	79698	0.955	ug/mlm

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1617.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 15:08:47
Operator : Meghan Dailey
Sample : SED-DA-BG-009 (0-0.5)
Misc :
ALS Vial : 16 Sample Multiplier: 0.0662691

Integration File: autoint1.e
Quant Time: Aug 28 07:45:35 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.251	11932	0.133	ug/mlm
42)	n-C37	37.622	65656	0.799	ug/mlm
43)	n-C38	39.222	8032	0.099	ug/mlm
44)	n-C39	41.103	6513	0.084	ug/mlm
45)	n-C40	0.000	0	N.D.	ug/mld
46)	TPH	31.056	31271177	363.330	ug/mlm
47)	TRH1	8.702	287851	3.344	ug/mlm
48)	TRH2	12.998f	1725812	20.052	ug/mlm
49)	TRH3	26.610f	945390	10.979	ug/mlm
50)	TRH4	31.056f	2473579	28.740	ug/mlm
51)	TRH5	33.064	5414916	62.914	ug/mlm
52)	TRH6	37.622f	964861	11.210	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

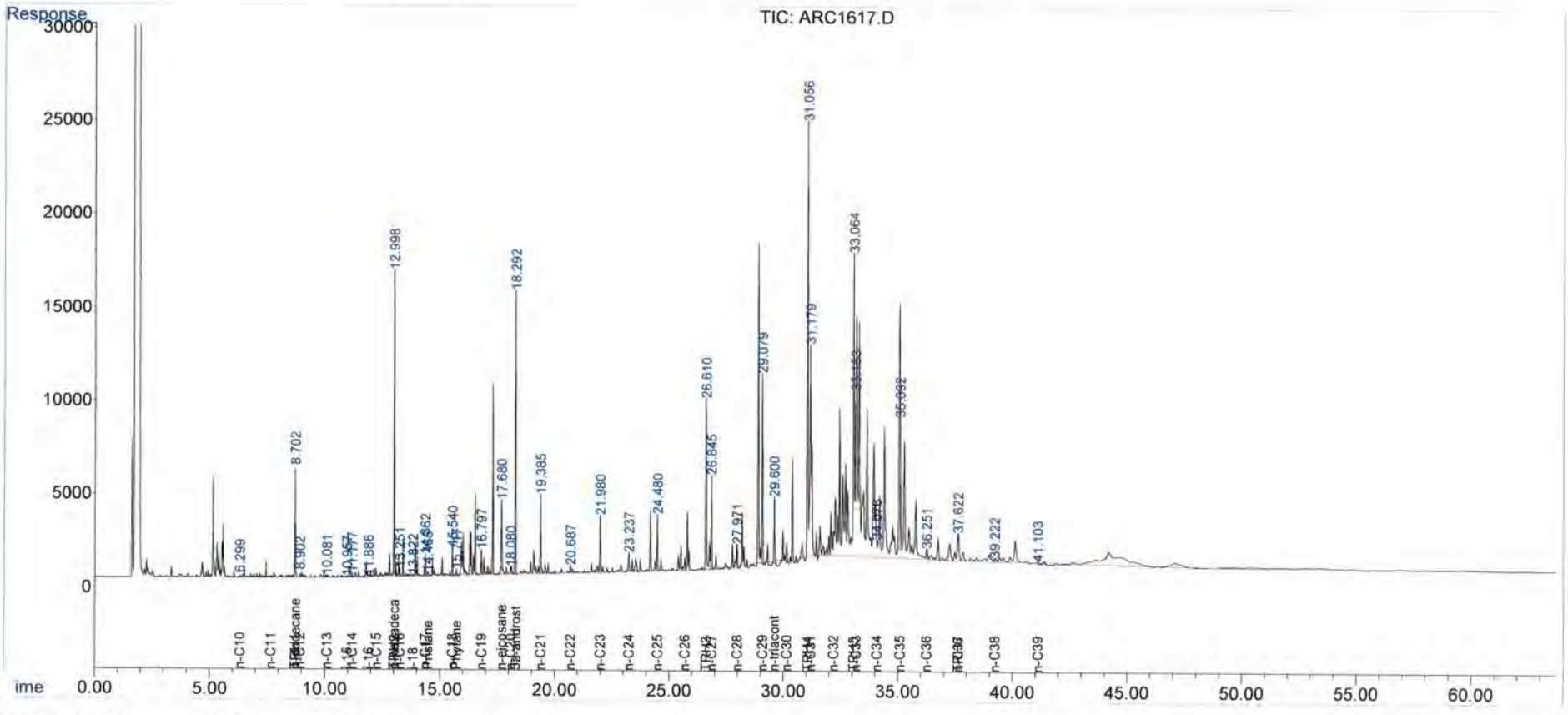
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1617.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 15:08:47
Operator : Meghan Dailey
Sample : SED-DA-BG-009 (0-0.5)
Misc :
ALS Vial : 16 Sample Multiplier: 0.0662691

Integration File: autoint1.e
Quant Time: Aug 28 07:45:35 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



:08FRONT081213.M Wed Sep 11 09:09:06 2013

			Concentration
Data File Name	**ARC1633.D**		ARC1633.D
Sample Name	**SED-DA-009 (0-0.5)**		SED-DA-009 (0-0.5)
Misc Info	**0**		16-Aug-2013, 16:19:32
Data File Path	**C:\msdchem\2\data\FID10078**		ALI2012.M
Operator	**Meghan Dailey**		
Date Acquired	**16-Aug-2013, 16:19:32**		0.0665336
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	17
Vial Number	**17**	IS Area 1	225455
Sample Multiplier	**0.0665336**	IS Area 2	286599

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	6.45	0	0.00	0.000
5)	n-C11	0.00	0	0.00	0.000
7)	n-C12	0.00	0	0.00	0.000
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	10.08	145.181	0.00	0.002
11)	i-15	0.00	0	0.00	0.000
12)	n-C14	11.18	315.26	0.00	0.004
13)	i-16	0.00	0	0.00	0.000
14)	n-C15	12.21	271.132	0.00	0.003
15)	n-C16	13.25	610.72	0.01	0.008
17)	i-18	0.00	0	0.00	0.000
18)	n-C17	14.36	459.068	0.01	0.005
19)	Pristane	14.47	444.838	0.01	0.005
20)	n-C18	15.54	1280.39	0.02	0.015
21)	Phytane	15.71	233.903	0.00	0.003
22)	n-C19	16.80	813.019	0.01	0.010
24)	n-C20	18.08	198.565	0.00	0.002
25)	n-C21	19.39	844.123	0.01	0.010
26)	n-C22	20.69	457.618	0.01	0.005
27)	n-C23	21.98	891.542	0.01	0.011
28)	n-C24	23.24	775.046	0.01	0.009
29)	n-C25	24.48	1344.35	0.02	0.016
30)	n-C26	25.68	844.532	0.01	0.010
31)	n-C27	26.84	2050.99	0.03	0.025
32)	n-C28	27.96	1027.48	0.01	0.012
33)	n-C29	29.07	7345.94	0.09	0.088
35)	n-C30	30.13	1014.99	0.01	0.012
36)	n-C31	31.16	3919.99	0.05	0.048
37)	n-C32	32.15	504.418	0.01	0.006
38)	n-C33	33.14	3655.18	0.05	0.046
39)	n-C34	34.05	275.824	0.00	0.003
40)	n-C35	0.00	0	0.00	0.000
41)	n-C36	0.00	0	0.00	0.000
42)	n-C37	0.00	0	0.00	0.000
43)	n-C38	0.00	0	0.00	0.000
44)	n-C39	0.00	0	0.00	0.000
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	13.00	11493400	143.28	143.282
47)	TRH1	8.70	106637	1.33	1.329
48)	TRH2	13.00	684687	8.54	8.536
49)	TRH3	26.60	73743.6	0.92	0.919
50)	TRH4	29.60	166561	2.08	2.076
51)	TRH5	35.25	584885	7.29	7.291
52)	TRH6	44.05	417702	5.21	5.207
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	74954.2	1.07	80.5
23)	n-eicosane-d42	17.68	85703.1	1.29	96.7
34)	n-triacontane-d62	29.60	83594.9	1.30	97.4
1)	n-hexadecane-d34	13.00	225455	3.33	225455.000
16)	5a-androstane	18.29	286599	3.33	286599.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1633.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 16:19:32
Operator : Meghan Dailey
Sample : SED-DA-009 (0-0.5)
Misc :
ALS Vial : 17 Sample Multiplier: 0.0665336

Integration File: autoint1.e
Quant Time: Aug 28 07:48:44 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1) I	n-hexadecane-d34	12.997	225455	50.000	ug/mlm
16) I	5a-androstane	18.290	286599	50.072	ug/mlm
	System Monitoring Compounds				
6) S	n-dodecane-d26	8.702	74954	1.071	ug/mlm
23) S	n-eicosane-d42	17.678	85703	1.295	ug/mlm
34) S	n-triacontane-d62	29.595	83595	1.297	ug/mlm
	Target Compounds				
2)	n-C8	0.000	0	N.D.	ug/mld
3)	n-C9	0.000	0	N.D.	ug/mld
4)	n-C10	0.000	0	N.D.	ug/mld
5)	n-C11	0.000	0	N.D.	ug/mld
7)	n-C12	0.000	0	N.D.	ug/mld
8)	i-13	0.000	0	N.D.	ug/mld
9)	i-14	0.000	0	N.D.	ug/mld
10)	n-C13	10.080	145	0.002	ug/mlm
11)	i-15	0.000	0	N.D.	ug/mld
12)	n-C14	11.177	315	0.004	ug/mlm
13)	i-16	0.000	0	N.D.	ug/mld
14)	n-C15	12.208	271	0.003	ug/mlm
15)	n-C16	13.252	611	0.008	ug/mlm
17)	i-18	0.000	0	N.D.	ug/mld
18)	n-C17	14.356	459	0.005	ug/mlm
19)	Pristane	14.466	445	0.005	ug/mlm
20)	n-C18	15.542	1280	0.015	ug/mlm
21)	Phytane	15.707	234	0.003	ug/mlm
22)	n-C19	16.804	813	0.010	ug/mlm
24)	n-C20	18.080	199	0.002	ug/mlm
25)	n-C21	19.386	844	0.010	ug/mlm
26)	n-C22	20.689	458	0.005	ug/mlm
27)	n-C23	21.975	892	0.011	ug/mlm
28)	n-C24	23.241	775	0.009	ug/mlm
29)	n-C25	24.478	1344	0.016	ug/mlm
30)	n-C26	25.679	845	0.010	ug/mlm
31)	n-C27	26.843	2051	0.025	ug/mlm
32)	n-C28	27.960	1027	0.012	ug/mlm
33)	n-C29	29.068	7346	0.088	ug/mlm
35)	n-C30	30.131	1015	0.012	ug/mlm
36)	n-C31	31.156	3920	0.048	ug/mlm
37)	n-C32	32.154	504	0.006	ug/mlm
38)	n-C33	33.140	3655	0.046	ug/mlm
39)	n-C34	34.050	276	0.003	ug/mlm
40)	n-C35	0.000	0	N.D.	ug/mld

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1633.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 16:19:32
Operator : Meghan Dailey
Sample : SED-DA-009 (0-0.5)
Misc :
ALS Vial : 17 Sample Multiplier: 0.0665336

Integration File: autoint1.e
Quant Time: Aug 28 07:48:44 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	0.000	0	N.D.	ug/mld
42)	n-C37	0.000	0	N.D.	ug/mld
43)	n-C38	0.000	0	N.D.	ug/mld
44)	n-C39	0.000	0	N.D.	ug/mld
45)	n-C40	0.000	0	N.D.	ug/mld
46)	TPH	12.997f	11493369	143.282	ug/mlm
47)	TRH1	8.702	106637	1.329	ug/mlm
48)	TRH2	12.997f	684687	8.536	ug/mlm
49)	TRH3	26.603f	73744	0.919	ug/mlm
50)	TRH4	29.595	166561	2.076	ug/mlm
51)	TRH5	35.251	584885	7.291	ug/mlm
52)	TRH6	44.045	417702	5.207	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

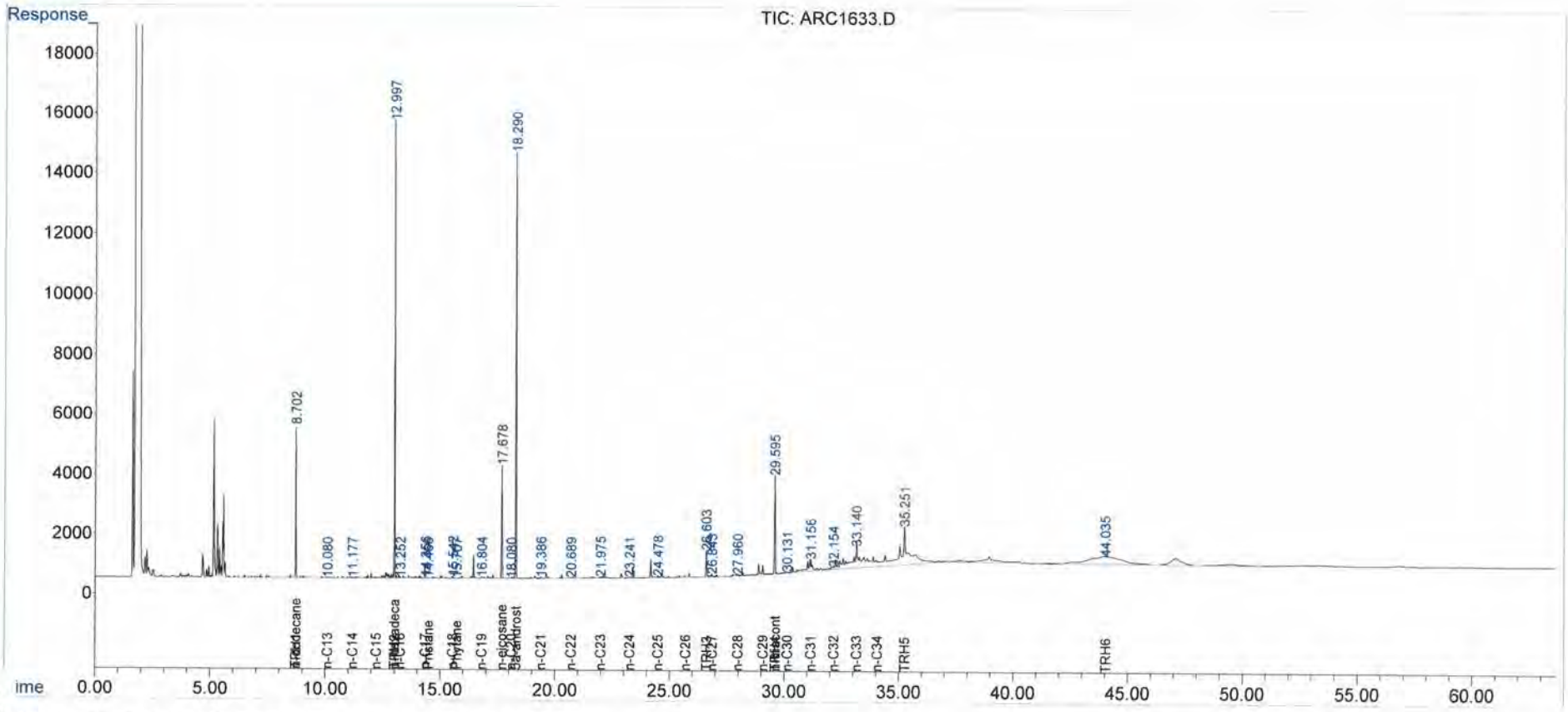
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1633.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 16:19:32
Operator : Meghan Dailey
Sample : SED-DA-009 (0-0.5)
Misc :
ALS Vial : 17 Sample Multiplier: 0.0665336

Integration File: autoint1.e
Quant Time: Aug 28 07:48:44 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



			Concentration
Data File Name	**ARC1634.D**		ARC1634.D
Sample Name	**SED-DA-008 (0-0.5)**		SED-DA-008 (0-0.5)
Misc Info	**0**		16-Aug-2013, 17:30:16
Data File Path	**C:\msdchem\2\data\FID10078**		ALI2012.M
Operator	**Meghan Dailey**		
Date Acquired	**16-Aug-2013, 17:30:16**		0.0659631
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	18
Vial Number	**18**	IS Area 1	276595
Sample Multiplier	**0.0659631**	IS Area 2	352164

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	0.00	0	0.00	0.000
5)	n-C11	0.00	0	0.00	0.000
7)	n-C12	8.90	810.3	0.01	0.008
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	10.08	182.486	0.00	0.002
11)	i-15	0.00	0	0.00	0.000
12)	n-C14	11.18	385.927	0.00	0.004
13)	i-16	0.00	0	0.00	0.000
14)	n-C15	12.22	1889.76	0.02	0.019
15)	n-C16	13.25	943.082	0.01	0.009
17)	i-18	0.00	0	0.00	0.000
18)	n-C17	14.36	727.579	0.01	0.007
19)	Pristane	14.47	485.454	0.00	0.005
20)	n-C18	15.54	1063.15	0.01	0.010
21)	Phytane	15.71	268.863	0.00	0.003
22)	n-C19	16.80	880.822	0.01	0.009
24)	n-C20	18.08	258.874	0.00	0.003
25)	n-C21	19.38	916.53	0.01	0.009
26)	n-C22	20.69	585.091	0.01	0.006
27)	n-C23	21.98	920.537	0.01	0.009
28)	n-C24	23.24	892.745	0.01	0.009
29)	n-C25	24.48	1520.94	0.01	0.015
30)	n-C26	25.68	942.076	0.01	0.009
31)	n-C27	26.84	4483.64	0.04	0.044
32)	n-C28	27.96	989.52	0.01	0.010
33)	n-C29	29.07	6561.98	0.06	0.064
35)	n-C30	30.13	813.841	0.01	0.008
36)	n-C31	31.15	4006.43	0.04	0.040
37)	n-C32	32.16	687.637	0.01	0.007
38)	n-C33	33.13	3101.98	0.03	0.032
39)	n-C34	34.06	283.18	0.00	0.003
40)	n-C35	0.00	0	0.00	0.000
41)	n-C36	0.00	0	0.00	0.000
42)	n-C37	0.00	0	0.00	0.000
43)	n-C38	0.00	0	0.00	0.000
44)	n-C39	0.00	0	0.00	0.000
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	13.00	11923600	119.93	119.933
47)	TRH1	8.70	134622	1.35	1.354
48)	TRH2	13.00	833159	8.38	8.380
49)	TRH3	26.60	53772.6	0.54	0.541
50)	TRH4	29.59	178636	1.80	1.797
51)	TRH5	35.25	626081	6.30	6.297
52)	TRH6	40.25	597333	6.01	6.008
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	93075.3	1.07	81.5
23)	n-eicosane-d42	17.68	101467	1.24	93.1
34)	n-triacontane-d62	29.59	97352.6	1.22	92.3
1)	n-hexadecane-d34	13.00	276595	3.30	276595.000
16)	5a-androstane	18.29	352164	3.30	352164.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1634.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 17:30:16
Operator : Meghan Dailey
Sample : SED-DA-008 (0-0.5)
Misc :
ALS Vial : 18 Sample Multiplier: 0.0659631

Integration File: autoint1.e
Quant Time: Aug 20 14:05:38 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
Internal Standards					
1) I	n-hexadecane-d34	12.997	276595	50.000	ug/mlm
16) I	5a-androstane	18.292	352164	50.072	ug/mlm
System Monitoring Compounds					
6) S	n-dodecane-d26	8.702	93075	1.075	ug/mlm
23) S	n-eicosane-d42	17.678	101467	1.237	ug/mlm
34) S	n-triacontane-d62	29.595	97353	1.219	ug/mlm
Target Compounds					
2)	n-C8	0.000	0	N.D.	ug/mld
3)	n-C9	0.000	0	N.D.	ug/mld
4)	n-C10	0.000	0	N.D.	ug/mld
5)	n-C11	0.000	0	N.D.	ug/mld
7)	n-C12	8.898	810	0.008	ug/mlm
8)	i-13	0.000	0	N.D.	ug/ml
9)	i-14	0.000	0	N.D.	ug/mld
10)	n-C13	10.083	182	0.002	ug/mlm
11)	i-15	0.000	0	N.D.	ug/mld
12)	n-C14	11.177	386	0.004	ug/mlm
13)	i-16	0.000	0	N.D.	ug/mld
14)	n-C15	12.221	1890	0.019	ug/mlm
15)	n-C16	13.248	943	0.009	ug/mlm
17)	i-18	0.000	0	N.D.	ug/mld
18)	n-C17	14.360	728	0.007	ug/mlm
19)	Pristane	14.472	485	0.005	ug/mlm
20)	n-C18	15.538	1063	0.010	ug/mlm
21)	Phytane	15.711	269	0.003	ug/mlm
22)	n-C19	16.802	881	0.009	ug/mlm
24)	n-C20	18.075	259	0.003	ug/mlm
25)	n-C21	19.384	917	0.009	ug/mlm
26)	n-C22	20.687	585	0.006	ug/mlm
27)	n-C23	21.976	921	0.009	ug/mlm
28)	n-C24	23.243	893	0.009	ug/mlm
29)	n-C25	24.475	1521	0.015	ug/mlm
30)	n-C26	25.677	942	0.009	ug/mlm
31)	n-C27	26.840	4484	0.044	ug/mlm
32)	n-C28	27.959	990	0.010	ug/mlm
33)	n-C29	29.069	6562	0.064	ug/mlm
35)	n-C30	30.127	814	0.008	ug/mlm
36)	n-C31	31.155	4006	0.040	ug/mlm
37)	n-C32	32.157	688	0.007	ug/mlm
38)	n-C33	33.130	3102	0.032	ug/mlm
39)	n-C34	34.061	283	0.003	ug/mlm
40)	n-C35	0.000	0	N.D.	ug/mld

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1634.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 17:30:16
Operator : Meghan Dailey
Sample : SED-DA-008 (0-0.5)
Misc :
ALS Vial : 18 Sample Multiplier: 0.0659631

Integration File: autoint1.e
Quant Time: Aug 20 14:05:38 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	0.000	0	N.D.	ug/mld
42)	n-C37	0.000	0	N.D.	ug/mld
43)	n-C38	0.000	0	N.D.	ug/mld
44)	n-C39	0.000	0	N.D.	ug/mld
45)	n-C40	0.000	0	N.D.	ug/mld
46)	TPH	12.997f	11923567	119.933	ug/mlm
47)	TRH1	8.702	134622	1.354	ug/mlm
48)	TRH2	12.997f	833159	8.380	ug/mlm
49)	TRH3	26.600f	53773	0.541	ug/mlm
50)	TRH4	29.595	178636	1.797	ug/mlm
51)	TRH5	35.253	626081	6.297	ug/mlm
52)	TRH6	40.254f	597333	6.008	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

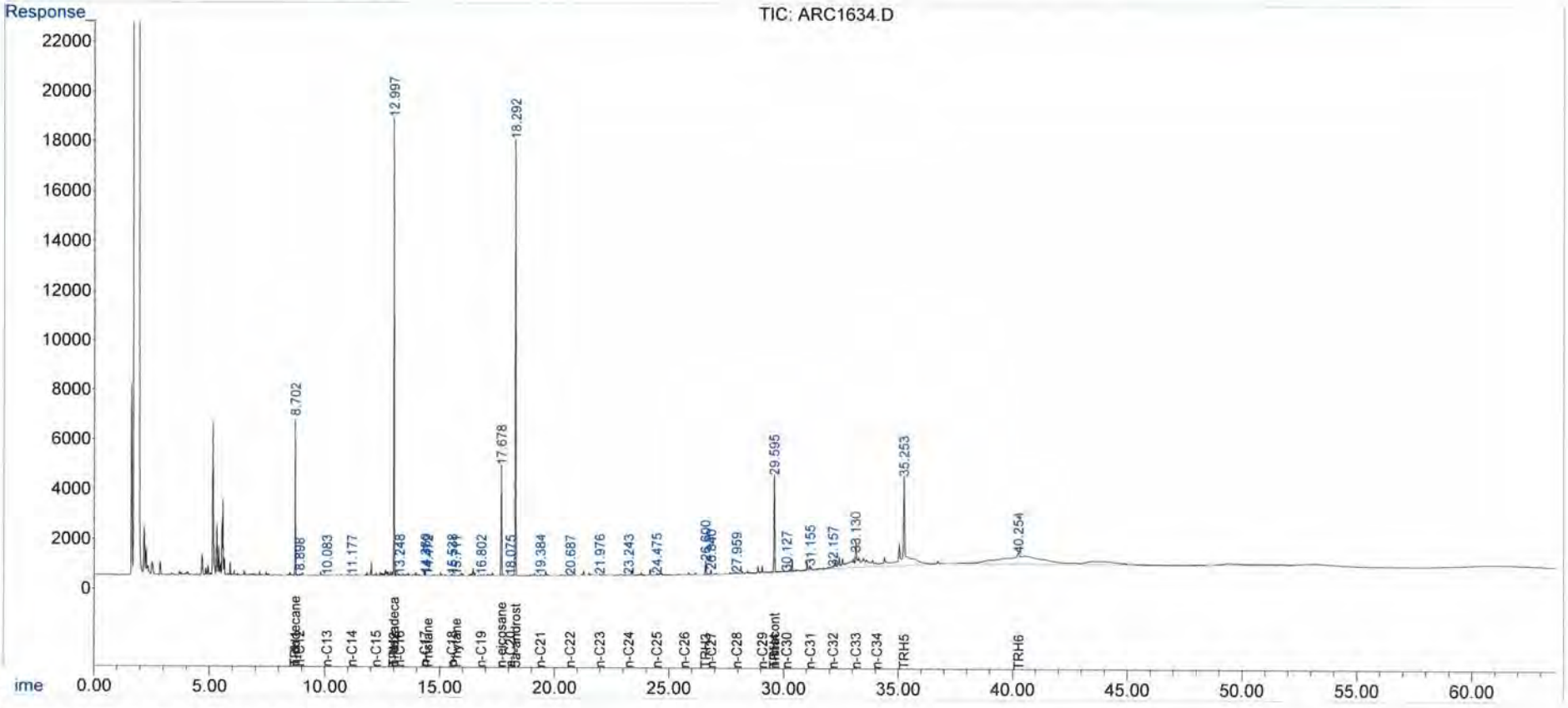
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1634.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 17:30:16
Operator : Meghan Dailey
Sample : SED-DA-008 (0-0.5)
Misc :
ALS Vial : 18 Sample Multiplier: 0.0659631

Integration File: autoint1.e
Quant Time: Aug 20 14:05:38 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data File Name	**ARC1637.D**		**Concentration**
Sample Name	**SED-DA-007 (0-0.5)**		ARC1637.D
Misc Info	**0**		SED-DA-007 (0-0.5)
Data File Path	**C:\msdchem\2\data\FID10078**		16-Aug-2013, 18:40:48
Operator	**Meghan Dailey**		ALI2012.M
Date Acquired	**16-Aug-2013, 18:40:48**		0.0660502
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	19
Vial Number	**19**	IS Area 1	275003
Sample Multiplier	**0.0660502**	IS Area 2	350853

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	6.30	272.692	0.00	0.003
5)	n-C11	7.65	183.77	0.00	0.002
7)	n-C12	8.91	1048.25	0.01	0.011
8)	i-13	0.00	0	0.00	0.000
9)	i-14	9.80	115.618	0.00	0.001
10)	n-C13	10.08	616.164	0.01	0.006
11)	i-15	10.96	883.088	0.01	0.009
12)	n-C14	11.18	1554.82	0.02	0.016
13)	i-16	11.85	851.142	0.01	0.009
14)	n-C15	12.21	1466.14	0.01	0.015
15)	n-C16	13.25	2114.41	0.02	0.021
17)	i-18	13.82	2378.83	0.02	0.023
18)	n-C17	14.36	2485.43	0.02	0.024
19)	Pristane	14.47	5136.36	0.05	0.049
20)	n-C18	15.54	4039.2	0.04	0.039
21)	Phytane	15.71	6874.33	0.07	0.066
22)	n-C19	16.79	3751.26	0.04	0.037
24)	n-C20	18.07	2064.63	0.02	0.020
25)	n-C21	19.38	2201.4	0.02	0.021
26)	n-C22	20.68	2096.84	0.02	0.020
27)	n-C23	21.98	2652.21	0.03	0.026
28)	n-C24	23.24	2782.6	0.03	0.027
29)	n-C25	24.47	3440.77	0.03	0.033
30)	n-C26	25.67	1781.34	0.02	0.017
31)	n-C27	26.83	4963.93	0.05	0.049
32)	n-C28	27.97	2081.84	0.02	0.020
33)	n-C29	29.07	11413.7	0.11	0.111
35)	n-C30	30.13	2682.69	0.03	0.026
36)	n-C31	31.16	10884	0.11	0.109
37)	n-C32	32.15	1301.81	0.01	0.013
38)	n-C33	33.14	7282.35	0.07	0.075
39)	n-C34	34.07	697.942	0.01	0.007
40)	n-C35	0.00	0	0.00	0.000
41)	n-C36	0.00	0	0.00	0.000
42)	n-C37	0.00	0	0.00	0.000
43)	n-C38	0.00	0	0.00	0.000
44)	n-C39	0.00	0	0.00	0.000
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	13.00	15734800	159.07	159.070
47)	TRH1	8.70	173220	1.75	1.751
48)	TRH2	13.00	1518770	15.35	15.354
49)	TRH3	22.88	199760	2.02	2.019
50)	TRH4	29.59	240507	2.43	2.431
51)	TRH5	35.27	1009800	10.21	10.209
52)	TRH6	40.25	413968	4.18	4.185
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	99580.2	1.16	87.7
23)	n-eicosane-d42	17.68	103163	1.26	95.1
34)	n-triacontane-d62	29.59	103184	1.30	98.2
1)	n-hexadecane-d34	13.00	275003	3.30	275003.000
16)	5a-androstane	18.29	350853	3.31	350853.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1637.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 18:40:48
Operator : Meghan Dailey
Sample : SED-DA-007 (0-0.5)
Misc :
ALS Vial : 19 Sample Multiplier: 0.0660502

Integration File: autoint1.e
Quant Time: Aug 21 09:45:22 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1) I	n-hexadecane-d34	12.997	275003	50.000	ug/mlm
16) I	5a-androstane	18.292	350853	50.072	ug/mlm
	System Monitoring Compounds				
6) S	n-dodecane-d26	8.701	99580	1.158	ug/mlm
23) S	n-eicosane-d42	17.679	103163	1.264	ug/mlm
34) S	n-triacontane-d62	29.593	103184	1.299	ug/mlm
	Target Compounds				
2)	n-C8	0.000	0	N.D.	ug/mld
3)	n-C9	0.000	0	N.D.	ug/mld
4)	n-C10	6.298	273	0.003	ug/mlm
5)	n-C11	7.649	184	0.002	ug/mlm
7)	n-C12	8.907	1048	0.011	ug/mlm
8)	i-13	0.000	0	N.D.	ug/mld
9)	i-14	9.797	116	0.001	ug/mlm
10)	n-C13	10.080	616	0.006	ug/mlm
11)	i-15	10.957	883	0.009	ug/mlm
12)	n-C14	11.176	1555	0.016	ug/mlm
13)	i-16	11.848	851	0.009	ug/mlm
14)	n-C15	12.208	1466	0.015	ug/mlm
15)	n-C16	13.250	2114	0.021	ug/mlm
17)	i-18	13.817	2379	0.023	ug/mlm
18)	n-C17	14.361	2485	0.024	ug/mlm
19)	Pristane	14.473	5136	0.049	ug/mlm
20)	n-C18	15.542	4039	0.039	ug/mlm
21)	Phytane	15.709	6874	0.066	ug/mlm
22)	n-C19	16.794	3751	0.037	ug/mlm
24)	n-C20	18.075	2065	0.020	ug/mlm
25)	n-C21	19.382	2201	0.021	ug/mlm
26)	n-C22	20.684	2097	0.020	ug/mlm
27)	n-C23	21.976	2652	0.026	ug/mlm
28)	n-C24	23.238	2783	0.027	ug/mlm
29)	n-C25	24.473	3441	0.033	ug/mlm
30)	n-C26	25.673	1781	0.017	ug/mlm
31)	n-C27	26.835	4964	0.049	ug/mlm
32)	n-C28	27.968	2082	0.020	ug/mlm
33)	n-C29	29.065	11414	0.111	ug/mlm
35)	n-C30	30.128	2683	0.026	ug/mlm
36)	n-C31	31.155	10884	0.109	ug/mlm
37)	n-C32	32.148	1302	0.013	ug/mlm
38)	n-C33	33.137	7282	0.075	ug/mlm
39)	n-C34	34.070	698	0.007	ug/mlm
40)	n-C35	0.000	0	N.D.	ug/mld

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1637.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 18:40:48
Operator : Meghan Dailey
Sample : SED-DA-007 (0-0.5)
Misc :
ALS Vial : 19 Sample Multiplier: 0.0660502

Integration File: autoint1.e
Quant Time: Aug 21 09:45:22 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	0.000	0	N.D.	ug/mld
42)	n-C37	0.000	0	N.D.	ug/mld
43)	n-C38	0.000	0	N.D.	ug/mld
44)	n-C39	0.000	0	N.D.	ug/mld
45)	n-C40	0.000	0	N.D.	ug/mld
46)	TPH	12.997f	15734799	159.070	ug/mlm
47)	TRH1	8.701	173220	1.751	ug/mlm
48)	TRH2	12.997f	1518769	15.354	ug/mlm
49)	TRH3	22.881	199760	2.019	ug/mlm
50)	TRH4	29.593	240507	2.431	ug/mlm
51)	TRH5	35.265	1009804	10.209	ug/mlm
52)	TRH6	40.247f	413968	4.185	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

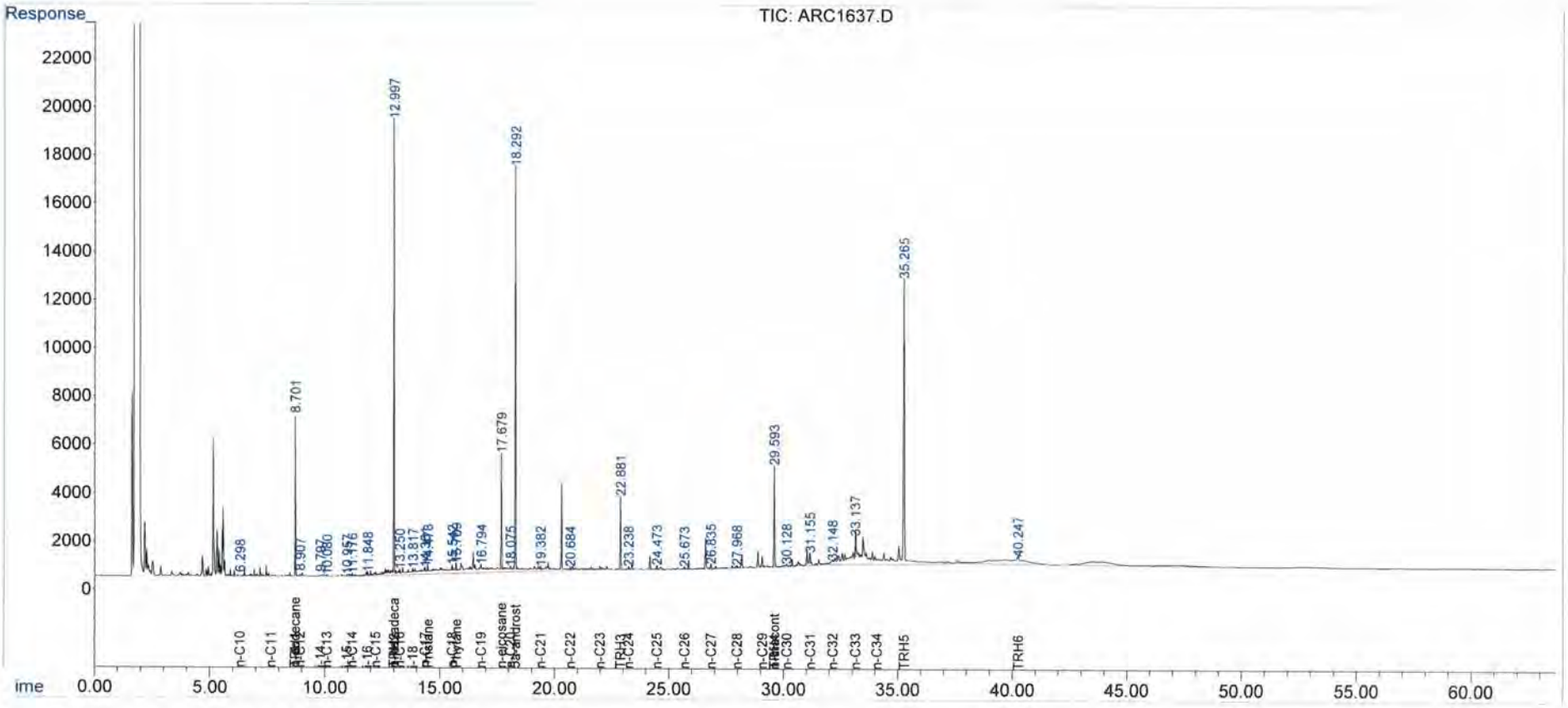
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1637.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 18:40:48
Operator : Meghan Dailey
Sample : SED-DA-007 (0-0.5)
Misc :
ALS Vial : 19 Sample Multiplier: 0.0660502

Integration File: autoint1.e
Quant Time: Aug 21 09:45:22 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



			Concentration
Data File Name	**ARC1638.D**		ARC1638.D
Sample Name	**SED-DA-006 (0-0.5)**		SED-DA-006 (0-0.5)
Misc Info	**0**		16-Aug-2013, 19:51:56
Data File Path	**C:\msdchem\2\data\FID10078**		ALI2012.M
Operator	**Meghan Dailey**		
Date Acquired	**16-Aug-2013, 19:51:56**		0.0664011
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	20
Vial Number	**20**	IS Area 1	258218
Sample Multiplier	**0.0664011**	IS Area 2	331502

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	0.00	0	0.00	0.000
5)	n-C11	0.00	0	0.00	0.000
7)	n-C12	8.90	834.248	0.01	0.009
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	10.08	343.623	0.00	0.004
11)	i-15	0.00	0	0.00	0.000
12)	n-C14	11.17	623.57	0.01	0.007
13)	i-16	0.00	0	0.00	0.000
14)	n-C15	12.21	472.681	0.01	0.005
15)	n-C16	13.25	952.58	0.01	0.010
17)	i-18	0.00	0	0.00	0.000
18)	n-C17	14.36	369.762	0.00	0.004
19)	Pristane	14.46	284.927	0.00	0.003
20)	n-C18	15.54	730.682	0.01	0.008
21)	Phytane	15.71	249.952	0.00	0.003
22)	n-C19	16.80	406.919	0.00	0.004
24)	n-C20	18.07	255.075	0.00	0.003
25)	n-C21	19.38	358.638	0.00	0.004
26)	n-C22	20.68	442.55	0.00	0.005
27)	n-C23	21.97	805.973	0.01	0.008
28)	n-C24	23.24	642.42	0.01	0.007
29)	n-C25	24.47	1236.46	0.01	0.013
30)	n-C26	25.67	645.969	0.01	0.007
31)	n-C27	26.84	1983.24	0.02	0.021
32)	n-C28	27.95	539.275	0.01	0.006
33)	n-C29	29.07	2433.9	0.03	0.025
35)	n-C30	30.13	517.995	0.01	0.005
36)	n-C31	31.15	1236.55	0.01	0.013
37)	n-C32	32.15	161.365	0.00	0.002
38)	n-C33	0.00	0	0.00	0.000
39)	n-C34	0.00	0	0.00	0.000
40)	n-C35	0.00	0	0.00	0.000
41)	n-C36	0.00	0	0.00	0.000
42)	n-C37	0.00	0	0.00	0.000
43)	n-C38	0.00	0	0.00	0.000
44)	n-C39	0.00	0	0.00	0.000
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	13.00	9611460	103.38	103.385
47)	TRH1	8.70	142205	1.53	1.530
48)	TRH2	13.00	785165	8.45	8.446
49)	TRH3	22.88	44794.4	0.48	0.482
50)	TRH4	29.59	138873	1.49	1.494
51)	TRH5	35.24	76050.6	0.82	0.818
52)	TRH6	43.98	175134	1.88	1.884
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	94977.4	1.18	89.0
23)	n-eicosane-d42	17.68	99360.3	1.30	96.9
34)	n-triacontane-d62	29.59	92578.5	1.24	93.3
1)	n-hexadecane-d34	13.00	258218	3.32	258218.000
16)	5a-androstane	18.29	331502	3.32	331502.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1638.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 19:51:56
Operator : Meghan Dailey
Sample : SED-DA-006 (0-0.5)
Misc :
ALS Vial : 20 Sample Multiplier: 0.0664011

Integration File: autoint1.e
Quant Time: Aug 28 08:05:42 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1) I	n-hexadecane-d34	12.996	258218	50.000	ug/mlm
16) I	5a-androstane	18.289	331502	50.072	ug/mlm
	System Monitoring Compounds				
6) S	n-dodecane-d26	8.701	94977	1.183	ug/mlm
23) S	n-eicosane-d42	17.677	99360	1.295	ug/mlm
34) S	n-triacontane-d62	29.590	92578	1.240	ug/mlm
	Target Compounds				
2)	n-C8	0.000	0	N.D.	ug/mld
3)	n-C9	0.000	0	N.D.	ug/mld
4)	n-C10	0.000	0	N.D.	ug/mld
5)	n-C11	0.000	0	N.D.	ug/mld
7)	n-C12	8.902	834	0.009	ug/mlm
8)	i-13	0.000	0	N.D.	ug/mld
9)	i-14	0.000	0	N.D.	ug/mld
10)	n-C13	10.078	344	0.004	ug/mlm
11)	i-15	0.000	0	N.D.	ug/mld
12)	n-C14	11.175	624	0.007	ug/mlm
13)	i-16	0.000	0	N.D.	ug/mld
14)	n-C15	12.207	473	0.005	ug/mlm
15)	n-C16	13.249	953	0.010	ug/mlm
17)	i-18	0.000	0	N.D.	ug/mld
18)	n-C17	14.357	370	0.004	ug/mlm
19)	Pristane	14.462	285	0.003	ug/mlm
20)	n-C18	15.542	731	0.008	ug/mlm
21)	Phytane	15.713	250	0.003	ug/mlm
22)	n-C19	16.797	407	0.004	ug/mlm
24)	n-C20	18.073	255	0.003	ug/mlm
25)	n-C21	19.379	359	0.004	ug/mlm
26)	n-C22	20.684	443	0.005	ug/mlm
27)	n-C23	21.973	806	0.008	ug/mlm
28)	n-C24	23.235	642	0.007	ug/mlm
29)	n-C25	24.472	1236	0.013	ug/mlm
30)	n-C26	25.672	646	0.007	ug/mlm
31)	n-C27	26.835	1983	0.021	ug/mlm
32)	n-C28	27.955	539	0.006	ug/mlm
33)	n-C29	29.067	2434	0.025	ug/mlm
35)	n-C30	30.126	518	0.005	ug/mlm
36)	n-C31	31.153	1237	0.013	ug/mlm
37)	n-C32	32.148	161	0.002	ug/mlm
38)	n-C33	0.000	0	N.D.	ug/mld
39)	n-C34	0.000	0	N.D.	ug/ml
40)	n-C35	0.000	0	N.D.	ug/mld

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1638.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 19:51:56
Operator : Meghan Dailey
Sample : SED-DA-006 (0-0.5)
Misc :
ALS Vial : 20 Sample Multiplier: 0.0664011

Integration File: autoint1.e
Quant Time: Aug 28 08:05:42 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	0.000	0	N.D.	ug/mld
42)	n-C37	0.000	0	N.D.	ug/mld
43)	n-C38	0.000	0	N.D.	ug/mld
44)	n-C39	0.000	0	N.D.	ug/mld
45)	n-C40	0.000	0	N.D.	ug/mld
46)	TPH	12.996f	9611456	103.385	ug/mlm
47)	TRH1	8.701	142205	1.530	ug/mlm
48)	TRH2	12.996f	785165	8.446	ug/mlm
49)	TRH3	22.877	44794	0.482	ug/mlm
50)	TRH4	29.590	138873	1.494	ug/mlm
51)	TRH5	35.238	76051	0.818	ug/mlm
52)	TRH6	43.975	175134	1.884	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

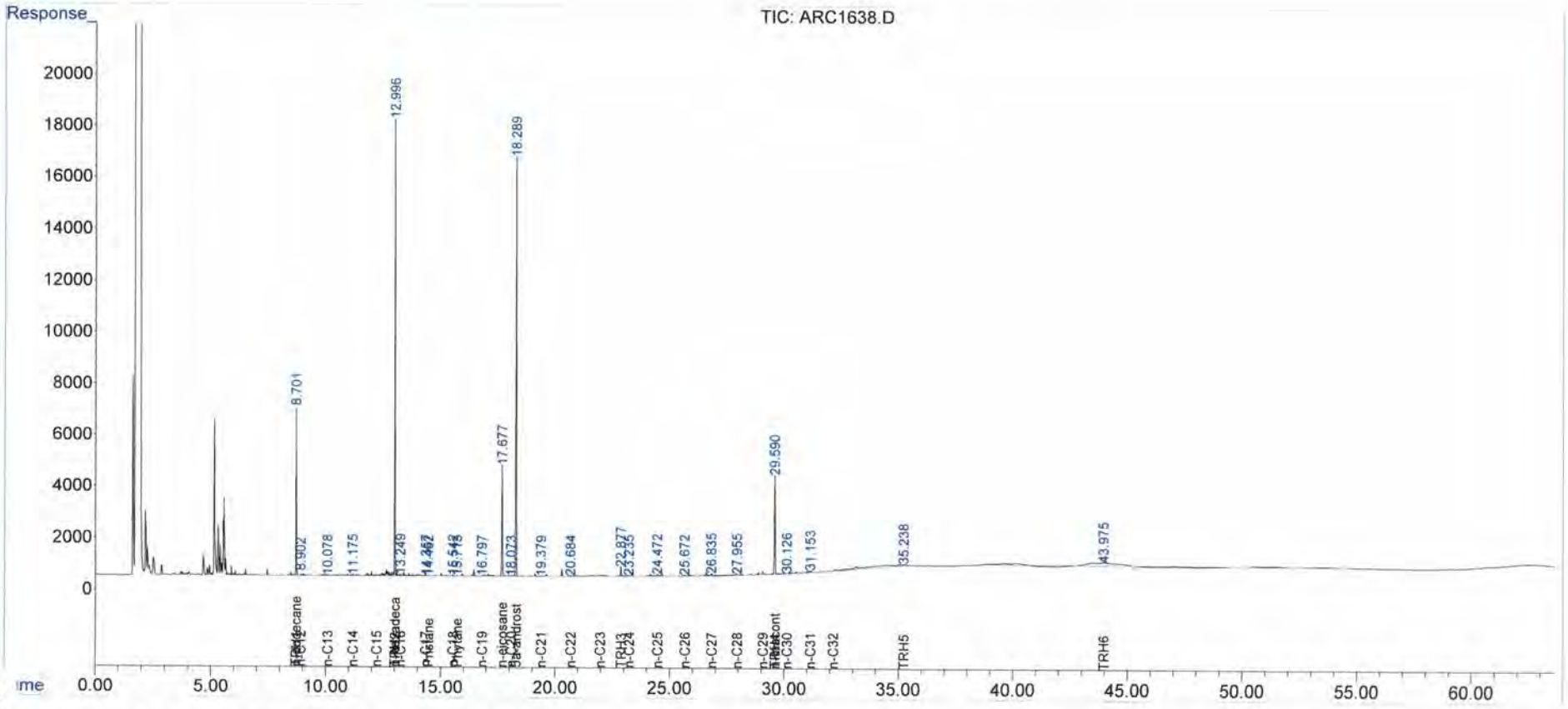
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1638.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 19:51:56
Operator : Meghan Dailey
Sample : SED-DA-006 (0-0.5)
Misc :
ALS Vial : 20 Sample Multiplier: 0.0664011

Integration File: autoint1.e
Quant Time: Aug 28 08:05:42 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



			Concentration
Data File Name	**ARC1639.D**		ARC1639.D
Sample Name	**SED-DA-005 (0-0.5)**		SED-DA-005 (0-0.5)
Misc Info	**0**		16-Aug-2013, 22:12:59
Data File Path	**P:\2013\J13034\Aliphatics\ENV 3079\FID10078**		ALI2012.M
Operator	**Meghan Dailey**		
Date Acquired	**16-Aug-2013, 22:12:59**		0.0658328
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	22
Vial Number	**22**	IS Area 1	259034
Sample Multiplier	**0.0658328**	IS Area 2	329821

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	6.31	334.3	0.00	0.004
5)	n-C11	7.65	185.144	0.00	0.002
7)	n-C12	8.90	1552.68	0.02	0.017
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	10.08	1075.92	0.01	0.012
11)	i-15	0.00	0	0.00	0.000
12)	n-C14	11.17	2264.32	0.02	0.024
13)	i-16	0.00	0	0.00	0.000
14)	n-C15	12.20	1923.19	0.02	0.020
15)	n-C16	13.25	2747.4	0.03	0.029
17)	i-18	0.00	0	0.00	0.000
18)	n-C17	14.36	2421.72	0.02	0.024
19)	Pristane	14.47	3737.74	0.04	0.038
20)	n-C18	15.54	2828.41	0.03	0.029
21)	Phytane	15.71	4404.24	0.04	0.045
22)	n-C19	16.79	2174.86	0.02	0.023
24)	n-C20	18.07	1699.61	0.02	0.018
25)	n-C21	19.37	1588.26	0.02	0.016
26)	n-C22	20.68	1229.78	0.01	0.013
27)	n-C23	21.97	1791.96	0.02	0.018
28)	n-C24	23.23	2298.75	0.02	0.024
29)	n-C25	24.47	2922.04	0.03	0.030
30)	n-C26	25.67	1669.48	0.02	0.017
31)	n-C27	26.83	3925.7	0.04	0.041
32)	n-C28	27.96	2126.84	0.02	0.022
33)	n-C29	29.06	11327.6	0.12	0.117
35)	n-C30	30.13	2362.37	0.02	0.025
36)	n-C31	31.15	16681.4	0.18	0.176
37)	n-C32	32.15	1178.69	0.01	0.013
38)	n-C33	33.14	10027.9	0.11	0.109
39)	n-C34	34.06	646.023	0.01	0.007
40)	n-C35	0.00	0	0.00	0.000
41)	n-C36	0.00	0	0.00	0.000
42)	n-C37	0.00	0	0.00	0.000
43)	n-C38	0.00	0	0.00	0.000
44)	n-C39	0.00	0	0.00	0.000
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	13.00	14007500	150.14	150.143
47)	TRH1	8.70	179191	1.92	1.921
48)	TRH2	13.00	1202080	12.88	12.885
49)	TRH3	26.59	68327.7	0.73	0.732
50)	TRH4	29.59	193519	2.07	2.074
51)	TRH5	33.14	321365	3.44	3.445
52)	TRH6	38.94	75653.6	0.81	0.811
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	95563.9	1.18	89.3
23)	n-eicosane-d42	17.67	99485.7	1.29	97.5
34)	n-triacontane-d62	29.59	97767.5	1.30	99.0
1)	n-hexadecane-d34	13.00	259034	3.29	259034.000
16)	5a-androstane	18.29	329821	3.30	329821.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1639.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 22:12:59
Operator : Meghan Dailey
Sample : SED-DA-005 (0-0.5)
Misc :
ALS Vial : 22 Sample Multiplier: 0.0658328

Integration File: autoint1.e
Quant Time: Aug 21 10:08:57 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1) I	n-hexadecane-d34	12.995	259034	50.000	ug/mlm
16) I	5a-androstane	18.286	329821	50.072	ug/mlm
	System Monitoring Compounds				
6) S	n-dodecane-d26	8.700	95564	1.176	ug/mlm
23) S	n-eicosane-d42	17.674	99486	1.292	ug/mlm
34) S	n-triacontane-d62	29.590	97768	1.305	ug/mlm
	Target Compounds				
2)	n-C8	0.000	0	N.D.	ug/mld
3)	n-C9	0.000	0	N.D.	ug/mld
4)	n-C10	6.308	334	0.004	ug/mlm
5)	n-C11	7.645	185	0.002	ug/mlm
7)	n-C12	8.904	1553	0.017	ug/mlm
8)	i-13	0.000	0	N.D.	ug/mld
9)	i-14	0.000	0	N.D.	ug/mld
10)	n-C13	10.078	1076	0.012	ug/mlm
11)	i-15	0.000	0	N.D.	ug/mld
12)	n-C14	11.174	2264	0.024	ug/mlm
13)	i-16	0.000	0	N.D.	ug/mld
14)	n-C15	12.204	1923	0.020	ug/mlm
15)	n-C16	13.248	2747	0.029	ug/mlm
17)	i-18	0.000	0	N.D.	ug/mld
18)	n-C17	14.358	2422	0.024	ug/mlm
19)	Pristane	14.470	3738	0.038	ug/mlm
20)	n-C18	15.541	2828	0.029	ug/mlm
21)	Phytane	15.705	4404	0.045	ug/mlm
22)	n-C19	16.788	2175	0.023	ug/mlm
24)	n-C20	18.071	1700	0.018	ug/mlm
25)	n-C21	19.374	1588	0.016	ug/mlm
26)	n-C22	20.683	1230	0.013	ug/mlm
27)	n-C23	21.971	1792	0.018	ug/mlm
28)	n-C24	23.234	2299	0.024	ug/mlm
29)	n-C25	24.467	2922	0.030	ug/mlm
30)	n-C26	25.672	1669	0.017	ug/mlm
31)	n-C27	26.834	3926	0.041	ug/mlm
32)	n-C28	27.963	2127	0.022	ug/mlm
33)	n-C29	29.059	11328	0.117	ug/mlm
35)	n-C30	30.126	2362	0.025	ug/mlm
36)	n-C31	31.148	16681	0.176	ug/mlm
37)	n-C32	32.148	1179	0.013	ug/mlm
38)	n-C33	33.140	10028	0.109	ug/mlm
39)	n-C34	34.064	646	0.007	ug/mlm
40)	n-C35	0.000	0	N.D.	ug/mld

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1639.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 22:12:59
Operator : Meghan Dailey
Sample : SED-DA-005 (0-0.5)
Misc :
ALS Vial : 22 Sample Multiplier: 0.0658328

Integration File: autoint1.e
Quant Time: Aug 21 10:08:57 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	0.000	0	N.D.	ug/mld
42)	n-C37	0.000	0	N.D.	ug/mld
43)	n-C38	0.000	0	N.D.	ug/mld
44)	n-C39	0.000	0	N.D.	ug/mld
45)	n-C40	0.000	0	N.D.	ug/mld
46)	TPH	12.995f	14007547	150.143	ug/mlm
47)	TRH1	8.700	179191	1.921	ug/mlm
48)	TRH2	12.995f	1202081	12.885	ug/mlm
49)	TRH3	26.594f	68328	0.732	ug/mlm
50)	TRH4	29.590	193519	2.074	ug/mlm
51)	TRH5	33.140	321365	3.445	ug/mlm
52)	TRH6	38.940f	75654	0.811	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

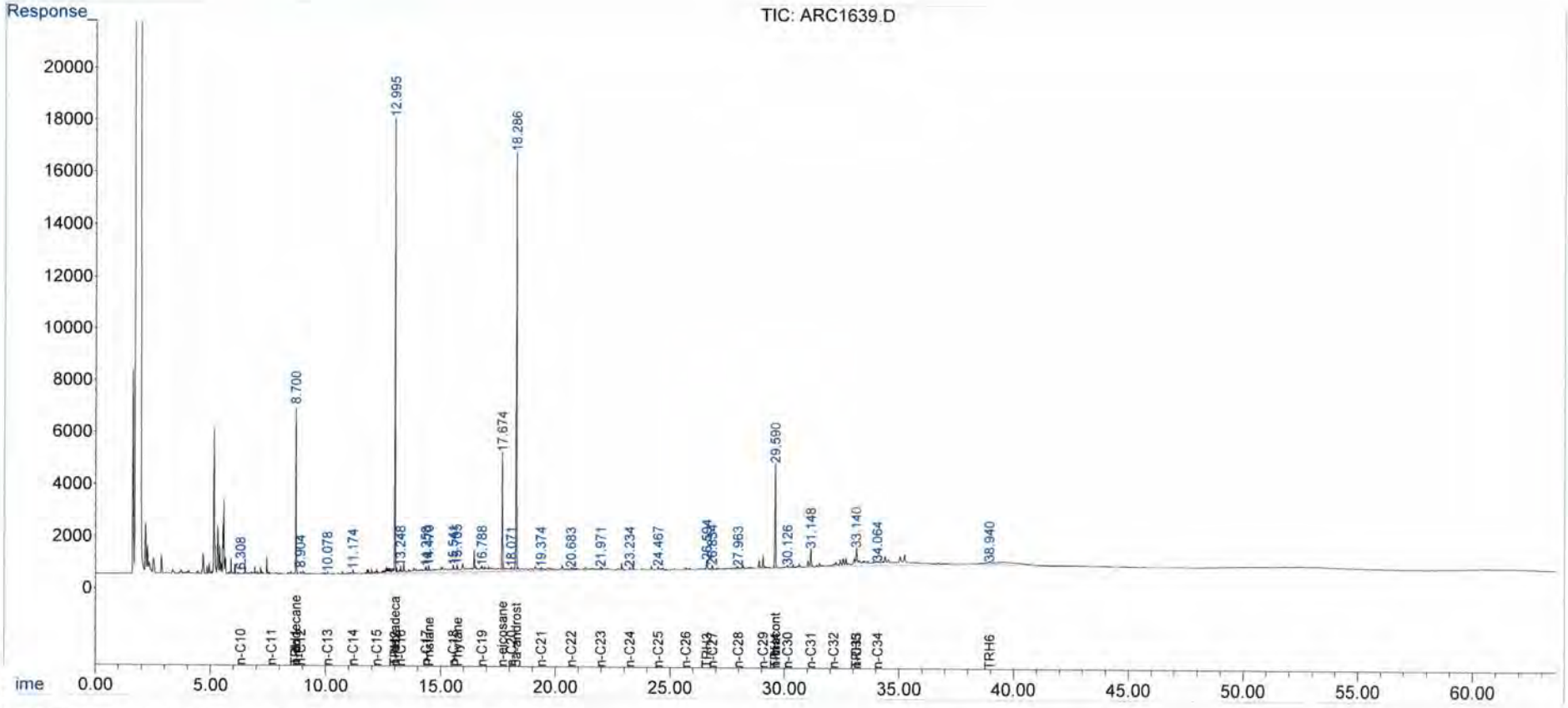
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1639.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 22:12:59
Operator : Meghan Dailey
Sample : SED-DA-005 (0-0.5)
Misc :
ALS Vial : 22 Sample Multiplier: 0.0658328

Integration File: autoint1.e
Quant Time: Aug 21 10:08:57 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



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			Concentration
Data File Name	**ARC1640.D**		ARC1640.D
Sample Name	**SED-DA-010 (0-0.5)**		SED-DA-010 (0-0.5)
Misc Info	**0**		16-Aug-2013, 23:23:32
Data File Path	**C:\msdchem\2\data\FID10078**		ALI2012.M
Operator	**Meghan Dailey**		
Date Acquired	**16-Aug-2013, 23:23:32**		0.0658762
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	23
Vial Number	**23**	IS Area 1	247962
Sample Multiplier	**0.0658762**	IS Area 2	316347

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	0.00	0	0.00	0.000
5)	n-C11	7.65	336.32	0.00	0.004
7)	n-C12	8.90	1450.38	0.02	0.017
8)	i-13	0.00	0	0.00	0.000
9)	i-14	0.00	0	0.00	0.000
10)	n-C13	10.08	717.315	0.01	0.008
11)	i-15	0.00	0	0.00	0.000
12)	n-C14	11.17	1248.74	0.01	0.014
13)	i-16	0.00	0	0.00	0.000
14)	n-C15	12.21	998.977	0.01	0.011
15)	n-C16	13.25	1744.13	0.02	0.019
17)	i-18	0.00	0	0.00	0.000
18)	n-C17	14.36	1647.42	0.02	0.017
19)	Pristane	14.47	1526.09	0.02	0.016
20)	n-C18	15.54	2586.59	0.03	0.028
21)	Phytane	15.70	1899.89	0.02	0.020
22)	n-C19	16.79	1669.7	0.02	0.018
24)	n-C20	18.07	566.976	0.01	0.006
25)	n-C21	19.38	1610.97	0.02	0.017
26)	n-C22	20.68	613.885	0.01	0.007
27)	n-C23	21.97	1633.93	0.02	0.018
28)	n-C24	23.24	1056.58	0.01	0.011
29)	n-C25	24.47	2483.07	0.03	0.027
30)	n-C26	25.67	986.927	0.01	0.011
31)	n-C27	26.83	5037.5	0.06	0.055
32)	n-C28	27.97	2201.63	0.02	0.024
33)	n-C29	29.06	18021.3	0.19	0.194
35)	n-C30	30.12	1245.64	0.01	0.014
36)	n-C31	31.15	15494	0.17	0.171
37)	n-C32	32.14	1534.59	0.02	0.017
38)	n-C33	33.14	14738.2	0.17	0.168
39)	n-C34	34.06	451.565	0.01	0.005
40)	n-C35	35.08	3470.92	0.04	0.040
41)	n-C36	0.00	0	0.00	0.000
42)	n-C37	0.00	0	0.00	0.000
43)	n-C38	0.00	0	0.00	0.000
44)	n-C39	0.00	0	0.00	0.000
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	12.99	12907000	144.33	144.334
47)	TRH1	8.70	151409	1.69	1.693
48)	TRH2	12.99	853855	9.55	9.548
49)	TRH3	26.60	50168.1	0.56	0.561
50)	TRH4	29.59	215717	2.41	2.412
51)	TRH5	33.14	400729	4.48	4.481
52)	TRH6	37.60	57279.6	0.64	0.641
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	85068.5	1.09	83.1
23)	n-eicosane-d42	17.68	93349.2	1.27	95.4
34)	n-triacontane-d62	29.59	91201.3	1.27	96.3
1)	n-hexadecane-d34	12.99	247962	3.29	247962.000
16)	5a-androstane	18.29	316347	3.30	316347.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1640.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 23:23:32
Operator : Meghan Dailey
Sample : SED-DA-010 (0-0.5)
Misc :
ALS Vial : 23 Sample Multiplier: 0.0658762

Integration File: autoint1.e
Quant Time: Aug 28 07:50:36 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1)	I n-hexadecane-d34	12.994	247962	50.000 ug/mlm
16)	I 5a-androstane	18.285	316347	50.072 ug/mlm
	System Monitoring Compounds			
6)	S n-dodecane-d26	8.700	85069	1.094 ug/mlm
23)	S n-eicosane-d42	17.675	93349	1.265 ug/mlm
34)	S n-triacontane-d62	29.589	91201	1.270 ug/mlm
	Target Compounds			
2)	n-C8	0.000	0	N.D. ug/mld
3)	n-C9	0.000	0	N.D. ug/mld
4)	n-C10	0.000	0	N.D. ug/mld
5)	n-C11	7.646	336	0.004 ug/mlm
7)	n-C12	8.903	1450	0.017 ug/mlm
8)	i-13	0.000	0	N.D. ug/mld
9)	i-14	0.000	0	N.D. ug/mld
10)	n-C13	10.078	717	0.008 ug/mlm
11)	i-15	0.000	0	N.D. ug/mld
12)	n-C14	11.174	1249	0.014 ug/mlm
13)	i-16	0.000	0	N.D. ug/mld
14)	n-C15	12.205	999	0.011 ug/mlm
15)	n-C16	13.247	1744	0.019 ug/mlm
17)	i-18	0.000	0	N.D. ug/mld
18)	n-C17	14.357	1647	0.017 ug/mlm
19)	Pristane	14.468	1526	0.016 ug/mlm
20)	n-C18	15.535	2587	0.028 ug/mlm
21)	Phytane	15.704	1900	0.020 ug/mlm
22)	n-C19	16.792	1670	0.018 ug/mlm
24)	n-C20	18.072	567	0.006 ug/mlm
25)	n-C21	19.378	1611	0.017 ug/mlm
26)	n-C22	20.682	614	0.007 ug/mlm
27)	n-C23	21.965	1634	0.018 ug/mlm
28)	n-C24	23.236	1057	0.011 ug/mlm
29)	n-C25	24.470	2483	0.027 ug/mlm
30)	n-C26	25.671	987	0.011 ug/mlm
31)	n-C27	26.833	5037	0.055 ug/mlm
32)	n-C28	27.965	2202	0.024 ug/mlm
33)	n-C29	29.061	18021	0.194 ug/mlm
35)	n-C30	30.124	1246	0.014 ug/mlm
36)	n-C31	31.150	15494	0.171 ug/mlm
37)	n-C32	32.143	1535	0.017 ug/mlm
38)	n-C33	33.140	14738	0.168 ug/mlm
39)	n-C34	34.060	452	0.005 ug/mlm
40)	n-C35	35.075	3471	0.040 ug/mlm

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1640.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 23:23:32
Operator : Meghan Dailey
Sample : SED-DA-010 (0-0.5)
Misc :
ALS Vial : 23 Sample Multiplier: 0.0658762

Integration File: autoint1.e
Quant Time: Aug 28 07:50:36 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	0.000	0	N.D.	ug/mld
42)	n-C37	0.000	0	N.D.	ug/mld
43)	n-C38	0.000	0	N.D.	ug/mld
44)	n-C39	0.000	0	N.D.	ug/mld
45)	n-C40	0.000	0	N.D.	ug/mld
46)	TPH	12.994f	12906998	144.334	ug/mlm
47)	TRH1	8.700	151409	1.693	ug/mlm
48)	TRH2	12.994f	853855	9.548	ug/mlm
49)	TRH3	26.595f	50168	0.561	ug/mlm
50)	TRH4	29.589	215717	2.412	ug/mlm
51)	TRH5	33.140	400729	4.481	ug/mlm
52)	TRH6	37.601f	57280	0.641	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

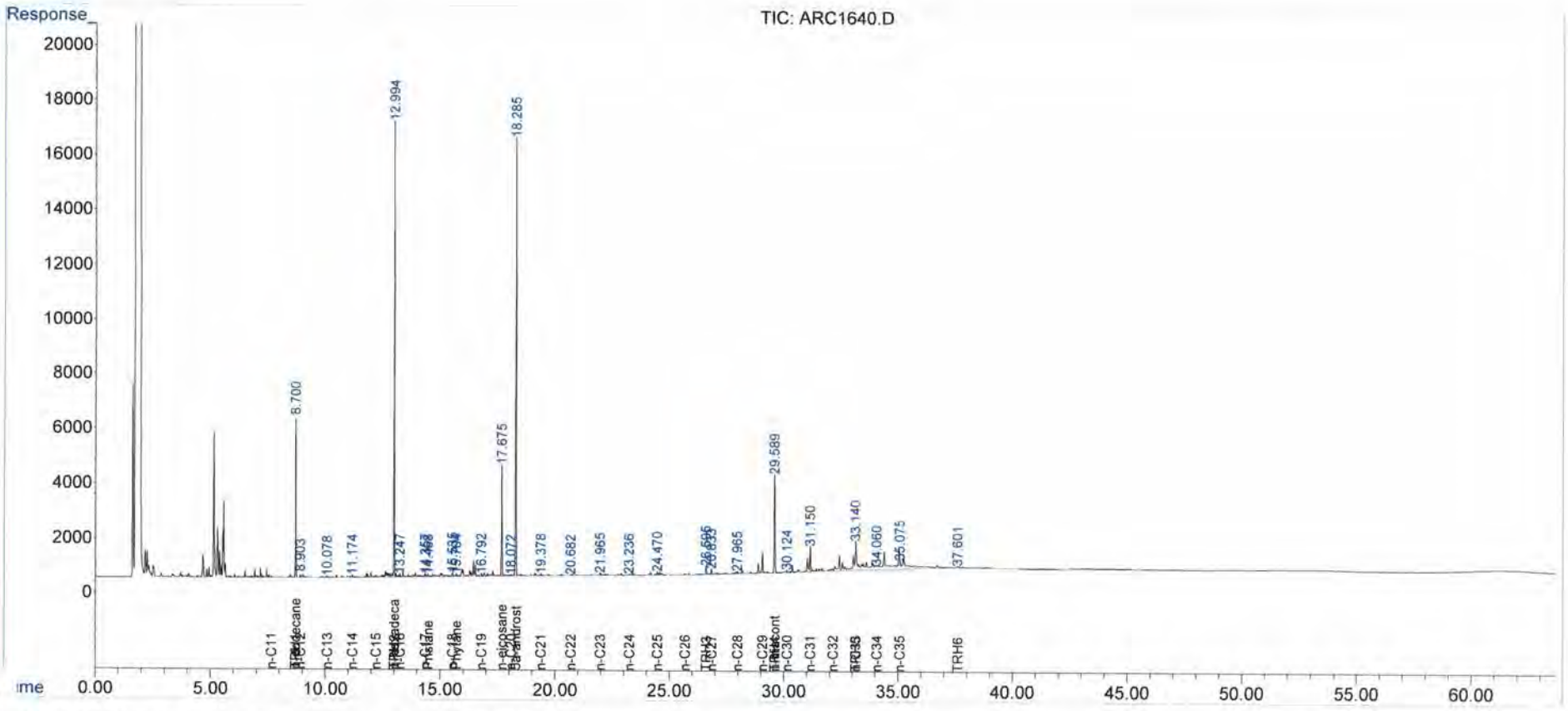
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1640.D
Signal(s) : FID1A.CH
Acq On : 16-Aug-2013, 23:23:32
Operator : Meghan Dailey
Sample : SED-DA-010 (0-0.5)
Misc :
ALS Vial : 23 Sample Multiplier: 0.0658762

Integration File: autoint1.e
Quant Time: Aug 28 07:50:36 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



210

			Concentration
Data File Name	**ARC1645.D**		ARC1645.D
Sample Name	**SED-DA-BG-004 (0-0.5)**		SED-DA-BG-004 (0-0.5)
Misc Info	**0**		17-Aug-2013, 00:34:15
Data File Path	**C:\msdchem\2\data\FID10078**		ALI2012.M
Operator	**Meghan Dailey**		
Date Acquired	**17-Aug-2013, 00:34:15**		0.0660502
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	24
Vial Number	**24**	IS Area 1	256060
Sample Multiplier	**0.0660502**	IS Area 2	329621

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	6.30	1561.67	0.02	0.019
5)	n-C11	7.65	1916.74	0.02	0.022
7)	n-C12	8.90	1712.36	0.02	0.019
8)	i-13	9.10	751.197	0.01	0.008
9)	i-14	9.79	1131.84	0.01	0.012
10)	n-C13	10.08	1221.73	0.01	0.014
11)	i-15	10.96	718.423	0.01	0.008
12)	n-C14	11.17	1588.52	0.02	0.017
13)	i-16	11.85	587.412	0.01	0.006
14)	n-C15	12.22	6391.07	0.07	0.069
15)	n-C16	13.25	1930.21	0.02	0.021
17)	i-18	13.82	872.009	0.01	0.009
18)	n-C17	14.36	6916.7	0.07	0.070
19)	Pristane	14.49	9970.38	0.10	0.101
20)	n-C18	15.53	25430.1	0.26	0.263
21)	Phytane	15.72	4500.23	0.05	0.046
22)	n-C19	16.79	1220.46	0.01	0.013
24)	n-C20	18.07	860.052	0.01	0.009
25)	n-C21	19.38	22223.2	0.23	0.229
26)	n-C22	20.67	4164.04	0.04	0.043
27)	n-C23	21.97	18101.1	0.19	0.187
28)	n-C24	23.24	5999.81	0.06	0.062
29)	n-C25	24.47	34856.6	0.36	0.359
30)	n-C26	25.69	17958.7	0.19	0.185
31)	n-C27	26.84	45636.1	0.48	0.482
32)	n-C28	28.01	24221	0.25	0.252
33)	n-C29	29.07	82364.9	0.85	0.854
35)	n-C30	30.13	14402.9	0.15	0.151
36)	n-C31	31.16	113021	1.20	1.201
37)	n-C32	32.15	11725.6	0.13	0.126
38)	n-C33	33.15	100756	1.10	1.104
39)	n-C34	34.07	10086.7	0.11	0.109
40)	n-C35	35.11	47767.5	0.53	0.530
41)	n-C36	36.28	9112.42	0.09	0.094
42)	n-C37	37.84	22584.7	0.25	0.255
43)	n-C38	39.21	5952.55	0.07	0.068
44)	n-C39	41.06	14439.8	0.17	0.173
45)	n-C40	43.28	10932.7	0.14	0.139
46)	TPH	35.07	37073500	398.93	398.934
47)	TRH1	8.70	264974	2.85	2.851
48)	TRH2	12.99	2114360	22.75	22.752
49)	TRH3	23.47	1477050	15.89	15.886
50)	TRH4	27.10	2763250	29.73	29.734
51)	TRH5	35.07	3496180	37.62	37.621
52)	TRH6	41.46	602469	6.48	6.483
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	92005.4	1.15	87.0
23)	n-eicosane-d42	17.67	99586.9	1.30	97.7
34)	n-triacontane-d62	29.59	94351.5	1.26	95.6
1)	n-hexadecane-d34	12.99	256060	3.30	256060.000
16)	5a-androstane	18.29	329621	3.31	329621.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1645.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 00:34:15
Operator : Meghan Dailey
Sample : SED-DA-BG-004 (0-0.5)
Misc :
ALS Vial : 24 Sample Multiplier: 0.0660502

Integration File: autoint1.e
Quant Time: Aug 28 07:52:29 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	n-hexadecane-d34	12.994	256060	50.000 ug/mlm
16) I	5a-androstane	18.286	329621	50.072 ug/mlm
	System Monitoring Compounds			
6) S	n-dodecane-d26	8.700	92005	1.149 ug/mlm
23) S	n-eicosane-d42	17.675	99587	1.299 ug/mlm
34) S	n-triacontane-d62	29.594	94352	1.264 ug/mlm
	Target Compounds			
2)	n-C8	0.000	0	N.D. ug/mld
3)	n-C9	0.000	0	N.D. ug/mld
4)	n-C10	6.297	1562	0.019 ug/mlm
5)	n-C11	7.647	1917	0.022 ug/mlm
7)	n-C12	8.904	1712	0.019 ug/mlm
8)	i-13	9.096	751	0.008 ug/mlm
9)	i-14	9.794	1132	0.012 ug/mlm
10)	n-C13	10.078	1222	0.014 ug/mlm
11)	i-15	10.956	718	0.008 ug/mlm
12)	n-C14	11.174	1589	0.017 ug/mlm
13)	i-16	11.845	587	0.006 ug/mlm
14)	n-C15	12.223	6391	0.069 ug/mlm
15)	n-C16	13.246	1930	0.021 ug/mlm
17)	i-18	13.820	872	0.009 ug/mlm
18)	n-C17	14.356	6917	0.070 ug/mlm
19)	Pristane	14.492	9970	0.101 ug/mlm
20)	n-C18	15.534	25430	0.263 ug/mlm
21)	Phytane	15.723	4500	0.046 ug/mlm
22)	n-C19	16.787	1220	0.013 ug/mlm
24)	n-C20	18.073	860	0.009 ug/mlm
25)	n-C21	19.380	22223	0.229 ug/mlm
26)	n-C22	20.674	4164	0.043 ug/mlm
27)	n-C23	21.973	18101	0.187 ug/mlm
28)	n-C24	23.243	6000	0.062 ug/mlm
29)	n-C25	24.472	34857	0.359 ug/mlm
30)	n-C26	25.688	17959	0.185 ug/mlm
31)	n-C27	26.839	45636	0.482 ug/mlm
32)	n-C28	28.007	24221	0.252 ug/mlm
33)	n-C29	29.067	82365	0.854 ug/mlm
35)	n-C30	30.129	14403	0.151 ug/mlm
36)	n-C31	31.157	113021	1.201 ug/mlm
37)	n-C32	32.154	11726	0.126 ug/mlm
38)	n-C33	33.153	100756	1.104 ug/mlm
39)	n-C34	34.070	10087	0.109 ug/mlm
40)	n-C35	35.107	47767	0.530 ug/mlm

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1645.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 00:34:15
Operator : Meghan Dailey
Sample : SED-DA-BG-004 (0-0.5)
Misc :
ALS Vial : 24 Sample Multiplier: 0.0660502

Integration File: autoint1.e
Quant Time: Aug 28 07:52:29 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.278	9112	0.094	ug/mlm
42)	n-C37	37.836f	22585	0.255	ug/mlm
43)	n-C38	39.213	5953	0.068	ug/mlm
44)	n-C39	41.060	14440	0.173	ug/mlm
45)	n-C40	43.277	10933	0.139	ug/mlm
46)	TPH	35.068	37073463	398.934	ug/mlm
47)	TRH1	8.700	264974	2.851	ug/mlm
48)	TRH2	12.994f	2114363	22.752	ug/mlm
49)	TRH3	23.471	1477048	15.886	ug/mlm
50)	TRH4	27.101f	2763251	29.734	ug/mlm
51)	TRH5	35.068	3496181	37.621	ug/mlm
52)	TRH6	41.457f	602469	6.483	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

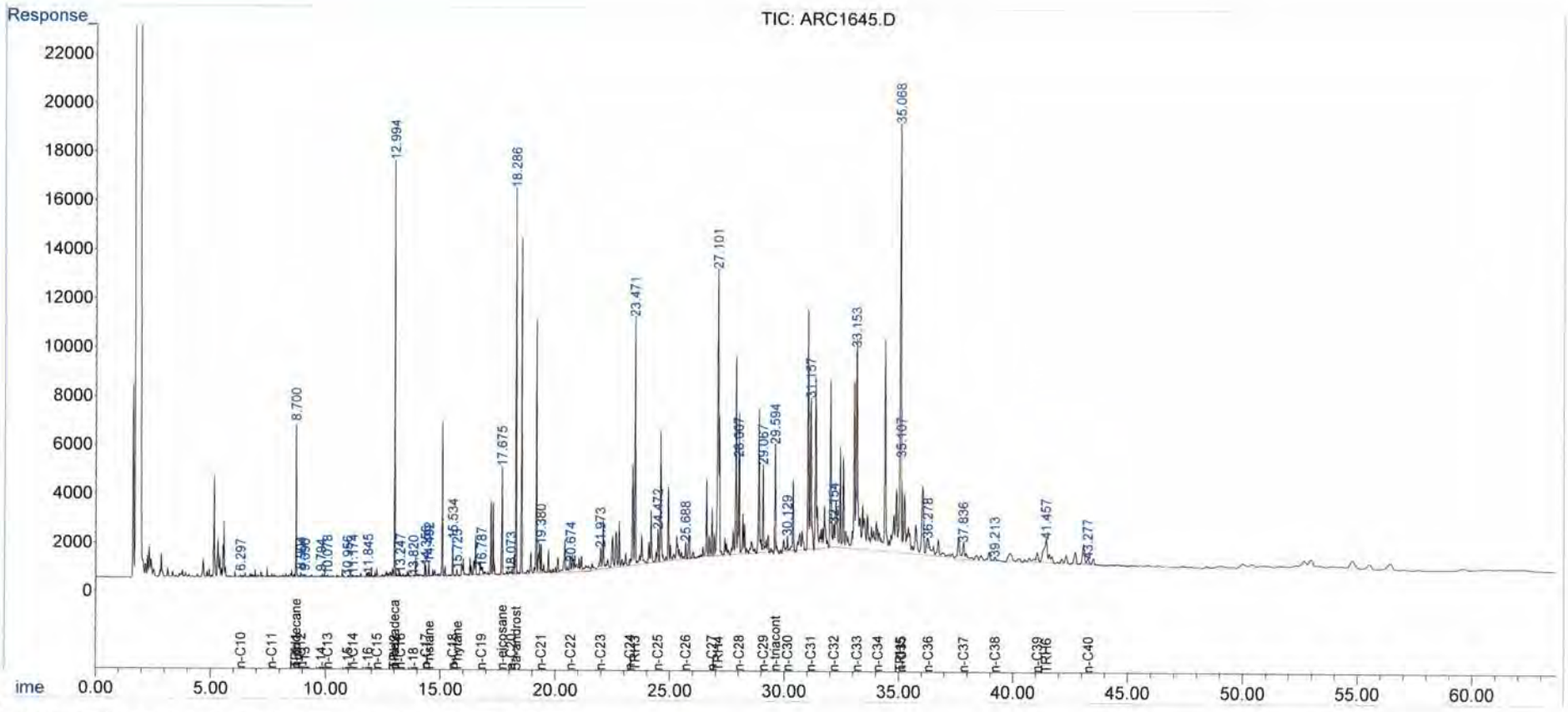
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1645.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 00:34:15
Operator : Meghan Dailey
Sample : SED-DA-BG-004 (0-0.5)
Misc :
ALS Vial : 24 Sample Multiplier: 0.0660502

Integration File: autoint1.e
Quant Time: Aug 28 07:52:29 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



			Concentration
Data File Name	**ARC1646.D**		ARC1646.D
Sample Name	**SED-DA-BG-005 (0-0.5)**		SED-DA-BG-005 (0-0.5)
Misc Info	**0**		17-Aug-2013, 01:44:48
Data File Path	**C:\msdchem\2\data\FID10078**		ALI2012.M
Operator	**Meghan Dailey**		
Date Acquired	**17-Aug-2013, 01:44:48**		0.0666667
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	25
Vial Number	**25**	IS Area 1	276562
Sample Multiplier	**0.0666667**	IS Area 2	352017

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	0.00	0	0.00	0.000
5)	n-C11	7.65	506.625	0.01	0.006
7)	n-C12	8.90	2220.03	0.02	0.023
8)	i-13	9.10	79.848	0.00	0.001
9)	i-14	9.79	887.388	0.01	0.009
10)	n-C13	10.08	1494.19	0.02	0.016
11)	i-15	10.95	877.396	0.01	0.009
12)	n-C14	11.17	2796.41	0.03	0.028
13)	i-16	11.84	795.397	0.01	0.008
14)	n-C15	12.21	2155.08	0.02	0.022
15)	n-C16	13.25	3075.55	0.03	0.031
17)	i-18	13.82	746.008	0.01	0.007
18)	n-C17	14.36	4450.81	0.04	0.043
19)	Pristane	14.48	886.25	0.01	0.009
20)	n-C18	15.53	4637.25	0.05	0.045
21)	Phytane	15.71	374.882	0.00	0.004
22)	n-C19	16.80	3148.44	0.03	0.031
24)	n-C20	18.07	828.308	0.01	0.008
25)	n-C21	19.38	2008.93	0.02	0.020
26)	n-C22	20.68	1242.89	0.01	0.012
27)	n-C23	21.97	2896.18	0.03	0.028
28)	n-C24	23.24	1996.4	0.02	0.019
29)	n-C25	24.47	4424.95	0.04	0.043
30)	n-C26	25.67	2847.35	0.03	0.028
31)	n-C27	26.83	8165.5	0.08	0.082
32)	n-C28	27.97	3960.74	0.04	0.039
33)	n-C29	29.06	17705.3	0.17	0.174
35)	n-C30	30.12	2400.94	0.02	0.024
36)	n-C31	31.14	17050.6	0.17	0.171
37)	n-C32	32.15	681.091	0.01	0.007
38)	n-C33	33.14	11184.8	0.12	0.116
39)	n-C34	34.06	436.872	0.00	0.004
40)	n-C35	35.07	10350.7	0.11	0.109
41)	n-C36	36.26	198.038	0.00	0.002
42)	n-C37	37.60	6275.5	0.07	0.067
43)	n-C38	0.00	0	0.00	0.000
44)	n-C39	0.00	0	0.00	0.000
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	13.00	15129300	153.87	153.866
47)	TRH1	8.70	217601	2.21	2.213
48)	TRH2	13.00	1006000	10.23	10.231
49)	TRH3	26.59	146184	1.49	1.486
50)	TRH4	29.59	453846	4.62	4.616
51)	TRH5	35.04	688759	7.00	7.005
52)	TRH6	47.01	225710	2.30	2.295
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	96704.8	1.13	84.7
23)	n-eicosane-d42	17.67	105090	1.30	96.5
34)	n-triacontane-d62	29.59	101185	1.28	96.0
1)	n-hexadecane-d34	13.00	276562	3.33	276562.000
16)	5a-androstane	18.29	352017	3.34	352017.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1646.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 01:44:48
Operator : Meghan Dailey
Sample : SED-DA-BG-005 (0-0.5)
Misc :
ALS Vial : 25 Sample Multiplier: 0.0666667

Integration File: autoint1.e
Quant Time: Aug 28 07:55:01 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1) I	n-hexadecane-d34	12.995	276562	50.000	ug/mlm
16) I	5a-androstane	18.286	352017	50.072	ug/mlm
	System Monitoring Compounds				
6) S	n-dodecane-d26	8.700	96705	1.129	ug/mlm
23) S	n-eicosane-d42	17.674	105090	1.295	ug/mlm
34) S	n-triacontane-d62	29.589	101185	1.281	ug/mlm
	Target Compounds				
2)	n-C8	0.000	0	N.D.	ug/mld
3)	n-C9	0.000	0	N.D.	ug/mld
4)	n-C10	0.000	0	N.D.	ug/mld
5)	n-C11	7.647	507	0.006	ug/mlm
7)	n-C12	8.904	2220	0.023	ug/mlm
8)	i-13	9.095	80	0.001	ug/mlm
9)	i-14	9.793	887	0.009	ug/mlm
10)	n-C13	10.078	1494	0.016	ug/mlm
11)	i-15	10.954	877	0.009	ug/mlm
12)	n-C14	11.174	2796	0.028	ug/mlm
13)	i-16	11.842	795	0.008	ug/mlm
14)	n-C15	12.205	2155	0.022	ug/mlm
15)	n-C16	13.247	3076	0.031	ug/mlm
17)	i-18	13.820	746	0.007	ug/mlm
18)	n-C17	14.357	4451	0.043	ug/mlm
19)	Pristane	14.475	886	0.009	ug/mlm
20)	n-C18	15.534	4637	0.045	ug/mlm
21)	Phytane	15.712	375	0.004	ug/mlm
22)	n-C19	16.797	3148	0.031	ug/mlm
24)	n-C20	18.074	828	0.008	ug/mlm
25)	n-C21	19.379	2009	0.020	ug/mlm
26)	n-C22	20.677	1243	0.012	ug/mlm
27)	n-C23	21.970	2896	0.028	ug/mlm
28)	n-C24	23.237	1996	0.019	ug/mlm
29)	n-C25	24.469	4425	0.043	ug/mlm
30)	n-C26	25.672	2847	0.028	ug/mlm
31)	n-C27	26.833	8166	0.082	ug/mlm
32)	n-C28	27.973	3961	0.039	ug/mlm
33)	n-C29	29.060	17705	0.174	ug/mlm
35)	n-C30	30.118	2401	0.024	ug/mlm
36)	n-C31	31.145	17051	0.171	ug/mlm
37)	n-C32	32.147	681	0.007	ug/mlm
38)	n-C33	33.143	11185	0.116	ug/mlm
39)	n-C34	34.064	437	0.004	ug/mlm
40)	n-C35	35.075	10351	0.109	ug/mlm

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1646.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 01:44:48
Operator : Meghan Dailey
Sample : SED-DA-BG-005 (0-0.5)
Misc :
ALS Vial : 25 Sample Multiplier: 0.0666667

Integration File: autoint1.e
Quant Time: Aug 28 07:55:01 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.261	198	0.002	ug/mlm
42)	n-C37	37.604	6275	0.067	ug/mlm
43)	n-C38	0.000	0	N.D.	ug/mld
44)	n-C39	0.000	0	N.D.	ug/mld
45)	n-C40	0.000	0	N.D.	ug/mld
46)	TPH	12.995f	15129344	153.866	ug/mlm
47)	TRH1	8.700	217601	2.213	ug/mlm
48)	TRH2	12.995f	1005997	10.231	ug/mlm
49)	TRH3	26.594f	146184	1.486	ug/mlm
50)	TRH4	29.589	453846	4.616	ug/mlm
51)	TRH5	35.040	688759	7.005	ug/mlm
52)	TRH6	47.006	225710	2.295	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

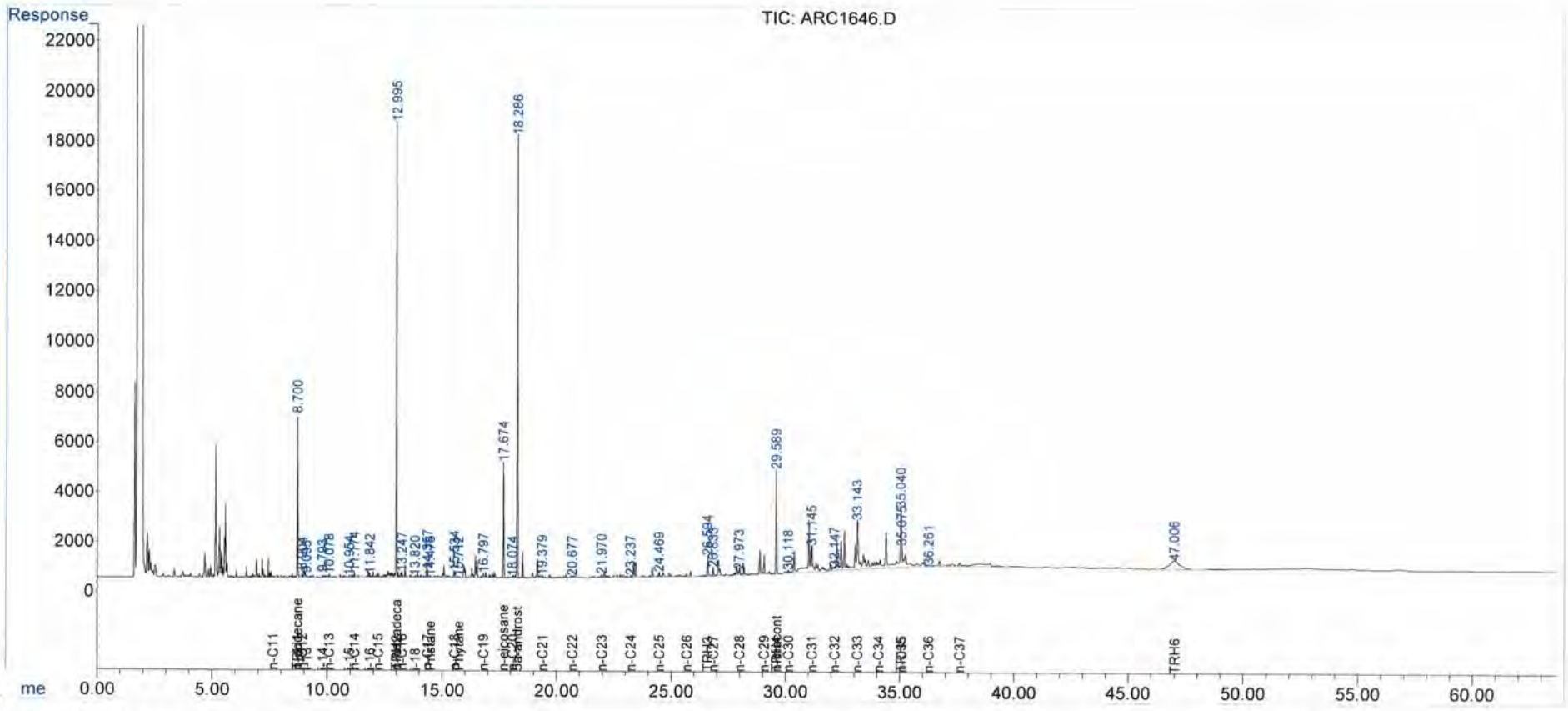
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1646.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 01:44:48
Operator : Meghan Dailey
Sample : SED-DA-BG-005 (0-0.5)
Misc :
ALS Vial : 25 Sample Multiplier: 0.0666667

Integration File: autoint1.e
Quant Time: Aug 28 07:55:01 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



			Concentration
Data File Name	**ARC1647.D**		ARC1647.D
Sample Name	**SED-DA-BG-006 (0-0.5)**		SED-DA-BG-006 (0-0.5)
Misc Info	**0**		17-Aug-2013, 14:53:02
Data File Path	**C:\msdchem\2\data\FID10078**		ALI2012.M
Operator	**Meghan Dailey**		
Date Acquired	**17-Aug-2013, 14:53:02**		0.0662252
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	27
Vial Number	**27**	IS Area 1	294395
Sample Multiplier	**0.0662252**	IS Area 2	378895

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	0.00	0	0.00	0.000
5)	n-C11	7.65	523.282	0.01	0.005
7)	n-C12	8.90	2018.14	0.02	0.020
8)	i-13	9.10	118.17	0.00	0.001
9)	i-14	9.79	825.404	0.01	0.008
10)	n-C13	10.08	1801.83	0.02	0.018
11)	i-15	10.95	932.907	0.01	0.009
12)	n-C14	11.17	3730.23	0.04	0.035
13)	i-16	11.85	353.696	0.00	0.003
14)	n-C15	12.21	2783.68	0.03	0.026
15)	n-C16	13.25	4344.03	0.04	0.041
17)	i-18	13.82	916.47	0.01	0.008
18)	n-C17	14.36	1972.92	0.02	0.017
19)	Pristane	14.46	1881.02	0.02	0.017
20)	n-C18	15.54	3882.42	0.03	0.035
21)	Phytane	15.71	880.63	0.01	0.008
22)	n-C19	16.79	1310.08	0.01	0.012
24)	n-C20	18.07	914.779	0.01	0.008
25)	n-C21	19.38	1216.12	0.01	0.011
26)	n-C22	20.68	959.551	0.01	0.009
27)	n-C23	21.97	1713.22	0.02	0.015
28)	n-C24	23.23	1239.44	0.01	0.011
29)	n-C25	24.47	2842.37	0.03	0.026
30)	n-C26	25.67	1319.72	0.01	0.012
31)	n-C27	26.83	4563.91	0.04	0.042
32)	n-C28	27.96	804.26	0.01	0.007
33)	n-C29	29.06	4526.85	0.04	0.041
35)	n-C30	30.12	661.91	0.01	0.006
36)	n-C31	31.15	3871.49	0.04	0.036
37)	n-C32	32.14	425.836	0.00	0.004
38)	n-C33	33.12	3000.57	0.03	0.029
39)	n-C34	34.02	92.859	0.00	0.001
40)	n-C35	35.05	2704.4	0.03	0.026
41)	n-C36	0.00	0	0.00	0.000
42)	n-C37	0.00	0	0.00	0.000
43)	n-C38	0.00	0	0.00	0.000
44)	n-C39	0.00	0	0.00	0.000
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	13.00	11311200	106.17	106.168
47)	TRH1	8.70	190274	1.79	1.786
48)	TRH2	13.00	1010380	9.48	9.483
49)	TRH3	26.59	78659.6	0.74	0.738
50)	TRH4	29.59	165800	1.56	1.556
51)	TRH5	32.68	650885	6.11	6.109
52)	TRH6	38.94	214347	2.01	2.012
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	93011.3	1.01	76.5
23)	n-eicosane-d42	17.67	101139	1.15	86.3
34)	n-triacontane-d62	29.59	95342.2	1.11	84.0
1)	n-hexadecane-d34	13.00	294395	3.31	294395.000
16)	5a-androstane	18.29	378895	3.32	378895.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1647.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 14:53:02
Operator : Meghan Dailey
Sample : SED-DA-BG-006 (0-0.5)
Misc :
ALS Vial : 27 Sample Multiplier: 0.0662252

Integration File: autoint1.e
Quant Time: Aug 28 08:10:26 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
	Internal Standards			
1) I	n-hexadecane-d34	12.995	294395	50.000 ug/mlm
16) I	5a-androstane	18.287	378895	50.072 ug/mlm
	System Monitoring Compounds			
6) S	n-dodecane-d26	8.699	93011	1.013 ug/mlm
23) S	n-eicosane-d42	17.673	101139	1.150 ug/mlm
34) S	n-triacontane-d62	29.587	95342	1.114 ug/mlm
	Target Compounds			
2)	n-C8	0.000	0	N.D. ug/mld
3)	n-C9	0.000	0	N.D. ug/mld
4)	n-C10	0.000	0	N.D. ug/mld
5)	n-C11	7.646	523	0.005 ug/mlm
7)	n-C12	8.899	2018	0.020 ug/mlm
8)	i-13	9.096	118	0.001 ug/mlm
9)	i-14	9.792	825	0.008 ug/mlm
10)	n-C13	10.078	1802	0.018 ug/mlm
11)	i-15	10.954	933	0.009 ug/mlm
12)	n-C14	11.173	3730	0.035 ug/mlm
13)	i-16	11.852	354	0.003 ug/mlm
14)	n-C15	12.205	2784	0.026 ug/mlm
15)	n-C16	13.247	4344	0.041 ug/mlm
17)	i-18	13.820	916	0.008 ug/mlm
18)	n-C17	14.356	1973	0.017 ug/mlm
19)	Pristane	14.458	1881	0.017 ug/mlm
20)	n-C18	15.539	3882	0.035 ug/mlm
21)	Phytane	15.710	881	0.008 ug/mlm
22)	n-C19	16.791	1310	0.012 ug/mlm
24)	n-C20	18.072	915	0.008 ug/mlm
25)	n-C21	19.375	1216	0.011 ug/mlm
26)	n-C22	20.680	960	0.009 ug/mlm
27)	n-C23	21.968	1713	0.015 ug/mlm
28)	n-C24	23.234	1239	0.011 ug/mlm
29)	n-C25	24.468	2842	0.026 ug/mlm
30)	n-C26	25.669	1320	0.012 ug/mlm
31)	n-C27	26.831	4564	0.042 ug/mlm
32)	n-C28	27.957	804	0.007 ug/mlm
33)	n-C29	29.062	4527	0.041 ug/mlm
35)	n-C30	30.123	662	0.006 ug/mlm
36)	n-C31	31.148	3871	0.036 ug/mlm
37)	n-C32	32.141	426	0.004 ug/mlm
38)	n-C33	33.124	3001	0.029 ug/mlm
39)	n-C34	34.017f	93	0.001 ug/mlm
40)	n-C35	35.050f	2704	0.026 ug/mlm

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1647.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 14:53:02
Operator : Meghan Dailey
Sample : SED-DA-BG-006 (0-0.5)
Misc :
ALS Vial : 27 Sample Multiplier: 0.0662252

Integration File: autoint1.e
Quant Time: Aug 28 08:10:26 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	0.000	0	N.D.	ug/mld
42)	n-C37	0.000	0	N.D.	ug/mld
43)	n-C38	0.000	0	N.D.	ug/mld
44)	n-C39	0.000	0	N.D.	ug/mld
45)	n-C40	0.000	0	N.D.	ug/mld
46)	TPH	12.995f	11311221	106.167	ug/mlm
47)	TRH1	8.699	190274	1.786	ug/mlm
48)	TRH2	12.995f	1010379	9.483	ug/mlm
49)	TRH3	26.593f	78660	0.738	ug/mlm
50)	TRH4	29.587	165800	1.556	ug/mlm
51)	TRH5	32.683f	650885	6.109	ug/mlm
52)	TRH6	38.938f	214347	2.012	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

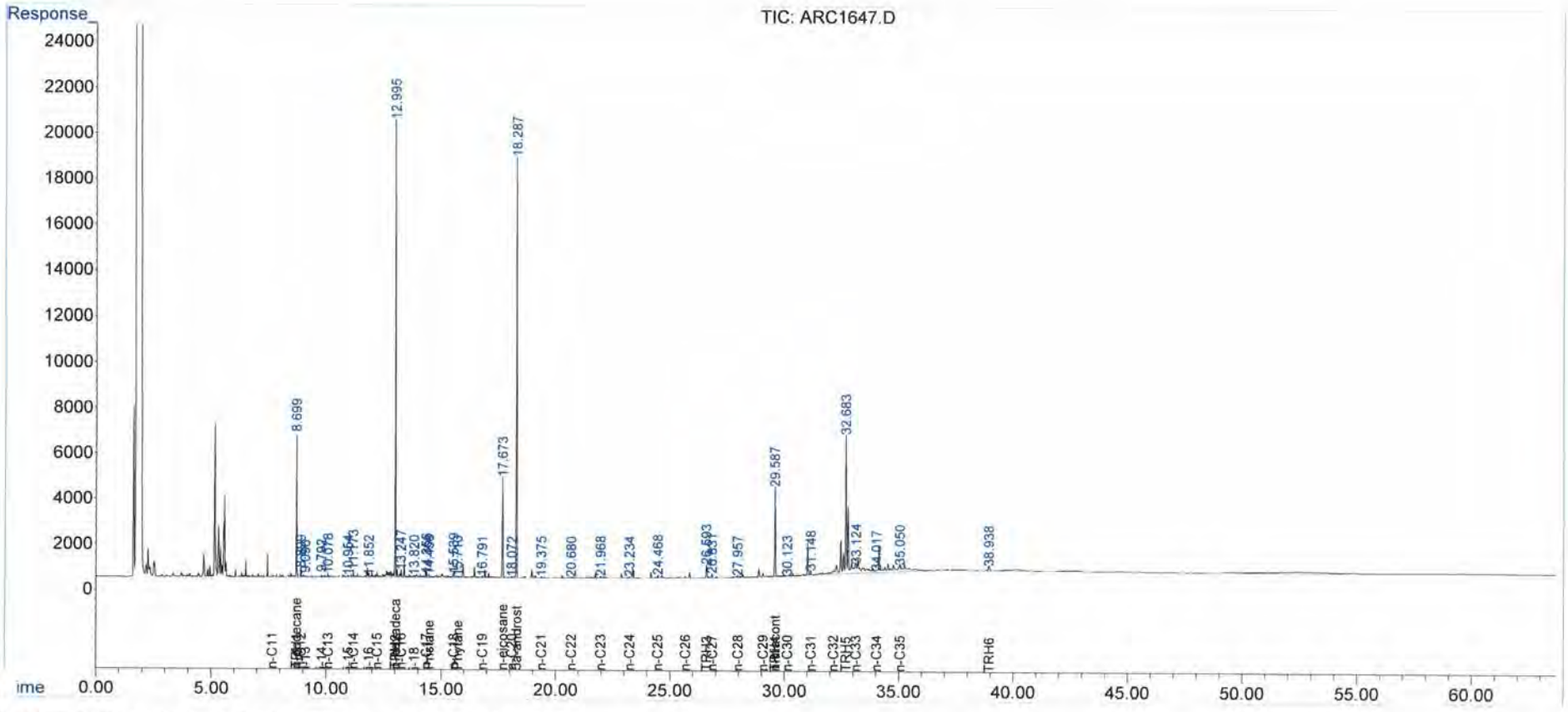
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1647.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 14:53:02
Operator : Meghan Dailey
Sample : SED-DA-BG-006 (0-0.5)
Misc :
ALS Vial : 27 Sample Multiplier: 0.0662252

Integration File: autoint1.e
Quant Time: Aug 28 08:10:26 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



			Concentration
Data File Name	**ARC1653.D**		ARC1653.D
Sample Name	**SED-DA-DUP-04-080313**		SED-DA-DUP-04-080313
Misc Info	**0**		17-Aug-2013, 16:03:37
Data File Path	**C:\msdchem\2\data\FID10078**		ALI2012.M
Operator	**Meghan Dailey**		
Date Acquired	**17-Aug-2013, 16:03:37**		0.0657895
Instrument Name	**HP5890**		
Acq. Method File	**ALI2012.M**	Vial #	28
Vial Number	**28**	IS Area 1	260429
Sample Multiplier	**0.0657895**	IS Area 2	342109

#	Name	Ret Time	Target Response	Amount	Concentration
2)	n-C8	0.00	0	0.00	0.000
3)	n-C9	0.00	0	0.00	0.000
4)	n-C10	0.00	0	0.00	0.000
5)	n-C11	7.65	481.369	0.01	0.006
7)	n-C12	8.90	1685.97	0.02	0.018
8)	i-13	9.10	815.948	0.01	0.009
9)	i-14	9.79	2641.49	0.03	0.028
10)	n-C13	10.08	2247.79	0.02	0.025
11)	i-15	10.95	9263.31	0.10	0.098
12)	n-C14	11.17	7321.16	0.08	0.078
13)	i-16	11.85	6208.32	0.07	0.065
14)	n-C15	12.21	8230.62	0.09	0.087
15)	n-C16	13.25	12535.7	0.13	0.132
17)	i-18	13.82	22232.5	0.22	0.220
18)	n-C17	14.36	18472.1	0.18	0.180
19)	Pristane	14.47	37127.3	0.36	0.363
20)	n-C18	15.54	19938.4	0.20	0.198
21)	Phytane	15.71	43174.3	0.42	0.420
22)	n-C19	16.79	15899.7	0.16	0.159
24)	n-C20	18.07	12191.5	0.12	0.121
25)	n-C21	19.38	14033.6	0.14	0.139
26)	n-C22	20.68	10778.3	0.11	0.107
27)	n-C23	21.98	12316.5	0.12	0.122
28)	n-C24	23.24	12809.9	0.13	0.127
29)	n-C25	24.48	14031.6	0.14	0.139
30)	n-C26	25.67	8540.55	0.08	0.085
31)	n-C27	26.84	19650.1	0.20	0.199
32)	n-C28	27.98	10541.6	0.11	0.105
33)	n-C29	29.07	57230.6	0.57	0.570
35)	n-C30	30.14	16730.7	0.17	0.168
36)	n-C31	31.16	72008.3	0.73	0.734
37)	n-C32	32.15	5490.86	0.06	0.056
38)	n-C33	33.15	92820.5	0.98	0.976
39)	n-C34	34.06	5666.28	0.06	0.059
40)	n-C35	35.08	25475.5	0.27	0.271
41)	n-C36	36.26	5948.33	0.06	0.059
42)	n-C37	37.62	11336.3	0.12	0.123
43)	n-C38	0.00	0	0.00	0.000
44)	n-C39	0.00	0	0.00	0.000
45)	n-C40	0.00	0	0.00	0.000
46)	TPH	13.00	33641900	347.42	347.417
47)	TRH1	8.70	270054	2.79	2.789
48)	TRH2	13.00	4545420	46.94	46.940
49)	TRH3	22.88	470314	4.85	4.855
50)	TRH4	29.60	929951	9.60	9.603
51)	TRH5	35.05	1597830	16.50	16.501
52)	TRH6	37.62	110059	1.14	1.137
53)	GRO	0.00	0	0.00	0.000
54)	DRO	0.00	0	0.00	0.000
55)	RRO	0.00	0	0.00	0.000
6)	n-dodecane-d26	8.70	93448.9	1.14	86.9
23)	n-eicosane-d42	17.68	92107.6	1.15	87.0
34)	n-triacontane-d62	29.60	95037.8	1.22	92.8
1)	n-hexadecane-d34	13.00	260429	3.29	260429.000
16)	5a-androstane	18.29	342109	3.29	342109.000

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1653.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 16:03:37
Operator : Meghan Dailey
Sample : SED-DA-DUP-04-080313
Misc :
ALS Vial : 28 Sample Multiplier: 0.0657895

Integration File: autoint1.e
Quant Time: Aug 28 07:58:26 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
	Internal Standards				
1) I	n-hexadecane-d34	12.996	260429	50.000	ug/mlm
16) I	5a-androstane	18.293	342109	50.072	ug/mlm
	System Monitoring Compounds				
6) S	n-dodecane-d26	8.700	93449	1.143	ug/mlm
23) S	n-eicosane-d42	17.681	92108	1.153	ug/mlm
34) S	n-triacontane-d62	29.595	95038	1.222	ug/mlm
	Target Compounds				
2)	n-C8	0.000	0	N.D.	ug/mld
3)	n-C9	0.000	0	N.D.	ug/mld
4)	n-C10	0.000	0	N.D.	ug/mld
5)	n-C11	7.647	481	0.006	ug/mlm
7)	n-C12	8.904	1686	0.018	ug/mlm
8)	i-13	9.097	816	0.009	ug/mlm
9)	i-14	9.795	2641	0.028	ug/mlm
10)	n-C13	10.078	2248	0.025	ug/mlm
11)	i-15	10.952	9263	0.098	ug/mlm
12)	n-C14	11.174	7321	0.078	ug/mlm
13)	i-16	11.851	6208	0.065	ug/mlm
14)	n-C15	12.206	8231	0.087	ug/mlm
15)	n-C16	13.248	12536	0.132	ug/mlm
17)	i-18	13.816	22233	0.220	ug/mlm
18)	n-C17	14.361	18472	0.180	ug/mlm
19)	Pristane	14.473	37127	0.363	ug/mlm
20)	n-C18	15.542	19938	0.198	ug/mlm
21)	Phytane	15.709	43174	0.420	ug/mlm
22)	n-C19	16.789	15900	0.159	ug/mlm
24)	n-C20	18.075	12192	0.121	ug/mlm
25)	n-C21	19.378	14034	0.139	ug/mlm
26)	n-C22	20.683	10778	0.107	ug/mlm
27)	n-C23	21.976	12316	0.122	ug/mlm
28)	n-C24	23.242	12810	0.127	ug/mlm
29)	n-C25	24.476	14032	0.139	ug/mlm
30)	n-C26	25.673	8541	0.085	ug/mlm
31)	n-C27	26.841	19650	0.199	ug/mlm
32)	n-C28	27.975	10542	0.105	ug/mlm
33)	n-C29	29.069	57231	0.570	ug/mlm
35)	n-C30	30.135	16731	0.168	ug/mlm
36)	n-C31	31.159	72008	0.734	ug/mlm
37)	n-C32	32.154	5491	0.056	ug/mlm
38)	n-C33	33.151	92820	0.976	ug/mlm
39)	n-C34	34.063	5666	0.059	ug/mlm
40)	n-C35	35.075	25476	0.271	ug/mlm

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1653.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 16:03:37
Operator : Meghan Dailey
Sample : SED-DA-DUP-04-080313
Misc :
ALS Vial : 28 Sample Multiplier: 0.0657895

Integration File: autoint1.e
Quant Time: Aug 28 07:58:26 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc	Units
41)	n-C36	36.257	5948	0.059	ug/mlm
42)	n-C37	37.616	11336	0.123	ug/mlm
43)	n-C38	0.000	0	N.D.	ug/mld
44)	n-C39	0.000	0	N.D.	ug/mld
45)	n-C40	0.000	0	N.D.	ug/mld
46)	TPH	12.996f	33641887	347.417	ug/mlm
47)	TRH1	8.700	270054	2.789	ug/mlm
48)	TRH2	12.996f	4545418	46.940	ug/mlm
49)	TRH3	22.881	470314	4.855	ug/mlm
50)	TRH4	29.595	929951	9.604	ug/mlm
51)	TRH5	35.047	1597828	16.501	ug/mlm
52)	TRH6	37.616f	110059	1.137	ug/mlm
53)	GRO	0.000	0	N.D.	ug/mld
54)	DRO	0.000	0	N.D.	ug/mld
55)	RRO	0.000	0	N.D.	ug/mld

SemiQuant Compounds - Not Calibrated on this Instrument

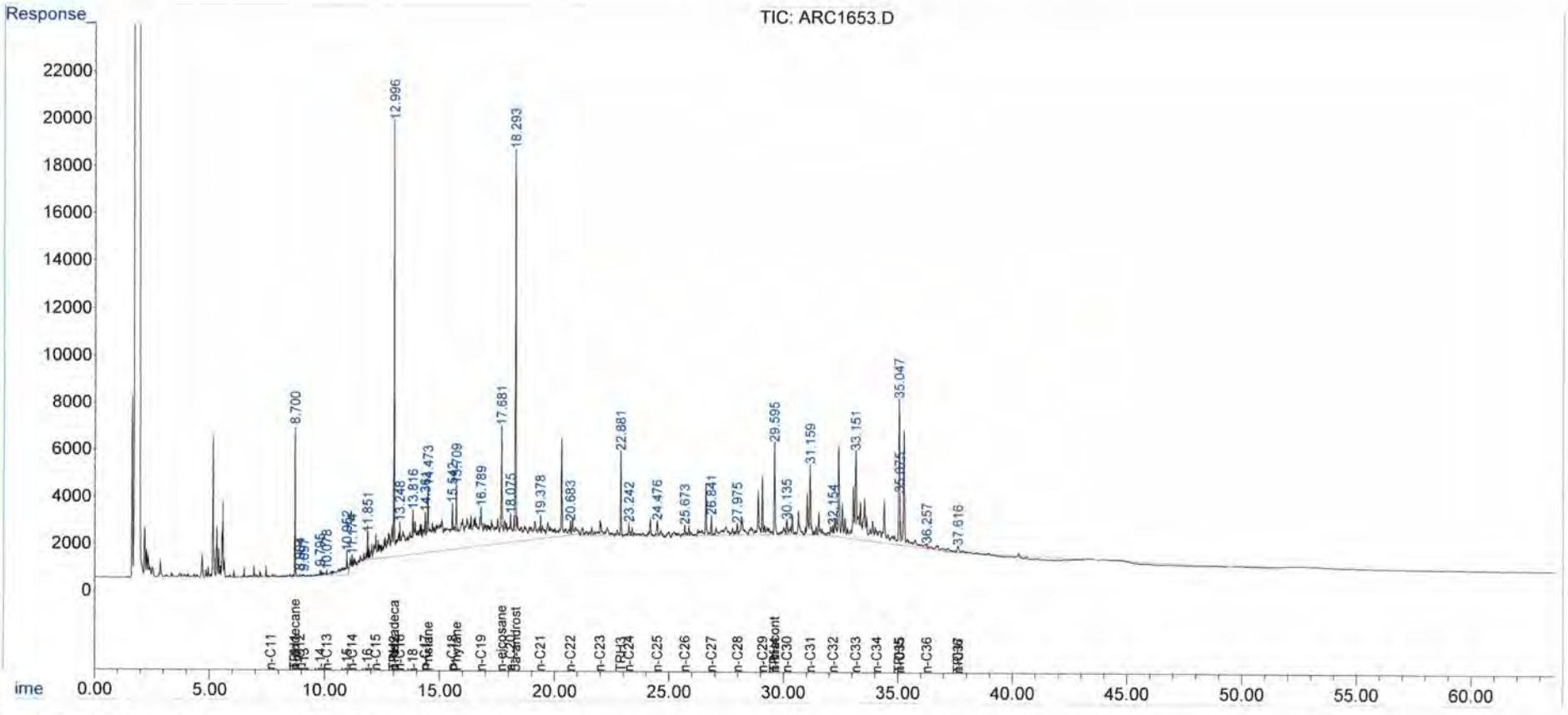
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\FID10078\
Data File : ARC1653.D
Signal(s) : FID1A.CH
Acq On : 17-Aug-2013, 16:03:37
Operator : Meghan Dailey
Sample : SED-DA-DUP-04-080313
Misc :
ALS Vial : 28 Sample Multiplier: 0.0657895

Integration File: autoint1.e
Quant Time: Aug 28 07:58:26 2013
Quant Method : P:\2013\J13034\Aliphatics\ENV 3079\FID1C08FRONT081213.M
Quant Title : C8 - C40 aliphatic
QLast Update : Mon Aug 12 13:56:00 2013
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1603.D
Acq On : 16 Aug 2013 7:59 am
Operator : YM
Sample : SED-DA-DUP-02-073013
Misc :
ALS Vial : 20 Sample Multiplier: 0.06653

Quant Time: Sep 08 17:02:12 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.558	192	308433m	16.16		
45) 2-Methylanthracene	26.731	192	246225m	12.90		
46) 4/9-Methylphenanthrene	26.835	192	276531m	14.49		
47) 1-Methylphenanthrene	26.939	192	195588m	10.25		
48) 3,6-Dimethylphenanthrene	28.013	206	88863m	5.82		
49) Retene	30.680	234	104943m	12.84		
50) C2-Phenanthrenes/Anthr...	28.359	206	1732252m	78.10		
51) C3-Phenanthrenes/Anthr...	29.918	220	1862928m	83.99		
52) C4-Phenanthrenes/Anthr...	31.789	234	1332680m	60.08		
53) Naphthobenzothiophene	32.987	234	641881m	21.42		
54) C1-Naphthobenzothiophenes	34.151	248	1786684m	59.64		
55) C2-Naphthobenzothiophenes	35.393	262	2703343m	90.23		
56) C3-Naphthobenzothiophenes	36.946	276	2688523m	89.74		
57) C4-Naphthobenzothiophenes	38.265	290	1037627m	34.63		
58) Fluoranthene	28.914	202	2208592m	88.87		
59) Pyrene	29.710	202	1499738m	48.74		
60) 2-Methylfluoranthene	30.472	216	118878m	6.13		
61) Benzo(b)fluorene	31.061	216	196018m	11.85		
62) C1-Fluoranthenes/Pyrenes	31.512	216	1349751m	54.31		
63) C2-Fluoranthenes/Pyrenes	32.211	230	2972518m	119.61		
64) C3-Fluoranthenes/Pyrenes	34.151	244	1455290m	58.56		
65) C4-Fluoranthenes/Pyrenes	35.820	258	1318679m	53.06		
67) Benz(a)anthracene	33.802	228	553307m	20.14		
68) Chrysene/Triphenylene	33.919	228	1224873m	41.43		
69) C1-Chrysenes	35.704	242	2333432m	78.93		
70) C2-Chrysenes	36.325	256	1514440m	51.23		
71) C3-Chrysenes	37.566	270	1005234m	34.00		
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.372	252	1564235m	95.25		
78) Benzo(k,j)fluoranthene	37.450	252	344775m	23.80		
79) Benzo(a)fluoranthene	37.722	252	395295m	27.29		
80) Benzo(e)pyrene	38.343	252	653849m	43.90		
81) Benzo(a)pyrene	38.537	252	402431m	27.38		
82) Indeno(1,2,3-c,d)pyrene	43.363	276	415503m	29.69		
83) Dibenzo(a,h)anthracene	43.400	278	89305m	8.00		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.838	276	766185m	67.84		
89) Perylene	38.847	252	8397123m	555.52		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1603.D
Acq On : 16 Aug 2013 7:59 am
Operator : YM
Sample : SED-DA-DUP-02-073013
Misc :
ALS Vial : 20 Sample Multiplier: 0.06653

Quant Time: Sep 08 17:02:12 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

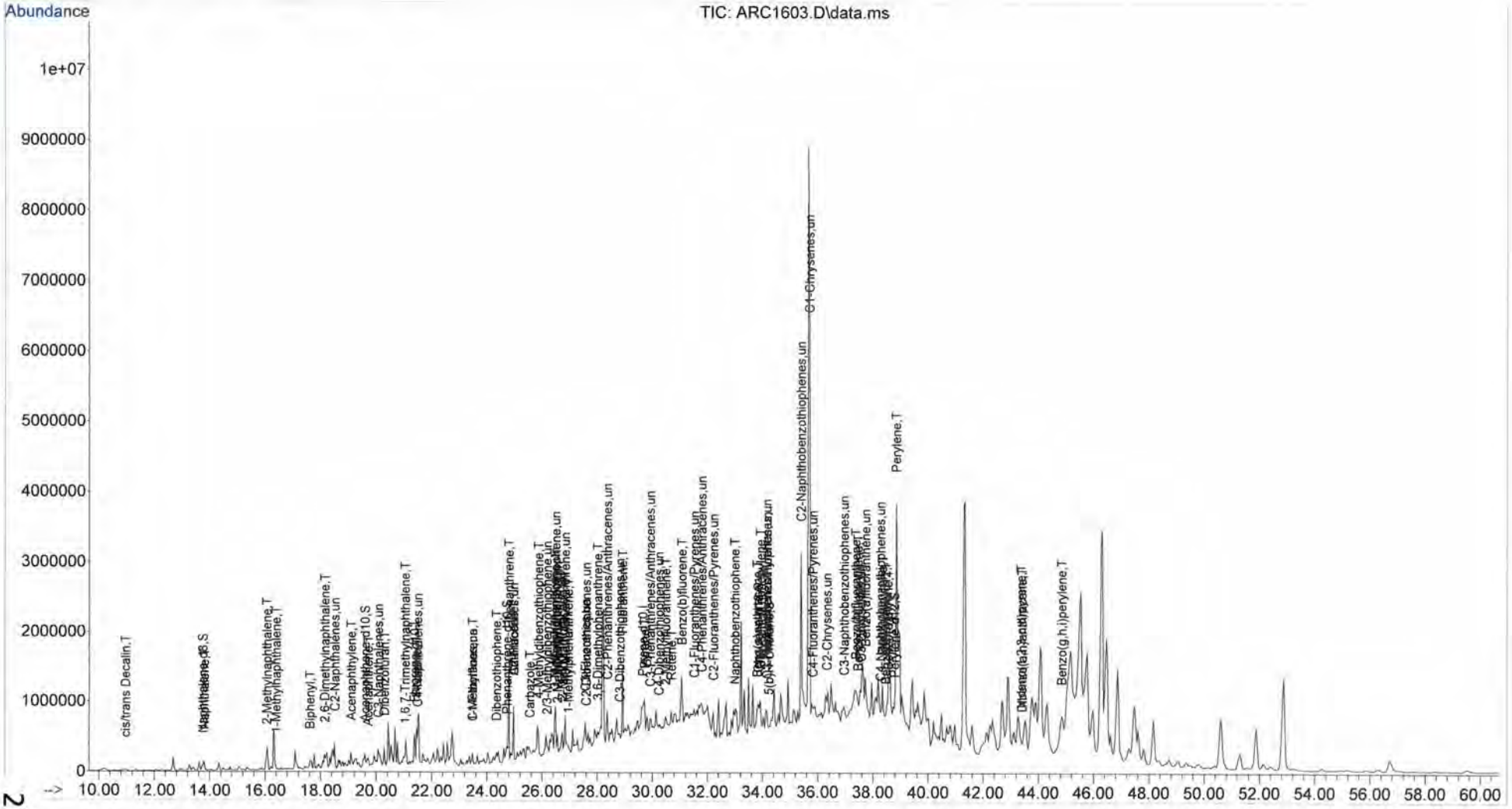
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1603.D
Acq On : 16 Aug 2013 7:59 am
Operator : YM
Sample : SED-DA-DUP-02-073013
Misc :
ALS Vial : 20 Sample Multiplier: 0.06653

Quant Time: Sep 08 17:02:12 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1611.D
Data File Path C:\msdchem\2\data\MS60141\
Operator YM
Date Acquired 8/16/2013 9:08
Acq. Method File PAH-2012.M
Sample Name SED-DA-BG-011 (0-0.5)
Misc Info 0
Instrument Name GCMS6
Vial Number 21
Sample Multiplier 0.06667
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ARC1611.D
SED-DA-BG-011 (0-0.5)
8/16/2013
PAH-2012.M
14.99925004

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	213707	10.3112	10.8606
9)+10)	C1-Naphthalenes	16.19	241511	11.6527	12.2736
13)	C2-Naphthalenes	18.50	468092	22.5851	23.7886
14)	C3-Naphthalenes	20.06	550296	26.5514	27.9662
15)	C4-Naphthalenes	22.10	823257	39.7216	41.8381
16)	Benzothiophene	13.96	25747	1.5644	1.6477
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.61	123738	7.0064	7.3797
23)	Acenaphthylene	19.09	144819	7.1620	7.5436
24)	Acenaphthene	19.67	28275	2.4496	2.5801
25)	Dibenzofuran	20.29	246558	12.6384	13.3118
26)	Fluorene	21.46	294274	19.1234	20.1424
28)	C1-Fluorenes	23.37	210450	13.6761	14.4048
29)	C2-Fluorenes	25.35	506573	32.9196	34.6737
30)	C3-Fluorenes	27.56	771336	50.1252	52.7961
33)	Carbazole	25.52	118460	6.9001	7.2678
42)	Anthracene	24.96	278113	14.7316	15.5166
41)	Phenanthrene	24.79	2018550	100.6997	106.0654
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.69	1090436	54.3987	57.2973
50)	C2-Phenanthrenes/Anthracenes	28.36	1574570	78.5506	82.7361
51)	C3-Phenanthrenes/Anthracenes	30.68	1780580	88.8278	93.5609
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	24.34	339912	16.9859	17.8910
35)+36)+37)	C1-Dibenzothiophenes	26.17	653117	32.6372	34.3763
38)	C2-Dibenzothiophenes	27.29	960732	48.0092	50.5673
39)	C3-Dibenzothiophenes	29.29	1304270	65.1763	68.6492
40)	C4-Dibenzothiophenes	30.85	1154400	57.6872	60.7610
58)	Fluoranthene	28.91	3238340	144.1792	151.8617
59)	Pyrene	29.68	2157920	77.5999	81.7347
62)	C1-Fluoranthenes/Pyrenes	31.51	1362250	60.6506	63.8824
63)	C2-Fluoranthenes/Pyrenes	33.30	2475850	110.2308	116.1044
64)	C3-Fluoranthenes/Pyrenes	33.61	800530	35.6416	37.5407
65)	C4-Fluoranthenes/Pyrenes	35.32	768933	34.2348	36.0590
53)	Naphthobenzothiophene	32.99	825376	30.4831	32.1074
54)	C1-Naphthobenzothiophenes	34.73	1300280	48.0223	50.5811
55)	C2-Naphthobenzothiophenes	35.82	1598870	59.0500	62.1964
56)	C3-Naphthobenzothiophenes	37.22	1004460	37.0973	39.0740
57)	C4-Naphthobenzothiophenes	38.07	482336	17.8138	18.7630
67)	Benz(a)anthracene	33.80	776513	31.2752	32.9416
68)	Chrysene/Triphenylene	33.92	2000510	74.8784	78.8683
69)	C1-Chrysenes	35.16	1288130	48.2140	50.7831
70)	C2-Chrysenes	36.87	753956	28.2203	29.7240
71)	C3-Chrysenes	38.85	440372	16.4830	17.3612
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.33	2488510	131.0912	138.0763
78)	Benzo(k,j)fluoranthene	37.45	489111	29.2063	30.7625
79)	Benzo(a)fluoranthene	37.72	179321	10.7078	11.2784
80)	Benzo(e)pyrene	38.34	1150800	66.8347	70.3959
81)	Benzo(a)pyrene	38.54	712263	41.9290	44.1631
89)	Perylene	38.85	909310	52.0399	54.8128
82)	Indeno(1,2,3-c,d)pyrene	43.25	630197	38.9505	41.0260
83)	Dibenzo(a,h)anthracene	43.29	134077	10.3959	10.9498
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.65	524267	40.1582	42.2980

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.02	176306	13.1150	13.8138
10)	1-Methylnaphthalene	16.36	65205	5.2628	5.5433
11)	2,6-Dimethylnaphthalene	18.14	154284	12.5829	13.2534
12)	1,6,7-Trimethylnaphthalene	20.98	43322	3.9550	4.1658
27)	1-Methylfluorene	23.47	64270	7.7765	8.1908
35)	4-Methyldibenzothiophene	25.86	361042	22.9009	24.1212
36)	2/3-Methyldibenzothiophene	26.14	171322	10.8669	11.4460
37)	1-Methyldibenzothiophene	26.49	120753	7.6594	8.0675
43)	3-Methylphenanthrene	26.45	296329	17.1795	18.0949
44)	2-Methylphenanthrene	26.56	308485	17.8842	18.8372
45)	2-Methylanthracene	26.70	98562	5.7141	6.0185
46)	4/9-Methylphenanthrene	26.83	219904	12.7488	13.4281
47)	1-Methylphenanthrene	26.90	167156	9.6908	10.2071
48)	3,6-Dimethylphenanthrene	27.94	117153	8.4888	8.9411
49)	Retene	0.00	0	0.0000	0.0000
60)	2-Methylfluoranthene	30.47	139147	7.9442	8.3675
61)	Benzo(b)fluorene	31.06	210162	14.0522	14.8009
74)	C29-Hopane	0.00	0	0.0000	0.0000
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	0.00	0	0.0000	0.0000
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.74	312756	16.27	97.57
21)	Acenaphthene-d10	19.59	154802	14.52	87.08
32)	Phenanthrene-d10	24.72	263705	15.84	94.94
66)	Chrysene-d12	33.84	322763	13.48	80.85
88)	Perylene-d12	38.73	213491	15.01	90.05
90)	5(b)H-Cholane	34.23	105937	37.70	226.22
	Internal Standards				
1)	Fluorene-d10	21.37	184238	16.74	
31)	Pyrene-d10	29.64	334811	16.71	
73)	Benzo(a)pyrene-d12	38.42	209380	16.69	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1611.D
Acq On : 16 Aug 2013 9:08 am
Operator : YM
Sample : SED-DA-BG-011 (0-0.5)
Misc :
ALS Vial : 21 Sample Multiplier: 0.06667

Quant Time: Sep 05 06:37:46 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.372	176	184238m	251.05		0.00
31) Pyrene-d10	29.641	212	334811m	250.63		0.03
73) Benzo(a)pyrene-d12	38.420	264	209380m	250.32		0.04
System Monitoring Compounds						
2) Naphthalene-d8	13.737	136	312756m	16.27		0.00
21) Acenaphthene-d10	19.588	164	154802m	14.52		0.00
32) Phenanthrene-d10	24.722	188	263705m	15.84		0.03
66) Chrysene-d12	33.841	240	322763m	13.48		0.04
88) Perylene-d12	38.731	264	213491m	15.01		0.04
90) 5(b)H-Cholane	34.229	217	105937m	37.70		0.04
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.792	128	213707m	10.31		
9) 2-Methylnaphthalene	16.022	142	176306m	13.11		
10) 1-Methylnaphthalene	16.356	142	65205m	5.26		
11) 2,6-Dimethylnaphthalene	18.139	156	154284m	12.58		
12) 1,6,7-Trimethylnaphtha...	20.982	170	43322m	3.96		
13) C2-Naphthalenes	18.502	156	468092m	22.59		
14) C3-Naphthalenes	20.062	170	550296m	26.55		
15) C4-Naphthalenes	22.096	184	823257m	39.72		
16) Benzothiophene	13.960	134	25747m	1.56		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.610	154	123738m	7.01		
23) Acenaphthylene	19.087	152	144819m	7.16		
24) Acenaphthene	19.672	154	28275m	2.45		
25) Dibenzofuran	20.285	168	246558m	12.64		
26) Fluorene	21.455	166	294274m	19.12		
27) 1-Methylfluorene	23.475	180	64270m	7.78		
28) C1-Fluorenes	23.371	180	210450m	13.68		
29) C2-Fluorenes	25.345	194	506573m	32.92		
30) C3-Fluorenes	27.562	208	771336m	50.13		
33) Carbazole	25.518	167	118460m	6.90		
34) Dibenzothiophene	24.341	184	339912m	16.99		
35) 4-Methyldibenzothiophene	25.865	198	361042m	22.90		
36) 2/3-Methyldibenzothiop...	26.142	198	171322m	10.87		
37) 1-Methyldibenzothiophene	26.488	198	120753m	7.66		
38) C2-Dibenzothiophenes	27.285	212	960732m	48.01		
39) C3-Dibenzothiophenes	29.294	226	1304270m	65.18		
40) C4-Dibenzothiophenes	30.853	240	1154401m	57.69		
41) Phenanthrene	24.791	178	2018554m	100.70		
42) Anthracene	24.964	178	278113m	14.73		
43) 3-Methylphenanthrene	26.454	192	296329m	17.18		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1611.D
Acq On : 16 Aug 2013 9:08 am
Operator : YM
Sample : SED-DA-BG-011 (0-0.5)
Misc :
ALS Vial : 21 Sample Multiplier: 0.06667

Quant Time: Sep 05 06:37:46 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.558	192	308485m	17.88		
45) 2-Methylanthracene	26.696	192	98562m	5.71		
46) 4/9-Methylphenanthrene	26.835	192	219904m	12.75		
47) 1-Methylphenanthrene	26.904	192	167156m	9.69		
48) 3,6-Dimethylphenanthrene	27.943	206	117153m	8.49		
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	28.359	206	1574570m	78.55		
51) C3-Phenanthrenes/Anthr...	30.680	220	1780576m	88.83		
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	32.987	234	825376m	30.48		
54) C1-Naphthobenzothiophenes	34.733	248	1300276m	48.02		
55) C2-Naphthobenzothiophenes	35.820	262	1598867m	59.05		
56) C3-Naphthobenzothiophenes	37.217	276	1004464m	37.10		
57) C4-Naphthobenzothiophenes	38.071	290	482336m	17.81		
58) Fluoranthene	28.913	202	3238344m	144.18		
59) Pyrene	29.675	202	2157915m	77.60		
60) 2-Methylfluoranthene	30.472	216	139147m	7.94		
61) Benzo(b)fluorene	31.061	216	210162m	14.05		
62) C1-Fluoranthenes/Pyrenes	31.511	216	1362246m	60.65		
63) C2-Fluoranthenes/Pyrenes	33.298	230	2475846m	110.23		
64) C3-Fluoranthenes/Pyrenes	33.608	244	800530m	35.64		
65) C4-Fluoranthenes/Pyrenes	35.316	258	768933m	34.23		
67) Benz(a)anthracene	33.802	228	776513m	31.28		
68) Chrysene/Triphenylene	33.919	228	2000509m	74.88		
69) C1-Chrysenes	35.160	242	1288125m	48.21		
70) C2-Chrysenes	36.868	256	753956m	28.22		
71) C3-Chrysenes	38.847	270	440372m	16.48		
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.334	252	2488506m	131.09		
78) Benzo(k,j)fluoranthene	37.450	252	489111m	29.21		
79) Benzo(a)fluoranthene	37.722	252	179321m	10.71		
80) Benzo(e)pyrene	38.342	252	1150800m	66.83		
81) Benzo(a)pyrene	38.536	252	712263m	41.93		
82) Indeno(1,2,3-c,d)pyrene	43.252	276	630197m	38.95		
83) Dibenzo(a,h)anthracene	43.288	278	134077m	10.40		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.653	276	524267m	40.16		
89) Perylene	38.847	252	909310m	52.04		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1611.D
Acq On : 16 Aug 2013 9:08 am
Operator : YM
Sample : SED-DA-BG-011 (0-0.5)
Misc :
ALS Vial : 21 Sample Multiplier: 0.06667

Quant Time: Sep 05 06:37:46 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

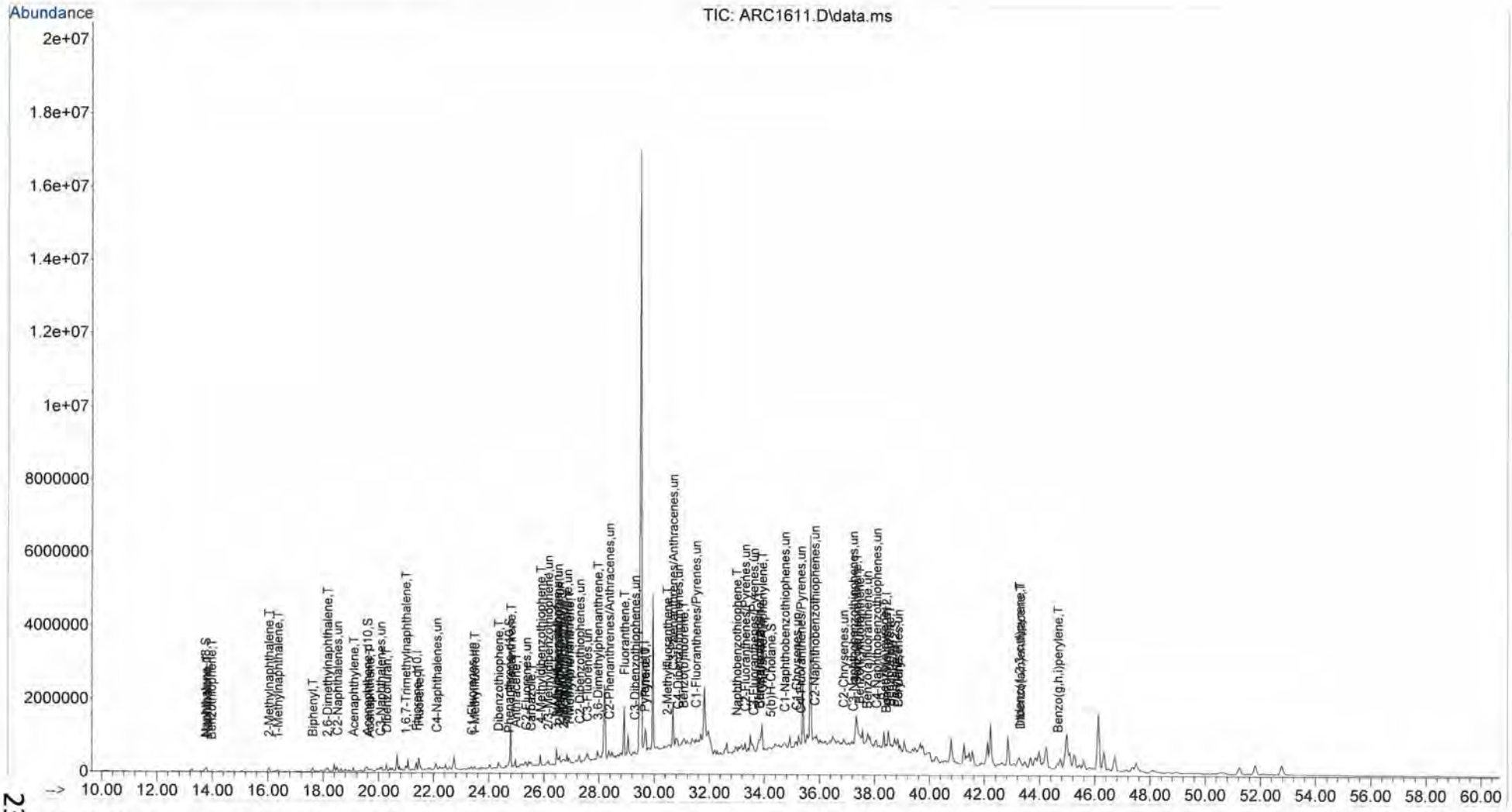
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1611.D
Acq On : 16 Aug 2013 9:08 am
Operator : YM
Sample : SED-DA-BG-011 (0-0.5)
Misc :
ALS Vial : 21 Sample Multiplier: 0.06667

Quant Time: Sep 05 06:37:46 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1612.D
Data File Path C:\msdchem\2\data\MS60141\
Operator YM
Date Acquired 8/16/2013 10:18
Acq. Method File PAH-2012.M
Sample Name SED-DA-BG-010 (0-0.5)
Misc Info 0
Instrument Name GCMS6
Vial Number 22
Sample Multiplier 0.06662
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ARC1612.D
SED-DA-BG-010 (0-0.5)
8/16/2013
PAH-2012.M
15.01050736

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	207701	10.1027	10.7189
9)+10)	C1-Naphthalenes	16.21	254378	12.3731	13.1278
13)	C2-Naphthalenes	18.14	490057	23.8366	25.2904
14)	C3-Naphthalenes	20.42	539910	26.2615	27.8632
15)	C4-Naphthalenes	21.48	683295	33.2359	35.2629
16)	Benzothiophene	13.96	25411	1.5565	1.6514
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.61	124607	7.1128	7.5466
23)	Acenaphthylene	19.08	115843	5.7755	6.1277
24)	Acenaphthene	19.70	26859	2.3458	2.4889
25)	Dibenzofuran	20.28	194061	10.0281	10.6397
26)	Fluorene	21.45	266569	17.4634	18.5285
28)	C1-Fluorenes	23.37	203080	13.3041	14.1156
29)	C2-Fluorenes	25.34	452661	29.6547	31.4633
30)	C3-Fluorenes	27.56	826250	54.1292	57.4305
33)	Carbazole	25.52	86585	4.8438	5.1393
42)	Anthracene	24.96	256238	13.0357	13.8307
41)	Phenanthrene	24.79	1533030	73.4519	77.9317
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.70	904498	43.3371	45.9802
50)	C2-Phenanthrenes/Anthracenes	28.36	1454010	69.6659	73.9147
51)	C3-Phenanthrenes/Anthracenes	29.81	2017870	96.6816	102.5781
52)	C4-Phenanthrenes/Anthracenes	31.79	1757690	84.2157	89.3519
34)	Dibenzothiophene	24.34	223888	10.7452	11.4005
35)+36)+37)	C1-Dibenzothiophenes	26.18	373593	17.9301	19.0236
38)	C2-Dibenzothiophenes	27.28	796931	38.2477	40.5804
39)	C3-Dibenzothiophenes	28.81	1469620	70.5326	74.8343
40)	C4-Dibenzothiophenes	30.23	1537390	73.7850	78.2851
58)	Fluoranthene	28.91	2279490	97.4717	103.4165
59)	Pyrene	29.71	1747820	60.3650	64.0467
62)	C1-Fluoranthenes/Pyrenes	31.20	1497170	64.0196	67.9241
63)	C2-Fluoranthenes/Pyrenes	33.30	2172340	92.8896	98.5549
64)	C3-Fluoranthenes/Pyrenes	34.15	760386	32.5144	34.4975
65)	C4-Fluoranthenes/Pyrenes	35.59	772358	33.0263	35.0406
53)	Naphthobenzothiophene	32.99	652060	23.1290	24.5396
54)	C1-Naphthobenzothiophenes	34.15	1218010	43.2037	45.8386
55)	C2-Naphthobenzothiophenes	35.86	1744090	61.8641	65.6371
56)	C3-Naphthobenzothiophenes	37.26	1675840	59.4432	63.0686
57)	C4-Naphthobenzothiophenes	38.23	803798	28.5112	30.2501
67)	Benz(a)anthracene	33.80	647105	25.0315	26.5582
68)	Chrysene/Triphenylene	33.92	1536640	55.2394	58.6085
69)	C1-Chrysenes	35.16	1187440	42.6864	45.2898
70)	C2-Chrysenes	36.87	888195	31.9290	33.8763
71)	C3-Chrysenes	37.57	586634	21.0884	22.3746
72)	C4-Chrysenes	39.39	328219	11.7989	12.5185
77)	Benzo(b)fluoranthene	37.37	1760530	89.1142	94.5493
78)	Benzo(k,j)fluoranthene	37.45	510572	29.2948	31.0815
79)	Benzo(a)fluoranthene	37.72	152760	8.7649	9.2994
80)	Benzo(e)pyrene	38.34	875153	48.8372	51.8157
81)	Benzo(a)pyrene	38.54	545006	30.8276	32.7078
89)	Perylene	38.85	4379400	240.8260	255.5138
82)	Indeno(1,2,3-c,d)pyrene	43.25	434512	25.8050	27.3788
83)	Dibenzo(a,h)anthracene	43.29	113384	8.4474	8.9626
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.62	385501	28.3735	30.1040

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.05	190130	14.2580	15.1276
10)	1-Methylnaphthalene	16.38	64248	5.2276	5.5465
11)	2,6-Dimethylnaphthalene	18.14	184161	15.1413	16.0648
12)	1,6,7-Trimethylnaphthalene	21.03	45702	4.2061	4.4626
27)	1-Methylfluorene	23.47	57117	6.9670	7.3919
35)	4-Methyldibenzothiophene	25.86	180925	11.0219	11.6941
36)	2/3-Methyldibenzothiophene	26.18	129946	7.9163	8.3991
37)	1-Methyldibenzothiophene	26.49	62722	3.8210	4.0540
43)	3-Methylphenanthrene	26.45	228930	12.7468	13.5242
44)	2-Methylphenanthrene	26.56	270932	15.0854	16.0055
45)	2-Methylanthracene	26.73	101811	5.6688	6.0146
46)	4/9-Methylphenanthrene	26.83	183003	10.1896	10.8111
47)	1-Methylphenanthrene	26.90	119822	6.6717	7.0786
48)	3,6-Dimethylphenanthrene	28.01	81016	5.6380	5.9819
49)	Retene	30.68	110892	14.4240	15.3037
60)	2-Methylfluoranthene	30.47	113677	6.2332	6.6134
61)	Benzo(b)fluorene	31.06	204354	13.1231	13.9234
74)	C29-Hopane	0.00	0	0.0000	0.0000
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	0.00	0	0.0000	0.0000
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.73	241254	12.65	75.93
21)	Acenaphthene-d10	19.59	154475	14.61	87.67
32)	Phenanthrene-d10	24.72	272374	15.71	94.25
66)	Chrysene-d12	33.84	366932	14.72	88.35
88)	Perylene-d12	38.77	208816	14.11	84.70
90)	5(b)H-Cholane	34.27	59805	20.45	122.80
	Internal Standards				
1)	Fluorene-d10	21.37	182619	16.72	
31)	Pyrene-d10	29.64	348347	16.70	
73)	Benzo(a)pyrene-d12	38.46	217743	16.68	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1612.D
Acq On : 16 Aug 2013 10:18 am
Operator : YM
Sample : SED-DA-BG-010 (0-0.5)
Misc :
ALS Vial : 22 Sample Multiplier: 0.06662

Quant Time: Sep 05 06:39:18 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.369	176	182619m	251.05		0.00
31) Pyrene-d10	29.640	212	348347m	250.63		0.03
73) Benzo(a)pyrene-d12	38.458	264	217743m	250.32		0.08
System Monitoring Compounds						
2) Naphthalene-d8	13.734	136	241254m	12.65		0.00
21) Acenaphthene-d10	19.585	164	154475m	14.61		0.00
32) Phenanthrene-d10	24.721	188	272374m	15.71		0.03
66) Chrysene-d12	33.841	240	366932m	14.72		0.04
88) Perylene-d12	38.769	264	208816m	14.11		0.08
90) 5(b)H-Cholane	34.267	217	59805m	20.45		0.08
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.789	128	207701m	10.10		
9) 2-Methylnaphthalene	16.046	142	190130m	14.26		
10) 1-Methylnaphthalene	16.381	142	64248m	5.23		
11) 2,6-Dimethylnaphthalene	18.136	156	184161m	15.14		
12) 1,6,7-Trimethylnaphtha...	21.034	170	45702m	4.21		
13) C2-Naphthalenes	18.136	156	490057m	23.84		
14) C3-Naphthalenes	20.421	170	539910m	26.26		
15) C4-Naphthalenes	21.480	184	683295m	33.24		
16) Benzothiophene	13.956	134	25411m	1.56		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.607	154	124607m	7.11		
23) Acenaphthylene	19.084	152	115843m	5.78		
24) Acenaphthene	19.697	154	26859m	2.35		
25) Dibenzofuran	20.282	168	194061m	10.03		
26) Fluorene	21.452	166	266569m	17.46		
27) 1-Methylfluorene	23.474	180	57117m	6.97		
28) C1-Fluorenes	23.370	180	203080m	13.30		
29) C2-Fluorenes	25.345	194	452661m	29.65		
30) C3-Fluorenes	27.561	208	826250m	54.13		
33) Carbazole	25.518	167	86585m	4.84		
34) Dibenzothiophene	24.340	184	223888m	10.75		
35) 4-Methyldibenzothiophene	25.864	198	180925m	11.02		
36) 2/3-Methyldibenzothiop...	26.176	198	129946m	7.92		
37) 1-Methyldibenzothiophene	26.488	198	62722m	3.82		
38) C2-Dibenzothiophenes	27.284	212	796931m	38.25		
39) C3-Dibenzothiophenes	28.808	226	1469621m	70.53		
40) C4-Dibenzothiophenes	30.229	240	1537392m	73.79		
41) Phenanthrene	24.790	178	1533031m	73.45		
42) Anthracene	24.964	178	256238m	13.04		
43) 3-Methylphenanthrene	26.453	192	228930m	12.75		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1612.D
Acq On : 16 Aug 2013 10:18 am
Operator : YM
Sample : SED-DA-BG-010 (0-0.5)
Misc :
ALS Vial : 22 Sample Multiplier: 0.06662

Quant Time: Sep 05 06:39:18 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.557	192	270932m	15.09		
45) 2-Methylanthracene	26.730	192	101811m	5.67		
46) 4/9-Methylphenanthrene	26.834	192	183003m	10.19		
47) 1-Methylphenanthrene	26.903	192	119822m	6.67		
48) 3,6-Dimethylphenanthrene	28.012	206	81016m	5.64		
49) Retene	30.679	234	110892m	14.42		
50) C2-Phenanthrenes/Anthr...	28.358	206	1454011m	69.67		
51) C3-Phenanthrenes/Anthr...	29.813	220	2017874m	96.68		
52) C4-Phenanthrenes/Anthr...	31.787	234	1757685m	84.22		
53) Naphthobenzothiophene	32.987	234	652060m	23.13		
54) C1-Naphthobenzothiophenes	34.151	248	1218012m	43.20		
55) C2-Naphthobenzothiophenes	35.858	262	1744092m	61.86		
56) C3-Naphthobenzothiophenes	37.255	276	1675844m	59.44		
57) C4-Naphthobenzothiophenes	38.226	290	803798m	28.51		
58) Fluoranthene	28.912	202	2279491m	97.47		
59) Pyrene	29.709	202	1747816m	60.37		
60) 2-Methylfluoranthene	30.471	216	113677m	6.23		
61) Benzo(b)fluorene	31.060	216	204354m	13.12		
62) C1-Fluoranthenes/Pyrenes	31.199	216	1497172m	64.02		
63) C2-Fluoranthenes/Pyrenes	33.297	230	2172335m	92.89		
64) C3-Fluoranthenes/Pyrenes	34.151	244	760386m	32.51		
65) C4-Fluoranthenes/Pyrenes	35.587	258	772358m	33.03		
67) Benz(a)anthracene	33.802	228	647105m	25.03		
68) Chrysene/Triphenylene	33.918	228	1536642m	55.24		
69) C1-Chrysenes	35.160	242	1187443m	42.69		
70) C2-Chrysenes	36.867	256	888195m	31.93		
71) C3-Chrysenes	37.566	270	586634m	21.09		
72) C4-Chrysenes	39.390	284	328219m	11.80		
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.372	252	1760534m	89.11		
78) Benzo(k,j)fluoranthene	37.450	252	510572m	29.29		
79) Benzo(a)fluoranthene	37.721	252	152760m	8.76		
80) Benzo(e)pyrene	38.342	252	875153m	48.84		
81) Benzo(a)pyrene	38.536	252	545006m	30.83		
82) Indeno(1,2,3-c,d)pyrene	43.251	276	434512m	25.80		
83) Dibenzo(a,h)anthracene	43.288	278	113384m	8.45		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.616	276	385501m	28.37		
89) Perylene	38.847	252	4379396m	240.83		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1612.D
Acq On : 16 Aug 2013 10:18 am
Operator : YM
Sample : SED-DA-BG-010 (0-0.5)
Misc :
ALS Vial : 22 Sample Multiplier: 0.06662

Quant Time: Sep 05 06:39:18 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

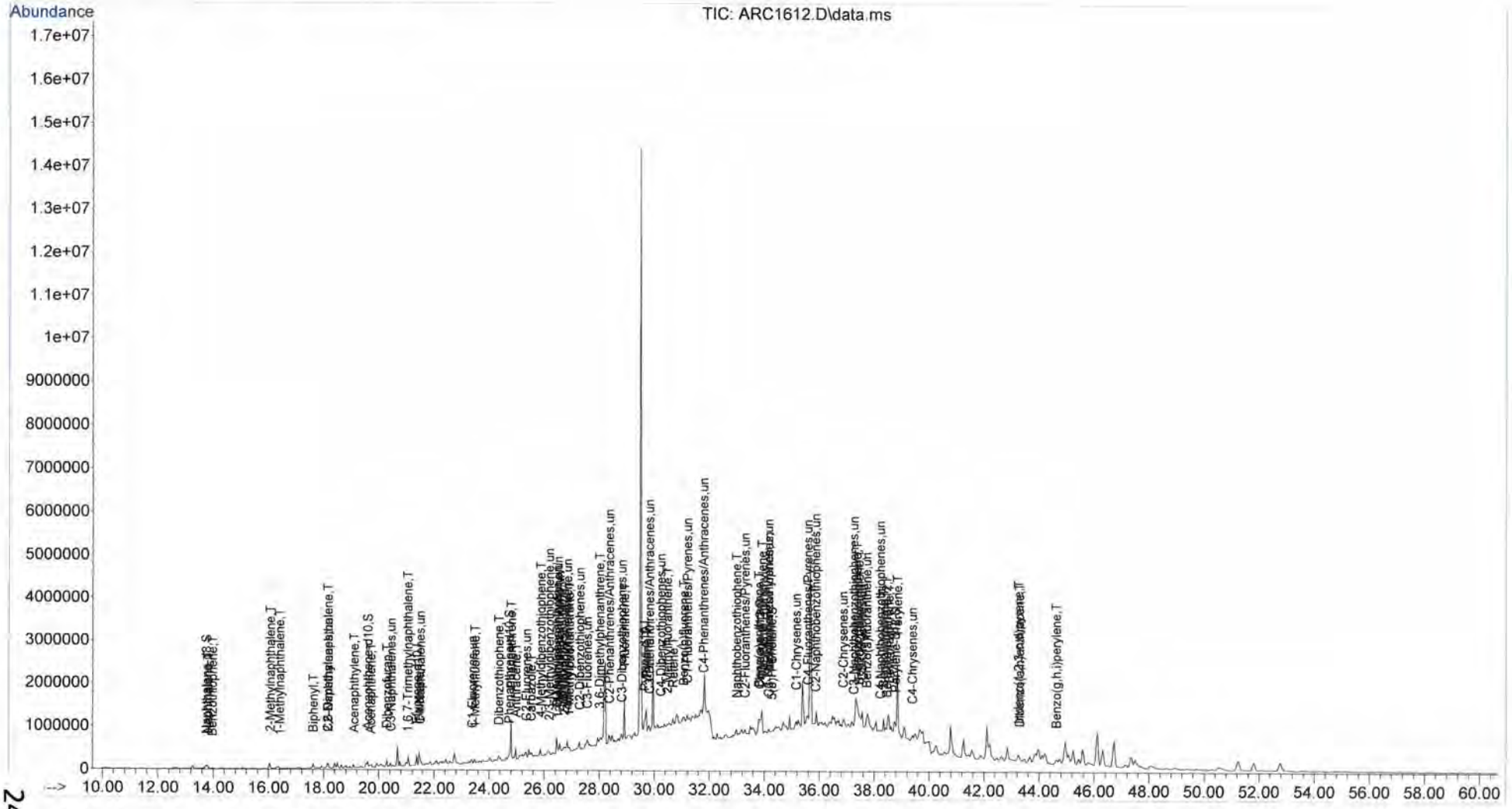
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1612.D
Acq On : 16 Aug 2013 10:18 am
Operator : YM
Sample : SED-DA-BG-010 (0-0.5)
Misc :
ALS Vial : 22 Sample Multiplier: 0.06662

Quant Time: Sep 05 06:39:18 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1616.D
Data File Path C:\GCMS6\MS60141\
Operator YM
Date Acquired 8/16/2013 11:27
Acq. Method File PAH-2012.M
Sample Name SED-DA-DUP-03-073113
Misc Info 0
Instrument Name GCMS6
Vial Number 23
Sample Multiplier 0.06609
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ARC1616.D
SED-DA-DUP-03-073113
8/16/2013
PAH-2012.M
15.13088213

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	119759	5.7463	6.0830
9)+10)	C1-Naphthalenes	16.20	118015	5.6626	5.9945
13)	C2-Naphthalenes	18.50	210963	10.1225	10.7157
14)	C3-Naphthalenes	20.06	358098	17.1824	18.1892
15)	C4-Naphthalenes	21.48	262394	12.5903	13.3280
16)	Benzothiophene	13.96	8467	0.5116	0.5416
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.61	46351	2.6100	2.7630
23)	Acenaphthylene	19.09	61055	3.0028	3.1787
24)	Acenaphthene	19.67	17638	1.5196	1.6087
25)	Dibenzofuran	20.28	112465	5.7330	6.0689
26)	Fluorene	21.45	149731	9.6764	10.2434
28)	C1-Fluorenes	23.37	88231	5.7020	6.0361
29)	C2-Fluorenes	25.52	244481	15.7997	16.7255
30)	C3-Fluorenes	26.73	159948	10.3367	10.9424
33)	Carbazole	25.52	57396	3.2377	3.4274
42)	Anthracene	24.96	134871	6.9185	7.3239
41)	Phenanthrene	24.79	659727	31.8726	33.7403
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.69	344082	16.6232	17.5973
50)	C2-Phenanthrenes/Anthracenes	28.19	465999	22.5132	23.8324
51)	C3-Phenanthrenes/Anthracenes	30.68	445071	21.5022	22.7621
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	24.34	55909	2.7056	2.8642
35)+36)+37)	C1-Dibenzothiophenes	26.17	52859	2.5580	2.7079
38)	C2-Dibenzothiophenes	27.60	106019	5.1306	5.4313
39)	C3-Dibenzothiophenes	28.78	148117	7.1679	7.5879
40)	C4-Dibenzothiophenes	29.50	165812	8.0242	8.4944
58)	Fluoranthene	28.91	624809	26.9396	28.5182
59)	Pyrene	29.68	675672	23.5304	24.9092
62)	C1-Fluoranthenes/Pyrenes	30.82	412359	17.7795	18.8213
63)	C2-Fluoranthenes/Pyrenes	32.56	547660	23.6132	24.9969
64)	C3-Fluoranthenes/Pyrenes	34.11	198864	8.5743	9.0767
65)	C4-Fluoranthenes/Pyrenes	35.66	369999	15.9531	16.8879
53)	Naphthobenzothiophene	32.95	238894	8.5443	9.0450
54)	C1-Naphthobenzothiophenes	34.11	240573	8.6044	9.1086
55)	C2-Naphthobenzothiophenes	35.39	275905	9.8680	10.4463
56)	C3-Naphthobenzothiophenes	36.91	403350	14.4263	15.2716
57)	C4-Naphthobenzothiophenes	38.03	169135	6.0493	6.4038
67)	Benz(a)anthracene	33.76	246314	9.6074	10.1703
68)	Chrysene/Triphenylene	33.88	458645	16.6248	17.5990
69)	C1-Chrysenes	35.66	630303	22.8470	24.1857
70)	C2-Chrysenes	36.83	239701	8.6886	9.1977
71)	C3-Chrysenes	38.81	136461	4.9464	5.2362
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.29	582351	24.8229	26.2775
78)	Benzo(k,j)fluoranthene	37.41	118791	5.7396	6.0760
79)	Benzo(a)fluoranthene	37.64	101031	4.8815	5.1676
80)	Benzo(e)pyrene	38.30	237301	11.1515	11.8049
81)	Benzo(a)pyrene	38.46	135560	6.4571	6.8355
89)	Perylene	38.81	6439270	298.1901	315.6631
82)	Indeno(1,2,3-c,d)pyrene	43.18	121458	6.0743	6.4302
83)	Dibenzo(a,h)anthracene	43.25	43459	2.7266	2.8864
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.58	108772	6.7417	7.1367

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.05	87138	6.4461	6.8238
10)	1-Methylnaphthalene	16.35	30877	2.4784	2.6236
11)	2,6-Dimethylnaphthalene	18.14	66661	5.4066	5.7234
12)	1,6,7-Trimethylnaphthalene	20.95	16379	1.4870	1.5742
27)	1-Methylfluorene	23.48	18138	2.1825	2.3104
35)	4-Methyldibenzothiophene	25.87	26665	1.6380	1.7339
36)	2/3-Methyldibenzothiophene	26.14	19849	1.2193	1.2907
37)	1-Methyldibenzothiophene	26.49	6345	0.3898	0.4126
43)	3-Methylphenanthrene	26.45	83312	4.6774	4.9515
44)	2-Methylphenanthrene	26.56	80036	4.4935	4.7568
45)	2-Methylanthracene	26.70	71707	4.0259	4.2618
46)	4/9-Methylphenanthrene	26.84	51954	2.9169	3.0878
47)	1-Methylphenanthrene	26.90	57073	3.2043	3.3920
48)	3,6-Dimethylphenanthrene	28.01	21826	1.5316	1.6213
49)	Retene	0.00	0	0.0000	0.0000
60)	2-Methylfluoranthene	30.44	47590	2.6312	2.7854
61)	Benzo(b)fluorene	31.06	81505	5.2776	5.5869
74)	C29-Hopane	0.00	0	0.0000	0.0000
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	0.00	0	0.0000	0.0000
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.73	246875	12.77	77.27
21)	Acenaphthene-d10	19.59	147521	13.76	83.25
32)	Phenanthrene-d10	24.69	268581	15.62	94.46
66)	Chrysene-d12	33.80	397060	16.06	97.17
88)	Perylene-d12	38.69	263777	15.01	90.82
90)	5(b)H-Cholane	34.23	60853	17.53	106.07
	Internal Standards				
1)	Fluorene-d10	21.37	183651	16.59	
31)	Pyrene-d10	29.61	342721	16.56	
73)	Benzo(a)pyrene-d12	38.38	256512	16.54	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1616.D
Acq On : 16 Aug 2013 11:27 am
Operator : YM
Sample : SED-DA-DUP-03-073113
Misc :
ALS Vial : 23 Sample Multiplier: 0.06609

Quant Time: Sep 05 06:40:10 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.370	176	183651m	251.05		0.00
31) Pyrene-d10	29.606	212	342721m	250.63		0.00
73) Benzo(a)pyrene-d12	38.380	264	256512m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.735	136	246875m	12.77		0.00
21) Acenaphthene-d10	19.587	164	147521m	13.76		0.00
32) Phenanthrene-d10	24.688	188	268581m	15.62		0.00
66) Chrysene-d12	33.801	240	397060m	16.06		0.00
88) Perylene-d12	38.691	264	263777m	15.01		0.00
90) 5(b)H-Cholane	34.228	217	60853m	17.53		0.04
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.791	128	119759m	5.75		
9) 2-Methylnaphthalene	16.048	142	87138m	6.45		
10) 1-Methylnaphthalene	16.354	142	30877m	2.48		
11) 2,6-Dimethylnaphthalene	18.138	156	66661m	5.41		
12) 1,6,7-Trimethylnaphtha...	20.952	170	16379m	1.49		
13) C2-Naphthalenes	18.500	156	210963m	10.12		
14) C3-Naphthalenes	20.060	170	358098m	17.18		
15) C4-Naphthalenes	21.482	184	262394m	12.59		
16) Benzothiophene	13.958	134	8467m	0.51		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.608	154	46351m	2.61		
23) Acenaphthylene	19.085	152	61055m	3.00		
24) Acenaphthene	19.670	154	17638m	1.52		
25) Dibenzofuran	20.283	168	112465m	5.73		
26) Fluorene	21.454	166	149731m	9.68		
27) 1-Methylfluorene	23.475	180	18138m	2.18		
28) C1-Fluorenes	23.371	180	88231m	5.70		
29) C2-Fluorenes	25.519	194	244481m	15.80		
30) C3-Fluorenes	26.731	208	159948m	10.34		
33) Carbazole	25.519	167	57396m	3.24		
34) Dibenzothiophene	24.341	184	55909m	2.71		
35) 4-Methyldibenzothiophene	25.865	198	26665m	1.64		
36) 2/3-Methyldibenzothiop...	26.143	198	19849m	1.22		
37) 1-Methyldibenzothiophene	26.489	198	6345m	0.39		
38) C2-Dibenzothiophenes	27.597	212	106019m	5.13		
39) C3-Dibenzothiophenes	28.775	226	148117m	7.17		
40) C4-Dibenzothiophenes	29.503	240	165812m	8.02		
41) Phenanthrene	24.792	178	659727m	31.87		
42) Anthracene	24.965	178	134871m	6.92		
43) 3-Methylphenanthrene	26.454	192	83312m	4.68		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1616.D
Acq On : 16 Aug 2013 11:27 am
Operator : YM
Sample : SED-DA-DUP-03-073113
Misc :
ALS Vial : 23 Sample Multiplier: 0.06609

Quant Time: Sep 05 06:40:10 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44)	2-Methylphenanthrene	26.558	192	80036m	4.49		
45)	2-Methylanthracene	26.697	192	71707m	4.03		
46)	4/9-Methylphenanthrene	26.835	192	51954m	2.92		
47)	1-Methylphenanthrene	26.905	192	57073m	3.20		
48)	3,6-Dimethylphenanthrene	28.013	206	21826m	1.53		
49)	Retene	0.000		0	N.D.	d	
50)	C2-Phenanthrenes/Anthr...	28.186	206	465999m	22.51		
51)	C3-Phenanthrenes/Anthr...	30.680	220	445071m	21.50		
52)	C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53)	Naphthobenzothiophene	32.948	234	238894m	8.54		
54)	C1-Naphthobenzothiophenes	34.112	248	240573m	8.60		
55)	C2-Naphthobenzothiophenes	35.392	262	275905m	9.87		
56)	C3-Naphthobenzothiophenes	36.906	276	403350m	14.43		
57)	C4-Naphthobenzothiophenes	38.031	290	169135m	6.05		
58)	Fluoranthene	28.914	202	624809m	26.94		
59)	Pyrene	29.676	202	675672m	23.53		
60)	2-Methylfluoranthene	30.438	216	47590m	2.63		
61)	Benzo(b)fluorene	31.061	216	81505m	5.28		
62)	C1-Fluoranthenes/Pyrenes	30.819	216	412359m	17.78		
63)	C2-Fluoranthenes/Pyrenes	32.560	230	547660m	23.61		
64)	C3-Fluoranthenes/Pyrenes	34.112	244	198864m	8.57		
65)	C4-Fluoranthenes/Pyrenes	35.664	258	369999m	15.95		
67)	Benz(a)anthracene	33.763	228	246314m	9.61		
68)	Chrysene/Triphenylene	33.879	228	458645m	16.62		
69)	C1-Chrysenes	35.664	242	630303m	22.85		
70)	C2-Chrysenes	36.828	256	239701m	8.69		
71)	C3-Chrysenes	38.807	270	136461m	4.95		
72)	C4-Chrysenes	0.000		0	N.D.	d	
74)	C29-Hopane	0.000		0	N.D.	d	
75)	18a-Oleanane	0.000		0	N.D.	d	
76)	C30-Hopane	0.000		0	N.D.	d	
77)	Benzo(b)fluoranthene	37.294	252	582351m	24.82		
78)	Benzo(k,j)fluoranthene	37.410	252	118791m	5.74		
79)	Benzo(a)fluoranthene	37.643	252	101031m	4.88		
80)	Benzo(e)pyrene	38.303	252	237301m	11.15		
81)	Benzo(a)pyrene	38.458	252	135560m	6.46		
82)	Indeno(1,2,3-c,d)pyrene	43.177	276	121458m	6.07		
83)	Dibenzo(a,h)anthracene	43.251	278	43459m	2.73		
84)	C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85)	C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86)	C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87)	Benzo(g,h,i)perylene	44.579	276	108772m	6.74		
89)	Perylene	38.807	252	6439267m	298.19		
91)	C20-TAS	0.000		0	N.D.	d	
92)	C21-TAS	0.000		0	N.D.	d	
93)	C26(20S)-TAS	0.000		0	N.D.	d	
94)	C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95)	C28(20S)-TAS	0.000		0	N.D.	d	
96)	C27(20R)-TAS	0.000		0	N.D.	d	
97)	C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1616.D
Acq On : 16 Aug 2013 11:27 am
Operator : YM
Sample : SED-DA-DUP-03-073113
Misc :
ALS Vial : 23 Sample Multiplier: 0.06609

Quant Time: Sep 05 06:40:10 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

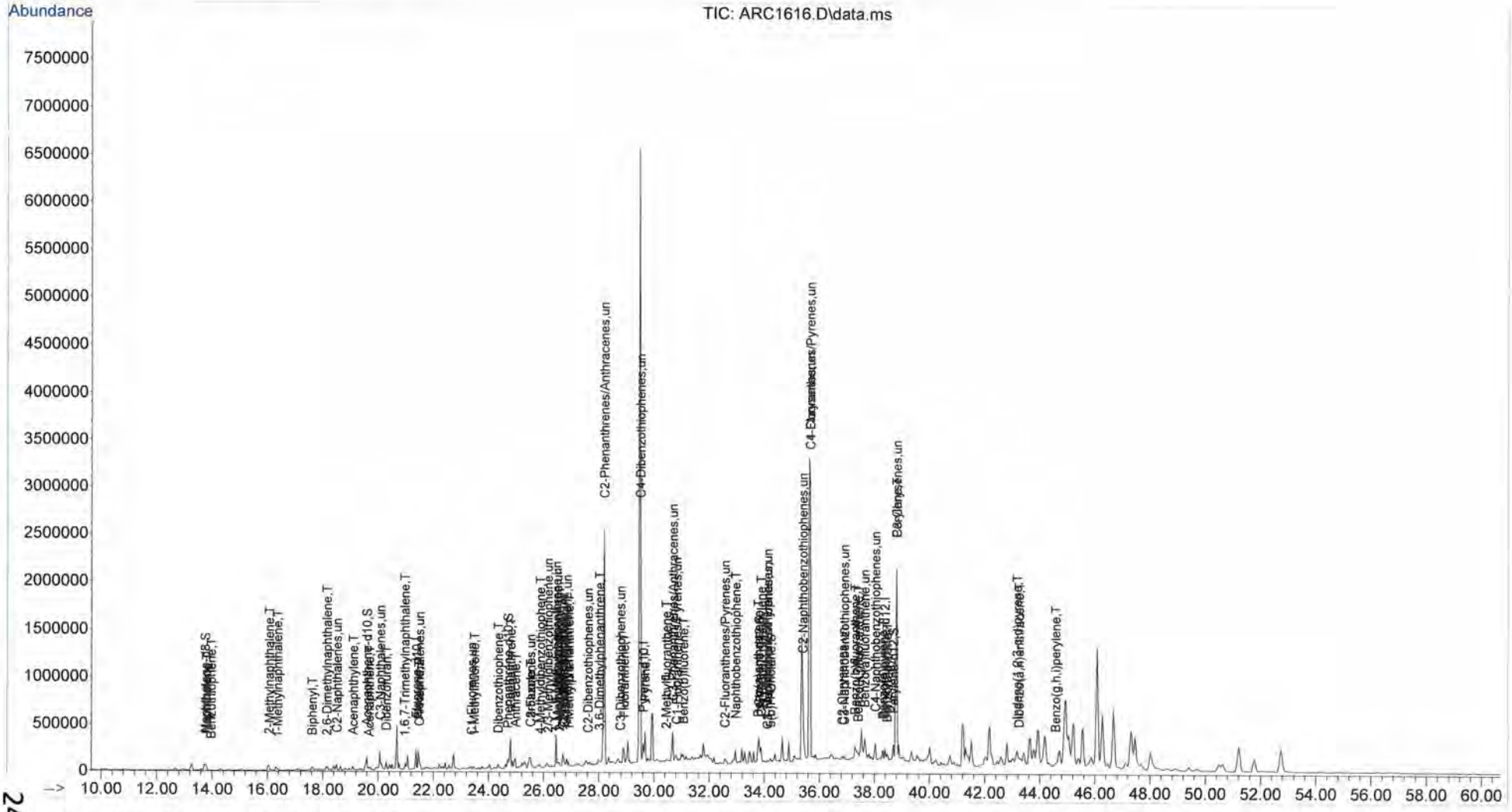
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1616.D
Acq On : 16 Aug 2013 11:27 am
Operator : YM
Sample : SED-DA-DUP-03-073113
Misc :
ALS Vial : 23 Sample Multiplier: 0.06609

Quant Time: Sep 05 06:40:10 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1617.D
Data File Path C:\msdchem\2\data\MS60141\
Operator YM
Date Acquired 8/16/2013 12:36
Acq. Method File PAH-2012.M
Sample Name SED-DA-BG-009 (0-0.5)
Misc Info 0
Instrument Name GCMS6
Vial Number 24
Sample Multiplier 0.06627
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ARC1617.D
SED-DA-BG-009 (0-0.5)
8/16/2013
PAH-2012.M
15.08978422

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	106882	5.5348	6.0964
9)+10)	C1-Naphthalenes	16.19	105653	5.4711	6.0263
13)	C2-Naphthalenes	18.50	174415	9.0319	9.9483
14)	C3-Naphthalenes	20.06	284128	14.7132	16.2061
15)	C4-Naphthalenes	21.48	201121	10.4148	11.4716
16)	Benzothiophene	13.96	6329	0.4127	0.4546
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.61	43034	2.6152	2.8806
23)	Acenaphthylene	19.09	49248	2.6140	2.8792
24)	Acenaphthene	19.67	15163	1.4099	1.5529
25)	Dibenzofuran	20.29	95057	5.2295	5.7601
26)	Fluorene	21.46	133708	9.3255	10.2718
28)	C1-Fluorenes	23.37	71743	5.0037	5.5115
29)	C2-Fluorenes	25.35	177422	12.3744	13.6300
30)	C3-Fluorenes	27.56	189687	13.2298	14.5722
33)	Carbazole	25.52	53660	3.1436	3.4626
42)	Anthracene	24.96	119178	6.3492	6.9934
41)	Phenanthrene	24.79	539488	27.0686	29.8152
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.69	308025	15.4550	17.0232
50)	C2-Phenanthrenes/Anthracenes	28.19	380360	19.0844	21.0208
51)	C3-Phenanthrenes/Anthracenes	29.92	409646	20.5538	22.6394
52)	C4-Phenanthrenes/Anthracenes	30.68	410693	20.6063	22.6972
34)	Dibenzothiophene	24.34	50830	2.5547	2.8139
35)+36)+37)	C1-Dibenzothiophenes	26.17	50234	2.5247	2.7809
38)	C2-Dibenzothiophenes	27.60	94459	4.7475	5.2292
39)	C3-Dibenzothiophenes	28.77	131698	6.6191	7.2907
40)	C4-Dibenzothiophenes	31.03	130865	6.5772	7.2446
58)	Fluoranthene	28.88	583190	26.1147	28.7645
59)	Pyrene	29.68	614705	22.2326	24.4885
62)	C1-Fluoranthenes/Pyrenes	30.82	384264	17.2069	18.9529
63)	C2-Fluoranthenes/Pyrenes	32.56	541934	24.2673	26.7296
64)	C3-Fluoranthenes/Pyrenes	34.11	218613	9.7893	10.7826
65)	C4-Fluoranthenes/Pyrenes	35.66	314976	14.1043	15.5354
53)	Naphthobenzothiophene	32.95	197047	7.3193	8.0620
54)	C1-Naphthobenzothiophenes	34.11	211555	7.8582	8.6556
55)	C2-Naphthobenzothiophenes	35.39	268534	9.9748	10.9869
56)	C3-Naphthobenzothiophenes	37.18	304890	11.3252	12.4744
57)	C4-Naphthobenzothiophenes	38.03	161838	6.0115	6.6215
67)	Benz(a)anthracene	33.76	212094	8.5916	9.4633
68)	Chrysene/Triphenylene	33.88	403714	15.1979	16.7400
69)	C1-Chrysenes	35.66	653977	24.6191	27.1172
70)	C2-Chrysenes	36.83	254365	9.5756	10.5472
71)	C3-Chrysenes	38.81	171080	6.4403	7.0938
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.29	451087	19.3310	21.2925
78)	Benzo(k,j)fluoranthene	37.41	89375	4.3415	4.7821
79)	Benzo(a)fluoranthene	37.64	94111	4.5716	5.0355
80)	Benzo(e)pyrene	38.30	184446	8.7142	9.5985
81)	Benzo(a)pyrene	38.46	99820	4.7802	5.2653
89)	Perylene	38.81	5703000	265.5127	292.4537
82)	Indeno(1,2,3-c,d)pyrene	43.18	93810	4.7168	5.1954
83)	Dibenzo(a,h)anthracene	43.25	34515	2.1771	2.3980
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.58	85030	5.2985	5.8361

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.02	78337	6.2542	6.8888
10)	1-Methylnaphthalene	16.36	27316	2.3662	2.6063
11)	2,6-Dimethylnaphthalene	18.14	55444	4.8531	5.3455
12)	1,6,7-Trimethylnaphthalene	20.98	15864	1.5544	1.7121
27)	1-Methylfluorene	23.47	16579	2.1530	2.3714
35)	4-Methyldibenzothiophene	25.87	23240	1.4826	1.6330
36)	2/3-Methyldibenzothiophene	26.14	20071	1.2804	1.4104
37)	1-Methyldibenzothiophene	26.49	6923	0.4417	0.4865
43)	3-Methylphenanthrene	26.45	70697	4.1222	4.5405
44)	2-Methylphenanthrene	26.56	70293	4.0987	4.5145
45)	2-Methylanthracene	26.70	66251	3.8630	4.2550
46)	4/9-Methylphenanthrene	26.83	48718	2.8407	3.1289
47)	1-Methylphenanthrene	26.90	52066	3.0359	3.3439
48)	3,6-Dimethylphenanthrene	28.01	17249	1.2571	1.3846
49)	Retene	0.00	0	0.0000	0.0000
60)	2-Methylfluoranthene	30.44	41814	2.4010	2.6446
61)	Benzo(b)fluorene	31.06	72745	4.8920	5.3884
74)	C29-Hopane	0.00	0	0.0000	0.0000
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	0.00	0	0.0000	0.0000
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.74	234632	13.10	79.04
21)	Acenaphthene-d10	19.59	135042	13.60	82.02
32)	Phenanthrene-d10	24.69	249221	15.05	90.79
66)	Chrysene-d12	33.80	372491	15.64	94.42
88)	Perylene-d12	38.69	245856	14.06	84.87
90)	5(b)H-Cholane	34.23	53998	15.63	94.37
	Internal Standards				
1)	Fluorene-d10	21.37	170633	16.64	
31)	Pyrene-d10	29.61	330896	16.61	
73)	Benzo(a)pyrene-d12	38.38	255837	16.59	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1617.D
Acq On : 16 Aug 2013 12:36 pm
Operator : YM
Sample : SED-DA-BG-009 (0-0.5)
Misc :
ALS Vial : 24 Sample Multiplier: 0.06627

Quant Time: Sep 04 22:33:06 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.373	176	170633m	251.05		0.00
31) Pyrene-d10	29.606	212	330896m	250.63		0.00
73) Benzo(a)pyrene-d12	38.381	264	255837m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.737	136	234632m	13.10		0.00
21) Acenaphthene-d10	19.589	164	135042m	13.60		0.00
32) Phenanthrene-d10	24.687	188	249221m	15.05		0.00
66) Chrysene-d12	33.802	240	372491m	15.64		0.00
88) Perylene-d12	38.691	264	245856m	14.06		0.00
90) 5(b)H-Cholane	34.229	217	53998m	15.63		0.04
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.793	128	106882m	5.53		
9) 2-Methylnaphthalene	16.022	142	78337m	6.25		
10) 1-Methylnaphthalene	16.357	142	27316m	2.37		
11) 2,6-Dimethylnaphthalene	18.140	156	55444m	4.85		
12) 1,6,7-Trimethylnaphtha...	20.982	170	15864m	1.55		
13) C2-Naphthalenes	18.502	156	174415m	9.03		
14) C3-Naphthalenes	20.063	170	284128m	14.71		
15) C4-Naphthalenes	21.484	184	201121m	10.41		
16) Benzothiophene	13.960	134	6329m	0.41		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.611	154	43034m	2.62		
23) Acenaphthylene	19.088	152	49248m	2.61		
24) Acenaphthene	19.673	154	15163m	1.41		
25) Dibenzofuran	20.286	168	95057m	5.23		
26) Fluorene	21.456	166	133708m	9.33		
27) 1-Methylfluorene	23.475	180	16579m	2.15		
28) C1-Fluorenes	23.371	180	71743m	5.00		
29) C2-Fluorenes	25.345	194	177422m	12.37		
30) C3-Fluorenes	27.562	208	189687m	13.23		
33) Carbazole	25.519	167	53660m	3.14		
34) Dibenzothiophene	24.341	184	50830m	2.55		
35) 4-Methyldibenzothiophene	25.865	198	23240m	1.48		
36) 2/3-Methyldibenzothiop...	26.142	198	20071m	1.28		
37) 1-Methyldibenzothiophene	26.488	198	6923m	0.44		
38) C2-Dibenzothiophenes	27.597	212	94459m	4.75		
39) C3-Dibenzothiophenes	28.775	226	131698m	6.62		
40) C4-Dibenzothiophenes	31.026	240	130865m	6.58		
41) Phenanthrene	24.791	178	539488m	27.07		
42) Anthracene	24.964	178	119178m	6.35		
43) 3-Methylphenanthrene	26.454	192	70697m	4.12		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1617.D
Acq On : 16 Aug 2013 12:36 pm
Operator : YM
Sample : SED-DA-BG-009 (0-0.5)
Misc :
ALS Vial : 24 Sample Multiplier: 0.06627

Quant Time: Sep 04 22:33:06 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.558	192	70293m	4.10		
45) 2-Methylanthracene	26.696	192	66251m	3.86		
46) 4/9-Methylphenanthrene	26.835	192	48718m	2.84		
47) 1-Methylphenanthrene	26.904	192	52066m	3.04		
48) 3,6-Dimethylphenanthrene	28.013	206	17249m	1.26		
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	28.186	206	380360m	19.08		
51) C3-Phenanthrenes/Anthr...	29.918	220	409646m	20.55		
52) C4-Phenanthrenes/Anthr...	30.680	234	410693m	20.61		
53) Naphthobenzothiophene	32.948	234	197047m	7.32		
54) C1-Naphthobenzothiophenes	34.112	248	211555m	7.86		
55) C2-Naphthobenzothiophenes	35.393	262	268534m	9.97		
56) C3-Naphthobenzothiophenes	37.178	276	304890m	11.33		
57) C4-Naphthobenzothiophenes	38.032	290	161838m	6.01		
58) Fluoranthene	28.879	202	583190m	26.11		
59) Pyrene	29.675	202	614705m	22.23		
60) 2-Methylfluoranthene	30.437	216	41814m	2.40		
61) Benzo(b)fluorene	31.061	216	72745m	4.89		
62) C1-Fluoranthenes/Pyrenes	30.818	216	384264m	17.21		
63) C2-Fluoranthenes/Pyrenes	32.560	230	541934m	24.27		
64) C3-Fluoranthenes/Pyrenes	34.112	244	218613m	9.79		
65) C4-Fluoranthenes/Pyrenes	35.665	258	314976m	14.10		
67) Benz(a)anthracene	33.763	228	212094m	8.59		
68) Chrysene/Triphenylene	33.880	228	403714m	15.20		
69) C1-Chrysenes	35.665	242	653977m	24.62		
70) C2-Chrysenes	36.829	256	254365m	9.58		
71) C3-Chrysenes	38.808	270	171080m	6.44		
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.294	252	451087m	19.33		
78) Benzo(k,j)fluoranthene	37.411	252	89375m	4.34		
79) Benzo(a)fluoranthene	37.644	252	94111m	4.57		
80) Benzo(e)pyrene	38.303	252	184446m	8.71		
81) Benzo(a)pyrene	38.459	252	99820m	4.78		
82) Indeno(1,2,3-c,d)pyrene	43.178	276	93810m	4.72		
83) Dibenzo(a,h)anthracene	43.252	278	34515m	2.18		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.580	276	85030m	5.30		
89) Perylene	38.808	252	5702999m	265.51		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1617.D
Acq On : 16 Aug 2013 12:36 pm
Operator : YM
Sample : SED-DA-BG-009 (0-0.5)
Misc :
ALS Vial : 24 Sample Multiplier: 0.06627

Quant Time: Sep 04 22:33:06 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

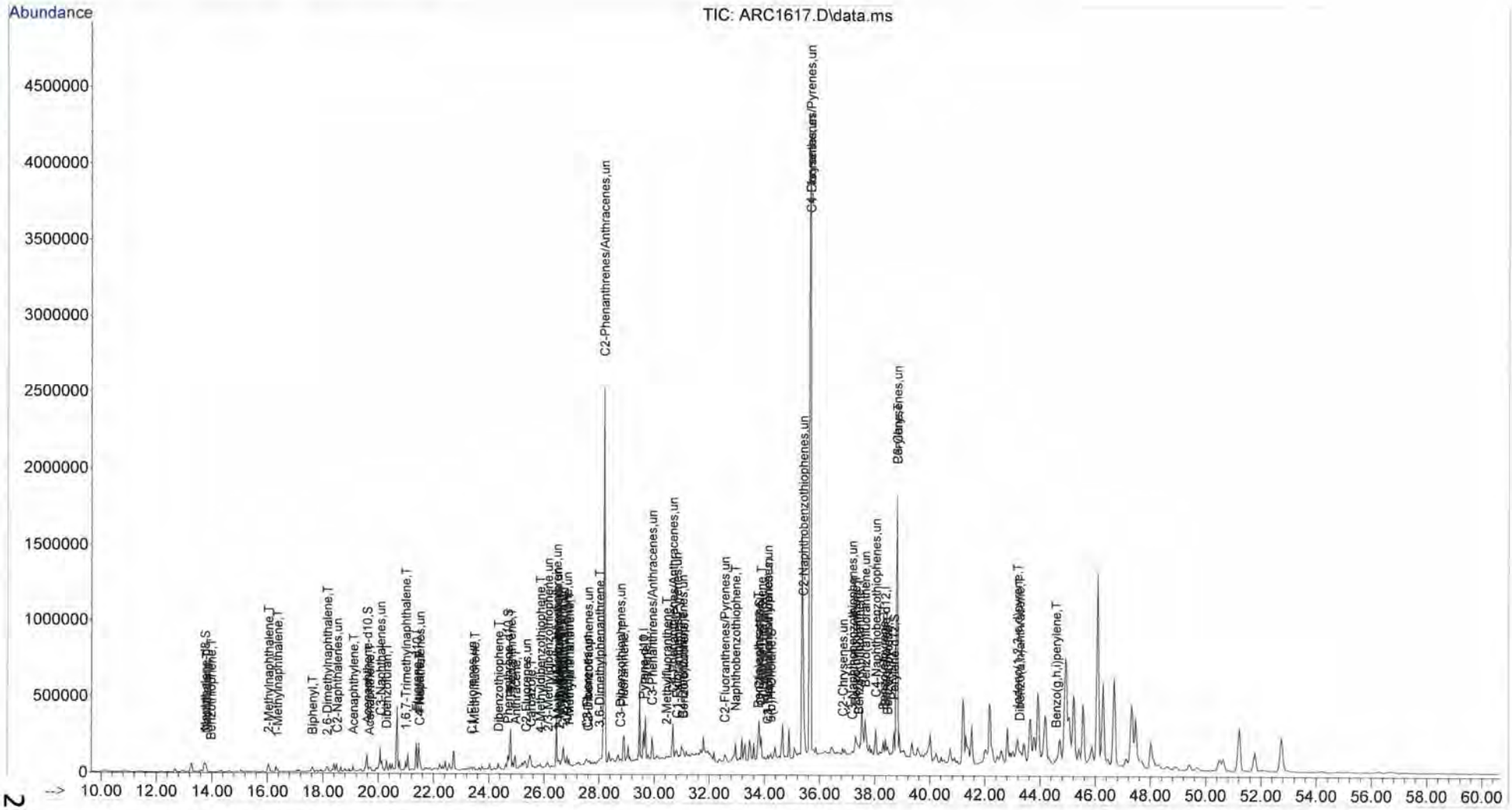
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1617.D
Acq On : 16 Aug 2013 12:36 pm
Operator : YM
Sample : SED-DA-BG-009 (0-0.5)
Misc :
ALS Vial : 24 Sample Multiplier: 0.06627

Quant Time: Sep 04 22:33:06 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1633.D
Data File Path C:\msdchem\2\data\MS60141\
Operator YM
Date Acquired 8/16/2013 13:46
Acq. Method File PAH-2012.M
Sample Name SED-DA-009 (0-0.5)
Misc Info 0
Instrument Name GCMS6
Vial Number 25
Sample Multiplier 0.06653
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ARC1633.D
SED-DA-009 (0-0.5)
8/16/2013
PAH-2012.M
15.03081317

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	10940	0.6447	0.7709
9)+10)	C1-Naphthalenes	16.21	10227	0.6027	0.7207
13)	C2-Naphthalenes	18.50	20667	1.2179	1.4563
14)	C3-Naphthalenes	20.06	21230	1.2510	1.4960
15)	C4-Naphthalenes	0.00	0	0.0000	0.0000
16)	Benzothiophene	13.96	1597	0.1185	0.1417
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.61	10050	0.6950	0.8311
23)	Acenaphthylene	19.09	2144	0.1295	0.1549
24)	Acenaphthene	0.00	0	0.0000	0.0000
25)	Dibenzofuran	20.28	8348	0.5226	0.6250
26)	Fluorene	21.45	5786	0.4592	0.5491
28)	C1-Fluorenes	0.00	0	0.0000	0.0000
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	25.52	3631	0.2215	0.2648
42)	Anthracene	0.00	0	0.0000	0.0000
41)	Phenanthrene	24.79	35685	1.8640	2.2290
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	24.34	5758	0.3013	0.3603
35)+36)+37)	C1-Dibenzothiophenes	26.17	7208	0.3772	0.4510
38)	C2-Dibenzothiophenes	27.94	8228	0.4305	0.5148
39)	C3-Dibenzothiophenes	28.78	7143	0.3738	0.4469
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	28.88	18954	0.8836	1.0566
59)	Pyrene	29.68	16544	0.6229	0.7449
62)	C1-Fluoranthenes/Pyrenes	30.82	10808	0.5039	0.6025
63)	C2-Fluoranthenes/Pyrenes	32.56	25453	1.1866	1.4189
64)	C3-Fluoranthenes/Pyrenes	34.23	10156	0.4735	0.5662
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	32.95	7921	0.3063	0.3663
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benz(a)anthracene	33.76	6462	0.2725	0.3259
68)	Chrysene/Triphenylene	33.88	22313	0.8745	1.0457
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.29	23171	1.0826	1.2946
78)	Benzo(k,j)fluoranthene	37.33	6580	0.3485	0.4167
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.26	10247	0.5278	0.6312
81)	Benzo(a)pyrene	38.46	2228	0.1163	0.1391
89)	Perylene	38.77	5388	0.2735	0.3271
82)	Indeno(1,2,3-c,d)pyrene	43.14	5589	0.3064	0.3664
83)	Dibenzo(a,h)anthracene	43.21	1509	0.1038	0.1241
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.51	4003	0.2720	0.3252

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.05	7109	0.6459	0.7723
10)	1-Methylnaphthalene	16.38	3118	0.3074	0.3675
11)	2,6-Dimethylnaphthalene	18.17	5059	0.5039	0.6026
12)	1,6,7-Trimethylnaphthalene	21.01	1548	0.1726	0.2064
27)	1-Methylfluorene	0.00	0	0.0000	0.0000
35)	4-Methyldibenzothiophene	25.87	3552	0.2359	0.2821
36)	2/3-Methyldibenzothiophene	26.14	2440	0.1621	0.1938
37)	1-Methyldibenzothiophene	26.49	1216	0.0808	0.0966
43)	3-Methylphenanthrene	0.00	0	0.0000	0.0000
44)	2-Methylphenanthrene	0.00	0	0.0000	0.0000
45)	2-Methylanthracene	0.00	0	0.0000	0.0000
46)	4/9-Methylphenanthrene	0.00	0	0.0000	0.0000
47)	1-Methylphenanthrene	0.00	0	0.0000	0.0000
48)	3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49)	Retene	0.00	0	0.0000	0.0000
60)	2-Methylfluoranthene	30.44	1180	0.0705	0.0844
61)	Benzo(b)fluorene	31.06	827	0.0579	0.0692
74)	C29-Hopane	0.00	0	0.0000	0.0000
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	0.00	0	0.0000	0.0000
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.73	187878	11.94	71.74
21)	Acenaphthene-d10	19.59	111026	12.72	76.44
32)	Phenanthrene-d10	24.69	221366	13.92	83.63
66)	Chrysene-d12	33.80	326696	14.28	85.87
88)	Perylene-d12	38.69	3725	0.23	1.40
90)	5(b)H-Cholane	34.19	57535	18.16	109.20
	Internal Standards				
1)	Fluorene-d10	21.37	150534	16.70	
31)	Pyrene-d10	29.61	319086	16.67	
73)	Benzo(a)pyrene-d12	38.38	235568	16.65	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1633.D
Acq On : 16 Aug 2013 1:46 pm
Operator : YM
Sample : SED-DA-009 (0-0.5)
Misc :
ALS Vial : 25 Sample Multiplier: 0.06653

Quant Time: Sep 04 22:49:40 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.370	176	150534m	251.05		0.00
31) Pyrene-d10	29.607	212	319086m	250.63		0.00
73) Benzo(a)pyrene-d12	38.380	264	235568m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.735	136	187878m	11.94		0.00
21) Acenaphthene-d10	19.587	164	111026m	12.72		0.00
32) Phenanthrene-d10	24.688	188	221366m	13.92		0.00
66) Chrysene-d12	33.801	240	326696m	14.28		0.00
88) Perylene-d12	38.691	264	3725m	0.23		0.00
90) 5(b)H-Cholane	34.189	217	57535m	18.16		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.790	128	10940m	0.64		
9) 2-Methylnaphthalene	16.048	142	7109m	0.65		
10) 1-Methylnaphthalene	16.382	142	3118m	0.31		
11) 2,6-Dimethylnaphthalene	18.165	156	5059m	0.50		
12) 1,6,7-Trimethylnaphtha...	21.008	170	1548m	0.17		
13) C2-Naphthalenes	18.500	156	20667m	1.22		
14) C3-Naphthalenes	20.060	170	21230m	1.25		
15) C4-Naphthalenes	0.000		0	N.D.	d	
16) Benzothiophene	13.958	134	1597m	0.12		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.608	154	10050m	0.70		
23) Acenaphthylene	19.085	152	2144m	0.13		
24) Acenaphthene	0.000		0	N.D.	d	
25) Dibenzofuran	20.283	168	8348m	0.52		
26) Fluorene	21.454	166	5786m	0.46		
27) 1-Methylfluorene	0.000		0	N.D.	d	
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.519	167	3631m	0.22		
34) Dibenzothiophene	24.342	184	5758m	0.30		
35) 4-Methyldibenzothiophene	25.866	198	3552m	0.24		
36) 2/3-Methyldibenzothiop...	26.143	198	2440m	0.16		
37) 1-Methyldibenzothiophene	26.489	198	1216m	0.08		
38) C2-Dibenzothiophenes	27.944	212	8228m	0.43		
39) C3-Dibenzothiophenes	28.775	226	7143m	0.37		
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.792	178	35685m	1.86		
42) Anthracene	0.000		0	N.D.	d	
43) 3-Methylphenanthrene	0.000		0	N.D.	d	

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1633.D
Acq On : 16 Aug 2013 1:46 pm
Operator : YM
Sample : SED-DA-009 (0-0.5)
Misc :
ALS Vial : 25 Sample Multiplier: 0.06653

Quant Time: Sep 04 22:49:40 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	0.000		0	N.D.	d	
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	32.948	234	7921m	0.31		
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.879	202	18954m	0.88		
59) Pyrene	29.676	202	16544m	0.62		
60) 2-Methylfluoranthene	30.438	216	1180m	0.07		
61) Benzo(b)fluorene	31.062	216	827m	0.06		
62) C1-Fluoranthenes/Pyrenes	30.819	216	10808m	0.50		
63) C2-Fluoranthenes/Pyrenes	32.559	230	25453m	1.19		
64) C3-Fluoranthenes/Pyrenes	34.228	244	10156m	0.47		
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.762	228	6462m	0.27		
68) Chrysene/Triphenylene	33.879	228	22313m	0.87		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.294	252	23171m	1.08		
78) Benzo(k,j)fluoranthene	37.333	252	6580m	0.35		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.264	252	10247m	0.53		
81) Benzo(a)pyrene	38.458	252	2228m	0.12		
82) Indeno(1,2,3-c,d)pyrene	43.141	276	5589m	0.31		
83) Dibenzo(a,h)anthracene	43.214	278	1509m	0.10		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.505	276	4003m	0.27		
89) Perylene	38.768	252	5388m	0.27		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1633.D
Acq On : 16 Aug 2013 1:46 pm
Operator : YM
Sample : SED-DA-009 (0-0.5)
Misc :
ALS Vial : 25 Sample Multiplier: 0.06653

Quant Time: Sep 04 22:49:40 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

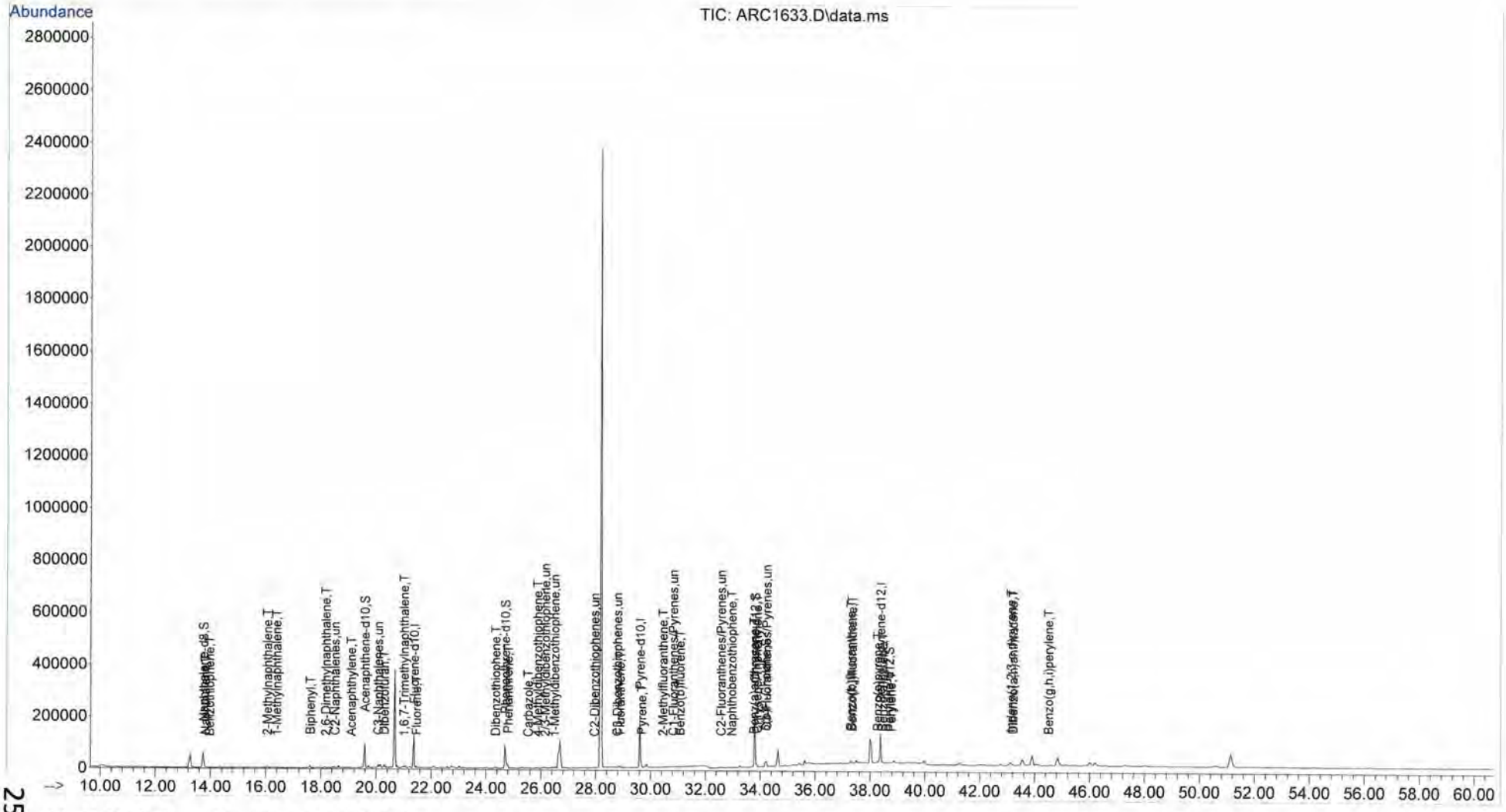
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1633.D
Acq On : 16 Aug 2013 1:46 pm
Operator : YM
Sample : SED-DA-009 (0-0.5)
Misc :
ALS Vial : 25 Sample Multiplier: 0.06653

Quant Time: Sep 04 22:49:40 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1634.D
Data File Path C:\GCMS6\MS60141\
Operator YM
Date Acquired 8/16/2013 14:55
Acq. Method File PAH-2012.M
Sample Name SED-DA-008 (0-0.5)
Misc Info 0
Instrument Name GCMS6
Vial Number 26
Sample Multiplier 0.06596
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ARC1634.D
SED-DA-008 (0-0.5)
8/16/2013
PAH-2012.M
15.16070346

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	7459	0.3549	0.4386
9)+10)	C1-Naphthalenes	16.19	6012	0.2861	0.3535
13)	C2-Naphthalenes	18.50	13106	0.6237	0.7706
14)	C3-Naphthalenes	20.06	17713	0.8429	1.0415
15)	C4-Naphthalenes	0.00	0	0.0000	0.0000
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.61	4959	0.2769	0.3422
23)	Acenaphthylene	19.09	1749	0.0853	0.1054
24)	Acenaphthene	19.62	373	0.0319	0.0394
25)	Dibenzofuran	20.29	6522	0.3297	0.4074
26)	Fluorene	21.46	5824	0.3733	0.4612
28)	C1-Fluorenes	23.37	3248	0.2082	0.2572
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	24.97	2049	0.0920	0.1137
41)	Phenanthrene	24.79	31701	1.3402	1.6561
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	24.34	3801	0.1610	0.1989
35)+36)+37)	C1-Dibenzothiophenes	26.18	4817	0.2040	0.2521
38)	C2-Dibenzothiophenes	27.94	8150	0.3451	0.4265
39)	C3-Dibenzothiophenes	28.78	16849	0.7135	0.8817
40)	C4-Dibenzothiophenes	29.61	23061	0.9766	1.2067
58)	Fluoranthene	28.88	27397	1.0337	1.2773
59)	Pyrene	29.68	19546	0.5957	0.7360
62)	C1-Fluoranthenes/Pyrenes	31.17	17446	0.6582	0.8134
63)	C2-Fluoranthenes/Pyrenes	32.56	33908	1.2794	1.5809
64)	C3-Fluoranthenes/Pyrenes	34.38	16664	0.6287	0.7769
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	32.95	11202	0.3506	0.4332
54)	C1-Naphthobenzothiophenes	34.69	21980	0.6879	0.8501
55)	C2-Naphthobenzothiophenes	36.01	38540	1.2062	1.4905
56)	C3-Naphthobenzothiophenes	37.18	34209	1.0707	1.3230
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benz(a)anthracene	33.76	8967	0.3061	0.3782
68)	Chrysene/Triphenylene	33.88	27453	0.8708	1.0760
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.29	32846	1.2092	1.4941
78)	Benzo(k,j)fluoranthene	37.33	11423	0.4767	0.5890
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.26	19060	0.7736	0.9559
81)	Benzo(a)pyrene	38.46	6506	0.2676	0.3307
89)	Perylene	38.77	27046	1.0817	1.3366
82)	Indeno(1,2,3-c,d)pyrene	43.14	9882	0.4268	0.5274
83)	Dibenzo(a,h)anthracene	43.21	2558	0.1386	0.1713
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.50	6324	0.3385	0.4183

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.02	4226	0.3100	0.3831
10)	1-Methylnaphthalene	16.36	1786	0.1422	0.1757
11)	2,6-Dimethylnaphthalene	18.17	3386	0.2724	0.3365
12)	1,6,7-Trimethylnaphthalene	20.98	901	0.0811	0.1002
27)	1-Methylfluorene	23.48	1226	0.1463	0.1808
35)	4-Methyldibenzothiophene	25.87	1646	0.0885	0.1093
36)	2/3-Methyldibenzothiophene	26.18	2371	0.1274	0.1575
37)	1-Methyldibenzothiophene	26.49	800	0.0430	0.0531
43)	3-Methylphenanthrene	0.00	0	0.0000	0.0000
44)	2-Methylphenanthrene	0.00	0	0.0000	0.0000
45)	2-Methylanthracene	0.00	0	0.0000	0.0000
46)	4/9-Methylphenanthrene	0.00	0	0.0000	0.0000
47)	1-Methylphenanthrene	0.00	0	0.0000	0.0000
48)	3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49)	Retene	0.00	0	0.0000	0.0000
60)	2-Methylfluoranthene	30.44	1396	0.0675	0.0835
61)	Benzo(b)fluorene	31.06	1403	0.0795	0.0982
74)	C29-Hopane	40.71	26194	3.6010	4.4496
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	42.03	31352	4.3101	5.3258
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.74	231427	11.87	71.98
21)	Acenaphthene-d10	19.59	129615	11.99	72.69
32)	Phenanthrene-d10	24.69	262423	13.36	80.93
66)	Chrysene-d12	33.80	395913	14.01	84.95
88)	Perylene-d12	38.69	2119	0.10	0.63
90)	5(b)H-Cholane	34.23	67850	16.88	102.34
	Internal Standards				
1)	Fluorene-d10	21.37	184816	16.56	
31)	Pyrene-d10	29.61	390876	16.53	
73)	Benzo(a)pyrene-d12	38.38	296426	16.51	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1634.D
Acq On : 16 Aug 2013 2:55 pm
Operator : YM
Sample : SED-DA-008 (0-0.5)
Misc :
ALS Vial : 26 Sample Multiplier: 0.06596

Quant Time: Sep 03 08:29:06 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.373	176	184816m	251.05		0.00
31) Pyrene-d10	29.607	212	390876m	250.63		0.00
73) Benzo(a)pyrene-d12	38.380	264	296426m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.738	136	231427m	11.87		0.00
21) Acenaphthene-d10	19.590	164	129615m	11.99		0.00
32) Phenanthrene-d10	24.688	188	262423m	13.36		0.00
66) Chrysene-d12	33.801	240	395913m	14.01		0.00
88) Perylene-d12	38.690	264	2119m	0.10		0.00
90) 5(b)H-Cholane	34.228	217	67850m	16.88		0.04
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.793	128	7459m	0.35		
9) 2-Methylnaphthalene	16.023	142	4226m	0.31		
10) 1-Methylnaphthalene	16.357	142	1786m	0.14		
11) 2,6-Dimethylnaphthalene	18.168	156	3386m	0.27		
12) 1,6,7-Trimethylnaphtha...	20.983	170	901m	0.08		
13) C2-Naphthalenes	18.503	156	13106m	0.62		
14) C3-Naphthalenes	20.063	170	17713m	0.84		
15) C4-Naphthalenes	0.000		0	N.D.	d	
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.611	154	4959m	0.28		
23) Acenaphthylene	19.088	152	1749m	0.09		
24) Acenaphthene	19.617	154	373m	0.03		
25) Dibenzofuran	20.286	168	6522m	0.33		
26) Fluorene	21.457	166	5824m	0.37		
27) 1-Methylfluorene	23.476	180	1226m	0.15		
28) C1-Fluorenes	23.372	180	3248m	0.21		
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	0.000		0	N.D.	d	
34) Dibenzothiophene	24.342	184	3801m	0.16		
35) 4-Methyldibenzothiophene	25.866	198	1646m	0.09		
36) 2/3-Methyldibenzothiop...	26.177	198	2371m	0.13		
37) 1-Methyldibenzothiophene	26.489	198	800m	0.04		
38) C2-Dibenzothiophenes	27.944	212	8150m	0.35		
39) C3-Dibenzothiophenes	28.775	226	16849m	0.71		
40) C4-Dibenzothiophenes	29.607	240	23061m	0.98		
41) Phenanthrene	24.792	178	31701m	1.34		
42) Anthracene	24.965	178	2049m	0.09		
43) 3-Methylphenanthrene	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1634.D
Acq On : 16 Aug 2013 2:55 pm
Operator : YM
Sample : SED-DA-008 (0-0.5)
Misc :
ALS Vial : 26 Sample Multiplier: 0.06596

Quant Time: Sep 03 08:29:06 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	0.000		0	N.D.	d	
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	32.947	234	11202m	0.35		
54) C1-Naphthobenzothiophenes	34.693	248	21980m	0.69		
55) C2-Naphthobenzothiophenes	36.013	262	38540m	1.21		
56) C3-Naphthobenzothiophenes	37.177	276	34209m	1.07		
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.879	202	27397m	1.03		
59) Pyrene	29.676	202	19546m	0.60		
60) 2-Methylfluoranthene	30.438	216	1396m	0.07		
61) Benzo(b)fluorene	31.062	216	1403m	0.08		
62) C1-Fluoranthenes/Pyrenes	31.165	216	17446m	0.66		
63) C2-Fluoranthenes/Pyrenes	32.559	230	33908m	1.28		
64) C3-Fluoranthenes/Pyrenes	34.383	244	16664m	0.63		
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.762	228	8967m	0.31		
68) Chrysene/Triphenylene	33.879	228	27453m	0.87		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	40.706	191	26194m	3.60		
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.033	191	31352m	4.31		
77) Benzo(b)fluoranthene	37.293	252	32846m	1.21		
78) Benzo(k,j)fluoranthene	37.332	252	11423m	0.48		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.264	252	19060m	0.77		
81) Benzo(a)pyrene	38.458	252	6506m	0.27		
82) Indeno(1,2,3-c,d)pyrene	43.140	276	9882m	0.43		
83) Dibenzo(a,h)anthracene	43.213	278	2558m	0.14		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.504	276	6324m	0.34		
89) Perylene	38.768	252	27046m	1.08		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1634.D
Acq On : 16 Aug 2013 2:55 pm
Operator : YM
Sample : SED-DA-008 (0-0.5)
Misc :
ALS Vial : 26 Sample Multiplier: 0.06596

Quant Time: Sep 03 08:29:06 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

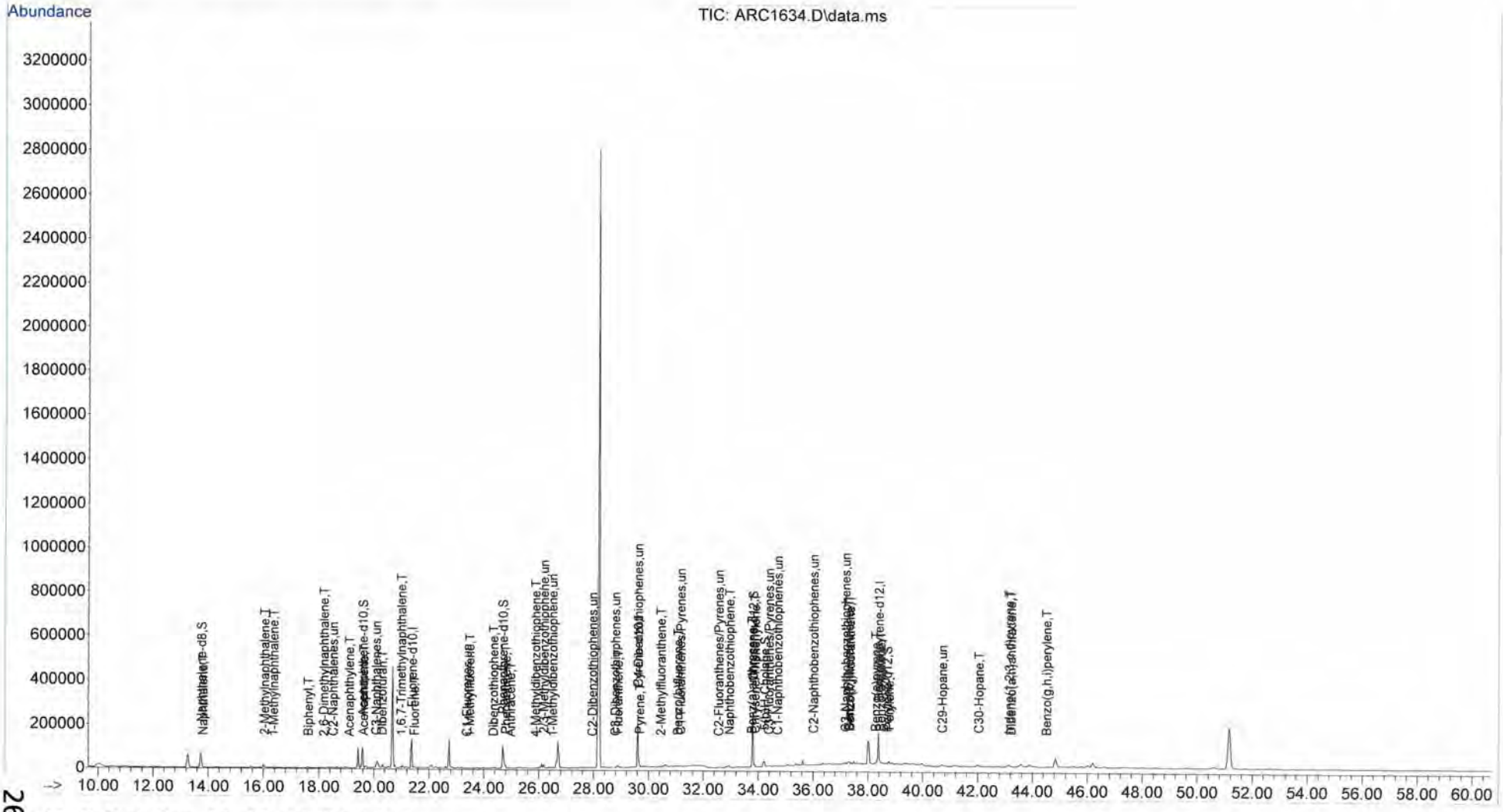
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1634.D
Acq On : 16 Aug 2013 2:55 pm
Operator : YM
Sample : SED-DA-008 (0-0.5)
Misc :
ALS Vial : 26 Sample Multiplier: 0.06596

Quant Time: Sep 03 08:29:06 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1637.D
Data File Path C:\GCMS6\MS60141\
Operator YM
Date Acquired 8/16/2013 16:05
Acq. Method File PAH-2012.M
Sample Name SED-DA-007 (0-0.5)
Misc Info 0
Instrument Name GCMS6
Vial Number 27
Sample Multiplier 0.06605
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ARC1637.D
SED-DA-007 (0-0.5)
8/16/2013
PAH-2012.M
15.14004542

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	27100	1.2984	1.4054
9)+10)	C1-Naphthalenes	16.20	42166	2.0202	2.1867
13)	C2-Naphthalenes	18.50	118548	5.6798	6.1478
14)	C3-Naphthalenes	20.76	325617	15.6009	16.8864
15)	C4-Naphthalenes	22.74	402281	19.2739	20.8620
16)	Benzothiophene	13.96	1702	0.1027	0.1111
17)	C1-Benzothiophenes	16.30	12555	0.7575	0.8199
18)	C2-Benzothiophenes	17.86	26943	1.6256	1.7595
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.61	12308	0.6920	0.7491
23)	Acenaphthylene	19.09	5994	0.2944	0.3186
24)	Acenaphthene	0.00	0	0.0000	0.0000
25)	Dibenzofuran	20.29	21571	1.0980	1.1884
26)	Fluorene	21.46	28034	1.8090	1.9581
28)	C1-Fluorenes	23.48	80223	5.1768	5.6034
29)	C2-Fluorenes	25.21	279869	18.0600	19.5481
30)	C3-Fluorenes	27.53	426344	27.5121	29.7790
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	24.97	8944	0.4240	0.4590
41)	Phenanthrene	24.79	173264	7.7360	8.3734
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.68	614466	27.4350	29.6955
50)	C2-Phenanthrenes/Anthracenes	28.36	1199430	53.5530	57.9656
51)	C3-Phenanthrenes/Anthracenes	29.92	1367950	61.0771	66.1097
52)	C4-Phenanthrenes/Anthracenes	31.75	970105	43.3139	46.8828
34)	Dibenzothiophene	24.34	129339	5.7846	6.2612
35)+36)+37)	C1-Dibenzothiophenes	26.17	548042	24.5107	26.5303
38)	C2-Dibenzothiophenes	27.94	1005230	44.9579	48.6623
39)	C3-Dibenzothiophenes	28.78	1464870	65.5151	70.9134
40)	C4-Dibenzothiophenes	29.61	1126840	50.3970	54.5496
58)	Fluoranthene	28.88	63601	2.5343	2.7431
59)	Pyrene	29.68	97206	3.1285	3.3863
62)	C1-Fluoranthenes/Pyrenes	30.82	221933	8.8434	9.5721
63)	C2-Fluoranthenes/Pyrenes	32.56	326766	13.0208	14.0936
64)	C3-Fluoranthenes/Pyrenes	34.00	284517	11.3372	12.2714
65)	C4-Fluoranthenes/Pyrenes	35.35	211236	8.4172	9.1108
53)	Naphthobenzothiophene	32.95	284464	9.4027	10.1775
54)	C1-Naphthobenzothiophenes	34.11	627968	20.7569	22.4673
55)	C2-Naphthobenzothiophenes	35.82	792700	26.2020	28.3610
56)	C3-Naphthobenzothiophenes	37.18	648600	21.4389	23.2054
57)	C4-Naphthobenzothiophenes	38.03	339113	11.2091	12.1327
67)	Benz(a)anthracene	33.76	34695	1.2507	1.3537
68)	Chrysene/Triphenylene	33.88	126792	4.2474	4.5974
69)	C1-Chrysenes	35.12	226499	7.5876	8.2128
70)	C2-Chrysenes	36.91	332666	11.1440	12.0623
71)	C3-Chrysenes	38.07	217053	7.2711	7.8702
72)	C4-Chrysenes	39.47	103628	3.4714	3.7575
77)	Benzo(b)fluoranthene	37.29	93440	3.6681	3.9704
78)	Benzo(k,j)fluoranthene	37.41	16310	0.7258	0.7856
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.30	60272	2.6085	2.8235
81)	Benzo(a)pyrene	38.46	14273	0.6261	0.6777
89)	Perylene	38.77	3274	0.1396	0.1511
82)	Indeno(1,2,3-c,d)pyrene	43.14	18009	0.8295	0.8978
83)	Dibenzo(a,h)anthracene	43.21	7636	0.4412	0.4776
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.51	21413	1.2223	1.3230

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.05	28849	2.1310	2.3066
10)	1-Methylnaphthalene	16.36	13317	1.0673	1.1553
11)	2,6-Dimethylnaphthalene	18.17	32390	2.6231	2.8393
12)	1,6,7-Trimethylnaphthalene	20.98	32082	2.9084	3.1480
27)	1-Methylfluorene	23.48	38959	4.6809	5.0666
35)	4-Methyldibenzothiophene	25.87	237597	13.4883	14.5997
36)	2/3-Methyldibenzothiophene	26.14	160946	9.1368	9.8897
37)	1-Methyldibenzothiophene	26.49	149499	8.4870	9.1863
43)	3-Methylphenanthrene	26.45	119103	6.1798	6.6890
44)	2-Methylphenanthrene	26.52	140352	7.2824	7.8825
45)	2-Methylanthracene	26.70	56585	2.9360	3.1779
46)	4/9-Methylphenanthrene	26.84	161270	8.3677	9.0572
47)	1-Methylphenanthrene	26.91	137156	7.1166	7.7029
48)	3,6-Dimethylphenanthrene	28.01	44927	2.9135	3.1536
49)	Retene	30.68	31489	3.8168	4.1313
60)	2-Methylfluoranthene	30.44	20330	1.0388	1.1244
61)	Benzo(b)fluorene	31.06	13591	0.8133	0.8803
74)	C29-Hopane	40.71	174234	25.5425	27.6471
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	42.03	329018	48.2336	52.2079
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.74	238544	12.32	74.59
21)	Acenaphthene-d10	19.59	118624	11.05	66.89
32)	Phenanthrene-d10	24.69	284054	15.27	92.39
66)	Chrysene-d12	33.80	426465	15.94	96.51
88)	Perylene-d12	38.69	16440	0.86	5.22
90)	5(b)H-Cholane	34.23	81226	21.54	130.47
	Internal Standards				
1)	Fluorene-d10	21.37	183811	16.58	
31)	Pyrene-d10	29.61	370615	16.55	
73)	Benzo(a)pyrene-d12	38.38	278356	16.53	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1637.D
Acq On : 16 Aug 2013 4:05 pm
Operator : YM
Sample : SED-DA-007 (0-0.5)
Misc :
ALS Vial : 27 Sample Multiplier: 0.06605

Quant Time: Sep 05 06:36:04 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.373	176	183811m	251.05		0.00
31) Pyrene-d10	29.607	212	370615m	250.63		0.00
73) Benzo(a)pyrene-d12	38.380	264	278356m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.738	136	238544m	12.32		0.00
21) Acenaphthene-d10	19.590	164	118624m	11.05		0.00
32) Phenanthrene-d10	24.688	188	284054m	15.27		0.00
66) Chrysene-d12	33.801	240	426465m	15.94		0.00
88) Perylene-d12	38.691	264	16440m	0.86		0.00
90) 5(b)H-Cholane	34.228	217	81226m	21.54		0.04
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.793	128	27100m	1.30		
9) 2-Methylnaphthalene	16.051	142	28849m	2.13		
10) 1-Methylnaphthalene	16.357	142	13317m	1.07		
11) 2,6-Dimethylnaphthalene	18.168	156	32390m	2.62		
12) 1,6,7-Trimethylnaphtha...	20.983	170	32082m	2.91		
13) C2-Naphthalenes	18.503	156	118548m	5.68		
14) C3-Naphthalenes	20.760	170	325617m	15.60		
15) C4-Naphthalenes	22.738	184	402281m	19.27		
16) Benzothiophene	13.961	134	1702m	0.10		
17) C1-Benzothiophenes	16.301	148	12555m	0.76		
18) C2-Benzothiophenes	17.862	162	26943m	1.63		
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.611	154	12308m	0.69		
23) Acenaphthylene	19.088	152	5994m	0.29		
24) Acenaphthene	0.000		0	N.D.	d	
25) Dibenzofuran	20.286	168	21571m	1.10		
26) Fluorene	21.457	166	28034m	1.81		
27) 1-Methylfluorene	23.476	180	38959m	4.68		
28) C1-Fluorenes	23.476	180	80223m	5.18		
29) C2-Fluorenes	25.208	194	279869m	18.06		
30) C3-Fluorenes	27.529	208	426344m	27.51		
33) Carbazole	0.000		0	N.D.	d	
34) Dibenzothiophene	24.342	184	129339m	5.78		
35) 4-Methyldibenzothiophene	25.866	198	237597m	13.49		
36) 2/3-Methyldibenzothiop...	26.143	198	160946m	9.14		
37) 1-Methyldibenzothiophene	26.489	198	149499m	8.49		
38) C2-Dibenzothiophenes	27.944	212	1005229m	44.96		
39) C3-Dibenzothiophenes	28.776	226	1464874m	65.52		
40) C4-Dibenzothiophenes	29.607	240	1126842m	50.40		
41) Phenanthrene	24.792	178	173264m	7.74		
42) Anthracene	24.965	178	8944m	0.42		
43) 3-Methylphenanthrene	26.455	192	119103m	6.18		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1637.D
Acq On : 16 Aug 2013 4:05 pm
Operator : YM
Sample : SED-DA-007 (0-0.5)
Misc :
ALS Vial : 27 Sample Multiplier: 0.06605

Quant Time: Sep 05 06:36:04 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.524	192	140352m	7.28		
45) 2-Methylanthracene	26.697	192	56585m	2.94		
46) 4/9-Methylphenanthrene	26.836	192	161270m	8.37		
47) 1-Methylphenanthrene	26.905	192	137156m	7.12		
48) 3,6-Dimethylphenanthrene	28.014	206	44927m	2.91		
49) Retene	30.681	234	31489m	3.82		
50) C2-Phenanthrenes/Anthr...	28.360	206	1199432m	53.55		
51) C3-Phenanthrenes/Anthr...	29.919	220	1367950m	61.08		
52) C4-Phenanthrenes/Anthr...	31.755	234	970105m	43.31		
53) Naphthobenzothiophene	32.948	234	284464m	9.40		
54) C1-Naphthobenzothiophenes	34.112	248	627968m	20.76		
55) C2-Naphthobenzothiophenes	35.819	262	792700m	26.20		
56) C3-Naphthobenzothiophenes	37.177	276	648600m	21.44		
57) C4-Naphthobenzothiophenes	38.031	290	339113m	11.21		
58) Fluoranthene	28.880	202	63601m	2.53		
59) Pyrene	29.676	202	97206m	3.13		
60) 2-Methylfluoranthene	30.438	216	20330m	1.04		
61) Benzo(b)fluorene	31.062	216	13591m	0.81		
62) C1-Fluoranthenes/Pyrenes	30.819	216	221933m	8.84		
63) C2-Fluoranthenes/Pyrenes	32.559	230	326766m	13.02		
64) C3-Fluoranthenes/Pyrenes	33.995	244	284517m	11.34		
65) C4-Fluoranthenes/Pyrenes	35.353	258	211236m	8.42		
67) Benz(a)anthracene	33.762	228	34695m	1.25		
68) Chrysene/Triphenylene	33.879	228	126792m	4.25		
69) C1-Chrysenes	35.121	242	226499m	7.59		
70) C2-Chrysenes	36.906	256	332666m	11.14		
71) C3-Chrysenes	38.070	270	217053m	7.27		
72) C4-Chrysenes	39.467	284	103628m	3.47		
74) C29-Hopane	40.707	191	174234m	25.54		
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.034	191	329018m	48.23		
77) Benzo(b)fluoranthene	37.294	252	93440m	3.67		
78) Benzo(k,j)fluoranthene	37.410	252	16310m	0.73		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.303	252	60272m	2.61		
81) Benzo(a)pyrene	38.458	252	14273m	0.63		
82) Indeno(1,2,3-c,d)pyrene	43.141	276	18009m	0.83		
83) Dibenzo(a,h)anthracene	43.214	278	7636m	0.44		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.505	276	21413m	1.22		
89) Perylene	38.768	252	3274m	0.14		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1637.D
Acq On : 16 Aug 2013 4:05 pm
Operator : YM
Sample : SED-DA-007 (0-0.5)
Misc :
ALS Vial : 27 Sample Multiplier: 0.06605

Quant Time: Sep 05 06:36:04 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

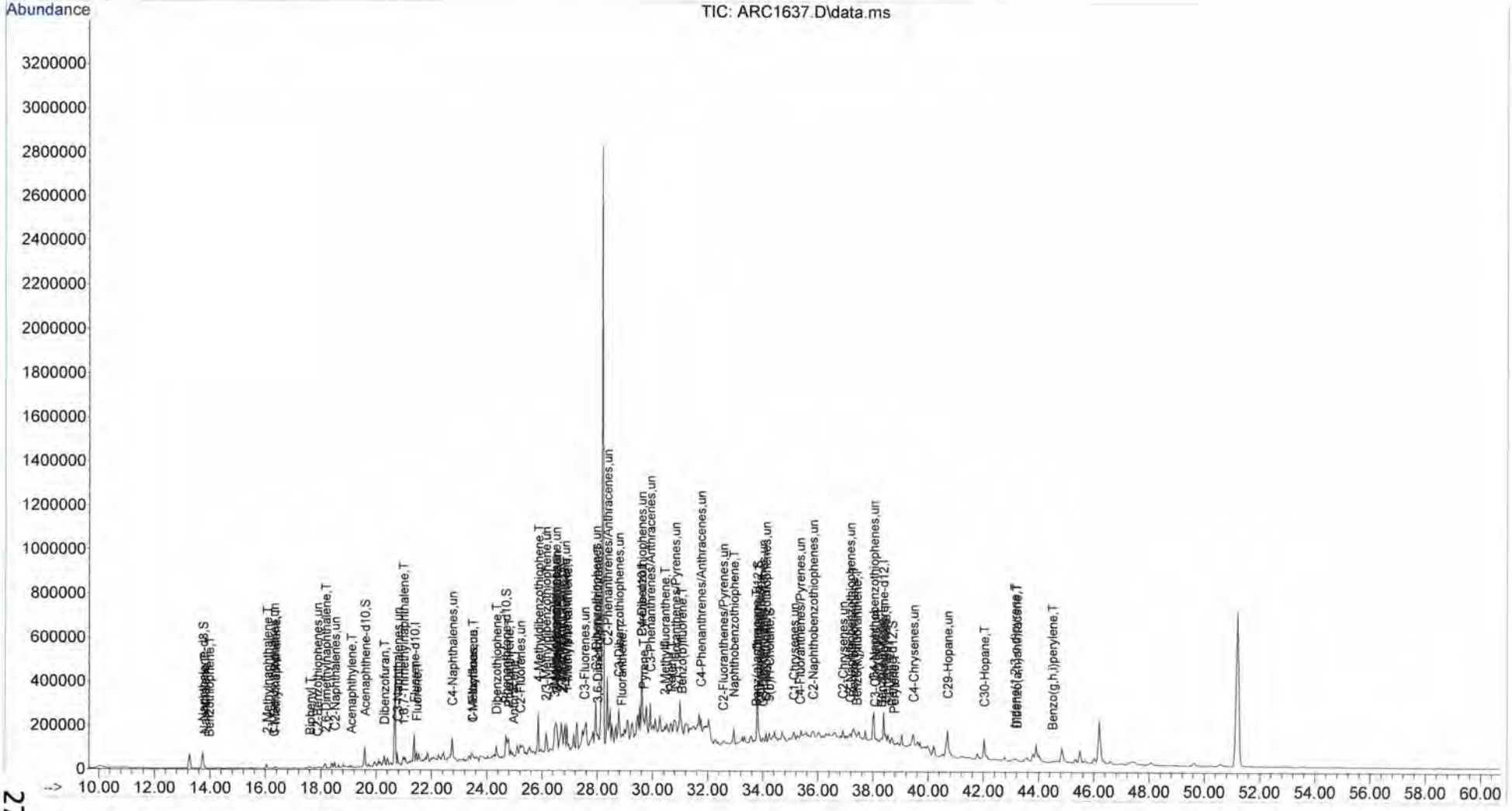
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1637.D
Acq On : 16 Aug 2013 4:05 pm
Operator : YM
Sample : SED-DA-007 (0-0.5)
Misc :
ALS Vial : 27 Sample Multiplier: 0.06605

Quant Time: Sep 05 06:36:04 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1638.D
Data File Path C:\msdchem\2\data\MS60141\
Operator YM
Date Acquired 8/16/2013 18:23
Acq. Method File PAH-2012.M
Sample Name SED-DA-006 (0-0.5)
Misc Info 0
Instrument Name GCMS6
Vial Number 29
Sample Multiplier 0.0664
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ARC1638.D
SED-DA-006 (0-0.5)
8/16/2013
PAH-2012.M
15.06024096

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	6015	0.3054	0.3537
9)+10)	C1-Naphthalenes	16.20	4161	0.2112	0.2447
13)	C2-Naphthalenes	18.50	8474	0.4302	0.4983
14)	C3-Naphthalenes	0.00	0	0.0000	0.0000
15)	C4-Naphthalenes	0.00	0	0.0000	0.0000
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.61	2827	0.1684	0.1951
23)	Acenaphthylene	0.00	0	0.0000	0.0000
24)	Acenaphthene	0.00	0	0.0000	0.0000
25)	Dibenzofuran	20.28	6966	0.3757	0.4352
26)	Fluorene	21.45	5855	0.4003	0.4637
28)	C1-Fluorenes	23.47	1808	0.1236	0.1432
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	25.52	445	0.0247	0.0286
42)	Anthracene	0.00	0	0.0000	0.0000
41)	Phenanthrene	24.79	26788	1.2726	1.4740
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	24.34	2812	0.1338	0.1550
35)+36)+37)	C1-Dibenzothiophenes	26.18	2630	0.1252	0.1450
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	28.88	3968	0.1682	0.1949
59)	Pyrene	29.67	339	0.0116	0.0134
62)	C1-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benz(a)anthracene	0.00	0	0.0000	0.0000
68)	Chrysene/Triphenylene	0.00	0	0.0000	0.0000
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	0.00	0	0.0000	0.0000
78)	Benzo(k,j)fluoranthene	0.00	0	0.0000	0.0000
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	0.00	0	0.0000	0.0000
81)	Benzo(a)pyrene	0.00	0	0.0000	0.0000
89)	Perylene	0.00	0	0.0000	0.0000
82)	Indeno(1,2,3-c,d)pyrene	0.00	0	0.0000	0.0000
83)	Dibenzo(a,h)anthracene	0.00	0	0.0000	0.0000
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	0.00	0	0.0000	0.0000

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.05	2911	0.2278	0.2639
10)	1-Methylnaphthalene	16.35	1250	0.1062	0.1230
11)	2,6-Dimethylnaphthalene	18.16	1634	0.1402	0.1624
12)	1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27)	1-Methylfluorene	23.47	736	0.0937	0.1085
35)	4-Methyldibenzothiophene	25.86	1426	0.0861	0.0998
36)	2/3-Methyldibenzothiophene	26.18	844	0.0510	0.0590
37)	1-Methyldibenzothiophene	26.49	360	0.0217	0.0252
43)	3-Methylphenanthrene	0.00	0	0.0000	0.0000
44)	2-Methylphenanthrene	0.00	0	0.0000	0.0000
45)	2-Methylanthracene	0.00	0	0.0000	0.0000
46)	4/9-Methylphenanthrene	0.00	0	0.0000	0.0000
47)	1-Methylphenanthrene	0.00	0	0.0000	0.0000
48)	3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49)	Retene	0.00	0	0.0000	0.0000
60)	2-Methylfluoranthene	0.00	0	0.0000	0.0000
61)	Benzo(b)fluorene	0.00	0	0.0000	0.0000
74)	C29-Hopane	0.00	0	0.0000	0.0000
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	0.00	0	0.0000	0.0000
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.73	236780	12.96	78.04
21)	Acenaphthene-d10	19.59	90124	8.90	53.56
32)	Phenanthrene-d10	24.69	250797	14.34	86.33
66)	Chrysene-d12	33.80	357204	14.20	85.56
88)	Perylene-d12	38.69	242	0.01	0.08
90)	5(b)H-Cholane	34.19	62504	17.85	107.55
	Internal Standards				
1)	Fluorene-d10	21.37	174390	16.67	
31)	Pyrene-d10	29.61	350164	16.64	
73)	Benzo(a)pyrene-d12	38.38	259849	16.62	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1638.D
Acq On : 16 Aug 2013 6:23 pm
Operator : YM
Sample : SED-DA-006 (0-0.5)
Misc :
ALS Vial : 29 Sample Multiplier: 0.0664

Quant Time: Sep 05 06:26:32 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.369	176	174390m	251.05		0.00
31) Pyrene-d10	29.605	212	350164m	250.63		0.00
73) Benzo(a)pyrene-d12	38.381	264	259849m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.734	136	236780m	12.96		0.00
21) Acenaphthene-d10	19.586	164	90124m	8.90		0.00
32) Phenanthrene-d10	24.687	188	250797m	14.34		0.00
66) Chrysene-d12	33.802	240	357204m	14.20		0.00
88) Perylene-d12	38.692	264	242m	0.01		0.00
90) 5(b)H-Cholane	34.190	217	62504m	17.85		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.790	128	6015m	0.31		
9) 2-Methylnaphthalene	16.047	142	2911m	0.23		
10) 1-Methylnaphthalene	16.353	142	1250m	0.11		
11) 2,6-Dimethylnaphthalene	18.164	156	1634m	0.14		
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d	
13) C2-Naphthalenes	18.499	156	8474m	0.43		
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.	d	
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.607	154	2827m	0.17		
23) Acenaphthylene	0.000		0	N.D.	d	
24) Acenaphthene	0.000		0	N.D.	d	
25) Dibenzofuran	20.282	168	6966m	0.38		
26) Fluorene	21.453	166	5855m	0.40		
27) 1-Methylfluorene	23.474	180	736m	0.09		
28) C1-Fluorenes	23.474	180	1808m	0.12		
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.518	167	445m	0.02		
34) Dibenzothiophene	24.340	184	2812m	0.13		
35) 4-Methyldibenzothiophene	25.864	198	1426m	0.09		
36) 2/3-Methyldibenzothiop...	26.176	198	844m	0.05		
37) 1-Methyldibenzothiophene	26.488	198	360m	0.02		
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.791	178	26788m	1.27		
42) Anthracene	0.000		0	N.D.	d	
43) 3-Methylphenanthrene	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1638.D
Acq On : 16 Aug 2013 6:23 pm
Operator : YM
Sample : SED-DA-006 (0-0.5)
Misc :
ALS Vial : 29 Sample Multiplier: 0.0664

Quant Time: Sep 05 06:26:32 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	0.000		0	N.D.	d	
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.878	202	3968m	0.17		
59) Pyrene	29.675	202	339m	0.01		
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	0.000		0	N.D.	d	
68) Chrysene/Triphenylene	0.000		0	N.D.	d	
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	0.000		0	N.D.	d	
78) Benzo(k,j)fluoranthene	0.000		0	N.D.	d	
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	0.000		0	N.D.	d	
81) Benzo(a)pyrene	0.000		0	N.D.	d	
82) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.	d	
83) Dibenzo(a,h)anthracene	0.000		0	N.D.	d	
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	0.000		0	N.D.	d	
89) Perylene	0.000		0	N.D.	d	
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1638.D
Acq On : 16 Aug 2013 6:23 pm
Operator : YM
Sample : SED-DA-006 (0-0.5)
Misc :
ALS Vial : 29 Sample Multiplier: 0.0664

Quant Time: Sep 05 06:26:32 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

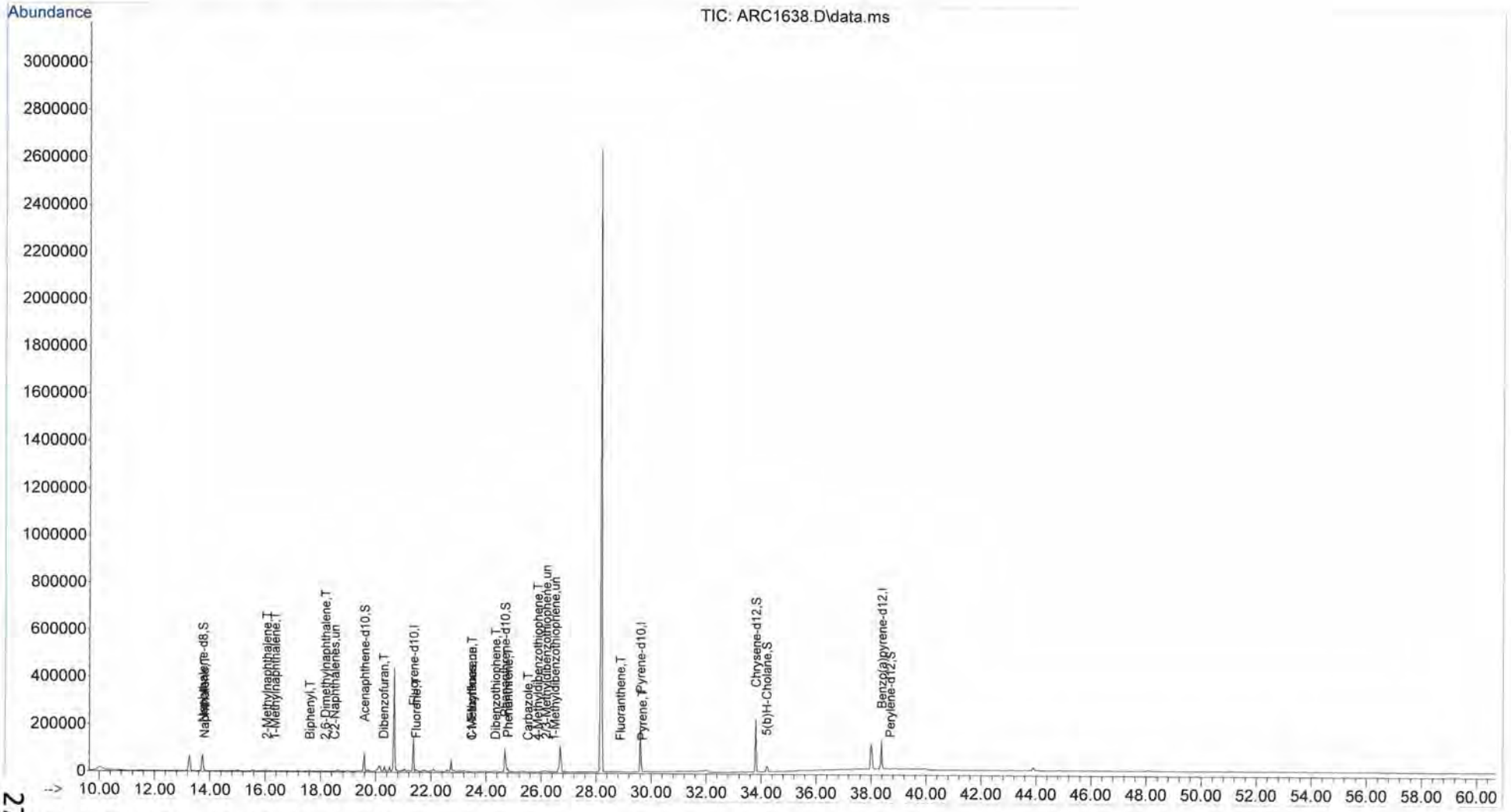
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1638.D
Acq On : 16 Aug 2013 6:23 pm
Operator : YM
Sample : SED-DA-006 (0-0.5)
Misc :
ALS Vial : 29 Sample Multiplier: 0.0664

Quant Time: Sep 05 06:26:32 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1639.D
Data File Path C:\msdchem\2\data\MS60141\
Operator YM
Date Acquired 8/16/2013 19:32
Acq. Method File PAH-2012.M
Sample Name SED-DA-005 (0-0.5)
Misc Info 0
Instrument Name GCMS6
Vial Number 30
Sample Multiplier 0.06583
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ARC1639.D
SED-DA-005 (0-0.5)
8/16/2013
PAH-2012.M
15.19064256

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	30084	1.4022	1.5807
9)+10)	C1-Naphthalenes	16.19	41952	1.9554	2.2043
13)	C2-Naphthalenes	18.50	97895	4.5628	5.1438
14)	C3-Naphthalenes	20.76	167020	7.7847	8.7758
15)	C4-Naphthalenes	22.74	282514	13.1678	14.8443
16)	Benzothiophene	13.96	2164	0.1270	0.1432
17)	C1-Benzothiophenes	16.30	10636	0.6243	0.7037
18)	C2-Benzothiophenes	17.83	19271	1.1311	1.2751
19)	C3-Benzothiophenes	20.23	31100	1.8254	2.0578
20)	C4-Benzothiophenes	21.54	35666	2.0934	2.3599
22)	Biphenyl	17.61	16598	0.9079	1.0235
23)	Acenaphthylene	19.09	4560	0.2178	0.2456
24)	Acenaphthene	19.67	1211	0.1013	0.1143
25)	Dibenzofuran	20.29	27265	1.3501	1.5220
26)	Fluorene	21.46	30683	1.9262	2.1714
28)	C1-Fluorenes	23.47	33049	2.0747	2.3388
29)	C2-Fluorenes	25.21	176231	11.0631	12.4716
30)	C3-Fluorenes	26.73	246507	15.4748	17.4450
33)	Carbazole	25.52	5890	0.2907	0.3278
42)	Anthracene	24.96	9491	0.4260	0.4803
41)	Phenanthrene	24.79	134821	5.6996	6.4253
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.68	315557	13.3404	15.0388
50)	C2-Phenanthrenes/Anthracenes	28.36	663149	28.0351	31.6044
51)	C3-Phenanthrenes/Anthracenes	29.92	792602	33.5078	37.7738
52)	C4-Phenanthrenes/Anthracenes	31.75	615102	26.0038	29.3145
34)	Dibenzothiophene	24.34	60067	2.5437	2.8675
35)+36)+37)	C1-Dibenzothiophenes	26.17	258455	10.9448	12.3383
38)	C2-Dibenzothiophenes	27.94	554025	23.4614	26.4483
39)	C3-Dibenzothiophenes	28.77	849705	35.9825	40.5637
40)	C4-Dibenzothiophenes	29.78	635262	26.9015	30.3265
58)	Fluoranthene	28.88	48045	1.8127	2.0435
59)	Pyrene	29.68	75712	2.3072	2.6010
62)	C1-Fluoranthenes/Pyrenes	31.16	164895	6.2214	7.0135
63)	C2-Fluoranthenes/Pyrenes	32.56	280015	10.5649	11.9099
64)	C3-Fluoranthenes/Pyrenes	34.00	246513	9.3008	10.4849
65)	C4-Fluoranthenes/Pyrenes	35.35	205765	7.7634	8.7518
53)	Naphthobenzothiophene	32.95	140534	4.3984	4.9583
54)	C1-Naphthobenzothiophenes	34.69	390619	12.2254	13.7818
55)	C2-Naphthobenzothiophenes	35.78	597173	18.6900	21.0695
56)	C3-Naphthobenzothiophenes	37.18	456087	14.2744	16.0917
57)	C4-Naphthobenzothiophenes	38.03	267542	8.3734	9.4394
67)	Benz(a)anthracene	33.76	18551	0.6332	0.7138
68)	Chrysene/Triphenylene	33.84	90725	2.8777	3.2441
69)	C1-Chrysenes	35.12	183039	5.8058	6.5449
70)	C2-Chrysenes	36.91	254711	8.0791	9.1077
71)	C3-Chrysenes	38.07	188109	5.9666	6.7262
72)	C4-Chrysenes	39.43	101781	3.2284	3.6394
77)	Benzo(b)fluoranthene	37.29	52177	1.9086	2.1516
78)	Benzo(k,j)fluoranthene	37.33	19060	0.7903	0.8909
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.26	44548	1.7965	2.0252
81)	Benzo(a)pyrene	38.46	12934	0.5287	0.5960
89)	Perylene	38.77	5406	0.2148	0.2422
82)	Indeno(1,2,3-c,d)pyrene	43.14	13360	0.5734	0.6464
83)	Dibenzo(a,h)anthracene	43.21	5751	0.3096	0.3491
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.51	22017	1.1710	1.3201

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.02	29317	2.1067	2.3749
10)	1-Methylnaphthalene	16.36	12635	0.9851	1.1106
11)	2,6-Dimethylnaphthalene	18.17	26936	2.1221	2.3923
12)	1,6,7-Trimethylnaphthalene	20.98	19114	1.6857	1.9003
27)	1-Methylfluorene	23.65	5948	0.6952	0.7837
35)	4-Methyldibenzothiophene	25.86	110023	5.9140	6.6669
36)	2/3-Methyldibenzothiophene	26.14	77737	4.1785	4.7105
37)	1-Methyldibenzothiophene	26.49	70695	3.8000	4.2838
43)	3-Methylphenanthrene	26.45	59018	2.8995	3.2686
44)	2-Methylphenanthrene	26.52	66839	3.2837	3.7018
45)	2-Methylanthracene	26.70	51884	2.5490	2.8735
46)	4/9-Methylphenanthrene	26.83	76478	3.7573	4.2356
47)	1-Methylphenanthrene	26.90	61338	3.0135	3.3971
48)	3,6-Dimethylphenanthrene	28.01	23741	1.4578	1.6434
49)	Retene	30.68	17459	2.0038	2.2589
60)	2-Methylfluoranthene	30.44	11884	0.5750	0.6482
61)	Benzo(b)fluorene	31.06	8181	0.4636	0.5226
74)	C29-Hopane	40.71	205747	28.1049	31.6830
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	42.03	258787	35.3501	39.8506
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.74	245707	12.35	75.00
21)	Acenaphthene-d10	19.59	136364	12.36	75.05
32)	Phenanthrene-d10	24.69	287086	14.61	88.71
66)	Chrysene-d12	33.80	429145	15.19	92.26
88)	Perylene-d12	38.69	17984	0.88	5.33
90)	5(b)H-Cholane	34.23	79210	19.58	118.95
	Internal Standards				
1)	Fluorene-d10	21.37	188317	16.53	
31)	Pyrene-d10	29.61	390114	16.50	
73)	Benzo(a)pyrene-d12	38.38	297738	16.48	

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1639.D
Acq On : 16 Aug 2013 7:32 pm
Operator : YM
Sample : SED-DA-005 (0-0.5)
Misc :
ALS Vial : 30 Sample Multiplier: 0.06583

Quant Time: Sep 05 06:34:38 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.372	176	188317m	251.05		0.00
31) Pyrene-d10	29.606	212	390114m	250.63		0.00
73) Benzo(a)pyrene-d12	38.381	264	297738m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.737	136	245707m	12.35		0.00
21) Acenaphthene-d10	19.589	164	136364m	12.36		0.00
32) Phenanthrene-d10	24.687	188	287086m	14.61		0.00
66) Chrysene-d12	33.802	240	429145m	15.19		0.00
88) Perylene-d12	38.692	264	17984m	0.88		0.00
90) 5(b)H-Cholane	34.229	217	79210m	19.58		0.04
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.793	128	30084m	1.40		
9) 2-Methylnaphthalene	16.022	142	29317m	2.11		
10) 1-Methylnaphthalene	16.356	142	12635m	0.99		
11) 2,6-Dimethylnaphthalene	18.168	156	26936m	2.12		
12) 1,6,7-Trimethylnaphtha...	20.982	170	19114m	1.69		
13) C2-Naphthalenes	18.502	156	97895m	4.56		
14) C3-Naphthalenes	20.759	170	167020m	7.78		
15) C4-Naphthalenes	22.738	184	282514m	13.17		
16) Benzothiophene	13.960	134	2164m	0.13		
17) C1-Benzothiophenes	16.301	148	10636m	0.62		
18) C2-Benzothiophenes	17.833	162	19271m	1.13		
19) C3-Benzothiophenes	20.230	176	31100m	1.83		
20) C4-Benzothiophenes	21.539	190	35666m	2.09		
22) Biphenyl	17.610	154	16598m	0.91		
23) Acenaphthylene	19.087	152	4560m	0.22		
24) Acenaphthene	19.672	154	1211m	0.10		
25) Dibenzofuran	20.285	168	27265m	1.35		
26) Fluorene	21.456	166	30683m	1.93		
27) 1-Methylfluorene	23.648	180	5948m	0.70		
28) C1-Fluorenes	23.475	180	33049m	2.07		
29) C2-Fluorenes	25.207	194	176231m	11.06		
30) C3-Fluorenes	26.731	208	246507m	15.47		
33) Carbazole	25.518	167	5890m	0.29		
34) Dibenzothiophene	24.341	184	60067m	2.54		
35) 4-Methyldibenzothiophene	25.865	198	110023m	5.91		
36) 2/3-Methyldibenzothiop...	26.142	198	77737m	4.18		
37) 1-Methyldibenzothiophene	26.488	198	70695m	3.80		
38) C2-Dibenzothiophenes	27.943	212	554025m	23.46		
39) C3-Dibenzothiophenes	28.775	226	849705m	35.98		
40) C4-Dibenzothiophenes	29.779	240	635262m	26.90		
41) Phenanthrene	24.791	178	134821m	5.70		
42) Anthracene	24.964	178	9491m	0.43		
43) 3-Methylphenanthrene	26.454	192	59018m	2.90		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1639.D
Acq On : 16 Aug 2013 7:32 pm
Operator : YM
Sample : SED-DA-005 (0-0.5)
Misc :
ALS Vial : 30 Sample Multiplier: 0.06583

Quant Time: Sep 05 06:34:38 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.523	192	66839m	3.28		
45) 2-Methylanthracene	26.696	192	51884m	2.55		
46) 4/9-Methylphenanthrene	26.835	192	76478m	3.76		
47) 1-Methylphenanthrene	26.904	192	61338m	3.01		
48) 3,6-Dimethylphenanthrene	28.012	206	23741m	1.46		
49) Retene	30.680	234	17459m	2.00		
50) C2-Phenanthrenes/Anthr...	28.359	206	663149m	28.04		
51) C3-Phenanthrenes/Anthr...	29.918	220	792602m	33.51		
52) C4-Phenanthrenes/Anthr...	31.753	234	615102m	26.00		
53) Naphthobenzothiophene	32.948	234	140534m	4.40		
54) C1-Naphthobenzothiophenes	34.695	248	390619m	12.23		
55) C2-Naphthobenzothiophenes	35.781	262	597173m	18.69		
56) C3-Naphthobenzothiophenes	37.178	276	456087m	14.27		
57) C4-Naphthobenzothiophenes	38.032	290	267542m	8.37		
58) Fluoranthene	28.878	202	48045m	1.81		
59) Pyrene	29.675	202	75712m	2.31		
60) 2-Methylfluoranthene	30.437	216	11884m	0.57		
61) Benzo(b)fluorene	31.061	216	8181m	0.46		
62) C1-Fluoranthenes/Pyrenes	31.165	216	164895m	6.22		
63) C2-Fluoranthenes/Pyrenes	32.560	230	280015m	10.56		
64) C3-Fluoranthenes/Pyrenes	33.996	244	246513m	9.30		
65) C4-Fluoranthenes/Pyrenes	35.354	258	205765m	7.76		
67) Benz(a)anthracene	33.763	228	18551m	0.63		
68) Chrysene/Triphenylene	33.841	228	90725m	2.88		
69) C1-Chrysenes	35.121	242	183039m	5.81		
70) C2-Chrysenes	36.907	256	254711m	8.08		
71) C3-Chrysenes	38.071	270	188109m	5.97		
72) C4-Chrysenes	39.429	284	101781m	3.23		
74) C29-Hopane	40.707	191	205747m	28.10		
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.035	191	258787m	35.35		
77) Benzo(b)fluoranthene	37.295	252	52177m	1.91		
78) Benzo(k,j)fluoranthene	37.333	252	19060m	0.79		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.265	252	44548m	1.80		
81) Benzo(a)pyrene	38.459	252	12934m	0.53		
82) Indeno(1,2,3-c,d)pyrene	43.141	276	13360m	0.57		
83) Dibenzo(a,h)anthracene	43.215	278	5751m	0.31		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.506	276	22017m	1.17		
89) Perylene	38.769	252	5406m	0.21		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1639.D
Acq On : 16 Aug 2013 7:32 pm
Operator : YM
Sample : SED-DA-005 (0-0.5)
Misc :
ALS Vial : 30 Sample Multiplier: 0.06583

Quant Time: Sep 05 06:34:38 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

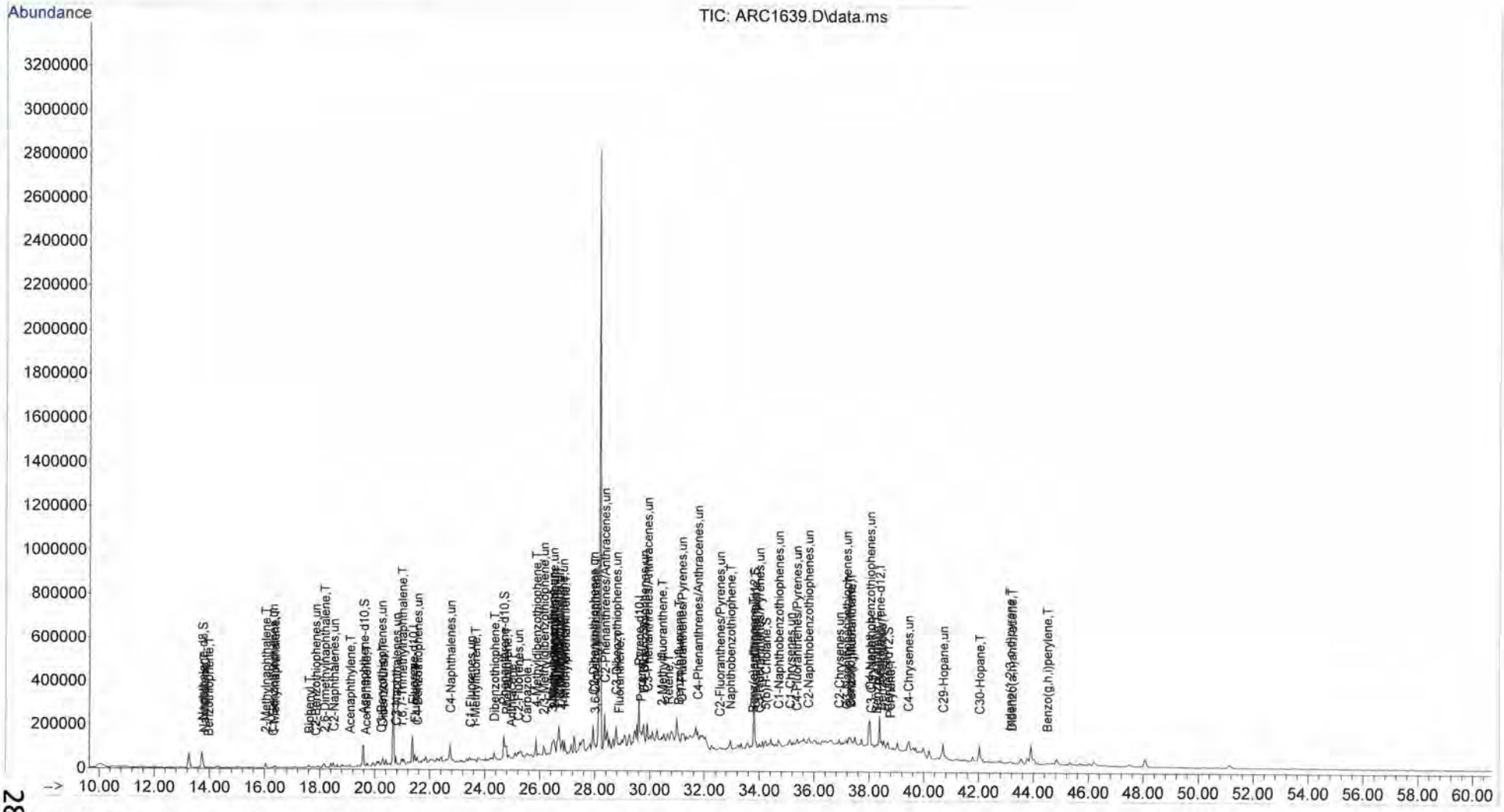
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1639.D
Acq On : 16 Aug 2013 7:32 pm
Operator : YM
Sample : SED-DA-005 (0-0.5)
Misc :
ALS Vial : 30 Sample Multiplier: 0.06583

Quant Time: Sep 05 06:34:38 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1640.D
Data File Path C:\msdchem\2\data\MS60141\
Operator YM
Date Acquired 8/16/2013 20:41
Acq. Method File PAH-2012.M
Sample Name SED-DA-010 (0-0.5)
Misc Info 0
Instrument Name GCMS6
Vial Number 31
Sample Multiplier 0.06588
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ARC1640.D
SED-DA-010 (0-0.5)
8/16/2013
PAH-2012.M
15.17911354

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	25311	1.3630	1.5533
9)+10)	C1-Naphthalenes	16.20	28313	1.5246	1.7375
13)	C2-Naphthalenes	18.50	55216	2.9733	3.3885
14)	C3-Naphthalenes	21.37	105043	5.6565	6.4462
15)	C4-Naphthalenes	21.48	102178	5.5022	6.2704
16)	Benzothiophene	13.96	980	0.0665	0.0757
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.61	11137	0.7038	0.8021
23)	Acenaphthylene	19.08	6409	0.3537	0.4031
24)	Acenaphthene	19.67	1590	0.1537	0.1752
25)	Dibenzofuran	20.28	20164	1.1536	1.3146
26)	Fluorene	21.45	19634	1.4240	1.6228
28)	C1-Fluorenes	23.47	14064	1.0200	1.1624
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	25.52	18035	1.0122	1.1535
42)	Anthracene	24.96	11853	0.6050	0.6894
41)	Phenanthrene	24.79	130773	6.2860	7.1636
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.68	152968	7.3529	8.3794
50)	C2-Phenanthrenes/Anthracenes	28.19	307577	14.7847	16.8487
51)	C3-Phenanthrenes/Anthracenes	30.99	311713	14.9835	17.0753
52)	C4-Phenanthrenes/Anthracenes	31.75	253385	12.1798	13.8801
34)	Dibenzothiophene	24.34	21357	1.0283	1.1719
35)+36)+37)	C1-Dibenzothiophenes	26.17	75702	3.6450	4.1539
38)	C2-Dibenzothiophenes	27.94	196749	9.4733	10.7959
39)	C3-Dibenzothiophenes	28.77	315860	15.2085	17.3317
40)	C4-Dibenzothiophenes	29.78	255770	12.3151	14.0344
58)	Fluoranthene	28.88	235213	10.0904	11.4991
59)	Pyrene	29.68	233770	8.1000	9.2308
62)	C1-Fluoranthenes/Pyrenes	31.16	146034	6.2647	7.1393
63)	C2-Fluoranthenes/Pyrenes	32.56	250087	10.7285	12.2263
64)	C3-Fluoranthenes/Pyrenes	34.11	170168	7.3000	8.3192
65)	C4-Fluoranthenes/Pyrenes	35.27	133087	5.7093	6.5064
53)	Naphthobenzothiophene	32.95	106971	3.8066	4.3381
54)	C1-Naphthobenzothiophenes	34.69	197465	7.0270	8.0080
55)	C2-Naphthobenzothiophenes	35.78	315081	11.2124	12.7777
56)	C3-Naphthobenzothiophenes	37.18	249243	8.8695	10.1077
57)	C4-Naphthobenzothiophenes	38.03	162658	5.7883	6.5964
67)	Benz(a)anthracene	33.76	85589	3.3215	3.7852
68)	Chrysene/Triphenylene	33.88	234881	8.4709	9.6535
69)	C1-Chrysenes	35.12	145652	5.2529	5.9862
70)	C2-Chrysenes	36.28	145484	5.2468	5.9793
71)	C3-Chrysenes	37.99	103256	3.7239	4.2438
72)	C4-Chrysenes	39.43	69696	2.5136	2.8645
77)	Benzo(b)fluoranthene	37.29	277692	11.8936	13.5540
78)	Benzo(k,j)fluoranthene	37.33	96714	4.6954	5.3509
79)	Benzo(a)fluoranthene	37.64	19241	0.9341	1.0645
80)	Benzo(e)pyrene	38.26	149101	7.0404	8.0233
81)	Benzo(a)pyrene	38.46	107882	5.1634	5.8843
89)	Perylene	38.77	31123	1.4482	1.6503
82)	Indeno(1,2,3-c,d)pyrene	43.14	81610	4.1010	4.6736
83)	Dibenzo(a,h)anthracene	43.22	20748	1.3080	1.4906
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.51	81494	5.0753	5.7838

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.05	19724	1.6375	1.8661
10)	1-Methylnaphthalene	16.35	8589	0.7737	0.8817
11)	2,6-Dimethylnaphthalene	18.16	16541	1.5056	1.7158
12)	1,6,7-Trimethylnaphthalene	20.98	6655	0.6781	0.7727
27)	1-Methylfluorene	23.65	2026	0.2736	0.3118
35)	4-Methyldibenzothiophene	25.86	33862	2.0695	2.3585
36)	2/3-Methyldibenzothiophene	26.14	23310	1.4246	1.6235
37)	1-Methyldibenzothiophene	26.49	18530	1.1325	1.2906
43)	3-Methylphenanthrene	26.45	24107	1.3466	1.5346
44)	2-Methylphenanthrene	26.52	32528	1.8170	2.0707
45)	2-Methylanthracene	26.70	45133	2.5211	2.8731
46)	4/9-Methylphenanthrene	26.80	26995	1.5080	1.7185
47)	1-Methylphenanthrene	26.90	24205	1.3521	1.5409
48)	3,6-Dimethylphenanthrene	28.01	9170	0.6402	0.7296
49)	Retene	30.68	6648	0.8675	0.9886
60)	2-Methylfluoranthene	30.44	12613	0.6938	0.7907
61)	Benzo(b)fluorene	31.06	13628	0.8780	1.0006
74)	C29-Hopane	40.71	121212	19.3870	22.0936
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	42.04	144855	23.1686	26.4031
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.73	212390	12.33	74.84
21)	Acenaphthene-d10	19.59	123190	12.90	78.27
32)	Phenanthrene-d10	24.69	249957	14.46	87.75
66)	Chrysene-d12	33.80	384913	15.49	94.02
88)	Perylene-d12	38.69	94325	5.39	32.74
90)	5(b)H-Cholane	34.23	63838	18.47	112.16
	Internal Standards				
1)	Fluorene-d10	21.37	163122	16.54	
31)	Pyrene-d10	29.61	343364	16.51	
73)	Benzo(a)pyrene-d12	38.38	254475	16.49	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1640.D
Acq On : 16 Aug 2013 8:41 pm
Operator : YM
Sample : SED-DA-010 (0-0.5)
Misc :
ALS Vial : 31 Sample Multiplier: 0.06588

Quant Time: Sep 06 08:26:28 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.369	176	163122m	251.05		0.00
31) Pyrene-d10	29.606	212	343364m	250.63		0.00
73) Benzo(a)pyrene-d12	38.379	264	254475m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.734	136	212390m	12.33		0.00
21) Acenaphthene-d10	19.586	164	123190m	12.90		0.00
32) Phenanthrene-d10	24.687	188	249957m	14.46		0.00
66) Chrysene-d12	33.800	240	384913m	15.49		0.00
88) Perylene-d12	38.689	264	94325m	5.39		0.00
90) 5(b)H-Cholane	34.227	217	63838m	18.47		0.04
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.790	128	25311m	1.36		
9) 2-Methylnaphthalene	16.047	142	19724m	1.64		
10) 1-Methylnaphthalene	16.354	142	8589m	0.77		
11) 2,6-Dimethylnaphthalene	18.165	156	16541m	1.51		
12) 1,6,7-Trimethylnaphtha...	20.979	170	6655m	0.68		
13) C2-Naphthalenes	18.499	156	55216m	2.97		
14) C3-Naphthalenes	21.369	170	105043m	5.66		
15) C4-Naphthalenes	21.481	184	102178m	5.50		
16) Benzothiophene	13.957	134	980m	0.07		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.608	154	11137m	0.70		
23) Acenaphthylene	19.084	152	6409m	0.35		
24) Acenaphthene	19.670	154	1590m	0.15		
25) Dibenzofuran	20.283	168	20164m	1.15		
26) Fluorene	21.453	166	19634m	1.42		
27) 1-Methylfluorene	23.648	180	2026m	0.27		
28) C1-Fluorenes	23.475	180	14064m	1.02		
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.518	167	18035m	1.01		
34) Dibenzothiophene	24.341	184	21357m	1.03		
35) 4-Methyldibenzothiophene	25.865	198	33862m	2.07		
36) 2/3-Methyldibenzothiop...	26.142	198	23310m	1.42		
37) 1-Methyldibenzothiophene	26.488	198	18530m	1.13		
38) C2-Dibenzothiophenes	27.943	212	196749m	9.47		
39) C3-Dibenzothiophenes	28.775	226	315860m	15.21		
40) C4-Dibenzothiophenes	29.779	240	255770m	12.32		
41) Phenanthrene	24.791	178	130773m	6.29		
42) Anthracene	24.964	178	11853m	0.60		
43) 3-Methylphenanthrene	26.454	192	24107m	1.35		

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1640.D
Acq On : 16 Aug 2013 8:41 pm
Operator : YM
Sample : SED-DA-010 (0-0.5)
Misc :
ALS Vial : 31 Sample Multiplier: 0.06588

Quant Time: Sep 06 08:26:28 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.523	192	32528m	1.82		
45) 2-Methylanthracene	26.696	192	45133m	2.52		
46) 4/9-Methylphenanthrene	26.800	192	26995m	1.51		
47) 1-Methylphenanthrene	26.904	192	24205m	1.35		
48) 3,6-Dimethylphenanthrene	28.012	206	9170m	0.64		
49) Retene	30.680	234	6648m	0.87		
50) C2-Phenanthrenes/Anthr...	28.186	206	307577m	14.78		
51) C3-Phenanthrenes/Anthr...	30.991	220	311713m	14.98		
52) C4-Phenanthrenes/Anthr...	31.753	234	253385m	12.18		
53) Naphthobenzothiophene	32.946	234	106971m	3.81		
54) C1-Naphthobenzothiophenes	34.692	248	197465m	7.03		
55) C2-Naphthobenzothiophenes	35.779	262	315081m	11.21		
56) C3-Naphthobenzothiophenes	37.176	276	249243m	8.87		
57) C4-Naphthobenzothiophenes	38.030	290	162658m	5.79		
58) Fluoranthene	28.878	202	235213m	10.09		
59) Pyrene	29.675	202	233770m	8.10		
60) 2-Methylfluoranthene	30.437	216	12613m	0.69		
61) Benzo(b)fluorene	31.061	216	13628m	0.88		
62) C1-Fluoranthenes/Pyrenes	31.165	216	146034m	6.26		
63) C2-Fluoranthenes/Pyrenes	32.558	230	250087m	10.73		
64) C3-Fluoranthenes/Pyrenes	34.110	244	170168m	7.30		
65) C4-Fluoranthenes/Pyrenes	35.274	258	133087m	5.71		
67) Benz(a)anthracene	33.761	228	85589m	3.32		
68) Chrysene/Triphenylene	33.877	228	234881m	8.47		
69) C1-Chrysenes	35.119	242	145652m	5.25		
70) C2-Chrysenes	36.283	256	145484m	5.25		
71) C3-Chrysenes	37.991	270	103256m	3.72		
72) C4-Chrysenes	39.427	284	69696m	2.51		
74) C29-Hopane	40.708	191	121212m	19.39		
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.035	191	144855m	23.17		
77) Benzo(b)fluoranthene	37.292	252	277692m	11.89		
78) Benzo(k,j)fluoranthene	37.331	252	96714m	4.70		
79) Benzo(a)fluoranthene	37.642	252	19241m	0.93		
80) Benzo(e)pyrene	38.262	252	149101m	7.04		
81) Benzo(a)pyrene	38.456	252	107882m	5.16		
82) Indeno(1,2,3-c,d)pyrene	43.141	276	81610m	4.10		
83) Dibenzo(a,h)anthracene	43.215	278	20748m	1.31		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.506	276	81494m	5.08		
89) Perylene	38.767	252	31123m	1.45		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1640.D
Acq On : 16 Aug 2013 8:41 pm
Operator : YM
Sample : SED-DA-010 (0-0.5)
Misc :
ALS Vial : 31 Sample Multiplier: 0.06588

Quant Time: Sep 06 08:26:28 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

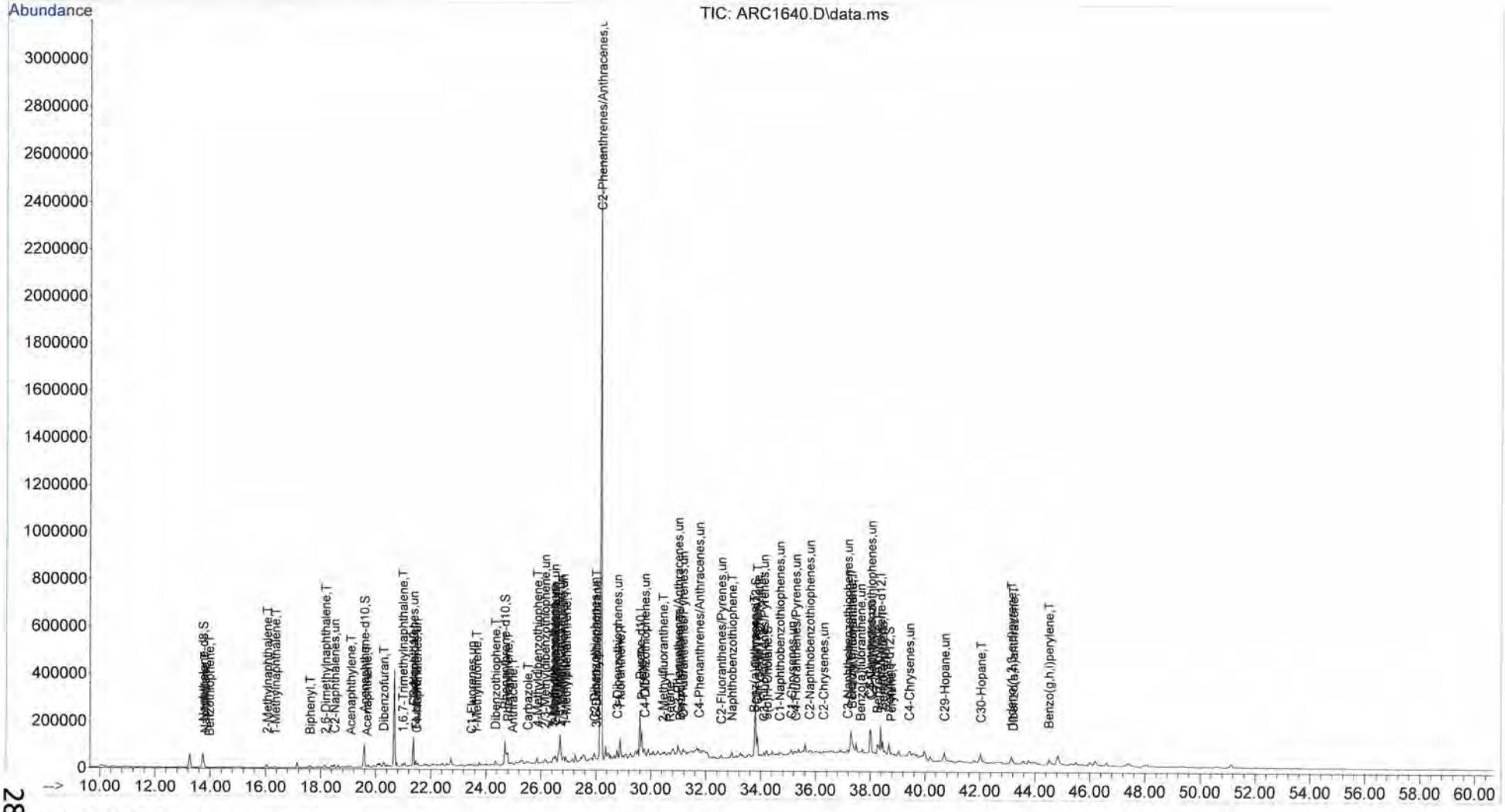
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1640.D
Acq On : 16 Aug 2013 8:41 pm
Operator : YM
Sample : SED-DA-010 (0-0.5)
Misc :
ALS Vial : 31 Sample Multiplier: 0.06588

Quant Time: Sep 06 08:26:28 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1646.D
Data File Path C:\GCMS6\MS60141\
Operator YM
Date Acquired 8/16/2013 22:59
Acq. Method File PAH-2012.M
Sample Name SED-DA-BG-005 (0-0.5)
Misc Info 0
Instrument Name GCMS6
Vial Number 33
Sample Multiplier 0.06667
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ARC1646.D
SED-DA-BG-005 (0-0.5)
8/16/2013
PAH-2012.M
14.99925004

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	11.78	10498	3.2224	3.7152
4)	C1-Decalins	12.68	4656	1.4292	1.6477
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	75951	3.7824	4.3608
9)+10)	C1-Naphthalenes	16.20	58968	2.9367	3.3857
13)	C2-Naphthalenes	18.17	79635	3.9659	4.5723
14)	C3-Naphthalenes	20.76	45773	2.2795	2.6281
15)	C4-Naphthalenes	21.48	45973	2.2895	2.6396
16)	Benzothiophene	13.96	3097	0.1942	0.2239
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.61	22052	1.2888	1.4859
23)	Acenaphthylene	19.09	36282	1.8520	2.1352
24)	Acenaphthene	19.67	10850	0.9702	1.1186
25)	Dibenzofuran	20.28	57773	3.0566	3.5240
26)	Fluorene	21.45	60727	4.0733	4.6961
28)	C1-Fluorenes	23.47	12586	0.8442	0.9733
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	25.52	230909	11.8395	13.6500
42)	Anthracene	24.96	63111	2.9427	3.3927
41)	Phenanthrene	24.79	1248900	54.8434	63.2298
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.68	435152	19.1090	22.0310
50)	C2-Phenanthrenes/Anthracenes	28.19	301445	13.2375	15.2617
51)	C3-Phenanthrenes/Anthracenes	29.92	154328	6.7771	7.8134
52)	C4-Phenanthrenes/Anthracenes	31.75	67975	2.9850	3.4415
34)	Dibenzothiophene	24.34	65195	2.8678	3.3063
35)+36)+37)	C1-Dibenzothiophenes	26.16	32635	1.4355	1.6551
38)	C2-Dibenzothiophenes	27.60	31458	1.3838	1.5954
39)	C3-Dibenzothiophenes	28.77	25454	1.1197	1.2909
40)	C4-Dibenzothiophenes	30.19	12125	0.5334	0.6149
58)	Fluoranthene	28.88	4222710	165.4929	190.7992
59)	Pyrene	29.67	4069530	128.8198	148.5182
62)	C1-Fluoranthenes/Pyrenes	30.82	1472120	57.6940	66.5163
63)	C2-Fluoranthenes/Pyrenes	33.26	1326510	51.9875	59.9372
64)	C3-Fluoranthenes/Pyrenes	33.72	296450	11.6182	13.3948
65)	C4-Fluoranthenes/Pyrenes	35.28	413258	16.1961	18.6727
53)	Naphthobenzothiophene	32.95	735001	23.8949	27.5487
54)	C1-Naphthobenzothiophenes	34.11	234933	7.6376	8.8056
55)	C2-Naphthobenzothiophenes	36.01	120142	3.9058	4.5031
56)	C3-Naphthobenzothiophenes	37.02	73286	2.3825	2.7468
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benz(a)anthracene	33.76	1956410	69.3615	79.9678
68)	Chrysene/Triphenylene	33.88	3553010	117.0632	134.9639
69)	C1-Chrysenes	35.12	756686	24.9310	28.7434
70)	C2-Chrysenes	36.44	246484	8.1211	9.3629
71)	C3-Chrysenes	37.99	74852	2.4662	2.8433
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	0.00	0	0.0000	0.0000
78)	Benzo(k,j)fluoranthene	37.29	3848220	186.3993	214.9025
79)	Benzo(a)fluoranthene	37.33	1485150	71.9369	82.9371
80)	Benzo(e)pyrene	38.26	1731710	81.5814	94.0564
81)	Benzo(a)pyrene	38.46	1191890	56.9146	65.6176
89)	Perylene	38.77	156873	7.2826	8.3963
82)	Indeno(1,2,3-c,d)pyrene	43.14	1064790	53.3848	61.5481
83)	Dibenzo(a,h)anthracene	43.21	270605	17.0199	19.6225
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.51	768305	47.7387	55.0387

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.05	41073	3.1536	3.6358
10)	1-Methylnaphthalene	16.35	17895	1.4908	1.7188
11)	2,6-Dimethylnaphthalene	18.17	25821	2.1736	2.5060
12)	1,6,7-Trimethylnaphthalene	20.98	3867	0.3644	0.4201
27)	1-Methylfluorene	23.65	3419	0.4270	0.4923
35)	4-Methyldibenzothiophene	25.86	15145	0.8456	0.9749
36)	2/3-Methyldibenzothiophene	26.14	12551	0.7008	0.8079
37)	1-Methyldibenzothiophene	26.49	4939	0.2758	0.3179
43)	3-Methylphenanthrene	26.45	104391	5.3273	6.1419
44)	2-Methylphenanthrene	26.52	128516	6.5585	7.5614
45)	2-Methylanthracene	26.70	55728	2.8439	3.2788
46)	4/9-Methylphenanthrene	26.83	65368	3.3359	3.8460
47)	1-Methylphenanthrene	26.90	81149	4.1412	4.7745
48)	3,6-Dimethylphenanthrene	28.01	14660	0.9351	1.0780
49)	Retene	30.68	3406	0.4060	0.4681
60)	2-Methylfluoranthene	30.44	175671	8.8285	10.1785
61)	Benzo(b)fluorene	31.06	309449	18.2133	20.9984
74)	C29-Hopane	40.71	25822	4.1206	4.7507
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	42.03	26708	4.2620	4.9137
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.73	225403	12.10	72.58
21)	Acenaphthene-d10	19.59	119473	11.57	69.37
32)	Phenanthrene-d10	24.69	273689	14.47	86.74
66)	Chrysene-d12	33.80	429901	15.80	94.80
88)	Perylene-d12	38.69	3856	0.22	1.32
90)	5(b)H-Cholane	34.19	71988	20.78	124.70
	Internal Standards				
1)	Fluorene-d10	21.37	178498	16.74	
31)	Pyrene-d10	29.61	380356	16.71	
73)	Benzo(a)pyrene-d12	38.38	258119	16.69	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1646.D
Acq On : 16 Aug 2013 10:59 pm
Operator : YM
Sample : SED-DA-BG-005 (0-0.5)
Misc :
ALS Vial : 33 Sample Multiplier: 0.06667

Quant Time: Sep 05 07:29:18 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.370	176	178498m	251.05		0.00
31) Pyrene-d10	29.606	212	380356m	250.63		0.00
73) Benzo(a)pyrene-d12	38.381	264	258119m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.735	136	225403m	12.10		0.00
21) Acenaphthene-d10	19.587	164	119473m	11.57		0.00
32) Phenanthrene-d10	24.687	188	273689m	14.47		0.00
66) Chrysene-d12	33.802	240	429901m	15.80		0.00
88) Perylene-d12	38.691	264	3856m	0.22		0.00
90) 5(b)H-Cholane	34.190	217	71988m	20.78		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	11.784	138	10498m	3.22		
4) C1-Decalins	12.676	152	4656m	1.43		
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.791	128	75951m	3.78		
9) 2-Methylnaphthalene	16.048	142	41073m	3.15		
10) 1-Methylnaphthalene	16.354	142	17895m	1.49		
11) 2,6-Dimethylnaphthalene	18.166	156	25821m	2.17		
12) 1,6,7-Trimethylnaphtha...	20.980	170	3867m	0.36		
13) C2-Naphthalenes	18.166	156	79635m	3.97		
14) C3-Naphthalenes	20.757	170	45773m	2.28		
15) C4-Naphthalenes	21.482	184	45973m	2.29		
16) Benzothiophene	13.958	134	3097m	0.19		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.608	154	22052m	1.29		
23) Acenaphthylene	19.085	152	36282m	1.85		
24) Acenaphthene	19.670	154	10850m	0.97		
25) Dibenzofuran	20.283	168	57773m	3.06		
26) Fluorene	21.454	166	60727m	4.07		
27) 1-Methylfluorene	23.648	180	3419m	0.43		
28) C1-Fluorenes	23.474	180	12586m	0.84		
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.518	167	230909m	11.84		
34) Dibenzothiophene	24.340	184	65195m	2.87		
35) 4-Methyldibenzothiophene	25.865	198	15145m	0.85		
36) 2/3-Methyldibenzothiop...	26.142	198	12551m	0.70		
37) 1-Methyldibenzothiophene	26.488	198	4939m	0.28		
38) C2-Dibenzothiophenes	27.597	212	31458m	1.38		
39) C3-Dibenzothiophenes	28.774	226	25454m	1.12		
40) C4-Dibenzothiophenes	30.194	240	12125m	0.53		
41) Phenanthrene	24.791	178	1248895m	54.84		
42) Anthracene	24.964	178	63111m	2.94		
43) 3-Methylphenanthrene	26.453	192	104391m	5.33		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1646.D
Acq On : 16 Aug 2013 10:59 pm
Operator : YM
Sample : SED-DA-BG-005 (0-0.5)
Misc :
ALS Vial : 33 Sample Multiplier: 0.06667

Quant Time: Sep 05 07:29:18 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.523	192	128516m	6.56		
45) 2-Methylanthracene	26.696	192	55728m	2.84		
46) 4/9-Methylphenanthrene	26.834	192	65368m	3.34		
47) 1-Methylphenanthrene	26.904	192	81149m	4.14		
48) 3,6-Dimethylphenanthrene	28.012	206	14660m	0.94		
49) Retene	30.679	234	3406m	0.41		
50) C2-Phenanthrenes/Anthr...	28.185	206	301445m	13.24		
51) C3-Phenanthrenes/Anthr...	29.917	220	154328m	6.78		
52) C4-Phenanthrenes/Anthr...	31.753	234	67975m	2.99		
53) Naphthobenzothiophene	32.948	234	735001m	23.89		
54) C1-Naphthobenzothiophenes	34.112	248	234933m	7.64		
55) C2-Naphthobenzothiophenes	36.014	262	120142m	3.91		
56) C3-Naphthobenzothiophenes	37.023	276	73286m	2.38		
57) C4-Naphthobenzothiophenes	0.000		0	N.D.		d
58) Fluoranthene	28.878	202	4222706m	165.49		
59) Pyrene	29.675	202	4069528m	128.82		
60) 2-Methylfluoranthene	30.437	216	175671m	8.83		
61) Benzo(b)fluorene	31.060	216	309449m	18.21		
62) C1-Fluoranthenes/Pyrenes	30.818	216	1472115m	57.69		
63) C2-Fluoranthenes/Pyrenes	33.259	230	1326509m	51.99		
64) C3-Fluoranthenes/Pyrenes	33.724	244	296450m	11.62		
65) C4-Fluoranthenes/Pyrenes	35.276	258	413258m	16.20		
67) Benz(a)anthracene	33.763	228	1956408m	69.36		
68) Chrysene/Triphenylene	33.879	228	3553007m	117.06		
69) C1-Chrysenes	35.121	242	756686m	24.93		
70) C2-Chrysenes	36.441	256	246484m	8.12		
71) C3-Chrysenes	37.993	270	74852m	2.47		
72) C4-Chrysenes	0.000		0	N.D.		d
74) C29-Hopane	40.707	191	25822m	4.12		
75) 18a-Oleanane	0.000		0	N.D.		d
76) C30-Hopane	42.034	191	26708m	4.26		
77) Benzo(b)fluoranthene	0.000		0	N.D.		d
78) Benzo(k,j)fluoranthene	37.294	252	3848219m	186.40		
79) Benzo(a)fluoranthene	37.333	252	1485148m	71.94		
80) Benzo(e)pyrene	38.265	252	1731708m	81.58		
81) Benzo(a)pyrene	38.459	252	1191885m	56.91		
82) Indeno(1,2,3-c,d)pyrene	43.141	276	1064794m	53.38		
83) Dibenzo(a,h)anthracene	43.214	278	270605m	17.02		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.		d
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.		d
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.		d
87) Benzo(g,h,i)perylene	44.505	276	768305m	47.74		
89) Perylene	38.769	252	156873m	7.28		
91) C20-TAS	0.000		0	N.D.		d
92) C21-TAS	0.000		0	N.D.		d
93) C26(20S)-TAS	0.000		0	N.D.		d
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.		d
95) C28(20S)-TAS	0.000		0	N.D.		d
96) C27(20R)-TAS	0.000		0	N.D.		d
97) C28(20R)-TAS	0.000		0	N.D.		d

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1646.D
Acq On : 16 Aug 2013 10:59 pm
Operator : YM
Sample : SED-DA-BG-005 (0-0.5)
Misc :
ALS Vial : 33 Sample Multiplier: 0.06667

Quant Time: Sep 05 07:29:18 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

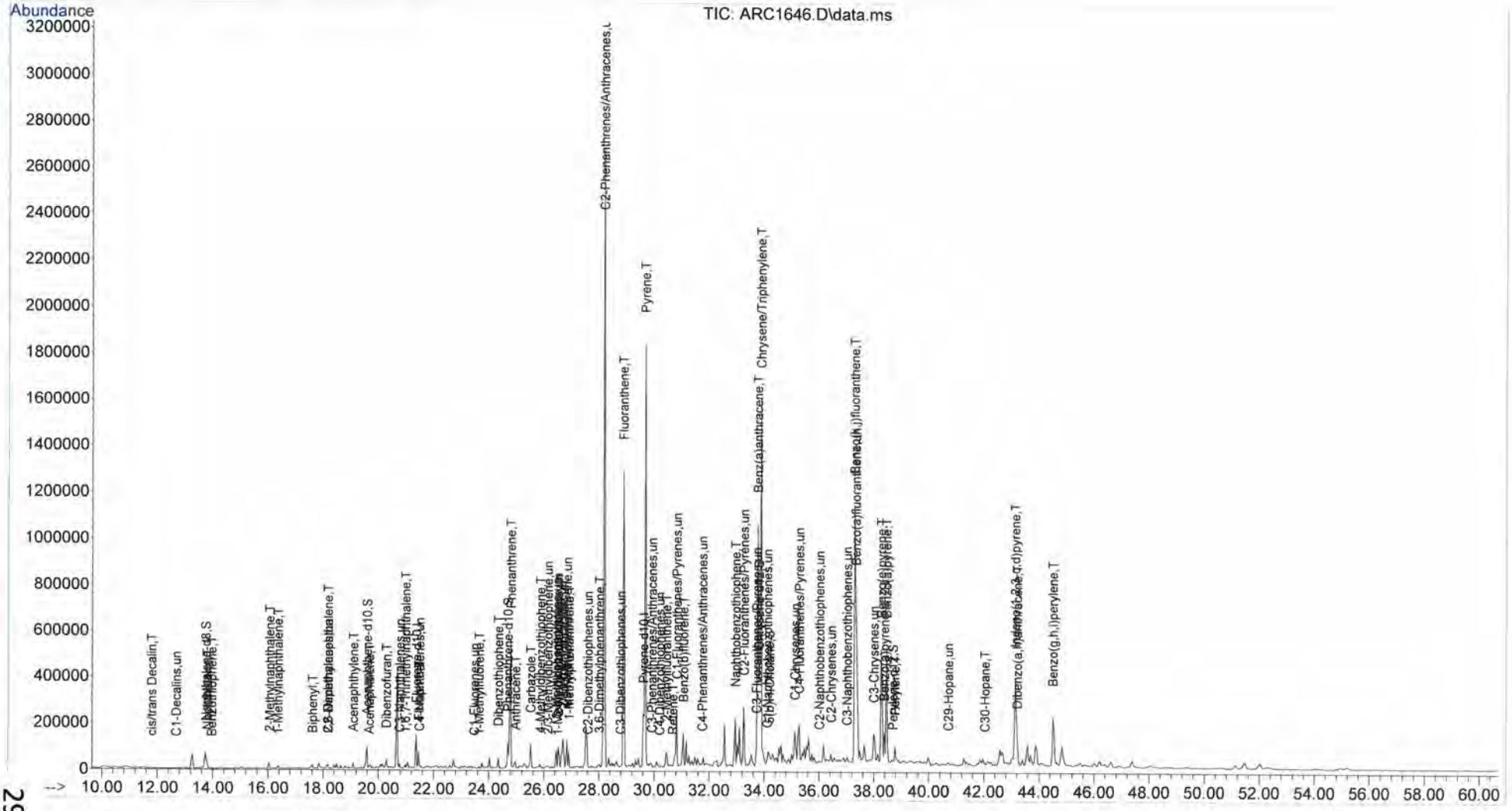
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1646.D
Acq On : 16 Aug 2013 10:59 pm
Operator : YM
Sample : SED-DA-BG-005 (0-0.5)
Misc :
ALS Vial : 33 Sample Multiplier: 0.06667

Quant Time: Sep 05 07:29:18 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1647.D
Data File Path C:\msdchem\2\data\MS60141\
Operator YM
Date Acquired 8/17/2013 0:08
Acq. Method File PAH-2012.M
Sample Name SED-DA-BG-006 (0-0.5)
Misc Info 0
Instrument Name GCMS6
Vial Number 34
Sample Multiplier 0.06623
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ARC1647.D
SED-DA-BG-006 (0-0.5)
8/17/2013
PAH-2012.M
15.09889778

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	34361	1.6947	2.1258
9)+10)	C1-Naphthalenes	16.19	36974	1.8236	2.2875
13)	C2-Naphthalenes	18.17	68302	3.3688	4.2257
14)	C3-Naphthalenes	20.06	50157	2.4738	3.1031
15)	C4-Naphthalenes	21.48	56539	2.7886	3.4979
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.61	13533	0.7833	0.9826
23)	Acenaphthylene	19.09	5930	0.2998	0.3760
24)	Acenaphthene	0.00	0	0.0000	0.0000
25)	Dibenzofuran	20.28	41767	2.1885	2.7452
26)	Fluorene	21.45	46214	3.0700	3.8508
28)	C1-Fluorenes	23.65	2263	0.1503	0.1886
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	25.52	3030	0.1501	0.1882
42)	Anthracene	0.00	0	0.0000	0.0000
41)	Phenanthrene	24.79	170141	7.2164	9.0519
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.68	87671	3.7185	4.6643
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	24.34	20872	0.8868	1.1123
35)+36)+37)	C1-Dibenzothiophenes	26.17	16944	0.7199	0.9030
38)	C2-Dibenzothiophenes	27.35	16330	0.6938	0.8703
39)	C3-Dibenzothiophenes	28.77	5776	0.2454	0.3078
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	28.88	34673	1.3125	1.6463
59)	Pyrene	29.68	15257	0.4665	0.5851
62)	C1-Fluoranthenes/Pyrenes	31.68	19599	0.7419	0.9306
63)	C2-Fluoranthenes/Pyrenes	33.26	9307	0.3523	0.4419
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benz(a)anthracene	33.76	4298	0.1472	0.1846
68)	Chrysene/Triphenylene	33.88	10960	0.3488	0.4375
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.30	13567	0.5437	0.6820
78)	Benzo(k,j)fluoranthene	37.33	4261	0.1936	0.2428
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.27	6536	0.2888	0.3622
81)	Benzo(a)pyrene	38.46	2724	0.1220	0.1530
89)	Perylene	38.77	3870	0.1685	0.2113
82)	Indeno(1,2,3-c,d)pyrene	43.14	5440	0.2558	0.3208
83)	Dibenzo(a,h)anthracene	43.22	1356	0.0800	0.1003
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.51	4319	0.2517	0.3157

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.02	25287	1.9228	2.4119
10)	1-Methylnaphthalene	16.35	11687	0.9642	1.2095
11)	2,6-Dimethylnaphthalene	18.17	22743	1.8961	2.3784
12)	1,6,7-Trimethylnaphthalene	20.98	5464	0.5099	0.6396
27)	1-Methylfluorene	23.65	2263	0.2799	0.3511
35)	4-Methyldibenzothiophene	25.87	9738	0.5252	0.6587
36)	2/3-Methyldibenzothiophene	26.14	4610	0.2486	0.3118
37)	1-Methyldibenzothiophene	26.49	2596	0.1400	0.1756
43)	3-Methylphenanthrene	26.45	11248	0.5544	0.6954
44)	2-Methylphenanthrene	26.52	14147	0.6973	0.8747
45)	2-Methylanthracene	26.70	44057	2.1716	2.7239
46)	4/9-Methylphenanthrene	26.80	9741	0.4801	0.6023
47)	1-Methylphenanthrene	26.90	8478	0.4179	0.5242
48)	3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49)	Retene	0.00	0	0.0000	0.0000
60)	2-Methylfluoranthene	30.44	887	0.0431	0.0540
61)	Benzo(b)fluorene	31.06	1143	0.0650	0.0815
74)	C29-Hopane	0.00	0	0.0000	0.0000
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	0.00	0	0.0000	0.0000
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.74	216345	11.51	69.45
21)	Acenaphthene-d10	19.59	122850	11.78	71.11
32)	Phenanthrene-d10	24.69	258728	13.21	79.72
66)	Chrysene-d12	33.80	353724	12.56	75.84
88)	Perylene-d12	38.69	5364	0.29	1.73
90)	5(b)H-Cholane	34.19	62038	16.80	101.44
	Internal Standards				
1)	Fluorene-d10	21.37	179043	16.63	
31)	Pyrene-d10	29.61	391203	16.60	
73)	Benzo(a)pyrene-d12	38.38	273429	16.58	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1647.D
Acq On : 17 Aug 2013 12:08 am
Operator : YM
Sample : SED-DA-BG-006 (0-0.5)
Misc :
ALS Vial : 34 Sample Multiplier: 0.06623

Quant Time: Sep 05 07:37:24 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.370	176	179043m	251.05		0.00
31) Pyrene-d10	29.606	212	391203m	250.63		0.00
73) Benzo(a)pyrene-d12	38.382	264	273429m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.735	136	216345m	11.51		0.00
21) Acenaphthene-d10	19.587	164	122850m	11.78		0.00
32) Phenanthrene-d10	24.687	188	258728m	13.21		0.00
66) Chrysene-d12	33.802	240	353724m	12.56		0.00
88) Perylene-d12	38.692	264	5364m	0.29		0.00
90) 5(b)H-Cholane	34.190	217	62038m	16.80		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.791	128	34361m	1.69		
9) 2-Methylnaphthalene	16.020	142	25287m	1.92		
10) 1-Methylnaphthalene	16.355	142	11687m	0.96		
11) 2,6-Dimethylnaphthalene	18.166	156	22743m	1.90		
12) 1,6,7-Trimethylnaphtha...	20.980	170	5464m	0.51		
13) C2-Naphthalenes	18.166	156	68302m	3.37		
14) C3-Naphthalenes	20.061	170	50157m	2.47		
15) C4-Naphthalenes	21.482	184	56539m	2.79		
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.609	154	13533m	0.78		
23) Acenaphthylene	19.085	152	5930m	0.30		
24) Acenaphthene	0.000		0	N.D.	d	
25) Dibenzofuran	20.284	168	41767m	2.19		
26) Fluorene	21.454	166	46214m	3.07		
27) 1-Methylfluorene	23.648	180	2263m	0.28		
28) C1-Fluorenes	23.648	180	2263m	0.15		
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.519	167	3030m	0.15		
34) Dibenzothiophene	24.341	184	20872m	0.89		
35) 4-Methyldibenzothiophene	25.865	198	9738m	0.53		
36) 2/3-Methyldibenzothiop...	26.142	198	4610m	0.25		
37) 1-Methyldibenzothiophene	26.489	198	2596m	0.14		
38) C2-Dibenzothiophenes	27.355	212	16330m	0.69		
39) C3-Dibenzothiophenes	28.775	226	5776m	0.25		
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.791	178	170141m	7.22		
42) Anthracene	0.000		0	N.D.	d	
43) 3-Methylphenanthrene	26.454	192	11248m	0.55		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1647.D
Acq On : 17 Aug 2013 12:08 am
Operator : YM
Sample : SED-DA-BG-006 (0-0.5)
Misc :
ALS Vial : 34 Sample Multiplier: 0.06623

Quant Time: Sep 05 07:37:24 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.523	192	14147m	0.70		
45) 2-Methylanthracene	26.697	192	44057m	2.17		
46) 4/9-Methylphenanthrene	26.800	192	9741m	0.48		
47) 1-Methylphenanthrene	26.904	192	8478m	0.42		
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.879	202	34673m	1.31		
59) Pyrene	29.675	202	15257m	0.47		
60) 2-Methylfluoranthene	30.438	216	887m	0.04		
61) Benzo(b)fluorene	31.061	216	1143m	0.06		
62) C1-Fluoranthenes/Pyrenes	31.685	216	19599m	0.74		
63) C2-Fluoranthenes/Pyrenes	33.259	230	9307m	0.35		
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.764	228	4298m	0.15		
68) Chrysene/Triphenylene	33.880	228	10960m	0.35		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.295	252	13567m	0.54		
78) Benzo(k,j)fluoranthene	37.334	252	4261m	0.19		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.265	252	6536m	0.29		
81) Benzo(a)pyrene	38.459	252	2724m	0.12		
82) Indeno(1,2,3-c,d)pyrene	43.141	276	5440m	0.26		
83) Dibenzo(a,h)anthracene	43.215	278	1356m	0.08		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.506	276	4319m	0.25		
89) Perylene	38.770	252	3870m	0.17		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1647.D
Acq On : 17 Aug 2013 12:08 am
Operator : YM
Sample : SED-DA-BG-006 (0-0.5)
Misc :
ALS Vial : 34 Sample Multiplier: 0.06623

Quant Time: Sep 05 07:37:24 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

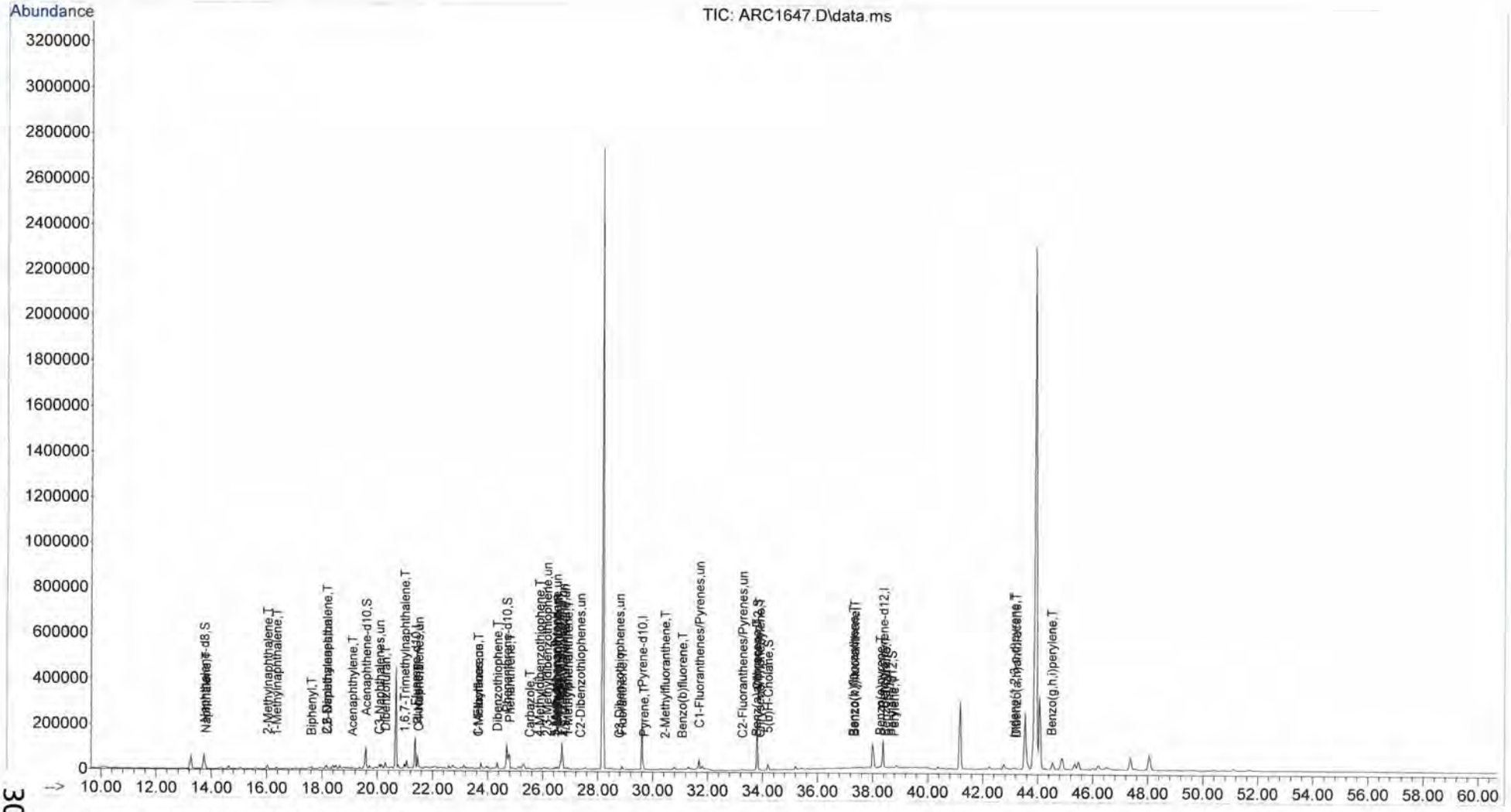
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1647.D
Acq On : 17 Aug 2013 12:08 am
Operator : YM
Sample : SED-DA-BG-006 (0-0.5)
Misc :
ALS Vial : 34 Sample Multiplier: 0.06623

Quant Time: Sep 05 07:37:24 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1653.D
Data File Path C:\GCMS6\MS60141\
Operator YM
Date Acquired 8/17/2013 1:17
Acq. Method File PAH-2012.M
Sample Name SED-DA-DUP-04-080313
Misc Info 0
Instrument Name GCMS6
Vial Number 35
Sample Multiplier 0.06579
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
S(b)H-Cholane	250.000

Copy data below to Spread Sheet

ARC1653.D
SED-DA-DUP-04-080313
8/17/2013
PAH-2012.M
15.1998784

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	11.79	7539	1.8057	1.8907
4)	C1-Decalins	12.60	13660	3.2718	3.4258
5)	C2-Decalins	14.63	21353	5.1144	5.3551
6)	C3-Decalins	16.61	64240	15.3867	16.1108
7)	C4-Decalins	17.64	168322	40.3162	42.2135
8)	Naphthalene	13.79	118795	4.6163	4.8336
9)+10)	C1-Naphthalenes	16.19	329264	12.7950	13.3972
13)	C2-Naphthalenes	18.50	1305000	50.7118	53.0983
14)	C3-Naphthalenes	20.43	3045760	118.3569	123.9268
15)	C4-Naphthalenes	23.03	5273250	204.9155	214.5588
16)	Benzothiophene	13.96	9641	0.4718	0.4940
17)	C1-Benzothiophenes	16.05	102274	5.0047	5.2402
18)	C2-Benzothiophenes	17.86	307329	15.0389	15.7467
19)	C3-Benzothiophenes	20.54	586065	28.6787	30.0283
20)	C4-Benzothiophenes	21.57	1250670	61.2008	64.0809
22)	Biphenyl	17.61	63282	2.8859	3.0217
23)	Acenaphthylene	19.09	37157	1.4800	1.5496
24)	Acenaphthene	19.70	18991	1.3251	1.3875
25)	Dibenzofuran	20.29	106072	4.3790	4.5851
26)	Fluorene	21.46	153226	8.0196	8.3970
28)	C1-Fluorenes	23.48	735883	38.5148	40.3273
29)	C2-Fluorenes	25.31	1999550	104.6528	109.5778
30)	C3-Fluorenes	27.29	2756270	144.2584	151.0472
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	24.97	119161	5.4426	5.6987
41)	Phenanthrene	24.79	1152040	49.5566	51.8888
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.70	3732613	160.5637	168.1198
50)	C2-Phenanthrenes/Anthracenes	28.36	7069430	304.1005	318.4115
51)	C3-Phenanthrenes/Anthracenes	29.92	7764680	334.0079	349.7264
52)	C4-Phenanthrenes/Anthracenes	31.79	5607940	241.2329	252.5853
34)	Dibenzothiophene	24.38	708876	30.5448	31.9822
35)+36)+37)	C1-Dibenzothiophenes	26.18	3608889	155.5035	162.8216
38)	C2-Dibenzothiophenes	27.29	7429800	320.1434	335.2094
39)	C3-Dibenzothiophenes	28.81	9524160	410.3868	429.6997
40)	C4-Dibenzothiophenes	29.64	7190370	309.8262	324.4067
58)	Fluoranthene	28.91	399922	15.3532	16.0757
59)	Pyrene	29.68	627162	19.4470	20.3622
62)	C1-Fluoranthenes/Pyrenes	31.20	1924360	73.8769	77.3536
63)	C2-Fluoranthenes/Pyrenes	32.91	2794560	107.2844	112.3332
64)	C3-Fluoranthenes/Pyrenes	34.03	2013690	77.3065	80.9446
65)	C4-Fluoranthenes/Pyrenes	35.16	1954230	75.0243	78.5549
53)	Naphthobenzothiophene	32.95	1050350	33.4492	35.0233
54)	C1-Naphthobenzothiophenes	34.73	3101480	98.7686	103.4166
55)	C2-Naphthobenzothiophenes	35.86	5022720	159.9519	167.4793
56)	C3-Naphthobenzothiophenes	37.22	3415220	108.7601	113.8784
57)	C4-Naphthobenzothiophenes	38.19	1279820	40.7567	42.6747
67)	Benz(a)anthracene	33.76	146427	5.0853	5.3246
68)	Chrysene/Triphenylene	33.88	584787	18.8737	19.7619
69)	C1-Chrysenes	35.12	1793810	57.8942	60.6187
70)	C2-Chrysenes	36.60	2028040	65.4538	68.5341
71)	C3-Chrysenes	38.03	1477670	47.6912	49.9355
72)	C4-Chrysenes	39.43	679240	21.9221	22.9538
77)	Benzo(b)fluoranthene	37.33	467928	19.8137	20.7461
78)	Benzo(k,j)fluoranthene	37.41	136963	6.5739	6.8833
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.30	342619	15.9942	16.7469
81)	Benzo(a)pyrene	38.50	150551	7.1237	7.4590
89)	Perylene	38.81	55127	2.5359	2.6553
82)	Indeno(1,2,3-c,d)pyrene	43.18	100237	4.9798	5.2142
83)	Dibenzo(a,h)anthracene	43.25	38025	2.3699	2.4814
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.54	154048	9.4848	9.9312

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.02	216305	12.9591	13.5689
10)	1-Methylnaphthalene	16.36	112959	7.3429	7.6884
11)	2,6-Dimethylnaphthalene	18.14	322383	21.1757	22.1722
12)	1,6,7-Trimethylnaphthalene	21.01	374175	27.5119	28.8066
27)	1-Methylfluorene	23.48	296965	28.9391	30.3010
35)	4-Methyldibenzothiophene	25.87	1577420	86.2750	90.3352
36)	2/3-Methyldibenzothiophene	26.18	1186930	64.9181	67.9731
37)	1-Methyldibenzothiophene	26.49	844539	46.1912	48.3650
43)	3-Methylphenanthrene	26.46	770159	38.5000	40.3118
44)	2-Methylphenanthrene	26.56	884323	44.2070	46.2874
45)	2-Methylanthracene	26.73	149224	7.4597	7.8107
46)	4/9-Methylphenanthrene	26.84	1223920	61.1834	64.0628
47)	1-Methylphenanthrene	26.91	704987	35.2421	36.9006
48)	3,6-Dimethylphenanthrene	28.01	338118	21.1256	22.1197
49)	Retene	30.68	178643	20.8619	21.8436
60)	2-Methylfluoranthene	30.47	113007	5.5632	5.8250
61)	Benzo(b)fluorene	31.06	118710	6.8442	7.1663
74)	C29-Hopane	40.74	1382110	218.5471	228.8320
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	42.07	1653190	261.4126	273.7148
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.74	237183	9.94	60.39
21)	Acenaphthene-d10	19.59	144523	10.92	66.35
32)	Phenanthrene-d10	24.72	303584	15.72	95.51
66)	Chrysene-d12	33.84	325934	11.74	71.34
88)	Perylene-d12	38.73	46697	2.64	16.04
90)	5(b)H-Cholane	34.23	114087	32.64	198.44
	Internal Standards				
1)	Fluorene-d10	21.37	225737	16.52	
31)	Pyrene-d10	29.64	383164	16.49	
73)	Benzo(a)pyrene-d12	38.42	257048	16.47	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1653.D
Acq On : 17 Aug 2013 1:17 am
Operator : YM
Sample : SED-DA-DUP-04-080313
Misc :
ALS Vial : 35 Sample Multiplier: 0.06579

Quant Time: Sep 05 07:54:46 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.373	176	225737m	251.05		0.00
31) Pyrene-d10	29.642	212	383164m	250.63		0.04
73) Benzo(a)pyrene-d12	38.419	264	257048m	250.32		0.04
System Monitoring Compounds						
2) Naphthalene-d8	13.737	136	237183m	9.94		0.00
21) Acenaphthene-d10	19.589	164	144523m	10.92		0.00
32) Phenanthrene-d10	24.723	188	303584m	15.72		0.04
66) Chrysene-d12	33.840	240	325934m	11.74		0.04
88) Perylene-d12	38.729	264	46697m	2.64		0.04
90) 5(b)H-Cholane	34.228	217	114087m	32.64		0.04
Target Compounds						Qvalue
3) cis/trans Decalin	11.787	138	7539m	1.81		
4) C1-Decalins	12.595	152	13660m	3.27		
5) C2-Decalins	14.629	166	21353m	5.11		
6) C3-Decalins	16.608	180	64240m	15.39		
7) C4-Decalins	17.639	194	168322m	40.32		
8) Naphthalene	13.793	128	118795m	4.62		
9) 2-Methylnaphthalene	16.022	142	216305m	12.96		
10) 1-Methylnaphthalene	16.357	142	112959m	7.34		
11) 2,6-Dimethylnaphthalene	18.140	156	322383m	21.18		
12) 1,6,7-Trimethylnaphtha...	21.010	170	374175m	27.51		
13) C2-Naphthalenes	18.503	156	1305004m	50.71		
14) C3-Naphthalenes	20.425	170	3045761m	118.36		
15) C4-Naphthalenes	23.026	184	5273247m	204.92		
16) Benzothiophene	13.960	134	9641m	0.47		
17) C1-Benzothiophenes	16.050	148	102274m	5.00		
18) C2-Benzothiophenes	17.862	162	307329m	15.04		
19) C3-Benzothiophenes	20.537	176	586065m	28.68		
20) C4-Benzothiophenes	21.568	190	1250673m	61.20		
22) Biphenyl	17.611	154	63282m	2.89		
23) Acenaphthylene	19.088	152	37157m	1.48		
24) Acenaphthene	19.701	154	18991m	1.33		
25) Dibenzofuran	20.286	168	106072m	4.38		
26) Fluorene	21.456	166	153226m	8.02		
27) 1-Methylfluorene	23.476	180	296965m	28.94		
28) C1-Fluorenes	23.476	180	735883m	38.51		
29) C2-Fluorenes	25.312	194	1999547m	104.65		
30) C3-Fluorenes	27.286	208	2756271m	144.26		
33) Carbazole	0.000		0	N.D.	d	
34) Dibenzothiophene	24.377	184	708876m	30.54		
35) 4-Methyldibenzothiophene	25.866	198	1577418m	86.28		
36) 2/3-Methyldibenzothiop...	26.178	198	1186932m	64.92		
37) 1-Methyldibenzothiophene	26.490	198	844539m	46.19		
38) C2-Dibenzothiophenes	27.286	212	7429803m	320.14		
39) C3-Dibenzothiophenes	28.810	226	9524163m	410.39		
40) C4-Dibenzothiophenes	29.642	240	7190369m	309.83		
41) Phenanthrene	24.792	178	1152043m	49.56		
42) Anthracene	24.965	178	119161m	5.44		
43) 3-Methylphenanthrene	26.455	192	770159m	38.50		

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1653.D
Acq On : 17 Aug 2013 1:17 am
Operator : YM
Sample : SED-DA-DUP-04-080313
Misc :
ALS Vial : 35 Sample Multiplier: 0.06579

Quant Time: Sep 05 07:54:46 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.559	192	884323m	44.21		
45) 2-Methylanthracene	26.732	192	149224m	7.46		
46) 4/9-Methylphenanthrene	26.836	192	1223922m	61.18		
47) 1-Methylphenanthrene	26.905	192	704987m	35.24		
48) 3,6-Dimethylphenanthrene	28.014	206	338118m	21.13		
49) Retene	30.681	234	178643m	20.86		
50) C2-Phenanthrenes/Anthr...	28.360	206	7069425m	304.10		
51) C3-Phenanthrenes/Anthr...	29.919	220	7764675m	334.01		
52) C4-Phenanthrenes/Anthr...	31.789	234	5607943m	241.23		
53) Naphthobenzothiophene	32.947	234	1050350m	33.45		
54) C1-Naphthobenzothiophenes	34.732	248	3101475m	98.77		
55) C2-Naphthobenzothiophenes	35.858	262	5022717m	159.95		
56) C3-Naphthobenzothiophenes	37.216	276	3415223m	108.76		
57) C4-Naphthobenzothiophenes	38.186	290	1279815m	40.76		
58) Fluoranthene	28.914	202	399922m	15.35		
59) Pyrene	29.676	202	627162m	19.45		
60) 2-Methylfluoranthene	30.473	216	113007m	5.56		
61) Benzo(b)fluorene	31.062	216	118710m	6.84		
62) C1-Fluoranthenes/Pyrenes	31.201	216	1924360m	73.88		
63) C2-Fluoranthenes/Pyrenes	32.908	230	2794562m	107.28		
64) C3-Fluoranthenes/Pyrenes	34.034	244	2013690m	77.31		
65) C4-Fluoranthenes/Pyrenes	35.159	258	1954234m	75.02		
67) Benz(a)anthracene	33.762	228	146427m	5.09		
68) Chrysene/Triphenylene	33.879	228	584787m	18.87		
69) C1-Chrysenes	35.120	242	1793808m	57.89		
70) C2-Chrysenes	36.595	256	2028035m	65.45		
71) C3-Chrysenes	38.031	270	1477674m	47.69		
72) C4-Chrysenes	39.428	284	679240m	21.92		
74) C29-Hopane	40.743	191	1382105m	218.55		
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.071	191	1653190m	261.41		
77) Benzo(b)fluoranthene	37.332	252	467928m	19.81		
78) Benzo(k,j)fluoranthene	37.410	252	136963m	6.57		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.303	252	342619m	15.99		
81) Benzo(a)pyrene	38.497	252	150551m	7.12		
82) Indeno(1,2,3-c,d)pyrene	43.177	276	100237m	4.98		
83) Dibenzo(a,h)anthracene	43.251	278	38025m	2.37		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.542	276	154048m	9.48		
89) Perylene	38.807	252	55127m	2.54		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1653.D
Acq On : 17 Aug 2013 1:17 am
Operator : YM
Sample : SED-DA-DUP-04-080313
Misc :
ALS Vial : 35 Sample Multiplier: 0.06579

Quant Time: Sep 05 07:54:46 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

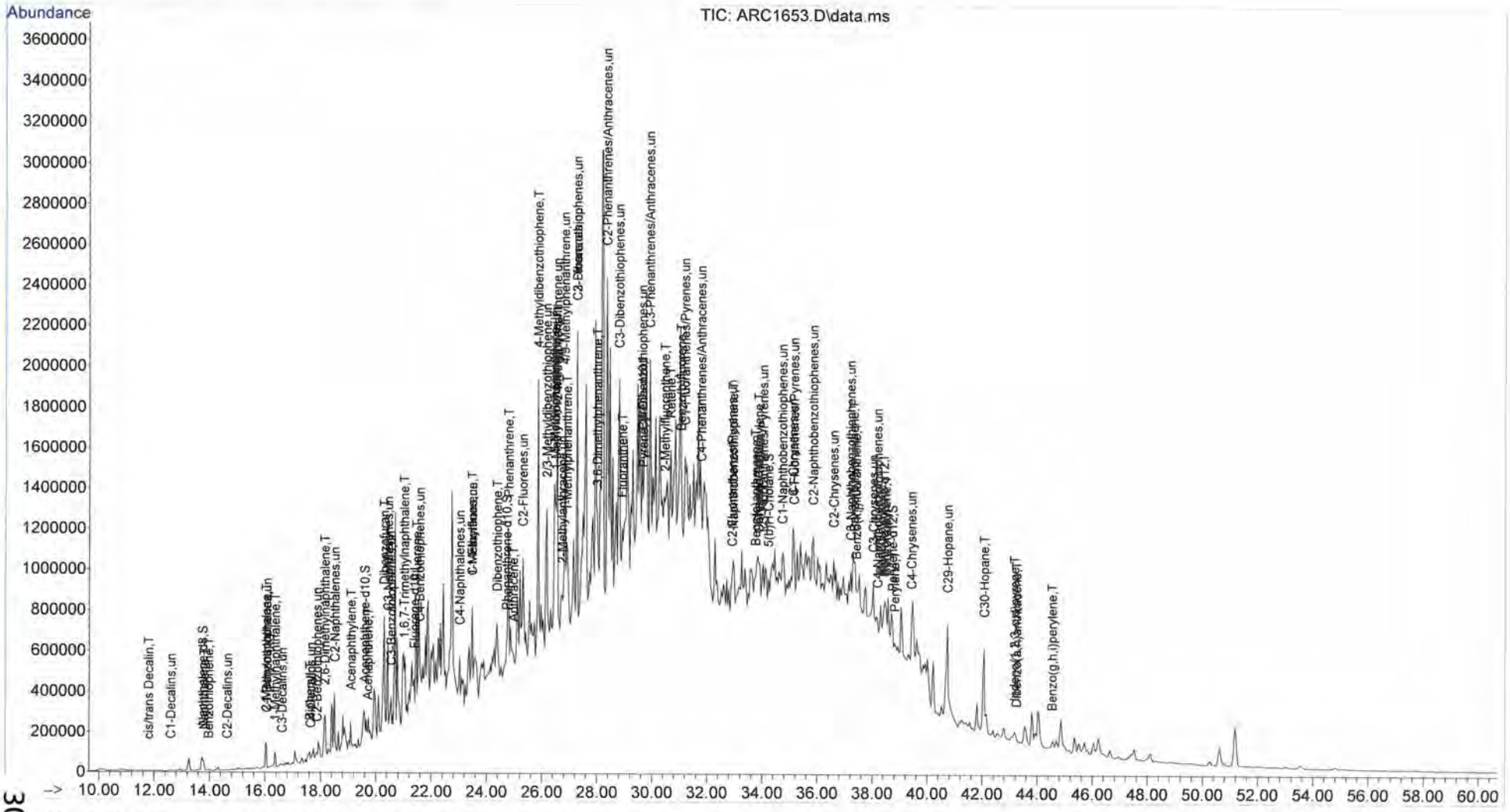
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1653.D
Acq On : 17 Aug 2013 1:17 am
Operator : YM
Sample : SED-DA-DUP-04-080313
Misc :
ALS Vial : 35 Sample Multiplier: 0.06579

Quant Time: Sep 05 07:54:46 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Sequence Name: C:\msdchem\1\sequence\MS60147.S
Comment: Arcadis-Mayflower AR-Sediments-PAH (09/04/13)
Operator: YM
Data Path: C:\MSDCHEM\1\DATA\MS60147\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

	Line		Sample Name/Misc Info		
1)	Sample	1	MS60147A	PAH-2012	Solvent rinse
2)	Sample	2	MS60147B	PAH-2012	AR-WKC1-020-030
3)	Sample	3	MS60147C	PAH-2012	AR-WKC2-100-030
4)	Sample	4	MS60147D	PAH-2012	AR-WKC3-250-030
5)	Sample	5	MS60147E	PAH-2012	AR-WKC4-500-030
6)	Sample	6	MS60147F	PAH-2012	AR-WKC5-1000-030
7)	Sample	7	MS60147G	PAH-2012	AR-WKC6-5000-030
8)	Sample	8	MS60147H	PAH-2012	AR-WKISSU-250-002
9)	Sample	9	MS60147I	PAH-2012	AR-WKICV-250-004
10)	Sample	10	MS60147J	PAH-2012	AR-WKCC-250-038
11)	Sample	11	MS60147K	PAH-2012	AR-SRM2779-WK-4.0-002 reinject below
12)	Sample	12	ENV3099A	PAH-2012	
13)	Sample	13	ENV3099B	PAH-2012	} In separate folder
14)	Sample	35	ARC1645	PAH-2012	10x
15)	Sample	14	ENV3099C	PAH-2012	5x
16)	Sample	15	ENV3099D	PAH-2012	5x
17)	Sample	16	ENV3099E	PAH-2012	} In separate folder
18)	Sample	17	ARC1856	PAH-2012	
19)	Sample	18	MS60147L	PAH-2012	AR-WKCC-250-038
20)	Sample	11	MS60147K	PAH-2012	AR-SRM2779-WK-4.0-002
21)	Sample	19	ARC1859	PAH-2012	5x
22)	Sample	20	ARC1868	PAH-2012	5x
23)	Sample	21	ARC1871	PAH-2012	
24)	Sample	22	ARC1877	PAH-2012	
25)	Sample	23	ARC1887	PAH-2012	
26)	Sample	24	ARC1888	PAH-2012	5x
27)	Sample	25	ARC1889	PAH-2012	
28)	Sample	26	MS60147M	PAH-2012	AR-WKCC-250-038
29)	Sample	27	ARC1890	PAH-2012	
30)	Sample	28	ARC1864	PAH-2012	
31)	Sample	29	ARC1865	PAH-2012	
32)	Sample	30	ARC1866	PAH-2012	
33)	Sample	31	ARC1867	PAH-2012	
34)	Sample	32	ARC1875	PAH-2012	
35)	Sample	33	ARC1876	PAH-2012	
36)	Sample	34	MS60146N	PAH-2012	AR-WKCC-250-038

} In separate folder

Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60147\
Data File : MS60147J.D
Acq On : 5 Sep 2013 7:16 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 05 12:35:29 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorene-d10	1.000	1.000	0.0	85	0.00
2	S	Naphthalene-d8	1.462	1.385	5.3	87	0.00
3	T	cis/trans Decalin	0.247	0.269	-8.9	95	0.00
4	un	C1-Decalins	0.247	0.000	100.0#	0#	-12.15#
5	un	C2-Decalins	0.247	0.000	100.0#	0#	-14.43#
6	un	C3-Decalins	0.247	0.000	100.0#	0#	-15.99#
7	un	C4-Decalins	0.247	0.000	100.0#	0#	-18.33#
8	T	Naphthalene	1.551	1.476	4.8	86	0.00
9	T	2-Methylnaphthalene	1.080	1.001	7.3	86	0.00
10	T	1-Methylnaphthalene	0.985	0.938	4.8	87	0.00
11	T	2,6-Dimethylnaphthalene	1.035	0.954	7.8	85	0.00
12	T	1,6,7-Trimethylnaphthalene	1.002	0.950	5.2	86	-0.03
13	un	C2-Naphthalenes	1.551	0.000	100.0#	0#	-17.91#
14	un	C3-Naphthalenes	1.551	0.000	100.0#	0#	-20.06#
15	un	C4-Naphthalenes	1.551	0.000	100.0#	0#	-21.73#
16	T	Benzothiophene	1.226	1.176	4.1	88	0.00
17	un	C1-Benzothiophenes	1.226	0.000	100.0#	0#	-15.18#
18	un	C2-Benzothiophenes	1.226	0.000	100.0#	0#	-18.44#
19	un	C3-Benzothiophenes	1.226	0.000	100.0#	0#	-20.00#
20	un	C4-Benzothiophenes	1.226	0.000	100.0#	0#	-21.95#
21	S	Acenaphthene-d10	0.934	0.864	7.5	86	-0.03
22	T	Biphenyl	1.453	1.353	6.9	85	0.00
23	T	Acenaphthylene	1.779	1.610	9.5	84	0.00
24	T	Acenaphthene	0.994	0.924	7.0	86	0.00
25	T	Dibenzofuran	1.645	1.504	8.6	84	0.00
26	T	Fluorene	1.331	1.175	11.7	81	0.00
27	T	1-Methylfluorene	0.923	0.833	9.8	81	0.00
28	un	C1-Fluorenes	1.331	0.000	100.0#	0#	-23.23#
29	un	C2-Fluorenes	1.331	0.000	100.0#	0#	-25.10#
30	un	C3-Fluorenes	1.331	0.000	100.0#	0#	-26.14#
31	I	Pyrene-d10	1.000	1.000	0.0	80	-0.03
32	S	Phenanthrene-d10	0.957	0.881	7.9	80	0.00
33	T	Carbazole	0.875	0.761	13.0	77	0.00
34	T	Dibenzothiophene	0.933	0.869	6.9	82	0.00
35	T	4-Methyldibenzothiophene	0.734	0.793	-8.0	90	0.00
36	un	2/3-Methyldibenzothiophene	0.734	0.000	100.0#	0#	-25.93#
37	un	1-Methyldibenzothiophene	0.734	0.000	100.0#	0#	-26.25#
38	un	C2-Dibenzothiophenes	0.933	0.000	100.0#	0#	-27.04#
39	un	C3-Dibenzothiophenes	0.933	0.000	100.0#	0#	-28.57#
40	un	C4-Dibenzothiophenes	0.933	0.000	100.0#	0#	-29.99#
41	T	Phenanthrene	1.134	1.096	3.4	82	0.00
42	T	Anthracene	1.094	1.047	4.3	80	0.00
43	un	3-Methylphenanthrene	0.740	0.000	100.0#	0#	-26.70#
44	un	2-Methylphenanthrene	0.740	0.000	100.0#	0#	-26.45#
45	un	2-Methylanthracene	0.740	0.000	100.0#	0#	-26.70#
46	un	4/9-Methylphenanthrene	0.740	0.000	100.0#	0#	-26.70#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60147\
Data File : MS60147J.D
Acq On : 5 Sep 2013 7:16 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 05 12:35:29 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
47	T	1-Methylphenanthrene	0.740	0.718	3.0	84	-0.03
48	T	3,6-Dimethylphenanthrene	0.828	0.711	14.1	76	0.00
49	T	Retene	0.409	0.404	1.2	81	0.00
50	un	C2-Phenanthrenes/Anthracene	1.134	0.000	100.0#	0#	-28.32#
51	un	C3-Phenanthrenes/Anthracene	1.134	0.000	100.0#	0#	-29.16#
52	un	C4-Phenanthrenes/Anthracene	1.134	0.000	100.0#	0#	-31.96#
53	T	Naphthobenzothiophene	1.495	1.305	12.7	75	0.00
54	un	C1-Naphthobenzothiophenes	1.495	0.000	100.0#	0#	-34.00#
55	un	C2-Naphthobenzothiophenes	1.495	0.000	100.0#	0#	-35.59#
56	un	C3-Naphthobenzothiophenes	1.495	0.000	100.0#	0#	-36.95#
57	un	C4-Naphthobenzothiophenes	1.495	0.000	100.0#	0#	-38.42#
58	T	Fluoranthene	1.306	1.125	13.9	78	0.00
59	T	Pyrene	1.321	1.409	-6.7	89	0.00
60	T	2-Methylfluoranthene	0.857	0.889	-3.7	87	0.00
61	T	Benzo(b)fluorene	0.899	0.779	13.3	73	0.00
62	un	C1-Fluoranthenes/Pyrenes	1.306	0.000	100.0#	0#	-30.44#
63	un	C2-Fluoranthenes/Pyrenes	1.306	0.000	100.0#	0#	-31.93#
64	un	C3-Fluoranthenes/Pyrenes	1.306	0.000	100.0#	0#	-34.00#
65	un	C4-Fluoranthenes/Pyrenes	1.306	0.000	100.0#	0#	-34.00#
66	S	Chrysene-d12	1.373	1.336	2.7	79	0.00
67	T	Benz(a)anthracene	1.449	1.246	14.0	73	0.00
68	T	Chrysene/Triphenylene	1.374	1.455	-5.9	84	0.00
69	un	C1-Chrysenes	1.374	0.000	100.0#	0#	-35.16#
70	un	C2-Chrysenes	1.374	0.000	100.0#	0#	-35.78#
71	un	C3-Chrysenes	1.374	0.000	100.0#	0#	-37.80#
72	un	C4-Chrysenes	1.374	0.000	100.0#	0#	-39.16#
73	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	75	0.00
74	un	C29-Hopane	0.436	0.000	100.0#	0#	-40.78#
75	un	18a-Oleanane	0.436	0.000	100.0#	0#	-41.63#
76	T	C30-Hopane	0.436	0.447	-2.5	81	0.00
77	T	Benzo(b)fluoranthene	1.309	1.117	14.7	69	-0.04
78	T	Benzo(k,j)fluoranthene	1.123	1.172	-4.4	86	0.00
79	un	Benzo(a)fluoranthene	1.123	0.000	100.0#	0#	-37.14#
80	T	Benzo(e)pyrene	1.273	1.329	-4.4	84	-0.04
81	T	Benzo(a)pyrene	1.277	1.173	8.1	74	0.00
82	T	Indeno(1,2,3-c,d)pyrene	1.518	1.452	4.3	77	-0.04
83	T	Dibenzo(a,h)anthracene	1.224	1.153	5.8	77	-0.04
84	un	C1-Dibenzo(a,h)anthracenes	1.224	0.000	100.0#	0#	-48.75#
85	un	C2-Dibenzo(a,h)anthracenes	1.224	0.000	100.0#	0#	-50.55#
86	un	C3-Dibenzo(a,h)anthracenes	1.224	0.000	100.0#	0#	-50.22#
87	T	Benzo(g,h,i)perylene	1.319	1.270	3.7	78	-0.07
88	S	Perylene-d12	1.120	1.122	-0.2	82	-0.04
89	T	Perylene	1.256	1.190	5.3	76	-0.04
90	S	5(b)H-Cholane	0.218	0.251	-15.1	91	0.00
91	un	C20-TAS	1.592	0.000	100.0#	0#	-33.03#
92	un	C21-TAS	1.592	0.000	100.0#	0#	-34.00#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60147\
Data File : MS60147J.D
Acq On : 5 Sep 2013 7:16 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 05 12:35:29 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
93 un	C26(20S)-TAS	1.592	0.000	100.0#	0#	-38.42#
94 T	C26(20R)/C27(20S)-TAS	1.592	1.603	-0.7	81	0.00
95 un	C28(20S)-TAS	1.592	0.000	100.0#	0#	-39.93#
96 un	C27(20R)-TAS	1.592	0.000	100.0#	0#	-40.30#
97 un	C28(20R)-TAS	1.592	0.000	100.0#	0#	-41.41#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Data Path : C:\GCMS6\MS60147\
Data File : MS60147J.D
Acq On : 5 Sep 2013 7:16 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 05 12:35:29 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorene-d10	21.119	176	200853	251.05			0.00
31) Pyrene-d10	29.364	212	376514m	250.63			-0.03
73) Benzo(a)pyrene-d12	38.109	264	419200	250.32			0.00
System Monitoring Compounds							
2) Naphthalene-d8	13.512	136	277166m	236.92			0.00
21) Acenaphthene-d10	19.336	164	172866	231.37			-0.03
32) Phenanthrene-d10	24.480	188	330966	230.23			0.00
66) Chrysene-d12	33.569	240	501798	243.30			0.00
88) Perylene-d12	38.381	264	469892	250.42			-0.04
90) 5(b)H-Cholane	33.957	217	105266m	287.98			0.00
Target Compounds							Qvalue
3) cis/trans Decalin	10.865	138	53158m	269.25			
4) C1-Decalins	0.000		0	N.D.	d		
5) C2-Decalins	0.000		0	N.D.	d		
6) C3-Decalins	0.000		0	N.D.	d		
7) C4-Decalins	0.000		0	N.D.	d		
8) Naphthalene	13.568	128	295146m	237.81			
9) 2-Methylnaphthalene	15.825	142	200407m	231.94			
10) 1-Methylnaphthalene	16.131	142	187495	237.82			99
11) 2,6-Dimethylnaphthalene	17.915	156	190819	230.46			89
12) 1,6,7-Trimethylnaphtha...	20.757	170	189961	236.96			69
13) C2-Naphthalenes	0.000		0	N.D.	d		
14) C3-Naphthalenes	0.000		0	N.D.	d		
15) C4-Naphthalenes	0.000		0	N.D.			
16) Benzothiophene	13.735	134	233780	238.32			100
17) C1-Benzothiophenes	0.000		0	N.D.	d		
18) C2-Benzothiophenes	0.000		0	N.D.	d		
19) C3-Benzothiophenes	0.000		0	N.D.	d		
20) C4-Benzothiophenes	0.000		0	N.D.	d		
22) Biphenyl	17.385	154	268096	230.56			92
23) Acenaphthylene	18.862	152	319513	224.44			99
24) Acenaphthene	19.447	154	185269	232.94			100
25) Dibenzofuran	20.060	168	299271	227.39			100
26) Fluorene	21.231	166	235409	221.09			96
27) 1-Methylfluorene	23.233	180	167788	227.13		#	56
28) C1-Fluorenes	0.000		0	N.D.	d		
29) C2-Fluorenes	0.000		0	N.D.	d		
30) C3-Fluorenes	0.000		0	N.D.			
33) Carbazole	25.311	167	283123	215.35			100
34) Dibenzothiophene	24.134	184	321669	229.57		#	91
35) 4-Methyldibenzothiophene	25.623	198	300316	272.24			100
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.			
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d		
38) C2-Dibenzothiophenes	0.000		0	N.D.	d		
39) C3-Dibenzothiophenes	0.000		0	N.D.	d		
40) C4-Dibenzothiophenes	0.000		0	N.D.	d		
41) Phenanthrene	24.549	178	407789	239.36			100
42) Anthracene	24.722	178	394378	240.02			96

Data Path : C:\GCMS6\MS60147\
Data File : MS60147J.D
Acq On : 5 Sep 2013 7:16 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 05 12:35:29 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d	
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.662	192	266659	239.88		96
48) 3,6-Dimethylphenanthrene	27.771	206	267406m	215.01		
49) Retene	30.438	234	135497	220.36		76
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.		
53) Naphthobenzothiophene	32.715	234	493105	219.50		100
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.671	202	422800m	215.43		
59) Pyrene	29.433	202	529039	266.59		100
60) 2-Methylfluoranthene	30.195	216	336169	260.97		100
61) Benzo(b)fluorene	30.819	216	295324	218.69		100
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.530	228	466902m	214.42		
68) Chrysene/Triphenylene	33.646	228	543209m	263.15		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.329	191	187270	256.56		100
77) Benzo(b)fluoranthene	37.022	252	468505m	213.75		
78) Benzo(k,j)fluoranthene	37.139	252	488855m	259.91		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	37.993	252	554140m	259.97		
81) Benzo(a)pyrene	38.187	252	489972	229.05		100
82) Indeno(1,2,3-c,d)pyrene	42.734	276	597353	234.95		87
83) Dibenzo(a,h)anthracene	42.808	278	478319	233.30		86
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.062	276	526856	238.44		85
89) Perylene	38.458	252	498658	237.14		100
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.079	231	670908	251.73		100
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60147\
Data File : MS60147J.D
Acq On : 5 Sep 2013 7:16 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 05 12:35:29 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

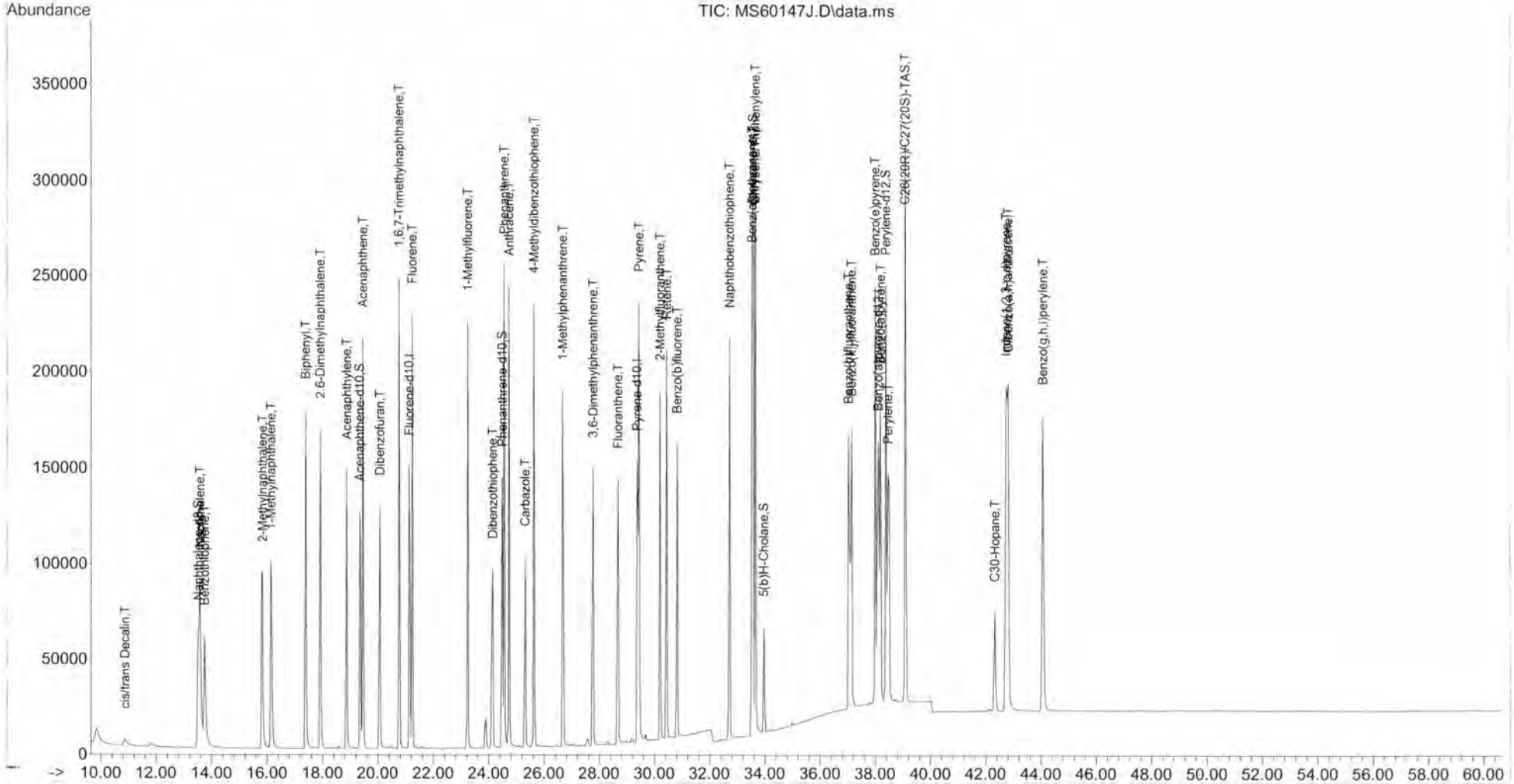
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60147\
Data File : MS60147J.D
Acq On : 5 Sep 2013 7:16 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Sep 05 12:35:29 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60147\
Data File : MS60147L.D
Acq On : 5 Sep 2013 5:44 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 06 07:35:26 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorene-d10	1.000	1.000	0.0	90	0.03
2	S	Naphthalene-d8	1.462	1.288	11.9	86	0.00
3	T	cis/trans Decalin	0.247	0.224	9.3	83	0.03
4	un	C1-Decalins	0.247	0.000	100.0#	0#	-12.15#
5	un	C2-Decalins	0.247	0.000	100.0#	0#	-14.43#
6	un	C3-Decalins	0.247	0.000	100.0#	0#	-15.99#
7	un	C4-Decalins	0.247	0.000	100.0#	0#	-18.33#
8	T	Naphthalene	1.551	1.374	11.4	84	0.00
9	T	2-Methylnaphthalene	1.080	0.967	10.5	88	0.00
10	T	1-Methylnaphthalene	0.985	0.896	9.0	88	0.03
11	T	2,6-Dimethylnaphthalene	1.035	0.954	7.8	90	0.00
12	T	1,6,7-Trimethylnaphthalene	1.002	0.921	8.1	89	0.00
13	un	C2-Naphthalenes	1.551	0.000	100.0#	0#	-17.91#
14	un	C3-Naphthalenes	1.551	0.000	100.0#	0#	-20.06#
15	un	C4-Naphthalenes	1.551	0.000	100.0#	0#	-21.73#
16	T	Benzothiophene	1.226	1.079	12.0	86	0.00
17	un	C1-Benzothiophenes	1.226	0.000	100.0#	0#	-15.18#
18	un	C2-Benzothiophenes	1.226	0.000	100.0#	0#	-18.44#
19	un	C3-Benzothiophenes	1.226	0.000	100.0#	0#	-20.00#
20	un	C4-Benzothiophenes	1.226	0.000	100.0#	0#	-21.95#
21	S	Acenaphthene-d10	0.934	0.864	7.5	91	0.00
22	T	Biphenyl	1.453	1.324	8.9	88	0.00
23	T	Acenaphthylene	1.779	1.641	7.8	90	0.00
24	T	Acenaphthene	0.994	0.906	8.9	89	0.03
25	T	Dibenzofuran	1.645	1.524	7.4	90	0.00
26	T	Fluorene	1.331	1.237	7.1	90	0.00
27	T	1-Methylfluorene	0.923	0.846	8.3	87	0.00
28	un	C1-Fluorenes	1.331	0.000	100.0#	0#	-23.23#
29	un	C2-Fluorenes	1.331	0.000	100.0#	0#	-25.10#
30	un	C3-Fluorenes	1.331	0.000	100.0#	0#	-26.14#
31	I	Pyrene-d10	1.000	1.000	0.0	102	0.00
32	S	Phenanthrene-d10	0.957	0.843	11.9	97	0.00
33	T	Carbazole	0.875	0.793	9.4	102	0.00
34	T	Dibenzothiophene	0.933	0.834	10.6	101	0.00
35	T	4-Methyldibenzothiophene	0.734	0.584	20.4	84	0.00
36	un	2/3-Methyldibenzothiophene	0.734	0.000	100.0#	0#	-25.93#
37	un	1-Methyldibenzothiophene	0.734	0.000	100.0#	0#	-26.25#
38	un	C2-Dibenzothiophenes	0.933	0.000	100.0#	0#	-27.04#
39	un	C3-Dibenzothiophenes	0.933	0.000	100.0#	0#	-28.57#
40	un	C4-Dibenzothiophenes	0.933	0.000	100.0#	0#	-29.99#
41	T	Phenanthrene	1.134	0.914	19.4	87	0.00
42	T	Anthracene	1.094	0.887	18.9	87	0.00
43	un	3-Methylphenanthrene	0.740	0.000	100.0#	0#	-26.70#
44	un	2-Methylphenanthrene	0.740	0.000	100.0#	0#	-26.45#
45	un	2-Methylanthracene	0.740	0.000	100.0#	0#	-26.70#
46	un	4/9-Methylphenanthrene	0.740	0.000	100.0#	0#	-26.70#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60147\
Data File : MS60147L.D
Acq On : 5 Sep 2013 5:44 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 06 07:35:26 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
47	T	1-Methylphenanthrene	0.740	0.651	12.0	97	0.00
48	T	3,6-Dimethylphenanthrene	0.828	0.757	8.6	103	0.00
49	T	Retene	0.409	0.311	24.0	80	0.00
50	un	C2-Phenanthrenes/Anthracene	1.134	0.000	100.0#	0#	-28.32#
51	un	C3-Phenanthrenes/Anthracene	1.134	0.000	100.0#	0#	-29.16#
52	un	C4-Phenanthrenes/Anthracene	1.134	0.000	100.0#	0#	-31.96#
53	T	Naphthobenzothiophene	1.495	1.250	16.4	91	0.00
54	un	C1-Naphthobenzothiophenes	1.495	0.000	100.0#	0#	-34.00#
55	un	C2-Naphthobenzothiophenes	1.495	0.000	100.0#	0#	-35.59#
56	un	C3-Naphthobenzothiophenes	1.495	0.000	100.0#	0#	-36.95#
57	un	C4-Naphthobenzothiophenes	1.495	0.000	100.0#	0#	-38.42#
58	T	Fluoranthene	1.306	1.180	9.6	104	0.00
59	T	Pyrene	1.321	1.035	21.7	83	0.00
60	T	2-Methylfluoranthene	0.857	0.693	19.1	86	0.03
61	T	Benzo(b)fluorene	0.899	0.768	14.6	92	0.00
62	un	C1-Fluoranthenes/Pyrenes	1.306	0.000	100.0#	0#	-30.44#
63	un	C2-Fluoranthenes/Pyrenes	1.306	0.000	100.0#	0#	-31.93#
64	un	C3-Fluoranthenes/Pyrenes	1.306	0.000	100.0#	0#	-34.00#
65	un	C4-Fluoranthenes/Pyrenes	1.306	0.000	100.0#	0#	-34.00#
66	S	Chrysene-d12	1.373	1.086	20.9	81	0.00
67	T	Benz(a)anthracene	1.449	1.245	14.1	93	0.00
68	T	Chrysene/Triphenylene	1.374	1.064	22.6	78	0.00
69	un	C1-Chrysenes	1.374	0.000	100.0#	0#	-35.16#
70	un	C2-Chrysenes	1.374	0.000	100.0#	0#	-35.78#
71	un	C3-Chrysenes	1.374	0.000	100.0#	0#	-37.80#
72	un	C4-Chrysenes	1.374	0.000	100.0#	0#	-39.16#
73	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	96	0.00
74	un	C29-Hopane	0.436	0.000	100.0#	0#	-40.78#
75	un	18a-Oleanane	0.436	0.000	100.0#	0#	-41.63#
76	T	C30-Hopane	0.436	0.430	1.4	100	0.00
77	T	Benzo(b)fluoranthene	1.309	1.194	8.8	94	0.00
78	T	Benzo(k,j)fluoranthene	1.123	1.220	-8.6	114	0.00
79	un	Benzo(a)fluoranthene	1.123	0.000	100.0#	0#	-37.14#
80	T	Benzo(e)pyrene	1.273	1.098	13.7	89	0.00
81	T	Benzo(a)pyrene	1.277	1.173	8.1	95	0.00
82	T	Indeno(1,2,3-c,d)pyrene	1.518	1.306	14.0	89	0.00
83	T	Dibenzo(a,h)anthracene	1.224	1.045	14.6	90	-0.04
84	un	C1-Dibenzo(a,h)anthracenes	1.224	0.000	100.0#	0#	-48.75#
85	un	C2-Dibenzo(a,h)anthracenes	1.224	0.000	100.0#	0#	-50.55#
86	un	C3-Dibenzo(a,h)anthracenes	1.224	0.000	100.0#	0#	-50.22#
87	T	Benzo(g,h,i)perylene	1.319	1.139	13.6	90	-0.04
88	S	Perylene-d12	1.120	0.987	11.9	92	0.00
89	T	Perylene	1.256	1.169	6.9	96	0.00
90	S	5(b)H-Cholane	0.218	0.182	16.5	85	0.04
91	un	C20-TAS	1.592	0.000	100.0#	0#	-33.03#
92	un	C21-TAS	1.592	0.000	100.0#	0#	-34.00#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60147\
Data File : MS60147L.D
Acq On : 5 Sep 2013 5:44 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 06 07:35:26 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
93 un	C26(20S)-TAS	1.592	0.000	100.0#	0#	-38.42#
94 T	C26(20R)/C27(20S)-TAS	1.592	1.432	10.1	93	0.04
95 un	C28(20S)-TAS	1.592	0.000	100.0#	0#	-39.93#
96 un	C27(20R)-TAS	1.592	0.000	100.0#	0#	-40.30#
97 un	C28(20R)-TAS	1.592	0.000	100.0#	0#	-41.41#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60147\
Data File : MS60147L.D
Acq On : 5 Sep 2013 5:44 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 06 07:35:26 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Fluorene-d10	21.147	176	212190m	251.05			0.03
31) Pyrene-d10	29.398	212	480010m	250.63			0.00
73) Benzo(a)pyrene-d12	38.109	264	537828m	250.32			0.00
System Monitoring Compounds							
2) Naphthalene-d8	13.512	136	272280m	220.30			0.00
21) Acenaphthene-d10	19.364	164	182720	231.50			0.00
32) Phenanthrene-d10	24.479	188	404052	220.47			0.00
66) Chrysene-d12	33.569	240	519838	197.71			0.00
88) Perylene-d12	38.419	264	530172	220.22			0.00
90) 5(b)H-Cholane	33.996	217	97821	208.59			0.04
Target Compounds							Qvalue
3) cis/trans Decalin	10.892	138	46795m	224.36			
4) C1-Decalins	0.000		0	N.D.	d		
5) C2-Decalins	0.000		0	N.D.	d		
6) C3-Decalins	0.000		0	N.D.	d		
7) C4-Decalins	0.000		0	N.D.	d		
8) Naphthalene	13.568	128	290414m	221.50			
9) 2-Methylnaphthalene	15.825	142	204629	224.17			91
10) 1-Methylnaphthalene	16.159	142	189163	227.12			93
11) 2,6-Dimethylnaphthalene	17.915	156	201623	230.50		#	70
12) 1,6,7-Trimethylnaphtha...	20.785	170	194664	229.85		#	19
13) C2-Naphthalenes	0.000		0	N.D.	d		
14) C3-Naphthalenes	0.000		0	N.D.	d		
15) C4-Naphthalenes	0.000		0	N.D.			
16) Benzothiophene	13.735	134	226684	218.74			100
17) C1-Benzothiophenes	0.000		0	N.D.	d		
18) C2-Benzothiophenes	0.000		0	N.D.	d		
19) C3-Benzothiophenes	0.000		0	N.D.	d		
20) C4-Benzothiophenes	0.000		0	N.D.	d		
22) Biphenyl	17.385	154	277250	225.69			95
23) Acenaphthylene	18.862	152	344066	228.78			99
24) Acenaphthene	19.475	154	191877	228.35			91
25) Dibenzofuran	20.060	168	320311	230.37			100
26) Fluorene	21.231	166	261953	232.87			92
27) 1-Methylfluorene	23.232	180	180089	230.76			80
28) C1-Fluorenes	0.000		0	N.D.	d		
29) C2-Fluorenes	0.000		0	N.D.	d		
30) C3-Fluorenes	0.000		0	N.D.	d		
33) Carbazole	25.310	167	376093	224.39			100
34) Dibenzothiophene	24.132	184	393623	220.35			95
35) 4-Methyldibenzothiophene	25.622	198	281867	200.42			100
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.	d		
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d		
38) C2-Dibenzothiophenes	0.000		0	N.D.	d		
39) C3-Dibenzothiophenes	0.000		0	N.D.	d		
40) C4-Dibenzothiophenes	0.000		0	N.D.	d		
41) Phenanthrene	24.548	178	433575m	199.62			
42) Anthracene	24.721	178	426120	203.42			98

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60147\
Data File : MS60147L.D
Acq On : 5 Sep 2013 5:44 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 06 07:35:26 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d		
44) 2-Methylphenanthrene	0.000		0	N.D.	d		
45) 2-Methylanthracene	0.000		0	N.D.	d		
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d		
47) 1-Methylphenanthrene	26.696	192	308388	217.60			85
48) 3,6-Dimethylphenanthrene	27.769	206	362891	228.88			94
49) Retene	30.437	234	133186	169.90			84
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d		
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d		
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d		
53) Naphthobenzothiophene	32.715	234	602430	210.35			100
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d		
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d		
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d		
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d		
58) Fluoranthene	28.670	202	565771	226.12			100
59) Pyrene	29.432	202	495676	195.92			100
60) 2-Methylfluoranthene	30.229	216	334090	203.43			100
61) Benzo(b)fluorene	30.818	216	371128	215.57			100
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d		
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d		
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d		
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d		
67) Benz(a)anthracene	33.530	228	594741	214.24			98
68) Chrysene/Triphenylene	33.646	228	506522m	192.47			
69) C1-Chrysenes	0.000		0	N.D.	d		
70) C2-Chrysenes	0.000		0	N.D.	d		
71) C3-Chrysenes	0.000		0	N.D.	d		
72) C4-Chrysenes	0.000		0	N.D.	d		
74) C29-Hopane	0.000		0	N.D.	d		
75) 18a-Oleanane	0.000		0	N.D.	d		
76) C30-Hopane	42.329	191	230846m	246.50			
77) Benzo(b)fluoranthene	37.061	252	642825m	228.59			
78) Benzo(k,j)fluoranthene	37.139	252	652643m	270.46			
79) Benzo(a)fluoranthene	0.000		0	N.D.	d		
80) Benzo(e)pyrene	38.031	252	587553m	214.84			
81) Benzo(a)pyrene	38.187	252	628973m	229.18			
82) Indeno(1,2,3-c,d)pyrene	42.772	276	689815	211.48			89
83) Dibenzo(a,h)anthracene	42.809	278	556354	211.51		#	81
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d		
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d		
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d		
87) Benzo(g,h,i)perylene	44.099	276	606549	213.96			86
89) Perylene	38.497	252	628599	233.00			100
91) C20-TAS	0.000		0	N.D.	d		
92) C21-TAS	0.000		0	N.D.	d		
93) C26(20S)-TAS	0.000		0	N.D.	d		
94) C26(20R)/C27(20S)-TAS	39.118	231	768978	224.89			100
95) C28(20S)-TAS	0.000		0	N.D.	d		
96) C27(20R)-TAS	0.000		0	N.D.	d		
97) C28(20R)-TAS	0.000		0	N.D.	d		

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60147\
Data File : MS60147L.D
Acq On : 5 Sep 2013 5:44 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 06 07:35:26 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

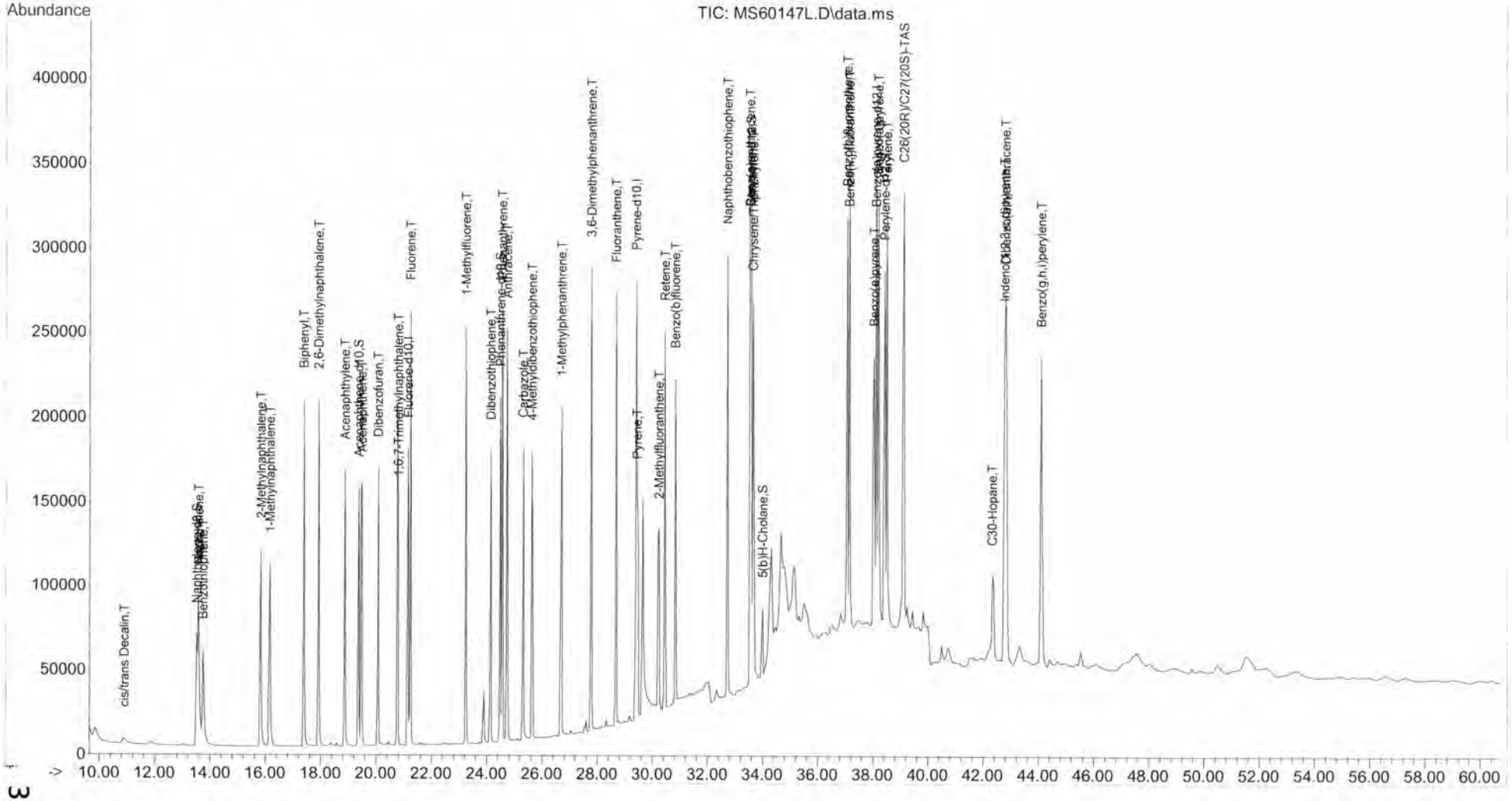
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60147\
Data File : MS60147L.D
Acq On : 5 Sep 2013 5:44 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Sep 06 07:35:26 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60147\
Data File : MS60147M.D
Acq On : 6 Sep 2013 4:12 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Sep 12 18:12:16 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorene-d10	1.000	1.000	0.0	95	0.03
2	S	Naphthalene-d8	1.462	1.317	9.9	93	0.00
3	T	cis/trans Decalin	0.247	0.233	5.7	92	0.03
4	un	C1-Decalins	0.247	0.000	100.0#	0#	-12.15#
5	un	C2-Decalins	0.247	0.000	100.0#	0#	-14.43#
6	un	C3-Decalins	0.247	0.000	100.0#	0#	-15.99#
7	un	C4-Decalins	0.247	0.000	100.0#	0#	-18.33#
8	T	Naphthalene	1.551	1.413	8.9	92	0.00
9	T	2-Methylnaphthalene	1.080	0.969	10.3	93	0.00
10	T	1-Methylnaphthalene	0.985	0.881	10.6	92	0.03
11	T	2,6-Dimethylnaphthalene	1.035	0.942	9.0	94	0.00
12	T	1,6,7-Trimethylnaphthalene	1.002	0.912	9.0	93	0.00
13	un	C2-Naphthalenes	1.551	0.000	100.0#	0#	-17.91#
14	un	C3-Naphthalenes	1.551	0.000	100.0#	0#	-20.06#
15	un	C4-Naphthalenes	1.551	0.000	100.0#	0#	-21.73#
16	T	Benzothiophene	1.226	1.133	7.6	95	0.00
17	un	C1-Benzothiophenes	1.226	0.000	100.0#	0#	-15.18#
18	un	C2-Benzothiophenes	1.226	0.000	100.0#	0#	-18.44#
19	un	C3-Benzothiophenes	1.226	0.000	100.0#	0#	-20.00#
20	un	C4-Benzothiophenes	1.226	0.000	100.0#	0#	-21.95#
21	S	Acenaphthene-d10	0.934	0.848	9.2	94	0.00
22	T	Biphenyl	1.453	1.294	10.9	92	0.00
23	T	Acenaphthylene	1.779	1.610	9.5	94	0.00
24	T	Acenaphthene	0.994	0.899	9.6	93	0.03
25	T	Dibenzofuran	1.645	1.477	10.2	93	0.00
26	T	Fluorene	1.331	1.210	9.1	94	0.00
27	T	1-Methylfluorene	0.923	0.774	16.1	85	0.00
28	un	C1-Fluorenes	1.331	0.000	100.0#	0#	-23.23#
29	un	C2-Fluorenes	1.331	0.000	100.0#	0#	-25.10#
30	un	C3-Fluorenes	1.331	0.000	100.0#	0#	-26.14#
31	I	Pyrene-d10	1.000	1.000	0.0	91	0.00
32	S	Phenanthrene-d10	0.957	0.977	-2.1	101	0.00
33	T	Carbazole	0.875	0.922	-5.4	107	0.00
34	T	Dibenzothiophene	0.933	0.991	-6.2	107	0.00
35	T	4-Methyldibenzothiophene	0.734	0.651	11.3	84	0.00
36	un	2/3-Methyldibenzothiophene	0.734	0.000	100.0#	0#	-25.93#
37	un	1-Methyldibenzothiophene	0.734	0.000	100.0#	0#	-26.25#
38	un	C2-Dibenzothiophenes	0.933	0.000	100.0#	0#	-27.04#
39	un	C3-Dibenzothiophenes	0.933	0.000	100.0#	0#	-28.57#
40	un	C4-Dibenzothiophenes	0.933	0.000	100.0#	0#	-29.99#
41	T	Phenanthrene	1.134	1.003	11.6	86	0.00
42	T	Anthracene	1.094	0.973	11.1	85	0.00
43	un	3-Methylphenanthrene	0.740	0.000	100.0#	0#	-26.70#
44	un	2-Methylphenanthrene	0.740	0.000	100.0#	0#	-26.45#
45	un	2-Methylanthracene	0.740	0.000	100.0#	0#	-26.70#
46	un	4/9-Methylphenanthrene	0.740	0.000	100.0#	0#	-26.70#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60147\
Data File : MS60147M.D
Acq On : 6 Sep 2013 4:12 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Sep 12 18:12:16 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
47	T	1-Methylphenanthrene	0.740	0.789	-6.6	106	0.00
48	T	3,6-Dimethylphenanthrene	0.828	0.863	-4.2	106	0.00
49	T	Retene	0.409	0.363	11.2	84	0.00
50	un	C2-Phenanthrenes/Anthracene	1.134	0.000	100.0#	0#	-28.32#
51	un	C3-Phenanthrenes/Anthracene	1.134	0.000	100.0#	0#	-29.16#
52	un	C4-Phenanthrenes/Anthracene	1.134	0.000	100.0#	0#	-31.96#
53	T	Naphthobenzothiophene	1.495	1.271	15.0	83	0.00
54	un	C1-Naphthobenzothiophenes	1.495	0.000	100.0#	0#	-34.00#
55	un	C2-Naphthobenzothiophenes	1.495	0.000	100.0#	0#	-35.59#
56	un	C3-Naphthobenzothiophenes	1.495	0.000	100.0#	0#	-36.95#
57	un	C4-Naphthobenzothiophenes	1.495	0.000	100.0#	0#	-38.42#
58	T	Fluoranthene	1.306	1.343	-2.8	106	0.00
59	T	Pyrene	1.321	1.218	7.8	88	0.04
60	T	2-Methylfluoranthene	0.857	0.821	4.2	92	0.04
61	T	Benzo(b)fluorene	0.899	0.862	4.1	93	0.00
62	un	C1-Fluoranthenes/Pyrenes	1.306	0.000	100.0#	0#	-30.44#
63	un	C2-Fluoranthenes/Pyrenes	1.306	0.000	100.0#	0#	-31.93#
64	un	C3-Fluoranthenes/Pyrenes	1.306	0.000	100.0#	0#	-34.00#
65	un	C4-Fluoranthenes/Pyrenes	1.306	0.000	100.0#	0#	-34.00#
66	S	Chrysene-d12	1.373	1.092	20.5	74	0.00
67	T	Benz(a)anthracene	1.449	1.316	9.2	88	0.00
68	T	Chrysene/Triphenylene	1.374	1.100	19.9	72	0.00
69	un	C1-Chrysenes	1.374	0.000	100.0#	0#	-35.16#
70	un	C2-Chrysenes	1.374	0.000	100.0#	0#	-35.78#
71	un	C3-Chrysenes	1.374	0.000	100.0#	0#	-37.80#
72	un	C4-Chrysenes	1.374	0.000	100.0#	0#	-39.16#
73	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	92	0.00
74	un	C29-Hopane	0.436	0.000	100.0#	0#	-40.78#
75	un	18a-Oleanane	0.436	0.000	100.0#	0#	-41.63#
76	T	C30-Hopane	0.436	0.442	-1.4	99	0.04
77	T	Benzo(b)fluoranthene	1.309	1.370	-4.7	103	0.00
78	T	Benzo(k,j)fluoranthene	1.123	1.257	-11.9	112	0.00
79	un	Benzo(a)fluoranthene	1.123	0.000	100.0#	0#	-37.14#
80	T	Benzo(e)pyrene	1.273	1.265	0.6	98	0.00
81	T	Benzo(a)pyrene	1.277	1.144	10.4	88	0.00
82	T	Indeno(1,2,3-c,d)pyrene	1.518	1.414	6.9	92	0.00
83	T	Dibenzo(a,h)anthracene	1.224	1.121	8.4	92	0.00
84	un	C1-Dibenzo(a,h)anthracenes	1.224	0.000	100.0#	0#	-48.75#
85	un	C2-Dibenzo(a,h)anthracenes	1.224	0.000	100.0#	0#	-50.55#
86	un	C3-Dibenzo(a,h)anthracenes	1.224	0.000	100.0#	0#	-50.22#
87	T	Benzo(g,h,i)perylene	1.319	1.231	6.7	93	-0.04
88	S	Perylene-d12	1.120	1.153	-2.9	103	0.00
89	T	Perylene	1.256	1.190	5.3	93	0.00
90	S	5(b)H-Cholane	0.218	0.209	4.1	93	0.04
91	un	C20-TAS	1.592	0.000	100.0#	0#	-33.03#
92	un	C21-TAS	1.592	0.000	100.0#	0#	-34.00#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60147\
Data File : MS60147M.D
Acq On : 6 Sep 2013 4:12 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Sep 12 18:12:16 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
93 un	C26(20S)-TAS	1.592	0.000	100.0#	0#	-38.42#
94 T	C26(20R)/C27(20S)-TAS	1.592	1.654	-3.9	102	0.04
95 un	C28(20S)-TAS	1.592	0.000	100.0#	0#	-39.93#
96 un	C27(20R)-TAS	1.592	0.000	100.0#	0#	-40.30#
97 un	C28(20R)-TAS	1.592	0.000	100.0#	0#	-41.41#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60147\
Data File : MS60147M.D
Acq On : 6 Sep 2013 4:12 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Sep 12 18:12:16 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.150	176	225203m	251.05		0.03
31) Pyrene-d10	29.399	212	431206m	250.63		0.00
73) Benzo(a)pyrene-d12	38.109	264	514040m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.515	136	295568m	225.33		0.00
21) Acenaphthene-d10	19.367	164	190195m	227.04		0.00
32) Phenanthrene-d10	24.480	188	420696m	255.53		0.00
66) Chrysene-d12	33.568	240	469565m	198.80		0.00
88) Perylene-d12	38.419	264	591756m	257.18		0.00
90) 5(b)H-Cholane	33.995	217	107338m	239.47		0.04
Target Compounds						Qvalue
3) cis/trans Decalin	10.896	138	51668m	233.41		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.571	128	316831m	227.68		
9) 2-Methylnaphthalene	15.828	142	217562m	224.57		
10) 1-Methylnaphthalene	16.162	142	197336m	223.24		
11) 2,6-Dimethylnaphthalene	17.918	156	211344m	227.65		
12) 1,6,7-Trimethylnaphtha...	20.788	170	204555m	227.57		
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.		
16) Benzothiophene	13.738	134	252452m	229.52		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.388	154	287500m	220.51		
23) Acenaphthylene	18.865	152	358224m	224.43		
24) Acenaphthene	19.478	154	202043m	226.56		
25) Dibenzofuran	20.063	168	329685m	223.41		
26) Fluorene	21.234	166	271954m	227.79		
27) 1-Methylfluorene	23.233	180	174865m	211.12		
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.312	167	393068m	261.06		
34) Dibenzothiophene	24.134	184	420289m	261.90		
35) 4-Methyldibenzothiophene	25.623	198	282287m	223.44		
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.	d	
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.549	178	427349m	219.03		
42) Anthracene	24.723	178	419586m	222.97		

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60147\
Data File : MS60147M.D
Acq On : 6 Sep 2013 4:12 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Sep 12 18:12:16 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d	
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.697	192	335575m	263.58		
48) 3,6-Dimethylphenanthrene	27.771	206	371605m	260.90		
49) Retene	30.438	234	139442m	198.01		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	32.715	234	550145m	213.83		
54) C1-Naphthobenzothiophenes	0.000		0	N.D.		
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.672	202	578432m	257.35		
59) Pyrene	29.468	202	524101m	230.60		
60) 2-Methylfluoranthene	30.230	216	355654m	241.08		
61) Benzo(b)fluorene	30.819	216	374029m	241.84		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.		
67) Benz(a)anthracene	33.529	228	565021m	226.57		
68) Chrysene/Triphenylene	33.646	228	470334m	198.95		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.366	191	226756m	253.34		
77) Benzo(b)fluoranthene	37.061	252	704586m	262.15		
78) Benzo(k,j)fluoranthene	37.138	252	642662m	278.65		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.031	252	646766m	247.44		
81) Benzo(a)pyrene	38.186	252	586142m	223.46		
82) Indeno(1,2,3-c,d)pyrene	42.772	276	713510m	228.86		
83) Dibenzo(a,h)anthracene	42.845	278	570268m	226.83		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.099	276	626093m	231.07		
89) Perylene	38.497	252	611667m	237.21		
91) C20-TAS	0.000		0	N.D.		
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.118	231	849267m	259.86		
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60147\
Data File : MS60147M.D
Acq On : 6 Sep 2013 4:12 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Sep 12 18:12:16 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

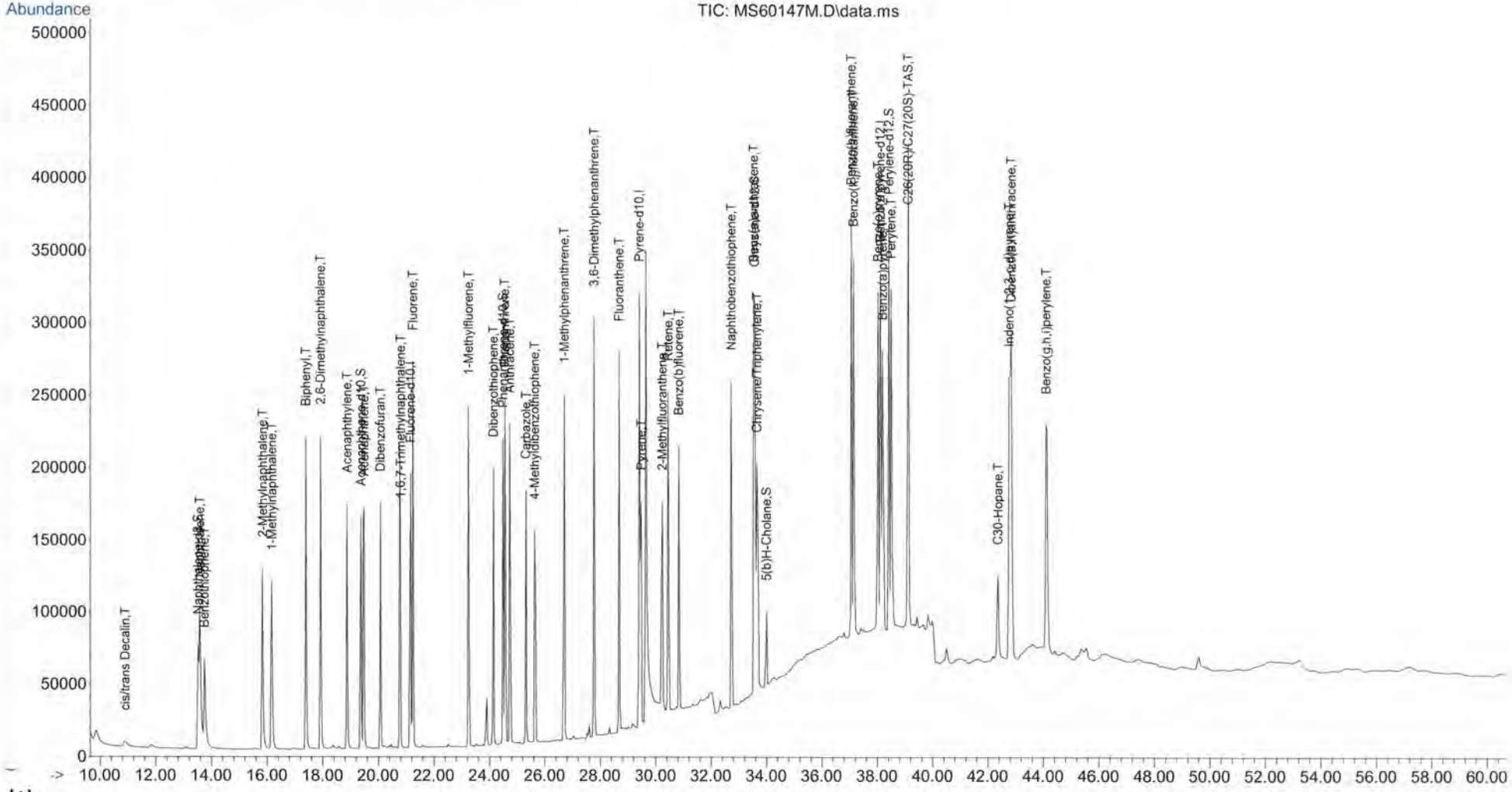
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60147\
Data File : MS60147M.D
Acq On : 6 Sep 2013 4:12 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 26 Sample Multiplier: 1

Quant Time: Sep 12 18:12:16 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name MS60147H.D
Data File Path C:\GCMS6\MS60147\
Operator YM
Date Acquired 9/5/2013 4:57
Acq. Method File PAH-2012.M
Sample Name AR-WKISSU-250-002
Misc Info 0
Instrument Name GCMS6
Vial Number 8
Sample Multiplier 1
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

MS60147H.D
AR-WKISSU-250-002
9/5/2013
PAH-2012.M
1

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	0.00	0	0.0000	0.0000
9)+10)	C1-Naphthalenes	0.00	0	0.0000	0.0000
13)	C2-Naphthalenes	0.00	0	0.0000	0.0000
14)	C3-Naphthalenes	0.00	0	0.0000	0.0000
15)	C4-Naphthalenes	0.00	0	0.0000	0.0000
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	0.00	0	0.0000	0.0000
23)	Acenaphthylene	0.00	0	0.0000	0.0000
24)	Acenaphthene	0.00	0	0.0000	0.0000
25)	Dibenzofuran	0.00	0	0.0000	0.0000
26)	Fluorene	0.00	0	0.0000	0.0000
28)	C1-Fluorenes	0.00	0	0.0000	0.0000
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	0.00	0	0.0000	0.0000
41)	Phenanthrene	0.00	0	0.0000	0.0000
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	0.00	0	0.0000	0.0000
35)+36)+37)	C1-Dibenzothiophenes	0.00	0	0.0000	0.0000
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	0.00	0	0.0000	0.0000
59)	Pyrene	0.00	0	0.0000	0.0000
62)	C1-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benz(a)anthracene	0.00	0	0.0000	0.0000
68)	Chrysene/Triphenylene	0.00	0	0.0000	0.0000
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	0.00	0	0.0000	0.0000
78)	Benzo(k,j)fluoranthene	0.00	0	0.0000	0.0000
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	0.00	0	0.0000	0.0000
81)	Benzo(a)pyrene	0.00	0	0.0000	0.0000
89)	Perylene	0.00	0	0.0000	0.0000
82)	Indeno(1,2,3-c,d)pyrene	0.00	0	0.0000	0.0000
83)	Dibenzo(a,h)anthracene	0.00	0	0.0000	0.0000
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	0.00	0	0.0000	0.0000

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	0.00	0	0.0000	0.0000
10)	1-Methylnaphthalene	0.00	0	0.0000	0.0000
11)	2,6-Dimethylnaphthalene	0.00	0	0.0000	0.0000
12)	1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27)	1-Methylfluorene	0.00	0	0.0000	0.0000
35)	4-Methyldibenzothiophene	0.00	0	0.0000	0.0000
36)	2/3-Methyldibenzothiophene	0.00	0	0.0000	0.0000
37)	1-Methyldibenzothiophene	0.00	0	0.0000	0.0000
43)	3-Methylphenanthrene	0.00	0	0.0000	0.0000
44)	2-Methylphenanthrene	0.00	0	0.0000	0.0000
45)	2-Methylanthracene	0.00	0	0.0000	0.0000
46)	4/9-Methylphenanthrene	0.00	0	0.0000	0.0000
47)	1-Methylphenanthrene	0.00	0	0.0000	0.0000
48)	3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49)	Retene	0.00	0	0.0000	0.0000
60)	2-Methylfluoranthene	0.00	0	0.0000	0.0000
61)	Benzo(b)fluorene	0.00	0	0.0000	0.0000
74)	C29-Hopane	0.00	0	0.0000	0.0000
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	0.00	0	0.0000	0.0000
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.51	303349	245.12	98.00
21)	Acenaphthene-d10	19.34	180042	227.80	91.06
32)	Phenanthrene-d10	24.48	345181	215.20	86.01
66)	Chrysene-d12	33.57	537229	233.45	93.37
88)	Perylene-d12	38.38	508198	248.10	99.23
90)	5(b)H-Cholane	33.96	115751	290.08	116.03
	Internal Standards				
1)	Fluorene-d10	21.12	212474	251.05	
31)	Pyrene-d10	29.36	420108	250.63	
73)	Benzo(a)pyrene-d12	38.11	457621	250.33	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60147\
Data File : MS60147H.D
Acq On : 5 Sep 2013 4:57 am
Operator : YM
Sample : AR-WKISSU-250-002
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 05 12:23:34 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.119	176	212474	251.05		0.00
31) Pyrene-d10	29.364	212	420108m	250.63		-0.03
73) Benzo(a)pyrene-d12	38.108	264	457621	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.512	136	303349	245.11		0.00
21) Acenaphthene-d10	19.336	164	180042	227.80		-0.03
32) Phenanthrene-d10	24.480	188	345181m	215.20		0.00
66) Chrysene-d12	33.568	240	537229	233.45		0.00
88) Perylene-d12	38.380	264	508198	248.10		-0.04
90) 5(b)H-Cholane	33.956	217	115751m	290.08		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	0.000		0	N.D.	d	
9) 2-Methylnaphthalene	0.000		0	N.D.	d	
10) 1-Methylnaphthalene	0.000		0	N.D.	d	
11) 2,6-Dimethylnaphthalene	0.000		0	N.D.	d	
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d	
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.		
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	0.000		0	N.D.	d	
23) Acenaphthylene	0.000		0	N.D.	d	
24) Acenaphthene	0.000		0	N.D.	d	
25) Dibenzofuran	0.000		0	N.D.	d	
26) Fluorene	0.000		0	N.D.	d	
27) 1-Methylfluorene	0.000		0	N.D.	d	
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	0.000		0	N.D.	d	
34) Dibenzothiophene	0.000		0	N.D.	d	
35) 4-Methyldibenzothiophene	0.000		0	N.D.	d	
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.	d	
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	0.000		0	N.D.	d	
42) Anthracene	0.000		0	N.D.	d	
43) 3-Methylphenanthrene	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60147\
Data File : MS60147H.D
Acq On : 5 Sep 2013 4:57 am
Operator : YM
Sample : AR-WKISSU-250-002
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 05 12:23:34 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	0.000		0	N.D.	d	
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	0.000		0	N.D.	d	
59) Pyrene	0.000		0	N.D.	d	
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	0.000		0	N.D.	d	
68) Chrysene/Triphenylene	0.000		0	N.D.	d	
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	0.000		0	N.D.	d	
78) Benzo(k,j)fluoranthene	0.000		0	N.D.	d	
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	0.000		0	N.D.	d	
81) Benzo(a)pyrene	0.000		0	N.D.	d	
82) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.	d	
83) Dibenzo(a,h)anthracene	0.000		0	N.D.	d	
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	0.000		0	N.D.	d	
89) Perylene	0.000		0	N.D.	d	
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60147\
Data File : MS60147H.D
Acq On : 5 Sep 2013 4:57 am
Operator : YM
Sample : AR-WKISSU-250-002
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 05 12:23:34 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

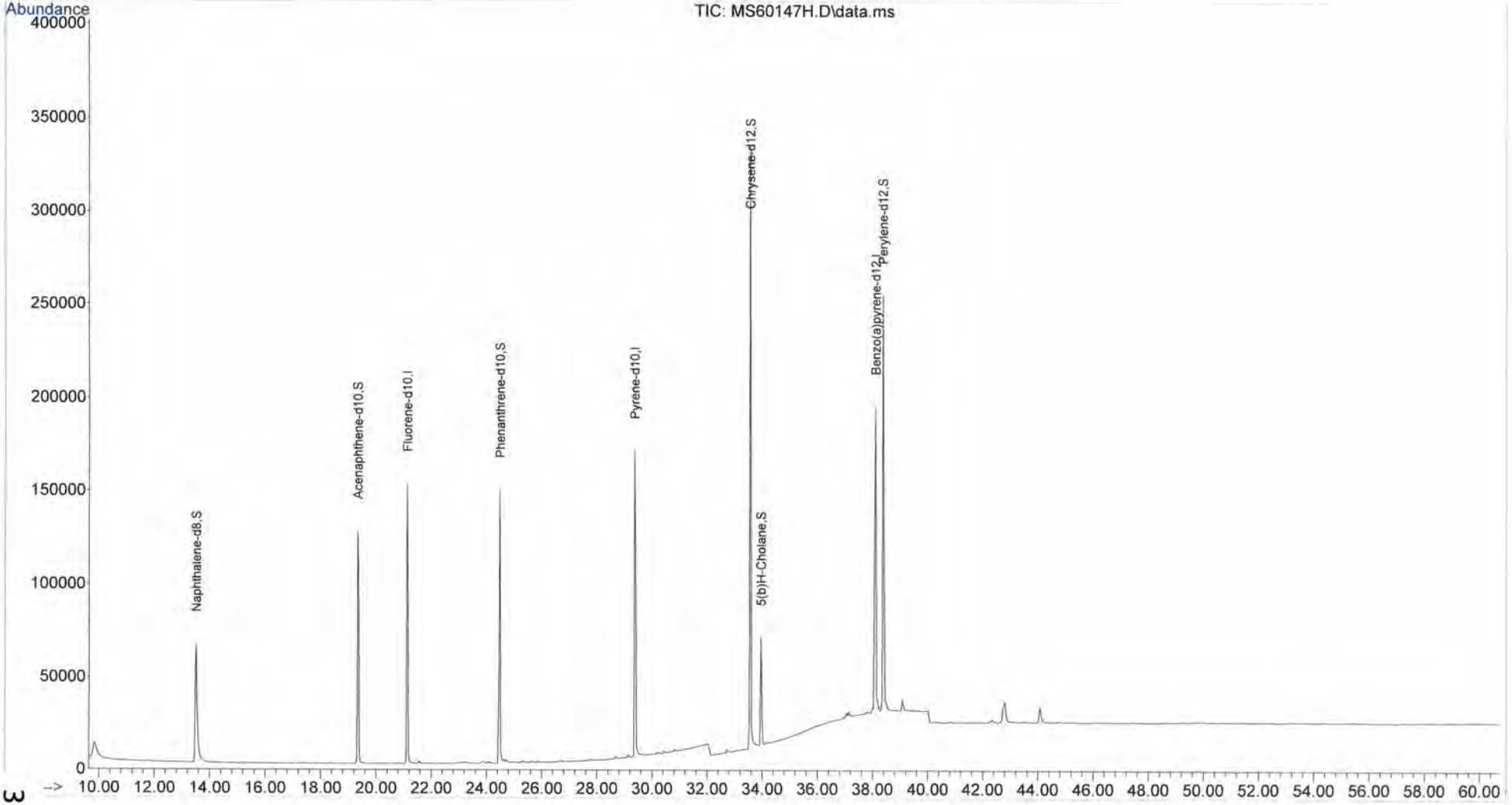
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60147\
Data File : MS60147H.D
Acq On : 5 Sep 2013 4:57 am
Operator : YM
Sample : AR-WKISSU-250-002
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Sep 05 12:23:34 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name MS60147K.D
Data File Path C:\msdchem\2\data\MS60147\
Operator YM
Date Acquired 9/5/2013 18:54
Acq. Method File PAH-2012.M
Sample Name AR-SRM2779-WK-4.0-002
Misc Info 0
Instrument Name GCMS6
Vial Number 11
Sample Multiplier 0.24461
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

MS60147K.D
AR-SRM2779-WK-4.0-002
9/5/2013
PAH-2012.M
4.088140305

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	10.89	967055	611.5005	736.0955
4)	C1-Decalins	12.03	1246420	788.1481	948.7355
5)	C2-Decalins	14.40	1085690	686.5175	826.3974
6)	C3-Decalins	16.38	1192740	754.2060	907.8776
7)	C4-Decalins	18.39	767854	485.5386	584.4685
8)	Naphthalene	13.57	5708430	574.2171	691.2154
9)+10)	C1-Naphthalenes	15.99	13358830	1343.7790	1617.5777
13)	C2-Naphthalenes	18.19	17022100	1712.2676	2061.1469
14)	C3-Naphthalenes	20.20	10912000	1097.6482	1321.2971
15)	C4-Naphthalenes	22.54	6204910	624.1591	751.3333
16)	Benzothiophene	13.79	59712	7.5992	9.1475
17)	C1-Benzothiophenes	15.35	248598	31.6376	38.0839
18)	C2-Benzothiophenes	18.33	205360	26.1349	31.4599
19)	C3-Benzothiophenes	20.03	253175	32.2200	38.7850
20)	C4-Benzothiophenes	21.48	226902	28.8765	34.7601
22)	Biphenyl	17.38	1295440	139.0791	167.4169
23)	Acenaphthylene	18.86	82311	7.2183	8.6890
24)	Acenaphthene	19.47	51043	8.0118	9.6442
25)	Dibenzofuran	20.06	228368	21.6621	26.0759
26)	Fluorene	21.23	776915	91.0903	109.6502
28)	C1-Fluorenes	23.23	1700670	199.3970	240.0247
29)	C2-Fluorenes	25.00	2361180	276.8398	333.2467
30)	C3-Fluorenes	26.63	2264120	265.4606	319.5489
33)	Carbazole	25.31	40802	3.5119	4.2274
42)	Anthracene	24.69	56905	3.9189	4.7174
41)	Phenanthrene	24.55	2491320	165.4723	199.1878
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.47	5844916	388.2166	467.3168
50)	C2-Phenanthrenes/Anthracenes	28.15	6978520	463.5115	557.9533
51)	C3-Phenanthrenes/Anthracenes	29.71	5508890	365.8999	440.4530
52)	C4-Phenanthrenes/Anthracenes	31.55	2184660	145.1046	174.6701
34)	Dibenzothiophene	24.13	416271	33.6165	40.4660
35)+36)+37)	C1-Dibenzothiophenes	25.96	1163146	93.9314	113.0702
38)	C2-Dibenzothiophenes	27.04	1604620	129.5831	155.9861
39)	C3-Dibenzothiophenes	28.57	1457990	117.7420	141.7323
40)	C4-Dibenzothiophenes	29.99	701154	56.6228	68.1599
58)	Fluoranthene	28.71	51279	2.9566	3.5590
59)	Pyrene	29.47	174029	9.9233	11.9452
62)	C1-Fluoranthenes/Pyrenes	30.61	989459	57.0499	68.6740
63)	C2-Fluoranthenes/Pyrenes	32.68	1447180	83.4411	100.4425
64)	C3-Fluoranthenes/Pyrenes	33.80	1857760	107.1142	128.9391
65)	C4-Fluoranthenes/Pyrenes	34.93	1410750	81.3402	97.9134
53)	Naphthobenzothiophene	32.71	288327	14.5234	17.4826
54)	C1-Naphthobenzothiophenes	34.15	681493	34.3276	41.3219
55)	C2-Naphthobenzothiophenes	35.59	973427	49.0326	59.0231
56)	C3-Naphthobenzothiophenes	36.94	685297	34.5191	41.5525
57)	C4-Naphthobenzothiophenes	37.91	330957	16.6707	20.0674
67)	Benz(a)anthracene	33.53	85137	4.4242	5.3257
68)	Chrysene/Triphenylene	33.65	577901	31.6790	38.1336
69)	C1-Chrysenes	34.89	1562030	85.6260	103.0725
70)	C2-Chrysenes	36.36	1903010	104.3174	125.5723
71)	C3-Chrysenes	37.76	1389200	76.1520	91.6682
72)	C4-Chrysenes	39.16	771169	42.2733	50.8865
77)	Benzo(b)fluoranthene	37.06	72787	3.8893	4.6818
78)	Benzo(k,j)fluoranthene	37.10	13330	0.8301	0.9992
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.03	150575	8.2733	9.9590
81)	Benzo(a)pyrene	38.19	26697	1.4617	1.7595
89)	Perylene	38.50	13244	0.7376	0.8879
82)	Indeno(1,2,3-c,d)pyrene	42.81	11420	0.5261	0.6333
83)	Dibenzo(a,h)anthracene	42.81	11286	0.6447	0.7761
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.14	30959	1.6410	1.9753

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	15.82	8199880	1184.7563	1426.1537
10)	1-Methylnaphthalene	16.16	5158950	816.9338	983.3863
11)	2,6-Dimethylnaphthalene	17.94	4746820	715.7117	861.5400
12)	1,6,7-Trimethylnaphthalene	20.78	1466360	228.3540	274.8817
27)	1-Methylfluorene	23.23	855181	144.5207	173.9672
35)	4-Methyldibenzothiophene	25.66	631562	64.7842	77.9842
36)	2/3-Methyldibenzothiophene	25.94	311827	31.9864	38.5038
37)	1-Methyldibenzothiophene	26.28	219757	22.5422	27.1352
43)	3-Methylphenanthrene	26.25	1262680	128.5306	154.7190
44)	2-Methylphenanthrene	26.32	1476570	150.3028	180.9274
45)	2-Methylanthracene	26.49	100416	10.2215	12.3042
46)	4/9-Methylphenanthrene	26.59	1745960	177.7243	213.9362
47)	1-Methylphenanthrene	26.70	1259290	128.1857	154.3039
48)	3,6-Dimethylphenanthrene	27.77	356942	32.4769	39.0941
49)	Retene	30.44	74329	13.6784	16.4654
60)	2-Methylfluoranthene	30.23	49539	4.3517	5.2384
61)	Benzo(b)fluorene	30.85	124665	10.4460	12.5745
74)	C29-Hopane	40.37	113142	18.1541	21.8531
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	41.67	233516	37.4686	45.1030
91)	C20-TAS	33.14	83073	3.6506	4.3944
92)	C21-TAS	34.19	94041	4.1326	4.9746
93)	C26(20S)-TAS	38.26	74199	3.2606	3.9250
94)	C26(20R)/C27(20S)-TAS	39.16	235187	10.3351	12.4410
95)	C28(20S)-TAS	39.93	169951	7.4684	8.9901
96)	C27(20R)-TAS	40.34	150764	6.6252	7.9751
97)	C28(20R)-TAS	41.41	107833	4.7387	5.7042
	Surrogate Standards				
2)	Naphthalene-d8	13.51	473660	50.55	82.61
21)	Acenaphthene-d10	19.36	347798	58.12	94.97
32)	Phenanthrene-d10	24.48	645886	50.84	83.07
66)	Chrysene-d12	33.57	721220	39.57	64.70
88)	Perylene-d12	38.42	976876	60.97	99.69
90)	5(b)H-Cholane	33.99	219540	70.34	115.03
	Internal Standards				
1)	Fluorene-d10	21.15	393544	61.41	
31)	Pyrene-d10	29.40	813907	61.31	
73)	Benzo(a)pyrene-d12	38.11	875523	61.23	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60147\
Data File : MS60147K.D
Acq On : 5 Sep 2013 6:54 pm
Operator : YM
Sample : AR-SRM2779-WK-4.0-002
Misc :
ALS Vial : 11 Sample Multiplier: 0.24461

Quant Time: Sep 06 08:03:20 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.147	176	393544m	251.05		0.03
31) Pyrene-d10	29.399	212	813907m	250.63		0.00
73) Benzo(a)pyrene-d12	38.108	264	875523m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.512	136	473660m	50.55		0.00
21) Acenaphthene-d10	19.363	164	347798m	58.12		0.00
32) Phenanthrene-d10	24.480	188	645886m	50.84		0.00
66) Chrysene-d12	33.568	240	721220m	39.57		0.00
88) Perylene-d12	38.419	264	976876m	60.97		0.00
90) 5(b)H-Cholane	33.995	217	219540m	70.34		0.04
Target Compounds						Qvalue
3) cis/trans Decalin	10.892	138	967055m	611.50		
4) C1-Decalins	12.035	152	1246415m	788.15		
5) C2-Decalins	14.403	166	1085691m	686.52		
6) C3-Decalins	16.382	180	1192738m	754.21		
7) C4-Decalins	18.388	194	767854m	485.54		
8) Naphthalene	13.567	128	5708431m	574.22		
9) 2-Methylnaphthalene	15.824	142	8199884m	1184.76		
10) 1-Methylnaphthalene	16.159	142	5158950m	816.93		
11) 2,6-Dimethylnaphthalene	17.942	156	4746818m	715.71		
12) 1,6,7-Trimethylnaphtha...	20.785	170	1466364m	228.35		
13) C2-Naphthalenes	18.193	156	17022060m	1712.27		
14) C3-Naphthalenes	20.199	170	10911976m	1097.65		
15) C4-Naphthalenes	22.540	184	6204911m	624.16		
16) Benzothiophene	13.790	134	59712m	7.60		
17) C1-Benzothiophenes	15.351	148	248598m	31.64		
18) C2-Benzothiophenes	18.332	162	205360m	26.13		
19) C3-Benzothiophenes	20.032	176	253175m	32.22		
20) C4-Benzothiophenes	21.481	190	226902m	28.88		
22) Biphenyl	17.385	154	1295437m	139.08		
23) Acenaphthylene	18.862	152	82311m	7.22		
24) Acenaphthene	19.475	154	51043m	8.01		
25) Dibenzofuran	20.060	168	228368m	21.66		
26) Fluorene	21.230	166	776915m	91.09		
27) 1-Methylfluorene	23.233	180	855181m	144.52		
28) C1-Fluorenes	23.233	180	1700667m	199.40		
29) C2-Fluorenes	25.000	194	2361180m	276.84		
30) C3-Fluorenes	26.628	208	2264122m	265.46		
33) Carbazole	25.312	167	40802m	3.51		
34) Dibenzothiophene	24.134	184	416271m	33.62		
35) 4-Methyldibenzothiophene	25.658	198	631562m	64.78		
36) 2/3-Methyldibenzothiop...	25.935	198	311827m	31.99		
37) 1-Methyldibenzothiophene	26.281	198	219757m	22.54		
38) C2-Dibenzothiophenes	27.044	212	1604617m	129.58		
39) C3-Dibenzothiophenes	28.568	226	1457990m	117.74		
40) C4-Dibenzothiophenes	29.988	240	701154m	56.62		
41) Phenanthrene	24.549	178	2491315m	165.47		
42) Anthracene	24.688	178	56905m	3.92		
43) 3-Methylphenanthrene	26.247	192	1262679m	128.53		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60147\
Data File : MS60147K.D
Acq On : 5 Sep 2013 6:54 pm
Operator : YM
Sample : AR-SRM2779-WK-4.0-002
Misc :
ALS Vial : 11 Sample Multiplier: 0.24461

Quant Time: Sep 06 08:03:20 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44)	2-Methylphenanthrene	26.316	192	1476569m	150.30		
45)	2-Methylanthracene	26.489	192	100416m	10.22		
46)	4/9-Methylphenanthrene	26.593	192	1745957m	177.72		
47)	1-Methylphenanthrene	26.697	192	1259293m	128.19		
48)	3,6-Dimethylphenanthrene	27.771	206	356942m	32.48		
49)	Retene	30.438	234	74329m	13.68		
50)	C2-Phenanthrenes/Anthr...	28.152	206	6978520m	463.51		
51)	C3-Phenanthrenes/Anthr...	29.711	220	5508891m	365.90		
52)	C4-Phenanthrenes/Anthr...	31.547	234	2184663m	145.10		
53)	Naphthobenzothiophene	32.714	234	288327m	14.52		
54)	C1-Naphthobenzothiophenes	34.150	248	681493m	34.33		
55)	C2-Naphthobenzothiophenes	35.586	262	973427m	49.03		
56)	C3-Naphthobenzothiophenes	36.944	276	685297m	34.52		
57)	C4-Naphthobenzothiophenes	37.914	290	330957m	16.67		
58)	Fluoranthene	28.706	202	51279m	2.96		
59)	Pyrene	29.468	202	174029m	9.92		
60)	2-Methylfluoranthene	30.230	216	49539m	4.35		
61)	Benzo(b)fluorene	30.854	216	124665m	10.45		
62)	C1-Fluoranthenes/Pyrenes	30.611	216	989459m	57.05		
63)	C2-Fluoranthenes/Pyrenes	32.675	230	1447181m	83.44		
64)	C3-Fluoranthenes/Pyrenes	33.801	244	1857764m	107.11		
65)	C4-Fluoranthenes/Pyrenes	34.926	258	1410745m	81.34		
67)	Benz(a)anthracene	33.529	228	85137m	4.42		
68)	Chrysene/Triphenylene	33.645	228	577901m	31.68		
69)	C1-Chrysenes	34.887	242	1562032m	85.63		
70)	C2-Chrysenes	36.362	256	1903006m	104.32		
71)	C3-Chrysenes	37.759	270	1389202m	76.15		
72)	C4-Chrysenes	39.156	284	771169m	42.27		
74)	C29-Hopane	40.375	191	113142m	18.15		
75)	18a-Oleanane	0.000		0	N.D.		d
76)	C30-Hopane	41.665	191	233516m	37.47		
77)	Benzo(b)fluoranthene	37.060	252	72787m	3.89		
78)	Benzo(k,j)fluoranthene	37.099	252	13330m	0.83		
79)	Benzo(a)fluoranthene	0.000		0	N.D.		d
80)	Benzo(e)pyrene	38.031	252	150575m	8.27		
81)	Benzo(a)pyrene	38.186	252	26697m	1.46		
82)	Indeno(1,2,3-c,d)pyrene	42.809	276	11420m	0.53		
83)	Dibenzo(a,h)anthracene	42.809	278	11286m	0.64		
84)	C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.		d
85)	C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.		d
86)	C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.		d
87)	Benzo(g,h,i)perylene	44.136	276	30959m	1.64		
89)	Perylene	38.496	252	13244m	0.74		
91)	C20-TAS	33.141	231	83073m	3.65		
92)	C21-TAS	34.189	231	94041m	4.13		
93)	C26(20S)-TAS	38.263	231	74199m	3.26		
94)	C26(20R)/C27(20S)-TAS	39.156	231	235187m	10.34		
95)	C28(20S)-TAS	39.932	231	169951m	7.47		
96)	C27(20R)-TAS	40.338	231	150764m	6.63		
97)	C28(20R)-TAS	41.407	231	107833m	4.74		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60147\
Data File : MS60147K.D
Acq On : 5 Sep 2013 6:54 pm
Operator : YM
Sample : AR-SRM2779-WK-4.0-002
Misc :
ALS Vial : 11 Sample Multiplier: 0.24461

Quant Time: Sep 06 08:03:20 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60147\
Data File : MS60147K.D
Acq On : 5 Sep 2013 6:54 pm
Operator : YM
Sample : AR-SRM2779-WK-4.0-002
Misc :
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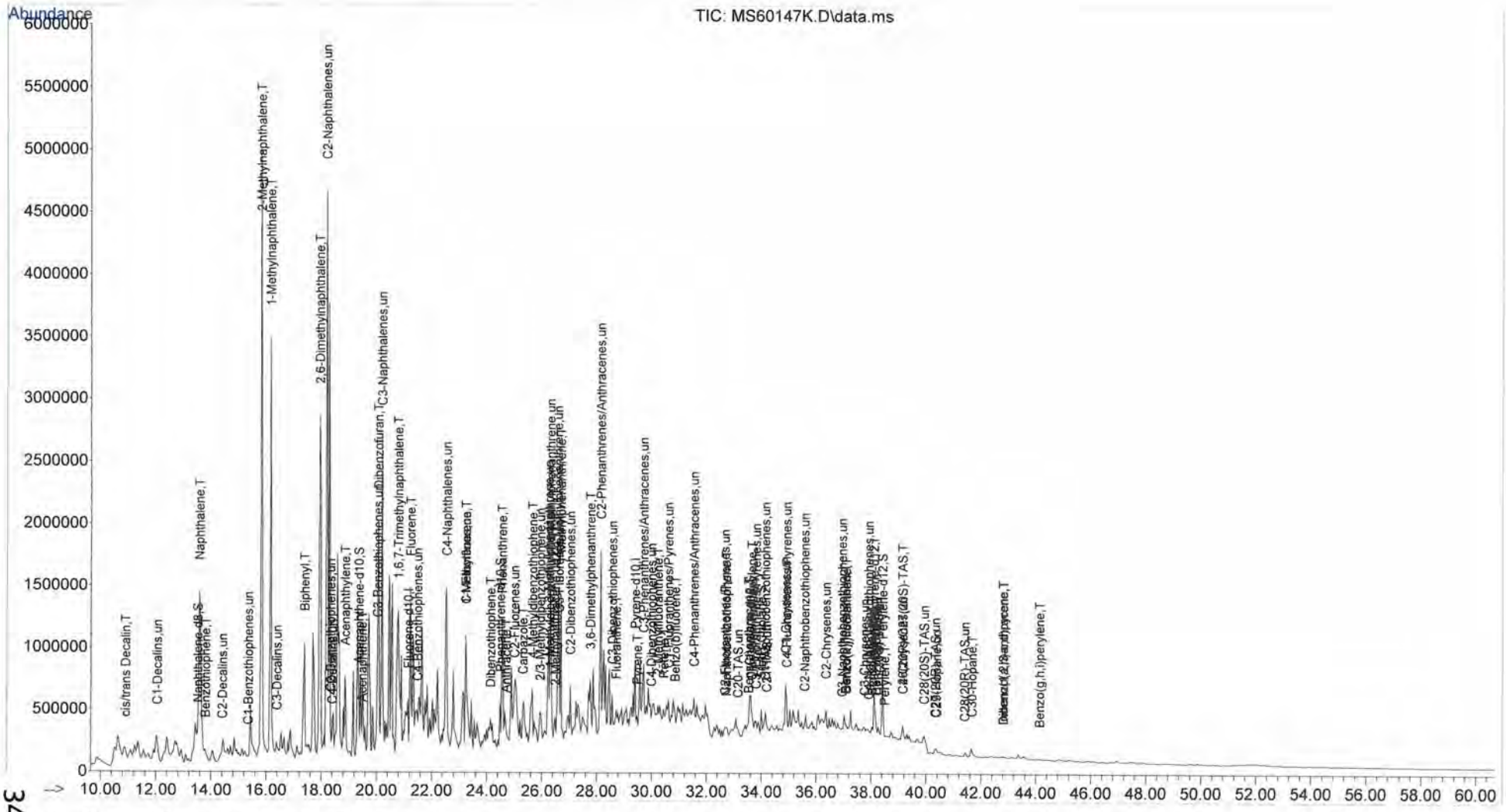
Quant Time: Sep 06 08:03:20 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1645.D
Data File Path C:\GCMS6\MS60147\
Operator YM
Date Acquired 9/5/2013 11:56
Acq. Method File PAH-2012.M
Sample Name SED-DA-BG-004 (0-0.5)
Misc Info 0
Instrument Name GCMS6
Vial Number 35
Sample Multiplier 0.6605
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ARC1645.D
SED-DA-BG-004 (0-0.5)
9/5/2013
PAH-2012.M
1.514004542

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.57	60911	29.7347	39.8022
9)+10)	C1-Naphthalenes	15.98	21571	10.5302	14.0955
13)	C2-Naphthalenes	18.19	24208	11.8175	15.8187
14)	C3-Naphthalenes	20.06	18669	9.1136	12.1993
15)	C4-Naphthalenes	22.51	14838	7.2434	9.6958
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.38	12286	6.4012	8.5686
23)	Acenaphthylene	18.86	61006	25.9630	34.7536
24)	Acenaphthene	19.45	26613	20.2719	27.1355
25)	Dibenzofuran	20.06	61742	28.4220	38.0451
26)	Fluorene	21.23	54049	30.7535	41.1660
28)	C1-Fluorenes	23.13	19742	11.2331	15.0363
29)	C2-Fluorenes	26.07	39468	22.4570	30.0605
30)	C3-Fluorenes	26.73	50530	28.7512	38.4857
33)	Carbazole	25.31	341545	131.3649	175.8424
42)	Anthracene	24.72	157959	48.6106	65.0692
41)	Phenanthrene	24.55	2431590	721.7085	966.0647
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.45	551467	163.6783	219.0965
50)	C2-Phenanthrenes/Anthracenes	28.12	322238	95.6417	128.0241
51)	C3-Phenanthrenes/Anthracenes	29.68	237615	70.5255	94.4041
52)	C4-Phenanthrenes/Anthracenes	31.51	161813	48.0270	64.2880
34)	Dibenzothiophene	24.10	83317	30.0667	40.2467
35)+36)+37)	C1-Dibenzothiophenes	25.92	35854	12.9387	17.3194
38)	C2-Dibenzothiophenes	27.35	45331	16.3587	21.8974
39)	C3-Dibenzothiophenes	28.84	63383	22.8731	30.6175
40)	C4-Dibenzothiophenes	30.61	43670	15.7593	21.0950
58)	Fluoranthene	28.67	7744920	1995.4894	2671.1223
59)	Pyrene	29.43	6452460	1644.1298	2200.7994
62)	C1-Fluoranthenes/Pyrenes	30.58	2045370	526.9912	705.4199
63)	C2-Fluoranthenes/Pyrenes	33.03	2931940	755.4139	1011.1819
64)	C3-Fluoranthenes/Pyrenes	33.49	874312	225.2675	301.5386
65)	C4-Fluoranthenes/Pyrenes	33.76	508739	131.0769	175.4569
53)	Naphthobenzothiophene	32.72	1295890	291.6920	390.4531
54)	C1-Naphthobenzothiophenes	33.88	528077	118.8649	159.1102
55)	C2-Naphthobenzothiophenes	35.55	405745	91.3293	122.2516
56)	C3-Naphthobenzothiophenes	36.64	331341	74.5817	99.8335
57)	C4-Naphthobenzothiophenes	37.76	97435	21.9317	29.3573
67)	Benz(a)anthracene	33.53	2211250	513.4899	687.3473
68)	Chrysene/Triphenylene	33.65	7932950	1943.2372	2601.1786
69)	C1-Chrysenes	35.01	1607450	393.7564	527.0745
70)	C2-Chrysenes	36.32	685421	167.8991	224.7464
71)	C3-Chrysenes	37.99	325350	79.6973	106.6812
72)	C4-Chrysenes	38.65	152900	37.4540	50.1352
77)	Benzo(b)fluoranthene	37.06	14467800	3029.8390	4055.6821
78)	Benzo(k,j)fluoranthene	37.14	4312780	1052.5266	1408.8911
79)	Benzo(a)fluoranthene	37.37	471162	114.9864	153.9186
80)	Benzo(e)pyrene	37.99	6588560	1418.7738	1899.1423
81)	Benzo(a)pyrene	38.19	5042060	1081.9254	1448.2438
89)	Perylene	38.50	869323	189.7610	254.0103
82)	Indeno(1,2,3-c,d)pyrene	42.77	7771080	1403.0077	1878.0381
83)	Dibenzo(a,h)anthracene	42.81	1472980	329.7810	441.4383
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.10	7627580	1584.5263	2121.0153

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	15.82	14821	10.3922	13.9108
10)	1-Methylnaphthalene	16.13	6750	5.1872	6.9435
11)	2,6-Dimethylnaphthalene	17.94	5937	4.3442	5.8151
12)	1,6,7-Trimethylnaphthalene	20.76	2326	1.7579	2.3530
27)	1-Methylfluorene	23.23	3831	3.1419	4.2057
35)	4-Methyldibenzothiophene	25.62	15193	6.9642	9.3221
36)	2/3-Methyldibenzothiophene	25.90	15835	7.2585	9.7161
37)	1-Methyldibenzothiophene	26.25	4826	2.2122	2.9611
43)	3-Methylphenanthrene	26.21	157509	71.6464	95.9045
44)	2-Methylphenanthrene	26.32	182280	82.9139	110.9869
45)	2-Methylanthracene	26.45	20486	9.3185	12.4735
46)	4/9-Methylphenanthrene	26.59	97058	44.1489	59.0968
47)	1-Methylphenanthrene	26.66	94134	42.8188	57.3164
48)	3,6-Dimethylphenanthrene	27.77	28376	11.5373	15.4436
49)	Retene	30.44	3903	3.2096	4.2963
60)	2-Methylfluoranthene	30.23	325148	127.6344	170.8488
61)	Benzo(b)fluorene	30.82	315333	118.0736	158.0510
74)	C29-Hopane	40.34	67692	42.5684	56.9812
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	41.63	74127	46.6151	62.3980
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.51	291019	150.71	91.22
21)	Acenaphthene-d10	19.33	187308	151.89	91.92
32)	Phenanthrene-d10	24.48	350973	123.45	74.71
66)	Chrysene-d12	33.57	595080	145.90	88.34
88)	Perylene-d12	38.38	616479	150.80	91.32
90)	5(b)H-Cholane	33.96	135036	169.57	102.69
	Internal Standards				
1)	Fluorene-d10	21.12	218970	165.82	
31)	Pyrene-d10	29.36	491811	165.54	
73)	Benzo(a)pyrene-d12	38.11	603210	165.34	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60147\
Data File : ARC1645.D
Acq On : 5 Sep 2013 11:56 am
Operator : YM
Sample : SED-DA-BG-004 (0-0.5)
Misc :
ALS Vial : 35 Sample Multiplier: 0.6605

Quant Time: Sep 06 08:14:14 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.118	176	218970m	251.05		0.00
31) Pyrene-d10	29.363	212	491811m	250.63		-0.03
73) Benzo(a)pyrene-d12	38.110	264	603210m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.511	136	291019m	150.71		0.00
21) Acenaphthene-d10	19.335	164	187308m	151.89		-0.03
32) Phenanthrene-d10	24.479	188	350973m	123.45		0.00
66) Chrysene-d12	33.570	240	595080m	145.90		0.00
88) Perylene-d12	38.382	264	616479m	150.80		-0.04
90) 5(b)H-Cholane	33.958	217	135036m	169.57		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.567	128	60911m	29.73		
9) 2-Methylnaphthalene	15.824	142	14821m	10.39		
10) 1-Methylnaphthalene	16.130	142	6750m	5.19		
11) 2,6-Dimethylnaphthalene	17.942	156	5937m	4.34		
12) 1,6,7-Trimethylnaphtha...	20.756	170	2326m	1.76		
13) C2-Naphthalenes	18.192	156	24208m	11.82		
14) C3-Naphthalenes	20.059	170	18669m	9.11		
15) C4-Naphthalenes	22.512	184	14838m	7.24		
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.384	154	12286m	6.40		
23) Acenaphthylene	18.861	152	61006m	25.96		
24) Acenaphthene	19.446	154	26613m	20.27		
25) Dibenzofuran	20.059	168	61742m	28.42		
26) Fluorene	21.230	166	54049m	30.75		
27) 1-Methylfluorene	23.232	180	3831m	3.14		
28) C1-Fluorenes	23.128	180	19742m	11.23		
29) C2-Fluorenes	26.073	194	39468m	22.46		
30) C3-Fluorenes	26.731	208	50530m	28.75		
33) Carbazole	25.311	167	341545m	131.36		
34) Dibenzothiophene	24.098	184	83317m	30.07		
35) 4-Methyldibenzothiophene	25.622	198	15193m	6.96		
36) 2/3-Methyldibenzothiop...	25.899	198	15835m	7.26		
37) 1-Methyldibenzothiophene	26.246	198	4826m	2.21		
38) C2-Dibenzothiophenes	27.354	212	45331m	16.36		
39) C3-Dibenzothiophenes	28.844	226	63383m	22.87		
40) C4-Dibenzothiophenes	30.610	240	43670m	15.76		
41) Phenanthrene	24.549	178	2431586m	721.71		
42) Anthracene	24.722	178	157959m	48.61		
43) 3-Methylphenanthrene	26.211	192	157509m	71.65		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60147\
Data File : ARC1645.D
Acq On : 5 Sep 2013 11:56 am
Operator : YM
Sample : SED-DA-BG-004 (0-0.5)
Misc :
ALS Vial : 35 Sample Multiplier: 0.6605

Quant Time: Sep 06 08:14:14 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.315	192	182280m	82.91		
45) 2-Methylanthracene	26.454	192	20486m	9.32		
46) 4/9-Methylphenanthrene	26.592	192	97058m	44.15		
47) 1-Methylphenanthrene	26.662	192	94134m	42.82		
48) 3,6-Dimethylphenanthrene	27.770	206	28376m	11.54		
49) Retene	30.437	234	3903m	3.21		
50) C2-Phenanthrenes/Anthr...	28.116	206	322238m	95.64		
51) C3-Phenanthrenes/Anthr...	29.675	220	237615m	70.53		
52) C4-Phenanthrenes/Anthr...	31.511	234	161813m	48.03		
53) Naphthobenzothiophene	32.716	234	1295886m	291.69		
54) C1-Naphthobenzothiophenes	33.880	248	528077m	118.87		
55) C2-Naphthobenzothiophenes	35.549	262	405745m	91.33		
56) C3-Naphthobenzothiophenes	36.635	276	331341m	74.58		
57) C4-Naphthobenzothiophenes	37.761	290	97435m	21.93		
58) Fluoranthene	28.671	202	7744917m	1995.49		
59) Pyrene	29.433	202	6452462m	1644.13		
60) 2-Methylfluoranthene	30.229	216	325148m	127.63		
61) Benzo(b)fluorene	30.818	216	315333m	118.07		
62) C1-Fluoranthenes/Pyrenes	30.576	216	2045368m	526.99		
63) C2-Fluoranthenes/Pyrenes	33.026	230	2931938m	755.42		
64) C3-Fluoranthenes/Pyrenes	33.492	244	874312m	225.27		
65) C4-Fluoranthenes/Pyrenes	33.764	258	508739m	131.08		
67) Benz(a)anthracene	33.531	228	2211246m	513.49		
68) Chrysene/Triphenylene	33.647	228	7932953m	1943.24		
69) C1-Chrysenes	35.005	242	1607446m	393.76		
70) C2-Chrysenes	36.325	256	685421m	167.90		
71) C3-Chrysenes	37.993	270	325350m	79.70		
72) C4-Chrysenes	38.653	284	152900m	37.45		
74) C29-Hopane	40.339	191	67692m	42.57		
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	41.629	191	74127m	46.62		
77) Benzo(b)fluoranthene	37.062	252	14467809m	3029.84		
78) Benzo(k,j)fluoranthene	37.140	252	4312783m	1052.53		
79) Benzo(a)fluoranthene	37.373	252	471162m	114.99		
80) Benzo(e)pyrene	37.993	252	6588556m	1418.78		
81) Benzo(a)pyrene	38.188	252	5042062m	1081.93		
82) Indeno(1,2,3-c,d)pyrene	42.773	276	7771081m	1403.01		
83) Dibenzo(a,h)anthracene	42.810	278	1472984m	329.78		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.100	276	7627580m	1584.53		
89) Perylene	38.498	252	869323m	189.76		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60147\
Data File : ARC1645.D
Acq On : 5 Sep 2013 11:56 am
Operator : YM
Sample : SED-DA-BG-004 (0-0.5)
Misc :
ALS Vial : 35 Sample Multiplier: 0.6605

Quant Time: Sep 06 08:14:14 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration

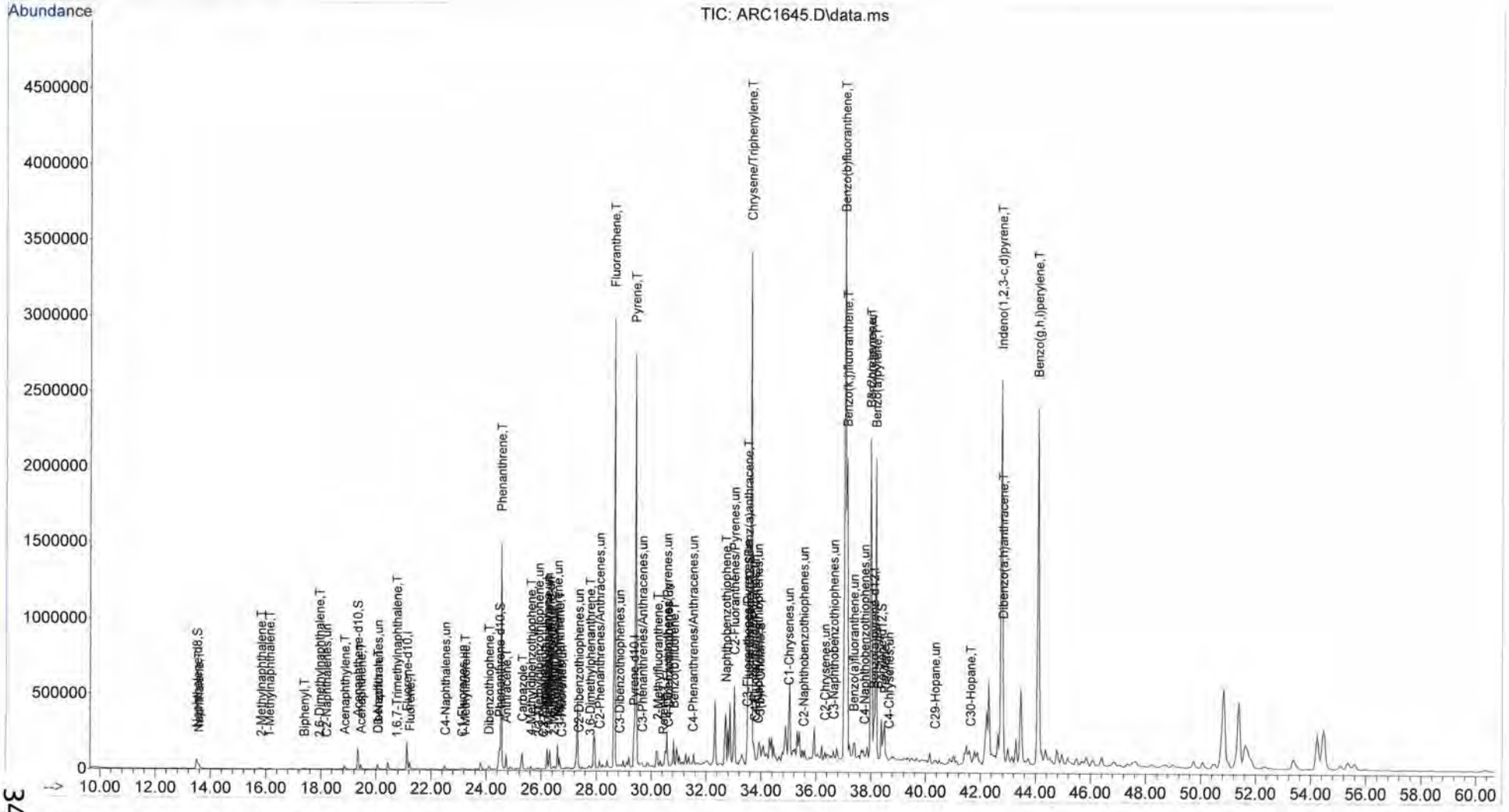
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60147\
Data File : ARC1645.D
Acq On : 5 Sep 2013 11:56 am
Operator : YM
Sample : SED-DA-BG-004 (0-0.5)
Misc :
ALS Vial : 35 Sample Multiplier: 0.6605

Quant Time: Sep 06 08:14:14 2013
Quant Method : C:\GCMS6\MS60147\AR60147.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Thu Sep 05 12:21:00 2013
Response via : Initial Calibration



Polycyclic Aromatic Hydrocarbon Raw Data

B&B LABORATORIES PAHs QA FORM

Extraction Page: ENV 3079	Analyst: Y. Miao
Client: Aracadis Mayflower	Date: 9/11/2013
Job: #: J13034	Project Quality Manager: W Judd
SDG #: various	Date: 09/12/13

Initial Calibration: No failures	ICV No failures
Surrogate Recoveries:	d12-Perylene was outside of laboratory QC %recovery limits due to matrix effect in seven client and three internal QC samples that used client submitted sediments see narrative
Procedural Blank:	No failures
Blank Spike:	NA
Blank Spike Duplicate:	NA
Laboratory Duplicate:	No failures
Matrix Spike:	four failures due to matrix effect - see narrative
Matirx Spike Duplicate:	four failures due to matrix effect - see narrative
SRM/LCS (Solution, Tissue, Sediment):	Sediment (1941b) no failures
CCC (from a second source):	No failures
SRM-2279 Reference Oil	2-Methylphenanthrene was outside lab %RPD limits
Mass Discrimination Check (benzo(ghi)perylene/phenanthrene >0.7)	No failures

Sequence Name: C:\msdchem\1\sequence\MS60141.S
Comment: Arcadis-Mayflower AR-Sediments-PAH (08/15/13)
Operator: YM
Data Path: C:\MSDCHEM\1\DATA\MS60141\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line		Sample Name	Misc Info	
1)	Sample 1	MS60141A	PAH-2012	Solvent rinse
2)	Sample 2	MS60141B	PAH-2012	AR-WKC1-020-030
3)	Sample 3	MS60141C	PAH-2012	AR-WKC2-100-030
4)	Sample 4	MS60141D	PAH-2012	AR-WKC3-250-030
5)	Sample 5	MS60141E	PAH-2012	AR-WKC4-500-030
6)	Sample 6	MS60141F	PAH-2012	AR-WKC5-1000-030
7)	Sample 7	MS60141G	PAH-2012	AR-WKC6-5000-030
8)	Sample 8	MS60141H	PAH-2012	AR-WKISSU-250-002
9)	Sample 9	MS60141I	PAH-2012	AR-WKICV-250-004
10)	Sample 10	MS60141J	PAH-2012	AR-WKCC-250-038
11)	Sample 11	MS60141K	PAH-2012	AR-SRM2779-WK-4.0-002
12)	Sample 12	ENV3079A	PAH-2012	
13)	Sample 13	ENV3079B	PAH-2012	
14)	Sample 14	ENV3079C	PAH-2012	
15)	Sample 15	ENV3079D	PAH-2012	
16)	Sample 16	ENV3079E	PAH-2012	
17)	Sample 18	ARC1602	PAH-2012	
18)	Sample 19	MS60141L	PAH-2012	AR-WKCC-250-038
19)	Sample 20	ARC1603	PAH-2012	
20)	Sample 21	ARC1611	PAH-2012	
21)	Sample 22	ARC1612	PAH-2012	
22)	Sample 23	ARC1616	PAH-2012	
23)	Sample 24	ARC1617	PAH-2012	
24)	Sample 25	ARC1633	PAH-2012	
25)	Sample 26	ARC1634	PAH-2012	
26)	Sample 27	ARC1637	PAH-2012	
27)	Sample 28	MS60141M	PAH-2012	AR-WKCC-250-038
28)	Sample 29	ARC1638	PAH-2012	
29)	Sample 30	ARC1639	PAH-2012	
30)	Sample 31	ARC1640	PAH-2012	
31)	Sample 32	ARC1645	PAH-2012	—Dilute 10×, reinject on MS60147 (9/5/13)
32)	Sample 33	ARC1646	PAH-2012	
33)	Sample 34	ARC1647	PAH-2012	
34)	Sample 35	ARC1653	PAH-2012	
35)	Sample 17	ARC1597	PAH-2012	—No analyze requested
36)	Sample 36	MS60141N	PAH-2012	AR-WKCC-250-038

Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60141\
Data File : MS60141J.D
Acq On : 15 Aug 2013 9:36 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 21 13:29:50 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorene-d10	1.000	1.000	0.0	87	0.00
2	S	Naphthalene-d8	1.746	1.654	5.3	88	0.00
3	T	cis/trans Decalin	0.305	0.309	-1.3	92	0.00
4	un	C1-Decalins	0.305	0.000	100.0#	0#	-12.26#
5	un	C2-Decalins	0.305	0.000	100.0#	0#	-13.32#
6	un	C3-Decalins	0.305	0.000	100.0#	0#	-16.07#
7	un	C4-Decalins	0.305	0.000	100.0#	0#	-18.78#
8	T	Naphthalene	1.883	1.801	4.4	88	0.00
9	T	2-Methylnaphthalene	1.221	1.139	6.7	87	-0.03
10	T	1-Methylnaphthalene	1.126	1.074	4.6	89	-0.03
11	T	2,6-Dimethylnaphthalene	1.114	1.024	8.1	87	0.00
12	T	1,6,7-Trimethylnaphthalene	0.995	0.927	6.8	87	-0.03
13	un	C2-Naphthalenes	1.883	0.000	100.0#	0#	-18.50#
14	un	C3-Naphthalenes	1.883	0.000	100.0#	0#	-20.28#
15	un	C4-Naphthalenes	1.883	0.000	100.0#	0#	-21.90#
16	T	Benzothiophene	1.495	1.445	3.3	89	0.00
17	un	C1-Benzothiophenes	1.495	0.000	100.0#	0#	-15.41#
18	un	C2-Benzothiophenes	1.495	0.000	100.0#	0#	-18.16#
19	un	C3-Benzothiophenes	1.495	0.000	100.0#	0#	-20.23#
20	un	C4-Benzothiophenes	1.495	0.000	100.0#	0#	-22.20#
21	S	Acenaphthene-d10	0.968	0.884	8.7	86	0.00
22	T	Biphenyl	1.604	1.482	7.6	87	0.00
23	T	Acenaphthylene	1.837	1.624	11.6	83	0.00
24	T	Acenaphthene	1.049	0.978	6.8	87	-0.03
25	T	Dibenzofuran	1.772	1.625	8.3	87	0.00
26	T	Fluorene	1.398	1.286	8.0	86	0.00
27	T	1-Methylfluorene	0.751	0.646	14.0	84	-0.03
28	un	C1-Fluorenes	1.398	0.000	100.0#	0#	-23.47#
29	un	C2-Fluorenes	1.398	0.000	100.0#	0#	-25.34#
30	un	C3-Fluorenes	1.398	0.000	100.0#	0#	-26.80#
31	I	Pyrene-d10	1.000	1.000	0.0	80	0.00
32	S	Phenanthrene-d10	0.831	0.885	-6.5	91	0.00
33	T	Carbazole	0.857	0.894	-4.3	88	0.00
34	T	Dibenzothiophene	0.999	1.087	-8.8	91	0.00
35	T	4-Methyldibenzothiophene	0.787	0.712	9.5	81	0.00
36	un	2/3-Methyldibenzothiophene	0.787	0.000	100.0#	0#	-26.14#
37	un	1-Methyldibenzothiophene	0.787	0.000	100.0#	0#	-26.49#
38	un	C2-Dibenzothiophenes	0.999	0.000	100.0#	0#	-27.25#
39	un	C3-Dibenzothiophenes	0.999	0.000	100.0#	0#	-28.77#
40	un	C4-Dibenzothiophenes	0.999	0.000	100.0#	0#	-30.44#
41	T	Phenanthrene	1.000	0.949	5.1	85	0.00
42	T	Anthracene	0.942	0.865	8.2	84	0.00
43	un	3-Methylphenanthrene	0.861	0.000	100.0#	0#	-26.70#
44	un	2-Methylphenanthrene	0.861	0.000	100.0#	0#	-26.90#
45	un	2-Methylanthracene	0.861	0.000	100.0#	0#	-26.90#
46	un	4/9-Methylphenanthrene	0.861	0.000	100.0#	0#	-26.90#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60141\
Data File : MS60141J.D
Acq On : 15 Aug 2013 9:36 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 21 13:29:50 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
47	T	1-Methylphenanthrene	0.861	0.851	1.2	85	0.00
48	T	3,6-Dimethylphenanthrene	0.689	0.714	-3.6	89	0.00
49	T	Retene	0.368	0.316	14.1	80	0.00
50	un	C2-Phenanthrenes/Anthracene	1.000	0.000	100.0#	0#	-28.53#
51	un	C3-Phenanthrenes/Anthracene	1.000	0.000	100.0#	0#	-29.40#
52	un	C4-Phenanthrenes/Anthracene	1.000	0.000	100.0#	0#	-32.03#
53	T	Naphthobenzothiophene	1.351	1.214	10.1	82	0.00
54	un	C1-Naphthobenzothiophenes	1.351	0.000	100.0#	0#	-34.23#
55	un	C2-Naphthobenzothiophenes	1.351	0.000	100.0#	0#	-35.82#
56	un	C3-Naphthobenzothiophenes	1.351	0.000	100.0#	0#	-37.18#
57	un	C4-Naphthobenzothiophenes	1.351	0.000	100.0#	0#	-37.72#
58	T	Fluoranthene	1.121	1.166	-4.0	89	0.00
59	T	Pyrene	1.388	1.291	7.0	82	0.00
60	T	2-Methylfluoranthene	0.874	0.756	13.5	80	0.00
61	T	Benzo(b)fluorene	0.746	0.646	13.4	82	-0.03
62	un	C1-Fluoranthenes/Pyrenes	1.121	0.000	100.0#	0#	-30.68#
63	un	C2-Fluoranthenes/Pyrenes	1.121	0.000	100.0#	0#	-32.13#
64	un	C3-Fluoranthenes/Pyrenes	1.121	0.000	100.0#	0#	-33.80#
65	un	C4-Fluoranthenes/Pyrenes	1.121	0.000	100.0#	0#	-35.47#
66	S	Chrysene-d12	1.195	1.180	1.3	84	0.00
67	T	Benz(a)anthracene	1.239	1.086	12.3	80	0.00
68	T	Chrysene/Triphenylene	1.333	1.348	-1.1	85	0.00
69	un	C1-Chrysenes	1.333	0.000	100.0#	0#	-35.39#
70	un	C2-Chrysenes	1.333	0.000	100.0#	0#	-36.05#
71	un	C3-Chrysenes	1.333	0.000	100.0#	0#	-38.11#
72	un	C4-Chrysenes	1.333	0.000	100.0#	0#	-39.43#
73	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	82	0.00
74	un	C29-Hopane	0.405	0.000	100.0#	0#	-41.04#
75	un	18a-Oleanane	0.405	0.000	100.0#	0#	-41.85#
76	T	C30-Hopane	0.405	0.390	3.7	85	0.00
77	T	Benzo(b)fluoranthene	1.513	1.423	5.9	83	0.00
78	T	Benzo(k,j)fluoranthene	1.335	1.286	3.7	83	0.00
79	un	Benzo(a)fluoranthene	1.335	0.000	100.0#	0#	-37.41#
80	T	Benzo(e)pyrene	1.372	1.302	5.1	85	0.00
81	T	Benzo(a)pyrene	1.354	1.266	6.5	81	0.00
82	T	Indeno(1,2,3-c,d)pyrene	1.290	1.156	10.4	81	0.00
83	T	Dibenzo(a,h)anthracene	1.028	0.922	10.3	82	0.00
84	un	C1-Dibenzo(a,h)anthracenes	1.028	0.000	100.0#	0#	-48.89#
85	un	C2-Dibenzo(a,h)anthracenes	1.028	0.000	100.0#	0#	-50.33#
86	un	C3-Dibenzo(a,h)anthracenes	1.028	0.000	100.0#	0#	-50.89#
87	T	Benzo(g,h,i)perylene	1.041	0.950	8.7	82	0.00
88	S	Perylene-d12	1.134	1.020	10.1	81	0.00
89	T	Perylene	1.393	1.319	5.3	84	0.00
90	S	5(b)H-Cholane	0.224	0.207	7.6	81	0.00
91	un	C20-TAS	1.773	0.000	100.0#	0#	-33.10#
92	un	C21-TAS	1.773	0.000	100.0#	0#	-34.23#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60141\
Data File : MS60141J.D
Acq On : 15 Aug 2013 9:36 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 21 13:29:50 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
93 un	C26(20S)-TAS	1.773	0.000	100.0#	0#	-38.69#
94 T	C26(20R)/C27(20S)-TAS	1.773	1.632	8.0	81	0.00
95 un	C28(20S)-TAS	1.773	0.000	100.0#	0#	-39.85#
96 un	C27(20R)-TAS	1.773	0.000	100.0#	0#	-40.63#
97 un	C28(20R)-TAS	1.773	0.000	100.0#	0#	-41.56#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60141\
Data File : MS60141J.D
Acq On : 15 Aug 2013 9:36 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 21 13:29:50 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.370	176	179145m	251.05		0.00
31) Pyrene-d10	29.606	212	320540m	250.63		0.00
73) Benzo(a)pyrene-d12	38.380	264	290899m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.735	136	295171m	236.88		0.00
21) Acenaphthene-d10	19.587	164	157840m	228.44		0.00
32) Phenanthrene-d10	24.688	188	283150m	266.41		0.00
66) Chrysene-d12	33.800	240	377473m	246.96		0.00
88) Perylene-d12	38.690	264	296344m	224.96		0.00
90) 5(b)H-Cholane	34.188	217	60127m	231.04		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	11.088	138	54517m	250.10		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.791	128	321300m	239.14		
9) 2-Methylnaphthalene	16.020	142	203431m	233.43		
10) 1-Methylnaphthalene	16.354	142	191406m	238.31		
11) 2,6-Dimethylnaphthalene	18.138	156	182633m	229.76		
12) 1,6,7-Trimethylnaphtha...	20.980	170	165378m	232.90		
13) C2-Naphthalenes	0.000		0	N.D.		
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.		
16) Benzothiophene	13.958	134	256276m	240.19		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.608	154	262004m	228.85		
23) Acenaphthylene	19.085	152	287377m	219.23		
24) Acenaphthene	19.670	154	174906m	233.75		
25) Dibenzofuran	20.283	168	288507m	228.12		
26) Fluorene	21.454	166	229932m	230.49		
27) 1-Methylfluorene	23.441	180	116127m	216.75		
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.519	167	283417m	258.64		
34) Dibenzothiophene	24.341	184	342759m	268.35		
35) 4-Methyldibenzothiophene	25.865	198	229612m	228.18		
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.	d	
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.792	178	300793m	235.10		
42) Anthracene	24.965	178	277378m	230.19		

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60141\
Data File : MS60141J.D
Acq On : 15 Aug 2013 9:36 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 21 13:29:50 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d	
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.905	192	269200m	244.51		
48) 3,6-Dimethylphenanthrene	27.978	206	228604m	259.52		
49) Retene	30.680	234	90340m	191.69		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	32.947	234	390534m	225.97		
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.879	202	373146m	260.28		
59) Pyrene	29.676	202	412925m	232.64		
60) 2-Methylfluoranthene	30.438	216	243417m	217.73		
61) Benzo(b)fluorene	31.027	216	208372m	218.28		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.762	228	346586m	218.70		
68) Chrysene/Triphenylene	33.878	228	428353m	251.19		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.734	191	113329m	240.69		
77) Benzo(b)fluoranthene	37.293	252	414353m	235.65		
78) Benzo(k,j)fluoranthene	37.371	252	372143m	239.91		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.263	252	376805m	236.25		
81) Benzo(a)pyrene	38.457	252	367130m	233.32		
82) Indeno(1,2,3-c,d)pyrene	43.140	276	330180m	220.32		
83) Dibenzo(a,h)anthracene	43.214	278	265384m	222.15		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.505	276	273581m	226.24		
89) Perylene	38.768	252	383679m	237.06		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.388	231	474125m	230.12		
95) C28(20S)-TAS	0.000		0	N.D.		
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60141\
Data File : MS60141J.D
Acq On : 15 Aug 2013 9:36 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 21 13:29:50 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

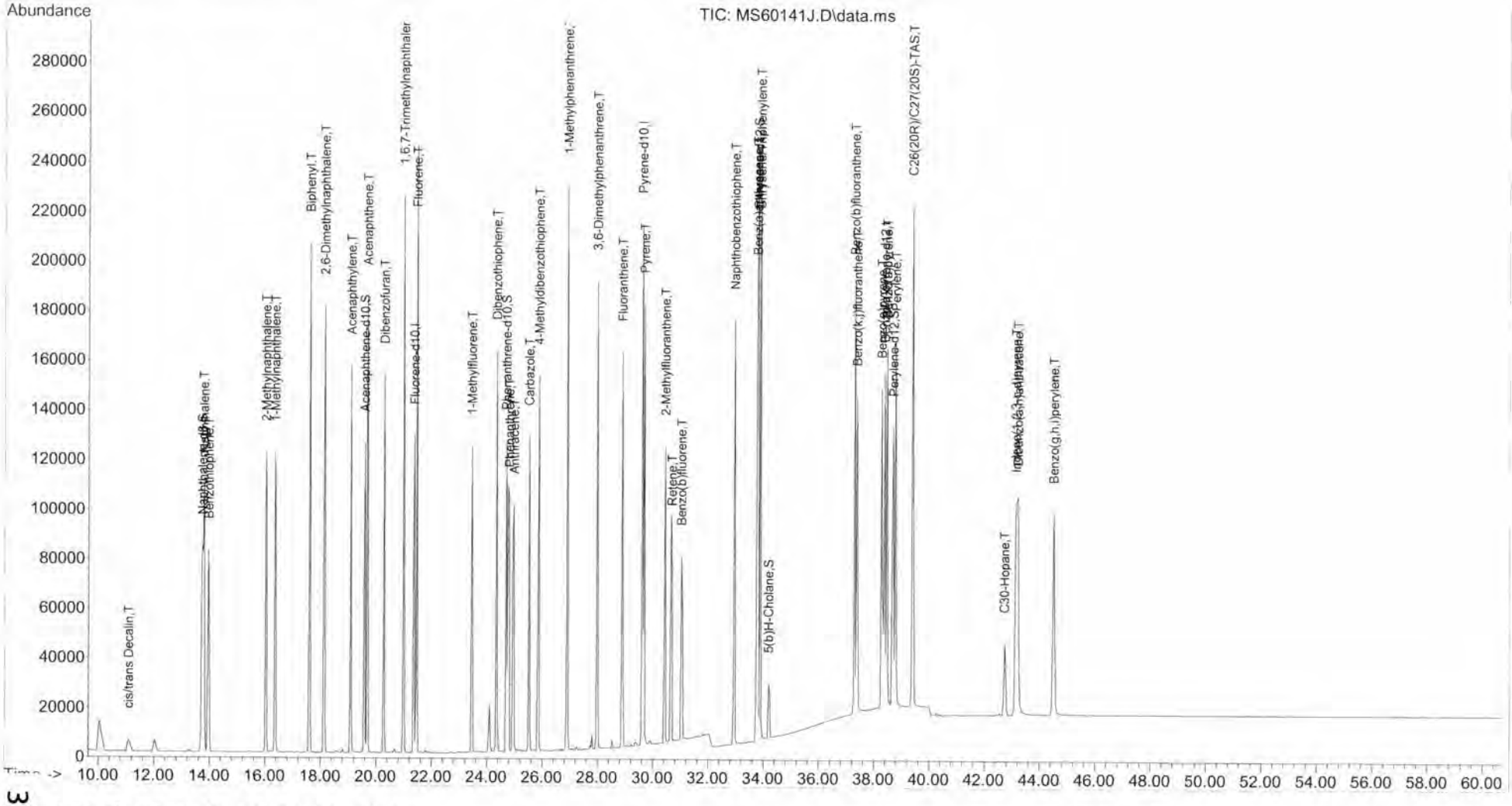
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60141\
Data File : MS60141J.D
Acq On : 15 Aug 2013 9:36 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Aug 21 13:29:50 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60141\
Data File : MS60141L.D
Acq On : 16 Aug 2013 6:50 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 17 06:33:48 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorene-d10	1.000	1.000	0.0	89	-0.03
2	S	Naphthalene-d8	1.746	1.627	6.8	89	-0.03
3	T	cis/trans Decalin	0.305	0.315	-3.3	96	0.00
4	un	C1-Decalins	0.305	0.000	100.0#	0#	-12.26#
5	un	C2-Decalins	0.305	0.000	100.0#	0#	-13.32#
6	un	C3-Decalins	0.305	0.000	100.0#	0#	-16.07#
7	un	C4-Decalins	0.305	0.000	100.0#	0#	-18.78#
8	T	Naphthalene	1.883	1.749	7.1	88	0.00
9	T	2-Methylnaphthalene	1.221	1.144	6.3	90	-0.03
10	T	1-Methylnaphthalene	1.126	1.051	6.7	89	-0.03
11	T	2,6-Dimethylnaphthalene	1.114	1.006	9.7	88	0.00
12	T	1,6,7-Trimethylnaphthalene	0.995	0.966	2.9	93	-0.03
13	un	C2-Naphthalenes	1.883	0.000	100.0#	0#	-18.50#
14	un	C3-Naphthalenes	1.883	0.000	100.0#	0#	-20.28#
15	un	C4-Naphthalenes	1.883	0.000	100.0#	0#	-21.90#
16	T	Benzothiophene	1.495	1.398	6.5	88	0.00
17	un	C1-Benzothiophenes	1.495	0.000	100.0#	0#	-15.41#
18	un	C2-Benzothiophenes	1.495	0.000	100.0#	0#	-18.16#
19	un	C3-Benzothiophenes	1.495	0.000	100.0#	0#	-20.23#
20	un	C4-Benzothiophenes	1.495	0.000	100.0#	0#	-22.20#
21	S	Acenaphthene-d10	0.968	0.895	7.5	89	-0.03
22	T	Biphenyl	1.604	1.443	10.0	87	0.00
23	T	Acenaphthylene	1.837	1.751	4.7	92	0.00
24	T	Acenaphthene	1.049	1.006	4.1	92	-0.03
25	T	Dibenzofuran	1.772	1.581	10.8	87	0.00
26	T	Fluorene	1.398	1.311	6.2	90	0.00
27	T	1-Methylfluorene	0.751	0.693	7.7	93	-0.04
28	un	C1-Fluorenes	1.398	0.000	100.0#	0#	-23.47#
29	un	C2-Fluorenes	1.398	0.000	100.0#	0#	-25.34#
30	un	C3-Fluorenes	1.398	0.000	100.0#	0#	-26.80#
31	I	Pyrene-d10	1.000	1.000	0.0	99	0.00
32	S	Phenanthrene-d10	0.831	0.758	8.8	97	0.00
33	T	Carbazole	0.857	0.837	2.3	102	0.00
34	T	Dibenzothiophene	0.999	0.933	6.6	96	0.00
35	T	4-Methyldibenzothiophene	0.787	0.625	20.6	88	0.00
36	un	2/3-Methyldibenzothiophene	0.787	0.000	100.0#	0#	-26.14#
37	un	1-Methyldibenzothiophene	0.787	0.000	100.0#	0#	-26.49#
38	un	C2-Dibenzothiophenes	0.999	0.000	100.0#	0#	-27.25#
39	un	C3-Dibenzothiophenes	0.999	0.000	100.0#	0#	-28.77#
40	un	C4-Dibenzothiophenes	0.999	0.000	100.0#	0#	-30.44#
41	T	Phenanthrene	1.000	0.818	18.2	91	-0.04
42	T	Anthracene	0.942	0.781	17.1	94	0.00
43	un	3-Methylphenanthrene	0.861	0.000	100.0#	0#	-26.70#
44	un	2-Methylphenanthrene	0.861	0.000	100.0#	0#	-26.90#
45	un	2-Methylanthracene	0.861	0.000	100.0#	0#	-26.90#
46	un	4/9-Methylphenanthrene	0.861	0.000	100.0#	0#	-26.90#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60141\
Data File : MS60141L.D
Acq On : 16 Aug 2013 6:50 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 17 06:33:48 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
47	T	1-Methylphenanthrene	0.861	0.766	11.0	94	0.00
48	T	3,6-Dimethylphenanthrene	0.689	0.681	1.2	105	0.00
49	T	Retene	0.368	0.294	20.1	92	0.00
50	un	C2-Phenanthrenes/Anthracene	1.000	0.000	100.0#	0#	-28.53#
51	un	C3-Phenanthrenes/Anthracene	1.000	0.000	100.0#	0#	-29.40#
52	un	C4-Phenanthrenes/Anthracene	1.000	0.000	100.0#	0#	-32.03#
53	T	Naphthobenzothiophene	1.351	1.045	22.6	88	0.00
54	un	C1-Naphthobenzothiophenes	1.351	0.000	100.0#	0#	-34.23#
55	un	C2-Naphthobenzothiophenes	1.351	0.000	100.0#	0#	-35.82#
56	un	C3-Naphthobenzothiophenes	1.351	0.000	100.0#	0#	-37.18#
57	un	C4-Naphthobenzothiophenes	1.351	0.000	100.0#	0#	-37.72#
58	T	Fluoranthene	1.121	1.085	3.2	102	0.00
59	T	Pyrene	1.388	1.142	17.7	90	0.00
60	T	2-Methylfluoranthene	0.874	0.726	16.9	95	0.00
61	T	Benzo(b)fluorene	0.746	0.640	14.2	101	-0.04
62	un	C1-Fluoranthenes/Pyrenes	1.121	0.000	100.0#	0#	-30.68#
63	un	C2-Fluoranthenes/Pyrenes	1.121	0.000	100.0#	0#	-32.13#
64	un	C3-Fluoranthenes/Pyrenes	1.121	0.000	100.0#	0#	-33.80#
65	un	C4-Fluoranthenes/Pyrenes	1.121	0.000	100.0#	0#	-35.47#
66	S	Chrysene-d12	1.195	1.020	14.6	90	0.00
67	T	Benz(a)anthracene	1.239	0.972	21.5	89	0.00
68	T	Chrysene/Triphenylene	1.333	1.249	6.3	97	0.00
69	un	C1-Chrysenes	1.333	0.000	100.0#	0#	-35.39#
70	un	C2-Chrysenes	1.333	0.000	100.0#	0#	-36.05#
71	un	C3-Chrysenes	1.333	0.000	100.0#	0#	-38.11#
72	un	C4-Chrysenes	1.333	0.000	100.0#	0#	-39.43#
73	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	95	0.00
74	un	C29-Hopane	0.405	0.000	100.0#	0#	-41.04#
75	un	18a-Oleanane	0.405	0.000	100.0#	0#	-41.85#
76	T	C30-Hopane	0.405	0.414	-2.2	105	0.00
77	T	Benzo(b)fluoranthene	1.513	1.473	2.6	100	0.00
78	T	Benzo(k,j)fluoranthene	1.335	1.375	-3.0	103	0.00
79	un	Benzo(a)fluoranthene	1.335	0.000	100.0#	0#	-37.41#
80	T	Benzo(e)pyrene	1.372	1.380	-0.6	105	0.00
81	T	Benzo(a)pyrene	1.354	1.313	3.0	98	0.00
82	T	Indeno(1,2,3-c,d)pyrene	1.290	1.175	8.9	96	0.00
83	T	Dibenzo(a,h)anthracene	1.028	0.924	10.1	95	0.00
84	un	C1-Dibenzo(a,h)anthracenes	1.028	0.000	100.0#	0#	-48.89#
85	un	C2-Dibenzo(a,h)anthracenes	1.028	0.000	100.0#	0#	-50.33#
86	un	C3-Dibenzo(a,h)anthracenes	1.028	0.000	100.0#	0#	-50.89#
87	T	Benzo(g,h,i)perylene	1.041	0.948	8.9	95	0.00
88	S	Perylene-d12	1.134	1.044	7.9	97	0.00
89	T	Perylene	1.393	1.320	5.2	98	0.00
90	S	5(b)H-Cholane	0.224	0.239	-6.7	109	0.00
91	un	C20-TAS	1.773	0.000	100.0#	0#	-33.10#
92	un	C21-TAS	1.773	0.000	100.0#	0#	-34.23#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60141\
Data File : MS60141L.D
Acq On : 16 Aug 2013 6:50 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 17 06:33:48 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
93 un	C26(20S)-TAS	1.773	0.000	100.0#	0#	-38.69#
94 T	C26(20R)/C27(20S)-TAS	1.773	1.814	-2.3	105	0.00
95 un	C28(20S)-TAS	1.773	0.000	100.0#	0#	-39.85#
96 un	C27(20R)-TAS	1.773	0.000	100.0#	0#	-40.63#
97 un	C28(20R)-TAS	1.773	0.000	100.0#	0#	-41.56#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60141\
Data File : MS60141L.D
Acq On : 16 Aug 2013 6:50 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 17 06:33:48 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.344	176	183644m	251.05		-0.03
31) Pyrene-d10	29.606	212	396860m	250.63		0.00
73) Benzo(a)pyrene-d12	38.381	264	338370m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.709	136	297744m	233.09		-0.03
21) Acenaphthene-d10	19.561	164	163821m	231.29		-0.03
32) Phenanthrene-d10	24.687	188	300352m	228.25		0.00
66) Chrysene-d12	33.802	240	403704m	213.33		0.00
88) Perylene-d12	38.691	264	352942m	230.33		0.00
90) 5(b)H-Cholane	34.190	217	80698m	266.58		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	11.089	138	56980m	254.99		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.792	128	319802m	232.19		
9) 2-Methylnaphthalene	16.022	142	209341m	234.33		
10) 1-Methylnaphthalene	16.356	142	191946m	233.13		
11) 2,6-Dimethylnaphthalene	18.139	156	184023m	225.84		
12) 1,6,7-Trimethylnaphtha...	20.982	170	176667m	242.70		
13) C2-Naphthalenes	0.000		0	N.D.		
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.		
16) Benzothiophene	13.960	134	254137m	232.35		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.610	154	261455m	222.77		
23) Acenaphthylene	19.087	152	317662m	236.40		
24) Acenaphthene	19.672	154	184397m	240.39		
25) Dibenzofuran	20.285	168	287666m	221.89		
26) Fluorene	21.455	166	240315m	235.00		
27) 1-Methylfluorene	23.440	180	127720m	232.54		
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.518	167	328166m	241.89		
34) Dibenzothiophene	24.340	184	363991m	230.17		
35) 4-Methyldibenzothiophene	25.865	198	249579m	200.33		
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.	d	
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.756	178	320797m	202.51		
42) Anthracene	24.964	178	310015m	207.80		

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60141\
Data File : MS60141L.D
Acq On : 16 Aug 2013 6:50 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 17 06:33:48 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d	
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.904	192	299921m	220.03		
48) 3,6-Dimethylphenanthrene	27.978	206	269959m	247.53		
49) Retene	30.679	234	103840m	177.96		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.		
53) Naphthobenzothiophene	32.948	234	416075m	194.45		
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.878	202	429762m	242.13		
59) Pyrene	29.675	202	451897m	205.64		
60) 2-Methylfluoranthene	30.437	216	289515m	209.16		
61) Benzo(b)fluorene	31.026	216	255753m	216.39		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.763	228	383828m	195.62		
68) Chrysene/Triphenylene	33.879	228	491480m	232.78		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.735	191	140002m	255.62		
77) Benzo(b)fluoranthene	37.294	252	498773m	243.87		
78) Benzo(k,j)fluoranthene	37.372	252	462712m	256.44		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.265	252	464398m	250.33		
81) Benzo(a)pyrene	38.459	252	442859m	241.96		
82) Indeno(1,2,3-c,d)pyrene	43.141	276	390427m	223.97		
83) Dibenzo(a,h)anthracene	43.215	278	309441m	222.69		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.505	276	317462m	225.70		
89) Perylene	38.769	252	446381m	237.11		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.390	231	613019m	255.79		
95) C28(20S)-TAS	0.000		0	N.D.		
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60141\
Data File : MS60141L.D
Acq On : 16 Aug 2013 6:50 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 17 06:33:48 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

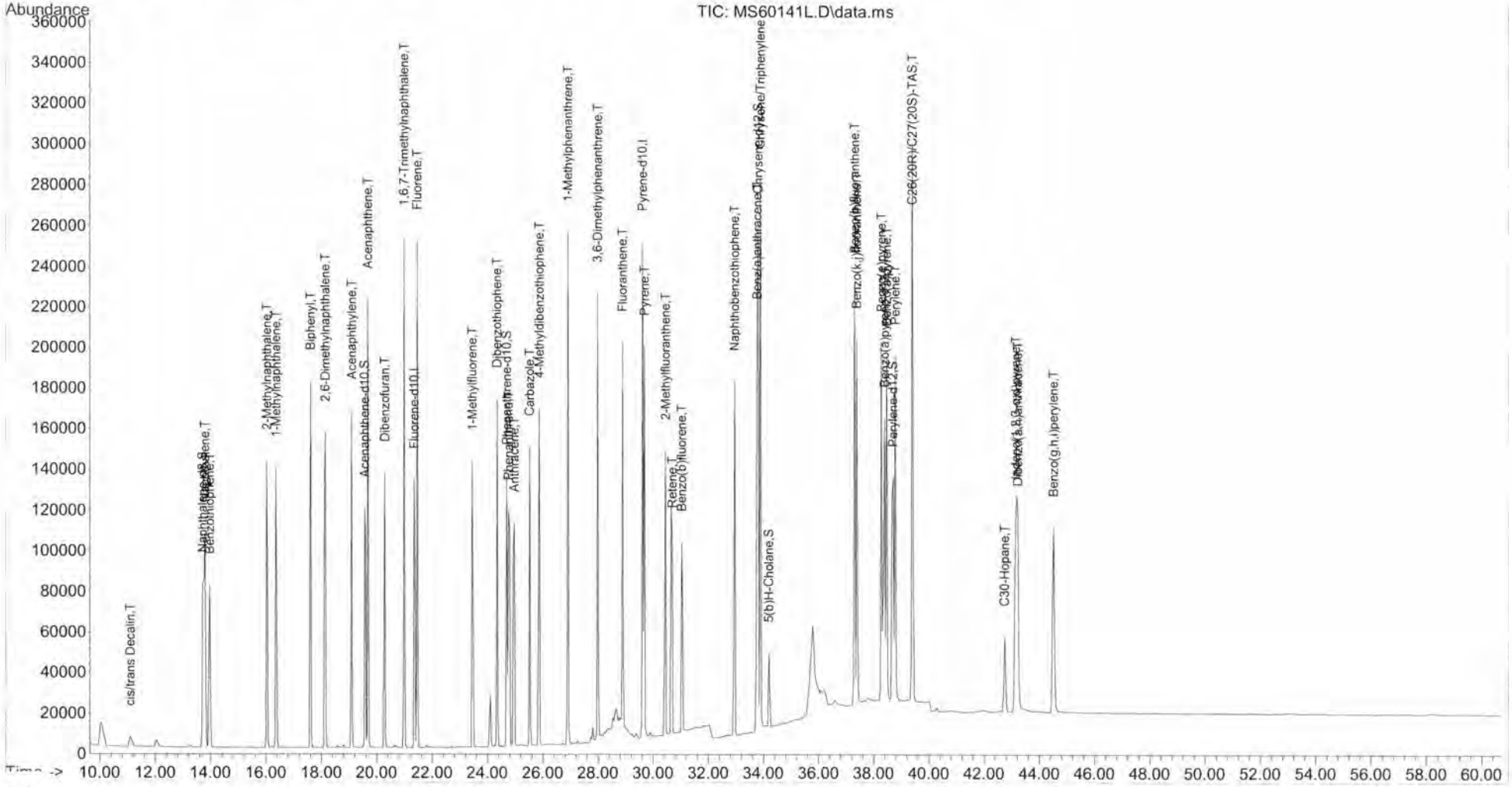
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60141\
Data File : MS60141L.D
Acq On : 16 Aug 2013 6:50 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Aug 17 06:33:48 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60141\
Data File : MS60141M.D
Acq On : 16 Aug 2013 5:14 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Aug 17 06:23:48 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorene-d10	1.000	1.000	0.0	89	0.00
2	S	Naphthalene-d8	1.746	1.528	12.5	83	0.00
3	T	cis/trans Decalin	0.305	0.273	10.5	83	0.00
4	un	C1-Decalins	0.305	0.000	100.0#	0#	-12.26#
5	un	C2-Decalins	0.305	0.000	100.0#	0#	-13.32#
6	un	C3-Decalins	0.305	0.000	100.0#	0#	-16.07#
7	un	C4-Decalins	0.305	0.000	100.0#	0#	-18.78#
8	T	Naphthalene	1.883	1.656	12.1	83	0.00
9	T	2-Methylnaphthalene	1.221	1.080	11.5	85	0.00
10	T	1-Methylnaphthalene	1.126	1.005	10.7	85	0.00
11	T	2,6-Dimethylnaphthalene	1.114	0.999	10.3	87	0.00
12	T	1,6,7-Trimethylnaphthalene	0.995	0.911	8.4	88	0.00
13	un	C2-Naphthalenes	1.883	0.000	100.0#	0#	-18.50#
14	un	C3-Naphthalenes	1.883	0.000	100.0#	0#	-20.28#
15	un	C4-Naphthalenes	1.883	0.000	100.0#	0#	-21.90#
16	T	Benzothiophene	1.495	1.321	11.6	83	0.00
17	un	C1-Benzothiophenes	1.495	0.000	100.0#	0#	-15.41#
18	un	C2-Benzothiophenes	1.495	0.000	100.0#	0#	-18.16#
19	un	C3-Benzothiophenes	1.495	0.000	100.0#	0#	-20.23#
20	un	C4-Benzothiophenes	1.495	0.000	100.0#	0#	-22.20#
21	S	Acenaphthene-d10	0.968	0.871	10.0	87	0.00
22	T	Biphenyl	1.604	1.441	10.2	87	0.00
23	T	Acenaphthylene	1.837	1.686	8.2	89	0.00
24	T	Acenaphthene	1.049	0.959	8.6	88	0.00
25	T	Dibenzofuran	1.772	1.603	9.5	88	0.00
26	T	Fluorene	1.398	1.274	8.9	88	0.00
27	T	1-Methylfluorene	0.751	0.671	10.7	90	0.00
28	un	C1-Fluorenes	1.398	0.000	100.0#	0#	-23.47#
29	un	C2-Fluorenes	1.398	0.000	100.0#	0#	-25.34#
30	un	C3-Fluorenes	1.398	0.000	100.0#	0#	-26.80#
31	I	Pyrene-d10	1.000	1.000	0.0	91	0.00
32	S	Phenanthrene-d10	0.831	0.758	8.8	90	0.00
33	T	Carbazole	0.857	0.817	4.7	92	0.00
34	T	Dibenzothiophene	0.999	0.932	6.7	89	0.00
35	T	4-Methyldibenzothiophene	0.787	0.714	9.3	93	0.00
36	un	2/3-Methyldibenzothiophene	0.787	0.000	100.0#	0#	-26.14#
37	un	1-Methyldibenzothiophene	0.787	0.000	100.0#	0#	-26.49#
38	un	C2-Dibenzothiophenes	0.999	0.000	100.0#	0#	-27.25#
39	un	C3-Dibenzothiophenes	0.999	0.000	100.0#	0#	-28.77#
40	un	C4-Dibenzothiophenes	0.999	0.000	100.0#	0#	-30.44#
41	T	Phenanthrene	1.000	0.880	12.0	91	0.00
42	T	Anthracene	0.942	0.835	11.4	93	0.00
43	un	3-Methylphenanthrene	0.861	0.000	100.0#	0#	-26.70#
44	un	2-Methylphenanthrene	0.861	0.000	100.0#	0#	-26.90#
45	un	2-Methylanthracene	0.861	0.000	100.0#	0#	-26.90#
46	un	4/9-Methylphenanthrene	0.861	0.000	100.0#	0#	-26.90#

Data Path : C:\GCMS6\MS60141\
Data File : MS60141M.D
Acq On : 16 Aug 2013 5:14 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Aug 17 06:23:48 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
47	T	1-Methylphenanthrene	0.861	0.804	6.6	92	0.00
48	T	3,6-Dimethylphenanthrene	0.689	0.646	6.2	93	0.00
49	T	Retene	0.368	0.336	8.7	98	0.00
50	un	C2-Phenanthrenes/Anthracene	1.000	0.000	100.0#	0#	-28.53#
51	un	C3-Phenanthrenes/Anthracene	1.000	0.000	100.0#	0#	-29.40#
52	un	C4-Phenanthrenes/Anthracene	1.000	0.000	100.0#	0#	-32.03#
53	T	Naphthobenzothiophene	1.351	1.268	6.1	99	0.00
54	un	C1-Naphthobenzothiophenes	1.351	0.000	100.0#	0#	-34.23#
55	un	C2-Naphthobenzothiophenes	1.351	0.000	100.0#	0#	-35.82#
56	un	C3-Naphthobenzothiophenes	1.351	0.000	100.0#	0#	-37.18#
57	un	C4-Naphthobenzothiophenes	1.351	0.000	100.0#	0#	-37.72#
58	T	Fluoranthene	1.121	1.044	6.9	91	0.00
59	T	Pyrene	1.388	1.295	6.7	94	0.00
60	T	2-Methylfluoranthene	0.874	0.830	5.0	100	0.00
61	T	Benzo(b)fluorene	0.746	0.656	12.1	96	0.00
62	un	C1-Fluoranthenes/Pyrenes	1.121	0.000	100.0#	0#	-30.68#
63	un	C2-Fluoranthenes/Pyrenes	1.121	0.000	100.0#	0#	-32.13#
64	un	C3-Fluoranthenes/Pyrenes	1.121	0.000	100.0#	0#	-33.80#
65	un	C4-Fluoranthenes/Pyrenes	1.121	0.000	100.0#	0#	-35.47#
66	S	Chrysene-d12	1.195	1.158	3.1	94	0.00
67	T	Benz(a)anthracene	1.239	1.181	4.7	100	0.00
68	T	Chrysene/Triphenylene	1.333	1.305	2.1	94	0.00
69	un	C1-Chrysenes	1.333	0.000	100.0#	0#	-35.39#
70	un	C2-Chrysenes	1.333	0.000	100.0#	0#	-36.05#
71	un	C3-Chrysenes	1.333	0.000	100.0#	0#	-38.11#
72	un	C4-Chrysenes	1.333	0.000	100.0#	0#	-39.43#
73	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	75	0.00
74	un	C29-Hopane	0.405	0.000	100.0#	0#	-41.04#
75	un	18a-Oleanane	0.405	0.000	100.0#	0#	-41.85#
76	T	C30-Hopane	0.405	0.457	-12.8	91	0.00
77	T	Benzo(b)fluoranthene	1.513	1.602	-5.9	86	0.00
78	T	Benzo(k,j)fluoranthene	1.335	1.406	-5.3	83	0.00
79	un	Benzo(a)fluoranthene	1.335	0.000	100.0#	0#	-37.41#
80	T	Benzo(e)pyrene	1.372	1.385	-0.9	82	0.00
81	T	Benzo(a)pyrene	1.354	1.386	-2.4	81	0.00
82	T	Indeno(1,2,3-c,d)pyrene	1.290	1.000	22.5	64	0.00
83	T	Dibenzo(a,h)anthracene	1.028	0.830	19.3	67	0.00
84	un	C1-Dibenzo(a,h)anthracenes	1.028	0.000	100.0#	0#	-48.89#
85	un	C2-Dibenzo(a,h)anthracenes	1.028	0.000	100.0#	0#	-50.33#
86	un	C3-Dibenzo(a,h)anthracenes	1.028	0.000	100.0#	0#	-50.89#
87	T	Benzo(g,h,i)perylene	1.041	0.756	27.4#	59	0.00
88	S	Perylene-d12	1.134	1.125	0.8	82	0.00
89	T	Perylene	1.393	1.385	0.6	81	0.00
90	S	5(b)H-Cholane	0.224	0.267	-19.2	95	0.00
91	un	C20-TAS	1.773	0.000	100.0#	0#	-33.10#
92	un	C21-TAS	1.773	0.000	100.0#	0#	-34.23#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60141\
Data File : MS60141M.D
Acq On : 16 Aug 2013 5:14 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Aug 17 06:23:48 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
93 un	C26(20S)-TAS	1.773	0.000	100.0#	0#	-38.69#
94 T	C26(20R)/C27(20S)-TAS	1.773	1.967	-10.9	89	0.00
95 un	C28(20S)-TAS	1.773	0.000	100.0#	0#	-39.85#
96 un	C27(20R)-TAS	1.773	0.000	100.0#	0#	-40.63#
97 un	C28(20R)-TAS	1.773	0.000	100.0#	0#	-41.56#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60141\
Data File : MS60141M.D
Acq On : 16 Aug 2013 5:14 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Aug 17 06:23:48 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.369	176	184059m	251.05		0.00
31) Pyrene-d10	29.606	212	367570m	250.63		0.00
73) Benzo(a)pyrene-d12	38.381	264	264769m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.734	136	280266m	218.92		0.00
21) Acenaphthene-d10	19.585	164	159786m	225.08		0.00
32) Phenanthrene-d10	24.687	188	278179m	228.24		0.00
66) Chrysene-d12	33.802	240	424690m	242.30		0.00
88) Perylene-d12	38.691	264	297556m	248.17		0.00
90) 5(b)H-Cholane	34.190	217	70560m	297.88		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	11.086	138	49438m	220.74		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.789	128	303471m	219.84		
9) 2-Methylnaphthalene	16.046	142	198107m	221.25		
10) 1-Methylnaphthalene	16.381	142	184097m	223.09		
11) 2,6-Dimethylnaphthalene	18.136	156	183074m	224.17		
12) 1,6,7-Trimethylnaphtha...	21.007	170	167015m	228.92		
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.		
16) Benzothiophene	13.957	134	240651m	219.53		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.607	154	261792m	222.56		
23) Acenaphthylene	19.084	152	306514m	227.59		
24) Acenaphthene	19.697	154	176115m	229.08		
25) Dibenzofuran	20.282	168	292393m	225.03		
26) Fluorene	21.452	166	234052m	228.36		
27) 1-Methylfluorene	23.474	180	123911m	225.10		
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.		
33) Carbazole	25.518	167	296772m	236.18		
34) Dibenzothiophene	24.340	184	336890m	230.01		
35) 4-Methyldibenzothiophene	25.865	198	263809m	228.62		
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.	d	
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.791	178	319812m	217.98		
42) Anthracene	24.964	178	306891m	222.10		

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60141\
Data File : MS60141M.D
Acq On : 16 Aug 2013 5:14 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Aug 17 06:23:48 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d	
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.904	192	291566m	230.94		
48) 3,6-Dimethylphenanthrene	27.978	206	237215m	234.84		
49) Retene	30.679	234	110054m	203.64		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	32.948	234	467797m	236.04		
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.878	202	383240m	233.12		
59) Pyrene	29.675	202	474900m	233.32		
60) 2-Methylfluoranthene	30.437	216	306321m	238.94		
61) Benzo(b)fluorene	31.060	216	242598m	221.62		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.763	228	432193m	237.83		
68) Chrysene/Triphenylene	33.879	228	475548m	243.19		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.736	191	120974m	282.28		
77) Benzo(b)fluoranthene	37.294	252	424453m	265.22		
78) Benzo(k,j)fluoranthene	37.372	252	370227m	262.23		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.265	252	364878m	251.35		
81) Benzo(a)pyrene	38.459	252	365675m	255.33		
82) Indeno(1,2,3-c,d)pyrene	43.141	276	260029m	190.63		
83) Dibenzo(a,h)anthracene	43.215	278	217565m	200.09		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.506	276	197980m	179.88		
89) Perylene	38.769	252	366572m	248.84		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.390	231	520055m	277.32		
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60141\
Data File : MS60141M.D
Acq On : 16 Aug 2013 5:14 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Aug 17 06:23:48 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

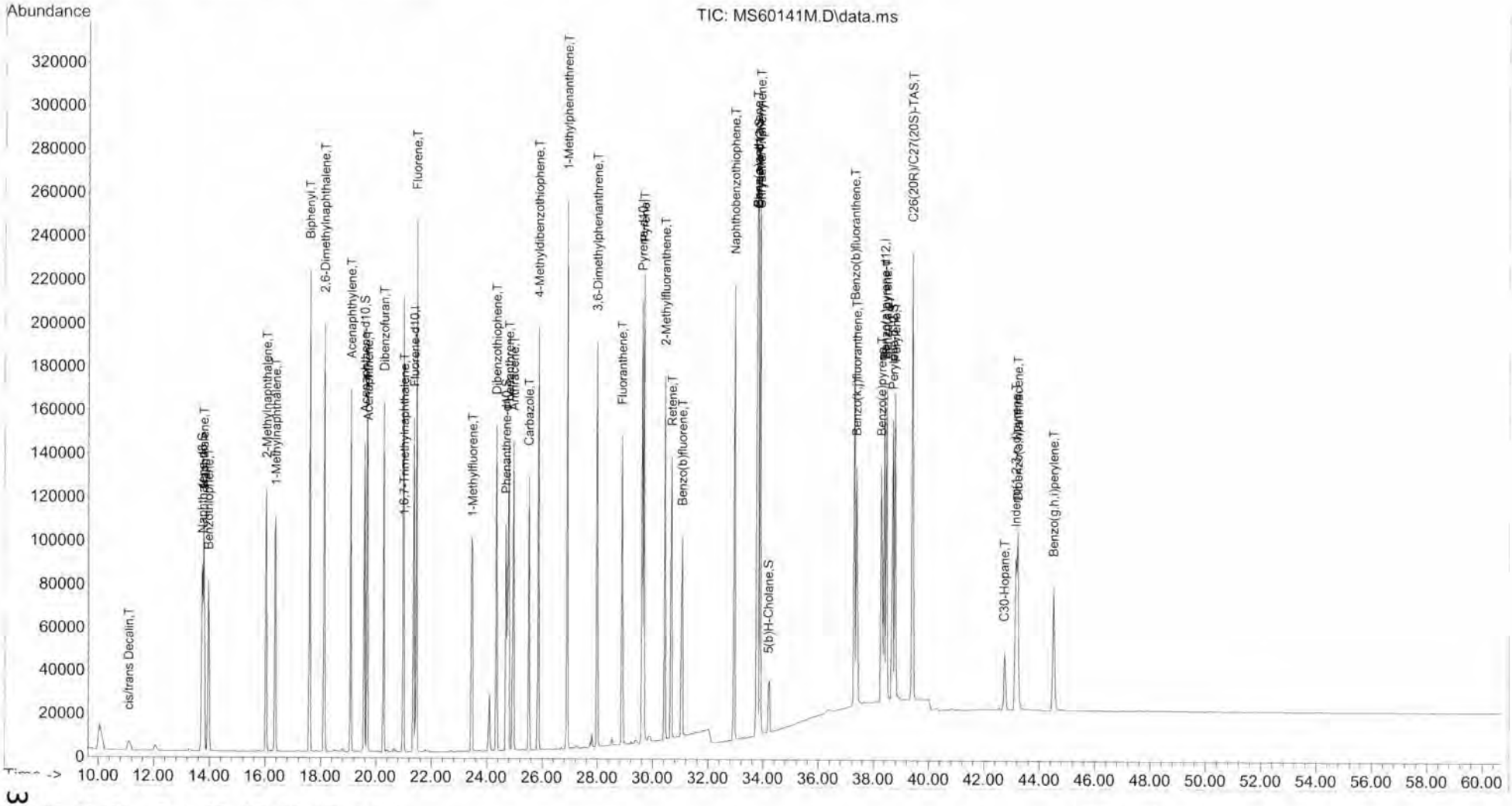
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60141\
Data File : MS60141M.D
Acq On : 16 Aug 2013 5:14 pm
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Aug 17 06:23:48 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60141\
Data File : MS60141N.D
Acq On : 17 Aug 2013 3:36 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 17 06:32:00 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Fluorene-d10	1.000	1.000	0.0	93	0.00
2	S	Naphthalene-d8	1.746	1.504	13.9	86	0.00
3	T	cis/trans Decalin	0.305	0.281	7.9	90	0.03
4	un	C1-Decalins	0.305	0.000	100.0#	0#	-12.26#
5	un	C2-Decalins	0.305	0.000	100.0#	0#	-13.32#
6	un	C3-Decalins	0.305	0.000	100.0#	0#	-16.07#
7	un	C4-Decalins	0.305	0.000	100.0#	0#	-18.78#
8	T	Naphthalene	1.883	1.629	13.5	85	0.00
9	T	2-Methylnaphthalene	1.221	1.083	11.3	89	0.00
10	T	1-Methylnaphthalene	1.126	0.994	11.7	88	0.00
11	T	2,6-Dimethylnaphthalene	1.114	1.012	9.2	92	0.00
12	T	1,6,7-Trimethylnaphthalene	0.995	0.938	5.7	94	-0.03
13	un	C2-Naphthalenes	1.883	0.000	100.0#	0#	-18.50#
14	un	C3-Naphthalenes	1.883	0.000	100.0#	0#	-20.28#
15	un	C4-Naphthalenes	1.883	0.000	100.0#	0#	-21.90#
16	T	Benzothiophene	1.495	1.298	13.2	85	0.00
17	un	C1-Benzothiophenes	1.495	0.000	100.0#	0#	-15.41#
18	un	C2-Benzothiophenes	1.495	0.000	100.0#	0#	-18.16#
19	un	C3-Benzothiophenes	1.495	0.000	100.0#	0#	-20.23#
20	un	C4-Benzothiophenes	1.495	0.000	100.0#	0#	-22.20#
21	S	Acenaphthene-d10	0.968	0.878	9.3	92	0.00
22	T	Biphenyl	1.604	1.432	10.7	90	0.00
23	T	Acenaphthylene	1.837	1.748	4.8	96	0.00
24	T	Acenaphthene	1.049	0.972	7.3	93	-0.03
25	T	Dibenzofuran	1.772	1.628	8.1	93	0.00
26	T	Fluorene	1.398	1.326	5.2	95	0.00
27	T	1-Methylfluorene	0.751	0.702	6.5	98	0.00
28	un	C1-Fluorenes	1.398	0.000	100.0#	0#	-23.47#
29	un	C2-Fluorenes	1.398	0.000	100.0#	0#	-25.34#
30	un	C3-Fluorenes	1.398	0.000	100.0#	0#	-26.80#
31	I	Pyrene-d10	1.000	1.000	0.0	106	0.00
32	S	Phenanthrene-d10	0.831	0.741	10.8	102	0.00
33	T	Carbazole	0.857	0.813	5.1	107	0.00
34	T	Dibenzothiophene	0.999	0.900	9.9	100	0.00
35	T	4-Methyldibenzothiophene	0.787	0.641	18.6	98	0.00
36	un	2/3-Methyldibenzothiophene	0.787	0.000	100.0#	0#	-26.14#
37	un	1-Methyldibenzothiophene	0.787	0.000	100.0#	0#	-26.49#
38	un	C2-Dibenzothiophenes	0.999	0.000	100.0#	0#	-27.25#
39	un	C3-Dibenzothiophenes	0.999	0.000	100.0#	0#	-28.77#
40	un	C4-Dibenzothiophenes	0.999	0.000	100.0#	0#	-30.44#
41	T	Phenanthrene	1.000	0.807	19.3	97	0.00
42	T	Anthracene	0.942	0.772	18.0	101	0.00
43	un	3-Methylphenanthrene	0.861	0.000	100.0#	0#	-26.70#
44	un	2-Methylphenanthrene	0.861	0.000	100.0#	0#	-26.90#
45	un	2-Methylanthracene	0.861	0.000	100.0#	0#	-26.90#
46	un	4/9-Methylphenanthrene	0.861	0.000	100.0#	0#	-26.90#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60141\
Data File : MS60141N.D
Acq On : 17 Aug 2013 3:36 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 17 06:32:00 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
47	T	1-Methylphenanthrene	0.861	0.776	9.9	103	0.00
48	T	3,6-Dimethylphenanthrene	0.689	0.642	6.8	107	0.00
49	T	Retene	0.368	0.303	17.7	103	0.00
50	un	C2-Phenanthrenes/Anthracene	1.000	0.000	100.0#	0#	-28.53#
51	un	C3-Phenanthrenes/Anthracene	1.000	0.000	100.0#	0#	-29.40#
52	un	C4-Phenanthrenes/Anthracene	1.000	0.000	100.0#	0#	-32.03#
53	T	Naphthobenzothiophene	1.351	1.189	12.0	108	0.00
54	un	C1-Naphthobenzothiophenes	1.351	0.000	100.0#	0#	-34.23#
55	un	C2-Naphthobenzothiophenes	1.351	0.000	100.0#	0#	-35.82#
56	un	C3-Naphthobenzothiophenes	1.351	0.000	100.0#	0#	-37.18#
57	un	C4-Naphthobenzothiophenes	1.351	0.000	100.0#	0#	-37.72#
58	T	Fluoranthene	1.121	1.045	6.8	106	0.00
59	T	Pyrene	1.388	1.218	12.2	103	0.00
60	T	2-Methylfluoranthene	0.874	0.760	13.0	107	0.00
61	T	Benzo(b)fluorene	0.746	0.639	14.3	109	0.00
62	un	C1-Fluoranthenes/Pyrenes	1.121	0.000	100.0#	0#	-30.68#
63	un	C2-Fluoranthenes/Pyrenes	1.121	0.000	100.0#	0#	-32.13#
64	un	C3-Fluoranthenes/Pyrenes	1.121	0.000	100.0#	0#	-33.80#
65	un	C4-Fluoranthenes/Pyrenes	1.121	0.000	100.0#	0#	-35.47#
66	S	Chrysene-d12	1.195	1.103	7.7	105	0.00
67	T	Benz(a)anthracene	1.239	1.111	10.3	110	0.00
68	T	Chrysene/Triphenylene	1.333	1.249	6.3	105	0.00
69	un	C1-Chrysenes	1.333	0.000	100.0#	0#	-35.39#
70	un	C2-Chrysenes	1.333	0.000	100.0#	0#	-36.05#
71	un	C3-Chrysenes	1.333	0.000	100.0#	0#	-38.11#
72	un	C4-Chrysenes	1.333	0.000	100.0#	0#	-39.43#
73	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	72	0.00
74	un	C29-Hopane	0.405	0.000	100.0#	0#	-41.04#
75	un	18a-Oleanane	0.405	0.000	100.0#	0#	-41.85#
76	T	C30-Hopane	0.405	0.488	-20.5	93	0.00
77	T	Benzo(b)fluoranthene	1.513	1.724	-13.9	88	0.00
78	T	Benzo(k,j)fluoranthene	1.335	1.570	-17.6	89	0.00
79	un	Benzo(a)fluoranthene	1.335	0.000	100.0#	0#	-37.41#
80	T	Benzo(e)pyrene	1.372	1.478	-7.7	84	0.00
81	T	Benzo(a)pyrene	1.354	1.508	-11.4	84	0.00
82	T	Indeno(1,2,3-c,d)pyrene	1.290	0.987	23.5	60	0.00
83	T	Dibenzo(a,h)anthracene	1.028	0.833	19.0	64	0.00
84	un	C1-Dibenzo(a,h)anthracenes	1.028	0.000	100.0#	0#	-48.89#
85	un	C2-Dibenzo(a,h)anthracenes	1.028	0.000	100.0#	0#	-50.33#
86	un	C3-Dibenzo(a,h)anthracenes	1.028	0.000	100.0#	0#	-50.89#
87	T	Benzo(g,h,i)perylene	1.041	0.706	32.2#	53	0.00
88	S	Perylene-d12	1.134	1.203	-6.1	84	0.00
89	T	Perylene	1.393	1.495	-7.3	84	0.00
90	S	5(b)H-Cholane	0.224	0.192	14.3	66	0.00
91	un	C20-TAS	1.773	0.000	100.0#	0#	-33.10#
92	un	C21-TAS	1.773	0.000	100.0#	0#	-34.23#

Evaluate Continuing Calibration Report

Data Path : C:\GCMS6\MS60141\
Data File : MS60141N.D
Acq On : 17 Aug 2013 3:36 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 17 06:32:00 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 200%

	Compound	AvgRF	CCRF	%Dev Area%	Dev(min)
93 un	C26(20S)-TAS	1.773	0.000	100.0# 0#	-38.69#
94 T	C26(20R)/C27(20S)-TAS	1.773	2.146	-21.0 93	0.00
95 un	C28(20S)-TAS	1.773	0.000	100.0# 0#	-39.85#
96 un	C27(20R)-TAS	1.773	0.000	100.0# 0#	-40.63#
97 un	C28(20R)-TAS	1.773	0.000	100.0# 0#	-41.56#

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60141\
Data File : MS60141N.D
Acq On : 17 Aug 2013 3:36 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 17 06:32:00 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorene-d10	21.369	176	191949m	251.05	0.00
31) Pyrene-d10	29.606	212	428444m	250.63	0.00
73) Benzo(a)pyrene-d12	38.380	264	254029m	250.32	0.00
System Monitoring Compounds					
2) Naphthalene-d8	13.734	136	287686m	215.48	0.00
21) Acenaphthene-d10	19.586	164	167961m	226.87	0.00
32) Phenanthrene-d10	24.688	188	317077m	223.19	0.00
66) Chrysene-d12	33.801	240	471633m	230.85	0.00
88) Perylene-d12	38.691	264	305255m	265.35	0.00
90) 5(b)H-Cholane	34.189	217	48820m	214.82	0.00
Target Compounds					Qvalue
3) cis/trans Decalin	11.115	138	53165m	227.63	
4) C1-Decalins	0.000		0	N.D.	d
5) C2-Decalins	0.000		0	N.D.	d
6) C3-Decalins	0.000		0	N.D.	d
7) C4-Decalins	0.000		0	N.D.	d
8) Naphthalene	13.790	128	311314m	216.25	
9) 2-Methylnaphthalene	16.047	142	207254m	221.96	
10) 1-Methylnaphthalene	16.381	142	189762m	220.50	
11) 2,6-Dimethylnaphthalene	18.137	156	193491m	227.19	
12) 1,6,7-Trimethylnaphtha...	20.979	170	179379m	235.76	
13) C2-Naphthalenes	0.000		0	N.D.	d
14) C3-Naphthalenes	0.000		0	N.D.	d
15) C4-Naphthalenes	0.000		0	N.D.	
16) Benzothiophene	13.957	134	246657m	215.76	
17) C1-Benzothiophenes	0.000		0	N.D.	d
18) C2-Benzothiophenes	0.000		0	N.D.	d
19) C3-Benzothiophenes	0.000		0	N.D.	d
20) C4-Benzothiophenes	0.000		0	N.D.	d
22) Biphenyl	17.607	154	271262m	221.13	
23) Acenaphthylene	19.084	152	331455m	235.99	
24) Acenaphthene	19.669	154	186213m	232.26	
25) Dibenzofuran	20.283	168	309663m	228.52	
26) Fluorene	21.453	166	253997m	237.63	
27) 1-Methylfluorene	23.475	180	135158m	235.44	
28) C1-Fluorenes	0.000		0	N.D.	d
29) C2-Fluorenes	0.000		0	N.D.	d
30) C3-Fluorenes	0.000		0	N.D.	
33) Carbazole	25.519	167	344399m	235.14	
34) Dibenzothiophene	24.341	184	379094m	222.05	
35) 4-Methyldibenzothiophene	25.865	198	276251m	205.39	
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.	d
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d
38) C2-Dibenzothiophenes	0.000		0	N.D.	d
39) C3-Dibenzothiophenes	0.000		0	N.D.	d
40) C4-Dibenzothiophenes	0.000		0	N.D.	d
41) Phenanthrene	24.791	178	341703m	199.81	
42) Anthracene	24.965	178	330997m	205.51	

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60141\
Data File : MS60141N.D
Acq On : 17 Aug 2013 3:36 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 17 06:32:00 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 3-Methylphenanthrene	0.000		0	N.D.	d	
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.904	192	327856m	222.79		
48) 3,6-Dimethylphenanthrene	27.978	206	274880m	233.46		
49) Retene	30.680	234	115829m	183.87		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	32.947	234	511393m	221.38		
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.879	202	447222m	233.39		
59) Pyrene	29.676	202	520379m	219.34		
60) 2-Methylfluoranthene	30.438	216	327225m	218.98		
61) Benzo(b)fluorene	31.061	216	275454m	215.88		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.762	228	473816m	223.68		
68) Chrysene/Triphenylene	33.879	228	530732m	232.84		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.736	191	123726m	300.91		
77) Benzo(b)fluoranthene	37.293	252	438326m	285.47		
78) Benzo(k,j)fluoranthene	37.371	252	396767m	292.90		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.264	252	373397m	268.10		
81) Benzo(a)pyrene	38.458	252	381690m	277.78		
82) Indeno(1,2,3-c,d)pyrene	43.142	276	246116m	188.06		
83) Dibenzo(a,h)anthracene	43.216	278	209417m	200.74		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.506	276	177544m	168.13		
89) Perylene	38.768	252	379769m	268.70		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.389	231	544460m	302.61		
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60141\
Data File : MS60141N.D
Acq On : 17 Aug 2013 3:36 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 17 06:32:00 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

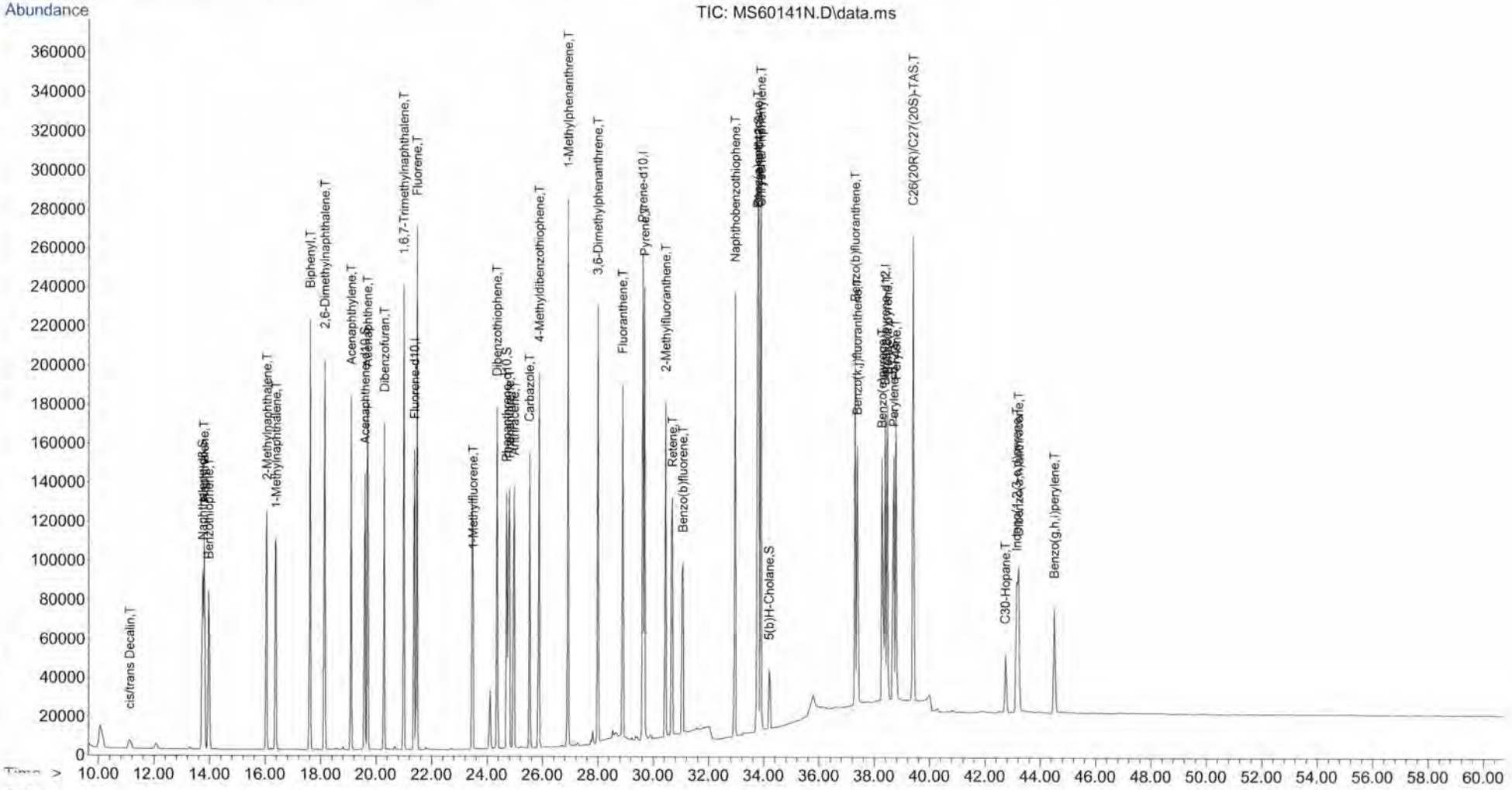
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\GCMS6\MS60141\
Data File : MS60141N.D
Acq On : 17 Aug 2013 3:36 am
Operator : YM
Sample : AR-WKCC-250-038
Misc :
ALS Vial : 36 Sample Multiplier: 1

Quant Time: Aug 17 06:32:00 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name MS60141H.D
Data File Path C:\GCMS6\MS60141\
Operator YM
Date Acquired 8/15/2013 19:16
Acq. Method File PAH-2012.M
Sample Name AR-WKISSU-250-002
Misc Info 0
Instrument Name GCMS6
Vial Number 8
Sample Multiplier 1
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

MS60141H.D
AR-WKISSU-250-002
8/15/2013
PAH-2012.M
1

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	0.00	0	0.0000	0.0000
9)+10)	C1-Naphthalenes	0.00	0	0.0000	0.0000
13)	C2-Naphthalenes	0.00	0	0.0000	0.0000
14)	C3-Naphthalenes	0.00	0	0.0000	0.0000
15)	C4-Naphthalenes	0.00	0	0.0000	0.0000
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	0.00	0	0.0000	0.0000
23)	Acenaphthylene	0.00	0	0.0000	0.0000
24)	Acenaphthene	0.00	0	0.0000	0.0000
25)	Dibenzofuran	0.00	0	0.0000	0.0000
26)	Fluorene	0.00	0	0.0000	0.0000
28)	C1-Fluorenes	0.00	0	0.0000	0.0000
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	0.00	0	0.0000	0.0000
42)	Anthracene	0.00	0	0.0000	0.0000
41)	Phenanthrene	0.00	0	0.0000	0.0000
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	0.00	0	0.0000	0.0000
35)+36)+37)	C1-Dibenzothiophenes	0.00	0	0.0000	0.0000
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	0.00	0	0.0000	0.0000
59)	Pyrene	0.00	0	0.0000	0.0000
62)	C1-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benz(a)anthracene	0.00	0	0.0000	0.0000
68)	Chrysene/Triphenylene	0.00	0	0.0000	0.0000
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	0.00	0	0.0000	0.0000
78)	Benzo(k,j)fluoranthene	0.00	0	0.0000	0.0000
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	0.00	0	0.0000	0.0000
81)	Benzo(a)pyrene	0.00	0	0.0000	0.0000
89)	Perylene	0.00	0	0.0000	0.0000
82)	Indeno(1,2,3-c,d)pyrene	0.00	0	0.0000	0.0000
83)	Dibenzo(a,h)anthracene	0.00	0	0.0000	0.0000
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	0.00	0	0.0000	0.0000

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	0.00	0	0.0000	0.0000
10)	1-Methylnaphthalene	0.00	0	0.0000	0.0000
11)	2,6-Dimethylnaphthalene	0.00	0	0.0000	0.0000
12)	1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27)	1-Methylfluorene	0.00	0	0.0000	0.0000
35)	4-Methyldibenzothiophene	0.00	0	0.0000	0.0000
36)	2/3-Methyldibenzothiophene	0.00	0	0.0000	0.0000
37)	1-Methyldibenzothiophene	0.00	0	0.0000	0.0000
43)	3-Methylphenanthrene	0.00	0	0.0000	0.0000
44)	2-Methylphenanthrene	0.00	0	0.0000	0.0000
45)	2-Methylanthracene	0.00	0	0.0000	0.0000
46)	4/9-Methylphenanthrene	0.00	0	0.0000	0.0000
47)	1-Methylphenanthrene	0.00	0	0.0000	0.0000
48)	3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49)	Retene	0.00	0	0.0000	0.0000
60)	2-Methylfluoranthene	0.00	0	0.0000	0.0000
61)	Benzo(b)fluorene	0.00	0	0.0000	0.0000
74)	C29-Hopane	0.00	0	0.0000	0.0000
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	0.00	0	0.0000	0.0000
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.73	295819	241.87	96.70
21)	Acenaphthene-d10	19.59	153326	226.08	90.37
32)	Phenanthrene-d10	24.69	264019	230.66	92.19
66)	Chrysene-d12	33.80	355797	216.15	86.45
88)	Perylene-d12	38.69	292201	227.93	91.16
90)	5(b)H-Cholane	34.19	63843	252.08	100.83
	Internal Standards				
1)	Fluorene-d10	21.37	175839	251.05	
31)	Pyrene-d10	29.61	345203	250.63	
73)	Benzo(a)pyrene-d12	38.38	283097	250.33	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : MS60141H.D
Acq On : 15 Aug 2013 7:16 pm
Operator : YM
Sample : AR-WKISSU-250-002
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 16 09:52:28 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.369	176	175839m	251.05		0.00
31) Pyrene-d10	29.605	212	345203m	250.63		0.00
73) Benzo(a)pyrene-d12	38.381	264	283097m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.733	136	295819m	241.87		0.00
21) Acenaphthene-d10	19.585	164	153326m	226.08		0.00
32) Phenanthrene-d10	24.687	188	264019m	230.66		0.00
66) Chrysene-d12	33.802	240	355797m	216.15		0.00
88) Perylene-d12	38.691	264	292201m	227.93		0.00
90) 5(b)H-Cholane	34.190	217	63843m	252.08		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	0.000		0	N.D.	d	
9) 2-Methylnaphthalene	0.000		0	N.D.	d	
10) 1-Methylnaphthalene	0.000		0	N.D.	d	
11) 2,6-Dimethylnaphthalene	0.000		0	N.D.	d	
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d	
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.	d	
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	0.000		0	N.D.	d	
23) Acenaphthylene	0.000		0	N.D.	d	
24) Acenaphthene	0.000		0	N.D.	d	
25) Dibenzofuran	0.000		0	N.D.	d	
26) Fluorene	0.000		0	N.D.	d	
27) 1-Methylfluorene	0.000		0	N.D.	d	
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	0.000		0	N.D.	d	
34) Dibenzothiophene	0.000		0	N.D.	d	
35) 4-Methyldibenzothiophene	0.000		0	N.D.	d	
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.	d	
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	0.000		0	N.D.	d	
42) Anthracene	0.000		0	N.D.	d	
43) 3-Methylphenanthrene	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : MS60141H.D
Acq On : 15 Aug 2013 7:16 pm
Operator : YM
Sample : AR-WKISSU-250-002
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 16 09:52:28 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	0.000		0	N.D.	d	
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	0.000		0	N.D.	d	
59) Pyrene	0.000		0	N.D.	d	
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	0.000		0	N.D.	d	
68) Chrysene/Triphenylene	0.000		0	N.D.	d	
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	0.000		0	N.D.	d	
78) Benzo(k,j)fluoranthene	0.000		0	N.D.	d	
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	0.000		0	N.D.	d	
81) Benzo(a)pyrene	0.000		0	N.D.	d	
82) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.	d	
83) Dibenzo(a,h)anthracene	0.000		0	N.D.	d	
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	0.000		0	N.D.	d	
89) Perylene	0.000		0	N.D.	d	
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : MS60141H.D
Acq On : 15 Aug 2013 7:16 pm
Operator : YM
Sample : AR-WKISSU-250-002
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 16 09:52:28 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

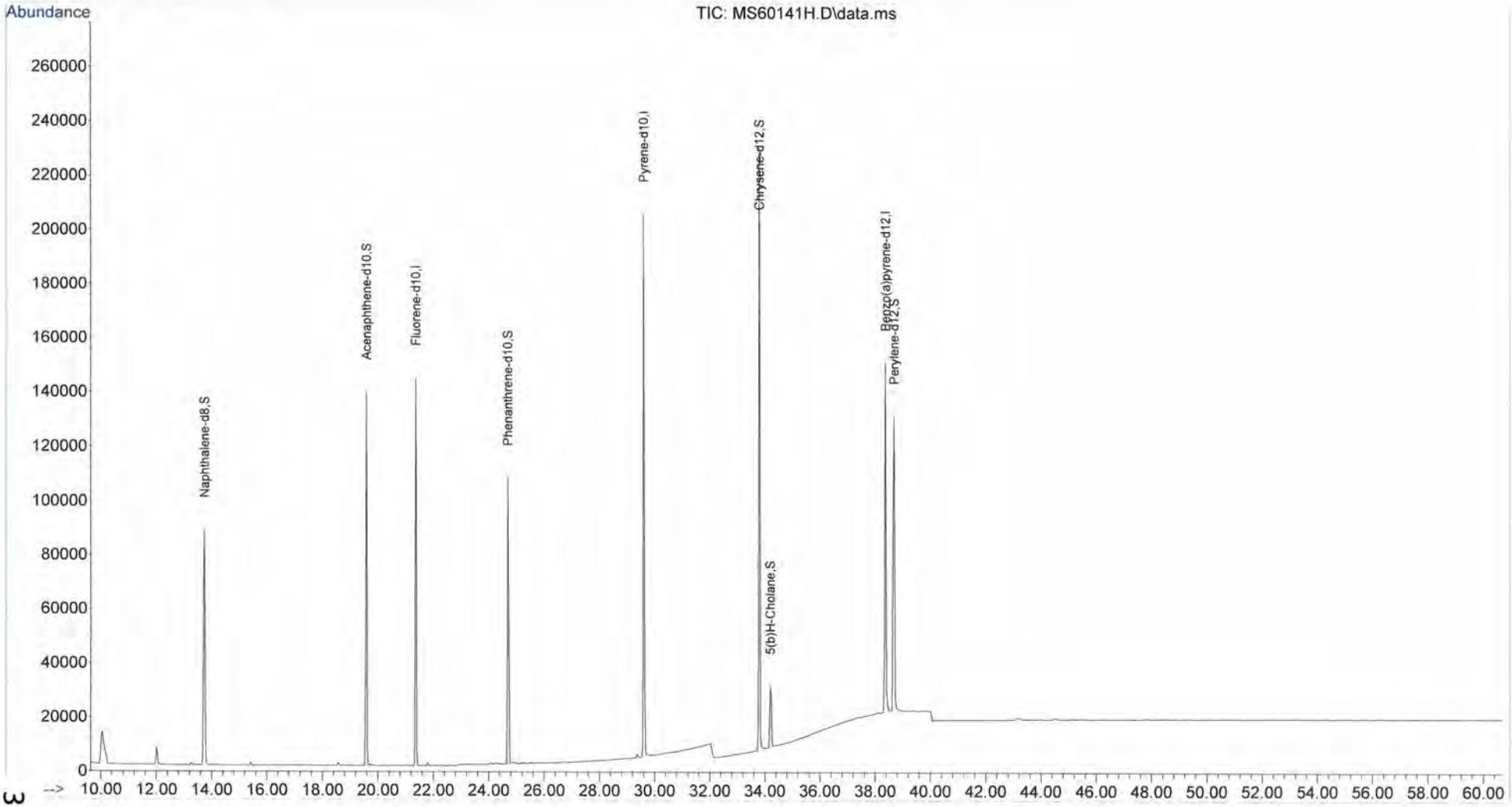
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : MS60141H.D
Acq On : 15 Aug 2013 7:16 pm
Operator : YM
Sample : AR-WKISSU-250-002
Misc :
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Aug 16 09:52:28 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name MS60141K.D
Data File Path C:\GCMS6\MS60141\
Operator YM
Date Acquired 8/15/2013 22:45
Acq. Method File PAH-2012.M
Sample Name AR-SRM2779-WK-4.0-002
Misc Info 0
Instrument Name GCMS6
Vial Number 11
Sample Multiplier 0.24461
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

MS60141K.D
AR-SRM2779-WK-4.0-002
8/15/2013
PAH-2012.M
4.088140305

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	11.09	876899	623.1342	700.1151
4)	C1-Decalins	12.26	1172650	833.2982	936.2424
5)	C2-Decalins	14.63	875644	622.2438	699.1147
6)	C3-Decalins	16.60	930859	661.4793	743.1973
7)	C4-Decalins	17.64	531289	377.5409	424.1816
8)	Naphthalene	13.79	5104840	588.5366	661.2433
9)+10)	C1-Naphthalenes	16.21	11084580	1277.9402	1435.8148
13)	C2-Naphthalenes	18.42	13339100	1537.8606	1727.8453
14)	C3-Naphthalenes	20.42	8659820	998.3879	1121.7271
15)	C4-Naphthalenes	22.74	4977230	573.8233	644.7124
16)	Benzothiophene	14.01	47025	6.8271	7.6705
17)	C1-Benzothiophenes	15.55	203254	29.5083	33.1537
18)	C2-Benzothiophenes	18.56	186408	27.0627	30.4059
19)	C3-Benzothiophenes	20.26	221592	32.1706	36.1449
20)	C4-Benzothiophenes	22.01	159194	23.1118	25.9669
22)	Biphenyl	17.61	992877	134.3347	150.9302
23)	Acenaphthylene	19.08	66121	7.8135	8.7788
24)	Acenaphthene	19.70	73457	15.2064	17.0850
25)	Dibenzofuran	20.28	215880	26.4414	29.7079
26)	Fluorene	21.45	654361	101.6085	114.1611
28)	C1-Fluorenes	23.48	1448350	224.8974	252.6808
29)	C2-Fluorenes	25.21	2065360	320.7057	360.3252
30)	C3-Fluorenes	26.80	1324710	205.6987	231.1103
33)	Carbazole	25.52	31780	3.9766	4.4678
42)	Anthracene	24.97	20840	2.3713	2.6643
41)	Phenanthrene	24.79	1851160	198.3816	222.8894
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.69	4454720	477.3951	536.3717
50)	C2-Phenanthrenes/Anthracenes	28.36	5111090	547.7356	615.4019
51)	C3-Phenanthrenes/Anthracenes	29.92	3557500	381.2418	428.3398
52)	C4-Phenanthrenes/Anthracenes	31.75	2242950	240.3685	270.0632
34)	Dibenzothiophene	24.34	340812	36.5851	41.1048
35)+36)+37)	C1-Dibenzothiophenes	26.17	973395	104.4909	117.3995
38)	C2-Dibenzothiophenes	27.94	1248460	134.0189	150.5753
39)	C3-Dibenzothiophenes	28.78	1048560	112.5602	126.4657
40)	C4-Dibenzothiophenes	29.78	538662	57.8238	64.9673
58)	Fluoranthene	28.91	48500	4.6386	5.2117
59)	Pyrene	29.68	142424	11.0022	12.3614
62)	C1-Fluoranthenes/Pyrenes	30.82	723870	69.2322	77.7850
63)	C2-Fluoranthenes/Pyrenes	32.60	1232150	117.8450	132.4034
64)	C3-Fluoranthenes/Pyrenes	34.00	1138450	108.8830	122.3342
65)	C4-Fluoranthenes/Pyrenes	35.12	1013770	96.9590	108.9371
53)	Naphthobenzothiophene	32.95	254896	20.2227	22.7209
54)	C1-Naphthobenzothiophenes	34.11	535058	42.4499	47.6940
55)	C2-Naphthobenzothiophenes	36.01	637252	50.5577	56.8035
56)	C3-Naphthobenzothiophenes	37.18	503425	39.9402	44.8743
57)	C4-Naphthobenzothiophenes	38.19	196140	15.5611	17.4835
67)	Benz(a)anthracene	33.76	75408	6.5243	7.3303
68)	Chrysene/Triphenylene	33.84	445116	35.7896	40.2110
69)	C1-Chrysenes	35.12	989617	79.5702	89.4001
70)	C2-Chrysenes	36.28	1246010	100.1854	112.5621
71)	C3-Chrysenes	37.99	854989	68.7454	77.2381
72)	C4-Chrysenes	39.43	533113	42.8650	48.1604
77)	Benzo(b)fluoranthene	37.29	56481	4.0004	4.4946
78)	Benzo(k,j)fluoranthene	37.33	7609	0.6109	0.6864
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.30	102047	7.9683	8.9527
81)	Benzo(a)pyrene	38.46	15577	1.2329	1.3852
89)	Perylene	38.77	8800	0.6771	0.7608
82)	Indeno(1,2,3-c,d)pyrene	43.18	7552	0.6276	0.7051
83)	Dibenzo(a,h)anthracene	43.18	6242	0.6507	0.7311
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.51	13385	1.3785	1.5488

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.05	6841810	1216.1031	1366.3384
10)	1-Methylnaphthalene	16.38	4242770	818.2498	919.3350
11)	2,6-Dimethylnaphthalene	18.14	3732160	727.3087	817.1592
12)	1,6,7-Trimethylnaphthalene	21.01	1014010	221.1967	248.5229
27)	1-Methylfluorene	23.48	666316	192.6429	216.4416
35)	4-Methyldibenzothiophene	25.87	560971	76.4370	85.8798
36)	2/3-Methyldibenzothiophene	26.14	232881	31.7320	35.6522
37)	1-Methyldibenzothiophene	26.49	179543	24.4642	27.4864
43)	3-Methylphenanthrene	26.45	1110500	138.3005	155.3859
44)	2-Methylphenanthrene	26.56	1074300	133.7914	150.3198
45)	2-Methylanthracene	26.70	72924	9.0819	10.2038
46)	4/9-Methylphenanthrene	26.84	1230290	153.2191	172.1475
47)	1-Methylphenanthrene	26.91	966706	120.3921	135.2652
48)	3,6-Dimethylphenanthrene	27.98	257462	40.0752	45.0260
49)	Retene	30.72	23240	6.7613	7.5965
60)	2-Methylfluoranthene	30.44	42797	5.2488	5.8972
61)	Benzo(b)fluorene	31.06	97012	13.9343	15.6557
74)	C29-Hopane	40.71	61473	16.2592	18.2678
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	42.03	154583	40.8861	45.9371
91)	C20-TAS	33.34	53304	3.2220	3.6200
92)	C21-TAS	34.42	107357	6.4892	7.2909
93)	C26(20S)-TAS	38.54	50320	3.0416	3.4174
94)	C26(20R)/C27(20S)-TAS	39.47	162071	9.7964	11.0067
95)	C28(20S)-TAS	40.19	104913	6.3415	7.1249
96)	C27(20R)-TAS	40.67	88685	5.3606	6.0228
97)	C28(20R)-TAS	41.78	78648	4.7539	5.3412
	Surrogate Standards				
2)	Naphthalene-d8	13.73	432729	53.79	87.92
21)	Acenaphthene-d10	19.59	258174	57.88	94.59
32)	Phenanthrene-d10	24.69	422234	54.47	89.00
66)	Chrysene-d12	33.80	644373	57.80	94.51
88)	Perylene-d12	38.69	615261	58.17	95.10
90)	5(b)H-Cholane	34.23	153561	73.48	120.17
	Internal Standards				
1)	Fluorene-d10	21.37	282894	61.41	
31)	Pyrene-d10	29.61	571841	61.31	
73)	Benzo(a)pyrene-d12	38.38	571370	61.23	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : MS60141K.D
Acq On : 15 Aug 2013 10:45 pm
Operator : YM
Sample : AR-SRM2779-WK-4.0-002
Misc :
ALS Vial : 11 Sample Multiplier: 0.24461

Quant Time: Aug 22 09:00:54 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.370	176	282894m	251.05		0.00
31) Pyrene-d10	29.607	212	571841m	250.63		0.00
73) Benzo(a)pyrene-d12	38.380	264	571370m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.735	136	432729m	53.79		0.00
21) Acenaphthene-d10	19.586	164	258174m	57.88		0.00
32) Phenanthrene-d10	24.688	188	422234m	54.47		0.00
66) Chrysene-d12	33.801	240	644373m	57.80		0.00
88) Perylene-d12	38.691	264	615261m	58.17		0.00
90) 5(b)H-Cholane	34.228	217	153561m	73.48		0.04
Target Compounds						Qvalue
3) cis/trans Decalin	11.087	138	876899m	623.14		
4) C1-Decalins	12.258	152	1172647m	833.30		
5) C2-Decalins	14.626	166	875644m	622.24		
6) C3-Decalins	16.605	180	930859m	661.48		
7) C4-Decalins	17.636	194	531289m	377.54		
8) Naphthalene	13.790	128	5104843m	588.54		
9) 2-Methylnaphthalene	16.047	142	6841806m	1216.10		
10) 1-Methylnaphthalene	16.382	142	4242765m	818.25		
11) 2,6-Dimethylnaphthalene	18.137	156	3732160m	727.31		
12) 1,6,7-Trimethylnaphtha...	21.008	170	1014006m	221.20		
13) C2-Naphthalenes	18.416	156	13339114m	1537.86		
14) C3-Naphthalenes	20.422	170	8659815m	998.39		
15) C4-Naphthalenes	22.735	184	4977232m	573.82		
16) Benzothiophene	14.013	134	47025m	6.83		
17) C1-Benzothiophenes	15.546	148	203254m	29.51		
18) C2-Benzothiophenes	18.555	162	186408m	27.06		
19) C3-Benzothiophenes	20.255	176	221592m	32.17		
20) C4-Benzothiophenes	22.011	190	159194m	23.11		
22) Biphenyl	17.608	154	992877m	134.33		
23) Acenaphthylene	19.085	152	66121m	7.81		
24) Acenaphthene	19.698	154	73457m	15.21		
25) Dibenzofuran	20.283	168	215880m	26.44		
26) Fluorene	21.453	166	654361m	101.61		
27) 1-Methylfluorene	23.476	180	666316m	192.64		
28) C1-Fluorenes	23.476	180	1448345m	224.90		
29) C2-Fluorenes	25.208	194	2065360m	320.71		
30) C3-Fluorenes	26.801	208	1324705m	205.70		
33) Carbazole	25.519	167	31780m	3.98		
34) Dibenzothiophene	24.342	184	340812m	36.59		
35) 4-Methyldibenzothiophene	25.866	198	560971m	76.44		
36) 2/3-Methyldibenzothiop...	26.143	198	232881m	31.73		
37) 1-Methyldibenzothiophene	26.489	198	179543m	24.46		
38) C2-Dibenzothiophenes	27.944	212	1248463m	134.02		
39) C3-Dibenzothiophenes	28.776	226	1048562m	112.56		
40) C4-Dibenzothiophenes	29.780	240	538662m	57.82		
41) Phenanthrene	24.792	178	1851161m	198.38		
42) Anthracene	24.965	178	20840m	2.37		
43) 3-Methylphenanthrene	26.455	192	1110504m	138.30		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : MS60141K.D
Acq On : 15 Aug 2013 10:45 pm
Operator : YM
Sample : AR-SRM2779-WK-4.0-002
Misc :
ALS Vial : 11 Sample Multiplier: 0.24461

Quant Time: Aug 22 09:00:54 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.559	192	1074296m	133.79		
45) 2-Methylanthracene	26.697	192	72924m	9.08		
46) 4/9-Methylphenanthrene	26.836	192	1230294m	153.22		
47) 1-Methylphenanthrene	26.905	192	966706m	120.39		
48) 3,6-Dimethylphenanthrene	27.979	206	257462m	40.08		
49) Retene	30.715	234	23240m	6.76		
50) C2-Phenanthrenes/Anthr...	28.360	206	5111093m	547.74		
51) C3-Phenanthrenes/Anthr...	29.919	220	3557497m	381.24		
52) C4-Phenanthrenes/Anthr...	31.754	234	2242954m	240.37		
53) Naphthobenzothiophene	32.947	234	254896m	20.22		
54) C1-Naphthobenzothiophenes	34.112	248	535058m	42.45		
55) C2-Naphthobenzothiophenes	36.013	262	637252m	50.56		
56) C3-Naphthobenzothiophenes	37.177	276	503425m	39.94		
57) C4-Naphthobenzothiophenes	38.186	290	196140m	15.56		
58) Fluoranthene	28.914	202	48500m	4.64		
59) Pyrene	29.676	202	142424m	11.00		
60) 2-Methylfluoranthene	30.438	216	42797m	5.25		
61) Benzo(b)fluorene	31.062	216	97012m	13.93		
62) C1-Fluoranthenes/Pyrenes	30.819	216	723870m	69.23		
63) C2-Fluoranthenes/Pyrenes	32.598	230	1232150m	117.85		
64) C3-Fluoranthenes/Pyrenes	33.995	244	1138446m	108.88		
65) C4-Fluoranthenes/Pyrenes	35.120	258	1013773m	96.96		
67) Benz(a)anthracene	33.762	228	75408m	6.52		
68) Chrysene/Triphenylene	33.840	228	445116m	35.79		
69) C1-Chrysenes	35.120	242	989617m	79.57		
70) C2-Chrysenes	36.285	256	1246009m	100.19		
71) C3-Chrysenes	37.992	270	854989m	68.75		
72) C4-Chrysenes	39.428	284	533113m	42.86		
74) C29-Hopane	40.706	191	61473m	16.26		
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	42.034	191	154583m	40.89		
77) Benzo(b)fluoranthene	37.294	252	56481m	4.00		
78) Benzo(k,j)fluoranthene	37.332	252	7609m	0.61		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.303	252	102047m	7.97		
81) Benzo(a)pyrene	38.458	252	15577m	1.23		
82) Indeno(1,2,3-c,d)pyrene	43.177	276	7552m	0.63		
83) Dibenzo(a,h)anthracene	43.177	278	6242m	0.65		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.505	276	13385m	1.38		
89) Perylene	38.768	252	8800m	0.68		
91) C20-TAS	33.335	231	53304m	3.22		
92) C21-TAS	34.422	231	107357m	6.49		
93) C26(20S)-TAS	38.535	231	50320m	3.04		
94) C26(20R)/C27(20S)-TAS	39.467	231	162071m	9.80		
95) C28(20S)-TAS	40.190	231	104913m	6.34		
96) C27(20R)-TAS	40.670	231	88685m	5.36		
97) C28(20R)-TAS	41.776	231	78648m	4.75		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : MS60141K.D
Acq On : 15 Aug 2013 10:45 pm
Operator : YM
Sample : AR-SRM2779-WK-4.0-002
Misc :
ALS Vial : 11 Sample Multiplier: 0.24461

Quant Time: Aug 22 09:00:54 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

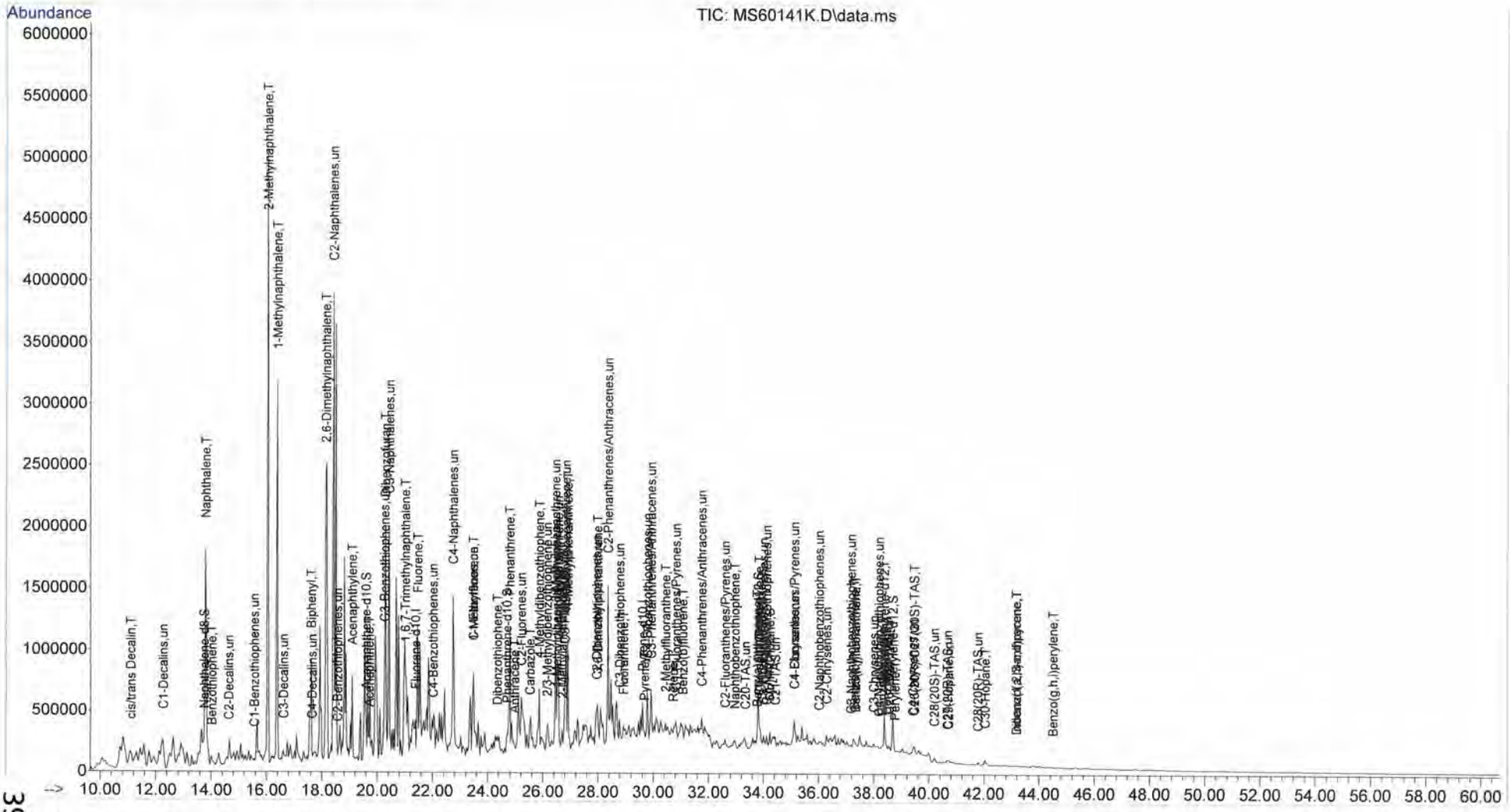
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : MS60141K.D
Acq On : 15 Aug 2013 10:45 pm
Operator : YM
Sample : AR-SRM2779-WK-4.0-002
Misc :
ALS Vial : 11 Sample Multiplier: 0.24461

Quant Time: Aug 22 09:00:54 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ENV3079A.D
Data File Path C:\GCMS6\MS60141\
Operator YM
Date Acquired 8/15/2013 23:54
Acq. Method File PAH-2012.M
Sample Name Procedural Blank
Misc Info 0
Instrument Name GCMS6
Vial Number 12
Sample Multiplier 0.06667
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ENV3079A.D
Procedural Blank
8/15/2013
PAH-2012.M
14.99925004

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	2317	0.1305	0.1462
9)+10)	C1-Naphthalenes	0.00	0	0.0000	0.0000
13)	C2-Naphthalenes	0.00	0	0.0000	0.0000
14)	C3-Naphthalenes	0.00	0	0.0000	0.0000
15)	C4-Naphthalenes	0.00	0	0.0000	0.0000
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.61	1864	0.1232	0.1380
23)	Acenaphthylene	0.00	0	0.0000	0.0000
24)	Acenaphthene	0.00	0	0.0000	0.0000
25)	Dibenzofuran	20.29	751	0.0449	0.0503
26)	Fluorene	21.46	135	0.0102	0.0115
28)	C1-Fluorenes	0.00	0	0.0000	0.0000
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	25.52	214	0.0128	0.0143
42)	Anthracene	0.00	0	0.0000	0.0000
41)	Phenanthrene	0.00	0	0.0000	0.0000
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	0.00	0	0.0000	0.0000
35)+36)+37)	C1-Dibenzothiophenes	0.00	0	0.0000	0.0000
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	0.00	0	0.0000	0.0000
59)	Pyrene	0.00	0	0.0000	0.0000
62)	C1-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benz(a)anthracene	0.00	0	0.0000	0.0000
68)	Chrysene/Triphenylene	0.00	0	0.0000	0.0000
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	0.00	0	0.0000	0.0000
78)	Benzo(k,j)fluoranthene	0.00	0	0.0000	0.0000
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	0.00	0	0.0000	0.0000
81)	Benzo(a)pyrene	0.00	0	0.0000	0.0000
89)	Perylene	38.77	4176	0.1892	0.2120
82)	Indeno(1,2,3-c,d)pyrene	0.00	0	0.0000	0.0000
83)	Dibenzo(a,h)anthracene	0.00	0	0.0000	0.0000
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	0.00	0	0.0000	0.0000

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	0.00	0	0.0000	0.0000
10)	1-Methylnaphthalene	0.00	0	0.0000	0.0000
11)	2,6-Dimethylnaphthalene	0.00	0	0.0000	0.0000
12)	1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27)	1-Methylfluorene	0.00	0	0.0000	0.0000
35)	4-Methyldibenzothiophene	0.00	0	0.0000	0.0000
36)	2/3-Methyldibenzothiophene	0.00	0	0.0000	0.0000
37)	1-Methyldibenzothiophene	0.00	0	0.0000	0.0000
43)	3-Methylphenanthrene	0.00	0	0.0000	0.0000
44)	2-Methylphenanthrene	0.00	0	0.0000	0.0000
45)	2-Methylanthracene	0.00	0	0.0000	0.0000
46)	4/9-Methylphenanthrene	0.00	0	0.0000	0.0000
47)	1-Methylphenanthrene	0.00	0	0.0000	0.0000
48)	3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49)	Retene	0.00	0	0.0000	0.0000
60)	2-Methylfluoranthene	0.00	0	0.0000	0.0000
61)	Benzo(b)fluorene	0.00	0	0.0000	0.0000
74)	C29-Hopane	0.00	0	0.0000	0.0000
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	0.00	0	0.0000	0.0000
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.74	243376	14.78	88.64
21)	Acenaphthene-d10	19.59	131163	14.37	86.13
32)	Phenanthrene-d10	24.69	241733	14.89	89.26
66)	Chrysene-d12	33.80	314534	13.47	80.81
88)	Perylene-d12	38.69	278848	15.52	93.12
90)	5(b)H-Cholane	34.19	63321	17.84	107.05
	Internal Standards				
1)	Fluorene-d10	21.37	157822	16.74	
31)	Pyrene-d10	29.61	326452	16.71	
73)	Benzo(a)pyrene-d12	38.38	264476	16.69	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079A.D
Acq On : 15 Aug 2013 11:54 pm
Operator : YM
Sample : Procedural Blank
Misc :
ALS Vial : 12 Sample Multiplier: 0.06667

Quant Time: Aug 22 09:04:32 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.373	176	157822m	251.05		0.00
31) Pyrene-d10	29.606	212	326452m	250.63		0.00
73) Benzo(a)pyrene-d12	38.382	264	264476m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.737	136	243376m	14.78		0.00
21) Acenaphthene-d10	19.589	164	131163m	14.37		0.00
32) Phenanthrene-d10	24.688	188	241733m	14.89		0.00
66) Chrysene-d12	33.803	240	314534m	13.47		0.00
88) Perylene-d12	38.692	264	278848m	15.52		0.00
90) 5(b)H-Cholane	34.191	217	63321m	17.84		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.793	128	2317m	0.13		
9) 2-Methylnaphthalene	0.000		0	N.D.	d	
10) 1-Methylnaphthalene	0.000		0	N.D.	d	
11) 2,6-Dimethylnaphthalene	0.000		0	N.D.	d	
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d	
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.	d	
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.611	154	1864m	0.12		
23) Acenaphthylene	0.000		0	N.D.	d	
24) Acenaphthene	0.000		0	N.D.	d	
25) Dibenzofuran	20.286	168	751m	0.04		
26) Fluorene	21.456	166	135m	0.01		
27) 1-Methylfluorene	0.000		0	N.D.	d	
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.519	167	214m	0.01		
34) Dibenzothiophene	0.000		0	N.D.	d	
35) 4-Methyldibenzothiophene	0.000		0	N.D.	d	
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.	d	
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	0.000		0	N.D.	d	
42) Anthracene	0.000		0	N.D.	d	
43) 3-Methylphenanthrene	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079A.D
Acq On : 15 Aug 2013 11:54 pm
Operator : YM
Sample : Procedural Blank
Misc :
ALS Vial : 12 Sample Multiplier: 0.06667

Quant Time: Aug 22 09:04:32 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	0.000		0	N.D.	d	
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	0.000		0	N.D.	d	
59) Pyrene	0.000		0	N.D.	d	
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	0.000		0	N.D.	d	
68) Chrysene/Triphenylene	0.000		0	N.D.	d	
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	0.000		0	N.D.	d	
78) Benzo(k,j)fluoranthene	0.000		0	N.D.	d	
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	0.000		0	N.D.	d	
81) Benzo(a)pyrene	0.000		0	N.D.	d	
82) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.	d	
83) Dibenzo(a,h)anthracene	0.000		0	N.D.	d	
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	0.000		0	N.D.	d	
89) Perylene	38.770	252	4176m	0.19		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079A.D
Acq On : 15 Aug 2013 11:54 pm
Operator : YM
Sample : Procedural Blank
Misc :
ALS Vial : 12 Sample Multiplier: 0.06667

Quant Time: Aug 22 09:04:32 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079A.D
Acq On : 15 Aug 2013 11:54 pm
Operator : YM
Sample : Procedural Blank
Misc :
ALS Vial : 12 Sample Multiplier: 0.06667

Quant Time: Aug 22 09:04:32 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
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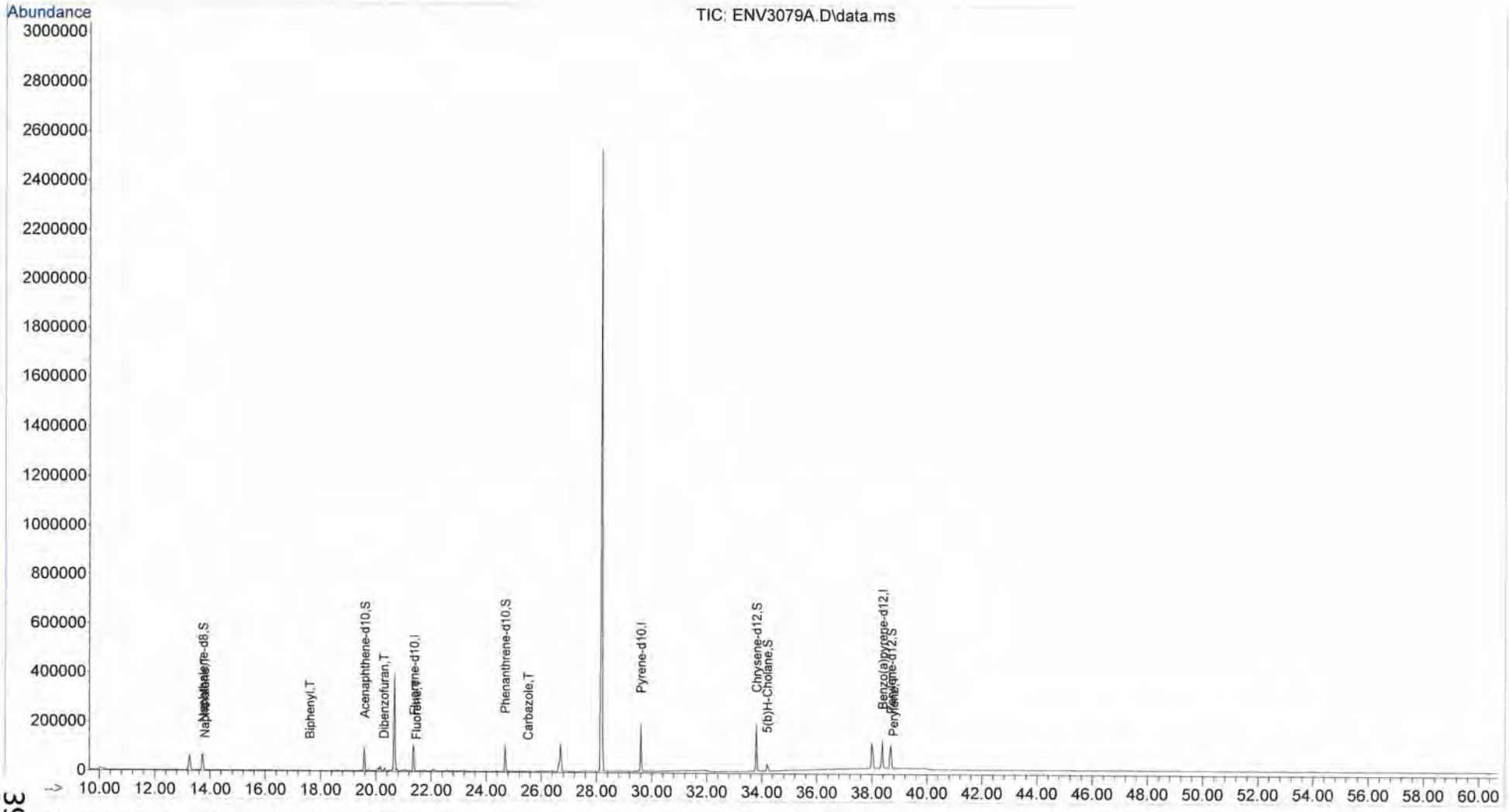

Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ENV3079B.D
Data File Path C:\msdchem\2\data\MS60141\
Operator YM
Date Acquired 8/16/2013 1:04
Acq. Method File PAH-2012.M
Sample Name SRM 1941b
Misc Info 0
Instrument Name GCMS6
Vial Number 13
Sample Multiplier 0.24752
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ENV3079B.D
SRM 1941b
8/16/2013
PAH-2012.M
4.040077569

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	11.34	27358	32.9961	35.9916
4)	C1-Decalins	12.62	6539	7.8866	8.6025
5)	C2-Decalins	14.63	8179	9.8646	10.7601
6)	C3-Decalins	17.22	16877	20.3551	22.2030
7)	C4-Decalins	17.52	25372	30.6009	33.3789
8)	Naphthalene	13.79	3155940	617.5376	673.5996
9)+10)	C1-Naphthalenes	16.21	949282	185.7505	202.6135
13)	C2-Naphthalenes	18.41	876646	171.5378	187.1105
14)	C3-Naphthalenes	20.42	583258	114.1290	124.4900
15)	C4-Naphthalenes	22.73	452014	88.4478	96.4774
16)	Benzothiophene	13.96	101950	25.1211	27.4016
17)	C1-Benzothiophenes	16.30	101343	24.9716	27.2385
18)	C2-Benzothiophenes	18.16	50448	12.4307	13.5592
19)	C3-Benzothiophenes	20.53	55711	13.7275	14.9738
20)	C4-Benzothiophenes	22.01	62300	15.3511	16.7447
22)	Biphenyl	17.61	241901	55.5489	60.5918
23)	Acenaphthylene	19.08	318245	63.8285	69.6230
24)	Acenaphthene	19.67	71093	24.9785	27.2461
25)	Dibenzofuran	20.28	344068	71.5256	78.0189
26)	Fluorene	21.45	185732	48.9491	53.3928
28)	C1-Fluorenes	23.37	148420	39.1156	42.6666
29)	C2-Fluorenes	25.35	365346	96.2858	105.0269
30)	C3-Fluorenes	27.56	521474	137.4328	149.9093
33)	Carbazole	25.52	83691	17.8253	19.4436
42)	Anthracene	24.96	814624	157.7826	172.1066
41)	Phenanthrene	24.79	1903980	347.3176	378.8481
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.68	1605021	292.7825	319.3622
50)	C2-Phenanthrenes/Anthracenes	28.36	1571050	286.5836	312.6005
51)	C3-Phenanthrenes/Anthracenes	29.92	927571	169.2037	184.5645
52)	C4-Phenanthrenes/Anthracenes	31.75	750266	136.8602	149.2848
34)	Dibenzothiophene	24.34	264254	48.2855	52.6690
35)+36)+37)	C1-Dibenzothiophenes	26.16	299217	54.6740	59.6375
38)	C2-Dibenzothiophenes	27.60	496290	90.6841	98.9167
39)	C3-Dibenzothiophenes	28.77	600114	109.6553	119.6102
40)	C4-Dibenzothiophenes	30.64	336111	61.4157	66.9912
58)	Fluoranthene	28.88	3523570	573.6350	625.7114
59)	Pyrene	29.68	3536440	465.0158	507.2314
62)	C1-Fluoranthenes/Pyrenes	30.82	2159710	351.5997	383.5190
63)	C2-Fluoranthenes/Pyrenes	32.56	2247950	365.9633	399.1865
64)	C3-Fluoranthenes/Pyrenes	33.84	1089700	177.4023	193.5074
65)	C4-Fluoranthenes/Pyrenes	35.28	807464	131.4547	143.3885
53)	Naphthobenzothiophene	32.95	808584	109.1957	119.1088
54)	C1-Naphthobenzothiophenes	34.11	669782	90.4512	98.6627
55)	C2-Naphthobenzothiophenes	35.82	703232	94.9685	103.5900
56)	C3-Naphthobenzothiophenes	37.18	531637	71.7952	78.3129
57)	C4-Naphthobenzothiophenes	38.03	222716	30.0769	32.8074
67)	Benz(a)anthracene	33.76	2170560	319.6647	348.6848
68)	Chrysene/Triphenylene	33.88	2834910	387.9950	423.2184
69)	C1-Chrysenes	35.12	1607720	220.0383	240.0141
70)	C2-Chrysenes	36.29	1001290	137.0409	149.4819
71)	C3-Chrysenes	37.99	591429	80.9452	88.2937
72)	C4-Chrysenes	39.43	309216	42.3205	46.1625
77)	Benzo(b)fluoranthene	37.29	2239430	283.6876	309.4417
78)	Benzo(k,j)fluoranthene	37.29	3457260	496.4434	541.5121
79)	Benzo(a)fluoranthene	37.64	445641	63.9916	69.8009
80)	Benzo(e)pyrene	38.30	2077550	290.1504	316.4911
81)	Benzo(a)pyrene	38.46	1665390	235.7541	257.1566
89)	Perylene	38.77	2116990	291.3484	317.7979
82)	Indeno(1,2,3-c,d)pyrene	43.14	1684610	250.3838	273.1144
83)	Dibenzo(a,h)anthracene	43.21	234388	43.7029	47.6704
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.54	1209780	222.8415	243.0717

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.05	660091	199.1353	217.2134
10)	1-Methylnaphthalene	16.38	289191	94.6603	103.2539
11)	2,6-Dimethylnaphthalene	18.16	285721	94.5031	103.0824
12)	1,6,7-Trimethylnaphthalene	20.98	69222	25.6287	27.9554
27)	1-Methylfluorene	23.47	60340	29.6091	32.2971
35)	4-Methyldibenzothiophene	25.86	159786	37.0602	40.4246
36)	2/3-Methyldibenzothiophene	26.14	93727	21.7387	23.7122
37)	1-Methyldibenzothiophene	26.49	45704	10.6004	11.5628
43)	3-Methylphenanthrene	26.45	356651	75.6055	82.4692
44)	2-Methylphenanthrene	26.52	380952	80.7569	88.0882
45)	2-Methylanthracene	26.70	260625	55.2492	60.2649
46)	4/9-Methylphenanthrene	26.83	312852	66.3205	72.3413
47)	1-Methylphenanthrene	26.90	293941	62.3117	67.9685
48)	3,6-Dimethylphenanthrene	28.01	72583	19.2311	20.9769
49)	Retene	30.68	48661	24.0978	26.2855
60)	2-Methylfluoranthene	30.44	304585	63.5854	69.3579
61)	Benzo(b)fluorene	31.06	301273	73.6587	80.3457
74)	C29-Hopane	40.71	508671	240.6350	262.4806
75)	18a-Oleanane	41.81	96632	45.7132	49.8632
76)	C30-Hopane	42.03	662037	313.1871	341.6191
91)	C20-TAS	33.26	82245	8.8916	9.6988
92)	C21-TAS	34.31	54350	5.8758	6.4093
93)	C26(20S)-TAS	38.54	21241	2.2964	2.5049
94)	C26(20R)/C27(20S)-TAS	39.47	70537	7.6258	8.3181
95)	C28(20S)-TAS	40.19	42850	4.6326	5.0531
96)	C27(20R)-TAS	40.67	56310	6.0877	6.6404
97)	C28(20R)-TAS	41.37	43118	4.6615	5.0847
	Surrogate Standards				
2)	Naphthalene-d8	13.73	214864	45.33	73.22
21)	Acenaphthene-d10	19.59	142916	54.38	87.82
32)	Phenanthrene-d10	24.69	258543	56.77	91.68
66)	Chrysene-d12	33.80	391975	59.85	96.71
88)	Perylene-d12	38.69	337819	57.12	92.30
90)	5(b)H-Cholane	34.23	73487	62.90	101.64
	Internal Standards				
1)	Fluorene-d10	21.37	168661	62.14	
31)	Pyrene-d10	29.61	339943	62.03	
73)	Benzo(a)pyrene-d12	38.38	323256	61.96	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079B.D
Acq On : 16 Aug 2013 1:04 am
Operator : YM
Sample : SRM 1941b
Misc :
ALS Vial : 13 Sample Multiplier: 0.24752

Quant Time: Sep 03 09:22:00 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.369	176	168661m	251.05		0.00
31) Pyrene-d10	29.606	212	339943m	250.63		0.00
73) Benzo(a)pyrene-d12	38.381	264	323256m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.733	136	214864m	45.33		0.00
21) Acenaphthene-d10	19.585	164	142916m	54.38		0.00
32) Phenanthrene-d10	24.687	188	258543m	56.77		0.00
66) Chrysene-d12	33.802	240	391975m	59.85		0.00
88) Perylene-d12	38.692	264	337819m	57.12		0.00
90) 5(b)H-Cholane	34.229	217	73487m	62.90		0.04
Target Compounds						Qvalue
3) cis/trans Decalin	11.337	138	27358m	33.00		
4) C1-Decalins	12.619	152	6539m	7.89		
5) C2-Decalins	14.625	166	8179m	9.86		
6) C3-Decalins	17.217	180	16877m	20.36		
7) C4-Decalins	17.523	194	25372m	30.60		
8) Naphthalene	13.789	128	3155935m	617.54		
9) 2-Methylnaphthalene	16.046	142	660091m	199.14		
10) 1-Methylnaphthalene	16.381	142	289191m	94.66		
11) 2,6-Dimethylnaphthalene	18.164	156	285721m	94.50		
12) 1,6,7-Trimethylnaphtha...	20.979	170	69222m	25.63		
13) C2-Naphthalenes	18.415	156	876646m	171.54		
14) C3-Naphthalenes	20.421	170	583258m	114.13		
15) C4-Naphthalenes	22.734	184	452014m	88.45		
16) Benzothiophene	13.956	134	101950m	25.12		
17) C1-Benzothiophenes	16.297	148	101343m	24.97		
18) C2-Benzothiophenes	18.164	162	50448m	12.43		
19) C3-Benzothiophenes	20.533	176	55711m	13.73		
20) C4-Benzothiophenes	22.010	190	62300m	15.35		
22) Biphenyl	17.607	154	241901m	55.55		
23) Acenaphthylene	19.084	152	318245m	63.83		
24) Acenaphthene	19.669	154	71093m	24.98		
25) Dibenzofuran	20.282	168	344068m	71.53		
26) Fluorene	21.452	166	185732m	48.95		
27) 1-Methylfluorene	23.475	180	60340m	29.61		
28) C1-Fluorenes	23.371	180	148420m	39.12		
29) C2-Fluorenes	25.345	194	365346m	96.29		
30) C3-Fluorenes	27.562	208	521474m	137.43		
33) Carbazole	25.518	167	83691m	17.83		
34) Dibenzothiophene	24.341	184	264254m	48.29		
35) 4-Methyldibenzothiophene	25.865	198	159786m	37.06		
36) 2/3-Methyldibenzothiop...	26.142	198	93727m	21.74		
37) 1-Methyldibenzothiophene	26.488	198	45704m	10.60		
38) C2-Dibenzothiophenes	27.597	212	496290m	90.68		
39) C3-Dibenzothiophenes	28.774	226	600114m	109.66		
40) C4-Dibenzothiophenes	30.645	240	336111m	61.42		
41) Phenanthrene	24.791	178	1903982m	347.32		
42) Anthracene	24.964	178	814624m	157.78		
43) 3-Methylphenanthrene	26.454	192	356651m	75.61		

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Acq On : 16 Aug 2013 1:04 am
Operator : YM
Sample : SRM 1941b
Misc :
ALS Vial : 13 Sample Multiplier: 0.24752

Quant Time: Sep 03 09:22:00 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44)	2-Methylphenanthrene	26.523	192	380952m	80.76		
45)	2-Methylanthracene	26.696	192	260625m	55.25		
46)	4/9-Methylphenanthrene	26.835	192	312852m	66.32		
47)	1-Methylphenanthrene	26.904	192	293941m	62.31		
48)	3,6-Dimethylphenanthrene	28.012	206	72583m	19.23		
49)	Retene	30.680	234	48661m	24.10		
50)	C2-Phenanthrenes/Anthr...	28.359	206	1571049m	286.58		
51)	C3-Phenanthrenes/Anthr...	29.917	220	927571m	169.20		
52)	C4-Phenanthrenes/Anthr...	31.753	234	750266m	136.86		
53)	Naphthobenzothiophene	32.948	234	808584m	109.20		
54)	C1-Naphthobenzothiophenes	34.112	248	669782m	90.45		
55)	C2-Naphthobenzothiophenes	35.820	262	703232m	94.97		
56)	C3-Naphthobenzothiophenes	37.178	276	531637m	71.80		
57)	C4-Naphthobenzothiophenes	38.032	290	222716m	30.08		
58)	Fluoranthene	28.878	202	3523567m	573.64		
59)	Pyrene	29.675	202	3536437m	465.02		
60)	2-Methylfluoranthene	30.437	216	304585m	63.59		
61)	Benzo(b)fluorene	31.061	216	301273m	73.66		
62)	C1-Fluoranthenes/Pyrenes	30.818	216	2159709m	351.60		
63)	C2-Fluoranthenes/Pyrenes	32.560	230	2247945m	365.96		
64)	C3-Fluoranthenes/Pyrenes	33.841	244	1089697m	177.40		
65)	C4-Fluoranthenes/Pyrenes	35.277	258	807464m	131.45		
67)	Benz(a)anthracene	33.763	228	2170557m	319.67		
68)	Chrysene/Triphenylene	33.880	228	2834907m	388.00		
69)	C1-Chrysenes	35.121	242	1607718m	220.04		
70)	C2-Chrysenes	36.286	256	1001294m	137.04		
71)	C3-Chrysenes	37.993	270	591429m	80.95		
72)	C4-Chrysenes	39.429	284	309216m	42.32		
74)	C29-Hopane	40.707	191	508671m	240.63		
75)	18a-Oleanane	41.813	191	96632m	45.71		
76)	C30-Hopane	42.035	191	662037m	313.19		
77)	Benzo(b)fluoranthene	37.294	252	2239427m	283.69		
78)	Benzo(k,j)fluoranthene	37.294	252	3457264m	496.44		
79)	Benzo(a)fluoranthene	37.644	252	445641m	63.99		
80)	Benzo(e)pyrene	38.303	252	2077551m	290.15		
81)	Benzo(a)pyrene	38.459	252	1665394m	235.75		
82)	Indeno(1,2,3-c,d)pyrene	43.141	276	1684612m	250.38		
83)	Dibenzo(a,h)anthracene	43.215	278	234388m	43.70		
84)	C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85)	C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86)	C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87)	Benzo(g,h,i)perylene	44.542	276	1209778m	222.84		
89)	Perylene	38.769	252	2116989m	291.35		
91)	C20-TAS	33.259	231	82245m	8.89		
92)	C21-TAS	34.306	231	54350m	5.88		
93)	C26(20S)-TAS	38.536	231	21241m	2.30		
94)	C26(20R)/C27(20S)-TAS	39.468	231	70537m	7.63		
95)	C28(20S)-TAS	40.191	231	42850m	4.63		
96)	C27(20R)-TAS	40.670	231	56310m	6.09		
97)	C28(20R)-TAS	41.371	231	43118m	4.66		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079B.D
Acq On : 16 Aug 2013 1:04 am
Operator : YM
Sample : SRM 1941b
Misc :
ALS Vial : 13 Sample Multiplier: 0.24752

Quant Time: Sep 03 09:22:00 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

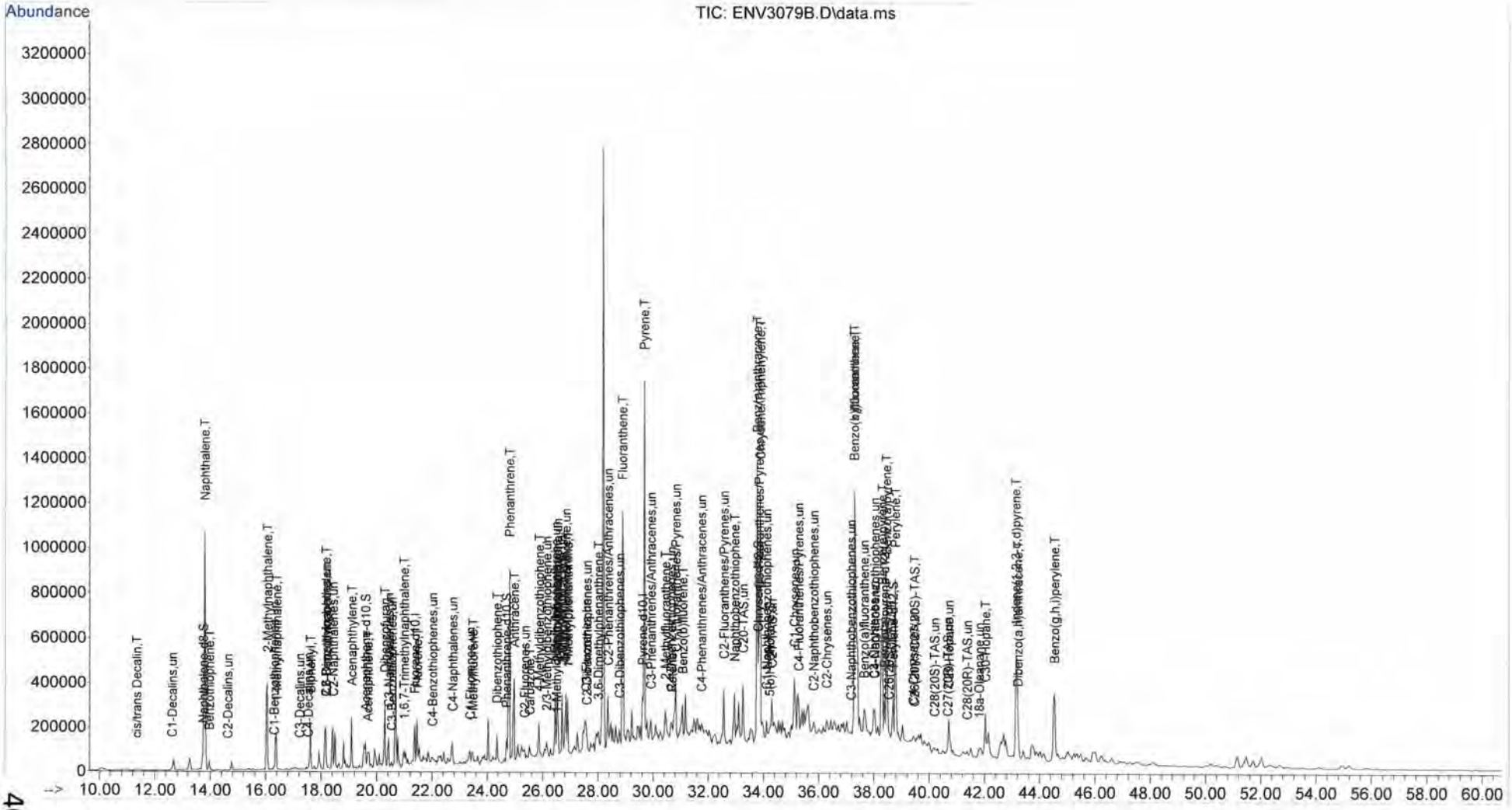
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079B.D
Acq On : 16 Aug 2013 1:04 am
Operator : YM
Sample : SRM 1941b
Misc :
ALS Vial : 13 Sample Multiplier: 0.24752

Quant Time: Sep 03 09:22:00 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ENV3079C.D
Data File Path C:\msdchem\2\data\MS60141\
Operator YM
Date Acquired 8/16/2013 2:13
Acq. Method File PAH-2012.M
Sample Name MS (SED-DA-008 (0-0.5) MS/MSD)
Misc Info 0
Instrument Name GCMS6
Vial Number 14
Sample Multiplier 0.06653
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ENV3079C.D
(SED-DA-008 (0-0.5) MS/MSD)
8/16/2013
PAH-2012.M
15.03081317

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	11.09	17773	5.7495	6.5396
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	105384	5.5310	6.2910
9)+10)	C1-Naphthalenes	16.19	129723	6.8084	7.7440
13)	C2-Naphthalenes	0.00	0	0.0000	0.0000
14)	C3-Naphthalenes	0.00	0	0.0000	0.0000
15)	C4-Naphthalenes	0.00	0	0.0000	0.0000
16)	Benzothiophene	13.96	77271	5.1069	5.8087
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.61	118152	7.2773	8.2773
23)	Acenaphthylene	19.09	95540	5.1396	5.8459
24)	Acenaphthene	19.67	53379	5.0304	5.7216
25)	Dibenzofuran	20.29	99221	5.5324	6.2926
26)	Fluorene	21.46	84560	5.9774	6.7988
28)	C1-Fluorenes	0.00	0	0.0000	0.0000
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	25.52	19362	1.0581	1.2035
42)	Anthracene	24.96	58486	2.9065	3.3059
41)	Phenanthrene	24.79	139899	6.5478	7.4475
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	5.38	103885	4.8622	5.5303
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	24.34	126857	5.9474	6.7647
35)+36)+37)	C1-Dibenzothiophenes	8.62	86565	4.0584	4.6161
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	28.88	164951	6.8901	7.8369
59)	Pyrene	29.68	152444	5.1431	5.8499
62)	C1-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benz(a)anthracene	33.76	137582	5.1988	5.9132
68)	Chrysene/Triphenylene	33.88	190520	6.6903	7.6097
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.29	206053	7.9657	9.0603
78)	Benzo(k,j)fluoranthene	37.37	146357	6.4134	7.2948
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.26	160918	6.8583	7.8008
81)	Benzo(a)pyrene	38.46	6580	0.2843	0.3233
89)	Perylene	38.69	28788	1.2090	1.3752
82)	Indeno(1,2,3-c,d)pyrene	43.14	129667	5.8813	6.6895
83)	Dibenzo(a,h)anthracene	43.22	109649	6.2391	7.0964
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.51	47989	2.6976	3.0683

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.02	68815	5.5683	6.3334
10)	1-Methylnaphthalene	16.36	60908	5.3475	6.0823
11)	2,6-Dimethylnaphthalene	18.14	60498	5.3671	6.1046
12)	1,6,7-Trimethylnaphthalene	20.98	55994	5.5605	6.3246
27)	1-Methylfluorene	23.48	43063	5.6678	6.4466
35)	4-Methyldibenzothiophene	25.87	86565	5.1514	5.8593
36)	2/3-Methyldibenzothiophene	0.00	0	0.0000	0.0000
37)	1-Methyldibenzothiophene	0.00	0	0.0000	0.0000
43)	3-Methylphenanthrene	0.00	0	0.0000	0.0000
44)	2-Methylphenanthrene	0.00	0	0.0000	0.0000
45)	2-Methylanthracene	0.00	0	0.0000	0.0000
46)	4/9-Methylphenanthrene	0.00	0	0.0000	0.0000
47)	1-Methylphenanthrene	26.90	103885	5.6504	6.4269
48)	3,6-Dimethylphenanthrene	28.01	87102	5.9213	6.7349
49)	Retene	30.68	36897	4.6882	5.3324
60)	2-Methylfluoranthene	30.44	96627	5.1757	5.8869
61)	Benzo(b)fluorene	31.03	88121	5.5279	6.2875
74)	C29-Hopane	0.00	0	0.0000	0.0000
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	0.00	0	0.0000	0.0000
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	39.39	200383	6.6111	7.5195
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.71	241933	13.69	82.28
21)	Acenaphthene-d10	19.56	135225	13.80	82.92
32)	Phenanthrene-d10	24.69	259742	14.63	87.92
66)	Chrysene-d12	33.80	367538	14.40	86.56
88)	Perylene-d12	38.69	2279	0.12	0.71
90)	5(b)H-Cholane	34.19	65524	17.11	102.90
	Internal Standards				
1)	Fluorene-d10	21.35	169017	16.70	
31)	Pyrene-d10	29.61	356120	16.67	
73)	Benzo(a)pyrene-d12	38.38	284717	16.65	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079C.D
Acq On : 16 Aug 2013 2:13 am
Operator : YM
Sample : MS (SED-DA-008 (0-0.5) MS/MSD)
Misc :
ALS Vial : 14 Sample Multiplier: 0.06653

Quant Time: Sep 03 08:30:54 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Fluorene-d10	21.345	176	169017m	251.05	-0.02
31) Pyrene-d10	29.606	212	356120m	250.63	0.00
73) Benzo(a)pyrene-d12	38.380	264	284717m	250.32	0.00
System Monitoring Compounds					
2) Naphthalene-d8	13.710	136	241933m	13.69	-0.02
21) Acenaphthene-d10	19.562	164	135225m	13.80	-0.02
32) Phenanthrene-d10	24.687	188	259742m	14.63	0.00
66) Chrysene-d12	33.801	240	367538m	14.40	0.00
88) Perylene-d12	38.690	264	2279m	0.12	0.00
90) 5(b)H-Cholane	34.189	217	65524m	17.11	0.00
Target Compounds					Qvalue
3) cis/trans Decalin	11.091	138	17773m	5.75	
4) C1-Decalins	0.000		0	N.D. d	
5) C2-Decalins	0.000		0	N.D. d	
6) C3-Decalins	0.000		0	N.D. d	
7) C4-Decalins	0.000		0	N.D. d	
8) Naphthalene	13.794	128	105384m	5.53	
9) 2-Methylnaphthalene	16.023	142	68815m	5.57	
10) 1-Methylnaphthalene	16.357	142	60908m	5.35	
11) 2,6-Dimethylnaphthalene	18.141	156	60498m	5.37	
12) 1,6,7-Trimethylnaphtha...	20.983	170	55994m	5.56	
13) C2-Naphthalenes	0.000		0	N.D. d	
14) C3-Naphthalenes	0.000		0	N.D. d	
15) C4-Naphthalenes	0.000		0	N.D. d	
16) Benzothiophene	13.961	134	77271m	5.11	
17) C1-Benzothiophenes	0.000		0	N.D. d	
18) C2-Benzothiophenes	0.000		0	N.D. d	
19) C3-Benzothiophenes	0.000		0	N.D. d	
20) C4-Benzothiophenes	0.000		0	N.D. d	
22) Biphenyl	17.611	154	118152m	7.28	
23) Acenaphthylene	19.088	152	95540m	5.14	
24) Acenaphthene	19.673	154	53379m	5.03	
25) Dibenzofuran	20.286	168	99221m	5.53	
26) Fluorene	21.457	166	84560m	5.98	
27) 1-Methylfluorene	23.475	180	43063m	5.67	
28) C1-Fluorenes	0.000		0	N.D. d	
29) C2-Fluorenes	0.000		0	N.D. d	
30) C3-Fluorenes	0.000		0	N.D. d	
33) Carbazole	25.519	167	19362m	1.06	
34) Dibenzothiophene	24.341	184	126857m	5.95	
35) 4-Methyldibenzothiophene	25.865	198	86565m	5.15	
36) 2/3-Methyldibenzothiop...	0.000		0	N.D. d	
37) 1-Methyldibenzothiophene	0.000		0	N.D. d	
38) C2-Dibenzothiophenes	0.000		0	N.D. d	
39) C3-Dibenzothiophenes	0.000		0	N.D. d	
40) C4-Dibenzothiophenes	0.000		0	N.D. d	
41) Phenanthrene	24.791	178	139899m	6.55	
42) Anthracene	24.964	178	58486m	2.91	
43) 3-Methylphenanthrene	0.000		0	N.D. d	

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079C.D
Acq On : 16 Aug 2013 2:13 am
Operator : YM
Sample : MS (SED-DA-008 (0-0.5) MS/MSD)
Misc :
ALS Vial : 14 Sample Multiplier: 0.06653

Quant Time: Sep 03 08:30:54 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.904	192	103885m	5.65		
48) 3,6-Dimethylphenanthrene	28.013	206	87102m	5.92		
49) Retene	30.680	234	36897m	4.69		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.879	202	164951m	6.89		
59) Pyrene	29.675	202	152444m	5.14		
60) 2-Methylfluoranthene	30.437	216	96627m	5.18		
61) Benzo(b)fluorene	31.026	216	88121m	5.53		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.762	228	137582m	5.20		
68) Chrysene/Triphenylene	33.878	228	190520m	6.69		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.293	252	206053m	7.97		
78) Benzo(k,j)fluoranthene	37.371	252	146357m	6.41		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.263	252	160918m	6.86		
81) Benzo(a)pyrene	38.457	252	6580m	0.28		
82) Indeno(1,2,3-c,d)pyrene	43.142	276	129667m	5.88		
83) Dibenzo(a,h)anthracene	43.216	278	109649m	6.24		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.507	276	47989m	2.70		
89) Perylene	38.690	252	28788m	1.21		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.389	231	200383m	6.61		
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079C.D
Acq On : 16 Aug 2013 2:13 am
Operator : YM
Sample : MS (SED-DA-008 (0-0.5) MS/MSD)
Misc :
ALS Vial : 14 Sample Multiplier: 0.06653

Quant Time: Sep 03 08:30:54 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

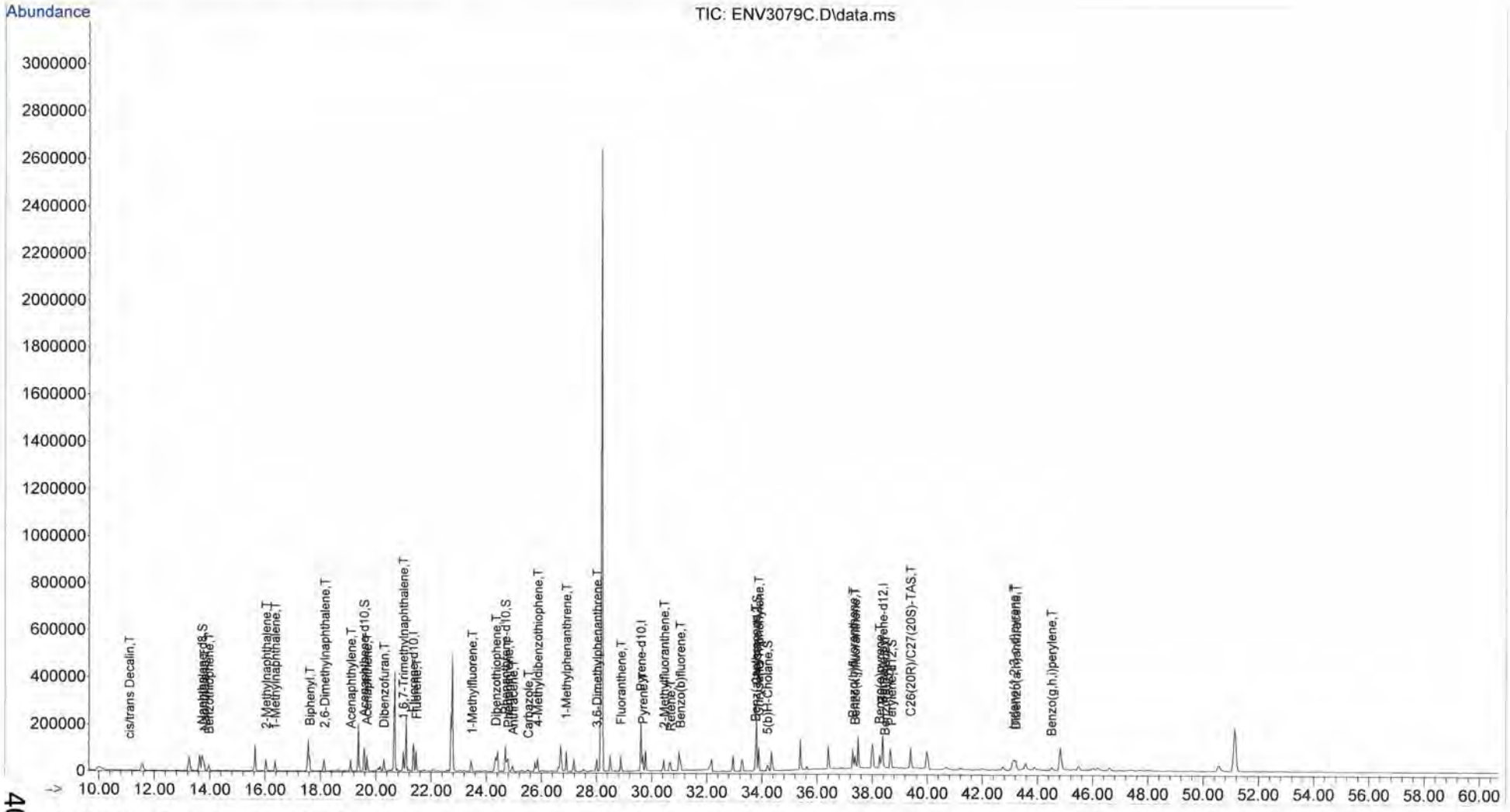
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079C.D
Acq On : 16 Aug 2013 2:13 am
Operator : YM
Sample : MS (SED-DA-008 (0-0.5) MS/MSD)
Misc :
ALS Vial : 14 Sample Multiplier: 0.06653

Quant Time: Sep 03 08:30:54 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ENV3079D.D
Data File Path C:\msdchem\2\data\MS60141\
Operator YM
Date Acquired 8/16/2013 3:22
Acq. Method File PAH-2012.M
Sample Name MSD (SED-DA-008 (0-0.5) MS/MSD)
Misc Info 0
Instrument Name GCMS6
Vial Number 15
Sample Multiplier 0.06623
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ENV3079D.D
(SED-DA-008 (0-0.5) MS/MSD)
8/16/2013
PAH-2012.M
15.09889778

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	11.09	16833	5.6490	6.2388
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	99730	5.4299	5.9969
9)+10)	C1-Naphthalenes	16.19	119697	6.5170	7.1975
13)	C2-Naphthalenes	0.00	0	0.0000	0.0000
14)	C3-Naphthalenes	0.00	0	0.0000	0.0000
15)	C4-Naphthalenes	0.00	0	0.0000	0.0000
16)	Benzothiophene	13.96	71256	4.8855	5.3955
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.61	111119	7.1000	7.8413
23)	Acenaphthylene	19.08	85471	4.7699	5.2679
24)	Acenaphthene	19.67	47433	4.6372	5.1213
25)	Dibenzofuran	20.28	96279	5.5690	6.1505
26)	Fluorene	21.45	79948	5.8627	6.4748
28)	C1-Fluorenes	0.00	0	0.0000	0.0000
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	25.52	12968	0.7351	0.8119
42)	Anthracene	24.97	49016	2.5268	2.7906
41)	Phenanthrene	24.76	133394	6.4763	7.1524
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	5.38	97725	4.7445	5.2399
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	24.34	144332	7.0191	7.7520
35)+36)+37)	C1-Dibenzothiophenes	8.62	79746	3.8782	4.2831
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	28.88	159435	6.9082	7.6295
59)	Pyrene	29.68	125490	4.3917	4.8503
62)	C1-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benz(a)anthracene	33.76	123077	4.8242	5.3279
68)	Chrysene/Triphenylene	33.88	173699	6.3272	6.9878
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.29	190730	8.5459	9.4382
78)	Benzo(k,j)fluoranthene	37.37	140482	7.1350	7.8800
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	38.26	141009	6.9655	7.6928
81)	Benzo(a)pyrene	38.46	5353	0.2680	0.2960
89)	Perylene	38.69	25234	1.2283	1.3566
82)	Indeno(1,2,3-c,d)pyrene	43.14	111899	5.8826	6.4968
83)	Dibenzo(a,h)anthracene	43.22	98908	6.5229	7.2040
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.51	40214	2.6200	2.8936

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.02	63772	5.3531	5.9120
10)	1-Methylnaphthalene	16.35	55925	5.0936	5.6254
11)	2,6-Dimethylnaphthalene	18.14	57134	5.2581	5.8071
12)	1,6,7-Trimethylnaphthalene	20.98	53093	5.4696	6.0406
27)	1-Methylfluorene	23.44	41662	5.6884	6.2823
35)	4-Methyldibenzothiophene	25.87	79746	4.9227	5.4367
36)	2/3-Methyldibenzothiophene	0.00	0	0.0000	0.0000
37)	1-Methyldibenzothiophene	0.00	0	0.0000	0.0000
43)	3-Methylphenanthrene	0.00	0	0.0000	0.0000
44)	2-Methylphenanthrene	0.00	0	0.0000	0.0000
45)	2-Methylanthracene	0.00	0	0.0000	0.0000
46)	4/9-Methylphenanthrene	0.00	0	0.0000	0.0000
47)	1-Methylphenanthrene	26.90	97725	5.5137	6.0893
48)	3,6-Dimethylphenanthrene	28.01	79789	5.6265	6.2139
49)	Retene	30.68	33435	4.4068	4.8669
60)	2-Methylfluoranthene	30.44	87571	4.8656	5.3736
61)	Benzo(b)fluorene	31.03	82573	5.3731	5.9341
74)	C29-Hopane	0.00	0	0.0000	0.0000
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	0.00	0	0.0000	0.0000
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	39.39	187774	7.1803	7.9299
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.73	225964	13.27	80.08
21)	Acenaphthene-d10	19.59	126360	13.38	80.75
32)	Phenanthrene-d10	24.69	256720	15.00	90.55
66)	Chrysene-d12	33.80	349158	14.19	85.69
88)	Perylene-d12	38.69	2154	0.13	0.78
90)	5(b)H-Cholane	34.19	62651	18.97	114.55
	Internal Standards				
1)	Fluorene-d10	21.37	162191	16.63	
31)	Pyrene-d10	29.61	341763	16.60	
73)	Benzo(a)pyrene-d12	38.38	244543	16.58	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079D.D
Acq On : 16 Aug 2013 3:22 am
Operator : YM
Sample : MSD (SED-DA-008 (0-0.5) MS/MSD)
Misc :
ALS Vial : 15 Sample Multiplier: 0.06623

Quant Time: Sep 03 08:32:02 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.370	176	162191m	251.05		0.00
31) Pyrene-d10	29.607	212	341763m	250.63		0.00
73) Benzo(a)pyrene-d12	38.380	264	244543m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.734	136	225964m	13.27		0.00
21) Acenaphthene-d10	19.586	164	126360m	13.38		0.00
32) Phenanthrene-d10	24.688	188	256720m	15.00		0.00
66) Chrysene-d12	33.801	240	349158m	14.19		0.00
88) Perylene-d12	38.690	264	2154m	0.13		0.00
90) 5(b)H-Cholane	34.189	217	62651m	18.97		0.00
Target Compounds						Qvalue
3) cis/trans Decalin	11.087	138	16833m	5.65		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.790	128	99730m	5.43		
9) 2-Methylnaphthalene	16.019	142	63772m	5.35		
10) 1-Methylnaphthalene	16.354	142	55925m	5.09		
11) 2,6-Dimethylnaphthalene	18.137	156	57134m	5.26		
12) 1,6,7-Trimethylnaphtha...	20.979	170	53093m	5.47		
13) C2-Naphthalenes	0.000		0	N.D.	d	
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.	d	
16) Benzothiophene	13.957	134	71256m	4.89		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.608	154	111119m	7.10		
23) Acenaphthylene	19.085	152	85471m	4.77		
24) Acenaphthene	19.670	154	47433m	4.64		
25) Dibenzofuran	20.283	168	96279m	5.57		
26) Fluorene	21.453	166	79948m	5.86		
27) 1-Methylfluorene	23.441	180	41662m	5.69		
28) C1-Fluorenes	0.000		0	N.D.	d	
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.519	167	12968m	0.74		
34) Dibenzothiophene	24.341	184	144332m	7.02		
35) 4-Methyldibenzothiophene	25.866	198	79746m	4.92		
36) 2/3-Methyldibenzothiop...	0.000		0	N.D.	d	
37) 1-Methyldibenzothiophene	0.000		0	N.D.	d	
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.757	178	133394m	6.48		
42) Anthracene	24.965	178	49016m	2.53		
43) 3-Methylphenanthrene	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079D.D
Acq On : 16 Aug 2013 3:22 am
Operator : YM
Sample : MSD (SED-DA-008 (0-0.5) MS/MSD)
Misc :
ALS Vial : 15 Sample Multiplier: 0.06623

Quant Time: Sep 03 08:32:02 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	26.905	192	97725m	5.51		
48) 3,6-Dimethylphenanthrene	28.013	206	79789m	5.63		
49) Retene	30.680	234	33435m	4.41		
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.879	202	159435m	6.91		
59) Pyrene	29.676	202	125490m	4.39		
60) 2-Methylfluoranthene	30.438	216	87571m	4.87		
61) Benzo(b)fluorene	31.027	216	82573m	5.37		
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	33.762	228	123077m	4.82		
68) Chrysene/Triphenylene	33.878	228	173699m	6.33		
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.293	252	190730m	8.55		
78) Benzo(k,j)fluoranthene	37.371	252	140482m	7.13		
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	38.263	252	141009m	6.97		
81) Benzo(a)pyrene	38.457	252	5353m	0.27		
82) Indeno(1,2,3-c,d)pyrene	43.142	276	111899m	5.88		
83) Dibenzo(a,h)anthracene	43.215	278	98908m	6.52		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.506	276	40214m	2.62		
89) Perylene	38.690	252	25234m	1.23		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	39.389	231	187774m	7.18		
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079D.D
Acq On : 16 Aug 2013 3:22 am
Operator : YM
Sample : MSD (SED-DA-008 (0-0.5) MS/MSD)
Misc :
ALS Vial : 15 Sample Multiplier: 0.06623

Quant Time: Sep 03 08:32:02 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

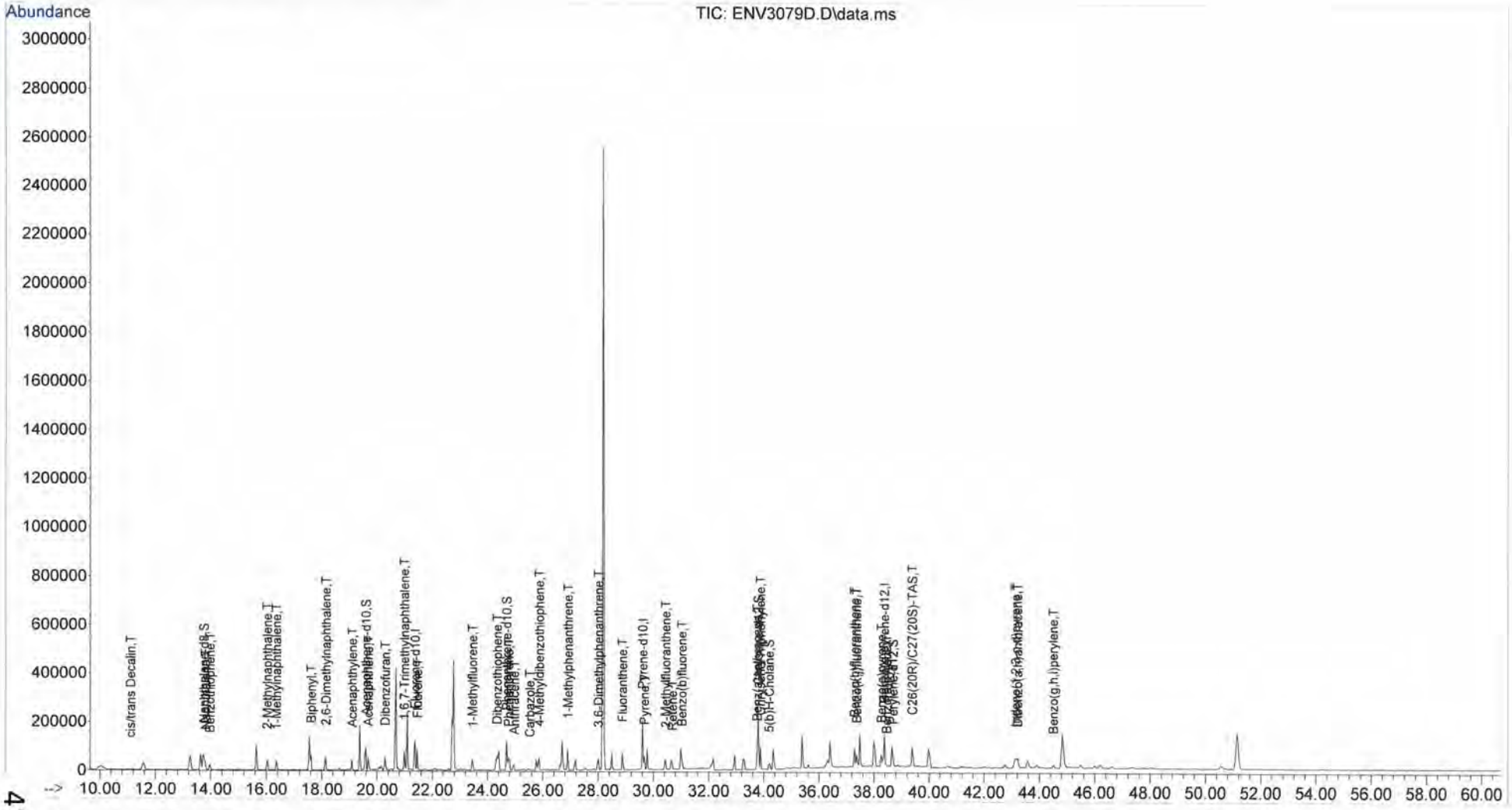
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079D.D
Acq On : 16 Aug 2013 3:22 am
Operator : YM
Sample : MSD (SED-DA-008 (0-0.5) MS/MSD)
Misc :
ALS Vial : 15 Sample Multiplier: 0.06623

Quant Time: Sep 03 08:32:02 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ENV3079E.D
Data File Path C:\GCMS6\MS60141\
Operator YM
Date Acquired 8/16/2013 4:31
Acq. Method File PAH-2012.M
Sample Name Dupl. (SED-DA-006 (0-0.5))
Misc Info 0
Instrument Name GCMS6
Vial Number 16
Sample Multiplier 0.06653
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ENV3079E.D
Dupl. (SED-DA-006 (0-0.5))
8/16/2013
PAH-2012.M
15.03081317

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	0.00	0	0.0000	0.0000
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	5238	0.3393	0.3891
9)+10)	C1-Naphthalenes	16.19	3584	0.2322	0.2663
13)	C2-Naphthalenes	18.17	5691	0.3686	0.4228
14)	C3-Naphthalenes	0.00	0	0.0000	0.0000
15)	C4-Naphthalenes	0.00	0	0.0000	0.0000
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.61	1986	0.1510	0.1731
23)	Acenaphthylene	0.00	0	0.0000	0.0000
24)	Acenaphthene	0.00	0	0.0000	0.0000
25)	Dibenzofuran	20.29	5115	0.3520	0.4037
26)	Fluorene	21.46	5120	0.4467	0.5123
28)	C1-Fluorenes	23.44	1466	0.1279	0.1467
29)	C2-Fluorenes	0.00	0	0.0000	0.0000
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	25.52	351	0.0229	0.0263
42)	Anthracene	0.00	0	0.0000	0.0000
41)	Phenanthrene	24.76	22876	1.2804	1.4685
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
50)	C2-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
51)	C3-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
52)	C4-Phenanthrenes/Anthracenes	0.00	0	0.0000	0.0000
34)	Dibenzothiophene	24.34	2369	0.1328	0.1523
35)+36)+37)	C1-Dibenzothiophenes	26.18	2048	0.1148	0.1317
38)	C2-Dibenzothiophenes	0.00	0	0.0000	0.0000
39)	C3-Dibenzothiophenes	0.00	0	0.0000	0.0000
40)	C4-Dibenzothiophenes	0.00	0	0.0000	0.0000
58)	Fluoranthene	28.88	3647	0.1822	0.2089
59)	Pyrene	29.68	303	0.0122	0.0140
62)	C1-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
63)	C2-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
64)	C3-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
65)	C4-Fluoranthenes/Pyrenes	0.00	0	0.0000	0.0000
53)	Naphthobenzothiophene	0.00	0	0.0000	0.0000
54)	C1-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
55)	C2-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
56)	C3-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
57)	C4-Naphthobenzothiophenes	0.00	0	0.0000	0.0000
67)	Benz(a)anthracene	0.00	0	0.0000	0.0000
68)	Chrysene/Triphenylene	0.00	0	0.0000	0.0000
69)	C1-Chrysenes	0.00	0	0.0000	0.0000
70)	C2-Chrysenes	0.00	0	0.0000	0.0000
71)	C3-Chrysenes	0.00	0	0.0000	0.0000
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	0.00	0	0.0000	0.0000
78)	Benzo(k,j)fluoranthene	0.00	0	0.0000	0.0000
79)	Benzo(a)fluoranthene	0.00	0	0.0000	0.0000
80)	Benzo(e)pyrene	0.00	0	0.0000	0.0000
81)	Benzo(a)pyrene	0.00	0	0.0000	0.0000
89)	Perylene	0.00	0	0.0000	0.0000
82)	Indeno(1,2,3-c,d)pyrene	0.00	0	0.0000	0.0000
83)	Dibenzo(a,h)anthracene	0.00	0	0.0000	0.0000
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	0.00	0	0.0000	0.0000

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.02	2564	0.2561	0.2937
10)	1-Methylnaphthalene	16.36	1020	0.1105	0.1268
11)	2,6-Dimethylnaphthalene	18.17	1309	0.1433	0.1644
12)	1,6,7-Trimethylnaphthalene	0.00	0	0.0000	0.0000
27)	1-Methylfluorene	23.44	673	0.1093	0.1254
35)	4-Methyldibenzothiophene	25.87	1210	0.0861	0.0988
36)	2/3-Methyldibenzothiophene	26.18	578	0.0411	0.0472
37)	1-Methyldibenzothiophene	26.49	260	0.0185	0.0212
43)	3-Methylphenanthrene	0.00	0	0.0000	0.0000
44)	2-Methylphenanthrene	0.00	0	0.0000	0.0000
45)	2-Methylanthracene	0.00	0	0.0000	0.0000
46)	4/9-Methylphenanthrene	0.00	0	0.0000	0.0000
47)	1-Methylphenanthrene	0.00	0	0.0000	0.0000
48)	3,6-Dimethylphenanthrene	0.00	0	0.0000	0.0000
49)	Retene	0.00	0	0.0000	0.0000
60)	2-Methylfluoranthene	0.00	0	0.0000	0.0000
61)	Benzo(b)fluorene	0.00	0	0.0000	0.0000
74)	C29-Hopane	0.00	0	0.0000	0.0000
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	0.00	0	0.0000	0.0000
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.71	207605	14.50	87.14
21)	Acenaphthene-d10	19.56	77715	9.79	58.82
32)	Phenanthrene-d10	24.69	215407	14.51	87.19
66)	Chrysene-d12	33.80	251407	11.78	70.81
88)	Perylene-d12	38.69	1197	0.08	0.47
90)	5(b)H-Cholane	0.00	0	0.00	0.00
	Internal Standards				
1)	Fluorene-d10	21.34	136942	16.70	
31)	Pyrene-d10	29.61	297786	16.67	
73)	Benzo(a)pyrene-d12	38.38	225729	16.65	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079E.D
Acq On : 16 Aug 2013 4:31 am
Operator : YM
Sample : Dupl. (SED-DA-006 (0-0.5))
Misc :
ALS Vial : 16 Sample Multiplier: 0.06653

Quant Time: Sep 03 08:19:58 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.345	176	136942m	251.05		-0.02
31) Pyrene-d10	29.607	212	297786m	250.63		0.00
73) Benzo(a)pyrene-d12	38.380	264	225729m	250.32		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.710	136	207605m	14.50		-0.02
21) Acenaphthene-d10	19.561	164	77715m	9.79		-0.02
32) Phenanthrene-d10	24.688	188	215407m	14.51		0.00
66) Chrysene-d12	33.801	240	251407m	11.78		0.00
88) Perylene-d12	38.691	264	1197m	0.08		0.00
90) 5(b)H-Cholane	0.000	217	0d	0.00		
Target Compounds						Qvalue
3) cis/trans Decalin	0.000		0	N.D.	d	
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.793	128	5238m	0.34		
9) 2-Methylnaphthalene	16.022	142	2564m	0.26		
10) 1-Methylnaphthalene	16.357	142	1020m	0.11		
11) 2,6-Dimethylnaphthalene	18.168	156	1309m	0.14		
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.	d	
13) C2-Naphthalenes	18.168	156	5691m	0.37		
14) C3-Naphthalenes	0.000		0	N.D.	d	
15) C4-Naphthalenes	0.000		0	N.D.	d	
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.611	154	1986m	0.15		
23) Acenaphthylene	0.000		0	N.D.	d	
24) Acenaphthene	0.000		0	N.D.	d	
25) Dibenzofuran	20.286	168	5115m	0.35		
26) Fluorene	21.456	166	5120m	0.45		
27) 1-Methylfluorene	23.441	180	673m	0.11		
28) C1-Fluorenes	23.441	180	1466m	0.13		
29) C2-Fluorenes	0.000		0	N.D.	d	
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.520	167	351m	0.02		
34) Dibenzothiophene	24.342	184	2369m	0.13		
35) 4-Methyldibenzothiophene	25.866	198	1210m	0.09		
36) 2/3-Methyldibenzothiop...	26.178	198	578m	0.04		
37) 1-Methyldibenzothiophene	26.490	198	260m	0.02		
38) C2-Dibenzothiophenes	0.000		0	N.D.	d	
39) C3-Dibenzothiophenes	0.000		0	N.D.	d	
40) C4-Dibenzothiophenes	0.000		0	N.D.	d	
41) Phenanthrene	24.758	178	22876m	1.28		
42) Anthracene	0.000		0	N.D.	d	
43) 3-Methylphenanthrene	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079E.D
Acq On : 16 Aug 2013 4:31 am
Operator : YM
Sample : Dupl. (SED-DA-006 (0-0.5))
Misc :
ALS Vial : 16 Sample Multiplier: 0.06653

Quant Time: Sep 03 08:19:58 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	0.000		0	N.D.	d	
45) 2-Methylanthracene	0.000		0	N.D.	d	
46) 4/9-Methylphenanthrene	0.000		0	N.D.	d	
47) 1-Methylphenanthrene	0.000		0	N.D.	d	
48) 3,6-Dimethylphenanthrene	0.000		0	N.D.	d	
49) Retene	0.000		0	N.D.	d	
50) C2-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
51) C3-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
52) C4-Phenanthrenes/Anthr...	0.000		0	N.D.	d	
53) Naphthobenzothiophene	0.000		0	N.D.	d	
54) C1-Naphthobenzothiophenes	0.000		0	N.D.	d	
55) C2-Naphthobenzothiophenes	0.000		0	N.D.	d	
56) C3-Naphthobenzothiophenes	0.000		0	N.D.	d	
57) C4-Naphthobenzothiophenes	0.000		0	N.D.	d	
58) Fluoranthene	28.880	202	3647m	0.18		
59) Pyrene	29.676	202	303m	0.01		
60) 2-Methylfluoranthene	0.000		0	N.D.	d	
61) Benzo(b)fluorene	0.000		0	N.D.	d	
62) C1-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
63) C2-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
64) C3-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
65) C4-Fluoranthenes/Pyrenes	0.000		0	N.D.	d	
67) Benz(a)anthracene	0.000		0	N.D.	d	
68) Chrysene/Triphenylene	0.000		0	N.D.	d	
69) C1-Chrysenes	0.000		0	N.D.	d	
70) C2-Chrysenes	0.000		0	N.D.	d	
71) C3-Chrysenes	0.000		0	N.D.	d	
72) C4-Chrysenes	0.000		0	N.D.	d	
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	0.000		0	N.D.	d	
78) Benzo(k,j)fluoranthene	0.000		0	N.D.	d	
79) Benzo(a)fluoranthene	0.000		0	N.D.	d	
80) Benzo(e)pyrene	0.000		0	N.D.	d	
81) Benzo(a)pyrene	0.000		0	N.D.	d	
82) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.	d	
83) Dibenzo(a,h)anthracene	0.000		0	N.D.	d	
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	0.000		0	N.D.	d	
89) Perylene	0.000		0	N.D.	d	
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079E.D
Acq On : 16 Aug 2013 4:31 am
Operator : YM
Sample : Dupl. (SED-DA-006 (0-0.5))
Misc :
ALS Vial : 16 Sample Multiplier: 0.06653

Quant Time: Sep 03 08:19:58 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

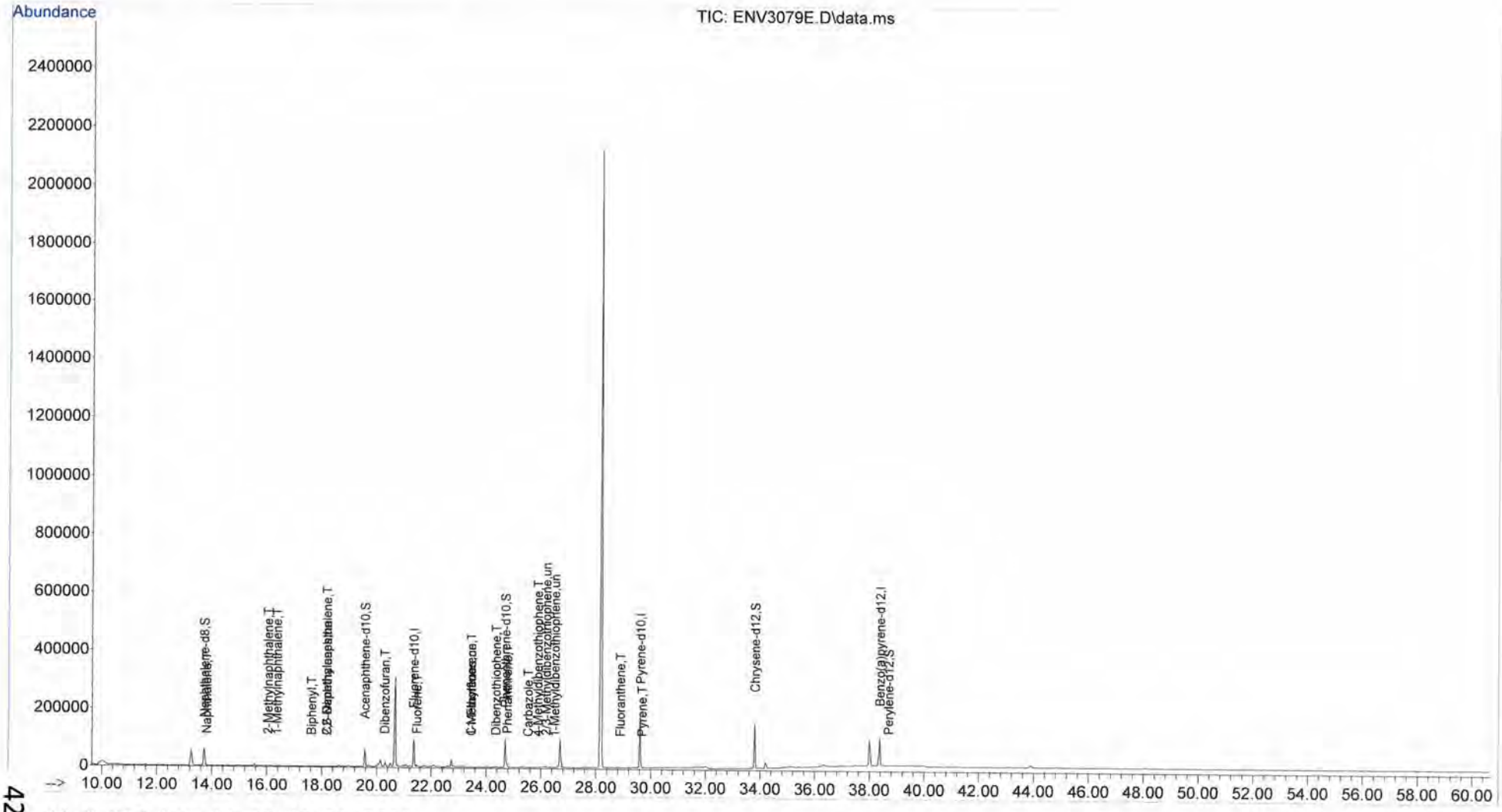
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ENV3079E.D
Acq On : 16 Aug 2013 4:31 am
Operator : YM
Sample : Dupl. (SED-DA-006 (0-0.5))
Misc :
ALS Vial : 16 Sample Multiplier: 0.06653

Quant Time: Sep 03 08:19:58 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1602.D
Data File Path C:\msdchem\2\data\MS60141\
Operator YM
Date Acquired 8/16/2013 5:40
Acq. Method File PAH-2012.M
Sample Name SED-DA-BG-007 (0-0.5)
Misc Info 0
Instrument Name GCMS6
Vial Number 18
Sample Multiplier 0.06658
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ARC1602.D
SED-DA-BG-007 (0-0.5)
8/16/2013
PAH-2012.M
15.01952538

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	11.34	41214	13.7377	14.4852
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	183447	9.9206	10.4604
9)+10)	C1-Naphthalenes	16.19	153786	8.3166	8.7691
13)	C2-Naphthalenes	18.50	297873	16.1086	16.9851
14)	C3-Naphthalenes	20.06	711674	38.4864	40.5804
15)	C4-Naphthalenes	21.48	403338	21.8120	22.9987
16)	Benzothiophene	13.96	9368	0.6380	0.6727
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.61	62171	3.9456	4.1603
23)	Acenaphthylene	19.09	328534	18.2106	19.2014
24)	Acenaphthene	19.67	31538	3.0624	3.2290
25)	Dibenzofuran	20.29	192683	11.0701	11.6724
26)	Fluorene	21.46	277058	20.1799	21.2779
28)	C1-Fluorenes	23.37	105989	7.7199	8.1399
29)	C2-Fluorenes	25.52	278848	20.3103	21.4153
30)	C3-Fluorenes	0.00	0	0.0000	0.0000
33)	Carbazole	25.52	108842	6.4030	6.7513
42)	Anthracene	24.96	537230	28.7400	30.3037
41)	Phenanthrene	24.79	1059780	53.3951	56.3002
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.69	521223	26.2609	27.6897
50)	C2-Phenanthrenes/Anthracenes	28.19	629879	31.7354	33.4621
51)	C3-Phenanthrenes/Anthracenes	29.92	618025	31.1382	32.8323
52)	C4-Phenanthrenes/Anthracenes	30.68	475808	23.9728	25.2771
34)	Dibenzothiophene	24.34	100920	5.0933	5.3704
35)+36)+37)	C1-Dibenzothiophenes	26.17	71380	3.6024	3.7984
38)	C2-Dibenzothiophenes	27.60	124823	6.2996	6.6424
39)	C3-Dibenzothiophenes	28.78	162460	8.1991	8.6452
40)	C4-Dibenzothiophenes	31.03	214719	10.8366	11.4261
58)	Fluoranthene	28.91	1857570	83.5266	88.0711
59)	Pyrene	29.68	2010970	73.0356	77.0093
62)	C1-Fluoranthenes/Pyrenes	30.82	1067510	48.0011	50.6127
63)	C2-Fluoranthenes/Pyrenes	32.56	1119620	50.3440	53.0831
64)	C3-Fluoranthenes/Pyrenes	34.11	517158	23.2542	24.5194
65)	C4-Fluoranthenes/Pyrenes	35.78	499166	22.4452	23.6664
53)	Naphthobenzothiophene	32.95	473212	17.6507	18.6110
54)	C1-Naphthobenzothiophenes	34.11	357963	13.3520	14.0784
55)	C2-Naphthobenzothiophenes	35.39	409045	15.2573	16.0874
56)	C3-Naphthobenzothiophenes	36.91	363134	13.5448	14.2817
57)	C4-Naphthobenzothiophenes	38.07	202757	7.5628	7.9742
67)	Benz(a)anthracene	33.76	1142930	46.4911	49.0206
68)	Chrysene/Triphenylene	33.88	1606070	60.7126	64.0159
69)	C1-Chrysenes	35.12	894572	33.8165	35.6564
70)	C2-Chrysenes	36.60	493927	18.6714	19.6872
71)	C3-Chrysenes	37.37	285256	10.7832	11.3699
72)	C4-Chrysenes	39.35	212083	8.0172	8.4534
77)	Benzo(b)fluoranthene	37.33	2557550	95.8765	101.0929
78)	Benzo(k,j)fluoranthene	37.41	829178	35.2345	37.1515
79)	Benzo(a)fluoranthene	37.68	314478	13.3632	14.0903
80)	Benzo(e)pyrene	38.30	1185670	49.0022	51.6683
81)	Benzo(a)pyrene	38.50	810337	33.9461	35.7931
89)	Perylene	38.81	14463800	589.0572	621.1063
82)	Indeno(1,2,3-c,d)pyrene	43.22	679640	29.8928	31.5192
83)	Dibenzo(a,h)anthracene	43.29	163928	9.0450	9.5371
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.62	553645	30.1790	31.8209

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.02	110553	9.2173	9.7188
10)	1-Methylnaphthalene	16.36	43233	3.9110	4.1238
11)	2,6-Dimethylnaphthalene	18.17	88743	8.1120	8.5534
12)	1,6,7-Trimethylnaphthalene	20.98	31342	3.2070	3.3815
27)	1-Methylfluorene	23.48	33002	4.4756	4.7191
35)	4-Methyldibenzothiophene	25.87	35363	2.2654	2.3886
36)	2/3-Methyldibenzothiophene	26.14	23786	1.5238	1.6067
37)	1-Methyldibenzothiophene	26.49	12231	0.7835	0.8262
43)	3-Methylphenanthrene	26.45	119712	7.0093	7.3906
44)	2-Methylphenanthrene	26.56	107966	6.3215	6.6655
45)	2-Methylanthracene	26.70	118446	6.9351	7.3124
46)	4/9-Methylphenanthrene	26.84	97305	5.6973	6.0073
47)	1-Methylphenanthrene	26.90	77794	4.5549	4.8027
48)	3,6-Dimethylphenanthrene	28.01	23754	1.7383	1.8329
49)	Retene	30.68	69183	9.4628	9.9777
60)	2-Methylfluoranthene	30.44	158911	9.1628	9.6613
61)	Benzo(b)fluorene	31.06	198719	13.4193	14.1494
74)	C29-Hopane	0.00	0	0.0000	0.0000
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	0.00	0	0.0000	0.0000
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.74	234913	13.70	82.25
21)	Acenaphthene-d10	19.59	141369	14.87	89.25
32)	Phenanthrene-d10	24.69	260478	15.80	94.84
66)	Chrysene-d12	33.80	365870	15.43	92.69
88)	Perylene-d12	38.73	255814	12.80	76.89
90)	5(b)H-Cholane	34.23	75516	19.13	114.91
	Internal Standards				
1)	Fluorene-d10	21.37	164156	16.71	
31)	Pyrene-d10	29.61	331066	16.69	
73)	Benzo(a)pyrene-d12	38.42	293831	16.67	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1602.D
Acq On : 16 Aug 2013 5:40 am
Operator : YM
Sample : SED-DA-BG-007 (0-0.5)
Misc :
ALS Vial : 18 Sample Multiplier: 0.06658

Quant Time: Sep 03 09:23:44 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.373	176	164156m	251.05		0.00
31) Pyrene-d10	29.606	212	331066m	250.63		0.00
73) Benzo(a)pyrene-d12	38.421	264	293831m	250.32		0.04
System Monitoring Compounds						
2) Naphthalene-d8	13.737	136	234913m	13.70		0.00
21) Acenaphthene-d10	19.589	164	141369m	14.87		0.00
32) Phenanthrene-d10	24.688	188	260478m	15.80		0.00
66) Chrysene-d12	33.803	240	365870m	15.43		0.00
88) Perylene-d12	38.731	264	255814m	12.80		0.04
90) 5(b)H-Cholane	34.229	217	75516m	19.13		0.04
Target Compounds						Qvalue
3) cis/trans Decalin	11.341	138	41214m	13.74		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.793	128	183447m	9.92		
9) 2-Methylnaphthalene	16.022	142	110553m	9.22		
10) 1-Methylnaphthalene	16.357	142	43233m	3.91		
11) 2,6-Dimethylnaphthalene	18.168	156	88743m	8.11		
12) 1,6,7-Trimethylnaphtha...	20.983	170	31342m	3.21		
13) C2-Naphthalenes	18.502	156	297873m	16.11		
14) C3-Naphthalenes	20.063	170	711674m	38.49		
15) C4-Naphthalenes	21.484	184	403338m	21.81		
16) Benzothiophene	13.960	134	9368m	0.64		
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.611	154	62171m	3.95		
23) Acenaphthylene	19.088	152	328534m	18.21		
24) Acenaphthene	19.673	154	31538m	3.06		
25) Dibenzofuran	20.286	168	192683m	11.07		
26) Fluorene	21.456	166	277058m	20.18		
27) 1-Methylfluorene	23.475	180	33002m	4.48		
28) C1-Fluorenes	23.371	180	105989m	7.72		
29) C2-Fluorenes	25.519	194	278848m	20.31		
30) C3-Fluorenes	0.000		0	N.D.	d	
33) Carbazole	25.519	167	108842m	6.40		
34) Dibenzothiophene	24.341	184	100920m	5.09		
35) 4-Methyldibenzothiophene	25.865	198	35363m	2.27		
36) 2/3-Methyldibenzothiop...	26.142	198	23786m	1.52		
37) 1-Methyldibenzothiophene	26.489	198	12231m	0.78		
38) C2-Dibenzothiophenes	27.597	212	124823m	6.30		
39) C3-Dibenzothiophenes	28.775	226	162460m	8.20		
40) C4-Dibenzothiophenes	31.027	240	214719m	10.84		
41) Phenanthrene	24.791	178	1059776m	53.40		
42) Anthracene	24.965	178	537230m	28.74		
43) 3-Methylphenanthrene	26.454	192	119712m	7.01		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1602.D
Acq On : 16 Aug 2013 5:40 am
Operator : YM
Sample : SED-DA-BG-007 (0-0.5)
Misc :
ALS Vial : 18 Sample Multiplier: 0.06658

Quant Time: Sep 03 09:23:44 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 2-Methylphenanthrene	26.558	192	107966m	6.32		
45) 2-Methylanthracene	26.697	192	118446m	6.94		
46) 4/9-Methylphenanthrene	26.835	192	97305m	5.70		
47) 1-Methylphenanthrene	26.904	192	77794m	4.55		
48) 3,6-Dimethylphenanthrene	28.013	206	23754m	1.74		
49) Retene	30.680	234	69183m	9.46		
50) C2-Phenanthrenes/Anthr...	28.186	206	629879m	31.74		
51) C3-Phenanthrenes/Anthr...	29.918	220	618025m	31.14		
52) C4-Phenanthrenes/Anthr...	30.680	234	475808m	23.97		
53) Naphthobenzothiophene	32.949	234	473212m	17.65		
54) C1-Naphthobenzothiophenes	34.113	248	357963m	13.35		
55) C2-Naphthobenzothiophenes	35.394	262	409045m	15.26		
56) C3-Naphthobenzothiophenes	36.907	276	363134m	13.54		
57) C4-Naphthobenzothiophenes	38.071	290	202757m	7.56		
58) Fluoranthene	28.914	202	1857573m	83.53		
59) Pyrene	29.676	202	2010973m	73.04		
60) 2-Methylfluoranthene	30.438	216	158911m	9.16		
61) Benzo(b)fluorene	31.061	216	198719m	13.42		
62) C1-Fluoranthenes/Pyrenes	30.819	216	1067513m	48.00		
63) C2-Fluoranthenes/Pyrenes	32.561	230	1119617m	50.34		
64) C3-Fluoranthenes/Pyrenes	34.113	244	517158m	23.25		
65) C4-Fluoranthenes/Pyrenes	35.782	258	499166m	22.45		
67) Benz(a)anthracene	33.764	228	1142932m	46.49		
68) Chrysene/Triphenylene	33.880	228	1606074m	60.71		
69) C1-Chrysenes	35.122	242	894572m	33.82		
70) C2-Chrysenes	36.597	256	493927m	18.67		
71) C3-Chrysenes	37.373	270	285256m	10.78		
72) C4-Chrysenes	39.352	284	212083m	8.02		
74) C29-Hopane	0.000		0	N.D.	d	
75) 18a-Oleanane	0.000		0	N.D.	d	
76) C30-Hopane	0.000		0	N.D.	d	
77) Benzo(b)fluoranthene	37.334	252	2557553m	95.88		
78) Benzo(k,j)fluoranthene	37.412	252	829178m	35.23		
79) Benzo(a)fluoranthene	37.683	252	314478m	13.36		
80) Benzo(e)pyrene	38.304	252	1185668m	49.00		
81) Benzo(a)pyrene	38.498	252	810337m	33.95		
82) Indeno(1,2,3-c,d)pyrene	43.216	276	679640m	29.89		
83) Dibenzo(a,h)anthracene	43.289	278	163928m	9.05		
84) C1-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
85) C2-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
86) C3-Dibenzo(a,h)anthrac...	0.000		0	N.D.	d	
87) Benzo(g,h,i)perylene	44.617	276	553645m	30.18		
89) Perylene	38.809	252	14463804m	589.06		
91) C20-TAS	0.000		0	N.D.	d	
92) C21-TAS	0.000		0	N.D.	d	
93) C26(20S)-TAS	0.000		0	N.D.	d	
94) C26(20R)/C27(20S)-TAS	0.000		0	N.D.	d	
95) C28(20S)-TAS	0.000		0	N.D.	d	
96) C27(20R)-TAS	0.000		0	N.D.	d	
97) C28(20R)-TAS	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1602.D
Acq On : 16 Aug 2013 5:40 am
Operator : YM
Sample : SED-DA-BG-007 (0-0.5)
Misc :
ALS Vial : 18 Sample Multiplier: 0.06658

Quant Time: Sep 03 09:23:44 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

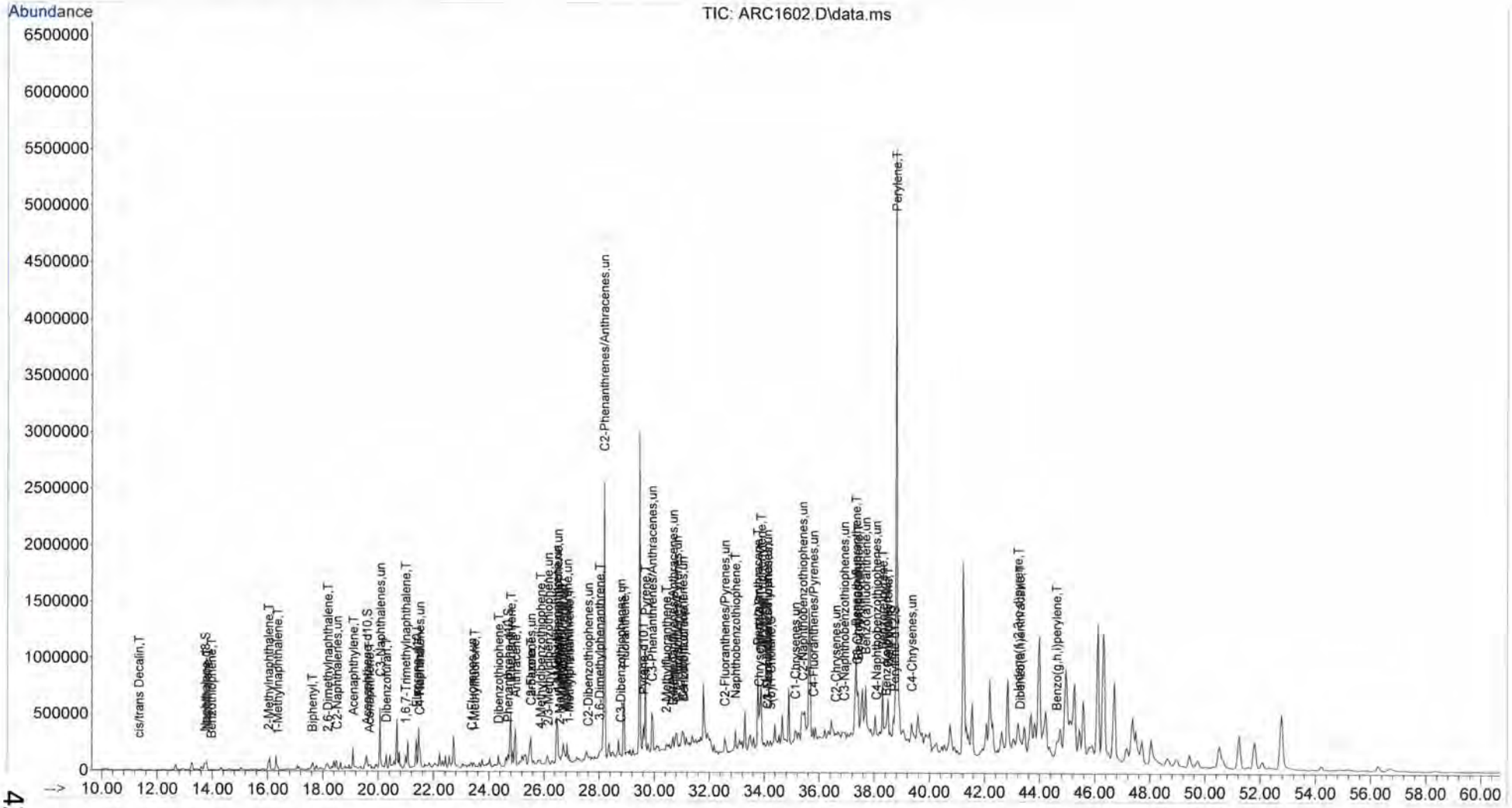
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1602.D
Acq On : 16 Aug 2013 5:40 am
Operator : YM
Sample : SED-DA-BG-007 (0-0.5)
Misc :
ALS Vial : 18 Sample Multiplier: 0.06658

Quant Time: Sep 03 09:23:44 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration



Tissues, Sediments and Water PAH Report (use Phenanthrene-d10 as surrogate correction)

Data File Name ARC1603.D
Data File Path C:\msdchem\2\data\MS60141\
Operator YM
Date Acquired 8/16/2013 7:59
Acq. Method File PAH-2012.M
Sample Name SED-DA-DUP-02-073013
Misc Info 0
Instrument Name GCMS6
Vial Number 20
Sample Multiplier 0.06653
Sample Amount 0

Surrogate/Internal Multiplier Factor: 1.00

AR-WKSU-2500-001:	**(ng/mL)**
Naphthalene-d8	250.125
Acenaphthene-d10	250.163
Phenanthrene-d10	250.194
Chrysene-d12	250.038
Perylene-d12	250.031
5(b)H-Cholane	250.000

Copy data below to Spread Sheet

ARC1603.D
SED-DA-DUP-02-073013
8/16/2013
PAH-2012.M
15.03081317

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
3)	cis/trans Decalin	10.95	314088	85.6953	87.5006
4)	C1-Decalins	0.00	0	0.0000	0.0000
5)	C2-Decalins	0.00	0	0.0000	0.0000
6)	C3-Decalins	0.00	0	0.0000	0.0000
7)	C4-Decalins	0.00	0	0.0000	0.0000
8)	Naphthalene	13.79	332985	14.7397	15.0502
9)+10)	C1-Naphthalenes	16.21	325989	14.4300	14.7340
13)	C2-Naphthalenes	18.50	860773	38.1023	38.9049
14)	C3-Naphthalenes	20.06	1016710	45.0049	45.9530
15)	C4-Naphthalenes	21.48	826232	36.5733	37.3437
16)	Benzothiophene	0.00	0	0.0000	0.0000
17)	C1-Benzothiophenes	0.00	0	0.0000	0.0000
18)	C2-Benzothiophenes	0.00	0	0.0000	0.0000
19)	C3-Benzothiophenes	0.00	0	0.0000	0.0000
20)	C4-Benzothiophenes	0.00	0	0.0000	0.0000
22)	Biphenyl	17.61	138101	7.1740	7.3251
23)	Acenaphthylene	19.08	292971	13.2924	13.5725
24)	Acenaphthene	19.70	107521	8.5459	8.7259
25)	Dibenzofuran	20.28	329621	15.5010	15.8275
26)	Fluorene	21.45	459656	27.4042	27.9815
28)	C1-Fluorenes	23.48	266862	15.9100	16.2452
29)	C2-Fluorenes	24.96	898363	53.5594	54.6877
30)	C3-Fluorenes	27.56	1160390	69.1812	70.6386
33)	Carbazole	25.55	133583	7.0321	7.1802
42)	Anthracene	24.96	674078	32.2692	32.9490
41)	Phenanthrene	24.79	2367060	106.7201	108.9683
43)+44)+45)+46)+47)	C1-Phenanthrenes/Anthracenes	26.70	1343079	60.5534	61.8291
50)	C2-Phenanthrenes/Anthracenes	28.36	1732250	78.0996	79.7449
51)	C3-Phenanthrenes/Anthracenes	29.92	1862930	83.9915	85.7609
52)	C4-Phenanthrenes/Anthracenes	31.79	1332680	60.0847	61.3505
34)	Dibenzothiophene	24.34	337902	15.2603	15.5817
35)+36)+37)	C1-Dibenzothiophenes	26.18	438092	19.7850	20.2018
38)	C2-Dibenzothiophenes	27.60	903528	40.8050	41.6646
39)	C3-Dibenzothiophenes	28.81	1081790	48.8556	49.8849
40)	C4-Dibenzothiophenes	30.23	1348310	60.8920	62.1748
58)	Fluoranthene	28.91	2208590	88.8674	90.7396
59)	Pyrene	29.71	1499740	48.7408	49.7676
62)	C1-Fluoranthenes/Pyrenes	31.51	1349750	54.3103	55.4544
63)	C2-Fluoranthenes/Pyrenes	32.21	2972520	119.6063	122.1260
64)	C3-Fluoranthenes/Pyrenes	34.15	1455290	58.5569	59.7905
65)	C4-Fluoranthenes/Pyrenes	35.82	1318680	53.0601	54.1779
53)	Naphthobenzothiophene	32.99	641881	21.4245	21.8759
54)	C1-Naphthobenzothiophenes	34.15	1786680	59.6354	60.8917
55)	C2-Naphthobenzothiophenes	35.39	2703340	90.2313	92.1322
56)	C3-Naphthobenzothiophenes	36.95	2688520	89.7370	91.6275
57)	C4-Naphthobenzothiophenes	38.26	1037630	34.6336	35.3632
67)	Benz(a)anthracene	33.80	553307	20.1404	20.5647
68)	Chrysene/Triphenylene	33.92	1224870	41.4338	42.3067
69)	C1-Chrysenes	35.70	2333430	78.9332	80.5960
70)	C2-Chrysenes	36.32	1514440	51.2290	52.3083
71)	C3-Chrysenes	37.57	1005230	34.0041	34.7204
72)	C4-Chrysenes	0.00	0	0.0000	0.0000
77)	Benzo(b)fluoranthene	37.37	1564240	95.2543	97.2610
78)	Benzo(k,j)fluoranthene	37.45	344775	23.7986	24.2999
79)	Benzo(a)fluoranthene	37.72	395295	27.2858	27.8606
80)	Benzo(e)pyrene	38.34	653849	43.8961	44.8208
81)	Benzo(a)pyrene	38.54	402431	27.3849	27.9619
89)	Perylene	38.85	8397120	555.5215	567.2245
82)	Indeno(1,2,3-c,d)pyrene	43.36	415503	29.6864	30.3118
83)	Dibenzo(a,h)anthracene	43.40	89305	8.0044	8.1731
84)	C1-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
85)	C2-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
86)	C3-Dibenzo(a,h)anthracenes	0.00	0	0.0000	0.0000
87)	Benzo(g,h,i)perylene	44.84	766185	67.8426	69.2719

#	Compound Name	Ret Time (minute)	Target Response (area)	Concentration	Su. Corrected Concentration
	Individual Alkyl Isomers and Hopanes				
9)	2-Methylnaphthalene	16.05	238151	16.2526	16.5950
10)	1-Methylnaphthalene	16.38	87838	6.5042	6.6412
11)	2,6-Dimethylnaphthalene	18.14	274575	20.5443	20.9771
12)	1,6,7-Trimethylnaphthalene	21.03	104085	8.7176	8.9013
27)	1-Methylfluorene	23.48	91148	10.1179	10.3311
35)	4-Methyldibenzothiophene	25.87	206757	11.8523	12.1020
36)	2/3-Methyldibenzothiophene	26.18	174710	10.0152	10.2262
37)	1-Methyldibenzothiophene	26.49	56625	3.2460	3.3144
43)	3-Methylphenanthrene	26.45	316302	16.5724	16.9215
44)	2-Methylphenanthrene	26.56	308433	16.1601	16.5006
45)	2-Methylanthracene	26.73	246225	12.9008	13.1726
46)	4/9-Methylphenanthrene	26.84	276531	14.4887	14.7939
47)	1-Methylphenanthrene	26.94	195588	10.2477	10.4636
48)	3,6-Dimethylphenanthrene	28.01	88863	5.8192	5.9418
49)	Retene	30.68	104943	12.8447	13.1153
60)	2-Methylfluoranthene	30.47	118878	6.1338	6.2630
61)	Benzo(b)fluorene	31.06	196018	11.8450	12.0945
74)	C29-Hopane	0.00	0	0.0000	0.0000
75)	18a-Oleanane	0.00	0	0.0000	0.0000
76)	C30-Hopane	0.00	0	0.0000	0.0000
91)	C20-TAS	0.00	0	0.0000	0.0000
92)	C21-TAS	0.00	0	0.0000	0.0000
93)	C26(20S)-TAS	0.00	0	0.0000	0.0000
94)	C26(20R)/C27(20S)-TAS	0.00	0	0.0000	0.0000
95)	C28(20S)-TAS	0.00	0	0.0000	0.0000
96)	C27(20R)-TAS	0.00	0	0.0000	0.0000
97)	C28(20R)-TAS	0.00	0	0.0000	0.0000
	Surrogate Standards				
2)	Naphthalene-d8	13.73	263716	12.59	75.64
21)	Acenaphthene-d10	19.59	160410	13.81	82.96
32)	Phenanthrene-d10	24.72	300364	16.30	97.94
66)	Chrysene-d12	33.84	337609	12.74	76.59
88)	Perylene-d12	38.77	160639	13.06	78.49
90)	5(b)H-Cholane	34.23	93637	38.53	231.63
	Internal Standards				
1)	Fluorene-d10	21.37	200399	16.70	
31)	Pyrene-d10	29.64	369690	16.67	
73)	Benzo(a)pyrene-d12	38.46	180749	16.65	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\2\data\MS60141\
Data File : ARC1603.D
Acq On : 16 Aug 2013 7:59 am
Operator : YM
Sample : SED-DA-DUP-02-073013
Misc :
ALS Vial : 20 Sample Multiplier: 0.06653

Quant Time: Sep 08 17:02:12 2013
Quant Method : C:\GCMS6\MS60141\AR60141.M
Quant Title : PAH Calibration Table-2013A
QLast Update : Fri Aug 16 09:49:40 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Fluorene-d10	21.369	176	200399m	251.05		0.00
31) Pyrene-d10	29.641	212	369690m	250.63		0.03
73) Benzo(a)pyrene-d12	38.459	264	180749m	250.32		0.08
System Monitoring Compounds						
2) Naphthalene-d8	13.734	136	263716m	12.59		0.00
21) Acenaphthene-d10	19.586	164	160410m	13.81		0.00
32) Phenanthrene-d10	24.722	188	300364m	16.30		0.03
66) Chrysene-d12	33.841	240	337609m	12.74		0.04
88) Perylene-d12	38.769	264	160639m	13.06		0.08
90) 5(b)H-Cholane	34.229	217	93637m	38.53		0.04
Target Compounds						Qvalue
3) cis/trans Decalin	10.947	138	314088m	85.69		
4) C1-Decalins	0.000		0	N.D.	d	
5) C2-Decalins	0.000		0	N.D.	d	
6) C3-Decalins	0.000		0	N.D.	d	
7) C4-Decalins	0.000		0	N.D.	d	
8) Naphthalene	13.790	128	332985m	14.74		
9) 2-Methylnaphthalene	16.047	142	238151m	16.25		
10) 1-Methylnaphthalene	16.381	142	87838m	6.50		
11) 2,6-Dimethylnaphthalene	18.137	156	274575m	20.54		
12) 1,6,7-Trimethylnaphtha...	21.035	170	104085m	8.72		
13) C2-Naphthalenes	18.499	156	860773m	38.10		
14) C3-Naphthalenes	20.060	170	1016712m	45.00		
15) C4-Naphthalenes	21.481	184	826232m	36.57		
16) Benzothiophene	0.000		0	N.D.	d	
17) C1-Benzothiophenes	0.000		0	N.D.	d	
18) C2-Benzothiophenes	0.000		0	N.D.	d	
19) C3-Benzothiophenes	0.000		0	N.D.	d	
20) C4-Benzothiophenes	0.000		0	N.D.	d	
22) Biphenyl	17.607	154	138101m	7.17		
23) Acenaphthylene	19.084	152	292971m	13.29		
24) Acenaphthene	19.697	154	107521m	8.55		
25) Dibenzofuran	20.283	168	329621m	15.50		
26) Fluorene	21.453	166	459656m	27.40		
27) 1-Methylfluorene	23.475	180	91148m	10.12		
28) C1-Fluorenes	23.475	180	266862m	15.91		
29) C2-Fluorenes	24.965	194	898363m	53.56		
30) C3-Fluorenes	27.563	208	1160393m	69.18		
33) Carbazole	25.554	167	133583m	7.03		
34) Dibenzothiophene	24.341	184	337902m	15.26		
35) 4-Methyldibenzothiophene	25.865	198	206757m	11.85		
36) 2/3-Methyldibenzothiop...	26.177	198	174710m	10.02		
37) 1-Methyldibenzothiophene	26.489	198	56625m	3.25		
38) C2-Dibenzothiophenes	27.597	212	903528m	40.80		
39) C3-Dibenzothiophenes	28.810	226	1081791m	48.86		
40) C4-Dibenzothiophenes	30.230	240	1348307m	60.89		
41) Phenanthrene	24.791	178	2367056m	106.72		
42) Anthracene	24.965	178	674078m	32.27		
43) 3-Methylphenanthrene	26.454	192	316302m	16.57		