APPENDIX A

COPY OF BWSC108 TRANSMITTAL FORM

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

Release Tracking Number: 4 - 17786

A. SITE LOCATION:

1. Site Name: Barge B120 Spill
2. Street Address: N/A
3. City/Town: Buzzards Bay 4. ZIP Code: N/A
5. UTM Coordinates: a. UTM N: _____ b. UTM E: _____
6. ☑ Check here if a Tier Classification Submittal has been provided to DEP for this disposal site.
   ☑ a. Tier IA ☐ b. Tier IB ☐ c. Tier IC ☐ d. Tier II
7. If applicable, provide the Permit Number: W050019

B. THIS FORM IS BEING USED TO: (check all that apply)

☐ 1. Submit a **Phase I Completion Statement**, pursuant to 310 CMR 40.0484.
☐ 2. Submit a **Revised Phase I Completion Statement**, pursuant to 310 CMR 40.0484.
☐ 3. Submit a **Phase II Scope of Work**, pursuant to 310 CMR 40.0834.
☐ 4. Submit an **interim Phase II Report**. This report does not satisfy the response action deadline requirements in 310 CMR 40.0500.
☐ 5. Submit a **final Phase II Report and Completion Statement**, pursuant to 310 CMR 40.0836.
☐ 6. Submit a **Revised Phase II Report and Completion Statement**, pursuant to 310 CMR 40.0836.
☐ 7. Submit a **Phase III Remedial Action Plan and Completion Statement**, pursuant to 310 CMR 40.0862.
☐ 8. Submit a **Revised Phase III Remedial Action Plan and Completion Statement**, pursuant to 310 CMR 40.0862.
☑ 9. Submit a **Phase IV Remedy Implementation Plan**, pursuant to 310 CMR 40.0874.
☐ 10. Submit a **Modified Phase IV Remedy Implementation Plan**, pursuant to 310 CMR 40.0874.
☐ 11. Submit an **As-Built Construction Report**, pursuant to 310 CMR 40.0875.
☐ 12. Submit a **Phase IV Status Report**, pursuant to 310 CMR 40.0877.
☐ 13. Submit a **Phase IV Completion Statement**, pursuant to 310 CMR 40.0878 and 40.0879.

Specify the outcome of Phase IV activities: (check one)

☐ a. Phase V Operation, Maintenance or Monitoring of the Comprehensive Remedial Action is necessary to achieve a Response Action Outcome.

☐ b. The requirements of a Class A Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.

☐ c. The requirements of a Class C Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.

☐ d. The requirements of a Class C Response Action Outcome have been met. Further Operation, Maintenance or Monitoring of the remedial action is necessary to ensure that conditions are maintained and that further progress is made toward a Permanent Solution. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.

(All sections of this transmittal form must be filled out unless otherwise noted above)

B. THIS FORM IS BEING USED TO (cont.): (check all that apply)

☐ 14. Submit a **Revised Phase IV Completion Statement**, pursuant to 310 CMR 40.0878 and 40.0879.

☐ 15. Submit a **Phase V Status Report**, pursuant to 310 CMR 40.0892.

☐ 16. Submit a **Remedial Monitoring Report**. (This report can only be submitted through eDEP.)

a. Type of Report: (check one) ☐ i. Initial Report ☐ ii. Interim Report ☐ iii. Final Report

b. Frequency of Submittal: (check all that apply)

☐ i. A Remedial Monitoring Report(s) submitted monthly to address an Imminent Hazard.

☐ ii. A Remedial Monitoring Report(s) submitted monthly to address a Condition of Substantial Release Migration.

☐ iii. A Remedial Monitoring Report(s) submitted concurrent with a Status Report.

c. Status of Site: (check one) ☐ i. Phase V ☐ ii. Remedy Operation Status ☐ iii. Class C RAO

d. Number of Remedial Systems and/or Monitoring Programs: _____

A separate BWSC108A, CRA Remedial Monitoring Report, must be filled out for each Remedial System and/or Monitoring Program addressed by this transmittal form.

☐ 17. Submit a **Remedy Operation Status**, pursuant to 310 CMR 40.0893.

☐ 18. Submit a **Status Report to maintain a Remedy Operation Status**, pursuant to 310 CMR 40.0893(2).

☐ 19. Submit a **Modification of a Remedy Operation Status**, pursuant to 310 CMR 40.0893(5).

☐ 20. Submit a **Termination of a Remedy Operation Status**, pursuant to 310 CMR 40.0893(6).

☐ 21. Submit a **Phase V Completion Statement**, pursuant to 310 CMR 40.0894.

Specify the outcome of Phase V activities: (check one)

☐ a. The requirements of a Class A Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement (BWSC104) will be submitted to DEP.

☐ b. The requirements of a Class C Response Action Outcome have been met. No additional Operation, Maintenance or Monitoring is necessary to ensure the integrity of the Response Action Outcome. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.

☐ c. The requirements of a Class C Response Action Outcome have been met. Further Operation, Maintenance or Monitoring of the remedial action is necessary to ensure that conditions are maintained and/or that further progress is made toward a Permanent Solution. A completed Response Action Outcome Statement and Report (BWSC104) will be submitted to DEP.

☐ 22. Submit a **Revised Phase V Completion Statement**, pursuant to 310 CMR 40.0894.

☐ 23. Submit a **Post-Class C Response Action Outcome Status Report**, pursuant to 310 CMR 40.0898.

(All sections of this transmittal form must be filled out unless otherwise noted above)

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

Release Tracking Number: 4 - 17786

C. LSP SIGNATURE AND STAMP:

I attest under the pains and penalties of perjury that I have personally examined and am familiar with this transmittal form, including any and all documents accompanying this submittal. In my professional opinion and judgment based upon application of (i) the standard of care in 309 CMR 4.02(1), (ii) the applicable provisions of 309 CMR 4.02(2) and (3), and 309 CMR 4.03(2), and (iii) the provisions of 309 CMR 4.03(3), to the best of my knowledge, information and belief,

> *if Section B indicates that a* ***Phase I, Phase II, Phase III, Phase IV or Phase V Completion Statement*** *is being submitted*, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed and implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that a* ***Phase II Scope of Work*** *or a* ***Phase IV Remedy Implementation Plan*** *is being submitted*, the response action(s) that is (are) the subject of this submittal (i) has (have) been developed in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal;

> *if Section B indicates that an* ***As-Built Construction Report, a Remedy Operation Status****, a* ***Phase IV, Phase V or Post-Class C RAO Status Report, a Status Report to Maintain a Remedy Operation Status*** *and/or a* ***Remedial Monitoring Report*** *is being submitted*, the response action(s) that is (are) the subject of this submittal (i) is (are) being implemented in accordance with the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, (ii) is (are) appropriate and reasonable to accomplish the purposes of such response action(s) as set forth in the applicable provisions of M.G.L. c. 21E and 310 CMR 40.0000, and (iii) comply(ies) with the identified provisions of all orders, permits, and approvals identified in this submittal.

I am aware that significant penalties may result, including, but not limited to, possible fines and imprisonment, if I submit information which I know to be false, inaccurate or materially incomplete.

1. LSP #: 5463

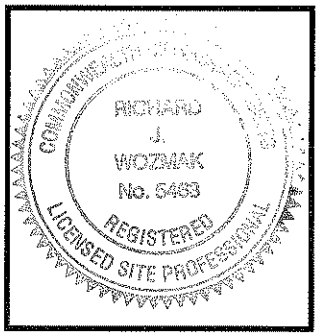
2. First Name: Richard 3. Last Name: Wozmak

4. Telephone: (603) 421-2777 5. Ext.: _____ 6. FAX: (603) 421-9880

7. Signature: R J Wozmak

8. Date: 07/23/2007 (mm/dd/yyyy)

9. LSP Stamp:



Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

Release Tracking Number: 4 - 17786

D. PERSON UNDERTAKING RESPONSE ACTIONS:

1. Check all that apply: ☐ a. change in contact name ☐ b. change of address ☐ c. change in the person undertaking response actions
2. Name of Organization: Bouchard Transportation Co., Inc.
3. Contact First Name: W. Lawrence 4. Last Name: Lopez
5. Street: 58 South Service Road, Suite 150 6. Title: Risk Manager
7. City/Town: Melville 8. State: NY 9. ZIP Code: 11747
10. Telephone: (516) 681-4900 11. Ext.: 12. FAX:

E. RELATIONSHIP TO SITE OF PERSON UNDERTAKING RESPONSE ACTIONS:

☑ 1. RP or PRP ☐ a. Owner ☐ b. Operator ☐ c. Generator ☑ d. Transporter
☐ e. Other RP or PRP Specify:

☐ 2. Fiduciary, Secured Lender or Municipality with Exempt Status (as defined by M.G.L. c. 21E, s. 2)

☐ 3. Agency or Public Utility on a Right of Way (as defined by M.G.L. c. 21E, s. 5(j))

☐ 4. Any Other Person Undertaking Response Actions Specify Relationship:

F. REQUIRED ATTACHMENT AND SUBMITTALS:

☑ 1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

☑ 2. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the submittal of any Phase Reports to DEP.

☐ 3. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase III Remedial Action Plan.

☑ 4. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of the availability of a Phase IV Remedy Implementation Plan.

☑ 5. Check here to certify that the Chief Municipal Officer and the Local Board of Health have been notified of any field work involving the implementation of a Phase IV Remedial Action.

☐ 6. If submitting a Modification of a Remedy Operation Status, check here to certify that a statement detailing the compliance history, as per 310 CMR 40.0893(5), for the person making this submittal is attached.

☐ 7. If submitting a Modification of a Remedy Operation Status, check here to certify that written consent of the person who submitted the Remedy Operation Status submittal, as per 310 CMR 40.0893(5), is attached.

☐ 8. Check here if any non-updatable information provided on this form is incorrect, e.g. Site Name. Send corrections to the DEP Regional Office.

☑ 9. Check here to certify that the LSP Opinion containing the material facts, data, and other information is attached.

Massachusetts Department of Environmental Protection
Bureau of Waste Site Cleanup

BWSC108

COMPREHENSIVE RESPONSE ACTION TRANSMITTAL FORM & PHASE I COMPLETION STATEMENT

Release Tracking Number: 4 - 17786

Pursuant to 310 CMR 40.0484 (Subpart D) and 40.0800 (Subpart H)

G. CERTIFICATION OF PERSON UNDERTAKING RESPONSE ACTIONS:

1. I, Richard Wozmak, attest under the pains and penalties of perjury (i) that I have personally examined and am familiar with the information contained in this submittal, including any and all documents accompanying this transmittal form, (ii) that, based on my inquiry of those individuals immediately responsible for obtaining the information, the material information contained in this submittal is, to the best of my knowledge and belief, true, accurate and complete, and (iii) that I am fully authorized to make this attestation on behalf of the entity legally responsible for this submittal. I/the person or entity on whose behalf this submittal is made am/is aware that there are significant penalties, including, but not limited to, possible fines and imprisonment, for willfully submitting false, inaccurate, or incomplete information.

2. By: _____ (Signature) 3. Title: Licensed Site Professional

4. For: Agent for Bouchard Transportation Co., Inc. (Name of person or entity recorded in Section D) 5. Date: 07/23/2007 (mm/dd/yyyy)

☐ 6. Check here if the address of the person providing certification is different from address recorded in Section D.

7. Street: _____

8. City/Town: _____ 9. State: _____ 10. ZIP Code: _____

11. Telephone: _____ 12. Ext.: _____ 13. FAX: _____

YOU ARE SUBJECT TO AN ANNUAL COMPLIANCE ASSURANCE FEE OF UP TO $10,000 PER BILLABLE YEAR FOR THIS DISPOSAL SITE. YOU MUST LEGIBLY COMPLETE ALL RELEVANT SECTIONS OF THIS FORM OR DEP MAY RETURN THE DOCUMENT AS INCOMPLETE. IF YOU SUBMIT AN INCOMPLETE FORM, YOU MAY BE PENALIZED FOR MISSING A REQUIRED DEADLINE.

Date Stamp (DEP USE ONLY:)

Supplement to BWSC108, Section F
Barge B120 Release
Buzzards Bay, Massachusetts
4-17786

Section F – Required Attachments and Submittals

1. Check here if the Response Action(s) on which this opinion is based, if any, are (were) subject to any order(s), permit(s) and/or approval(s) issued by DEP or EPA. If the box is checked, you MUST attach a statement identifying the applicable provisions thereof.

Massachusetts Department of Environmental Protection Orders, Permits, and/or Approvals:

- September 8, 2003 Request for IRA with Interim Deadlines;
- July 27, 2004 Decision to Grant Permit;
- January 18, 2006 Phase II Scope of Work Conditional Approval/Interim Deadline;
- June 27, 2006 Phase II SOW Addendum Approval; and
- October 19, 2006 Phase II - Comprehensive Site Assessment Report and Phase III - Remedial Action Plan Approval.

APPENDIX B

LABORATORY ANALYTICAL REPORT

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

GeoInsight, Inc.
Buzzards Bay Spill Project

Determination of:
Total Petroleum Hydrocarbons and Polycyclic Aromatic Hydrocarbons in an Oiled Rock Sample

(QC Batch ENV 1635)

May 8, 2007

Technical Report 07-1857

GeoInsight, Inc.
Buzzards Bay Spill Project
Table of Contents
B&B Laboratories
08-May-2007

Narrative

Technical Report 07-1857
GeoInsight, Inc.
Buzzards Bay Spill Project
Oiled Rock (Product) Sample

May 8, 2007

Introduction

B&B Laboratories received one (1) ice chest that contained one (1) bag that contained an oiled rock sample that was sent on April 11, 2007 and arrived on April 12, 2007 at B&B Laboratories in College Station, Texas sealed and in good condition. The internal temperature of the cooler was 14.8°C. The oiled rock sample was collected in support of the Buzzards Bay Spill Project (GeoInsight Project 3871-002). The oiled rock sample was stored in an access-controlled refrigerator (4.0°C) until processing. The oiled rock sample was analyzed for Total Petroleum Hydrocarbons (TPH) by GC/FID and Polycyclic Aromatic Hydrocarbons (PAHs) by GC/MS-SIM.

The results for TPH, PAH and hopanes are included in this report.

Analytical Methods

The analytical methods employed for TPH and PAH are listed in Table 1.

Table 1. Standard Operating Procedures for each analytical test.

Matrix	Extraction	TPH	PAH
Product	SW-846 3580A	B&B 1013	B&B 1006

Data Reporting

The reporting units for each analyte are listed in Table 2. The method detection limits (MDL) for each analyte are listed in Table 3. 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". RPD for analytes in duplicate samples that are <2X 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.

Table 2. Analytical Reporting Units.

Matrix	TPH/ALI	PAH
Product	ug/mg	ng/mg

Table 3. Reporting Limits.

TPH	RLs
Sample size	1ml final extract volume
Unit of measure	µg/mg
Total Petroleum Hydrocarbons	1.4
Total Resolved Hydrocarbons	1.4
Unresolved Complex Mixture	1.4
Extractable Organic Matter	100

Table 3 (Continued). Reporting Limits.

PAH	RL
Unit of measure	ng/ug
Naphthalene	10
C1-Naphthalenes	10
C2-Naphthalenes	10
C3-Naphthalenes	10
C4-Naphthalenes	10
Benzothiophene	10
C1-Benzothiophenes	10
C2-Benzothiophenes	10
C3-Benzothiophenes	10
Biphenyl	10
Acenaphthylene	10
Acenaphthene	10
Dibenzofuran	10
Fluorene	10
C1-Fluorenes	10
C2-Fluorenes	10
C3-Fluorenes	10
Carbazole	10
Anthracene	10
Phenanthrene	10
C1-Phenanthrenes/Anthracenes	10
C2-Phenanthrenes/Anthracenes	10
C3-Phenanthrenes/Anthracenes	10
C4-Phenanthrenes/Anthracenes	10
Dibenzothiophene	10
C1-Dibenzothiophenes	10
C2-Dibenzothiophenes	10
C3-Dibenzothiophenes	10
Fluoranthene	10
Pyrene	10
C1-Fluoranthenes/Pyrenes	10
C2-Fluoranthenes/Pyrenes	10
C3-Fluoranthenes/Pyrenes	10
Benz(a)anthracene	10

PAH (Continued) Unit of measure	RL ng/ug
Chrysene	10
C1-Chrysenes	10
C2-Chrysenes	10
C3-Chrysenes	10
C4-Chrysenes	10
Benzo(b)fluoranthene	10
Benzo(k)fluoranthene	10
Benzo(e)pyrene	10
Benzo(a)pyrene	10
Perylene	10
Indeno(1,2,3-c,d)pyrene	10
Dibenzo(a,h)anthracene	10
Benzo(g,h,i)perylene	10
Individual Alkyl Isomers and Hopanes	
2-Methylnaphthalene	10
1-Methylnaphthalene	10
2,6-Dimethylnaphthalene	10
1,6,7-Trimethylnaphthalene	10
1-Methylphenanthrene	10
C29-Hopane	10
18a-Oleanane	10
C30-Hopane	10

Quality Assurance/Quality Control

Oiled Rock (mg of extract)

TPH

The quality assurance/quality control procedure for this program included the analyses of a laboratory control sample (LCS) that was analyzed with each data set. The LCS is a diesel sample that is analyzed with each TPH/ALI run and for which controls are established based on performance. The QC criterion for the LCS is between 85 – 115% 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%.

PAH

The quality assurance/quality control procedure for this program included a standard reference oil (NIST 1582) and a laboratory control solution that were analyzed with this data set. 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 the reference oil SRM and the laboratory control material is ± 15% the laboratory derived 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%, except d12-perylene.

Quality Assurance/Quality Control Variances

Oiled Rock (mg of extract)

Total Petroleum Hydrocarbons (TPH)

Surrogate Recoveries

Observation

- No variances were observed.

Laboratory Control Standard

Observation

- No variances were observed.

PAH

Surrogate Recoveries

Observation

- No variances were observed.

Standard Reference Materials/Laboratory Control Materials

Observation

- No variances were observed.

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

Thomas J. McDonald
Project Manager

Donell Frank
Project Quality Officer

Sample/Analyses Description

B&B Laboratories
Project J03318
Report 07-1857

GeoInsight, Inc.
Buzzards Bay Spill Project
Sample Inventory

Client Project #3871-002

Laboratory File Number	Client Identification	Collection Date	Receive Date	Analysis	Matrix	Comments	B&B SDG	Entrix Project #
ETX7207	WIF-02-32707	03/27/07	04/12/07	PAH, TPH	Other	Oiled rock	07041201	3871-002

200000

Product Samples

Total Petroleum Hydrocarbons/ Extractable Organic Matter Concentrations

Geoinsight, Inc.
Buzzards Bay Oil Spill Project
Total Petroleum Hydrocarbon Data
Client Submitted Samples

Sample Name	ETX7207.D
Client Name	WIF-02-32707
Matrix	Oiled Rock
Collection Date	03/27/07
Received Date	04/12/07
Extraction Date	04/12/07
Extraction Batch	ENV 1635
Date Acquired	04/13/07
Method	ALI_COMP.M
Sample Weight (mg)	17.7
Dilution	NA

Target Compounds	Su Corrected Conc (µg/mg)	Q
Total Petroleum Hydrocarbons	266	
Total Resolved Hydrocarbons	69	
Unresolved Complex Mixture	197	

Surrogate (Su)	Su Recovery (%)
n-dodecane-d26	102
n-eicosane-d42	92
n-triacontane-d62	91

Qualifiers (Q): J=Below the MDL, U=Not detected, B=In procedural blank > 3x MDL, I=Interference, D=Diluted value, NA=Not applicable, *=Outside QA limits, refer to narrative
If n-eicosane-d42 (surrogate) recovery is above 100%, TPH and aliphatic values are surrogate corrected to 100%.

GeoInsight, Inc.
Buzzards Bay Oil Spill Project
Total Petroleum Hydrocarbon Data
Lab Control Standard Report

Sample Name	GC10846B.D
Client Name	AL-WKDIESEL-1000-005
Matrix	Solution
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	EOM 1635
Date Acquired	04/13/07
Method	ALI_COMP.M
Sample Volume (mL)	1.0
Dilution	NA

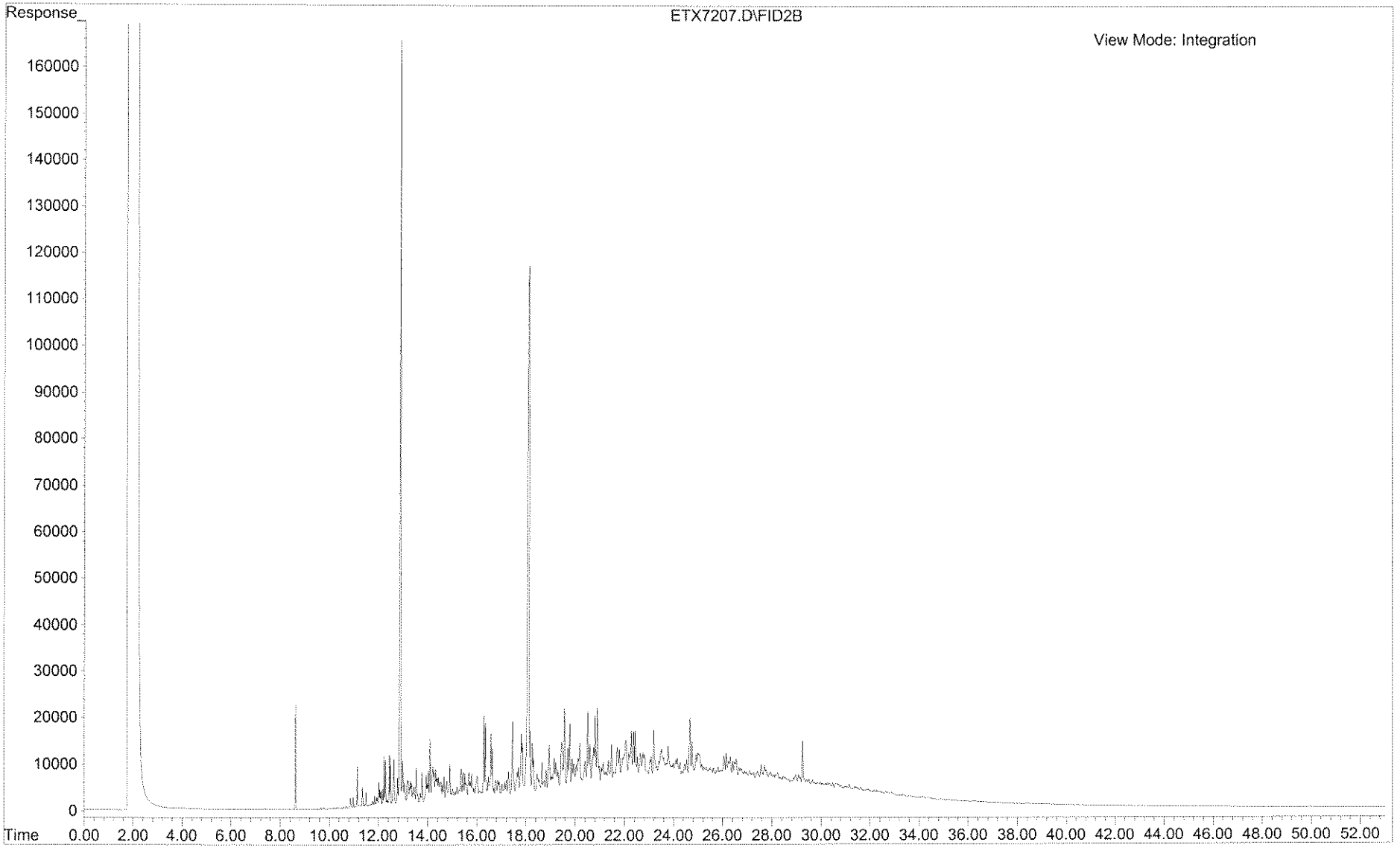
Target Compounds	Su Corrected Conc (µg/mL)	Q	RPD (%)	B&B Average Conc (µg/mL)	-15% Conc (µg/mL)	+15% Conc (µg/mL)
Total Petroleum Hydrocarbons	101		0.5	100	85	115

Surrogate (Su)	Su Recovery (%)
n-dodecane-d26	94
n-eicosane-d42	99
n-triacontane-d62	98

Qualifiers (Q): J=Below the MDL, U=Not detected, B=In procedural blank > 3x MDL, I=Interference, D=Diluted value, NA=Not applicable, *=Outside QA limits, refer to narrative
If n-eicosane-d42 (surrogate) recovery is above 100%, TPH values are surrogate corrected to 100%.

Total Petroleum Hydrocarbons Chromatograms

File : U:\2\DATA\GC10846\ETX7207.D
Operator : TJM
Acquired : 13 Apr 2007 19:40 using AcqMethod ALI_COMP.M
Instrument : GC#1
Sample Name: WIF-02-32707
Misc Info :
Vial Number: 56



800008

Polycyclic Aromatic Hydrocarbon Concentration

Geoinsight, Inc.
Buzzards Bay Oil Spill Project
Polycyclic Aromatic Hydrocarbon Data
Client Submitted Samples

Sample Name	ETX7207.D
Client Name	WIF-02-32707
Matrix	Oiled Rock
Collection Date	03/27/07
Received Date	04/12/07
Extraction Date	04/12/07
Extraction Batch	ENV 1635
Date Acquired	04/13/07
Method	PAH-2002
Sample Weight (mg)	17.7
Dilution	NA

Target Compounds	Su Corrected Conc. (ng/mg)	Q
Naphthalene	0.1	J
C1-Naphthalenes	0.8	J
C2-Naphthalenes	335	
C3-Naphthalenes	1330	
C4-Naphthalenes	1130	
Benzothiophene	<10	U
C1-Benzothiophenes	1.6	J
C2-Benzothiophenes	21.6	
C3-Benzothiophenes	75.8	
Biphenyl	0.1	J
Acenaphthylene	<10	U
Acenaphthene	30.9	
Dibenzofuran	18.2	
Fluorene	81.3	
C1-Fluorenes	390	
C2-Fluorenes	1060	
C3-Fluorenes	1360	
Carbazole	<10	U
Anthracene	57.2	
Phenanthrene	317	
C1-Phenanthrene/Anthracenes	2330	
C2-Phenanthrene/Anthracenes	4970	
C3-Phenanthrene/Anthracenes	5240	
C4-Phenanthrene/Anthracenes	2710	
Dibenzothiophene	75.5	
C1-Dibenzothiophenes	345	
C2-Dibenzothiophenes	737	
C3-Dibenzothiophenes	853	
Fluoranthene	88.9	
Pyrene	558	
C1-Fluoranthenes/Pyrenes	2490	
C2-Fluoranthenes/Pyrenes	3340	
C3-Fluoranthenes/Pyrenes	2710	
Naphthobenzothiophene	329	
C1-Naphthobenzothiophenes	799	
C2-Naphthobenzothiophenes	979	
C3-Naphthobenzothiophenes	455	
Benz(a)anthracene	318	
Chrysene	772	
C1-Chrysenes	2950	
C2-Chrysenes	3230	
C3-Chrysenes	1360	
C4-Chrysenes	42.8	
Benzo(b)fluoranthene	138	
Benzo(k)fluoranthene	18.4	
Benzo(e)pyrene	148	
Benzo(a)pyrene	278	
Perylene	71.2	
Indeno(1,2,3-c,d)pyrene	23.5	
Dibenzo(a,h)anthracene	36.9	
Benzo(g,h,i)perylene	45.8	
Total PAHs	44652	
Individual Alkyl Isomers and Hopanes		
2-Methylnaphthalene	0.3	J
1-Methylnaphthalene	1.0	J
2,6-Dimethylnaphthalene	63.3	
1,6,7-Trimethylnaphthalene	206	
1-Methylphenanthrene	326	
C29-Hopane	71.2	
18a-Oleanane	13.4	
C30-Hopane	85.0	

Surrogate (Su)	Su Recovery (%)
Naphthalene-d8	84
Acenaphthene-d10	90
Phenanthrene-d10	91
Chrysene-d12	91
Perylene-d12	96

Qualifiers (Q): J=Below the MDL, U=Not detected, B=In procedural blank > 3x MDL, I=Interference, D=Diluted value, NA=Not Applicable, *=Outside QA limits, refer to narral

Geoinsight, Inc.
Buzzards Bay Oil Spill Project
Polycyclic Aromatic Hydrocarbon Data
Standard Reference Material Report

Sample Name	MS30377B.D
Client Name	SRM 1582
Matrix	Petroleum
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 1635
Date Acquired	04/13/07
Method	PAH-2002
Sample Weight (g)	1.7

Target Compounds	Su Corrected Conc. (ug/g)	Q	RPD (%)	SRM 1582 Certified Conc. (ug/ g)	B&B Average	-15% Conc. (ug/g)	+15% Conc. (ug/g)
Naphthalene	148		2.0		145	123	167
C1-Naphthalenes	579		7.2		622	529	715
C2-Naphthalenes	1070		10.5		1189	1011	1367
C3-Naphthalenes	1020		1.7		1037	881	1193
C4-Naphthalenes	726		3.8		754	641	867
Benzothiophene	8.3	J					
C1-Benzothiophenes	17.5						
C2-Benzothiophenes	75.2						
C3-Benzothiophenes	147						
Biphenyl	34.0		1.5		34.5	29.3	39.7
Acenaphthylene	<10	U					
Acenaphthene	21.7		13.8		18.9	16.1	21.7
Dibenzofuran	12.4						
Fluorene	36.0		0.6		35.8	30.4	41.2
C1-Fluorenes	129		2.3		132	112	152
C2-Fluorenes	271		5.7		256	218	294
C3-Fluorenes	247		2.0		242	206	278
Carbazole	2.2	J					
Anthracene	3.8	J					
Phenanthrene	100		9.3	100 ± 7.0	110	93.3	126
C1-Phenanthrene/Anthracenes	343		5.1		326	277	375
C2-Phenanthrene/Anthracenes	516		5.1		543	462	624
C3-Phenanthrene/Anthracenes	543		3.9		522	444	600
C4-Phenanthrene/Anthracenes	280		1.8		275	234	316
Dibenzothiophene	30.7		14.5	32.9 ± 1.7	35.5	30.2	40.8
C1-Dibenzothiophene	131		4.7		125	106	144
C2-Dibenzothiophene	249		3.2		257	218	296
C3-Dibenzothiophene	252		0.8		250	213	288
Fluoranthene	5.2	J					
Pyrene	6.2	J					
C1-Fluoranthenes/Pyrenes	60.7		12.5		68.8	58.5	79.1
C2-Fluoranthenes/Pyrenes	103		1.9		105	89.3	121
C3-Fluoranthenes/Pyrenes	77.2		10.1		85.4	72.6	98.2
Naphthobenzothiophene	34.8		13.4		39.8	33.8	45.8
C1-Naphthobenzothiophenes	60.5		2.7		58.9	50.1	67.7
C2-Naphthobenzothiophenes	77.2		1.2		78.1	66.4	89.8
C3-Naphthobenzothiophenes	55.2		0.0		55.2	46.9	63.5
Benz(a)anthracene	4.4	J					
Chrysene	23.7		9.3		21.6	18.4	24.8
C1-Chrysenes	68.7		0.4		68.4	58.1	78.7
C2-Chrysenes	124		0.8		125	106	144
C3-Chrysenes	86.2		2.6		88.5	75.2	102
C4-Chrysenes	<10	U					
Benzo(b)fluoranthene	1.7	J					
Benzo(k)fluoranthene	0.5	J					
Benzo(e)pyrene	2.9	J					
Benzo(a)pyrene	2.0	J					
Perylene	37.6		11.6	30.2± 1.7	33.5	28.4	38.5
Indeno(1,2,3-c,d)pyrene	2.0	J					
Dibenzo(a,h)anthracene	0.6	J					
Benzo(g,h,i)perylene	1.6	J					
Total PAHs	7829						
Selected Ratios							
D2/P2	0.483		1.9		0.473	0.402	0.544
D3/P3	0.464		3.1		0.479	0.407	0.551
D2/C2	2.008		2.4		2.056	1.748	2.364
D3/C3	2.923		3.4		2.825	2.401	3.249
FI-Py2/C2	0.831		1.1		0.840	0.714	0.966
FI-Py3/C3	0.896		7.5		0.965	0.820	1.110
Individual Alkyl Isomers and Hopane							
2-Methylnaphthalene	527		13.3		602	512	692
1-Methylnaphthalene	386		7.2		415	353	477
2,6-Dimethylnaphthalene	545		9.9		602	512	692
1,6,7-Trimethylnaphthalene	168		10.0		152	129	175
1-Methylphenanthrene	88.0		12.8		100	85.0	115
C29-Hopane	198						
18a-Oleanane	64.5						
C30-Hopane	295		1.4		291	239	323

Surrogate (Su)	Su Recovery (%)
Naphthalene-d8	94
Acenaphthene-d10	99
Phenanthrene-d10	97
Chrysene-d12	90
Perylene-d12	91

Qualifiers (Q): J=Below the MDL, U=Not detected, B=In procedural blank > 3x MDL, I=Interference, D=Diluted value, NA=Not Applicable, *=Outside QA limits, refer to narrative

Geoinsight, Inc.
Buzzards Bay Oil Spill Project
Polycyclic Aromatic Hydrocarbon Data
Laboratory Control Standard Report

Sample Name	MS30377J.D
Client Name	AR-WKCC-250-022
Matrix	Solution
Collection Date	NA
Received Date	NA
Extraction Date	NA
Extraction Batch	ENV 1635
Date Acquired	04/13/07
Method	PAH-2002
Sample Volume (mL)	1

Target Compounds	Conc. (ng/ml)	Q	RPD (%)	LCS Certified Conc. Conc. (ng/ml)	-15% Conc. Conc. (ng/ml)	+15% Conc. Conc. (ng/ml)
Naphthalene	247		-2.2	253	215	290
C1-Naphthalenes	NA					
C2-Naphthalenes	NA					
C3-Naphthalenes	NA					
C4-Naphthalenes	NA					
Benzothiophene	241		-3.9	251	213	288
C1-Benzothiophenes	NA					
C2-Benzothiophenes	NA					
C3-Benzothiophenes	NA					
Biphenyl	256		2.2	250	213	288
Acenaphthylene	255		1.9	250	213	288
Acenaphthene	247		-1.4	251	213	288
Dibenzofuran	247					
Fluorene	253		1.0	251	213	288
C1-Fluorenes	NA					
C2-Fluorenes	NA					
C3-Fluorenes	NA					
Carbazole	259		3.4	250	213	288
Anthracene	258		3.0	250	213	288
Phenanthrene	253		1.0	251	213	288
C1-Phenanthrene/Anthracenes	NA					
C2-Phenanthrene/Anthracenes	NA					
C3-Phenanthrene/Anthracenes	NA					
C4-Phenanthrene/Anthracenes	NA					
Dibenzothiophene	257		2.6	250	213	288
C1-Dibenzothiophenes	NA					
C2-Dibenzothiophenes	NA					
C3-Dibenzothiophenes	NA					
Fluoranthene	239		-4.7	251	213	288
Pyrene	251		0.2	251	213	288
C1-Fluoranthenes/Pyrenes	NA					
C2-Fluoranthenes/Pyrenes	NA					
C3-Fluoranthenes/Pyrenes	NA					
Naphthobenzothiophene	260		4.0	250	212	287
C1-Naphthobenzothiophenes	NA					
C2-Naphthobenzothiophenes	NA					
C3-Naphthobenzothiophenes	NA					
Benz(a)anthracene	269		7.1	251	213	288
Chrysene	260		3.7	251	213	288
C1-Chrysenes	NA					
C2-Chrysenes	NA					
C3-Chrysenes	NA					
C4-Chrysenes	NA					
Benzo(b)fluoranthene	237		-5.5	250	213	288
Benzo(k)fluoranthene	239		-4.7	251	213	288
Benzo(e)pyrene	220		-13.0	251	213	288
Benzo(a)pyrene	242		-3.4	250	213	288
Perylene	235		-6.4	250	213	288
Indeno(1,2,3-c,d)pyrene	265		5.6	251	213	288
Dibenzo(a,h)anthracene	269		7.2	250	213	288
Benzo(g,h,i)perylene	241		-3.9	250	213	288
Individual Alkyl Isomers and Hopanes						
2-Methylnaphthalene	253		0.9	251	213	288
1-Methylnaphthalene	242		-3.5	251	213	288
2,6-Dimethylnaphthalene	252		0.6	251	213	288
1,6,7-Trimethylnaphthalene	258		3.0	250	213	288
1-Methylphenanthrene	261		4.1	251	213	288
C29-Hopane	NA					
18a-Oleanane	NA					
C30-Hopane	234		-6.6	250	213	288

Surrogate (Su)	Su Recovery (%)
Naphthalene-d8	97
Acenaphthene-d10	100
Phenanthrene-d10	94
Chrysene-d12	108
Perylene-d12	92

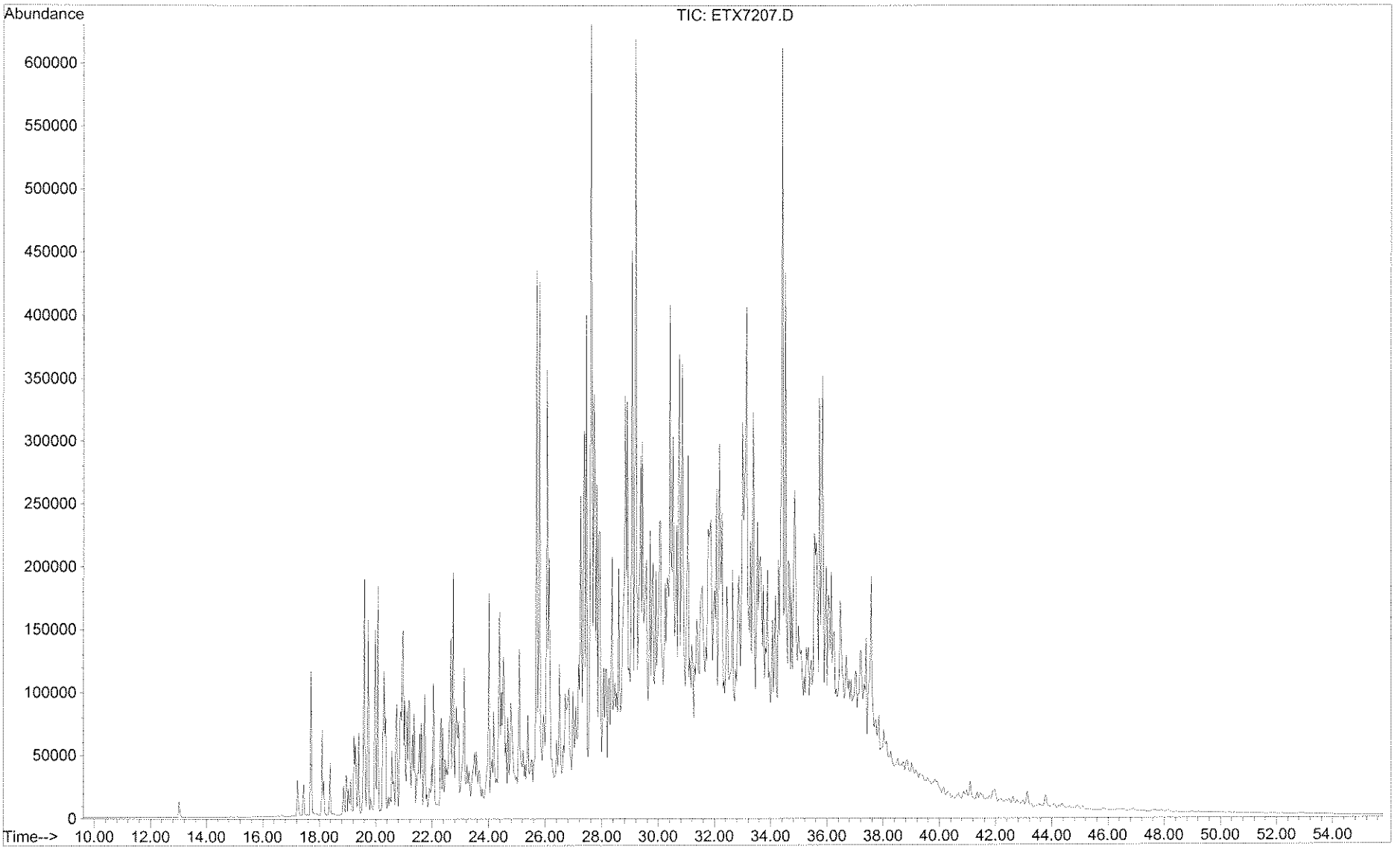
Qualifiers (Q): J=Below the MDL, U=Not detected, B=In procedural blank > 3x MDL, I=Interference, D=Diluted value, NA=Not Applicable, *=Outside QA limits, refer to narrative

Polycyclic Aromatic Hydrocarbon Histograms

WIF-02-32707 (Oiled Rock)
ETX7207
Concentration (ng/mg)
0
1000
2000
3000
4000
5000
6000
Naphthalene
C1-Naphthalenes
C2-Naphthalenes
C3-Naphthalenes
C4-Naphthalenes
Benzothiophene
C1-Benzothiophenes
C2-Benzothiophenes
C3-Benzothiophenes
Biphenyl
Acenaphthylene
Acenaphthene
Dibenzofuran
Fluorene
C1-Fluorenes
C2-Fluorenes
C3-Fluorenes
Carbazole
Anthracene
Phenanthrene
C1-Phenanthrene/Anthracenes
C2-Phenanthrene/Anthracenes
C3-Phenanthrene/Anthracenes
C4-Phenanthrene/Anthracenes
Dibenzothiophene
C1-Dibenzothiophenes
C2-Dibenzothiophenes
C3-Dibenzothiophenes
Fluoranthene
Pyrene
C1-Fluoranthenes/Pyrenes
C2-Fluoranthenes/Pyrenes
C3-Fluoranthenes/Pyrenes
Naphthobenzothiophene
C1-Naphthobenzothiophenes
C2-Naphthobenzothiophenes
C3-Naphthobenzothiophenes
Benz(a)anthracene
Chrysene
C1-Chrysenes
C2-Chrysenes
C3-Chrysenes
C4-Chrysenes
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(e)pyrene
Benzo(a)pyrene
Perylene
Indeno(1,2,3-c,d)pyrene
Dibenzo(a,h)anthracene
Benzo(g,h,i)perylene

Polycyclic Aromatic Hydrocarbon Total Ion Chromatograms

File : X:\1\DATA\MS30377\ETX7207.D
Operator : TJM
Acquired : 13 Apr 2007 6:43 pm using AcqMethod PAH-2002
Instrument : GC/MS Ins
Sample Name: WIF-02-32707
Misc Info :
Vial Number: 5



Total Petroleum Hydrocarbons/ Aliphatic Hydrocarbons Raw Data

Sequence Name: W:\2\SEQUENCE\GC10846.S
Comment: GeoInsight-Buzzards Bay Spill-Rock
Operator: TJM
Data Path: C:\HPCHEM\2\DATA\gc10846\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	51	GC10846A	ALI_COMP	Solvent Blank
2	Sample	52	GC10846B	ALI_COMP	Diesel Std.
3	Sample	53	GC10846C	ALI_COMP	PEM (Low)
4	Sample	54	GC10846D	ALI_COMP	PEM (High)
5	Sample	96	GC10846E	ALI_COMP	CS1
6	Sample	97	GC10846F	ALI_COMP	CS2
7	Sample	98	GC10846G	ALI_COMP	CS3
8	Sample	99	GC10846H	ALI_COMP	CS4
9	Sample	100	GC10846I	ALI_COMP	CS5
10	Sample	55	GC10846J	ALI_COMP	AL-WKCC-25-006 (CCC)
11	Sample	56	ETX7207	ALI_COMP	
12	Sample	57	GC10846K	ALI_COMP	AL-WKCC-25-006(CCC)

Evaluate Continuing Calibration Report

Data File : W:\2\DATA\GC10846\GC10846J.D Vial: 55
Acq On : 13 Apr 2007 6:39 pm Operator: TJM
Sample : AL-WKCC-25-006 (CCC) Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e

Method : W:\2\METHODS\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1		n-hexadecane-d34	1.000	1.000	0.0	105	0.00
2		n-C10	1.016	1.000	1.6	102	0.00
3		n-C11	1.039	1.029	1.0	102	0.00
4	S	n-dodecane-d26	0.865	0.861	0.5	103	0.00
5		n-C12	1.085	1.077	0.7	102	0.00
6		n-C13	1.119	1.115	0.4	101	0.00
7		n-C14	1.164	1.142	1.9	101	0.00
8		n-C15	1.183	1.175	0.7	101	0.00
9		n-C16	1.201	1.183	1.5	101	0.00
10		5a-androstane	1.000	1.000	0.0	104	0.00
11		n-C17	0.929	0.924	0.5	101	0.00
12		Pristane	0.987	0.971	1.6	101	-0.01
13		n-C18	0.933	0.930	0.3	101	-0.01
14		Phytane	0.989	0.970	1.9	101	-0.01
15		n-C19	0.934	0.926	0.9	101	-0.01
16	S	n-eicosane-d42	0.832	0.831	0.1	101	-0.01
17		n-C20	0.928	0.927	0.1	101	-0.01
18		n-C21	0.942	0.947	-0.5	101	-0.01
19		n-C22	0.924	0.915	1.0	101	-0.01
20		n-C23	0.918	0.921	-0.3	101	-0.02
21		n-C24	0.912	0.908	0.4	100	-0.01
22		n-C25	0.906	0.896	1.1	100	-0.01
23		n-C26	0.904	0.899	0.6	100	-0.02
24		n-C27	0.877	0.868	1.0	100	-0.01
25		n-C28	0.859	0.852	0.8	100	-0.02
26		n-C29	0.871	0.854	2.0	100	-0.02
27	S	n-triacontane-d62	0.724	0.714	1.4	100	-0.01
28		n-C30	0.827	0.816	1.3	100	-0.02
29		n-C31	0.803	0.793	1.2	100	-0.01
30		n-C32	0.770	0.765	0.6	101	-0.01
31		n-C33	0.747	0.744	0.4	100	-0.02
32		n-C34	0.730	0.727	0.4	101	-0.02

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

000019

Evaluate Continuing Calibration Report - Not Founds

Data File : W:\2\DATA\GC10846\GC10846J.D Vial: 55
Acq On : 13 Apr 2007 6:39 pm Operator: TJM
Sample : AL-WKCC-25-006 (CCC) Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e

Method : W:\2\METHODS\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
33	TPH	0.043	0.000	100.0#	0#	-22.30#
34	TRH1	0.043	0.000	100.0#	0#	-5.85#
35	TRH2	0.043	0.000	100.0#	0#	-12.65#
36	TRH3	0.043	0.000	100.0#	0#	-19.76#
37	TRH4	0.043	0.000	100.0#	0#	-27.15#
38	TRH5	0.043	0.000	100.0#	0#	-34.22#
39	TRH6	0.043	0.000	100.0#	0#	-42.15#

Quantitation Report (QT Reviewed)

Data File : W:\2\DATA\GC10846\GC10846J.D Vial: 55
Acq On : 13 Apr 2007 6:39 pm Operator: TJM
Sample : AL-WKCC-25-006 (CCC) Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 11:20 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc Units
		Internal Standards			
1)		n-hexadecane-d34	12.85	397397	20.001 ug/mlm
10)		5a-androstane	18.03	516981	20.003 ug/mlm
		System Monitoring Compounds			
4)	S	n-dodecane-d26	8.62	428216	24.909 ug/mlm
16)	S	n-eicosane-d42	17.44	537070	24.955 ug/mlm
27)	S	n-triacontane-d62	29.23	462148	24.668 ug/mlm
		Target Compounds			
2)		n-C10	6.26	495098	24.511 ug/mlm
3)		n-C11	7.59	509794	24.681 ug/mlm
5)		n-C12	8.83	533630	24.730 ug/mlm
6)		n-C13	9.99	551635	24.791 ug/mlm
7)		n-C14	11.07	567676	24.541 ug/mlm
8)		n-C15	12.09	580895	24.701 ug/mlm
9)		n-C16	13.11	587196	24.601 ug/mlm
11)		n-C17	14.20	597091	24.843 ug/mlm
12)		Pristane	14.31	628118	24.598 ug/mlm
13)		n-C18	15.35	602028	24.929 ug/mlm
14)		Phytane	15.52	617587	24.132 ug/mlm
15)		n-C19	16.57	599261	24.803 ug/mlm
17)		n-C20	17.84	599851	24.964 ug/mlm
18)		n-C21	19.12	611720	25.080 ug/mlm
19)		n-C22	20.41	580661	24.283 ug/mlm
20)		n-C23	21.68	595299	25.050 ug/mlm
21)		n-C24	22.93	587550	24.881 ug/mlm
22)		n-C25	24.16	580618	24.772 ug/mlm
23)		n-C26	25.35	577646	24.688 ug/mlm
24)		n-C27	26.50	555597	24.479 ug/mlm
25)		n-C28	27.62	549551	24.714 ug/mlm
26)		n-C29	28.70	552158	24.494 ug/mlm
28)		n-C30	29.76	527874	24.663 ug/mlm
29)		n-C31	30.78	512845	24.691 ug/mlm
30)		n-C32	31.77	487349	24.460 ug/mlm
31)		n-C33	32.76	480155	24.853 ug/mlm
32)		n-C34	33.89	468598	24.792 ug/mlm

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

000021

Quantitation Report (QT Reviewed)

Data File : W:\2\DATA\GC10846\GC10846J.D Vial: 55
Acq On : 13 Apr 2007 6:39 pm Operator: TJM
Sample : AL-WKCC-25-006 (CCC) Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 11:20 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units

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

000022

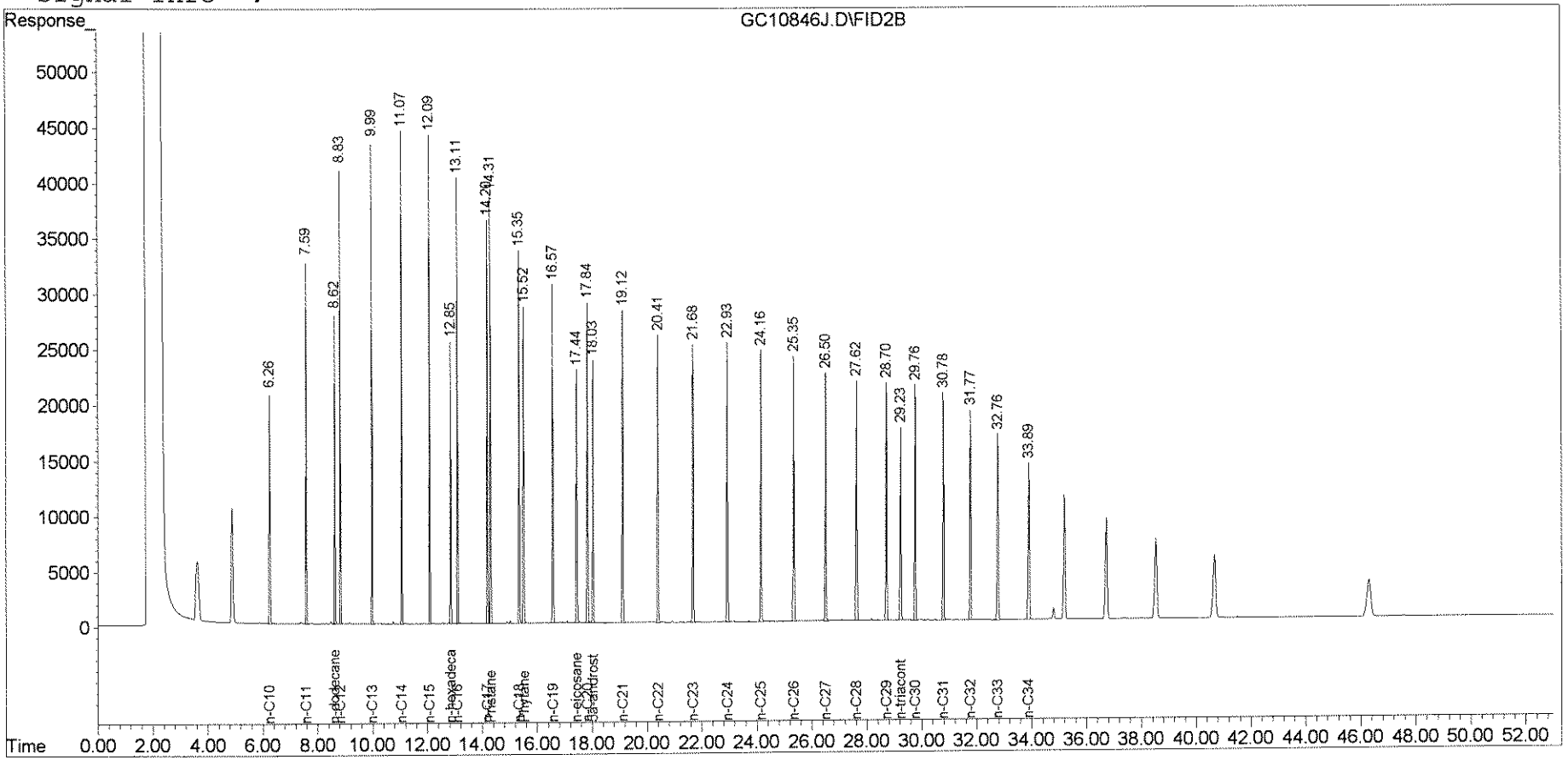
Quantitation Report

Data File : W:\2\DATA\GC10846\GC10846J.D
Acq On : 13 Apr 2007 6:39 pm
Sample : AL-WKCC-25-006 (CCC)
Misc :
IntFile : autoint1.e
Quant Time: Apr 14 11:20 2007 Quant Results File: C10B414.RES

Vial: 55
Operator: TJM
Inst : GC#1
Multiplr: 1.00

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Multiple Level Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :



000023

Evaluate Continuing Calibration Report

Data File : W:\2\DATA\GC10846\GC10846K.D Vial: 57
Acq On : 13 Apr 2007 8:40 pm Operator: TJM
Sample : AL-WKCC-25-006(CCC) Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e

Method : W:\2\METHODS\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1		n-hexadecane-d34	1.000	1.000	0.0	101	0.00
2		n-C10	1.016	1.035	-1.9	101	0.00
3		n-C11	1.039	1.043	-0.4	100	0.00
4	S	n-dodecane-d26	0.865	0.869	-0.5	100	0.00
5		n-C12	1.085	1.094	-0.8	100	0.00
6		n-C13	1.119	1.123	-0.4	99	0.00
7		n-C14	1.164	1.147	1.5	98	0.00
8		n-C15	1.183	1.167	1.4	97	0.00
9		n-C16	1.201	1.167	2.8	96	0.00
10		5a-androstane	1.000	1.000	0.0	94	0.00
11		n-C17	0.929	0.958	-3.1	95	0.00
12		Pristane	0.987	0.995	-0.8	94	0.00
13		n-C18	0.933	0.957	-2.6	94	0.00
14		Phytane	0.989	0.987	0.2	93	0.00
15		n-C19	0.934	0.949	-1.6	94	0.00
16	S	n-eicosane-d42	0.832	0.847	-1.8	94	0.00
17		n-C20	0.928	0.943	-1.6	93	-0.01
18		n-C21	0.942	0.952	-1.1	92	-0.01
19		n-C22	0.924	0.916	0.9	92	-0.01
20		n-C23	0.918	0.907	1.2	90	-0.01
21		n-C24	0.912	0.886	2.9	89	-0.01
22		n-C25	0.906	0.860	5.1	88	-0.01
23		n-C26	0.904	0.850	6.0	86	-0.01
24		n-C27	0.877	0.816	7.0	86	-0.01
25		n-C28	0.859	0.795	7.5	85	-0.01
26		n-C29	0.871	0.773	11.3	83	-0.01
27	S	n-triacontane-d62	0.724	0.643	11.2	82	-0.01
28		n-C30	0.827	0.744	10.0	83	-0.02
29		n-C31	0.803	0.688	14.3	79	-0.01
30		n-C32	0.770	0.664	13.8	79	-0.01
31		n-C33	0.747	0.609	18.5	75	-0.02
32		n-C34	0.730	0.606	17.0	76	-0.02
33		TPH	0.850	0.003	99.6#	0#	0.17
34		TRH1	0.850	0.017	98.0#	2#	0.02
35		TRH2	0.850	0.003	99.6#	0#	-0.04
36		TRH3	0.850	0.002	99.8#	0#	0.03
37		TRH4	0.850	0.009	98.9#	1#	0.00
38		TRH5	0.850	0.009	98.9#	1#	0.02
39		TRH6	0.850	0.012	98.6#	1#	-0.04

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

000024

Evaluate Continuing Calibration Report - Not Founds

Data File : W:\2\DATA\GC10846\GC10846K.D Vial: 57
Acq On : 13 Apr 2007 8:40 pm Operator: TJM
Sample : AL-WKCC-25-006(CCC) Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e

Method : W:\2\METHODS\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 25% Max. Rel. Area : 150%

Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)

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

000025

Quantitation Report (Not Reviewed)

Data File : W:\2\DATA\GC10846\GC10846K.D Vial: 57
Acq On : 13 Apr 2007 8:40 pm Operator: TJM
Sample : AL-WKCC-25-006(CCC) Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 11:20 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc Units
		Internal Standards			
1)		n-hexadecane-d34	12.86	383385	20.001 ug/ml
10)		5a-androstane	18.04	470378	20.003 ug/ml
		System Monitoring Compounds			
4)	S	n-dodecane-d26	8.63	416961	25.141 ug/ml
16)	S	n-eicosane-d42	17.44	497979	25.432 ug/ml
27)	S	n-triacontane-d62	29.23	378540	22.207 ug/ml
		Target Compounds			
2)		n-C10	6.26	494285	25.365 ug/ml
3)		n-C11	7.59	498779	25.030 ug/ml
5)		n-C12	8.83	522699	25.109 ug/ml
6)		n-C13	9.99	536167	24.976 ug/ml
7)		n-C14	11.07	550195	24.655 ug/ml
8)		n-C15	12.09	556634	24.535 ug/ml
9)		n-C16	13.11	558932	24.273 ug/ml
11)		n-C17	14.20	563197	25.754 ug/ml
12)		Pristane	14.31	585240	25.189 ug/ml
13)		n-C18	15.36	564000	25.668 ug/ml
14)		Phytane	15.52	571931	24.562 ug/ml
15)		n-C19	16.58	558724	25.416 ug/ml
17)		n-C20	17.84	555055	25.388 ug/ml
18)		n-C21	19.12	559862	25.228 ug/ml
19)		n-C22	20.41	528667	24.299 ug/ml
20)		n-C23	21.69	533893	24.692 ug/ml
21)		n-C24	22.94	521673	24.280 ug/ml
22)		n-C25	24.16	506781	23.764 ug/ml
23)		n-C26	25.35	496808	23.337 ug/ml
24)		n-C27	26.50	475363	23.019 ug/ml
25)		n-C28	27.62	466799	23.072 ug/ml
26)		n-C29	28.71	454748	22.172 ug/ml
28)		n-C30	29.76	438083	22.496 ug/ml
29)		n-C31	30.78	404939	21.427 ug/ml
30)		n-C32	31.77	385171	21.247 ug/ml
31)		n-C33	32.76	357626	20.345 ug/ml
32)		n-C34	33.89	355303	20.660 ug/ml

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

Quantitation Report (Not Reviewed)

Data File : W:\2\DATA\GC10846\GC10846K.D Vial: 57
Acq On : 13 Apr 2007 8:40 pm Operator: TJM
Sample : AL-WKCC-25-006(CCC) Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 11:20 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

	Compound	R.T.	Response	Conc Units
33)	TPH	22.47	1668	0.083 ug/ml
34)	TRH1	5.88	10284	0.514 ug/ml
35)	TRH2	12.62	1541	0.077 ug/ml
36)	TRH3	19.79	998	0.050 ug/ml
37)	TRH4	27.14	5223	0.261 ug/ml
38)	TRH5	34.24	5581	0.279 ug/ml
39)	TRH6	42.11	6891	0.344 ug/ml

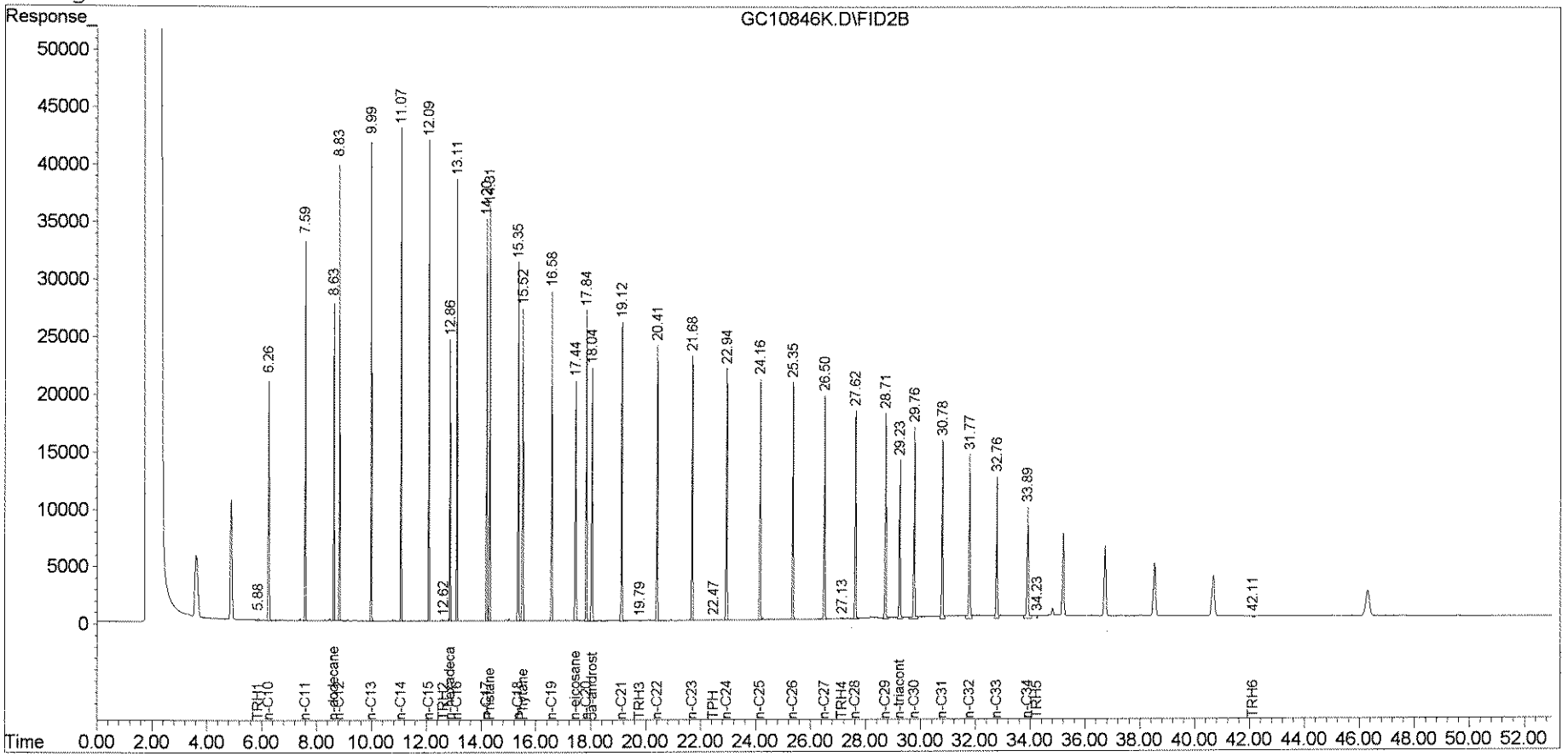
(f)=RT Delta > 1/2 Window (m)=manual int

Quantitation Report

Data File : W:\2\DATA\GC10846\GC10846K.D Vial: 57
Acq On : 13 Apr 2007 8:40 pm Operator: TJM
Sample : AL-WKCC-25-006(CCC) Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 11:20 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Multiple Level Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :



0000028

	Data File Name	**GC10846B.D**	GC10846B.D
	Data File Path	**W:\2\DATA\GC10846**	Diesel Std.
	Date Acquired	**04/13/20 -1:0:**	04/13/20 -1:0:
	Sample Name	**Diesel Std.**	ALI_COMP.M
	Sample Multiplier	**1**	
			1
Name	**Amount**		20.001
n-hexadecane-d34	20.00		20.003
5a-androstane	20.00		1.870036003
		Surrogate recovery	1.988539161
n-dodecane-d26	1.87	94	1.963768423
n-eicosane-d42	1.99	99	168.8699079
n-triacontane-d62	1.96	98	0
			0
		Surrogate Corrected	0
			0
TPH	168.87	169.84	0
TRH1	0.00	0.00	0
TRH2	0.00	0.00	93.50180016
TRH3	0.00	0.00	99.42695807
TRH4	0.00	0.00	98.18842113
TRH5	0.00	0.00	
TRH6	0.00	0.00	

Quantitation Report (QT Reviewed)

Data File : U:\2\DATA\GC10846\GC10846B.D
Acq On : 13 Apr 2007 10:33
Sample : Diesel Std.
Misc :

Vial: 52
Operator: TJM
Inst : GC#1
Multiplr: 1.00
Sample Amount: 0.00

IntFile : autoint1.e

Quant Time: Apr 16 7:10 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
		Internal Standards				
1)		n-hexadecane-d34	12.86	413240	20.001	ug/mlm
10)		5a-androstane	18.04	541339	20.003	ug/mlm
		System Monitoring Compounds				
4)	S	n-dodecane-d26	8.62	33430	1.870	ug/mlm
16)	S	n-eicosane-d42	17.43	44812	1.989	ug/mlm
27)	S	n-triacontane-d62	29.21	38525	1.964	ug/mlm
		Target Compounds				
33)		TPH	12.86	3890476	168.870	ug/mlm

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

Quantitation Report

Data File : U:\2\DATA\GC10846\GC10846B.D
Acq On : 13 Apr 2007 10:33
Sample : Diesel Std.
Misc :

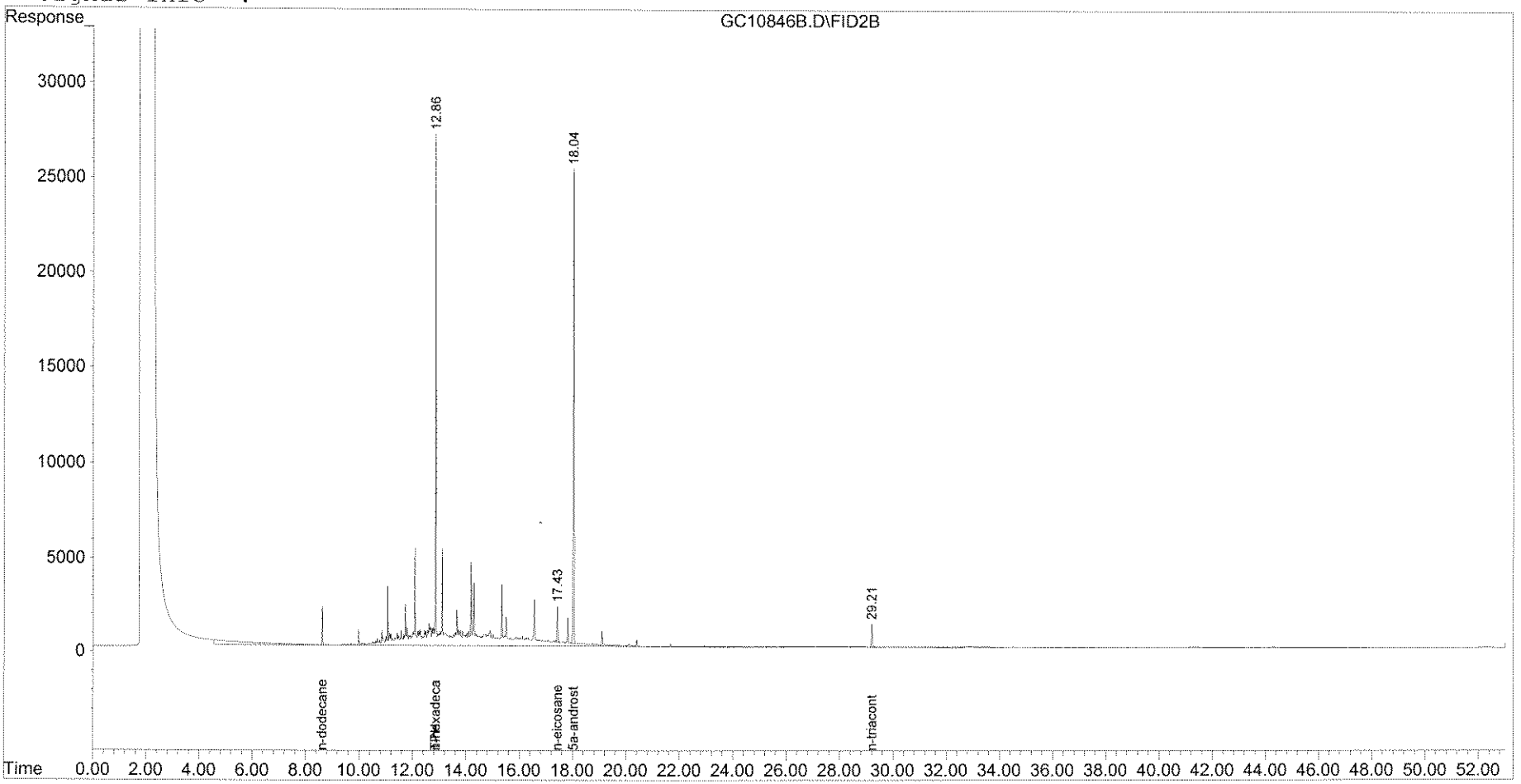
Vial: 52
Operator: TJM
Inst : GC#1
Multiplr: 1.00
Sample Amount: 0.00

IntFile : autoint1.e

Quant Time: Apr 16 7:10 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Multiple Level Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :



000031

Data File Name	**GC10846C.D**		GC10846C.D
Data File Path	**W:\2\DATA\GC10846**		PEM (Low)
Date Acquired	**04/13/20 -1:1:**		04/13/20 -1:1:
Sample Name	**PEM (Low)**		ALI_COMP.M
Sample Multiplier	**1**		
			1
Name	**Amount**		20.001
n-hexadecane-d34	20.00		20.003
5a-androstane	20.00		1.993664653
		Surrogate recovery	1.999039835
n-dodecane-d26	1.99	100	1.894693732
n-eicosane-d42	2.00	100	68.92844971
n-triacontane-d62	1.89	95	10.48498879
			44.65906223
		Surrogate Corrected	1.605688657
			4.795428516
TPH	68.93	68.96	2.089768265
TRH1	10.48	10.49	0.3763138171
TRH2	44.66	44.68	99.68323263
TRH3	1.61	1.61	99.95199174
TRH4	4.80	4.80	94.73468659
TRH5	2.09	2.09	
TRH6	0.38	0.38	

000032

Quantitation Report (QT Reviewed)

Data File : U:\2\DATA\GC10846\GC10846C.D
Acq On : 13 Apr 2007 11:34
Sample : PEM (Low)
Misc :

Vial: 53
Operator: TJM
Inst : GC#1
Multiplr: 1.00
Sample Amount: 0.00

IntFile : autoint1.e

Quant Time: Apr 14 17:31 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc Units
		Internal Standards			
1)		n-hexadecane-d34	12.85	346426	20.001 ug/mlm
10)		5a-androstane	18.03	469207	20.003 ug/mlm
		System Monitoring Compounds			
4)	S	n-dodecane-d26	8.62	29877	1.994 ug/mlm
16)	S	n-eicosane-d42	17.43	39046	1.999 ug/mlm
27)	S	n-triacontane-d62	29.21	32217	1.895 ug/mlm
		Target Compounds			
33)		TPH	12.85	1376399	68.928 ug/mlm
34)		TRH1	8.62	209370	10.485 ug/mlm
35)		TRH2	12.85	891775	44.659 ug/mlm
36)		TRH3	20.12	32063	1.606 ug/mlm
37)		TRH4	29.21	95758	4.795 ug/mlm
38)		TRH5	38.83	41730	2.090 ug/mlm
39)		TRH6	42.38	7514	0.376 ug/mlm

Data File : U:\2\DATA\GC10846\GC10846C.D
Acq On : 13 Apr 2007 11:34
Sample : PEM (Low)
Misc :

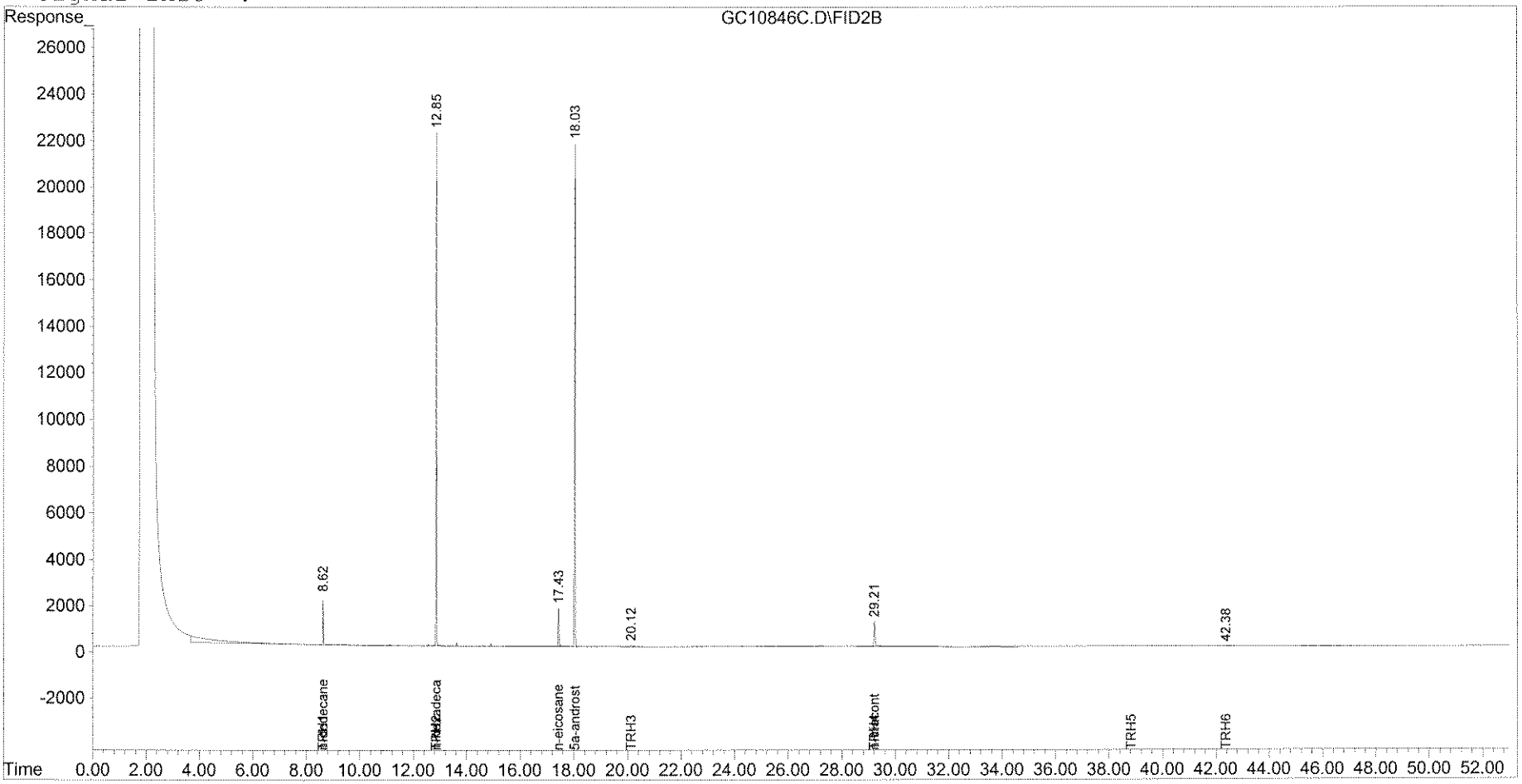
Vial: 53
Operator: TJM
Inst : GC#1
Multiplr: 1.00
Sample Amount: 0.00

IntFile : autoint1.e

Quant Time: Apr 14 17:31 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Multiple Level Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :



000034

Data File Name	**GC10846D.D**		GC10846D.D
Data File Path	**W:\2\DATA\GC10846**		PEM (High)
Date Acquired	**04/13/20 -1:2:**		04/13/20 -1:2:
Sample Name	**PEM (High)**		ALI_COMP.M
Sample Multiplier	**0.5657**		
			0.5657
Name	**Amount**		11.3145657
n-hexadecane-d34	11.31		11.3156971
5a-androstane	11.32		1.094000567
		Surrogate recovery	1.119919673
n-dodecane-d26	1.09	97	1.11541136
n-eicosane-d42	1.12	99	28.76247931
n-triacontane-d62	1.12	99	1.340272428
			24.69139648
		Surrogate Corrected	0.05657297687
			1.055525332
TPH	28.76	29.06	0.1073976302
TRH1	1.34	1.35	0.03624447017
TRH2	24.69	24.94	96.6944111
TRH3	0.06	0.06	98.98529905
TRH4	1.06	1.07	98.58682698
TRH5	0.11	0.11	
TRH6	0.04	0.04	

Quantitation Report (QT Reviewed)

Data File : U:\2\DATA\GC10846\GC10846D.D
Acq On : 13 Apr 2007 12:34
Sample : PEM (High)
Misc :

Vial: 54
Operator: TJM
Inst : GC#1
Multiplr: 0.57
Sample Amount: 0.00

IntFile : autoint1.e

Quant Time: Apr 16 7:14 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc Units
		Internal Standards			
1)		n-hexadecane-d34	12.89f	3645316	11.315 ug/mlm
10)		5a-androstane	18.10f	4820418	11.316 ug/mlm
		System Monitoring Compounds			
4)	S	n-dodecane-d26	8.62	304963	1.094 ug/mlm
16)	S	n-eicosane-d42	17.44	397262	1.120 ug/mlm
27)	S	n-triacontane-d62	29.22	344441	1.115 ug/mlm
		Target Compounds			
33)		TPH	12.89	10430512	28.762 ug/mlm
34)		TRH1	8.62	486040	1.340 ug/mlm
35)		TRH2	12.89	8954162	24.691 ug/mlm
36)		TRH3	20.12	20516	0.057 ug/mlm
37)		TRH4	29.22	382779	1.056 ug/mlm
38)		TRH5	34.47	38947	0.107 ug/mlm
39)		TRH6	41.33	13144	0.036 ug/mlm

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

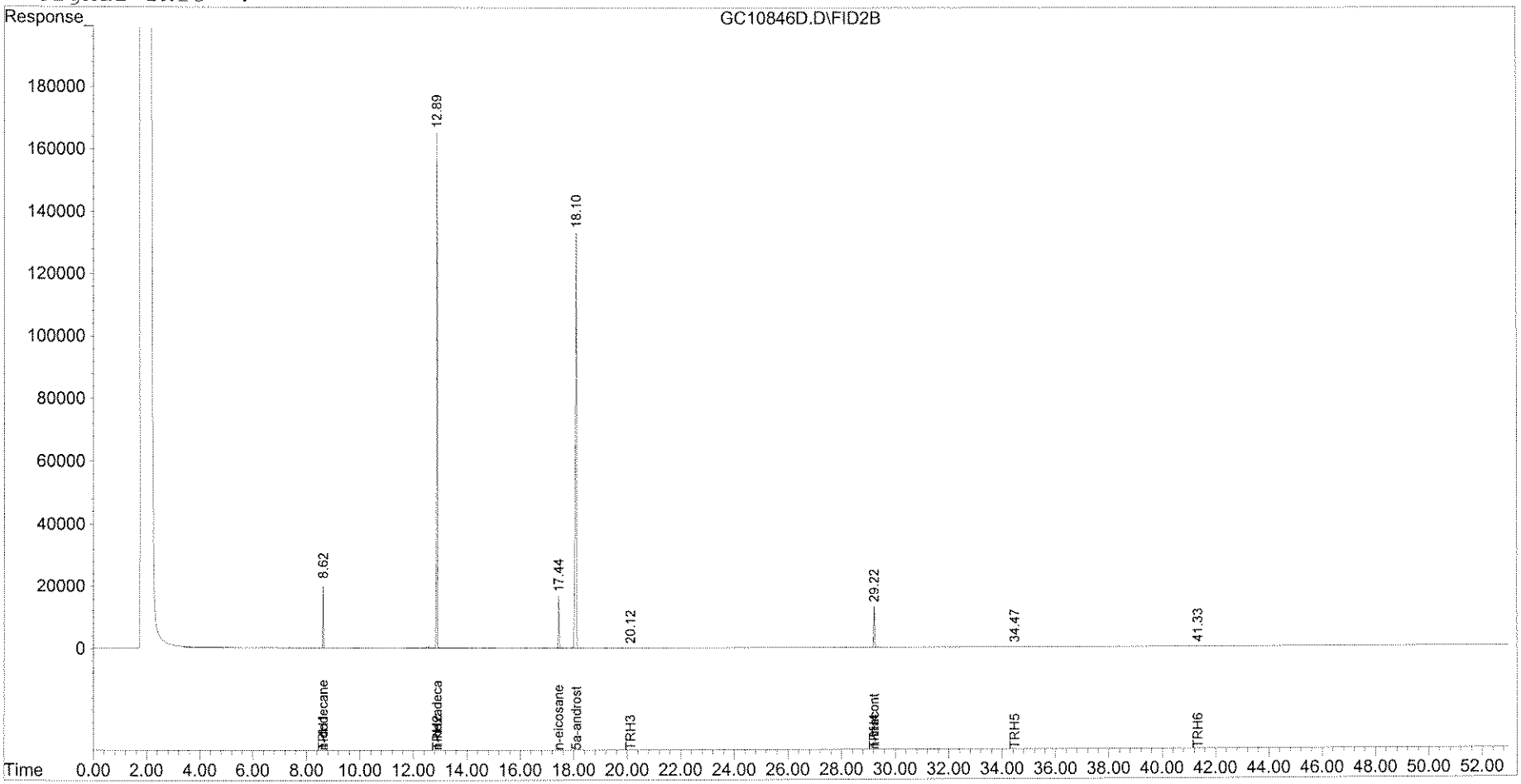
Data File : U:\2\DATA\GC10846\GC10846D.D Vial: 54
Acq On : 13 Apr 2007 12:34 Operator: TJM
Sample : PEM (High) Inst : GC#1
Misc : Multiplr: 0.57
Sample Amount: 0.00

IntFile : autoint1.e

Quant Time: Apr 16 7:14 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Multiple Level Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :



000037

Data File Name	**ETX7207.D**	ETX7207.D
Data File Path	**U:\2\DATA\GC10846**	WIF-02-32707
Date Acquired	**04/13/20 -1:9:**	04/13/20 -1:9:
Sample Name	**WIF-02-32707**	ALL_COMP.M
Sample Multiplier	**0.5657**	

Name	**Amount**		
			0.5657
n-hexadecane-d34	11.31		11.3145657
5a-androstane	11.32		11.3156971
		Surrogate recovery	1.148877043
n-dodecane-d26	1.15	102	1.042315411
n-eicosane-d42	1.04	92	1.033983776
n-triacontane-d62	1.03	91	274.0813551
			2.101523507
			60.73020583
		Surrogate Corrected	20.14145915
			7.825533995
TPH	274.08	297.51	0
TRH1	2.10	2.28	0
TRH2	60.73	65.92	101.5447272
TRH3	20.14	21.86	92.12616325
TRH4	7.83	8.49	91.38976277
TRH5	0.00	0.00	
TRH6	0.00	0.00	

000038

Quantitation Report (QT Reviewed)

Data File : U:\2\DATA\GC10846\ETX7207.D
Acq On : 13 Apr 2007 19:40
Sample : WIF-02-32707
Misc :

Vial: 56
Operator: TJM
Inst : GC#1
Multiplr: 0.57
Sample Amount: 0.00

IntFile : autoint1.e

Quant Time: Apr 20 16:20 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
		Internal Standards				
1)		n-hexadecane-d34	12.89f	3697746	11.315	ug/mlm
10)		5a-androstane	18.11f	5216861	11.316	ug/mlm
		System Monitoring Compounds				
4)	S	n-dodecane-d26	8.62	324866	1.149	ug/mlm
16)	S	n-eicosane-d42	17.46	400142	1.042	ug/mlm
27)	S	n-triacontane-d62	29.24	345556	1.034	ug/mlm
		Target Compounds				
33)		TPH	12.89	107568070	274.081	ug/mlm
34)		TRH1	8.62	824780	2.102	ug/mlm
35)		TRH2	12.89	23834642	60.730	ug/mlm
36)		TRH3	24.67	7904871	20.141	ug/mlm
37)		TRH4	29.24	3071269	7.826	ug/mlm

Data File : U:\2\DATA\GC10846\ETX7207.D
Acq On : 13 Apr 2007 19:40
Sample : WIF-02-32707
Misc :

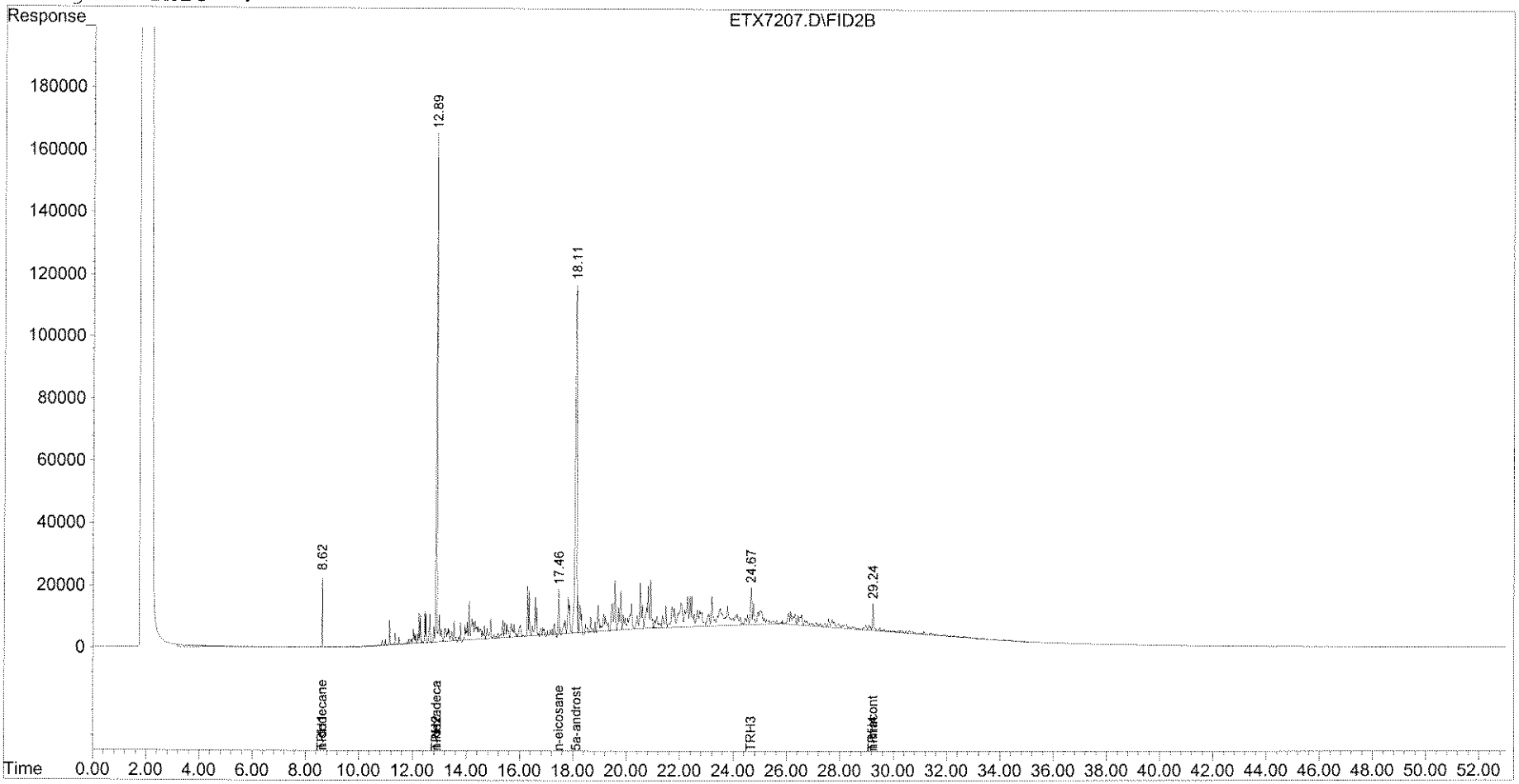
Vial: 56
Operator: TJM
Inst : GC#1
Multiplr: 0.57
Sample Amount: 0.00

IntFile : autoint1.e

Quant Time: Apr 20 16:20 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007
Response via : Multiple Level Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :



000040

Polycyclic Aromatic Hydrocarbon Raw Data

Sequence Name: G:\1\SEQUENCE\MS30377.S
Comment: GeoInsight-Buzzards Bay Spill-Rock
Operator: TJM
Data Path: C:\HPCHEM\1\data\ms30377\
Pre-Seq Cmd:
Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

On A Barcode Mismatch
(X) Inject Anyway
( ) Don't Inject

Line	Type	Vial	DataFile	Method	Sample Name
1	Sample	1	MS30377A	PAH-2002	Solvent Rinse
2	Sample	2	MS30377B	PAH-2002	SRM 1582
3	Sample	3	MS30377C	PAH-2002	IS/SU Mixture
4	Sample	41	MS30377D	PAH-2002	Cal Level 1
5	Sample	42	MS30377E	PAH-2002	Cal Level 2
6	Sample	43	MS30377F	PAH-2002	Cal Level 3
7	Sample	44	MS30377G	PAH-2002	Cal Level 4
8	Sample	45	MS30377H	PAH-2002	Cal Level 5
9	Sample	4	MS30377I	PAH-2002	AR-WKCC-250-022
10	Sample	5	ETX7207	PAH-2002	
11	Sample	6	MS30377J	PAH-2002	AR-WKCC-250-022

Evaluate Continuing Calibration Report

Data File : G:\1\DATA\MS30377\MS30377I.D Vial: 4
Acq On : 13 Apr 2007 5:40 pm Operator: TJM
Sample : AR-WKCC-250-022 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p

Method : G:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 25% 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	82	0.00
2	S	Naphthalene-d8	1.911	1.995	-4.4	87	0.00
3	T	Decalin	0.404	0.422	-4.5	90	0.00
4	un	C1-Decalin	0.404	0.000	100.0#	0#	-12.76#
5	un	C2-Decalin	0.404	0.000	100.0#	0#	-14.27#
6	un	C3-Decalin	0.404	0.000	100.0#	0#	-15.86#
7	un	C4-Decalin	0.404	0.000	100.0#	0#	-19.68#
8	T	Naphthalene	2.087	2.177	-4.3	87	0.00
9	T	2-Methylnaphthalene	1.365	1.448	-6.1	89	0.00
10	T	1-Methylnaphthalene	1.263	1.319	-4.4	92	0.00
11	T	2,6-Dimethylnaphthalene	1.111	1.151	-3.6	88	0.00
12	T	1,6,7-Trimethylnaphthalene	1.026	1.103	-7.5	104	0.00
13	un	C2-Naphthalenes	2.087	0.000	100.0#	0#	-17.94#
14	un	C3-Naphthalenes	2.087	0.000	100.0#	0#	-20.12#
15	un	C4-Naphthalenes	2.087	0.000	100.0#	0#	-22.24#
16	T	Benzothiophene	1.767	1.871	-5.9	87	0.00
17	un	C1-Benzothiophene	1.767	0.000	100.0#	0#	-15.58#
18	un	C2-Benzothiophene	1.767	0.000	100.0#	0#	-17.97#
19	un	C3-Benzothiophene	1.767	0.000	100.0#	0#	-19.61#
20	S	Acenaphthene-d10	0.921	0.968	-5.1	90	0.00
21	T	Biphenyl	1.667	1.752	-5.1	87	0.00
22	T	Acenaphthylene	2.012	2.123	-5.5	87	0.00
23	T	Acenaphthene	1.141	1.227	-7.5	89	0.00
24	T	Dibenzofuran	1.850	1.922	-3.9	88	0.00
25	T	Fluorene	1.328	1.379	-3.8	87	0.00
26	un	C1-Fluorenes	1.328	0.000	100.0#	0#	-22.65#
27	un	C2-Fluorenes	1.328	0.000	100.0#	0#	-24.32#
28	un	C3-Fluorenes	1.328	0.000	100.0#	0#	-26.19#
29	I	Pyrene-d10	1.000	1.000	0.0	76	0.00
30	S	Phenanthrene-d10	0.849	0.892	-5.1	81	0.00
31	T	Pentachlorophenol	0.044	0.000	100.0#	0#	-23.30#
32	T	Carbazole	0.988	1.012	-2.4	78	0.00
33	T	Dibenzothiophene	1.051	1.155	-9.9	85	0.00
34	un	C1-Dibenzothiophene	1.051	0.000	100.0#	0#	-25.11#
35	un	C2-Dibenzothiophene	1.051	0.000	100.0#	0#	-26.47#
36	un	C3-Dibenzothiophene	1.051	0.000	100.0#	0#	-28.57#
37	T	Phenanthrene	1.006	1.169	-16.2	93	0.00
38	T	Anthracene	1.116	1.311	-17.5	91	0.00
39	T	1-Methylphenanthrene	0.859	1.025	-19.3	94	0.00
40	un	C1-Phenanthrene/Anthracene	1.006	0.000	100.0#	0#	-26.20#

(#) = Out of Range

000043

Evaluate Continuing Calibration Report

Data File : G:\1\DATA\MS30377\MS30377I.D
Acq On : 13 Apr 2007 5:40 pm
Sample : AR-WKCC-250-022
Misc :
MS Integration Params: rteint.p

Vial: 4
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.00

Method : G:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Multiple Level Calibration

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

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	un	C2-Phenanthrene/Anthracene	1.006	0.000	100.0#	0#	-27.51#
42	un	C3-Phenanthrene/Anthracene	1.006	0.000	100.0#	0#	-30.06#
43	un	C4-Phenanthrene/Anthracene	1.006	0.000	100.0#	0#	-30.78#
44	T	Naphthobenzothiophene	0.983	1.141	-16.1	94	0.00
45	un	C1-Naphthobenzothiophene	0.983	0.000	100.0#	0#	-33.03#
46	un	C2-Naphthobenzothiophene	0.983	0.000	100.0#	0#	-34.70#
47	un	C3-Naphthobenzothiophene	0.983	0.000	100.0#	0#	-36.06#
48	T	Fluoranthene	1.299	1.311	-0.9	77	0.00
49	T	Pyrene	1.426	1.587	-11.3	87	0.00
50	un	C1-Fluoranthenes/Pyrenes	1.299	0.000	100.0#	0#	-30.52#
51	un	C2-Fluoranthenes/Pyrenes	1.299	0.000	100.0#	0#	-31.88#
52	un	C3-Fluoranthenes/Pyrenes	1.299	0.000	100.0#	0#	-32.93#
53	S	Chrysene-d12	1.147	1.362	-18.7	94	0.00
54	T	Benz(a)anthracene	1.324	1.473	-11.3	85	0.00
55	T	Chrysene	1.102	1.135	-3.0	77	0.00
56	un	C1-Chrysenes	1.102	0.000	100.0#	0#	-34.25#
57	un	C2-Chrysenes	1.102	0.000	100.0#	0#	-35.44#
58	un	C3-Chrysenes	1.102	0.000	100.0#	0#	-36.87#
59	un	C4-Chrysenes	1.102	0.000	100.0#	0#	-42.39#
60	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	77	0.00
61	un	C29-Hopane	0.679	0.000	100.0#	0#	-40.43#
62	un	18a-Oleanane	0.679	0.000	100.0#	0#	-42.28#
63	T	C30-Hopane	0.679	0.725	-6.8	87	0.00
64	T	Benzo(b)fluoranthene	1.787	2.047	-14.5	91	0.00
65	T	Benzo(k)fluoranthene	1.729	1.779	-2.9	78	0.00
66	T	Benzo(e)pyrene	1.800	2.026	-12.6	86	0.00
67	T	Benzo(a)pyrene	1.529	1.616	-5.7	83	0.00
68	T	Indeno(1,2,3-c,d)pyrene	1.161	1.162	-0.1	83	0.00
69	T	Dibenzo(a,h)anthracene	1.077	1.059	1.7	79	0.03
70	un	C1-Dibenzo(a,h)anthracene	1.077	0.000	100.0#	0#	-42.56#
71	un	C2-Dibenzo(a,h)anthracene	1.077	0.000	100.0#	0#	-44.47#
72	un	C3-Dibenzo(a,h)anthracene	1.077	0.000	100.0#	0#	-44.94#
73	T	Benzo(g,h,i)perylene	1.298	1.314	-1.2	80	0.00
74	S	Perylene-d12	0.823	0.899	-9.2	88	0.00
75	T	Perylene	1.640	1.813	-10.5	88	0.00

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

000044

Quantitation Report (QT Reviewed)

Data File : G:\1\DATA\MS30377\MS30377I.D
Acq On : 13 Apr 2007 5:40 pm
Sample : AR-WKCC-250-022
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 14 20:12 19107

Vial: 4
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorene-d10	20.63	176	1990m	51.08	ng/ml	0.00
29) Pyrene-d10	28.80	212	3557m	49.98		0.00
60) Benzo(a)pyrene-d12	37.42	264	2109m	45.61		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.01	136	19435	261.04		0.00
20) Acenaphthene-d10	18.86	164	9425m	262.70		0.00
30) Phenanthrene-d10	23.91	188	15868	262.70		0.00
53) Chrysene-d12	33.00	240	24231m	296.76		0.00
74) Perylene-d12	37.70	264	10388m	273.02		0.00
Target Compounds						Qvalue
3) Decalin	10.39	138	4120m	261.96	ng/ml	
4) C1-Decalin	0.00	152	0	N.D.	d	
5) C2-Decalin	0.00	166	0	N.D.	d	
6) C3-Decalin	0.00	180	0	N.D.	d	
7) C4-Decalin	0.00	194	0	N.D.	d	
8) Naphthalene	13.09	128	21243m	261.25		
9) 2-Methylnaphthalene	15.34	142	14147m	266.08		
10) 1-Methylnaphthalene	15.65	142	12869m	261.60		
11) 2,6-Dimethylnaphthalene	17.45	156	11233m	259.49		
12) 1,6,7-Trimethylnaphthalene	20.30	170	10762m	269.21		
13) C2-Naphthalenes	0.00	156	0	N.D.	d	
14) C3-Naphthalenes	0.00	170	0	N.D.	d	
15) C4-Naphthalenes	0.00	184	0	N.D.	d	
16) Benzothiophene	13.24	134	18259m	265.27	ng/ml	
17) C1-Benzothiophene	0.00	148	0	N.D.	d	
18) C2-Benzothiophene	0.00	162	0	N.D.	d	
19) C3-Benzothiophene	0.00	176	0	N.D.	d	
21) Biphenyl	16.92	154	17099m	263.21		
22) Acenaphthylene	18.35	152	20718m	264.32		
23) Acenaphthene	18.95	154	11963m	269.06		
24) Dibenzofuran	19.56	168	18746m	260.16	ng/ml	
25) Fluorene	20.75	166	13462m	260.16		
26) C1-Fluorenes	0.00	180	0	N.D.	d	
27) C2-Fluorenes	0.00	194	0	N.D.	d	
28) C3-Fluorenes	0.00	208	0	N.D.	d	
31) Pentachlorophenol	0.00	266	0	N.D.	d	
32) Carbazole	24.75	167	18033	256.48	ng/ml	
33) Dibenzothiophene	23.57	184	20573m	274.94		
34) C1-Dibenzothiophene	0.00	198	0	N.D.	d	

(#) = qualifier out of range (m) = manual integration

Data File : G:\1\DATA\MS30377\MS30377I.D
Acq On : 13 Apr 2007 5:40 pm
Sample : AR-WKCC-250-022
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 14 20:12 19107

Vial: 4
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
35)	C2-Dibenzothiophene	0.00	212	0	N.D.	d	
36)	C3-Dibenzothiophene	0.00	226	0	N.D.	d	
37)	Phenanthrene	24.01	178	20855m	291.28		
38)	Anthracene	24.18	178	23365m	294.16		
39)	1-Methylphenanthrene	26.13	192	18266m	298.93		
40)	C1-Phenanthrene/Anthracene	0.00	192	0	N.D.	d	
41)	C2-Phenanthrene/Anthracene	0.00	206	0	N.D.	d	
42)	C3-Phenanthrene/Anthracene	0.00	220	0	N.D.	d	
43)	C4-Phenanthrene/Anthracene	0.00	234	0	N.D.	d	
44)	Naphthobenzothiophene	32.16	234	20279m	289.73		
45)	C1-Naphthobenzothiophene	0.00	248	0	N.D.	d	
46)	C2-Naphthobenzothiophene	0.00	262	0	N.D.	d	
47)	C3-Naphthobenzothiophene	0.00	276	0	N.D.	d	
48)	Fluoranthene	28.09	202	23392m	253.09		
49)	Pyrene	28.86	202	28295m	278.85		
50)	C1-Fluoranthenes/Pyrenes	0.00	216	0	N.D.	d	
51)	C2-Fluoranthenes/Pyrenes	0.00	230	0	N.D.	d	
52)	C3-Fluoranthenes/Pyrenes	0.00	244	0	N.D.	d	
54)	Benz(a)anthracene	32.96	228	26259m	278.75		
55)	Chrysene	33.07	228	20251m	258.19		
56)	C1-Chrysenes	0.00	242	0	N.D.	d	
57)	C2-Chrysenes	0.00	256	0	N.D.	d	
58)	C3-Chrysenes	0.00	270	0	N.D.	d	
59)	C4-Chrysenes	0.00	284	0	N.D.	d	
61)	C29-Hopane	0.00	191	0	N.D.	d	
62)	18a-Oleanane	0.00	191	0	N.D.	d	
63)	C30-Hopane	41.74	191	8384m	267.12	ng/ml	
64)	Benzo(b)fluoranthene	36.43	252	23691m	286.68		
65)	Benzo(k)fluoranthene	36.50	252	20613m	257.79		
66)	Benzo(e)pyrene	37.31	252	23486m	282.17		
67)	Benzo(a)pyrene	37.49	252	18715m	264.74		
68)	Indeno(1,2,3-c,d)pyrene	41.84	276	13460m	250.71		
69)	Dibenzo(a,h)anthracene	41.97	278	12259m	246.24		
70)	C1-Dibenzo(a,h)anthracene	0.00	292	0	N.D.	d	
71)	C2-Dibenzo(a,h)anthracene	0.00	306	0	N.D.	d	
72)	C3-Dibenzo(a,h)anthracene	0.00	320	0	N.D.	d	
73)	Benzo(g,h,i)perylene	43.06	276	15221m	253.62		
75)	Perylene	37.77	252	20996m	276.93		

(#) = qualifier out of range (m) = manual integration

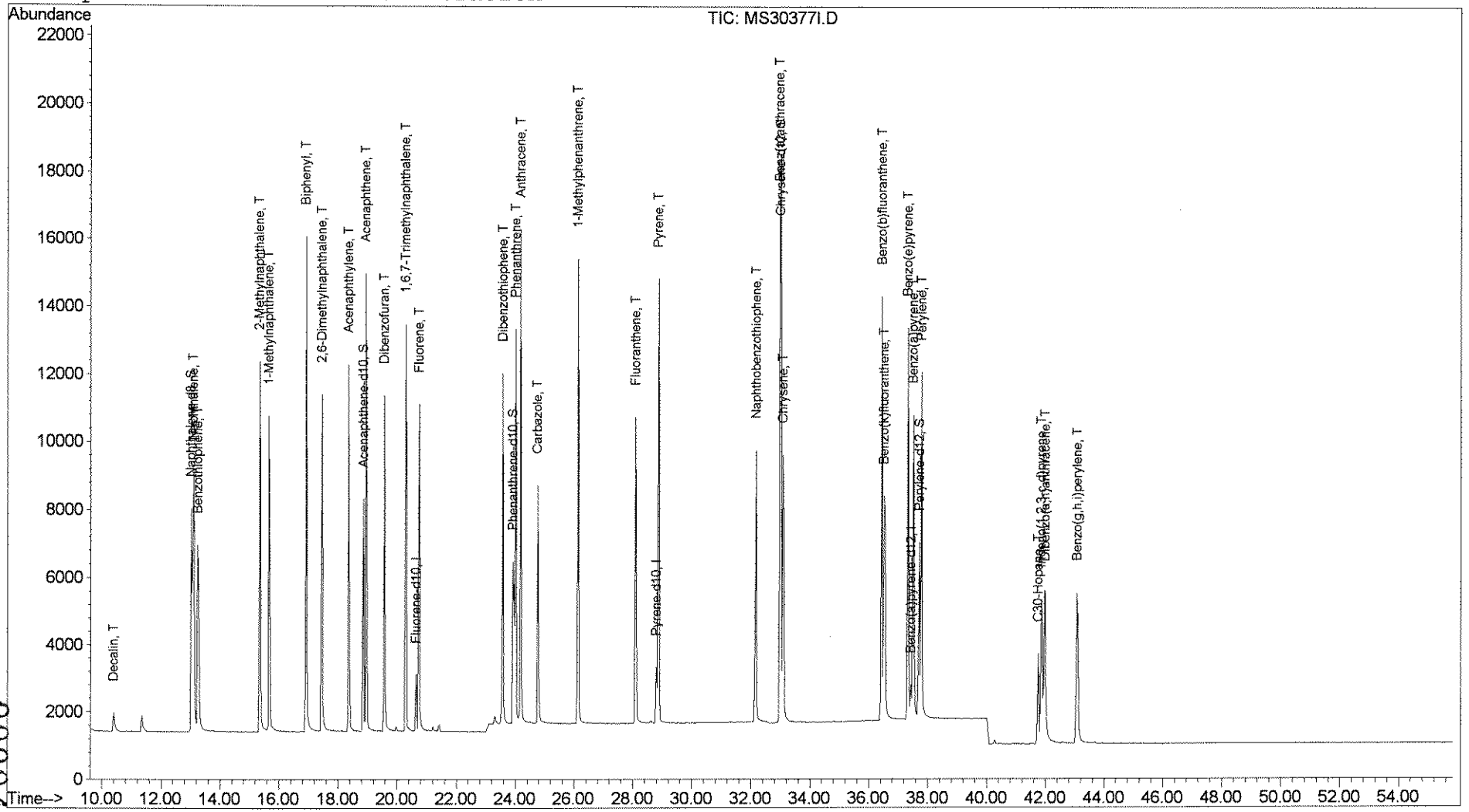
Quantitation Report

Data File : G:\1\DATA\MS30377\MS30377I.D
Acq On : 13 Apr 2007 5:40 pm
Sample : AR-WKCC-250-022
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 14 20:12 19107

Vial: 4
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 041507.RES

Method : G:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data File : G:\1\DATA\MS30377\MS30377J.D Vial: 6
Acq On : 13 Apr 2007 7:46 pm Operator: TJM
Sample : AR-WKCC-250-022 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p

Method : G:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 25% 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	110	0.00
2	S	Naphthalene-d8	1.911	1.861	2.6	109	0.00
3	T	Decalin	0.404	0.385	4.7	110	0.00
4	un	C1-Decalin	0.404	0.000	100.0#	0#	-12.76#
5	un	C2-Decalin	0.404	0.000	100.0#	0#	-14.27#
6	un	C3-Decalin	0.404	0.000	100.0#	0#	-15.86#
7	un	C4-Decalin	0.404	0.000	100.0#	0#	-19.68#
8	T	Naphthalene	2.087	2.054	1.6	110	0.00
9	T	2-Methylnaphthalene	1.365	1.379	-1.0	114	0.00
10	T	1-Methylnaphthalene	1.263	1.220	3.4	115	0.00
11	T	2,6-Dimethylnaphthalene	1.111	1.119	-0.7	114	0.00
12	T	1,6,7-Trimethylnaphthalene	1.026	1.058	-3.1	134	0.00
13	un	C2-Naphthalenes	2.087	0.000	100.0#	0#	-17.94#
14	un	C3-Naphthalenes	2.087	0.000	100.0#	0#	-20.12#
15	un	C4-Naphthalenes	2.087	0.000	100.0#	0#	-22.24#
16	T	Benzothiophene	1.767	1.701	3.7	106	0.00
17	un	C1-Benzothiophene	1.767	0.000	100.0#	0#	-15.58#
18	un	C2-Benzothiophene	1.767	0.000	100.0#	0#	-17.97#
19	un	C3-Benzothiophene	1.767	0.000	100.0#	0#	-19.61#
20	S	Acenaphthene-d10	0.921	0.924	-0.3	115	0.00
21	T	Biphenyl	1.667	1.704	-2.2	114	0.00
22	T	Acenaphthylene	2.012	2.046	-1.7	113	0.00
23	T	Acenaphthene	1.141	1.126	1.3	109	0.00
24	T	Dibenzofuran	1.850	1.825	1.4	112	0.00
25	T	Fluorene	1.328	1.344	-1.2	113	0.00
26	un	C1-Fluorenes	1.328	0.000	100.0#	0#	-22.65#
27	un	C2-Fluorenes	1.328	0.000	100.0#	0#	-24.32#
28	un	C3-Fluorenes	1.328	0.000	100.0#	0#	-26.19#
29	I	Pyrene-d10	1.000	1.000	0.0	107	0.00
30	S	Phenanthrene-d10	0.849	0.796	6.2	102	0.00
31	T	Pentachlorophenol	0.044	0.000	100.0#	0#	-23.30#
32	T	Carbazole	0.988	1.023	-3.5	113	0.00
33	T	Dibenzothiophene	1.051	1.077	-2.5	113	0.00
34	un	C1-Dibenzothiophene	1.051	0.000	100.0#	0#	-25.11#
35	un	C2-Dibenzothiophene	1.051	0.000	100.0#	0#	-26.47#
36	un	C3-Dibenzothiophene	1.051	0.000	100.0#	0#	-28.57#
37	T	Phenanthrene	1.006	1.015	-0.9	115	0.00
38	T	Anthracene	1.116	1.152	-3.2	114	0.00
39	T	1-Methylphenanthrene	0.859	0.896	-4.3	117	0.00
40	un	C1-Phenanthrene/Anthracene	1.006	0.000	100.0#	0#	-26.20#

(#) = Out of Range

000048

Evaluate Continuing Calibration Report

Data File : G:\1\DATA\MS30377\MS30377J.D Vial: 6
Acq On : 13 Apr 2007 7:46 pm Operator: TJM
Sample : AR-WKCC-250-022 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p

Method : G:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Multiple Level Calibration

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

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
41	un	C2-Phenanthrene/Anthracene	1.006	0.000	100.0#	0#	-27.51#
42	un	C3-Phenanthrene/Anthracene	1.006	0.000	100.0#	0#	-30.06#
43	un	C4-Phenanthrene/Anthracene	1.006	0.000	100.0#	0#	-30.78#
44	T	Naphthobenzothiophene	0.983	1.025	-4.3	119	0.00
45	un	C1-Naphthobenzothiophene	0.983	0.000	100.0#	0#	-33.03#
46	un	C2-Naphthobenzothiophene	0.983	0.000	100.0#	0#	-34.70#
47	un	C3-Naphthobenzothiophene	0.983	0.000	100.0#	0#	-36.06#
48	T	Fluoranthene	1.299	1.236	4.8	103	0.00
49	T	Pyrene	1.426	1.429	-0.2	111	0.00
50	un	C1-Fluoranthenes/Pyrenes	1.299	0.000	100.0#	0#	-30.52#
51	un	C2-Fluoranthenes/Pyrenes	1.299	0.000	100.0#	0#	-31.88#
52	un	C3-Fluoranthenes/Pyrenes	1.299	0.000	100.0#	0#	-32.93#
53	S	Chrysene-d12	1.147	1.234	-7.6	121	0.00
54	T	Benz(a)anthracene	1.324	1.423	-7.5	117	0.00
55	T	Chrysene	1.102	1.142	-3.6	110	0.00
56	un	C1-Chrysenes	1.102	0.000	100.0#	0#	-34.25#
57	un	C2-Chrysenes	1.102	0.000	100.0#	0#	-35.44#
58	un	C3-Chrysenes	1.102	0.000	100.0#	0#	-36.87#
59	un	C4-Chrysenes	1.102	0.000	100.0#	0#	-42.39#
60	I	Benzo(a)pyrene-d12	1.000	1.000	0.0	133	0.00
61	un	C29-Hopane	0.679	0.000	100.0#	0#	-40.43#
62	un	18a-Oleanane	0.679	0.000	100.0#	0#	-42.28#
63	T	C30-Hopane	0.679	0.636	6.3	132	0.00
64	T	Benzo(b)fluoranthene	1.787	1.690	5.4	131	0.00
65	T	Benzo(k)fluoranthene	1.729	1.646	4.8	125	0.00
66	T	Benzo(e)pyrene	1.800	1.581	12.2	116	0.00
67	T	Benzo(a)pyrene	1.529	1.475	3.5	131	0.00
68	T	Indeno(1,2,3-c,d)pyrene	1.161	1.228	-5.8	151	0.00
69	T	Dibenzo(a,h)anthracene	1.077	1.158	-7.5	150	0.00
70	un	C1-Dibenzo(a,h)anthracene	1.077	0.000	100.0#	0#	-42.56#
71	un	C2-Dibenzo(a,h)anthracene	1.077	0.000	100.0#	0#	-44.47#
72	un	C3-Dibenzo(a,h)anthracene	1.077	0.000	100.0#	0#	-44.94#
73	T	Benzo(g,h,i)perylene	1.298	1.251	3.6	131	0.00
74	S	Perylene-d12	0.823	0.758	7.9	129	0.00
75	T	Perylene	1.640	1.537	6.3	128	0.00

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

Quantitation Report (QT Reviewed)

Data File : G:\1\DATA\MS30377\MS30377J.D Vial: 6
Acq On : 13 Apr 2007 7:46 pm Operator: TJM
Sample : AR-WKCC-250-022 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 14 20:20 19107 Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorene-d10	20.63	176	2671m	51.08	ng/ml	0.00
29) Pyrene-d10	28.80	212	5049m	49.98		0.00
60) Benzo(a)pyrene-d12	37.42	264	3645m	45.61		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.01	136	24333m	243.50		0.00
20) Acenaphthene-d10	18.86	164	12074m	250.73		0.00
30) Phenanthrene-d10	23.91	188	20094m	234.36		0.00
53) Chrysene-d12	33.00	240	31174m	268.97		0.00
74) Perylene-d12	37.70	264	15138	230.20		0.00
Target Compounds						Qvalue
3) Decalin	10.39	138	5036m	238.56	ng/ml	
4) C1-Decalin	0.00	152	0	N.D.	d	
5) C2-Decalin	0.00	166	0	N.D.	d	
6) C3-Decalin	0.00	180	0	N.D.	d	
7) C4-Decalin	0.00	194	0	N.D.	d	
8) Naphthalene	13.09	128	26905m	246.52		
9) 2-Methylnaphthalene	15.34	142	18078m	253.33		
10) 1-Methylnaphthalene	15.65	142	15970m	241.87		
11) 2,6-Dimethylnaphthalene	17.45	156	14660m	252.32		
12) 1,6,7-Trimethylnaphthalene	20.29	170	13856m	258.23		
13) C2-Naphthalenes	0.00	156	0	N.D.	d	
14) C3-Naphthalenes	0.00	170	0	N.D.	d	
15) C4-Naphthalenes	0.00	184	0	N.D.	d	
16) Benzothiophene	13.23	134	22282m	241.18	ng/ml	
17) C1-Benzothiophene	0.00	148	0	N.D.	d	
18) C2-Benzothiophene	0.00	162	0	N.D.	d	
19) C3-Benzothiophene	0.00	176	0	N.D.	d	
21) Biphenyl	16.92	154	22314m	255.91		
22) Acenaphthylene	18.35	152	26802m	254.76		
23) Acenaphthene	18.94	154	14732m	246.86		
24) Dibenzofuran	19.56	168	23887m	246.98	ng/ml	
25) Fluorene	20.74	166	17602m	253.44		
26) C1-Fluorenes	0.00	180	0	N.D.	d	
27) C2-Fluorenes	0.00	194	0	N.D.	d	
28) C3-Fluorenes	0.00	208	0	N.D.	d	
31) Pentachlorophenol	0.00	266	0	N.D.		
32) Carbazole	24.75	167	25881m	259.33	ng/ml	
33) Dibenzothiophene	23.57	184	27251m	256.56		
34) C1-Dibenzothiophene	0.00	198	0	N.D.	d	

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\1\DATA\MS30377\MS30377J.D Vial: 6
Acq On : 13 Apr 2007 7:46 pm Operator: TJM
Sample : AR-WKCC-250-022 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 14 20:20 19107 Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
35)	C2-Dibenzothiophene	0.00	212	0	N.D. d	
36)	C3-Dibenzothiophene	0.00	226	0	N.D. d	
37)	Phenanthrene	24.01	178	25687m	252.75	
38)	Anthracene	24.18	178	29138m	258.44	
39)	1-Methylphenanthrene	26.13	192	22662m	261.28	
40)	C1-Phenanthrene/Anthracene	0.00	192	0	N.D. d	
41)	C2-Phenanthrene/Anthracene	0.00	206	0	N.D. d	
42)	C3-Phenanthrene/Anthracene	0.00	220	0	N.D. d	
43)	C4-Phenanthrene/Anthracene	0.00	234	0	N.D. d	
44)	Naphthobenzothiophene	32.16	234	25862m	260.30	
45)	C1-Naphthobenzothiophene	0.00	248	0	N.D. d	
46)	C2-Naphthobenzothiophene	0.00	262	0	N.D. d	
47)	C3-Naphthobenzothiophene	0.00	276	0	N.D. d	
48)	Fluoranthene	28.09	202	31298m	238.56	
49)	Pyrene	28.86	202	36166m	251.09	
50)	C1-Fluoranthenes/Pyrenes	0.00	216	0	N.D. d	
51)	C2-Fluoranthenes/Pyrenes	0.00	230	0	N.D. d	
52)	C3-Fluoranthenes/Pyrenes	0.00	244	0	N.D. d	
54)	Benz(a)anthracene	32.96	228	36029m	269.44	
55)	Chrysene	33.07	228	28904m	259.62	
56)	C1-Chrysenes	0.00	242	0	N.D. d	
57)	C2-Chrysenes	0.00	256	0	N.D. d	
58)	C3-Chrysenes	0.00	270	0	N.D. d	
59)	C4-Chrysenes	0.00	284	0	N.D. d	
61)	C29-Hopane	0.00	191	0	N.D. d	
62)	18a-Oleanane	0.00	191	0	N.D. d	
63)	C30-Hopane	41.74	191	12698	234.08 ng/ml	
64)	Benzo(b)fluoranthene	36.43	252	33806	236.69	
65)	Benzo(k)fluoranthene	36.50	252	32964	238.53	
66)	Benzo(e)pyrene	37.31	252	31675	220.19	
67)	Benzo(a)pyrene	37.49	252	29509	241.53	
68)	Indeno(1,2,3-c,d)pyrene	41.84	276	24584	264.95	
69)	Dibenzo(a,h)anthracene	41.95	278	23163	269.20	
70)	C1-Dibenzo(a,h)anthracene	0.00	292	0	N.D. d	
71)	C2-Dibenzo(a,h)anthracene	0.00	306	0	N.D. d	
72)	C3-Dibenzo(a,h)anthracene	0.00	320	0	N.D. d	
73)	Benzo(g,h,i)perylene	43.06	276	25040	241.41	
75)	Perylene	37.77	252	30764	234.77	

(#) = qualifier out of range (m) = manual integration

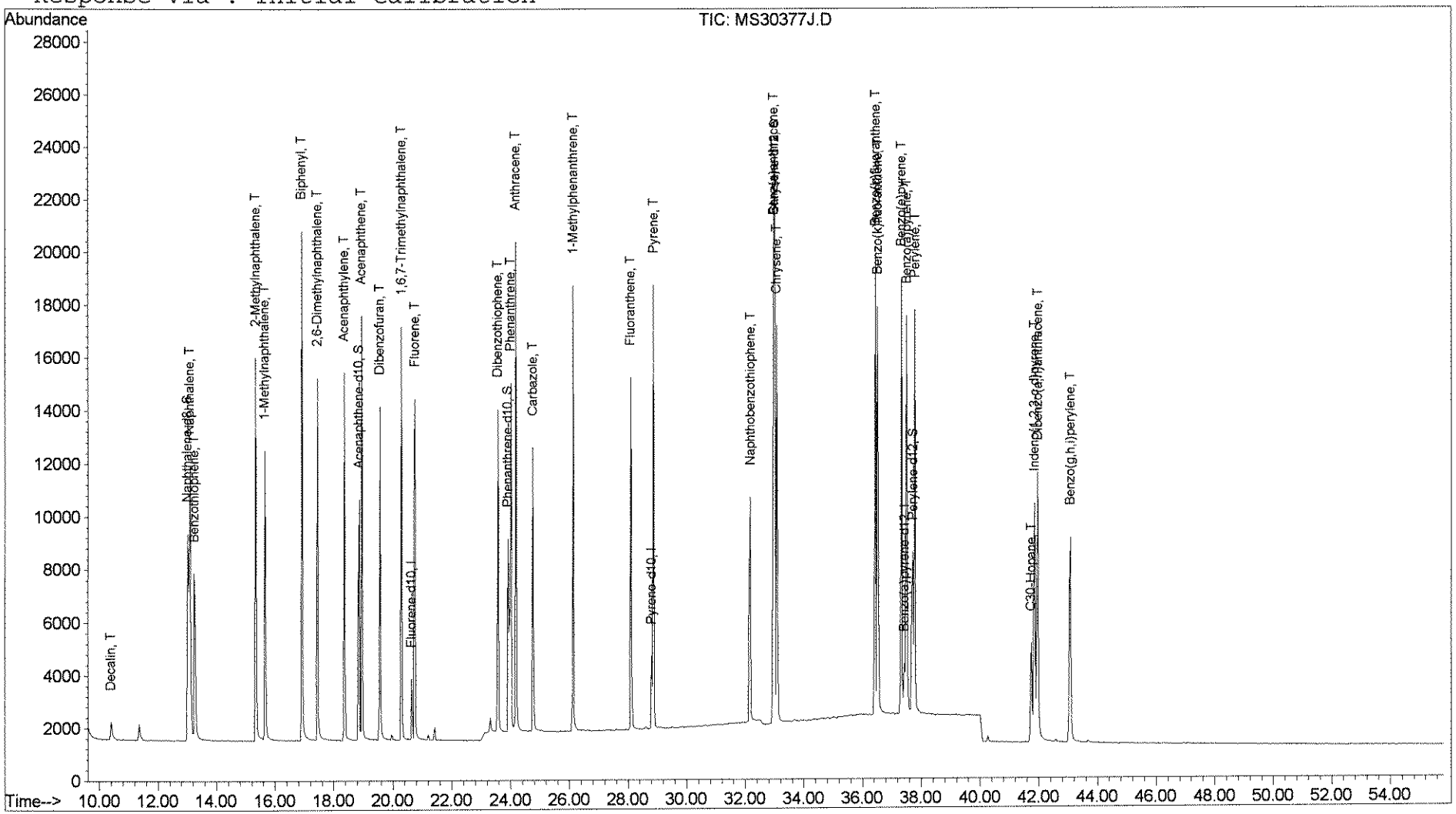
Quantitation Report

Data File : G:\1\DATA\MS30377\MS30377J.D
Acq On : 13 Apr 2007 7:46 pm
Sample : AR-WKCC-250-022
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 14 20:20 19107

Vial: 6
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 041507.RES

Method : G:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration



Tissue, Sediment, and Water Sample Report (Use d-10 Phenanthrene only for Surrogate Corrections)

Data File Name	**MS30377B.D**	**Su Amt = 50**	MS30377B.D
Data File Path	**X:\1\DATA\MS30377**		SRM 1582
Operator	**TJM**		
Date Acquired	**04/13/20 -1:0:**		
Method File	**PAH-2002**		
Sample Name	**SRM 1582**		
Misc Info			
Instrument Name	**GC/MS Ins**		04/13/20 -1:0:
Vial Number	**2**		PAH-2002
Sample Multiplier	**0.588**		1.70
Sample Amount	**0**		

Peak #	Compound	Ret Time (min)	Target Response (Area)	Conc. (ng/g or ng/L)	Su. Corrected Conc. (ng/g or ng/L)
3)	Decalin	0.00	0	0.00	0.00
4)	C1-Decalin	0.00	0	0.00	0.00
5)	C2-Decalin	0.00	0	0.00	0.00
6)	C3-Decalin	0.00	0	0.00	0.00
7)	C4-Decalin	0.00	0	0.00	0.00
8)	Naphthalene	13.06	24820	144.66	148.41
9+10)	C1-Naphthalenes	15.49	96757	563.94	578.53
13)	C2-Naphthalenes	17.79	178444	1040.04	1066.96
14)	C3-Naphthalenes	19.73	170794	995.45	1021.22
15)	C4-Naphthalenes	22.29	121460	707.91	726.24
16)	Benzothiophene	13.32	1168	8.04	8.25
17)	C1-Benzothiophene	15.34	2484	17.10	17.55
18)	C2-Benzothiophene	17.82	10652	73.34	75.24
19)	C3-Benzothiophene	19.53	20840	143.49	147.20
21)	Biphenyl	16.92	4542	33.14	33.99
22)	Acenaphthylene	0.00	0	0.00	0.00
23)	Acenaphthene	18.94	1988	21.19	21.74
24)	Dibenzofuran	19.56	1834	12.06	12.37
25)	Fluorene	20.71	3836	35.13	36.04
26)	C1-Fluorenes	22.71	13747	125.91	129.17
27)	C2-Fluorenes	24.45	28851	264.25	271.09
28)	C3-Fluorenes	26.10	26274	240.64	246.87
31)	Pentachlorophenol	0.00	0	0.00	0.00
32)	Carbazole	24.82	402	2.14	2.19
38)	Anthracene	24.18	778	3.66	3.76
37)	Phenanthrene	23.98	18683	97.58	100.11
40)	C1-Phenanthrene/Anthracene	25.76	63979	334.16	342.81
41)	C2-Phenanthrene/Anthracene	27.58	96372	503.35	516.38
42)	C3-Phenanthrene/Anthracene	29.17	101432	529.78	543.49
43)	C4-Phenanthrene/Anthracene	31.02	52306	273.19	280.26
33)	Dibenzothiophene	23.57	5987	29.92	30.69
34)	C1-Dibenzothiophene	25.09	25556	127.72	131.02
35)	C2-Dibenzothiophene	26.81	48508	242.42	248.69
36)	C3-Dibenzothiophene	28.02	49064	245.20	251.54
48)	Fluoranthene	28.09	1255	5.08	5.21
49)	Pyrene	28.86	1631	6.01	6.17
50)	C1-Fluoranthenes/Pyrenes	30.68	14626	59.18	60.71
51)	C2-Fluoranthenes/Pyrenes	31.52	24872	100.63	103.24
52)	C3-Fluoranthenes/Pyrenes	33.21	18609	75.29	77.24
44)	Naphthobenzothiophene	32.16	6353	33.94	34.82
45)	C1-Naphthobenzothiophene	33.88	11046	59.01	60.54
46)	C2-Naphthobenzothiophene	35.26	14084	75.25	77.19
47)	C3-Naphthobenzothiophene	36.36	10079	53.85	55.24
54)	Benz(a)anthracene	32.96	1086	4.31	4.42
55)	Chrysene	33.07	4852	23.13	23.73
56)	C1-Chrysenes	34.31	14048	66.98	68.71
57)	C2-Chrysenes	36.64	25266	120.46	123.58
58)	C3-Chrysenes	37.13	17614	83.98	86.15
59)	C4-Chrysenes	0.00	0	0.00	0.00
64)	Benzo(b)fluoranthene	36.43	420	1.62	1.66
65)	Benzo(k)fluoranthene	36.46	117	0.47	0.48
66)	Benzo(e)pyrene	37.31	740	2.84	2.91
67)	Benzo(a)pyrene	37.49	437	1.97	2.02
75)	Perylene	37.77	8706	36.66	37.61
68)	Indeno(1,2,3-c,d)pyrene	41.82	331	1.97	2.02
69)	Dibenzo(a,h)anthracene	41.92	84	0.54	0.55
70)	C1-Dibenzo(a,h)anthracene	0.00	0	0.00	0.00
71)	C2-Dibenzo(a,h)anthracene	0.00	0	0.00	0.00
72)	C3-Dibenzo(a,h)anthracene	0.00	0	0.00	0.00
73)	Benzo(g,h,i)perylene	43.06	299	1.59	1.63
	Total PAH				7828
	Individual Isomers				
9)	2-Methylnaphthalene	15.34	57656	513.93	527.23
10)	1-Methylnaphthalene	15.65	39101	376.69	386.45
11)	2,6-Dimethylnaphthalene	17.48	48527	531.28	545.04
12)	1,6,7-Trimethylnaphthalene	20.29	13848	164.17	168.42
39)	1-Methylphenanthrene	26.13	14011	85.75	87.97
61)	C29-Hopane	39.79	18934	192.60	197.59
62)	18a-Oleanane	40.83	6183	62.90	64.52
63)	C30-Hopane	41.04	28305	287.93	295.38
	Surrogates *(AR-STSU-040-005)*				**Su Recovery (%)**
2)	Naphthalene-d8	13.01	4339	27.62	94
20)	Acenaphthene-d10	18.83	2201	29.07	99
30)	Phenanthrene-d10	23.91	4629	28.66	97
53)	Chrysene-d12	33.00	5768	26.42	90
74)	Perylene-d12	37.70	3203	26.88	91
	Internal Stds *(AR-WKIS-0500-007)*				
1)	Fluorene-d10	20.63	2469	51.08	
29)	Pyrene-d10	28.80	5593	49.98	
60)	Benzo(a)pyrene-d12	37.42	3884	45.61	

Quantitation Report (QT Reviewed)

Data File : X:\1\DATA\MS30377\MS30377B.D
Acq On : 13 Apr 2007 10:19 am
Sample : SRM 1582
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 16 7:58 2007

Vial: 2
Operator: TJM
Inst : GC/MS Ins
Multiplr: 0.59
Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorene-d10	20.63	176	2469m	51.08	ng/ml	0.00
29) Pyrene-d10	28.80	212	5593m	49.98		0.00
60) Benzo(a)pyrene-d12	37.42	264	3884m	45.61		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.01	136	4339m	27.62		0.00
20) Acenaphthene-d10	18.83	164	2201m	29.07		-0.03
30) Phenanthrene-d10	23.91	188	4629m	28.66		0.00
53) Chrysene-d12	33.00	240	5768m	26.42		0.00
74) Perylene-d12	37.70	264	3203	26.88		0.00
Target Compounds						Qvalue
3) Decalin	0.00	138	0	N.D.		
4) C1-Decalin	0.00	152	0	N.D.	d	
5) C2-Decalin	0.00	166	0	N.D.	d	
6) C3-Decalin	0.00	180	0	N.D.	d	
7) C4-Decalin	0.00	194	0	N.D.	d	
8) Naphthalene	13.06	128	24820	144.66		
9) 2-Methylnaphthalene	15.34	142	57656	513.93		
10) 1-Methylnaphthalene	15.65	142	39101	376.69		
11) 2,6-Dimethylnaphthalene	17.48	156	48527	531.28		
12) 1,6,7-Trimethylnaphthalene	20.29	170	13848	164.17		
13) C2-Naphthalenes	17.79	156	178444	1040.04		
14) C3-Naphthalenes	19.73	170	170794	995.45		
15) C4-Naphthalenes	22.29	184	121460	707.91		
16) Benzothiophene	13.32	134	1168	8.04	ng/ml	
17) C1-Benzothiophene	15.34	148	2484	17.10	ng/ml	
18) C2-Benzothiophene	17.82	162	10652	73.34	ng/ml	
19) C3-Benzothiophene	19.53	176	20840	143.49	ng/ml	
21) Biphenyl	16.92	154	4542m	33.14		
22) Acenaphthylene	0.00	152	0	N.D.		
23) Acenaphthene	18.94	154	1988	21.19		
24) Dibenzofuran	19.56	168	1834	12.06	ng/ml	
25) Fluorene	20.71	166	3836	35.13		
26) C1-Fluorenes	22.71	180	13747	125.91		
27) C2-Fluorenes	24.45	194	28851m	264.25		
28) C3-Fluorenes	26.10	208	26274m	240.64		
31) Pentachlorophenol	0.00	266	0	N.D.		
32) Carbazole	24.82	167	402m	2.14	ng/ml	
33) Dibenzothiophene	23.57	184	5987m	29.92		
34) C1-Dibenzothiophene	25.09	198	25556m	127.72		
35) C2-Dibenzothiophene	26.81	212	48508m	242.42		
36) C3-Dibenzothiophene	28.02	226	49064m	245.20		
37) Phenanthrene	23.98	178	18683m	97.58		
38) Anthracene	24.18	178	778m	3.66		
39) 1-Methylphenanthrene	26.13	192	14011m	85.75		
40) C1-Phenanthrene/Anthracene	25.76	192	63979m	334.16		
41) C2-Phenanthrene/Anthracene	27.58	206	96372m	503.35		
42) C3-Phenanthrene/Anthracene	29.17	220	101432m	529.78		
43) C4-Phenanthrene/Anthracene	31.02	234	52306m	273.19		
44) Naphthobenzothiophene	32.16	234	6353m	33.94		
45) C1-Naphthobenzothiophene	33.88	248	11046m	59.01		
46) C2-Naphthobenzothiophene	35.26	262	14084m	75.25		

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : X:\1\DATA\MS30377\MS30377B.D Vial: 2
Acq On : 13 Apr 2007 10:19 am Operator: TJM
Sample : SRM 1582 Inst : GC/MS Ins
Misc : Multiplr: 0.59
MS Integration Params: rteint.p
Quant Time: Apr 16 7:58 2007 Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

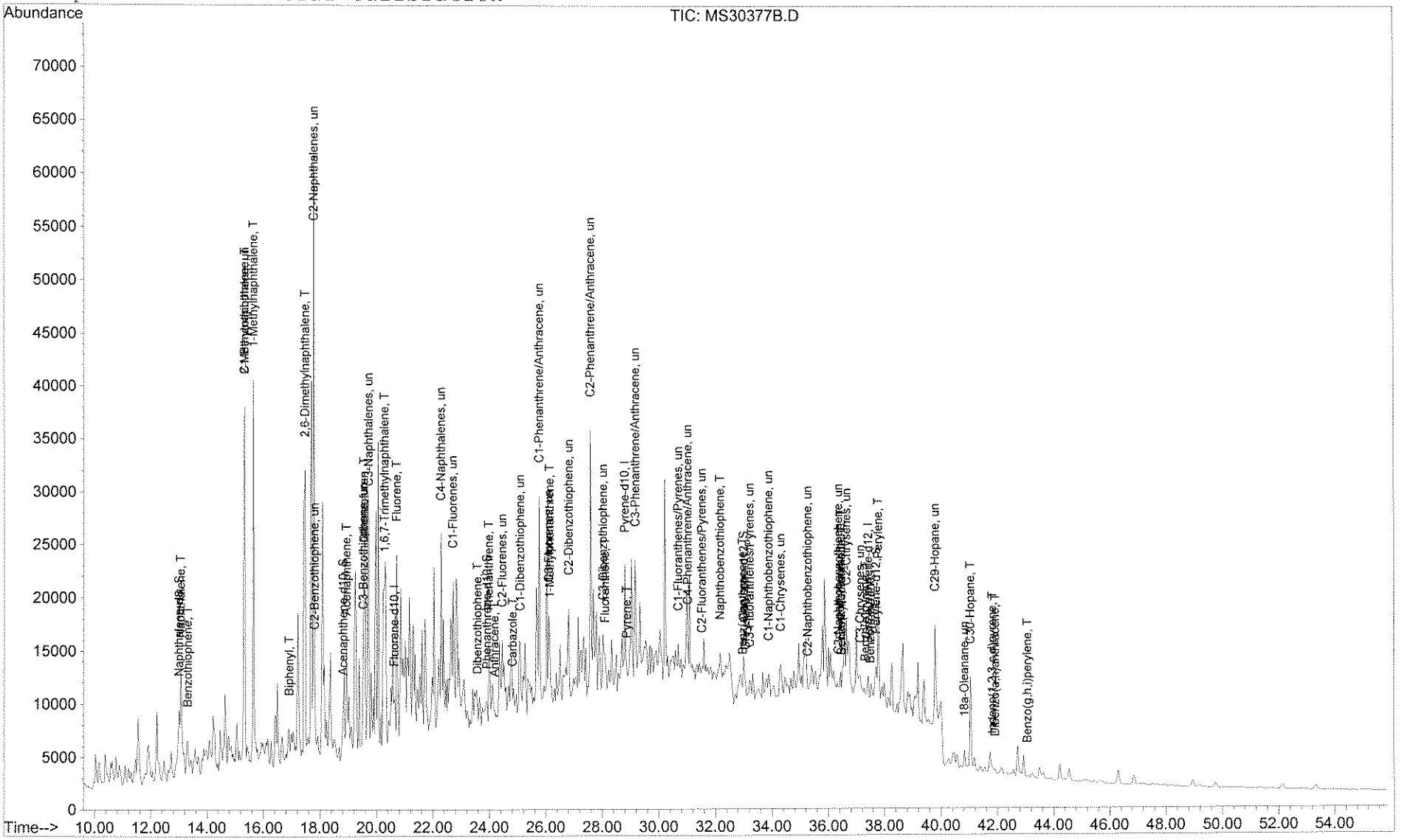
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
47)	C3-Naphthobenzothiophene	36.36	276	10079m	53.85		
48)	Fluoranthene	28.09	202	1255m	5.08		
49)	Pyrene	28.86	202	1631m	6.01		
50)	C1-Fluoranthenes/Pyrenes	30.68	216	14626m	59.18	ng/mL	
51)	C2-Fluoranthenes/Pyrenes	31.52	230	24872m	100.63	ng/mL	
52)	C3-Fluoranthenes/Pyrenes	33.21	244	18609m	75.29	ng/mL	
54)	Benz(a)anthracene	32.96	228	1086m	4.31		
55)	Chrysene	33.07	228	4852m	23.13		
56)	C1-Chrysenes	34.31	242	14048m	66.98	ng/mL	
57)	C2-Chrysenes	36.64	256	25266m	120.46	ng/mL	
58)	C3-Chrysenes	37.13	270	17614m	83.98	ng/mL	
59)	C4-Chrysenes	0.00	284	0	N.D.	d	
61)	C29-Hopane	39.79	191	18934	192.60	ng/ml	
62)	18a-Oleanane	40.83	191	6183	62.90	ng/ml	
63)	C30-Hopane	41.04	191	28305	287.93	ng/ml	
64)	Benzo(b)fluoranthene	36.43	252	420	1.62		
65)	Benzo(k)fluoranthene	36.46	252	117	0.47		
66)	Benzo(e)pyrene	37.31	252	740	2.84		
67)	Benzo(a)pyrene	37.49	252	437	1.97		
68)	Indeno(1,2,3-c,d)pyrene	41.82	276	331	1.97		
69)	Dibenzo(a,h)anthracene	41.92	278	84	0.54		
70)	C1-Dibenzo(a,h)anthracene	0.00	292	0	N.D.	d	
71)	C2-Dibenzo(a,h)anthracene	0.00	306	0	N.D.	d	
72)	C3-Dibenzo(a,h)anthracene	0.00	320	0	N.D.	d	
73)	Benzo(g,h,i)perylene	43.06	276	299	1.59		
75)	Perylene	37.77	252	8706m	36.66		

(#) = qualifier out of range (m) = manual integration
MS30377B.D 041507.M Tue May 08 06:52:05 2007

Quantitation Report

Data File : X:\1\DATA\MS30377\MS30377B.D Vial: 2
Acq On : 13 Apr 2007 10:19 am Operator: TJM
Sample : SRM 1582 Inst : GC/MS Ins
Misc : Multiplr: 0.59
MS Integration Params: rteint.p
Quant Time: Apr 16 7:58 2007 Quant Results File: 041507.RES

Method : X:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration



Tissue, Sediment, and Water Sample Report (Use d-10 Phenanthrene only for Surrogate Corrections)

Data File Name	**MS30377C.D**	**Su Amt = 50**	MS30377C.D
Data File Path	**X:\1\DATA\MS30377**		IS/SU Mixture
Operator	**TJM**		
Date Acquired	**04/13/20 -1:1:**		
Method File	**PAH-2002**		
Sample Name	**IS/SU Mixture**		
Misc Info			
Instrument Name	**GC/MS ins**		04/13/20 -1:1:
Vial Number	**3**		PAH-2002
Sample Multiplier	**1**		1.00
Sample Amount	**0**		

Peak #	Compound	Ret Time (min)	Target Response (Area)	Conc. (ng/g or ng/L)	Su. Corrected Conc. (ng/g or ng/L)
3)	Decalin	0.00	0	0.00	0.00
4)	C1-Decalin	0.00	0	0.00	0.00
5)	C2-Decalin	0.00	0	0.00	0.00
6)	C3-Decalin	0.00	0	0.00	0.00
7)	C4-Decalin	0.00	0	0.00	0.00
8)	Naphthalene	0.00	0	0.00	0.00
9+10)	C1-Naphthalenes	0.00	0	#DIV/0!	#DIV/0!
13)	C2-Naphthalenes	0.00	0	0.00	0.00
14)	C3-Naphthalenes	0.00	0	0.00	0.00
15)	C4-Naphthalenes	0.00	0	0.00	0.00
16)	Benzothiophene	0.00	0	0.00	0.00
17)	C1-Benzothiophene	0.00	0	0.00	0.00
18)	C2-Benzothiophene	0.00	0	0.00	0.00
19)	C3-Benzothiophene	0.00	0	0.00	0.00
21)	Biphenyl	0.00	0	0.00	0.00
22)	Acenaphthylene	0.00	0	0.00	0.00
23)	Acenaphthene	0.00	0	0.00	0.00
24)	Dibenzofuran	0.00	0	0.00	0.00
25)	Fluorene	0.00	0	0.00	0.00
26)	C1-Fluorenes	0.00	0	0.00	0.00
27)	C2-Fluorenes	0.00	0	0.00	0.00
28)	C3-Fluorenes	0.00	0	0.00	0.00
31)	Pentachlorophenol	0.00	0	0.00	0.00
32)	Carbazole	0.00	0	0.00	0.00
38)	Anthracene	0.00	0	0.00	0.00
37)	Phenanthrene	0.00	0	0.00	0.00
40)	C1-Phenanthrene/Anthracene	0.00	0	0.00	0.00
41)	C2-Phenanthrene/Anthracene	0.00	0	0.00	0.00
42)	C3-Phenanthrene/Anthracene	0.00	0	0.00	0.00
43)	C4-Phenanthrene/Anthracene	0.00	0	0.00	0.00
33)	Dibenzothiophene	0.00	0	0.00	0.00
34)	C1-Dibenzothiophene	0.00	0	0.00	0.00
35)	C2-Dibenzothiophene	0.00	0	0.00	0.00
36)	C3-Dibenzothiophene	0.00	0	0.00	0.00
48)	Fluoranthene	0.00	0	0.00	0.00
49)	Pyrene	0.00	0	0.00	0.00
50)	C1-Fluoranthenes/Pyrenes	0.00	0	0.00	0.00
51)	C2-Fluoranthenes/Pyrenes	0.00	0	0.00	0.00
52)	C3-Fluoranthenes/Pyrenes	0.00	0	0.00	0.00
44)	Naphthobenzothiophene	0.00	0	0.00	0.00
45)	C1-Naphthobenzothiophene	0.00	0	0.00	0.00
46)	C2-Naphthobenzothiophene	0.00	0	0.00	0.00
47)	C3-Naphthobenzothiophene	0.00	0	0.00	0.00
54)	Benz(a)anthracene	0.00	0	0.00	0.00
55)	Chrysene	0.00	0	0.00	0.00
56)	C1-Chrysenes	0.00	0	0.00	0.00
57)	C2-Chrysenes	0.00	0	0.00	0.00
58)	C3-Chrysenes	0.00	0	0.00	0.00
59)	C4-Chrysenes	0.00	0	0.00	0.00
64)	Benzo(b)fluoranthene	0.00	0	0.00	0.00
65)	Benzo(k)fluoranthene	0.00	0	0.00	0.00
66)	Benzo(e)pyrene	0.00	0	0.00	0.00
67)	Benzo(a)pyrene	0.00	0	0.00	0.00
75)	Perylene	0.00	0	0.00	0.00
68)	Indeno(1,2,3-c,d)pyrene	0.00	0	0.00	0.00
69)	Dibenzo(a,h)anthracene	0.00	0	0.00	0.00
70)	C1-Dibenzo(a,h)anthracene	0.00	0	0.00	0.00
71)	C2-Dibenzo(a,h)anthracene	0.00	0	0.00	0.00
72)	C3-Dibenzo(a,h)anthracene	0.00	0	0.00	0.00
73)	Benzo(g,h,i)perylene	0.00	0	0.00	0.00
	Total PAH				#DIV/0!
	Individual Isomers				
9)	2-Methylnaphthalene	0.00	0	0.00	0.00
10)	1-Methylnaphthalene	0.00	0	0.00	0.00
11)	2,6-Dimethylnaphthalene	0.00	0	0.00	0.00
12)	1,6,7-Trimethylnaphthalene	0.00	0	0.00	0.00
39)	1-Methylphenanthrene	0.00	0	0.00	0.00
61)	C29-Hopane	0.00	0	0.00	0.00
62)	18a-Oleanane	0.00	0	0.00	0.00
63)	C30-Hopane	0.00	0	0.00	0.00
	Surrogates *(AR-STSU-040-005)*				**Su Recovery (%)**
2)	Naphthalene-d8	13.01	4427	50.01	100
20)	Acenaphthene-d10	18.83	2077	48.69	97
30)	Phenanthrene-d10	23.91	3848	47.59	95
53)	Chrysene-d12	33.00	4953	45.31	91
74)	Perylene-d12	37.70	2567	46.51	93
	Internal Stds *(AR-WKIS-0500-007)*				
1)	Fluorene-d10	20.63	2366	51.08	
29)	Pyrene-d10	28.79	4762	49.98	
60)	Benzo(a)pyrene-d12	37.42	3059	45.61	

Quantitation Report (QT Reviewed)

Data File : X:\1\DATA\MS30377\MS30377C.D
Acq On : 13 Apr 2007 11:22 am
Sample : IS/SU Mixture
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 14 20:37 2007

Vial: 3
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorene-d10	20.63	176	2366m	51.08	ng/ml	0.00
29) Pyrene-d10	28.79	212	4762m	49.98		0.00
60) Benzo(a)pyrene-d12	37.42	264	3059m	45.61		0.00
System Monitoring Compounds						
2) Naphthalene-d8	13.01	136	4427	50.01		0.00
20) Acenaphthene-d10	18.83	164	2077m	48.69		-0.03
30) Phenanthrene-d10	23.91	188	3848	47.59		0.00
53) Chrysene-d12	33.00	240	4953m	45.31		0.00
74) Perylene-d12	37.70	264	2567m	46.51		0.00
Target Compounds						Qvalue
3) Decalin	0.00	138	0	N.D.	d	
4) C1-Decalin	0.00	152	0	N.D.	d	
5) C2-Decalin	0.00	166	0	N.D.	d	
6) C3-Decalin	0.00	180	0	N.D.	d	
7) C4-Decalin	0.00	194	0	N.D.	d	
8) Naphthalene	0.00	128	0	N.D.	d	
9) 2-Methylnaphthalene	0.00	142	0	N.D.	d	
10) 1-Methylnaphthalene	0.00	142	0	N.D.	d	
11) 2,6-Dimethylnaphthalene	0.00	156	0	N.D.		
12) 1,6,7-Trimethylnaphthalene	0.00	170	0	N.D.		
13) C2-Naphthalenes	0.00	156	0	N.D.	d	
14) C3-Naphthalenes	0.00	170	0	N.D.	d	
15) C4-Naphthalenes	0.00	184	0	N.D.	d	
16) Benzothiophene	0.00	134	0	N.D.		
17) C1-Benzothiophene	0.00	148	0	N.D.	d	
18) C2-Benzothiophene	0.00	162	0	N.D.	d	
19) C3-Benzothiophene	0.00	176	0	N.D.	d	
21) Biphenyl	0.00	154	0	N.D.	d	
22) Acenaphthylene	0.00	152	0	N.D.		
23) Acenaphthene	0.00	154	0	N.D.	d	
24) Dibenzofuran	0.00	168	0	N.D.	d	
25) Fluorene	0.00	166	0	N.D.	d	
26) C1-Fluorenes	0.00	180	0	N.D.	d	
27) C2-Fluorenes	0.00	194	0	N.D.	d	
28) C3-Fluorenes	0.00	208	0	N.D.	d	
31) Pentachlorophenol	0.00	266	0	N.D.		
32) Carbazole	0.00	167	0	N.D.	d	
33) Dibenzothiophene	0.00	184	0	N.D.	d	
34) C1-Dibenzothiophene	0.00	198	0	N.D.	d	
35) C2-Dibenzothiophene	0.00	212	0	N.D.	d	
36) C3-Dibenzothiophene	0.00	226	0	N.D.	d	
37) Phenanthrene	0.00	178	0	N.D.		
38) Anthracene	0.00	178	0	N.D.		
39) 1-Methylphenanthrene	0.00	192	0	N.D.		
40) C1-Phenanthrene/Anthracene	0.00	192	0	N.D.	d	
41) C2-Phenanthrene/Anthracene	0.00	206	0	N.D.	d	
42) C3-Phenanthrene/Anthracene	0.00	220	0	N.D.	d	
43) C4-Phenanthrene/Anthracene	0.00	234	0	N.D.	d	
44) Naphthobenzothiophene	0.00	234	0	N.D.		
45) C1-Naphthobenzothiophene	0.00	248	0	N.D.	d	
46) C2-Naphthobenzothiophene	0.00	262	0	N.D.	d	

(#) = qualifier out of range (m) = manual integration

Data File : X:\1\DATA\MS30377\MS30377C.D
Acq On : 13 Apr 2007 11:22 am
Sample : IS/SU Mixture
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 14 20:37 2007

Vial: 3
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

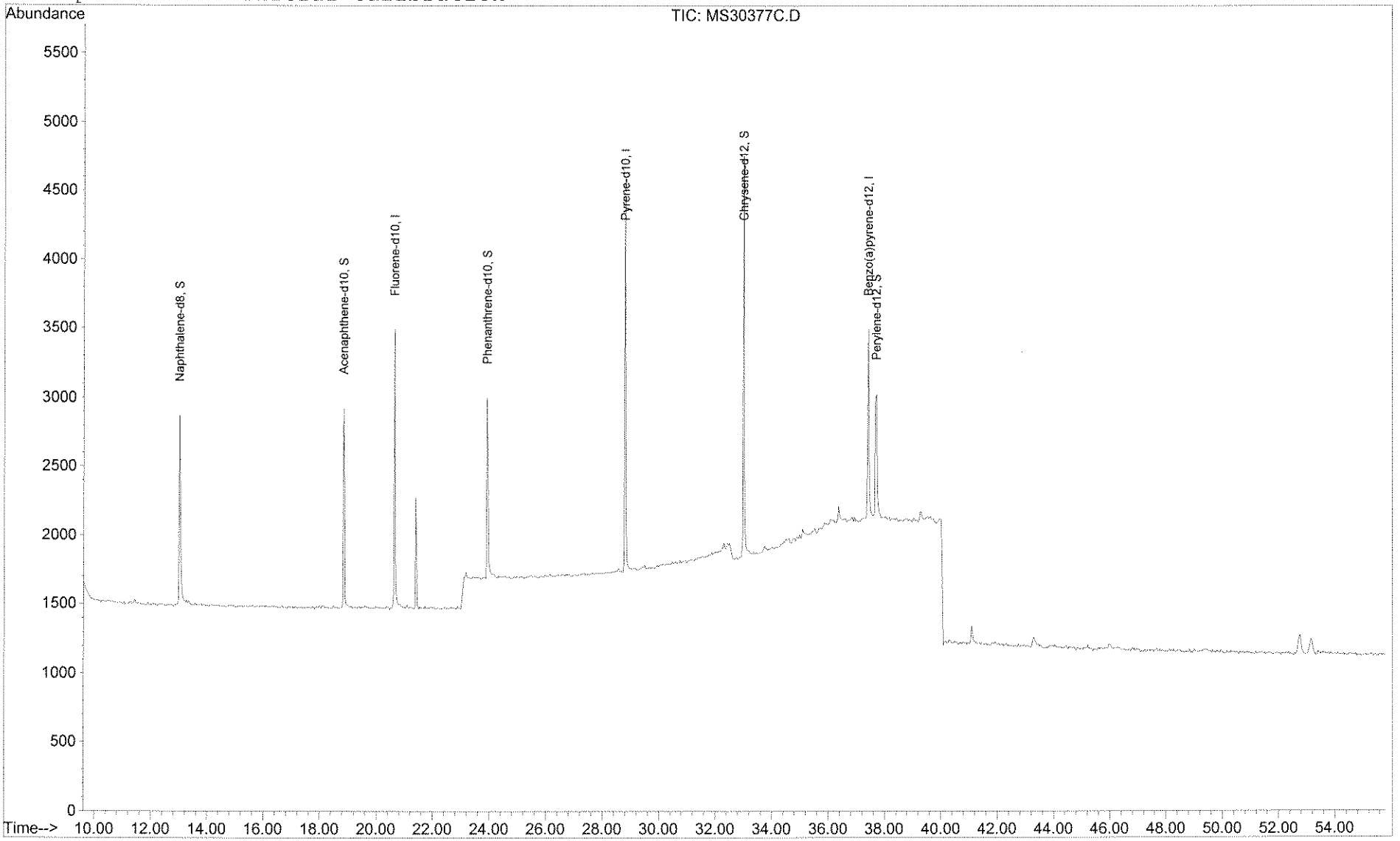
	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
47)	C3-Naphthobenzothiophene	0.00	276	0	N.D. d	
48)	Fluoranthene	0.00	202	0	N.D.	
49)	Pyrene	0.00	202	0	N.D.	
50)	C1-Fluoranthenes/Pyrenes	0.00	216	0	N.D. d	
51)	C2-Fluoranthenes/Pyrenes	0.00	230	0	N.D. d	
52)	C3-Fluoranthenes/Pyrenes	0.00	244	0	N.D. d	
54)	Benz(a)anthracene	0.00	228	0	N.D.	
55)	Chrysene	0.00	228	0	N.D.	
56)	C1-Chrysenes	0.00	242	0	N.D. d	
57)	C2-Chrysenes	0.00	256	0	N.D. d	
58)	C3-Chrysenes	0.00	270	0	N.D. d	
59)	C4-Chrysenes	0.00	284	0	N.D. d	
61)	C29-Hopane	0.00	191	0	N.D. d	
62)	18a-Oleanane	0.00	191	0	N.D. d	
63)	C30-Hopane	0.00	191	0	N.D.	
64)	Benzo(b)fluoranthene	0.00	252	0	N.D.	
65)	Benzo(k)fluoranthene	0.00	252	0	N.D.	
66)	Benzo(e)pyrene	0.00	252	0	N.D.	
67)	Benzo(a)pyrene	0.00	252	0	N.D.	
68)	Indeno(1,2,3-c,d)pyrene	0.00	276	0	N.D. d	
69)	Dibenzo(a,h)anthracene	0.00	278	0	N.D. d	
70)	C1-Dibenzo(a,h)anthracene	0.00	292	0	N.D. d	
71)	C2-Dibenzo(a,h)anthracene	0.00	306	0	N.D. d	
72)	C3-Dibenzo(a,h)anthracene	0.00	320	0	N.D. d	
73)	Benzo(g,h,i)perylene	0.00	276	0	N.D. d	
75)	Perylene	0.00	252	0	N.D.	

(#) = qualifier out of range (m) = manual integration

Data File : X:\1\DATA\MS30377\MS30377C.D
Acq On : 13 Apr 2007 11:22 am
Sample : IS/SU Mixture
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 14 20:37 2007

Vial: 3
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 041507.RES

Method : X:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration



090000

Tissue, Sediment, and Water Sample Report (Use d-10 Phenanthrene only for Surrogate Corrections)

Data File Name	**ETX7207.D**	**Su Amt = 50**	ETX7207.D
Data File Path	**X:\1\DATA\MS30377**		WIF-02-32707
Operator	**TJM**		
Date Acquired	**04/13/20 -1:6:**		
Method File	**PAH-2002**		
Sample Name	**WIF-02-32707**		
Misc Info			
Instrument Name	**GC/MS Ins**		04/13/20 -1:6:
Vial Number	**5**		PAH-2002
Sample Multiplier	**1.1314**		0.88
Sample Amount	**0**		

Peak #	Compound	Ret Time (min)	Target Response (Area)	Conc. (ng/g or ng/L)	Su. Corrected Conc. (ng/g or ng/L)
3)	Decalin	0.00	0	0.00	0.00
4)	C1-Decalin	0.00	0	0.00	0.00
5)	C2-Decalin	0.00	0	0.00	0.00
6)	C3-Decalin	0.00	0	0.00	0.00
7)	C4-Decalin	0.00	0	0.00	0.00
8)	Naphthalene	13.10	96	0.11	0.12
9+10)	C1-Naphthalenes	15.50	597	0.69	0.76
13)	C2-Naphthalenes	17.71	262061	304.58	335.48
14)	C3-Naphthalenes	19.73	1041965	1211.00	1333.89
15)	C4-Naphthalenes	22.07	881691	1024.73	1128.72
16)	Benzothiophene	13.35	10	0.01	0.02
17)	C1-Benzothiophene	15.63	1050	1.44	1.59
18)	C2-Benzothiophene	17.46	14279	19.60	21.59
19)	C3-Benzothiophene	19.54	50148	68.85	75.84
21)	Biphenyl	16.92	79	0.11	0.13
22)	Acenaphthylene	0.00	0	0.00	0.00
23)	Acenaphthene	18.95	13200	28.06	30.90
24)	Dibenzofuran	19.56	12622	16.55	18.23
25)	Fluorene	20.75	40410	73.80	81.29
26)	C1-Fluorenes	22.74	193648	353.68	389.57
27)	C2-Fluorenes	24.38	528750	965.70	1063.70
28)	C3-Fluorenes	26.07	677039	1236.53	1362.01
31)	Pentachlorophenol	0.00	0	0.00	0.00
32)	Carbazole	0.00	0	0.00	0.00
38)	Anthracene	24.18	51366	51.92	57.19
37)	Phenanthrene	24.01	256829	288.01	317.24
40)	C1-Phenanthrene/Anthracene	25.80	1882469	2111.01	2325.24
41)	C2-Phenanthrene/Anthracene	27.62	4021037	4509.22	4966.81
42)	C3-Phenanthrene/Anthracene	29.20	4238955	4753.59	5235.99
43)	C4-Phenanthrene/Anthracene	31.05	2193555	2459.87	2709.49
33)	Dibenzothiophene	23.57	63908	68.57	75.53
34)	C1-Dibenzothiophene	25.09	291905	313.21	345.00
35)	C2-Dibenzothiophene	26.84	623978	669.52	737.47
36)	C3-Dibenzothiophene	28.05	721721	774.40	852.99
48)	Fluoranthene	28.12	92853	80.66	88.85
49)	Pyrene	28.90	639803	506.25	557.62
50)	C1-Fluoranthenes/Pyrenes	30.41	2606972	2264.69	2494.51
51)	C2-Fluoranthenes/Pyrenes	32.16	3490858	3032.53	3340.27
52)	C3-Fluoranthenes/Pyrenes	33.39	2834421	2462.28	2712.15
44)	Naphthobenzothiophene	32.20	260280	298.57	328.87
45)	C1-Naphthobenzothiophene	33.63	632695	725.77	799.42
46)	C2-Naphthobenzothiophene	35.08	774814	888.79	978.99
47)	C3-Naphthobenzothiophene	36.14	359886	412.83	454.72
54)	Benz(a)anthracene	33.00	338217	288.27	317.52
55)	Chrysene	33.14	684544	700.75	771.86
56)	C1-Chrysenes	34.41	2619706	2681.72	2953.86
57)	C2-Chrysenes	35.72	2866092	2933.94	3231.68
58)	C3-Chrysenes	37.20	1208084	1236.68	1362.18
59)	C4-Chrysenes	40.34	37956	38.85	42.80
64)	Benzo(b)fluoranthene	36.46	135753	125.72	138.48
65)	Benzo(k)fluoranthene	36.57	17485	16.74	18.43
66)	Benzo(e)pyrene	37.38	146108	134.34	147.98
67)	Benzo(a)pyrene	37.56	233396	252.67	278.31
75)	Perylene	37.84	64000	64.60	71.16
68)	Indeno(1,2,3-c,d)pyrene	41.89	14942	21.30	23.46
69)	Dibenzo(a,h)anthracene	41.97	21789	33.49	36.89
70)	C1-Dibenzo(a,h)anthracene	0.00	0	0.00	0.00
71)	C2-Dibenzo(a,h)anthracene	0.00	0	0.00	0.00
72)	C3-Dibenzo(a,h)anthracene	0.00	0	0.00	0.00
73)	Benzo(g,h,i)perylene	43.11	32574	41.54	45.75
	Total PAH				44663
	Individual Isomers				
9)	2-Methylnaphthalene	15.35	138	0.25	0.27
10)	1-Methylnaphthalene	15.66	459	0.88	0.97
11)	2,6-Dimethylnaphthalene	17.46	26312	57.44	63.27
12)	1,6,7-Trimethylnaphthalene	20.30	79144	187.10	206.09
39)	1-Methylphenanthrene	26.13	225481	296.28	326.34
61)	C29-Hopane	39.86	26503	64.62	71.18
62)	18a-Oleanane	40.88	4996	12.18	13.42
63)	C30-Hopane	41.09	31630	77.12	84.95
	Surrogates				Su Recovery (%)
	(AR-STSU-040-005)				
2)	Naphthalene-d8	13.01	37610	47.74	84
20)	Acenaphthene-d10	18.86	19352	50.98	90
30)	Phenanthrene-d10	23.94	38637	51.36	91
53)	Chrysene-d12	33.03	52149	51.28	91
74)	Perylene-d12	37.73	27137	54.58	96
	Internal Stds				
	(AR-WKIS-0500-007)				
1)	Fluorene-d10	20.63	23824	51.08	
29)	Pyrene-d10	28.83	50123	49.98	
60)	Benzo(a)pyrene-d12	37.49	31179	45.61	

Quantitation Report (QT Reviewed)

Data File : X:\1\DATA\MS30377\ETX7207.D
Acq On : 13 Apr 2007 6:43 pm
Sample : WIF-02-32707
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 20 16:23 2007

Vial: 5
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.13
Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorene-d10	20.63	176	23824m	51.08	ng/ml	0.00
29) Pyrene-d10	28.83	212	50123m	49.98		0.03
60) Benzo(a)pyrene-d12	37.49	264	31179m	45.61		0.07
System Monitoring Compounds						
2) Naphthalene-d8	13.01	136	37610m	47.74		0.00
20) Acenaphthene-d10	18.86	164	19352m	50.98		0.00
30) Phenanthrene-d10	23.94	188	38637m	51.36		0.03
53) Chrysene-d12	33.03	240	52149m	51.28		0.03
74) Perylene-d12	37.73	264	27137m	54.58		0.03
Target Compounds						Qvalue
3) Decalin	0.00	138	0	N.D.		
4) C1-Decalin	0.00	152	0	N.D.	d	
5) C2-Decalin	0.00	166	0	N.D.	d	
6) C3-Decalin	0.00	180	0	N.D.	d	
7) C4-Decalin	0.00	194	0	N.D.	d	
8) Naphthalene	13.10	128	96m	0.11		
9) 2-Methylnaphthalene	15.35	142	138m	0.25		
10) 1-Methylnaphthalene	15.66	142	459m	0.88		
11) 2,6-Dimethylnaphthalene	17.46	156	26312m	57.44		
12) 1,6,7-Trimethylnaphthalene	20.30	170	79144m	187.10		
13) C2-Naphthalenes	17.71	156	262061m	304.58		
14) C3-Naphthalenes	19.73	170	1041965m	1211.00		
15) C4-Naphthalenes	22.07	184	881691m	1024.73		
16) Benzothiophene	13.35	134	10m	0.01	ng/ml	
17) C1-Benzothiophene	15.63	148	1050m	1.44	ng/ml	
18) C2-Benzothiophene	17.46	162	14279m	19.60	ng/ml	
19) C3-Benzothiophene	19.54	176	50148m	68.85	ng/ml	
21) Biphenyl	16.92	154	79m	0.11		
22) Acenaphthylene	0.00	152	0	N.D.	d	
23) Acenaphthene	18.95	154	13200m	28.06		
24) Dibenzofuran	19.56	168	12622m	16.55	ng/ml	
25) Fluorene	20.75	166	40410m	73.80		
26) C1-Fluorenes	22.74	180	193648m	353.68		
27) C2-Fluorenes	24.38	194	528750m	965.70		
28) C3-Fluorenes	26.07	208	677039m	1236.53		
31) Pentachlorophenol	0.00	266	0	N.D.		
32) Carbazole	0.00	167	0	N.D.	d	
33) Dibenzothiophene	23.57	184	63908m	68.57		
34) C1-Dibenzothiophene	25.09	198	291905m	313.21		
35) C2-Dibenzothiophene	26.84	212	623978m	669.52		
36) C3-Dibenzothiophene	28.05	226	721721m	774.40		
37) Phenanthrene	24.01	178	256829m	288.01		
38) Anthracene	24.18	178	51366m	51.92		
39) 1-Methylphenanthrene	26.13	192	225481m	296.28		
40) C1-Phenanthrene/Anthracene	25.80	192	1882469m	2111.01		
41) C2-Phenanthrene/Anthracene	27.62	206	4021037m	4509.22		
42) C3-Phenanthrene/Anthracene	29.20	220	4238955m	4753.59		
43) C4-Phenanthrene/Anthracene	31.05	234	2193555m	2459.87		
44) Naphthobenzothiophene	32.20	234	260280m	298.57		
45) C1-Naphthobenzothiophene	33.63	248	632695m	725.77		
46) C2-Naphthobenzothiophene	35.08	262	774814m	888.79		

(#) = qualifier out of range (m) = manual integration

000062

Quantitation Report (QT Reviewed)

Data File : X:\1\DATA\MS30377\ETX7207.D
Acq On : 13 Apr 2007 6:43 pm
Sample : WIF-02-32707
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 20 16:23 2007

Vial: 5
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.13
Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
47)	C3-Naphthobenzothiophene	36.14	276	359886m	412.83		
48)	Fluoranthene	28.12	202	92853m	80.66		
49)	Pyrene	28.90	202	639803m	506.25		
50)	C1-Fluoranthenes/Pyrenes	30.41	216	2606972m	2264.69	ng/mL	
51)	C2-Fluoranthenes/Pyrenes	32.16	230	3490858m	3032.53	ng/mL	
52)	C3-Fluoranthenes/Pyrenes	33.39	244	2834421m	2462.28	ng/mL	
54)	Benz(a)anthracene	33.00	228	338217m	288.27		
55)	Chrysene	33.14	228	684544m	700.75		
56)	C1-Chrysenes	34.41	242	2619706m	2681.72	ng/mL	
57)	C2-Chrysenes	35.72	256	2866092m	2933.94	ng/mL	
58)	C3-Chrysenes	37.20	270	1208084m	1236.68	ng/mL	
59)	C4-Chrysenes	40.34	284	37956m	38.85	ng/mL	
61)	C29-Hopane	39.86	191	26503m	64.62	ng/ml	
62)	18a-Oleanane	40.88	191	4996m	12.18	ng/ml	
63)	C30-Hopane	41.09	191	31630m	77.12	ng/ml	
64)	Benzo(b)fluoranthene	36.46	252	135753m	125.72		
65)	Benzo(k)fluoranthene	36.57	252	17485m	16.74		
66)	Benzo(e)pyrene	37.38	252	146108m	134.34		
67)	Benzo(a)pyrene	37.56	252	233396m	252.67		
68)	Indeno(1,2,3-c,d)pyrene	41.89	276	14942m	21.30		
69)	Dibenzo(a,h)anthracene	41.97	278	21789m	33.49		
70)	C1-Dibenzo(a,h)anthracene	0.00	292	0	N.D.	d	
71)	C2-Dibenzo(a,h)anthracene	0.00	306	0	N.D.	d	
72)	C3-Dibenzo(a,h)anthracene	0.00	320	0	N.D.	d	
73)	Benzo(g,h,i)perylene	43.11	276	32574m	41.54		
75)	Perylene	37.84	252	64000m	64.60		

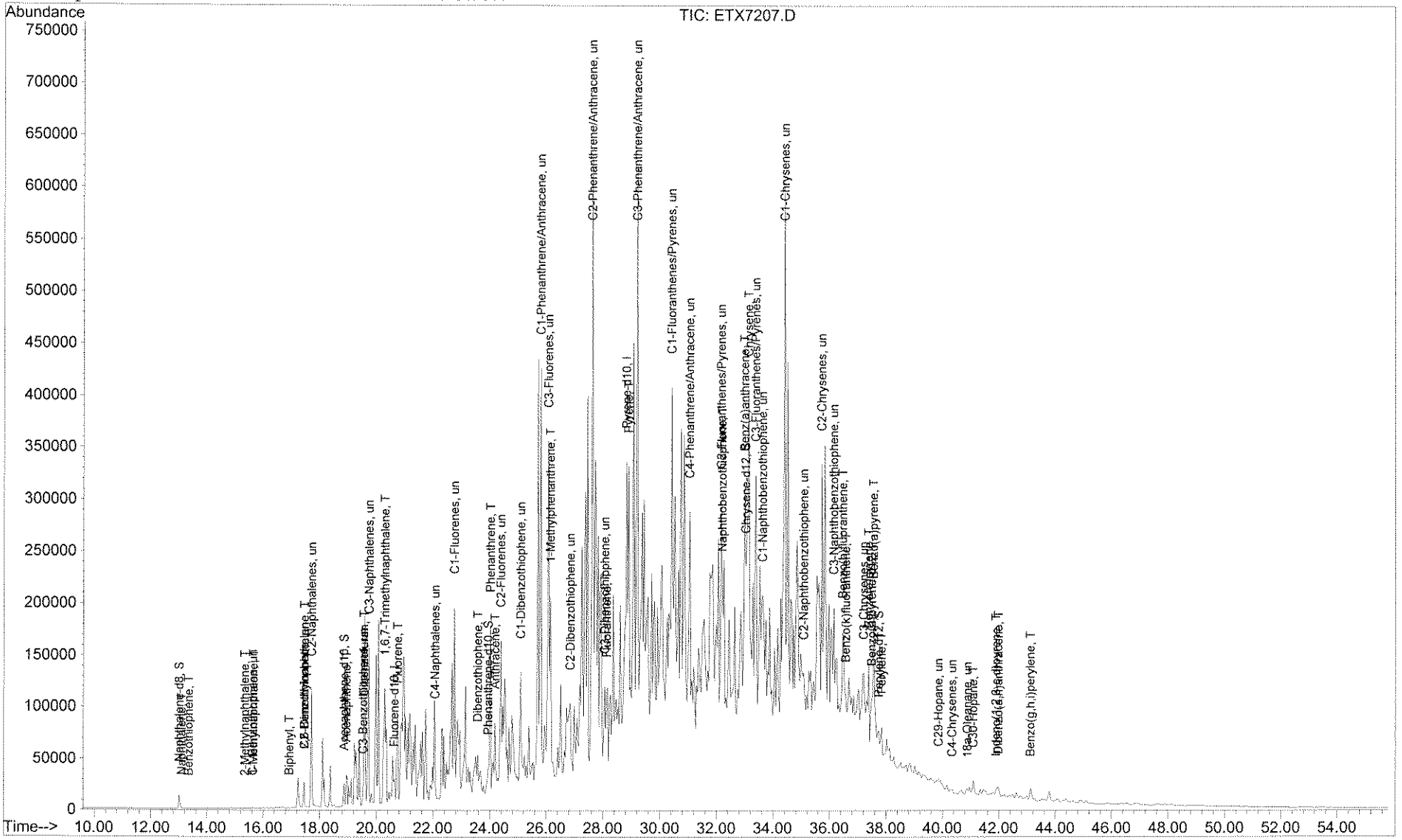
(#) = qualifier out of range (m) = manual integration
ETX7207.D 041507.M Tue May 08 06:53:22 2007

Data File : X:\1\DATA\MS30377\ETX7207.D
Acq On : 13 Apr 2007 6:43 pm
Sample : WIF-02-32707
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 20 16:23 2007

Vial: 5
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.13

Quant Results File: 041507.RES

Method : X:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration



000064

Total Petroleum Hydrocarbons/ Aliphatic Hydrocarbons Initial Calibration Data

ALI ICAL
C10B0414.M

GCFID
(ALI-COMP)

Response Factor Report GC#1

Method : W:\2\METHODS\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Sat Apr 14 11:05:52 2007

Calibration Files
1 =GC10846E.D 2 =GC10846F.D 3 =GC10846G.D
4 =GC10846H.D 5 =GC10846I.D

		Compound	1	2	3	4	5	Avg		%RSD
1)		n-hexadecane-d34	ISTD							
2)		n-C10	1.032	0.996	1.029	1.027	0.996	1.016	0	1.80
3)		n-C11	1.042	1.020	1.055	1.053	1.024	1.039	0	1.56
4)	S	n-dodecane-d26	0.867	0.845	0.878	0.881	0.853	0.865	0	1.80
5)		n-C12	1.068	1.069	1.109	1.106	1.075	1.085	0	1.86
6)		n-C13	1.090	1.106	1.150	1.142	1.109	1.119	0	2.30
7)		n-C14	1.190	1.146	1.184	1.167	1.131	1.164	0	2.14
8)		n-C15	1.170	1.175	1.213	1.197	1.160	1.183	0	1.84
9)		n-C16	1.219	1.187	1.225	1.206	1.166	1.201	0	2.03
10)		5a-androstane	ISTD							
11)		n-C17	0.904	0.915	0.950	0.951	0.923	0.929	0	2.26
12)		Pristane	1.007	0.972	0.996	0.995	0.964	0.987	0	1.83
13)		n-C18	0.906	0.923	0.955	0.957	0.925	0.933	0	2.38
14)		Phytane	1.021	0.976	0.995	0.992	0.961	0.989	0	2.28
15)		n-C19	0.924	0.922	0.951	0.952	0.919	0.934	0	1.76
16)	S	n-eicosane-d42	0.821	0.818	0.851	0.849	0.818	0.832	0	2.04
17)		n-C20	0.898	0.920	0.954	0.951	0.919	0.928	0	2.55
18)		n-C21	0.906	0.939	0.971	0.965	0.931	0.942	0	2.84
19)		n-C22	0.935	0.910	0.942	0.933	0.900	0.924	0	1.96
20)		n-C23	0.891	0.917	0.948	0.937	0.899	0.918	0	2.62
21)		n-C24	0.911	0.907	0.936	0.924	0.885	0.912	0	2.11
22)		n-C25	0.924	0.906	0.924	0.907	0.867	0.906	0	2.56
23)		n-C26	0.916	0.909	0.927	0.905	0.863	0.904	0	2.71
24)		n-C27	0.906	0.886	0.895	0.870	0.828	0.877	0	3.48
25)		n-C28	0.886	0.876	0.879	0.851	0.804	0.859	0	3.90
26)		n-C29	0.940	0.886	0.881	0.849	0.799	0.871	0	5.97
27)	S	n-triacontane-d62	0.768	0.740	0.739	0.711	0.661	0.724	0	5.63
28)		n-C30	0.874	0.855	0.842	0.806	0.757	0.827	0	5.59
29)		n-C31	0.849	0.836	0.820	0.780	0.728	0.803	0	6.10
30)		n-C32	0.815	0.812	0.787	0.745	0.691	0.770	0	6.82
31)		n-C33	0.772	0.808	0.767	0.720	0.666	0.747	0	7.33
32)		n-C34	0.780	0.785	0.748	0.697	0.642	0.730	0	8.26
33)		TPH	0.859	0.856	0.867	0.853	0.816	0.850	0	2.32
34)		TRH1	0.859	0.856	0.867	0.853	0.816	0.850	0	2.32
35)		TRH2	0.859	0.856	0.867	0.853	0.816	0.850	0	2.32
36)		TRH3	0.859	0.856	0.867	0.853	0.816	0.850	0	2.32
37)		TRH4	0.859	0.856	0.867	0.853	0.816	0.850	0	2.32
38)		TRH5	0.859	0.856	0.867	0.853	0.816	0.850	0	2.32
39)		TRH6	0.859	0.856	0.867	0.853	0.816	0.850	0	2.32

(#) = Out of Range

000067

Quantitation Report (QT Reviewed)

Data File : W:\2\DATA\GC10846\GC10846E.D Vial: 96
Acq On : 13 Apr 2007 1:35 pm Operator: TJM
Sample : CS1 Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 9:26 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Thu Apr 12 09:52:10 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc Units
		Internal Standards			
1)		n-hexadecane-d34	12.85	344970	20.001 ug/mlm
10)		5a-androstane	18.03	465681	20.003 ug/mlm
		System Monitoring Compounds			
4)	S	n-dodecane-d26	8.62	18711	1.318 ug/mlm
16)	S	n-eicosane-d42	17.43	23888	1.207 ug/mlm
27)	S	n-triacontane-d62	29.21f	22392	1.156 ug/mlm
		Target Compounds			
2)		n-C10	6.26	22172	1.350 ug/mlm
3)		n-C11	7.59	22417	1.325 ug/mlm
5)		n-C12	8.83	22972	1.286 ug/mlm
6)		n-C13	9.98	23397	1.257 ug/mlm
7)		n-C14	11.06	25674	1.325 ug/mlm
8)		n-C15	12.08	25117	1.244 ug/mlm
9)		n-C16	13.10	26268	1.268 ug/mlm
11)		n-C17	14.18	26313	1.228 ug/mlm
12)		Pristane	14.30f	29330	1.286 ug/mlm
13)		n-C18	15.34	26427	1.212 ug/mlm
14)		Phytane	15.50	29276	1.268 ug/mlm
15)		n-C19	16.56f	26944	1.221 ug/mlm
17)		n-C20	17.82f	26181	1.177 ug/mlm
18)		n-C21	19.10	26351	1.148 ug/mlm
19)		n-C22	20.39	26737	1.191 ug/mlm
20)		n-C23	21.66	25945	1.134 ug/mlm
21)		n-C24	22.91	26559	1.161 ug/mlm
22)		n-C25	24.14	26963	1.182 ug/mlm
23)		n-C26	25.33f	26515	1.145 ug/mlm
24)		n-C27	26.48	26121	1.153 ug/mlm
25)		n-C28	27.60	25760	1.142 ug/mlm
26)		n-C29	28.69	27376	1.192 ug/mlm
28)		n-C30	29.74f	25478	1.149 ug/mlm
29)		n-C31	30.76f	24723	1.134 ug/mlm
30)		n-C32	31.75	23381	1.109 ug/mlm
31)		n-C33	32.74	22445	1.092 ug/mlm
32)		n-C34	33.87f	22623	1.115 ug/mlm

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

000008

Quantitation Report (QT Reviewed)

Data File : W:\2\DATA\GC10846\GC10846E.D Vial: 96
Acq On : 13 Apr 2007 1:35 pm Operator: TJM
Sample : CS1 Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 9:26 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Thu Apr 12 09:52:10 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units

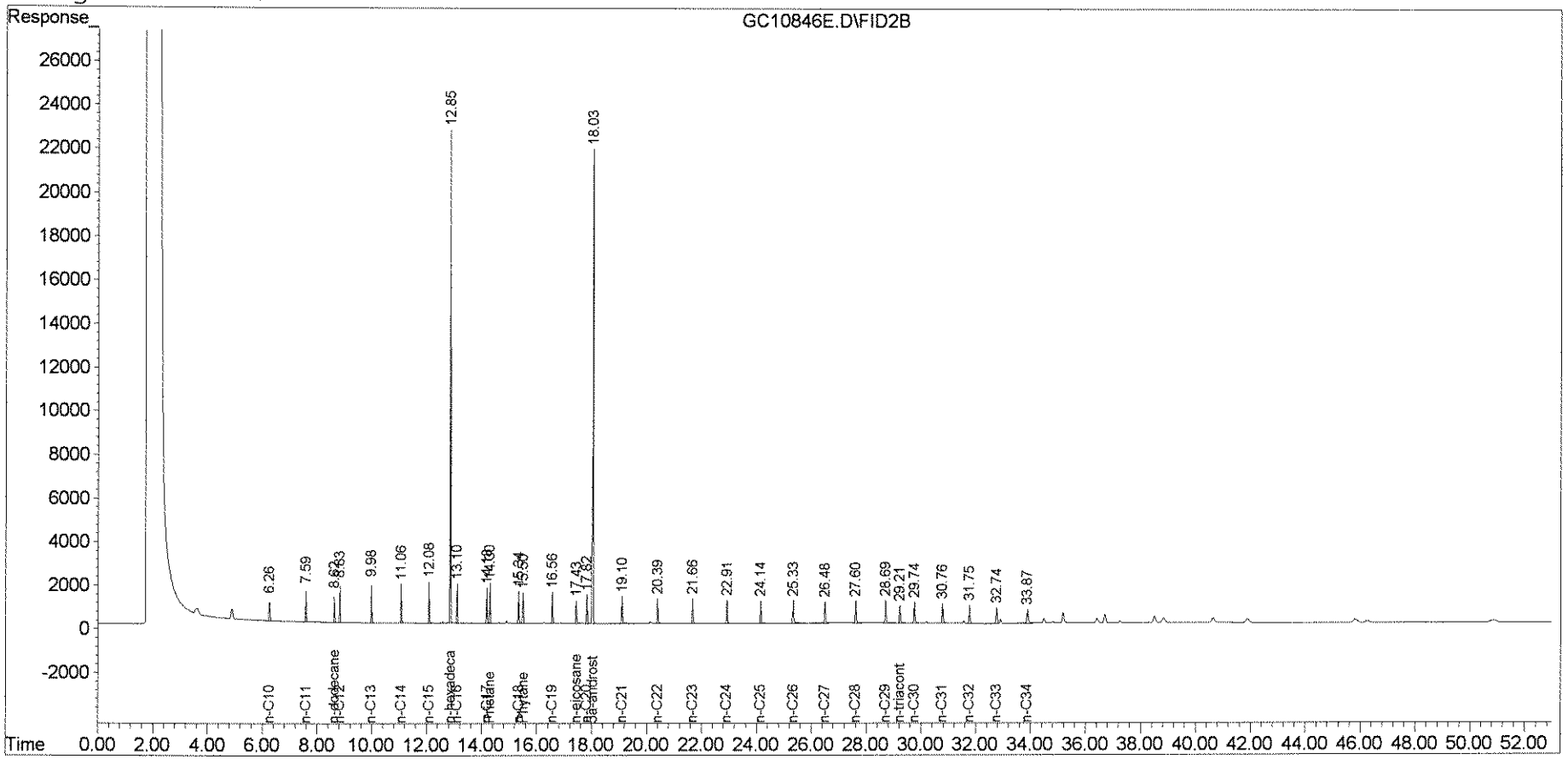
(f)=RT Delta > 1/2 Window (m)=manual integ

Quantitation Report

Data File : W:\2\DATA\GC10846\GC10846E.D Vial: 96
Acq On : 13 Apr 2007 1:35 pm Operator: TJM
Sample : CS1 Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 9:26 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Thu Apr 12 09:52:10 2007
Response via : Multiple Level Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :



070000

Quantitation Report (QT Reviewed)

Data File : W:\2\DATA\GC10846\GC10846F.D Vial: 97
Acq On : 13 Apr 2007 2:36 pm Operator: TJM
Sample : CS2 Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 9:33 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Thu Apr 12 09:52:10 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc	Units
		Internal Standards				
1)		n-hexadecane-d34	12.85	360834	20.001	ug/mlm
10)		5a-androstane	18.03	477652	20.003	ug/mlm
		System Monitoring Compounds				
4)	S	n-dodecane-d26	8.62	152639	10.280	ug/mlm
16)	S	n-eicosane-d42	17.43	195478	9.627	ug/mlm
27)	S	n-triacontane-d62	29.21f	177124	8.915	ug/mlm
		Target Compounds				
2)		n-C10	6.26	179015	10.424	ug/mlm
3)		n-C11	7.58	183624	10.376	ug/mlm
5)		n-C12	8.83	192328	10.297	ug/mlm
6)		n-C13	9.98	198661	10.205	ug/mlm
7)		n-C14	11.06	206908	10.210	ug/mlm
8)		n-C15	12.08	210963	9.992	ug/mlm
9)		n-C16	13.10	213947	9.870	ug/mlm
11)		n-C17	14.19	218486	9.943	ug/mlm
12)		Pristane	14.30	232288	9.933	ug/mlm
13)		n-C18	15.34	220860	9.871	ug/mlm
14)		Phytane	15.50	229648	9.697	ug/mlm
15)		n-C19	16.56	220477	9.741	ug/mlm
17)		n-C20	17.83f	219955	9.643	ug/mlm
18)		n-C21	19.11	224299	9.526	ug/mlm
19)		n-C22	20.40	213351	9.265	ug/mlm
20)		n-C23	21.67	219091	9.333	ug/mlm
21)		n-C24	22.92	216989	9.246	ug/mlm
22)		n-C25	24.14	216899	9.273	ug/mlm
23)		n-C26	25.33	215883	9.093	ug/mlm
24)		n-C27	26.49	209590	9.022	ug/mlm
25)		n-C28	27.61	209021	9.038	ug/mlm
26)		n-C29	28.69	211894	8.996	ug/mlm
28)		n-C30	29.75f	204524	8.996	ug/mlm
29)		n-C31	30.76	199765	8.936	ug/mlm
30)		n-C32	31.75	191369	8.847	ug/mlm
31)		n-C33	32.75	192709	9.144	ug/mlm
32)		n-C34	33.87	186784	8.972	ug/mlm

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

Quantitation Report (QT Reviewed)

Data File : W:\2\DATA\GC10846\GC10846F.D Vial: 97
Acq On : 13 Apr 2007 2:36 pm Operator: TJM
Sample : CS2 Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 9:33 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Thu Apr 12 09:52:10 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units

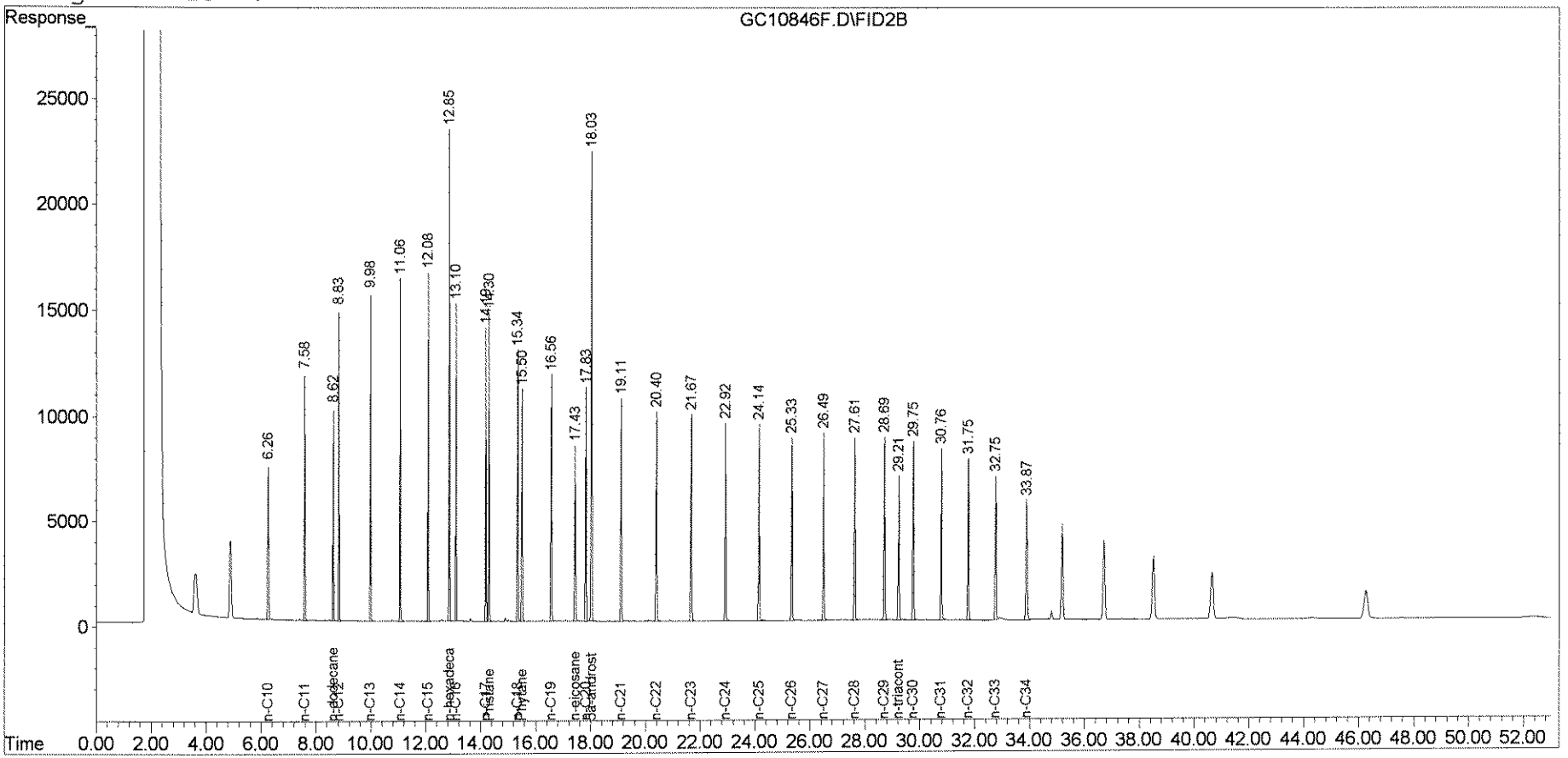
(f)=RT Delta > 1/2 Window (m)=manual int

Quantitation Report

Data File : W:\2\DATA\GC10846\GC10846F.D Vial: 97
Acq On : 13 Apr 2007 2:36 pm Operator: TJM
Sample : CS2 Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 9:33 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Thu Apr 12 09:52:10 2007
Response via : Multiple Level Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :



0000733

Quantitation Report (QT Reviewed)

Data File : W:\2\DATA\GC10846\GC10846G.D Vial: 98
Acq On : 13 Apr 2007 3:37 pm Operator: TJM
Sample : CS3 Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 9:46 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Thu Apr 12 09:52:10 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc Units
		Internal Standards			
1)		n-hexadecane-d34	12.85	379900	20.001 ug/mlm
10)		5a-androstane	18.03	499362	20.003 ug/mlm
		System Monitoring Compounds			
4)	S	n-dodecane-d26	8.62	417507	26.708 ug/mlm
16)	S	n-eicosane-d42	17.44	531251	25.027 ug/mlm
27)	S	n-triacontane-d62	29.23	462301	22.256 ug/mlm
		Target Compounds			
2)		n-C10	6.26	487020	26.936 ug/mlm
3)		n-C11	7.59	499909	26.830 ug/mlm
5)		n-C12	8.83	524931	26.693 ug/mlm
6)		n-C13	9.99	543956	26.540 ug/mlm
7)		n-C14	11.07	562896	26.383 ug/mlm
8)		n-C15	12.09	573692	25.808 ug/mlm
9)		n-C16	13.11	581309	25.471 ug/mlm
11)		n-C17	14.19	593087	25.817 ug/mlm
12)		Pristane	14.31	622148	25.448 ug/mlm
13)		n-C18	15.35	597649	25.550 ug/mlm
14)		Phytane	15.51	612089	24.723 ug/mlm
15)		n-C19	16.57	594679	25.131 ug/mlm
17)		n-C20	17.84	596383	25.009 ug/mlm
18)		n-C21	19.12	606173	24.624 ug/mlm
19)		n-C22	20.41	577229	23.977 ug/mlm
20)		n-C23	21.68	591849	24.117 ug/mlm
21)		n-C24	22.93	585159	23.850 ug/mlm
22)		n-C25	24.16	578573	23.660 ug/mlm
23)		n-C26	25.35	575451	23.183 ug/mlm
24)		n-C27	26.50	553151	22.775 ug/mlm
25)		n-C28	27.62	547903	22.660 ug/mlm
26)		n-C29	28.71	550574	22.359 ug/mlm
28)		n-C30	29.76	526543	22.153 ug/mlm
29)		n-C31	30.78	511919	21.905 ug/mlm
30)		n-C32	31.77	484744	21.436 ug/mlm
31)		n-C33	32.76	477901	21.691 ug/mlm
32)		n-C34	33.89	465282	21.378 ug/mlm

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

000074

Quantitation Report (QT Reviewed)

Data File : W:\2\DATA\GC10846\GC10846G.D Vial: 98
Acq On : 13 Apr 2007 3:37 pm Operator: TJM
Sample : CS3 Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 9:46 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Thu Apr 12 09:52:10 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc Units

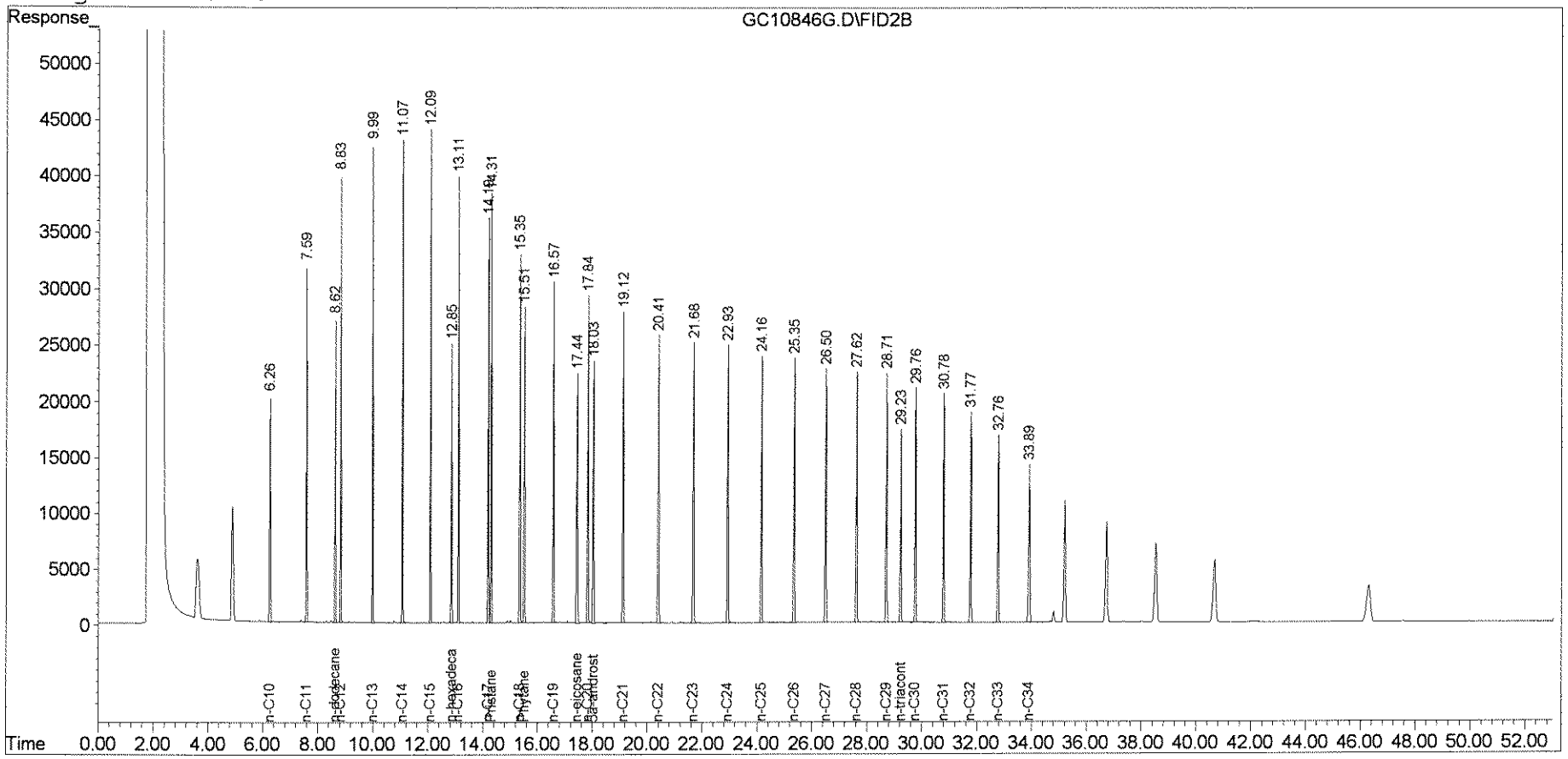
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : W:\2\DATA\GC10846\GC10846G.D Vial: 98
Acq On : 13 Apr 2007 3:37 pm Operator: TJM
Sample : CS3 Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 9:46 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Thu Apr 12 09:52:10 2007
Response via : Multiple Level Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :



920000

Quantitation Report (QT Reviewed)

Data File : W:\2\DATA\GC10846\GC10846H.D Vial: 99
Acq On : 13 Apr 2007 4:37 pm Operator: TJM
Sample : CS4 Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 10:10 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Thu Apr 12 09:52:10 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc Units
		Internal Standards			
1)		n-hexadecane-d34	12.86	391299	20.001 ug/mlm
10)		5a-androstane	18.04	503511	20.003 ug/mlm
		System Monitoring Compounds			
4)	S	n-dodecane-d26	8.63	689809	42.842 ug/mlm
16)	S	n-eicosane-d42	17.45	855492	39.970 ug/mlm
27)	S	n-triacontane-d62	29.24	717157	34.241 ug/mlm
		Target Compounds			
2)		n-C10	6.26	801196	43.021 ug/mlm
3)		n-C11	7.59	822509	42.859 ug/mlm
5)		n-C12	8.83	863068	42.609 ug/mlm
6)		n-C13	9.99	890194	42.168 ug/mlm
7)		n-C14	11.07	913843	41.584 ug/mlm
8)		n-C15	12.09	932506	40.728 ug/mlm
9)		n-C16	13.11	942836	40.109 ug/mlm
11)		n-C17	14.20	957039	41.317 ug/mlm
12)		Pristane	14.32	1002629	40.673 ug/mlm
13)		n-C18	15.36	965746	40.947 ug/mlm
14)		Phytane	15.52	984193	39.425 ug/mlm
15)		n-C19	16.58	959630	40.219 ug/mlm
17)		n-C20	17.85	958468	39.862 ug/mlm
18)		n-C21	19.13	972068	39.162 ug/mlm
19)		n-C22	20.42	922591	38.007 ug/mlm
20)		n-C23	21.69	943884	38.144 ug/mlm
21)		n-C24	22.94	931570	37.655 ug/mlm
22)		n-C25	24.17	915988	37.149 ug/mlm
23)		n-C26	25.36	906489	36.219 ug/mlm
24)		n-C27	26.51	867199	35.411 ug/mlm
25)		n-C28	27.63	855537	35.092 ug/mlm
26)		n-C29	28.72	855268	34.447 ug/mlm
28)		n-C30	29.77	813083	33.926 ug/mlm
29)		n-C31	30.79	785771	33.346 ug/mlm
30)		n-C32	31.78	739603	32.436 ug/mlm
31)		n-C33	32.77	723681	32.577 ug/mlm
32)		n-C34	33.90	699899	31.892 ug/mlm

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

000077

Quantitation Report (QT Reviewed)

Data File : W:\2\DATA\GC10846\GC10846H.D Vial: 99
Acq On : 13 Apr 2007 4:37 pm Operator: TJM
Sample : CS4 Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 10:10 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Thu Apr 12 09:52:10 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units

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

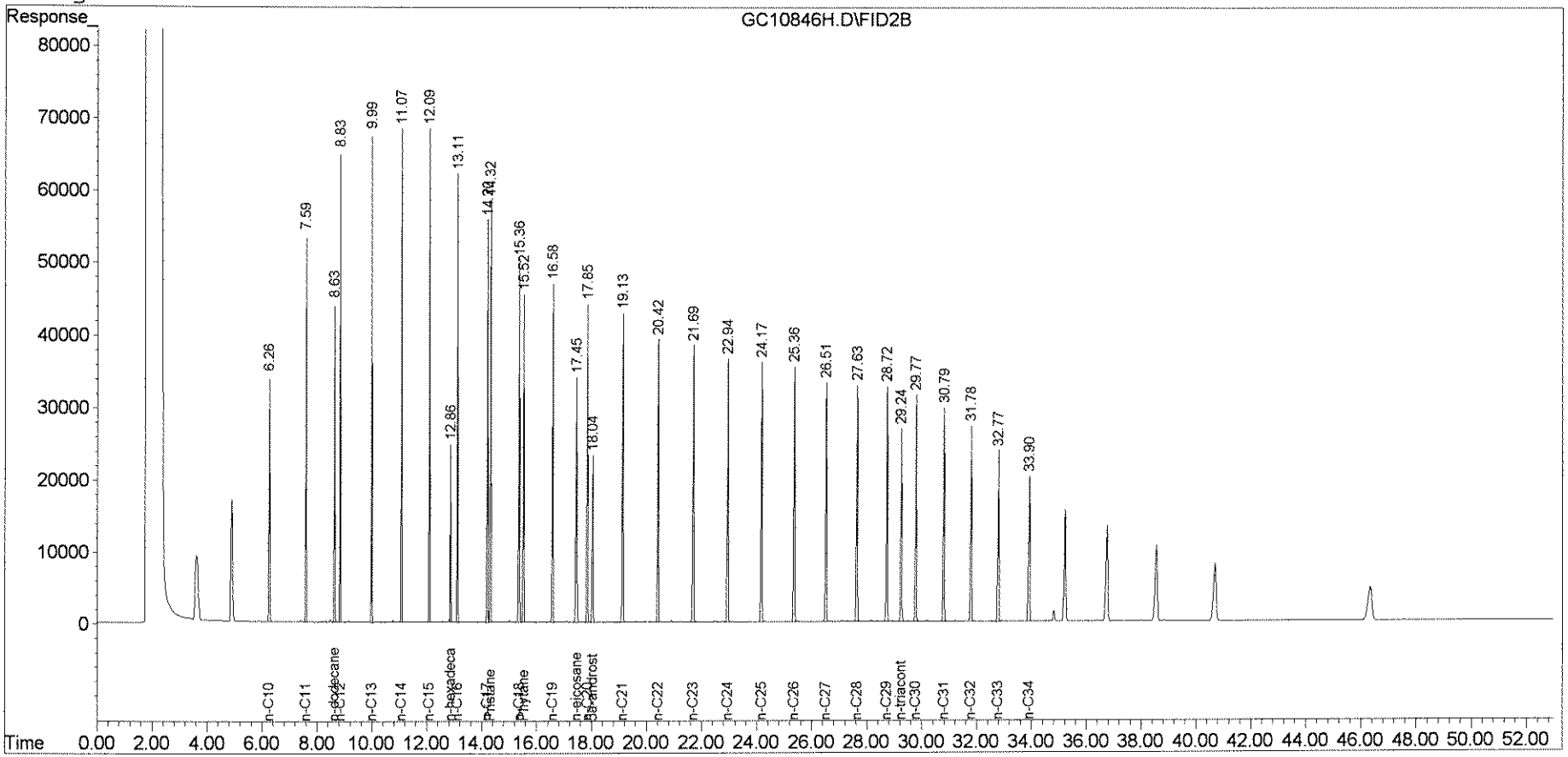
000078

Quantitation Report

Data File : W:\2\DATA\GC10846\GC10846H.D Vial: 99
Acq On : 13 Apr 2007 4:37 pm Operator: TJM
Sample : CS4 Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 10:10 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Thu Apr 12 09:52:10 2007
Response via : Multiple Level Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :



620000

Quantitation Report (QT Reviewed)

Data File : W:\2\DATA\GC10846\GC10846I.D Vial: 100
Acq On : 13 Apr 2007 5:38 pm Operator: TJM
Sample : CS5 Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 10:28 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Thu Apr 12 09:52:10 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

		Compound	R.T.	Response	Conc Units
		Internal Standards			
1)		n-hexadecane-d34	12.86	399244	20.001 ug/mlm
10)		5a-androstane	18.04	511077	20.003 ug/mlm
		System Monitoring Compounds			
4)	S	n-dodecane-d26	8.63	851887	51.855 ug/mlm
16)	S	n-eicosane-d42	17.45	1045910	48.143 ug/mlm
27)	S	n-triacontane-d62	29.24	845659	39.778 ug/mlm
		Target Compounds			
2)		n-C10	6.26	991150	52.162 ug/mlm
3)		n-C11	7.59	1020023	52.093 ug/mlm
5)		n-C12	8.84	1070387	51.793 ug/mlm
6)		n-C13	9.99	1102577	51.190 ug/mlm
7)		n-C14	11.08	1130250	50.408 ug/mlm
8)		n-C15	12.09	1152862	49.350 ug/mlm
9)		n-C16	13.12	1162863	48.485 ug/mlm
11)		n-C17	14.20	1179039	50.148 ug/ml
12)		Pristane	14.32	1232615	49.263 ug/mlm
13)		n-C18	15.36	1184312	49.470 ug/mlm
14)		Phytane	15.53	1209131	47.718 ug/mlm
15)		n-C19	16.59	1175615	48.542 ug/mlm
17)		n-C20	17.85	1175269	48.155 ug/mlm
18)		n-C21	19.14	1190151	47.239 ug/mlm
19)		n-C22	20.42	1128786	45.813 ug/mlm
20)		n-C23	21.70	1149860	45.780 ug/mlm
21)		n-C24	22.95	1132079	45.083 ug/mlm
22)		n-C25	24.17	1110968	44.390 ug/mlm
23)		n-C26	25.36	1096425	43.160 ug/mlm
24)		n-C27	26.51	1047632	42.146 ug/mlm
25)		n-C28	27.63	1026060	41.463 ug/mlm
26)		n-C29	28.72	1021478	40.532 ug/mlm
28)		n-C30	29.77	968992	39.833 ug/mlm
29)		n-C31	30.79	930890	38.919 ug/mlm
30)		n-C32	31.78	870519	37.613 ug/mlm
31)		n-C33	32.78	850247	37.707 ug/mlm
32)		n-C34	33.91	818059	36.724 ug/mlm

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

Quantitation Report (QT Reviewed)

Data File : W:\2\DATA\GC10846\GC10846I.D Vial: 100
Acq On : 13 Apr 2007 5:38 pm Operator: TJM
Sample : CS5 Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 10:28 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Thu Apr 12 09:52:10 2007
Response via : Initial Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :

Compound	R.T.	Response	Conc	Units

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

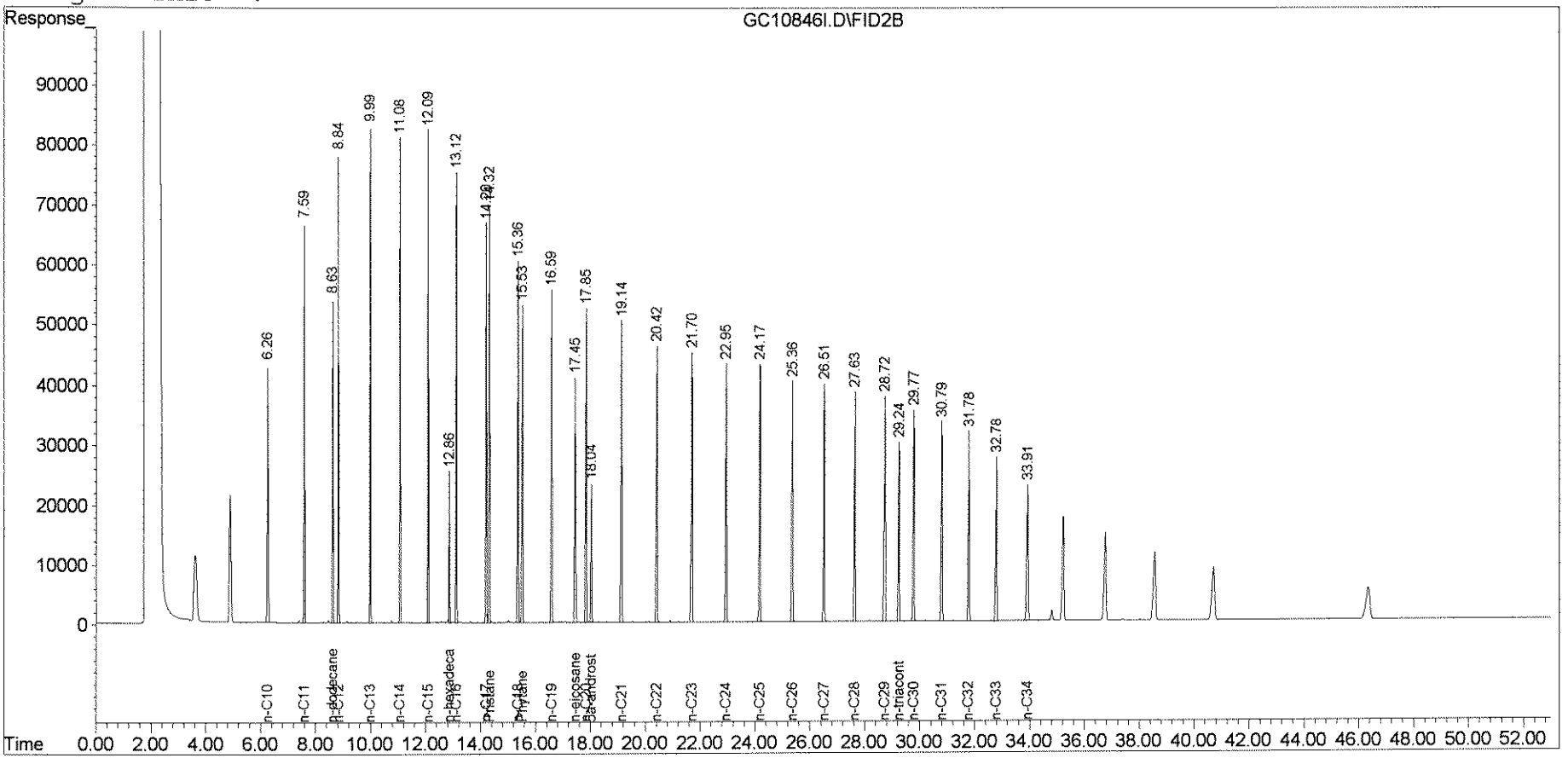
000081

Quantitation Report

Data File : W:\2\DATA\GC10846\GC10846I.D Vial: 100
Acq On : 13 Apr 2007 5:38 pm Operator: TJM
Sample : CS5 Inst : GC#1
Misc : Multiplr: 1.00
IntFile : autoint1.e
Quant Time: Apr 14 10:28 2007 Quant Results File: C10B414.RES

Quant Method : C:\GC10846\C10B414.M (Chemstation Integrator)
Title : C10 - C35 aliphatic
Last Update : Thu Apr 12 09:52:10 2007
Response via : Multiple Level Calibration
DataAcq Meth : ALI_COMP.M

Volume Inj. :
Signal Phase :
Signal Info :



280000

Polycyclic Aromatic Hydrocarbon
Initial Calibration Data

PAH ICAL
041507.M

GC/MS 3
(PAH 2002)

Response Factor Report GC/MS Ins

Method : G:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration

Calibration Files
1 =MS30377D.D 2 =MS30377E.D 3 =MS30377F.D
4 =MS30377G.D 5 =MS30377H.D

		Compound	1	2	3	4	5	Avg	%RSD
1)	I	Fluorene-d10	ISTD						
2)	S	Naphthalene-d8	1.755	2.074	1.876	1.878	1.972	1.911	6.24
3)	T	Decalin	0.438	0.430	0.385	0.377	0.389	0.404	6.95
4)	un	C1-Decalin	0.438	0.430	0.385	0.377	0.389	0.404	6.95
5)	un	C2-Decalin	0.438	0.430	0.385	0.377	0.389	0.404	6.95
6)	un	C3-Decalin	0.438	0.430	0.385	0.377	0.389	0.404	6.95
7)	un	C4-Decalin	0.438	0.430	0.385	0.377	0.389	0.404	6.95
8)	T	Naphthalene	1.902	2.277	2.046	2.040	2.171	2.087	6.82
9)	T	2-Methylnaphthalene	1.198	1.467	1.328	1.352	1.479	1.365	8.43
10)	T	1-Methylnaphthalene	1.160	1.410	1.171	1.271	1.301	1.263	8.14
11)	T	2,6-Dimethylnaphthale	0.942	1.182	1.078	1.130	1.223	1.111	9.80
12)	T	1,6,7-Trimethylnaphth	0.869	1.126	0.870	1.092	1.174	1.026	14.22
13)	un	C2-Naphthalenes	1.902	2.277	2.046	2.040	2.171	2.087	6.82
14)	un	C3-Naphthalenes	1.902	2.277	2.046	2.040	2.171	2.087	6.82
15)	un	C4-Naphthalenes	1.902	2.277	2.046	2.040	2.171	2.087	6.82
16)	T	Benzothiophene	1.625	1.886	1.759	1.743	1.820	1.767	5.49
17)	un	C1-Benzothiophene	1.625	1.886	1.759	1.743	1.820	1.767	5.49
18)	un	C2-Benzothiophene	1.625	1.886	1.759	1.743	1.820	1.767	5.49
19)	un	C3-Benzothiophene	1.625	1.886	1.759	1.743	1.820	1.767	5.49
20)	S	Acenaphthene-d10	0.836	0.981	0.883	0.893	1.012	0.921	7.93
21)	T	Biphenyl	1.482	1.771	1.649	1.657	1.778	1.667	7.23
22)	T	Acenaphthylene	1.829	2.139	1.991	2.006	2.095	2.012	5.94
23)	T	Acenaphthene	1.010	1.225	1.132	1.152	1.187	1.141	7.14
24)	T	Dibenzofuran	1.504	1.988	1.799	1.924	2.032	1.850	11.46
25)	T	Fluorene	1.141	1.381	1.306	1.335	1.478	1.328	9.28
26)	un	C1-Fluorenes	1.141	1.381	1.306	1.335	1.478	1.328	9.28
27)	un	C2-Fluorenes	1.141	1.381	1.306	1.335	1.478	1.328	9.28
28)	un	C3-Fluorenes	1.141	1.381	1.306	1.335	1.478	1.328	9.28
29)	I	Pyrene-d10	ISTD						
30)	S	Phenanthrene-d10	0.811	0.824	0.835	0.882	0.891	0.849	4.21
31)	T	Pentachlorophenol	0.048	0.040	0.040	0.043	0.049	0.044	10.23
32)	T	Carbazole	0.882	0.917	0.974	1.022	1.146	0.988	10.44
33)	T	Dibenzothiophene	1.058	0.994	1.026	1.026	1.153	1.051	5.83
34)	un	C1-Dibenzothiophene	1.058	0.994	1.026	1.026	1.153	1.051	5.83
35)	un	C2-Dibenzothiophene	1.058	0.994	1.026	1.026	1.153	1.051	5.83
36)	un	C3-Dibenzothiophene	1.058	0.994	1.026	1.026	1.153	1.051	5.83
37)	T	Phenanthrene	0.987	0.949	0.947	1.009	1.139	1.006	7.81
38)	T	Anthracene	0.967	1.048	1.087	1.181	1.297	1.116	11.40
39)	T	1-Methylphenanthrene	0.783	0.802	0.820	0.888	1.000	0.859	10.29
40)	un	C1-Phenanthrene/Anthr	0.987	0.949	0.947	1.009	1.139	1.006	7.81
41)	un	C2-Phenanthrene/Anthr	0.987	0.949	0.947	1.009	1.139	1.006	7.81
42)	un	C3-Phenanthrene/Anthr	0.987	0.949	0.947	1.009	1.139	1.006	7.81

(#) = Out of Range

Method : G:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration

Calibration Files
1 =MS30377D.D 2 =MS30377E.D 3 =MS30377F.D
4 =MS30377G.D 5 =MS30377H.D

		Compound	1	2	3	4	5	Avg	%RSD
43)	un	C4-Phenanthrene/Anthr	0.987	0.949	0.947	1.009	1.139	1.006	7.81
44)	T	Naphthobenzothiophene	0.931	0.928	0.921	1.042	1.096	0.983	8.17
45)	un	C1-Naphthobenzothioph	0.931	0.928	0.921	1.042	1.096	0.983	8.17
46)	un	C2-Naphthobenzothioph	0.931	0.928	0.921	1.042	1.096	0.983	8.17
47)	un	C3-Naphthobenzothioph	0.931	0.928	0.921	1.042	1.096	0.983	8.17
48)	T	Fluoranthene	1.165	1.274	1.285	1.386	1.384	1.299	7.07
49)	T	Pyrene	1.304	1.350	1.381	1.506	1.588	1.426	8.24
50)	un	C1-Fluoranthenes/Pyre	1.165	1.274	1.285	1.386	1.384	1.299	7.07
51)	un	C2-Fluoranthenes/Pyre	1.165	1.274	1.285	1.386	1.384	1.299	7.07
52)	un	C3-Fluoranthenes/Pyre	1.165	1.274	1.285	1.386	1.384	1.299	7.07
53)	S	Chrysene-d12	1.011	1.062	1.094	1.258	1.311	1.147	11.35
54)	T	Benz(a)anthracene	1.122	1.224	1.309	1.405	1.559	1.324	12.67
55)	T	Chrysene	0.952	1.065	1.112	1.206	1.176	1.102	9.11
56)	un	C1-Chrysenes	0.952	1.065	1.112	1.206	1.176	1.102	9.11
57)	un	C2-Chrysenes	0.952	1.065	1.112	1.206	1.176	1.102	9.11
58)	un	C3-Chrysenes	0.952	1.065	1.112	1.206	1.176	1.102	9.11
59)	un	C4-Chrysenes	0.952	1.065	1.112	1.206	1.176	1.102	9.11
60)	I	Benzo(a)pyrene-d12	----------ISTD----------						
61)	un	C29-Hopane	0.760	0.646	0.641	0.676	0.671	0.679	7.03
62)	un	18a-Oleanane	0.760	0.646	0.641	0.676	0.671	0.679	7.03
63)	T	C30-Hopane	0.760	0.646	0.641	0.676	0.671	0.679	7.03
64)	T	Benzo(b)fluoranthene	1.722	1.642	1.717	1.904	1.951	1.787	7.45
65)	T	Benzo(k)fluoranthene	1.633	1.648	1.747	1.843	1.775	1.729	5.11
66)	T	Benzo(e)pyrene	1.765	1.700	1.806	1.899	1.830	1.800	4.11
67)	T	Benzo(a)pyrene	1.384	1.390	1.496	1.688	1.686	1.529	9.89
68)	T	Indeno(1,2,3-c,d)pyre	1.066	1.057	1.076	1.252	1.354	1.161	11.59
69)	T	Dibenzo(a,h)anthracen	0.967	0.958	1.026	1.183	1.251	1.077	12.33
70)	un	C1-Dibenzo(a,h)anthra	0.967	0.958	1.026	1.183	1.251	1.077	12.33
71)	un	C2-Dibenzo(a,h)anthra	0.967	0.958	1.026	1.183	1.251	1.077	12.33
72)	un	C3-Dibenzo(a,h)anthra	0.967	0.958	1.026	1.183	1.251	1.077	12.33
73)	T	Benzo(g,h,i)perylene	1.162	1.166	1.262	1.408	1.492	1.298	11.36
74)	S	Perylene-d12	0.762	0.779	0.782	0.859	0.932	0.823	8.72
75)	T	Perylene	1.516	1.555	1.588	1.751	1.788	1.640	7.44

(#) = Out of Range

Quantitation Report (QT Reviewed)

Data File : G:\1\DATA\MS30377\MS30377D.D Vial: 41
Acq On : 13 Apr 2007 12:25 pm Operator: TJM
Sample : Cal Level 1 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 14 20:04 19107 Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 07 22:34:26 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) Fluorene-d10	20.63	176	3075m	51.08 ng/ml	0.03
29) Pyrene-d10	28.79	212	5317m	49.98	0.03
60) Benzo(a)pyrene-d12	37.42	264	2876m	45.61	0.03
System Monitoring Compounds					
2) Naphthalene-d8	13.01	136	2113m	18.67	0.03
20) Acenaphthene-d10	18.83	164	1006m	18.36	0.03
30) Phenanthrene-d10	23.91	188	1726	18.23	0.03
53) Chrysene-d12	33.00	240	2151	17.68	0.03
74) Perylene-d12	37.70	264	961	18.78	0.03
Target Compounds					Qvalue
3) Decalin	10.37	138	528m	21.35 ng/ml	
4) C1-Decalin	0.00	152	0	N.D. d	
5) C2-Decalin	0.00	166	0	N.D. d	
6) C3-Decalin	0.00	180	0	N.D. d	
7) C4-Decalin	0.00	194	0	N.D. d	
8) Naphthalene	13.10	128	2295m	17.70	
9) 2-Methylnaphthalene	15.35	142	1446m	18.42	
10) 1-Methylnaphthalene	15.66	142	1399m	18.18	
11) 2,6-Dimethylnaphthalene	17.46	156	1137m	18.29	
12) 1,6,7-Trimethylnaphthalene	20.30	170	1048m	18.10	
13) C2-Naphthalenes	0.00	156	0	N.D. d	
14) C3-Naphthalenes	0.00	170	0	N.D. d	
15) C4-Naphthalenes	0.00	184	0	N.D. d	
16) Benzothiophene	13.24	134	1961m	18.79 ng/ml	
17) C1-Benzothiophene	0.00	148	0	N.D. d	
18) C2-Benzothiophene	0.00	162	0	N.D. d	
19) C3-Benzothiophene	0.00	176	0	N.D. d	
21) Biphenyl	16.92	154	1787m	19.94	
22) Acenaphthylene	18.36	152	2206m	18.96	
23) Acenaphthene	18.95	154	1217m	17.19	
24) Dibenzofuran	19.57	168	1814m	18.09 ng/ml	
25) Fluorene	20.72	166	1377m	17.58	
26) C1-Fluorenes	0.00	180	0	N.D. d	
27) C2-Fluorenes	0.00	194	0	N.D. d	
28) C3-Fluorenes	0.00	208	0	N.D. d	
31) Pentachlorophenol	23.34	266	103m	25.57 ng/ml	
32) Carbazole	24.79	167	1878m	16.62 ng/ml	
33) Dibenzothiophene	23.57	184	2254	16.91	
34) C1-Dibenzothiophene	0.00	198	0	N.D. d	

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\1\DATA\MS30377\MS30377D.D
Acq On : 13 Apr 2007 12:25 pm
Sample : Cal Level 1
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 14 20:04 19107

Vial: 41
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 07 22:34:26 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
35)	C2-Dibenzothiophene	0.00	212	0	N.D.	d	
36)	C3-Dibenzothiophene	0.00	226	0	N.D.	d	
37)	Phenanthrene	24.01	178	2104	16.41		
38)	Anthracene	24.18	178	2060	14.75		
39)	1-Methylphenanthrene	26.13	192	1670	15.26		
40)	C1-Phenanthrene/Anthracene	0.00	192	0	N.D.	d	
41)	C2-Phenanthrene/Anthracene	0.00	206	0	N.D.	d	
42)	C3-Phenanthrene/Anthracene	0.00	220	0	N.D.	d	
43)	C4-Phenanthrene/Anthracene	0.00	234	0	N.D.	d	
44)	Naphthobenzothiophene	32.16	234	1983	16.19		
45)	C1-Naphthobenzothiophene	0.00	248	0	N.D.	d	
46)	C2-Naphthobenzothiophene	0.00	262	0	N.D.	d	
47)	C3-Naphthobenzothiophene	0.00	276	0	N.D.	d	
48)	Fluoranthene	28.09	202	2484	18.21		
49)	Pyrene	28.86	202	2781	16.30		
50)	C1-Fluoranthenes/Pyrenes	0.00	216	0	N.D.	d	
51)	C2-Fluoranthenes/Pyrenes	0.00	230	0	N.D.	d	
52)	C3-Fluoranthenes/Pyrenes	0.00	244	0	N.D.	d	
54)	Benz(a)anthracene	32.96	228	2393	17.18		
55)	Chrysene	33.07	228	2030	17.28		
56)	C1-Chrysenes	0.00	242	0	N.D.	d	
57)	C2-Chrysenes	0.00	256	0	N.D.	d	
58)	C3-Chrysenes	0.00	270	0	N.D.	d	
59)	C4-Chrysenes	0.00	284	0	N.D.	d	
61)	C29-Hopane	0.00	191	0	N.D.	d	
62)	18a-Oleanane	0.00	191	0	N.D.	d	
63)	C30-Hopane	41.74	191	958	21.92	ng/ml	
64)	Benzo(b)fluoranthene	36.43	252	2174	19.50		
65)	Benzo(k)fluoranthene	36.50	252	2064	22.00		
66)	Benzo(e)pyrene	37.31	252	2232	21.36		
67)	Benzo(a)pyrene	37.49	252	1748	19.12		
68)	Indeno(1,2,3-c,d)pyrene	41.84	276	1347m	19.08		
69)	Dibenzo(a,h)anthracene	41.95	278	1221m	18.44		
70)	C1-Dibenzo(a,h)anthracene	0.00	292	0	N.D.	d	
71)	C2-Dibenzo(a,h)anthracene	0.00	306	0	N.D.	d	
72)	C3-Dibenzo(a,h)anthracene	0.00	320	0	N.D.	d	
73)	Benzo(g,h,i)perylene	43.06	276	1468	18.31		
75)	Perylene	37.77	252	1916	19.43		

(#) = qualifier out of range (m) = manual integration

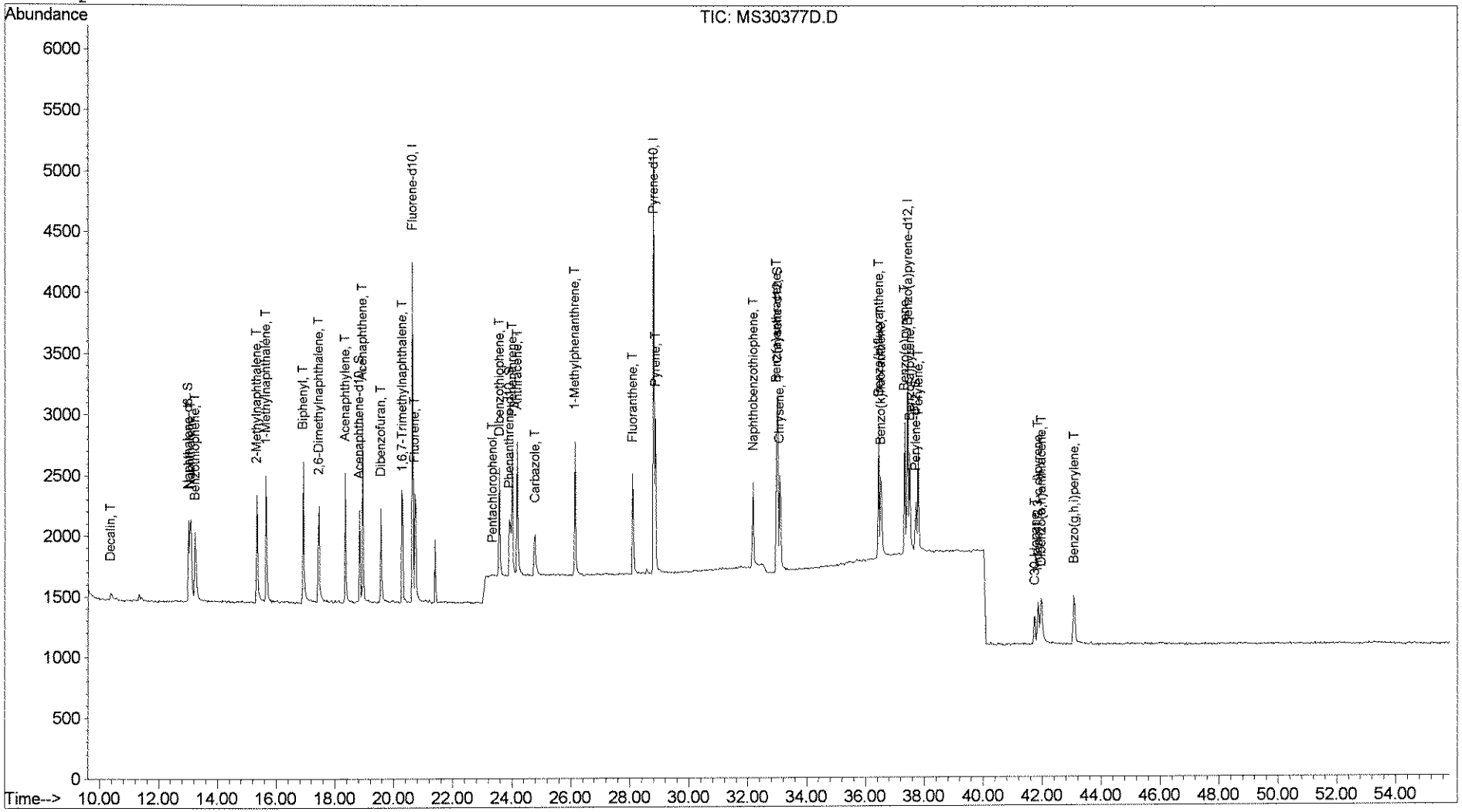
Quantitation Report

Data File : G:\1\DATA\MS30377\MS30377D.D
Acq On : 13 Apr 2007 12:25 pm
Sample : Cal Level 1
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 14 20:04 19107

Vial: 41
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 041507.RES

Method : G:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration



680000

Quantitation Report (QT Reviewed)

Data File : G:\1\DATA\MS30377\MS30377E.D Vial: 42
Acq On : 13 Apr 2007 1:28 pm Operator: TJM
Sample : Cal Level 2 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 14 19:58 19107 Quant Results File: 041507.RES

Quant Method : G:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 07 22:34:26 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorene-d10	20.63	176	2292m	51.08	ng/ml	0.02
29) Pyrene-d10	28.80	212	4817m	49.98		0.03
60) Benzo(a)pyrene-d12	37.42	264	2747m	45.61		0.04
System Monitoring Compounds						
2) Naphthalene-d8	13.01	136	9306m	110.32		0.02
20) Acenaphthene-d10	18.86	164	4400m	107.74		0.05
30) Phenanthrene-d10	23.91	188	7941m	92.58		0.03
53) Chrysene-d12	33.00	240	10238m	92.86		0.04
74) Perylene-d12	37.70	264	4693m	96.02		0.04
Target Compounds						Qvalue
3) Decalin	10.39	138	1932m	104.80	ng/ml	
4) C1-Decalin	0.00	152	0	N.D.	d	
5) C2-Decalin	0.00	166	0	N.D.	d	
6) C3-Decalin	0.00	180	0	N.D.	d	
7) C4-Decalin	0.00	194	0	N.D.	d	
8) Naphthalene	13.09	128	10237m	105.92		
9) 2-Methylnaphthalene	15.34	142	6602m	112.81		
10) 1-Methylnaphthalene	15.65	142	6336m	110.44		
11) 2,6-Dimethylnaphthalene	17.45	156	5314m	114.67		
12) 1,6,7-Trimethylnaphthalene	20.29	170	5063m	117.32		
13) C2-Naphthalenes	0.00	156	0	N.D.	d	
14) C3-Naphthalenes	0.00	170	0	N.D.	d	
15) C4-Naphthalenes	0.00	184	0	N.D.	d	
16) Benzothiophene	13.23	134	8480m	109.00	ng/ml	
17) C1-Benzothiophene	0.00	148	0	N.D.	d	
18) C2-Benzothiophene	0.00	162	0	N.D.	d	
19) C3-Benzothiophene	0.00	176	0	N.D.	d	
21) Biphenyl	16.92	154	7963m	119.23		
22) Acenaphthylene	18.35	152	9618m	110.92		
23) Acenaphthene	18.94	154	5503m	104.26		
24) Dibenzofuran	19.56	168	8935m	119.52	ng/ml	
25) Fluorene	20.74	166	6210m	106.34		
26) C1-Fluorenes	0.00	180	0	N.D.	d	
27) C2-Fluorenes	0.00	194	0	N.D.	d	
28) C3-Fluorenes	0.00	208	0	N.D.	d	
31) Pentachlorophenol	23.30	266	382m	104.66	ng/ml	
32) Carbazole	24.75	167	8849m	86.42	ng/ml	
33) Dibenzothiophene	23.57	184	9596m	79.46		
34) C1-Dibenzothiophene	0.00	198	0	N.D.	d	

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\1\DATA\MS30377\MS30377E.D Vial: 42
Acq On : 13 Apr 2007 1:28 pm Operator: TJM
Sample : Cal Level 2 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 14 19:58 19107 Quant Results File: 041507.RES

Quant Method : G:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 07 22:34:26 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
35)	C2-Dibenzothiophene	0.00	212	0	N.D.	d	
36)	C3-Dibenzothiophene	0.00	226	0	N.D.	d	
37)	Phenanthrene	24.01	178	9169m	78.92		
38)	Anthracene	24.18	178	10119m	79.99		
39)	1-Methylphenanthrene	26.13	192	7742m	78.11		
40)	C1-Phenanthrene/Anthracene	0.00	192	0	N.D.	d	
41)	C2-Phenanthrene/Anthracene	0.00	206	0	N.D.	d	
42)	C3-Phenanthrene/Anthracene	0.00	220	0	N.D.	d	
43)	C4-Phenanthrene/Anthracene	0.00	234	0	N.D.	d	
44)	Naphthobenzothiophene	32.16	234	8952m	80.67		
45)	C1-Naphthobenzothiophene	0.00	248	0	N.D.	d	
46)	C2-Naphthobenzothiophene	0.00	262	0	N.D.	d	
47)	C3-Naphthobenzothiophene	0.00	276	0	N.D.	d	
48)	Fluoranthene	28.09	202	12305m	99.57		
49)	Pyrene	28.86	202	13035m	84.34		
50)	C1-Fluoranthenes/Pyrenes	0.00	216	0	N.D.	d	
51)	C2-Fluoranthenes/Pyrenes	0.00	230	0	N.D.	d	
52)	C3-Fluoranthenes/Pyrenes	32.93	244	0	N.D.		
54)	Benz(a)anthracene	32.96	228	11821m	93.68		
55)	Chrysene	33.07	228	10287m	96.67		
56)	C1-Chrysenes	0.00	242	0	N.D.	d	
57)	C2-Chrysenes	0.00	256	0	N.D.	d	
58)	C3-Chrysenes	0.00	270	0	N.D.	d	
59)	C4-Chrysenes	0.00	284	0	N.D.	d	
61)	C29-Hopane	0.00	191	0	N.D.	d	
62)	18a-Oleanane	0.00	191	0	N.D.	d	
63)	C30-Hopane	41.74	191	3892m	93.25	ng/ml	
64)	Benzo(b)fluoranthene	36.43	252	9900m	92.99		
65)	Benzo(k)fluoranthene	36.50	252	9951m	111.04		
66)	Benzo(e)pyrene	37.31	252	10265m	102.83		
67)	Benzo(a)pyrene	37.49	252	8386m	96.02		
68)	Indeno(1,2,3-c,d)pyrene	41.84	276	6381m	94.65		
69)	Dibenzo(a,h)anthracene	41.94	278	5776m	91.35		
70)	C1-Dibenzo(a,h)anthracene	0.00	292	0	N.D.	d	
71)	C2-Dibenzo(a,h)anthracene	0.00	306	0	N.D.	d	
72)	C3-Dibenzo(a,h)anthracene	0.00	320	0	N.D.	d	
73)	Benzo(g,h,i)perylene	43.06	276	7037m	91.89		
75)	Perylene	37.77	252	9381m	99.58		

(#) = qualifier out of range (m) = manual integration

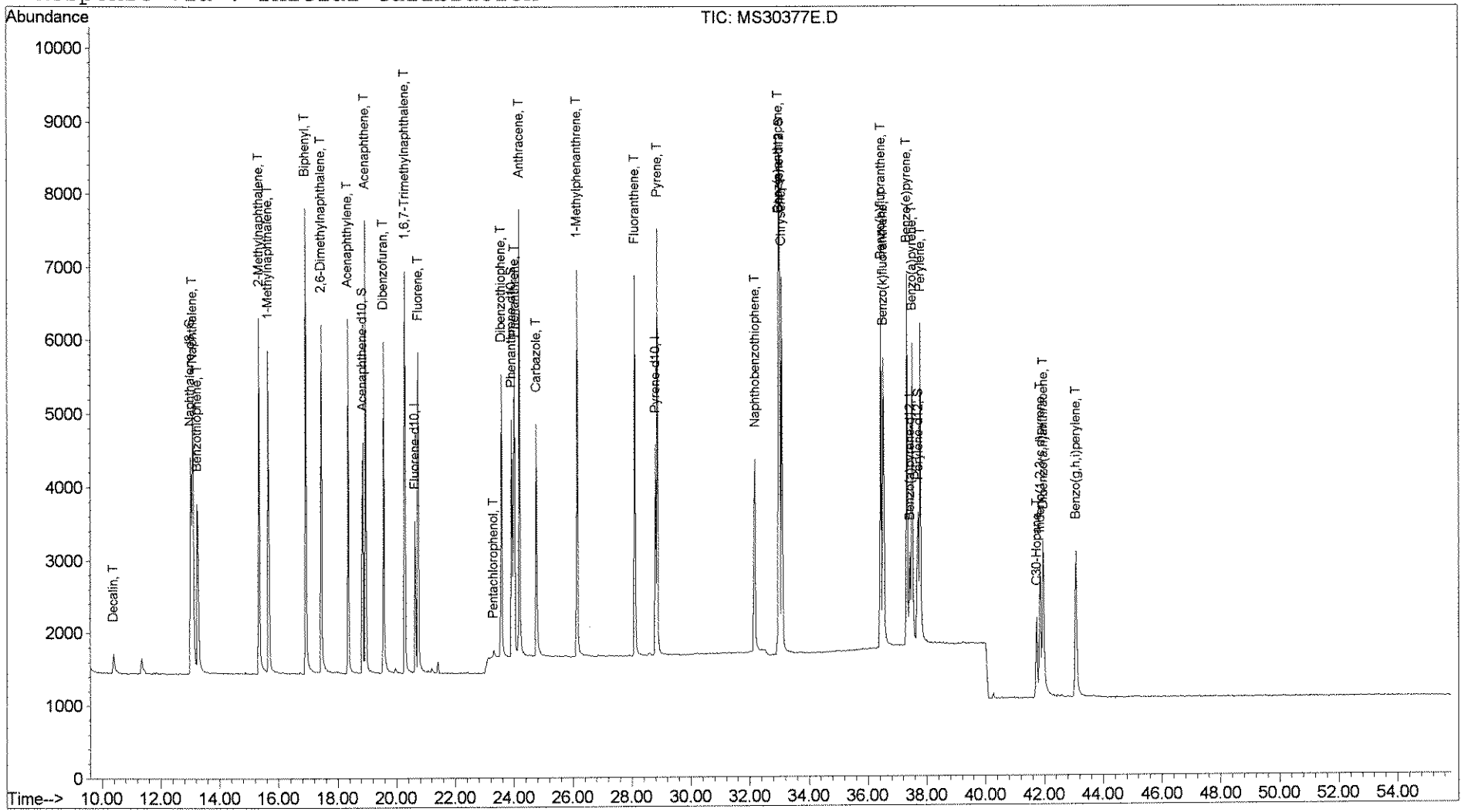
Quantitation Report

Data File : G:\1\DATA\MS30377\MS30377E.D
Acq On : 13 Apr 2007 1:28 pm
Sample : Cal Level 2
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 14 19:58 19107

Vial: 42
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 041507.RES

Method : G:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration



2600092

Quantitation Report (QT Reviewed)

Data File : G:\1\DATA\MS30377\MS30377F.D Vial: 43
Acq On : 13 Apr 2007 2:31 pm Operator: TJM
Sample : Cal Level 3 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 14 19:59 19107 Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 07 22:34:26 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorene-d10	20.63	176	2427m	51.08	ng/ml	0.03
29) Pyrene-d10	28.79	212	4711m	49.98		0.03
60) Benzo(a)pyrene-d12	37.42	264	2749m	45.61		0.04
System Monitoring Compounds						
2) Naphthalene-d8	13.01	136	22285m	249.50		0.03
20) Acenaphthene-d10	18.83	164	10491m	242.61		0.03
30) Phenanthrene-d10	23.91	188	19681	234.60		0.03
53) Chrysene-d12	33.00	240	25782m	239.12		0.04
74) Perylene-d12	37.70	264	11778m	240.80		0.04
Target Compounds						Qvalue
3) Decalin	10.39	138	4577m	234.47	ng/ml	
4) C1-Decalin	0.00	152	0	N.D.	d	
5) C2-Decalin	0.00	166	0	N.D.	d	
6) C3-Decalin	0.00	180	0	N.D.	d	
7) C4-Decalin	0.00	194	0	N.D.	d	
8) Naphthalene	13.09	128	24356m	238.00		
9) 2-Methylnaphthalene	15.34	142	15813m	255.17		
10) 1-Methylnaphthalene	15.65	142	13928m	229.27		
11) 2,6-Dimethylnaphthalene	17.45	156	12835m	261.55		
12) 1,6,7-Trimethylnaphthalene	20.29	170	10355m	226.60		
13) C2-Naphthalenes	0.00	156	0	N.D.	d	
14) C3-Naphthalenes	0.00	170	0	N.D.	d	
15) C4-Naphthalenes	0.00	184	0	N.D.	d	
16) Benzothiophene	13.23	134	20939m	254.18	ng/ml	
17) C1-Benzothiophene	0.00	148	0	N.D.	d	
18) C2-Benzothiophene	0.00	162	0	N.D.	d	
19) C3-Benzothiophene	0.00	176	0	N.D.	d	
21) Biphenyl	16.92	154	19624m	277.49		
22) Acenaphthylene	18.35	152	23701m	258.12		
23) Acenaphthene	18.94	154	13464m	240.89		
24) Dibenzofuran	19.56	168	21406m	270.41	ng/ml	
25) Fluorene	20.74	166	15547m	251.41		
26) C1-Fluorenes	0.00	180	0	N.D.	d	
27) C2-Fluorenes	0.00	194	0	N.D.	d	
28) C3-Fluorenes	0.00	208	0	N.D.	d	
31) Pentachlorophenol	23.30	266	934m	261.65	ng/ml	
32) Carbazole	24.75	167	22976m	229.45	ng/ml	
33) Dibenzothiophene	23.57	184	24212m	204.99		
34) C1-Dibenzothiophene	0.00	198	0	N.D.	d	

(#) = qualifier out of range (m) = manual integration

Data File : G:\1\DATA\MS30377\MS30377F.D Vial: 43
Acq On : 13 Apr 2007 2:31 pm Operator: TJM
Sample : Cal Level 3 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 14 19:59 19107 Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 07 22:34:26 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

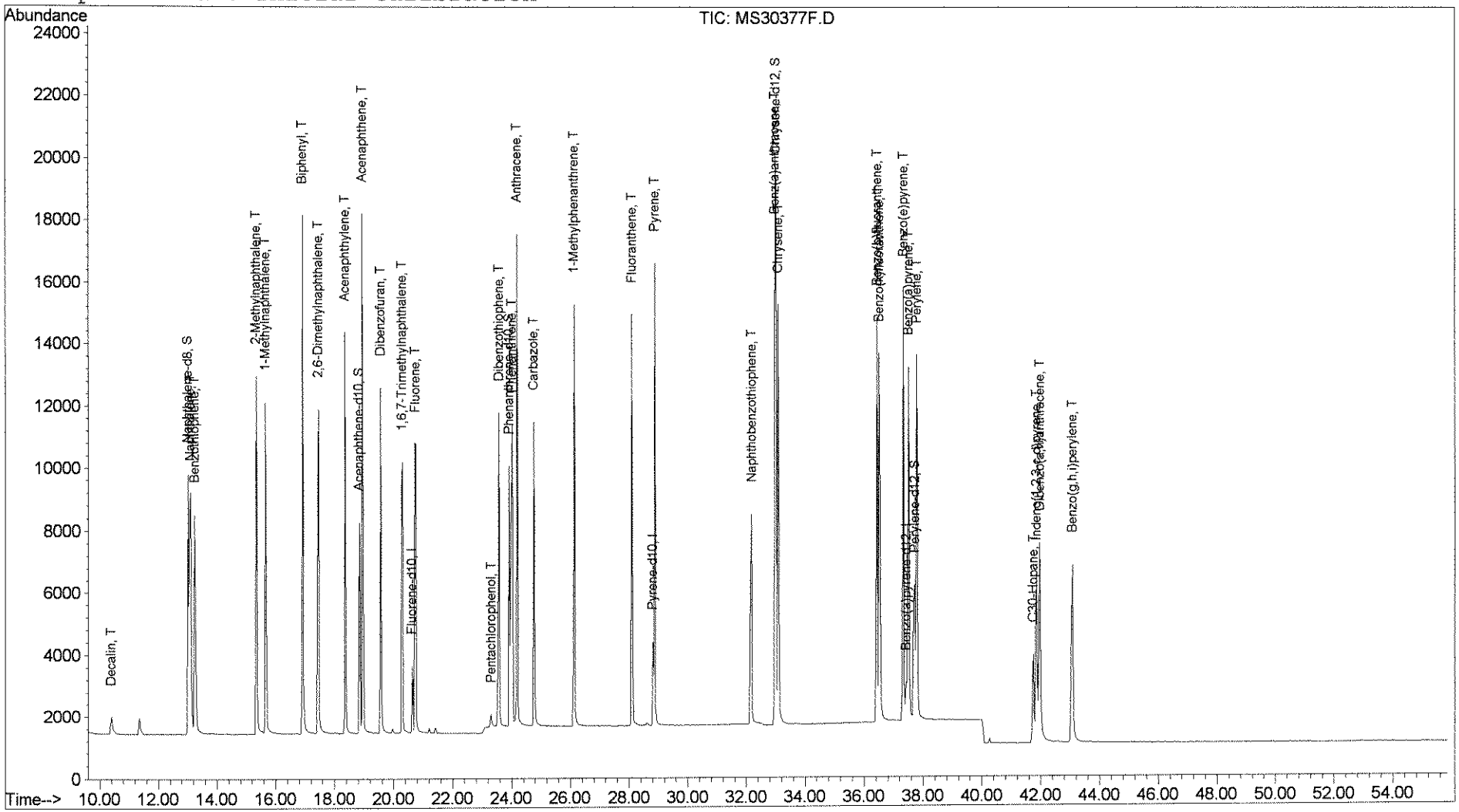
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
35)	C2-Dibenzothiophene	0.00	212	0	N.D.	d	
36)	C3-Dibenzothiophene	0.00	226	0	N.D.	d	
37)	Phenanthrene	24.01	178	22363m	196.82		
38)	Anthracene	24.18	178	25658m	207.40		
39)	1-Methylphenanthrene	26.13	192	19359m	199.71		
40)	C1-Phenanthrene/Anthracene	0.00	192	0	N.D.	d	
41)	C2-Phenanthrene/Anthracene	0.00	206	0	N.D.	d	
42)	C3-Phenanthrene/Anthracene	0.00	220	0	N.D.	d	
43)	C4-Phenanthrene/Anthracene	0.00	234	0	N.D.	d	
44)	Naphthobenzothiophene	32.16	234	21666m	199.64		
45)	C1-Naphthobenzothiophene	0.00	248	0	N.D.	d	
46)	C2-Naphthobenzothiophene	0.00	262	0	N.D.	d	
47)	C3-Naphthobenzothiophene	0.00	276	0	N.D.	d	
48)	Fluoranthene	28.09	202	30359m	251.19		
49)	Pyrene	28.86	202	32614m	215.76		
50)	C1-Fluoranthenes/Pyrenes	0.00	216	0	N.D.	d	
51)	C2-Fluoranthenes/Pyrenes	0.00	230	0	N.D.	d	
52)	C3-Fluoranthenes/Pyrenes	0.00	244	0	N.D.	d	
54)	Benz(a)anthracene	32.96	228	30910m	250.46		
55)	Chrysene	33.07	228	26268m	252.41		
56)	C1-Chrysenes	0.00	242	0	N.D.	d	
57)	C2-Chrysenes	0.00	256	0	N.D.	d	
58)	C3-Chrysenes	0.00	270	0	N.D.	d	
59)	C4-Chrysenes	0.00	284	0	N.D.	d	
61)	C29-Hopane	0.00	191	0	N.D.	d	
62)	18a-Oleanane	0.00	191	0	N.D.	d	
63)	C30-Hopane	41.74	191	9656	231.19	ng/ml	
64)	Benzo(b)fluoranthene	36.43	252	25904	243.14		
65)	Benzo(k)fluoranthene	36.50	252	26394	294.32		
66)	Benzo(e)pyrene	37.31	252	27283	273.10		
67)	Benzo(a)pyrene	37.49	252	22576	258.31		
68)	Indeno(1,2,3-c,d)pyrene	41.84	276	16253	240.91		
69)	Dibenzo(a,h)anthracene	41.94	278	15476m	244.58		
70)	C1-Dibenzo(a,h)anthracene	0.00	292	0	N.D.	d	
71)	C2-Dibenzo(a,h)anthracene	0.00	306	0	N.D.	d	
72)	C3-Dibenzo(a,h)anthracene	0.00	320	0	N.D.	d	
73)	Benzo(g,h,i)perylene	43.06	276	19049m	248.57		
75)	Perylene	37.77	252	23975m	254.31		

(#) = qualifier out of range (m) = manual integration

Quantitation Report

Data File : G:\1\DATA\MS30377\MS30377F.D Vial: 43
Acq On : 13 Apr 2007 2:31 pm Operator: TJM
Sample : Cal Level 3 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 14 19:59 19107 Quant Results File: 041507.RES

Method : G:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : G:\1\DATA\MS30377\MS30377G.D Vial: 44
Acq On : 13 Apr 2007 3:34 pm Operator: TJM
Sample : Cal Level 4 Inst : GC/MS Ins
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Apr 14 20:03 19107 Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 07 22:34:26 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorene-d10	20.63	176	2331m	51.08	ng/ml	0.02
29) Pyrene-d10	28.80	212	4362m	49.98		0.03
60) Benzo(a)pyrene-d12	37.42	264	2667m	45.61		0.04
System Monitoring Compounds						
2) Naphthalene-d8	13.01	136	42856m	499.57		0.02
20) Acenaphthene-d10	18.86	164	20383m	490.77		0.05
30) Phenanthrene-d10	23.91	188	38505m	495.71		0.03
53) Chrysene-d12	33.00	240	54883m	549.75		0.04
74) Perylene-d12	37.70	264	25119m	529.34		0.04
Target Compounds						Qvalue
3) Decalin	10.39	138	8615m	459.50	ng/ml	
4) C1-Decalin	0.00	152	0	N.D.	d	
5) C2-Decalin	0.00	166	0	N.D.	d	
6) C3-Decalin	0.00	180	0	N.D.	d	
7) C4-Decalin	0.00	194	0	N.D.	d	
8) Naphthalene	13.09	128	46653m	474.65		
9) 2-Methylnaphthalene	15.34	142	30943m	519.87		
10) 1-Methylnaphthalene	15.65	142	29039m	497.71		
11) 2,6-Dimethylnaphthalene	17.45	156	25845m	548.36		
12) 1,6,7-Trimethylnaphthalene	20.29	170	24953m	568.55		
13) C2-Naphthalenes	0.00	156	0	N.D.	d	
14) C3-Naphthalenes	0.00	170	0	N.D.	d	
15) C4-Naphthalenes	0.00	184	0	N.D.	d	
16) Benzothiophene	13.23	134	39852m	503.69	ng/ml	
17) C1-Benzothiophene	0.00	148	0	N.D.	d	
18) C2-Benzothiophene	0.00	162	0	N.D.	d	
19) C3-Benzothiophene	0.00	176	0	N.D.	d	
21) Biphenyl	16.92	154	37879m	557.68		
22) Acenaphthylene	18.35	152	45873m	520.16		
23) Acenaphthene	18.94	154	26320m	490.30		
24) Dibenzofuran	19.56	168	43965m	578.27	ng/ml	
25) Fluorene	20.74	166	30518m	513.83		
26) C1-Fluorenes	0.00	180	0	N.D.	d	
27) C2-Fluorenes	0.00	194	0	N.D.	d	
28) C3-Fluorenes	0.00	208	0	N.D.	d	
31) Pentachlorophenol	23.30	266	1900m	574.84	ng/ml	
32) Carbazole	24.75	167	44647m	481.53	ng/ml	
33) Dibenzothiophene	23.57	184	44830m	409.93		
34) C1-Dibenzothiophene	0.00	198	0	N.D.	d	

(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : G:\1\DATA\MS30377\MS30377G.D
Acq On : 13 Apr 2007 3:34 pm
Sample : Cal Level 4
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 14 20:03 19107

Vial: 44
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 07 22:34:26 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
35)	C2-Dibenzothiophene	0.00	212	0	N.D.	d	
36)	C3-Dibenzothiophene	0.00	226	0	N.D.	d	
37)	Phenanthrene	24.01	178	44125m	419.43		
38)	Anthracene	24.18	178	51595m	450.42		
39)	1-Methylphenanthrene	26.13	192	38834m	432.67		
40)	C1-Phenanthrene/Anthracene	0.00	192	0	N.D.	d	
41)	C2-Phenanthrene/Anthracene	0.00	206	0	N.D.	d	
42)	C3-Phenanthrene/Anthracene	0.00	220	0	N.D.	d	
43)	C4-Phenanthrene/Anthracene	0.00	234	0	N.D.	d	
44)	Naphthobenzothiophene	32.16	234	45498m	452.79		
45)	C1-Naphthobenzothiophene	0.00	248	0	N.D.	d	
46)	C2-Naphthobenzothiophene	0.00	262	0	N.D.	d	
47)	C3-Naphthobenzothiophene	0.00	276	0	N.D.	d	
48)	Fluoranthene	28.09	202	60628m	541.76		
49)	Pyrene	28.86	202	65862m	470.58		
50)	C1-Fluoranthenes/Pyrenes	0.00	216	0	N.D.	d	
51)	C2-Fluoranthenes/Pyrenes	0.00	230	0	N.D.	d	
52)	C3-Fluoranthenes/Pyrenes	0.00	244	0	N.D.	d	
54)	Benz(a)anthracene	32.96	228	61436m	537.64		
55)	Chrysene	33.07	228	52749m	547.41		
56)	C1-Chrysenes	0.00	242	0	N.D.	d	
57)	C2-Chrysenes	0.00	256	0	N.D.	d	
58)	C3-Chrysenes	0.00	270	0	N.D.	d	
59)	C4-Chrysenes	0.00	284	0	N.D.	d	
61)	C29-Hopane	0.00	191	0	N.D.	d	
62)	18a-Oleanane	0.00	191	0	N.D.	d	
63)	C30-Hopane	41.74	191	19771m	487.92	ng/ml	
64)	Benzo(b)fluoranthene	36.43	252	55736m	539.24		
65)	Benzo(k)fluoranthene	36.50	252	54009m	620.76		
66)	Benzo(e)pyrene	37.31	252	55661m	574.28		
67)	Benzo(a)pyrene	37.49	252	49425m	582.89		
68)	Indeno(1,2,3-c,d)pyrene	41.84	276	36686m	560.49		
69)	Dibenzo(a,h)anthracene	41.95	278	34626m	564.06		
70)	C1-Dibenzo(a,h)anthracene	0.00	292	0	N.D.	d	
71)	C2-Dibenzo(a,h)anthracene	0.00	306	0	N.D.	d	
72)	C3-Dibenzo(a,h)anthracene	0.00	320	0	N.D.	d	
73)	Benzo(g,h,i)perylene	43.06	276	41233m	554.60		
75)	Perylene	37.77	252	51302m	560.91		

(#) = qualifier out of range (m) = manual integration

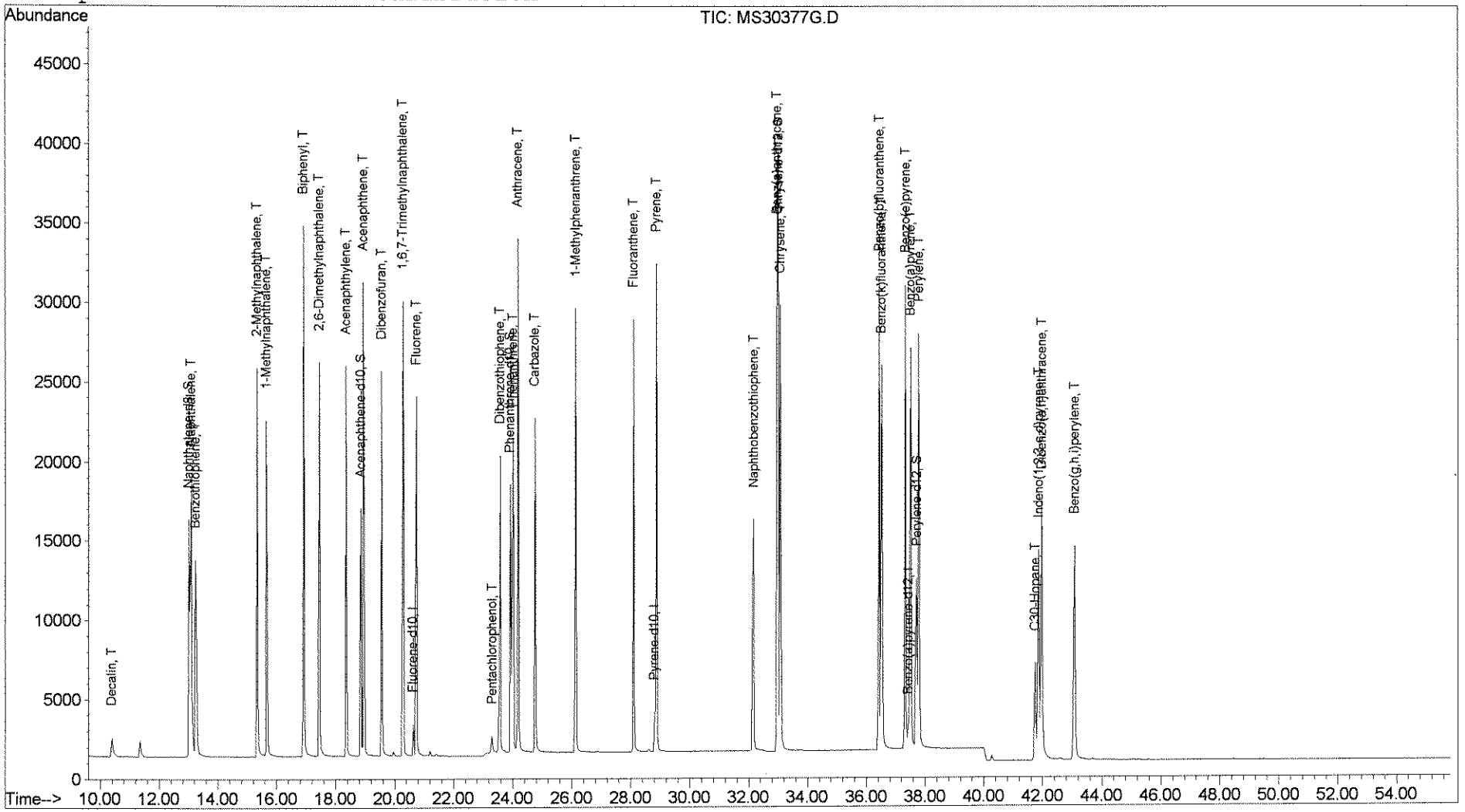
Quantitation Report

Data File : G:\1\DATA\MS30377\MS30377G.D
Acq On : 13 Apr 2007 3:34 pm
Sample : Cal Level 4
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 14 20:03 19107

Vial: 44
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 041507.RES

Method : G:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration



860000

Quantitation Report (QT Reviewed)

Data File : G:\1\DATA\MS30377\MS30377H.D
Acq On : 13 Apr 2007 4:37 pm
Sample : Cal Level 5
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 14 20:03 19107

Vial: 45
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 07 22:34:26 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Fluorene-d10	20.63	176	2159m	51.08	ng/ml	0.03
29) Pyrene-d10	28.80	212	4129m	49.98		0.03
60) Benzo(a)pyrene-d12	37.42	264	2785m	45.61		0.04
System Monitoring Compounds						
2) Naphthalene-d8	13.01	136	83349m	1048.99		0.03
20) Acenaphthene-d10	18.86	164	42769m	1111.81		0.05
30) Phenanthrene-d10	23.91	188	73600m	1000.99		0.03
53) Chrysene-d12	33.00	240	108347m	1146.52		0.04
74) Perylene-d12	37.70	264	56926m	1148.79		0.04
Target Compounds						Qvalue
3) Decalin	10.39	138	16456m	947.65	ng/ml	
4) C1-Decalin	0.00	152	0	N.D.	d	
5) C2-Decalin	0.00	166	0	N.D.	d	
6) C3-Decalin	0.00	180	0	N.D.	d	
7) C4-Decalin	0.00	194	0	N.D.	d	
8) Naphthalene	13.09	128	91937m	1009.88		
9) 2-Methylnaphthalene	15.34	142	62685m	1137.07		
10) 1-Methylnaphthalene	15.65	142	55086m	1019.35		
11) 2,6-Dimethylnaphthalene	17.45	156	51796m	1186.53		
12) 1,6,7-Trimethylnaphthalene	20.29	170	49694m	1222.47		
13) C2-Naphthalenes	0.00	156	0	N.D.	d	
14) C3-Naphthalenes	0.00	170	0	N.D.	d	
15) C4-Naphthalenes	0.00	184	0	N.D.	d	
16) Benzothiophene	13.23	134	77082m	1051.85	ng/ml	
17) C1-Benzothiophene	0.00	148	0	N.D.	d	
18) C2-Benzothiophene	0.00	162	0	N.D.	d	
19) C3-Benzothiophene	0.00	176	0	N.D.	d	
21) Biphenyl	16.92	154	75291m	1196.79		
22) Acenaphthylene	18.35	152	88733m	1086.31		
23) Acenaphthene	18.94	154	50208m	1009.82		
24) Dibenzofuran	19.56	168	86010m	1221.40	ng/ml	
25) Fluorene	20.74	166	62621m	1138.35		
26) C1-Fluorenes	0.00	180	0	N.D.	d	
27) C2-Fluorenes	0.00	194	0	N.D.	d	
28) C3-Fluorenes	0.00	208	0	N.D.	d	
31) Pentachlorophenol	23.30	266	4034m	1289.35	ng/ml	
32) Carbazole	24.75	167	94758m	1079.67	ng/ml	
33) Dibenzothiophene	23.57	184	95431m	921.87		
34) C1-Dibenzothiophene	0.00	198	0	N.D.	d	

(#) = qualifier out of range (m) = manual integration

Data File : G:\1\DATA\MS30377\MS30377H.D
Acq On : 13 Apr 2007 4:37 pm
Sample : Cal Level 5
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 14 20:03 19107

Vial: 45
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.00
Quant Results File: 041507.RES

Quant Method : C:\MS30377\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 07 22:34:26 2007
Response via : Initial Calibration
DataAcq Meth : PAH-2002

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
35)	C2-Dibenzothiophene	0.00	212	0	N.D.	d	
36)	C3-Dibenzothiophene	0.00	226	0	N.D.	d	
37)	Phenanthrene	24.01	178	94287m	946.81		
38)	Anthracene	24.18	178	107343m	989.98		
39)	1-Methylphenanthrene	26.13	192	82770m	974.23		
40)	C1-Phenanthrene/Anthracene	0.00	192	0	N.D.	d	
41)	C2-Phenanthrene/Anthracene	0.00	206	0	N.D.	d	
42)	C3-Phenanthrene/Anthracene	0.00	220	0	N.D.	d	
43)	C4-Phenanthrene/Anthracene	0.00	234	0	N.D.	d	
44)	Naphthobenzothiophene	32.16	234	90540m	951.89		
45)	C1-Naphthobenzothiophene	0.00	248	0	N.D.	d	
46)	C2-Naphthobenzothiophene	0.00	262	0	N.D.	d	
47)	C3-Naphthobenzothiophene	0.00	276	0	N.D.	d	
48)	Fluoranthene	28.09	202	114644m	1082.25		
49)	Pyrene	28.86	202	131442m	992.14		
50)	C1-Fluoranthenes/Pyrenes	0.00	216	0	N.D.	d	
51)	C2-Fluoranthenes/Pyrenes	0.00	230	0	N.D.	d	
52)	C3-Fluoranthenes/Pyrenes	0.00	244	0	N.D.	d	
54)	Benz(a)anthracene	32.96	228	129040m	1192.98		
55)	Chrysene	33.07	228	97417m	1068.02		
56)	C1-Chrysenes	0.00	242	0	N.D.	d	
57)	C2-Chrysenes	0.00	256	0	N.D.	d	
58)	C3-Chrysenes	0.00	270	0	N.D.	d	
59)	C4-Chrysenes	0.00	284	0	N.D.	d	
61)	C29-Hopane	0.00	191	0	N.D.	d	
62)	18a-Oleanane	0.00	191	0	N.D.	d	
63)	C30-Hopane	41.74	191	40974m	968.34	ng/ml	
64)	Benzo(b)fluoranthene	36.43	252	119283m	1105.15		
65)	Benzo(k)fluoranthene	36.50	252	108634m	1195.70		
66)	Benzo(e)pyrene	37.31	252	112035m	1106.95		
67)	Benzo(a)pyrene	37.49	252	103137m	1164.80		
68)	Indeno(1,2,3-c,d)pyrene	41.84	276	82832m	1211.90		
69)	Dibenzo(a,h)anthracene	41.95	278	76502m	1193.42		
70)	C1-Dibenzo(a,h)anthracene	0.00	292	0	N.D.	d	
71)	C2-Dibenzo(a,h)anthracene	0.00	306	0	N.D.	d	
72)	C3-Dibenzo(a,h)anthracene	0.00	320	0	N.D.	d	
73)	Benzo(g,h,i)perylene	43.06	276	91278m	1175.71		
75)	Perylene	37.77	252	109377m	1145.20		

(#) = qualifier out of range (m) = manual integration

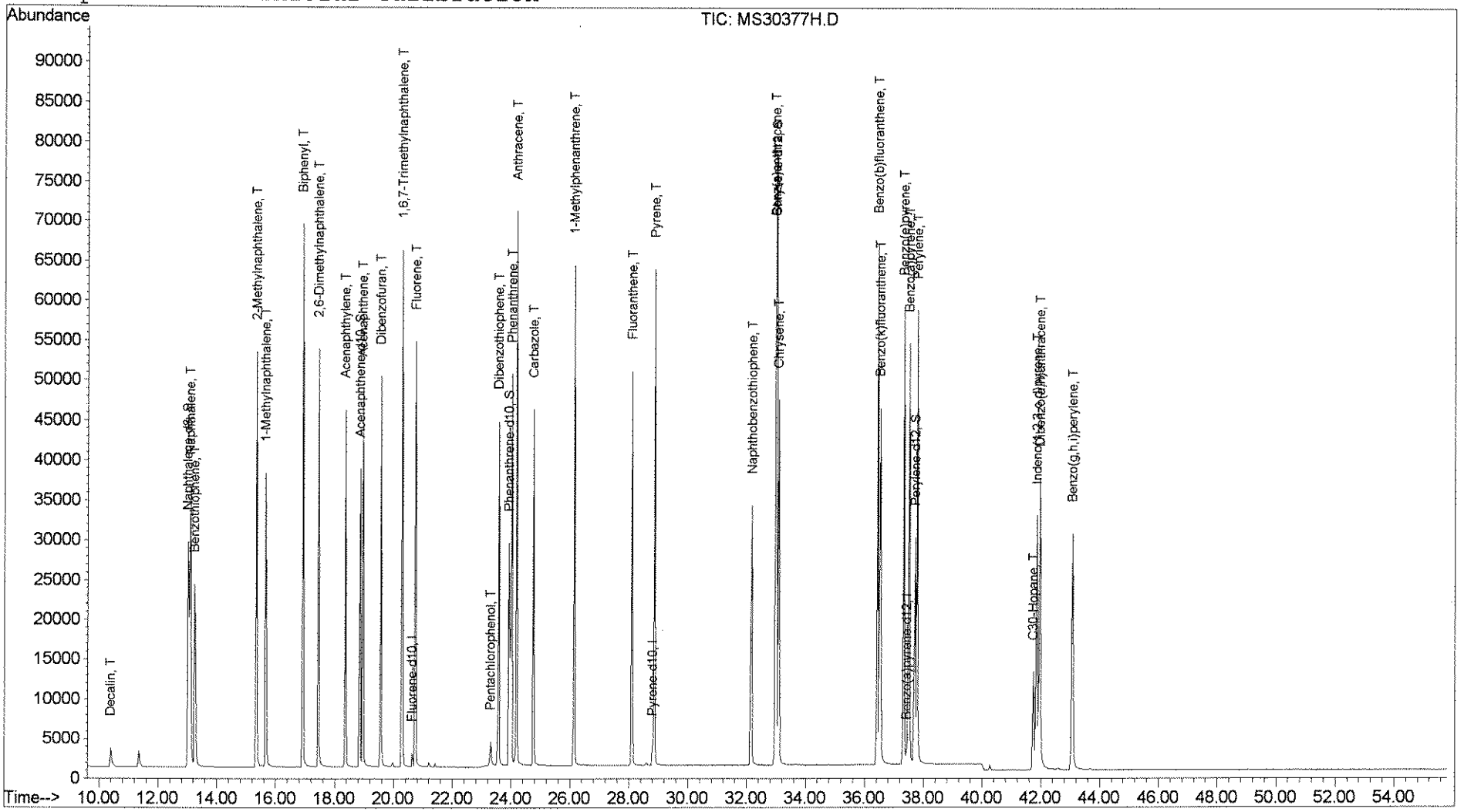
Quantitation Report

Data File : G:\1\DATA\MS30377\MS30377H.D
Acq On : 13 Apr 2007 4:37 pm
Sample : Cal Level 5
Misc :
MS Integration Params: rteint.p
Quant Time: Apr 14 20:03 19107

Vial: 45
Operator: TJM
Inst : GC/MS Ins
Multiplr: 1.00

Quant Results File: 041507.RES

Method : G:\1\METHODS\041507.M (RTE Integrator)
Title : PAH Calibration Table (2002)
Last Update : Sat Apr 14 20:04:44 2007
Response via : Initial Calibration



Supporting Documents

Shipping, Sample Receiving, and Project Initiation Documents

B&B LABORATORIES RECEIVING/INTEGRITY REPORT

J03318

Job: ~~J00[illegible]~~ Date Received: 04/12/07 SDG#: 07041201

Sender: GeoInsight - Kevin Trainer Buzzards Bay

1. Number of Shipping Containers: 1

Comments:

2. Airbill Present? (Yes)/No Shipping Company: FedEx

Airbill Number: 8418 0952 7446

Comments:

3. Custody Seals on Container?
(No) Yes Intact Not Intact

Comments:

4. Chain of Custody Records?
No (Yes)

Comments

5. General Sample Conditions:
Frozen Cool Unrefrigerated
Dry Ice Blue Ice (Ice)

Temperature/Comments:
14.8°C

6. List of Broken Containers:

7. Number of Samples Expected: 1 Number of Samples Received: 1 rock core

8. Problems/Discrepancies:

9. Resolutions:

10. Checked in by: Jarrell Frank Date: 04/12/07

FedEx Express **USA Airbill**

FedEx Tracking Number 8418 0952 7446

Form I.D. No. 0200

1 From

Date 4/11/07

Sender's Name IRENA KRISTOV Phone 978 692-1114

Company GeoInsight Inc.

Address 5 Law Drive

Dept./Floor/Suite/Room

City Westford State MA ZIP 01886

2 Your Internal Billing Reference

3871-002.02

3 To

Recipient's Name B & B Laboratories Phone 979 693-3446

Company TDI Brooks International

Address 1902 Pinon Street

To "HOLD" at FedEx location, print FedEx address. We cannot deliver to P.O. boxes or P.O. ZIP codes.

Address

Dept./Floor/Suite/Room

City College Station State TX ZIP 77845

8418 0952 7446

4a Express Package Service

Packages up to 150 lbs. Delivery commitment may be later in some areas.

- [x] FedEx Priority Overnight — Next business morning
- [ ] FedEx Standard Overnight — Next business afternoon
- [ ] FedEx First Overnight — Earliest next business morning delivery to select locations
- [ ] FedEx 2Day — Second business day
- [ ] FedEx Express Saver — Third business day

FedEx Envelope rate not available. Minimum charge: One-pound rate

4b Express Freight Service

Packages over 150 lbs. Delivery commitment may be later in some areas.

- [ ] FedEx 1Day Freight* — Next business day
- [ ] FedEx 2Day Freight — Second business day
- [ ] FedEx 3Day Freight — Third business day

* Call for Confirmation:

5 Packaging

* Declared value limit $500

- [ ] FedEx Envelope*
- [ ] FedEx Pak* — Includes FedEx Small Pak, FedEx Large Pak, and FedEx Sturdy Pak
- [x] Other

6 Special Handling

Include FedEx address in Section 3.

- [ ] **SATURDAY Delivery** — Available only for FedEx Priority Overnight and FedEx 2Day to select ZIP codes
- [ ] **HOLD Weekday** at FedEx Location — Not available for FedEx First Overnight
- [ ] **HOLD Saturday** at FedEx Location — Available only for FedEx Priority Overnight and FedEx 2Day to select locations

Does this shipment contain dangerous goods? One box must be checked.

- [x] No
- [ ] Yes — As per attached Shipper's Declaration
- [ ] Yes — Shipper's Declaration not required
- [ ] Dry Ice — Dry Ice, 9, UN 1845 ____ x ____ kg

Dangerous Goods (including Dry Ice) cannot be shipped in FedEx packaging.

- [ ] Cargo Aircraft Only

7 Payment *Bill to:*

Enter FedEx Acct. No. or Credit Card No. below.

- [x] Sender — Acct. No. in Section 1 will be billed
- [ ] Recipient
- [ ] Third Party
- [ ] Credit Card
- [ ] Cash/Check
- [ ] Obtain Recip. Acct. No.

2881

Total Packages	Total Weight	Total Declared Value†	Total Charges
1	4	$ .00	Credit Card Auth.

†Our liability is limited to $100 unless you declare a higher value. See back for details.

8 Release Signature

Sign to authorize delivery without obtaining signature.

By signing you authorize us to deliver this shipment without obtaining a signature and agree to indemnify and hold us harmless from any resulting claims.

Questions? Visit our Web site at fedex.com or call 1.800.Go.FedEx® 800.463.3339.

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446

000105

CHAIN OF CUSTODY RECORD

~~Phone: 413-525-2332~~
~~Fax: 413-525-6405~~
~~Email: info@contestlabs.com~~
~~www.contestlabs.com~~

~~39 SPRUCE ST, 2ND FLOOR~~
~~EAST LONGMEADOW, MA 01028~~

Company Name: GeoInsight, Inc
Address: 5 Lan Drive, Suite 200
Westford, MA 01886
Attention: Kevin Trainer
Project Location: Buzzards Bay, MA
Sampled By: Renee Egerton

Telephone: (978) 692-1114
Project # 3871-002
Client PO # 3871-002

DATA DELIVERY (check one):
☐FAX ☐EMAIL ☐WEBSITE CLIENT
Fax # :
Email:
Format: ☐ EXCEL ☐ PDF ☐ GIS KEY

Proposal Provided? (For Billing purposes)
☐ yes _____ proposal date

Field ID	Sample Description	Lab #	Date Sampled: Start Date/Time	Date Sampled: Stop Date/Time	Composite	Grab	*Matrix Code	# of containers	**Preservation	~Cont.Code	TPH	PAH
	WIF-02-32707		3/27/07			✓	oiled cobble				✓	✓

ANALYSIS REQUESTED

~Cont. Code:
A=amber glass
G=glass
P=plastic
ST=sterile
V= vial
S=summa can
T=tedlar bag
O=Other

Comments:
Contact Kevin Trainer at 978 692 1114 if there are any questions

Relinquished by: (signature)	Date/Time:
	4/11/07 11:00
Received by: (signature)	Date/Time:
Darrell Faard	4/12/07 0900
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Turnaround
☐ 24 Hour*
☐ 48 Hour*
☐ 72 Hour*
☑ Std.
☐ Other**
_____ Date needed**
*Require lab approval.

Detection Limit Requirements
Regulations? _____
Data Enhancement Project? ☐ Y ☐ N
(MA MCP sites only)
Special Requirements or DL's: _____

***Matrix Code:**
GW= groundwater
WW= wastewater
DW= drinking water
A = air
S = soil/solid
SL = sludge
O = other_____

****Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium bisulfate
O = Other_____
X = Na hydroxide
T = Na thiosulfate

00106

Con-Test Laboratory is the ONLY independent laboratory in all of New England with both prestigious AIHA and NELAC Certifications!

Log #		CLIENT NAME	FILENAME	CLIENT ID	COL. DATE	RECVD	ANALYSIS	MATRIX	COMMENTS	B&B SDG	Client Project #
43841	J03318	GeoInsight-Buzzards Bay Spill	ETX7207	WIF-02-32707	03/27/07	04/12/07	PAH, TPH	OTHER	Oiled rock	07041201	3871-002

000107

B&B LABORATORIES SAMPLE INITIATION FORM-ENV

Job #: J03318

SDG: 07041201

Client: GeoInsight - Buzzards Bay Spill

Initiation Date: 04/12/07

Number of Samples: 1

Matrix: Oiled rock

Due Date: _____

Comments: _____

Analyses

☒	PAHs	☐	OCs/PCBs	☒	Aliphatics/TPH	☒	EOM
☐	Dry Wt.	☐	%Lipid	☐	TOC/TIC	☐	_____
☒	Short Columns	☐	Long Columns	☐	_____	☐	_____

Requested QA/QC (per batch of _____ Client Samples) NO QA.

☐ Blank	☐ Blank Spike	☐ Blank Spike Duplicate
☐ Duplicate _____	☐ Matrix Spike _____	
☐ Matrix Spike Duplicate _____	☐ SRM _____	

SEE BACK FOR SPECIFIC STANDARDS TO USE

Surrogate(s): High AL, AR — Volume(s): 100ml

Spike Standard(s): — — Volume(s): —

Internal Standard(s): High AL, AR — Volume(s): 100

Final Extract Volume (ml): ~1ml~ — Final Solvent: DCM

Comments:

Sample Custodian Signature: [signature] — Date: 04/12/07

Project Administrator Signature: [signature] — Date: 4/13/07

Spl Initiation.doc

cc: COC Book
Extraction Lab

Extraction Standard Inventory

Organophosphates (OPs)

☐ OP-WKSU-0050-006 (Surrogate)

☐ OP-WKSK-TPT-006 (Surrogate)

☐ OP-WKIS-0100-006 (Int STD)

Aliphatic Hydrocarbons (ALI/TPH)

☐ AL-WKSU-20-009 (Surrogate)

☐ AL-WKSK-100-010 (Spike)

☐ AL-WKIS-200-007 (Int STD)

☐ AL-STSU-200-007 **(High Surrogate)**

☐ AL-STIS-2000-008 **(High Int STD)**

Polycyclic Aromatic Hydrocarbons (PAHs)

☐ AR-WKSU-0500-016 (Surrogate)

☐ AR-WKSK-1000-013 (Spike)

☐ AR-WKIS-0500-011 (Int STD)

☐ AR-STSU-5000-009 **(High Surrogate)**

☐ AR-STIS-5000-008 **(High Int STD)**

Organochlorine Pesticides/PCBs (OCs/PCBs)

☐ OC-WKSU-1000-010 (Surrogate)

☐ OC-WKSK-0400-008 (Spike)

☐ PEST-WKSU-1000-003 (Surrogate)*(Epsilon-HCH)*

☐ OC-WKIS-1000-008 (Int STD)

Polychlorinated Biphenyls (PCBs by GC/MS)

☐ PCB-WKSU-008-008 (Surrogate)

☐ PCB-WKSK-300-003 (Spike)

☐ PCB-WKIS-010-007 (Int STD)

Polybrominated Diphenyl Ether (PBDEs) and Polybrominated Biphenyls (PBBs)

☐ PBDE-WKSU-1.0-005 (Surrogate)

☐ PBDE-WKSK-1-006 (Spike)

☐ PBDE-WKIS-0.5-005 (Int STD)

☐ PBB-WKSU-5.0-004 (Surrogate)

☐ PBB-WKSK-2500-001 (Spike)

☐ PBB-WKIS-5.0-004 (Int STD)

Linear Alkylbenzenes (LABs)

LAB-WKSK-2500-002 (Spike)

Laboratory Bench Sheet Logs

B&B LABORATORIES ENVIRONMENTAL EXTRACTION LOG

MATRIX
- [X] OTHER
- [ ] WATER
- [ ] SEDIMENT
- [ ] TISSUE (rock)

Job #: J03318 SDG #: 07041201
Client: GeoInsight - Buzzards Bay Spill
Analysis: [X] PAH [ ] PESTS [ ] PCB [X] ALI
Other : TPH
Extraction Solvent: DCM Lot # 46202
Final Solvent : DCM Lot # 46202 Final Vol : 1 ml

Lipids Y / N
Dry Wt. Y / N
Copper Y / N
EOM (Y) / N

Surrogate: 1000 µL
PAH: AR-5T5V-5000-007
Pest/PCB: —
Aliphatic: AL-5T5V-200 007
Other: —

Spike: _____ µL
PAH: _____
Pest/PCB: _____
Aliphatic: _____
Other: _____

General Comments:
No QA Cons r short columns
High Surrogate + Internal

	Added	Witness
Surrogate:	4/12/07 JM	4/12/07 WP
Spike:	## —	—
Internal:	—	

GC Int Std: _____ µL
PAH: _____
Pest/PCB: —
Aliphatic: _____
Other: —

Turbo Vap II
Bath T (C): _____
Pressure (>20psi): _____
Check Water Level: _____
Turbo Vap Date: _____

	Sample Name	Client ID	Wet Wt. (g or L)	Dry Wt. %	Dry Wt. (g)	Hydromatrix (g)	Extraction Comments
1	ETX7207	WIF-02-32707	—	—	—		
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

Internal Chain of Custody

	Date:	Date:
Extraction Prep	4/12/07	4/12/07
From: / To:	JM	JM
Extraction		
Date:	4/12/07	4/12/07
From: / To:	JM	JM
Concentration		
Date:	4-13-07	4-13-07
From: / To:	EL	EL
Columns SA2		
Date:		
From: / To:		

Sample shaken with 300 ml of DCM and passed through Sodium Sulfate
JM 4/14/07

ENV 1635
Page 1 of 2

B&B LABORATORIES ENVIRONMENTAL EXTRACTION LOG

	Sample Name	Client ID	Wet Wt. (g or L)	Dry Wt. %	Dry Wt. (g)	Hydromatrix (g)	Extraction Comments
13							
14							
15							
16					4/16/07		
17							
18							
19							
20							
21							
22							
23							
24							

DATE	INITIALS
Columns SA1	
Date: / From:	Date: / To:
Concentration SA2	
Date: / From:	Date: / To:
Concentration SA1	
Date: / From:	Date: / To:
Transfer	
Date: / From:	Date: / To:
HPLC	
Date: / From:	Date: / To:
Concentration	
Date: 4/13/07 / From:	Date: 4/13/07 / To:
Pest/PCB Int Std Added	
PAH Int Std Added	
Aliphatic Int Std Added	
Transfer	
4/13/07	YM
Internal Chain of Custody Information	

Dry Weight Page

Lipid/EOM Page
EOM 221

Clean-up/Separation/Other Columns
4-13-07 RE

Sample Storage Box #
233

HPLC Storage Box #

QC Review	
Date	Initials
4/17/07	

Copied to Folders
4/13/07 YM

0001112

B&B LABORATORIES EOM LOGBOOK

MATRIX: (OTHER) / SEDIMENT / WATER

Job #: JU3318 SDG #: 0704/201

Client: Geolasight - Buzzards Bay Spill

General comments:
Take 1mL to short column. Conc. to 1mL.
PAH: 50 µl ⇒ 1mL w/ high IS, SU
TPH: 100 µl ⇒ 1mL w/ high IS, SU

Lab Manager	Transferred by Date/Int:	Date/Int: Bal. Cal.	Date/Int:
Date/Int: 4/17/06 JK	From ENV Pg: ENV165 From DRY Pg:	4-13-07 EL	

	Sample Name	Client ID	Smpl Wt./Vol (g/L) Wet Wt. Dry Wt.	Dry Wt. (%)	Final Extract Vol (mL)	Wt. of 100 µl EOM Wt. (mg)	EOM (Wet Wt. Basis)	EOM (Dry Wt. Basis)	Comments
1	ETX7207	WIF-02-32707	/	/	3	17.765	} Ave:	17.677	
2	ETX7207	WIF-02-32707			3	17.947			
3	ETX7207	WIF-02-32707			3	17.318			
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									

EOM 261

B&B LABORATORIES EOM LOGBOOK

	Sample Name	Client ID	Smpl Wt./Vol (g/L) Wet Wt. Dry Wt.	Dry Wt. (%)	Final Extract Vol (mL)	Wt. of 100 µl EOM Wt. (mg)	EOM (Wet Wt. Basis)	EOM (Dry Wt. Basis)	Comments
17									
18									
19									
20									
21									
22									
23									
24									

$$EOM = \frac{(EOM\ Wt.\ (mg))\ (Final\ Extract\ Vol.\ (ml))}{(Smpl\ Wt/Vol.\ (g/L))\ (0.10\ ml)} \times 1000\%$$

$$\%RPD = \frac{(EOM_1 - EOM_2)}{(EOM_1 + EOM_2) \times 0.5} \times 100\%$$

The Relative Percent Difference (RPD) between duplicates must be ≤ 25%.

Date/Int:	RPD

Sample: _____

Duplicate: _____

0001141

EOM Logs

EOM 261

Last Page

APPENDIX C

LEISURE SHORES TEST PIT LOCATIONS AND DESCRIPTIONS (SEPTEMBER 20, 2006)

APPENDIX C
LEISURE SHORES TEST PIT LOCATIONS AND DESCRIPTIONS
B120 RELEASE
BUZZARDS BAY, MASSACHUSETTS

Transect A

GPS Coordinates for Start Point (0,0): 41.62870º N 70.82366°

Test Pit ID	Diameter (inches)	Depth (inches)	Field Team Observation - Test Pit	Field Team Observation - Spoils in Bucket	X Coordinate	Y Coordinate
A-30	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	0	30
A-40	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	0	40
A-50	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	0	50
A-60	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 40% coverage	Evidence of oil not observed in bucket	0	60
A-70	12	9	Approximately 80 particles of oil each less than 1 mm in diameter, 1 particle of oil 3 mm in diameter, and approximately 10% silver sheen coverage, fractured, breaks up, may be weathered	Approximately 6 particles of oil each less than 1 mm in diameter with approximately 15% coverage	0	70
A-80	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 40% coverage	Evidence of oil not observed in bucket	0	80
A-90	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	0	90
A-100	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	0	100
A-110	12	9	3 particles of oil each less than 1 mm in diameter and approximately 5% silver sheen coverage, breaks up when touched	2 particles of oil each less than 1 mm in diameter and approximately 10% silver sheen coverage, breaks up, may be from weathering	0	110
A-120	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	0	120
A-130	12	9	Evidence of oil not observed in test pit, orange/brown sediment observed on the bottom of the test pit	Evidence of oil not observed in bucket	0	130
A-140	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	0	140
A-150	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	0	150
A-160	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 80% coverage	Evidence of oil not observed in bucket	0	160
A-170	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 80% coverage	Evidence of oil not observed in bucket	0	170

Notes:
1. Test pits were excavated on September 20, 2006.
2. Depths are approximate values.
3. Coordinates are reported in feet.
4. Trenches were excavated at 10-foot intervals along the transect.
5. mm = millimeters
6. cm = centimeters
7. Observations:

- Evidence of oil not observed
- Sheen
- 1 to 5 particles of oil
- 6 to 10 particles of oil
- 11 to 20 particles of oil
- 21 to 100 particles of oil
- Greater than 100 particles of oil

APPENDIX C
LEISURE SHORES TEST PIT LOCATIONS AND DESCRIPTIONS
B120 RELEASE
BUZZARDS BAY, MASSACHUSETTS

Transect B

Test Pit ID	Diameter (inches)	Depth (inches)	Field Team Observation - Test Pit	Field Team Observation - Spoils in Bucket	X Coordinate	Y Coordinate
B-30	12	9	Evidence of oil not observed in test pit	3 mm particle of oil observed on cobble sticking out above water line, approximately 20 particles of oil each less than 1 mm in diameter, approximately 5% sheen coverage with the sheen radiating from particles, largest sheen is approximately 1 cm in diameter	15	30
B-40	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	40
B-50	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 5% coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with approximately 20 % coverage	15	50
B-60	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	60
B-70	12	9	1 particle of oil less than 1 mm in diameter, 1 streamer approximately 13 cm long, less than 5% sheen and oil coverage, organic "scum" observed on surface of test pit with nearly 100% coverage	4 particles of oil each less than 1 mm in diameter, 1 particle of oil approximately 1 cm in diameter, less than 5% sheen coverage, organic "scum" observed on surface of water covering spoils with approximately 75% coverage	15	70
B-80	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	80
B-90	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	90
B-100	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 70% coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with approximately 70% coverage	15	100
B-110	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100% coverage	Evidence of oil not observed in bucket	15	110
B-120	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 80% coverage	Evidence of oil not observed in bucket	15	120
B-130	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 90% coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with approximately 50% coverage	15	130
B-140	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	140
B-150	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100% coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with nearly 100% coverage	15	150
B-160	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	160
B-170	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 90% coverage	Evidence of oil not observed in bucket	15	170
B-180	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 20% coverage	Evidence of oil not observed in bucket	15	180
B-190	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	190
B-200	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 90% coverage	Evidence of oil not observed in bucket	15	200

Notes:
1. Test pits were excavated on September 20, 2006.
2. Depths are approximate values.
3. Coordinates are reported in feet.
4. Trenches were excavated at 10-foot intervals along the transect.
5. mm = millimeters
6. cm = centimeters
7. Observations:
   - Evidence of oil not observed
   - Sheen
   - 1 to 5 particles of oil
   - 6 to 10 particles of oil
   - 11 to 20 particles of oil
   - 21 to 100 particles of oil
   - Greater than 100 particles of oil

APPENDIX C
LEISURE SHORES TEST PIT LOCATIONS AND DESCRIPTIONS
B120 RELEASE
BUZZARDS BAY, MASSACHUSETTS

Transect C

Test Pit ID	Diameter (inches)	Depth (inches)	Field Team Observation - Test Pit	Field Team Observation - Spoils in Bucket	X Coordinate	Y Coordinate
C-20	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	10 particles of oil each 1 to 2 mm in diameter with sheen emanating from them, 1 particle of oil 3 mm long, approximately 25 % sheen coverage	30	20
C-30	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	30
C-40	12	9	Evidence of oil not observed in test pit	1 particle of oil with sheen emanating from it, sheen approximately 1.5 cm in diameter.	30	40
C-50	12	9	Evidence of oil not observed in test pit	1 silver sheen approximately 1.5 inches long, no particles of oil observed	30	50
C-60	12	9	Evidence of oil not observed in test pit	1 particle of oil approximately 1 mm in diameter.	30	60
C-70	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	70
C-80	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	80
C-90	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with approximately 10 % coverage	30	90
C-100	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 90 % coverage	Evidence of oil not observed in bucket	30	100
C-110	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	110
C-120	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 5 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with approximately 5 % coverage	30	120
C-130	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 5 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with approximately 10 % coverage	30	130
C-140	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	140
C-150	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	150
C-160	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	160
C-170	12	9	Evidence of oil not observed in test pit, black sand particles observed, organic "scum" observed on surface of test pit with approximately 80% coverage	3 particles of oil each less than 1 mm in diameter, less than 5 % sheen coverage with sheen radiating from particles up to 1 cm	30	170
C-180	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	180
C-190	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 5 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with less than 5 % coverage	30	190
C-200	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 80 % coverage	Evidence of oil not observed in bucket	30	200

Notes:
1. Test pits were excavated on September 20, 2006.
2. Depths are approximate values.
3. Coordinates are reported in feet.
4. Trenches were excavated at 10-foot intervals along the transect.
5. mm = millimeters
6. cm = centimeters
7. Observations:

- Evidence of oil not observed
- Sheen
- 1 to 5 particles of oil
- 6 to 10 particles of oil
- 11 to 20 particles of oil
- 21 to 100 particles of oil
- Greater than 100 particles of oil

APPENDIX C
LEISURE SHORES TEST PIT LOCATIONS AND DESCRIPTIONS
B120 RELEASE
BUZZARDS BAY, MASSACHUSETTS

Transect D

Test Pit ID	Diameter (inches)	Depth (inches)	Field Team Observation - Test Pit	Field Team Observation - Spoils in Bucket	X Coordinate	Y Coordinate
D-30	12	9	Evidence of oil not observed in test pit, test pit was slightly underwater due to advancing tide	Evidence of oil not observed in bucket	45	30
D-40	12	9	Evidence of oil not observed in test pit, test pit was under less than 1 inch of water due to the advancing tide	Particles of oil not observed, less than 5 % silver sheen coverage	45	40
D-50	12	9	15 cm long streamer 1 to 2 cm wide	6 sheens 1.5 to 5 cm in diameter, 1 sheen 2 cm in diameter, 1 sheen 5 cm by 2.5 cm	45	50
D-60	12	9	1 particle of oil 2 mm in diameter, 2 sheens each 5 mm in diameter	25 particles of oil each less than 1 mm, 10 sheens some with slight rainbow each 5 mm in diameter, 5 silver streamers 3 to 5 cm long	45	60
D-70	12	9	Evidence of oil not observed in test pit	8 particles of oil each less than 1 mm with sheen radiating out 0.5 cm, 1 silver streamer 2.5 cm long and 3 mm wide	45	70
D-80	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with nearly 100% coverage	45	80
D-90	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with nearly 100% coverage.	45	90
D-100	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with nearly 100% coverage.	45	100
D-110	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with nearly 100% coverage.	45	110
D-120	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with nearly 100% coverage.	45	120
D-130	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with nearly 100% coverage.	45	130
D-140	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with nearly 100% coverage.	45	140
D-150	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with nearly 100% coverage.	45	150
D-160	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with nearly 100% coverage.	45	160
D-170	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with nearly 100% coverage.	45	170
D-180	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with nearly 100% coverage	45	180
D-190	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with nearly 100%	45	190
D-200	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with nearly 100%	45	200

Notes:
1. Test pits were excavated on September 20, 2006.
2. Depths are approximate values.
3. Coordinates are reported in feet.
4. Trenches were excavated at 10-foot intervals along the transect.
5. mm = millimeters
6. cm = centimeters
7. Observations:
   - Evidence of oil not observed
   - Sheen
   - 1 to 5 particles of oil
   - 6 to 10 particles of oil
   - 11 to 20 particles of oil
   - 21 to 100 particles of oil
   - Greater than 100 particles of oil

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Transect E

Test Pit ID	Diameter (inches)	Depth (inches)	Field Team Observation - Test Pit	Field Team Observation - Spoils in Bucket	X Coordinate	Y Coordinate
E-10	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	10
E-20	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	20
E-30	12	9	Approximately 100 particles of oil each less than 1 mm in diameter, 1 particle of oil approximately 3 mm in diameter, 1 stringer approximately 4 cm long, less than 5 % silver to dull rainbow sheen	5 % silver to dull rainbow sheen coverage, particles of oil not observed	60	30
E-40	12	9	1 particle of oil 3 mm in diameter, 7 particles of oil each 2 mm in diameter, approximately 200 particles of oil less than 1 mm in diameter, silver sheen surrounding particles, approximately 5 % total sheen coverage	7 particles of oil less than 1 mm in diameter, approximately 25 % dull rainbow sheen coverage	60	40
E-50	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	50
E-60	12	9	1 brown particle and sheen 1.5 cm	5% sheen coverage, 6 sheens 1 cm in diameter, 1 sheen 1.5 cm by 2 cm silver sheen, 1 silver streamer 5 cm long radiating from particles in center	60	60
E-70	12	9	2 silver streamers of sheen 3 cm long and 2 cm wide	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with nearly 100 % coverage	60	70
E-80	12	9	Evidence of oil not observed in test pit	1 particle of oil with sheen radiating around it 2 cm in diameter, 1 particle with sheen around it approximately 5 cm long and 2 cm wide	60	80
E-90	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	90
E-100	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	100
E-110	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	110
E-120	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	120
E-130	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	130
E-140	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	140
E-150	12	9	Evidence of oil not observed in test pit	2 particles of oil surrounded by sheen radiating 5 mm, 6 silver streamers, 2 5 mm sheens with brown middle, 5% sheen coverage	60	150
E-160	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	160
E-170	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	170
E-190	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	190
E-200	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	200

Notes:
1. Test pits were excavated on September 20, 2006.
2. Depths are approximate values.
3. Coordinates are reported in feet.
4. Trenches were excavated at 10-foot intervals along the transect.
5. mm = millimeters
6. cm = centimeters
7. Observations:

Evidence of oil not observed
Sheen
1 to 5 particles of oil
6 to 10 particles of oil
11 to 20 particles of oil
21 to 100 particles of oil
Greater than 100 particles of oil

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Transect F

Test Pit ID	Diameter (inches)	Depth (inches)	Field Team Observation - Test Pit	Field Team Observation - Spoils in Bucket	X Coordinate	Y Coordinate
F-10	12	10.5	Evidence of oil not observed in test pit	1 sheen approximately 2 cm long surrounding <1 mm particle, 1 particle of oil with sheen 3 mm in diameter	75	10
F-20	12	10.5	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	75	20
F-30	12	10.5	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	75	30
F-40	12	10.5	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket	75	40
F-50	12	10.5	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket	75	50
F-60	12	10.5	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket	75	60
F-70	12	10.5	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket	75	70
F-80	12	10.5	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket	75	80
F-90	12	10.5	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket	75	90
F-100	12	10.5	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket	75	100
F-110	12	10.5	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket	75	110
F-120	12	10.5	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket	75	120
F-130	12	10.5	1 long streamer of sheen approximately 1 foot long and 0.5 inches wide	1 particle of oil 1 mm in diameter, sheen 2 cm long radiating out from particle	75	130
F-140	12	10.5	Evidence of oil not observed in test pit, only approximately 1 inch of water in test pit	8 sheen clumps approximately 1 cm in diameter with brown centers composed of particles of oil each less than 1 mm in diameter, approximately 5 % silver sheen coverage, sheen stringers also	75	140
F-150	12	10.5	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 90 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with approximately 90 % coverage	75	150
F-160	12	10.5	Evidence of oil not observed in test pit, organic "scum" observed	Evidence of oil not observed in bucket, organic "scum" observed	75	160
F-170	12	10.5	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with approximately 50 % coverage	Evidence of oil not observed in bucket	75	170
F-190	12	10.5	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with 90 % coverage	Evidence of oil not observed in bucket	75	190
F-200	12	10.5	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with 90 % coverage	Evidence of oil not observed in bucket	75	200

Notes:
1. Test pits were excavated on September 20, 2006.
2. Depths are approximate values.
3. Coordinates are reported in feet.
4. Trenches were excavated at 10-foot intervals along the transect.
5. mm = millimeters
6. cm = centimeters
7. Observations:

- Evidence of oil not observed
- Sheen
- 1 to 5 particles of oil
- 6 to 10 particles of oil
- 11 to 20 particles of oil
- 21 to 100 particles of oil
- Greater than 100 particles of oil

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Transect G

Test Pit ID	Diameter (inches)	Depth (inches)	Field Team Observation - Test Pit	Field Team Observation - Spoils in Bucket	X Coordinate	Y Coordinate
G-70	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket	90	70
G-80	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils with approximately 20 % coverage	90	80
G-90	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket	90	90
G-100	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	1 particle of oil with sheen 1 mm in diameter	90	100
G-110	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit with nearly 100 % coverage	Evidence of oil not observed in bucket	90	110
G-120	12	9	Silver sheen 3 cm wide and 8 inches long around the edges of the test pit	Evidence of oil not observed in bucket	90	120
G-130	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	90	130
G-140	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	90	140
G-160	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	90	160
G-170	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	90	170
G-180	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils	90	180
G-190	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils	90	190
G-200	12	9	Evidence of oil not observed in test pit, organic "scum" observed on surface of test pit	Evidence of oil not observed in bucket, organic "scum" observed on surface of water covering spoils	90	200

Notes:
1. Test pits were excavated on September 20, 2006.
2. Depths are approximate values.
3. Coordinates are reported in feet.
4. Trenches were excavated at 10-foot intervals along the transect.
5. mm = millimeters
6. cm = centimeters
7. Observations:

- Evidence of oil not observed
- Sheen
- 1 to 5 particles of oil
- 6 to 10 particles of oil
- 11 to 20 particles of oil
- 21 to 100 particles of oil
- Greater than 100 particles of oil

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Vertical Distribution

Test Pit ID	Diameter (inches)	Depth (inches)	Field Team Observation - Test Pit	Field Team Observation - Spoils in Bucket	X Coordinate	Y Coordinate
A-70	12	2	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	0	70
A-70	12	4	1 dull rainbow sheen approximately 7 cm long and 5 cm wide seeping out of the sidewall and 1 sheen 2 cm long and 8 mm wide, approximately 15 % total sheen coverage	2 sheens, 1 sheen 1 cm diameter, 1 sheen 12 cm long and 1.5 cm wide, less than 5 % total sheen coverage	0	70
A-70	12	6	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	0	70
A-110	12	2	10 particles of oil 2 mm in diameter, 4 cm streamer, 1 sheen 2 cm in diameter, 1 sheen 4 cm in diameter, less than 5 % total sheen coverage	Evidence of oil not observed in bucket	0	110
A-110	12	4	4 cm rainbow streamer, 2 - 2cm rainbow streamers, 3 - 1 cm streamers, less than 5 % total sheen coverage	4 cm rainbow streamer, 9 sheens 0.5 in diameter, 1 sheen 1 cm in diameter, less than 5 % total sheen coverage	0	110
A-110	12	6	7 sheens 0.5 to 1 cm in diameter, less than 5 % total sheen coverage	10 small sheens 3 mm to 1 cm in diameter	0	110
E-40	12	2	7 particles of oil each less than 1 mm, less than 5 % total sheen coverage	Evidence of oil not observed in bucket	60	40
E-40	12	4	20 particles of oil, less than 5 % total sheen coverage	Evidence of oil not observed in bucket	60	40
E-40	12	6	6 particles of oil, less than 5 % total sheen coverage.	Evidence of oil not observed in bucket	60	40

Notes:
1. Test pits were excavated on September 20, 2006.
2. Depths are approximate values.
3. Coordinates are reported in feet.
4. Trenches were excavated at 10-foot intervals along the transect.
5. mm = millimeters
6. cm = centimeters
7. Observations:

Evidence of oil not observed
Sheen
1 to 5 particles of oil
6 to 10 particles of oil
11 to 20 particles of oil
21 to 100 particles of oil
Greater than 100 particles of oil

APPENDIX D

LEISURE SHORES TEST PIT LOCATIONS AND DESCRIPTIONS
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Transect A

GPS Coordinates for Start Point (0,0): 41.62870º N 70.82368°

Test Pit ID	Diameter (inches)	Depth (inches)	Field Team Observation - Test Pit	Field Team Observation - Spoils in Bucket	X Coordinate	Y Coordinate
A-30	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 10% coverage	Evidence of oil not observed in bucket; organic "scum" observed on surface of water covering spoils with approximately 10% coverage	0	30
A-40	12	9	5 particles of oil up to 1 mm in diameter with silver sheen radiating out up to 1.5 cm, less than 5% sheen coverage	Evidence of oil not observed in bucket	0	40
A-50	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	0	50
A-60	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 60% coverage	Evidence of oil not observed in bucket	0	60
A-70	12	9	Approximately 40 particles of oil up to 2 mm in diameter, rainbow sheen up to 4 cm in diameter, approximately 5% rainbow sheen coverage	Approximately 40 particles of oil up to 5 mm in diameter, rainbow sheen up to 9 cm in diameter, approximately 20% sheen coverage	0	70
A-80	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	0	80
A-90	12	9	Evidence of oil not observed in test pit; red brown sediment settled to the bottom of the test pit	Evidence of oil not observed in bucket; red brown sediment settled to the top of the spoils in the bucket	0	90
A-100	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	0	100
A-110	12	9	1 sheen approximately 1.5 cm in diameter, less than 5% sheen coverage	Sheens up to approximately 2 cm in diameter, less than 5% sheen coverage	0	110
A-120	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	0	120
A-130	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	0	130
A-140	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	0	140
A-150	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	0	150
A-160	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 60% coverage	Evidence of oil not observed in bucket	0	160
A-170	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 60% coverage	Evidence of oil not observed in bucket	0	170

Notes:
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3. Coordinates are reported in feet.
4. Trenches were excavated at 10-foot intervals along the transect.
5. mm = millimeters
6. cm = centimeters
7. Observations:

- Evidence of oil not observed
- Sheen
- 1 to 5 particles of oil
- 6 to 10 particles of oil
- 11 to 20 particles of oil
- 21 to 100 particles of oil
- Greater than 100 particles of oil

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Transect B

Test Pit ID	Diameter (inches)	Depth (inches)	Field Team Observation - Test Pit	Field Team Observation - Spoils in Bucket	X Coordinate	Y Coordinate
B-30	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	30
B-40	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	40
B-50	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	50
B-60	12	9	1 sheen 1.5 cm in diameter, less than 5% sheen coverage	Evidence of oil not observed in bucket	15	60
B-70	12	9	Evidence of oil not observed in test pit	3 particles of oil up to 1 mm in diameter, silver sheen up to 6.5 cm in diameter, approximately 10% sheen coverage	15	70
B-80	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	80
B-90	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	90
B-100	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	100
B-110	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	110
B-120	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	120
B-130	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	130
B-140	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 10% coverage	Evidence of oil not observed in bucket	15	140
B-150	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	150
B-160	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	160
B-170	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	170
B-180	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	15	180
B-190	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 30% coverage	Evidence of oil not observed in bucket	15	190
B-200	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 40% coverage	Evidence of oil not observed in bucket	15	200

Notes:
1. Test pits were excavated on July 10, 2007.
2. Depths are approximate values.
3. Coordinates are reported in feet.
4. Trenches were excavated at 10-foot intervals along the transect.
5. mm = millimeters
6. cm = centimeters
7. Observations:

- Evidence of oil not observed
- Sheen
- 1 to 5 particles of oil
- 6 to 10 particles of oil
- 11 to 20 particles of oil
- 21 to 100 particles of oil
- Greater than 100 particles of oil

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Transect C

Test Pit ID	Diameter (inches)	Depth (inches)	Field Team Observation - Test Pit	Field Team Observation - Spoils in Bucket	X Coordinate	Y Coordinate
C-10	12	9	Evidence of oil not observed in test pi	Evidence of oil not observed in bucket	30	10
C-20	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	20
C-30	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	30
C-40	12	9	Evidence of oil not observed in test pit, surface runoff flowing over test pit during evaluation	1 silver sheen approximately 7.5 cm in diameter, less than 5% sheen coverage	30	40
C-50	12	9	Evidence of oil not observed in test pit	3 silver sheens up to 5 mm in diameter, less than 5% sheen coverage	30	50
C-60	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	60
C-70	12	9	Evidence of oil not observed in test pit, surface runoff flowing over test pit during evaluation	1 particle of oil 1 mm in diameter with silver sheen radiating out up to 5 mm long and less than 2 mm wide, less than 5% sheen coverage	30	70
C-80	12	9	Evidence of oil not observed in test pit	1 silver sheen approximately 7.5 cm wide and 10 cm long , less than 5% sheen coverage	30	80
C-90	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	90
C-100	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	100
C-110	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	110
C-120	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	120
C-130	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	130
C-140	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 25% coverage	Evidence of oil not observed in bucket; organic "scum" observed on surface of water covering spoils with approximately 25% coverage	30	140
C-150	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 20% coverage	Evidence of oil not observed in bucket; organic "scum" observed on surface of water covering spoils with approximately 10% coverage	30	150
C-160	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	160
C-170	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	170
C-180	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	180
C-190	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	190
C-200	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	30	200

Notes:
1. Test pits were excavated on July 10, 2007.
2. Depths are approximate values.
3. Coordinates are reported in feet.
4. Trenches were excavated at 10-foot intervals along the transect.
5. mm = millimeters
6. cm = centimeters
7. Observations:

- Evidence of oil not observed
- Sheen
- 1 to 5 particles of oil
- 6 to 10 particles of oil
- 11 to 20 particles of oil
- 21 to 100 particles of oil
- Greater than 100 particles of oil

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Transect D

Test Pit ID	Diameter (inches)	Depth (inches)	Field Team Observation - Test Pit	Field Team Observation - Spoils in Bucket	X Coordinate	Y Coordinate
D-20	12	9	Evidence of oil not observed in test pit	1 particle of oil 1 mm in diameter with sheen radiating out up to 2 mm in diameter, less than 5% sheen coverage	45	20
D-30	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 75% coverage	2 particles of oil less than 1 mm in diameter with sheen radiating out approximately 4 mm, less than 5% sheen coverage	45	30
D-40	12	9	Evidence of oil not observed in test pit	Approximately 25 particles of oil up to 2 mm in diameter with sheen radiating out up to 2.5 cm, approximately 5% sheen coverage	45	40
D-50	12	9	2 particles of oil 2 mm in diameter with sheen radiating out up to 2 cm in diameter	1 particle of oil 2 mm in diameter, silver sheen up to 5 cm in diameter, 10% sheen coverage	45	50
D-60	12	9	2 particles of oil less than 1 mm in diameter with silver sheen emanating off of them up to 5 mm in diameter	Approximately 40 particles of oil up to 3 mm in diameter with rainbow sheen radiating out up to 5 mm in diameter, approximately 20% sheen coverage	45	60
D-70	12	9	2 particles of oil less than 1 mm in diameter with silver sheen radiating out of them up to 3 mm in diameter	Evidence of oil not observed, possibly very weathered or inorganic (breaks up to the touch) sheen observed up to 1.5 cm in diameter, approximately 5% inorganic sheen coverage	45	70
D-80	12	9	2 particles of oil less than 2 mm in diameter with sheen radiating out approximately 12.5 cm long and 1.5 cm wide, less than 5% sheen coverage	Evidence of oil not observed in bucket	45	80
D-90	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	45	90
D-100	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket; organic "scum" observed on surface of water covering spoils with approximately 25% coverage	45	100
D-110	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	45	110
D-120	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	45	120
D-130	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	45	130
D-140	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	45	140
D-150	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	45	150
D-160	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	45	160
D-170	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	45	170
D-180	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	45	180
D-190	12	9	Evidence of oil not observed in test pit, surface runoff flowing over test pit during evaluation	Evidence of oil not observed in bucket	45	190

Notes:
1. Test pits were excavated on July 10, 2007.
2. Depths are approximate values.
3. Coordinates are reported in feet.
4. Trenches were excavated at 10-foot intervals along the transect.
5. mm = millimeters
6. cm = centimeters
7. Observations:

	Evidence of oil not observed
	Sheen
	1 to 5 particles of oil
	6 to 10 particles of oil
	11 to 20 particles of oil
	21 to 100 particles of oil
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Transect E

Test Pit ID	Diameter (inches)	Depth (inches)	Field Team Observation - Test Pit	Field Team Observation - Spoils in Bucket	X Coordinate	Y Coordinate
E-10	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket; organic "scum" observed on surface of water covering spoils with approximately 5% coverage	60	10
E-20	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	20
E-30	12	9	Evidence of oil not observed in test pit, surface runoff flowing over test pit during evaluation	Sheen up to 2 mm in diameter, less than 5% sheen coverage	60	30
E-40	12	9	Evidence of oil not observed in test pit, surface runoff flowing over test pit during evaluation	1 particle of oil 2 mm in diameter, sheens up to 1.5 cm in diameter, less than 5% silver sheen coverage	60	40
E-50	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket; organic "scum" observed on surface of water covering spoils with approximately 10% coverage	60	50
E-60	12	9	2 particles of oil each 2 mm in diameter with rainbow sheen radiating out 4 cm, less than 5% sheen coverage	Evidence of oil not observed in bucket	60	60
E-70	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	70
E-80	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	80
E-90	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	90
E-100	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	100
E-110	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	110
E-120	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	120
E-130	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	130
E-140	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 10% coverage	Evidence of oil not observed in bucket	60	140
E-150	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket; organic "scum" observed on surface of water covering spoils with approximately 40% coverage	60	150
E-160	12	9	Test pit dry, evidence of oil not observed on sediment in test pit	Evidence of oil not observed in bucket; organic "scum" observed on surface of water covering spoils with approximately 40% coverage	60	160
E-170	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	170
E-200	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket; organic "scum" observed on surface of water covering spoils with approximately 50% coverage	60	200

Notes:
1. Test pits were excavated on July 10, 2007.
2. Depths are approximate values.
3. Coordinates are reported in feet.
4. Trenches were excavated at 10-foot intervals along the transect.
5. mm = millimeters
6. cm = centimeters
7. Observations:

- Evidence of oil not observed
- Sheen
- 1 to 5 particles of oil
- 6 to 10 particles of oil
- 11 to 20 particles of oil
- 21 to 100 particles of oil
- Greater than 100 particles of oil

APPENDIX D
LEISURE SHORES TEST PIT LOCATIONS AND DESCRIPTIONS
B120 RELEASE
BUZZARDS BAY, MASSACHUSETTS

Transect F

Test Pit ID	Diameter (inches)	Depth (inches)	Field Team Observation - Test Pit	Field Team Observation - Spoils in Bucket	X Coordinate	Y Coordinate
F-10	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 50% coverage	Evidence of oil not observed in bucket	75	10
F-20	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 25% coverage	Evidence of oil not observed in bucket	75	20
F-30	12	9	Evidence of oil not observed in test pit, surface runoff flowing over test pit during evaluation	Evidence of oil not observed in bucket; organic "scum" observed on surface of water covering spoils with less than 5% coverage	75	30
F-40	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket; organic "scum" observed on surface of water covering spoils with less than 5% coverage	75	40
F-50	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	75	50
F-60	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	75	60
F-70	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket, less than 5% inorganic (breaks up to the touch) sheen up to 5 cm in diameter	75	70
F-80	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	75	80
F-90	12	9	Approximately 5% silver sheen coverage, 1 stringer up to 2.5 cm wide and 10 cm long	Evidence of oil not observed in bucket	75	90
F-100	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	75	100
F-110	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	75	110
F-120	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	75	120
F-130	12	9	2 particles of oil up to 1 mm in diameter, silver sheen up to 2.5 cm in diameter, less than 5% sheen coverage	1 particle of oil less than 1 mm in diameter, silver sheens stringers up to 2.5 cm long and 2mm wide, less than 5% silver sheen coverage	75	130
F-140	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	75	140
F-150	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	75	150
F-160	12	9	Approximately 0.5" of water in test pit, evidence of oil not observed on surface of water or on the sediment in test pit	Evidence of oil not observed in bucket	75	160
F-170	12	9	Approximately 0.5" of water in test pit, evidence of oil not observed on surface of water or on the sediment in test pit	Evidence of oil not observed in bucket	75	170
F-190	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	75	190
F-200	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with less than 5% coverage	Evidence of oil not observed in bucket	75	200

Notes:
1. Test pits were excavated on July 10, 2007.
2. Depths are approximate values.
3. Coordinates are reported in feet.
4. Trenches were excavated at 10-foot intervals along the transect.
5. mm = millimeters
6. cm = centimeters
7. Observations:
   - Evidence of oil not observed
   - Sheen
   - 1 to 5 particles of oil
   - 6 to 10 particles of oil
   - 11 to 20 particles of oil
   - 21 to 100 particles of oil
   - Greater than 100 particles of oil

APPENDIX D
LEISURE SHORES TEST PIT LOCATIONS AND DESCRIPTIONS
B120 RELEASE
BUZZARDS BAY, MASSACHUSETTS

Transect G

Test Pit ID	Diameter (inches)	Depth (inches)	Field Team Observation - Test Pit	Field Team Observation - Spoils in Bucket	X Coordinate	Y Coordinate
G-10	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	90	10
G-20	12	9	Evidence of oil not observed in test pit, surface runoff flowing over test pit during evaluation	Evidence of oil not observed in bucket	90	20
G-30	12	9	Evidence of oil not observed in test pit, surface runoff flowing over test pit during evaluation	Evidence of oil not observed in bucket	90	30
G-40	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	90	40
G-50	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	90	50
G-60	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	90	60
G-70	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	90	70
G-80	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	90	80
G-90	12	9	Evidence of oil not observed in test pit	1 particle of oil 1 mm in diameter with silver sheen stringer radiating out approximately 5 cm long, less than 5% sheen coverage	90	90
G-100	12	9	Evidence of oil not observed in test pit	1 silver sheen approximately 3 mm in diameter, less than 5% sheen coverage	90	100
G-110	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	90	110
G-120	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	90	120
G-130	12	9	Silver sheen stringers up to 2.5 cm long and up to 3 mm wide, less than 5% sheen coverage.	Evidence of oil not observed in bucket	90	130
G-140	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	90	140
G-150	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	90	150
G-160	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	90	160
G-170	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	90	170
G-190	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket; organic "scum" observed on surface of water covering spoils with less than 5% coverage	90	190
G-200	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 75% coverage	Evidence of oil not observed in bucket	90	200

Notes:
1. Test pits were excavated on July 10, 2007.
2. Depths are approximate values.
3. Coordinates are reported in feet.
4. Trenches were excavated at 10-foot intervals along the transect.
5. mm = millimeters
6. cm = centimeters
7. Observations:

Evidence of oil not observed
Sheen
1 to 5 particles of oil
6 to 10 particles of oil
11 to 20 particles of oil
21 to 100 particles of oil
Greater than 100 particles of oil

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Transect H

Test Pit ID	Diameter (inches)	Depth (inches)	Field Team Observation - Test Pit	Field Team Observation - Spoils in Bucket	X Coordinate	Y Coordinate
H-50	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	105	50
H-60	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 50% coverage	Evidence of oil not observed in bucket; organic "scum" observed on surface of water covering spoils with approximately 50% coverage	105	60
H-70	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	105	70
H-80	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	105	80
H-90	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	105	90
H-100	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	105	100
H-110	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	105	110
H-120	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	105	120
H-130	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	105	130
H-140	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	105	140
H-150	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	105	150
H-160	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 80% coverage	Evidence of oil not observe din bucket	105	160
H-170	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	105	170
H-190	12	9	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 80% coverage	Evidence of oil not observed in bucket; organic "scum" observed on surface of water covering spoils with approximately 70% coverage	105	190
H-200	12	9	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	105	200

Notes:
1. Test pits were excavated on July 10, 2007.
2. Depths are approximate values.
3. Coordinates are reported in feet.
4. Trenches were excavated at 10-foot intervals along the transect.
5. mm = millimeters
6. cm = centimeters
7. Observations:

Evidence of oil not observed
Sheen
1 to 5 particles of oil
6 to 10 particles of oil
11 to 20 particles of oil
21 to 100 particles of oil
Greater than 100 particles of oil

APPENDIX D
LEISURE SHORES TEST PIT LOCATIONS AND DESCRIPTIONS
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Vertical Distribution

Test Pit ID	Diameter (inches)	Depth (inches)	Field Team Observation - Test Pit	Field Team Observation - Spoils in Bucket	X Coordinate	Y Coordinate
A-70	12	2	Large particles of oil interconnected in an area 7.5 cm in diameter and in an area 5 cm in diameter, an oiled rock was located adjacent to the test pit	Sheens up to 2 mm in diameter, approximately 10% sheen coverage	0	70
A-70	12	4	Large particles of oil interconnected in an area 7.5 cm in diameter, approximately 20 other particles up to 1 cm in diameter with rainbow sheen radiating out	More than 200 particles of oil up to 5 mm in diameter with rainbow sheen radiating out	0	70
A-70	12	6	Approximately 35 particles of oil, 3 up to 2 cm in diameter, most of them approximately 1 mm in diameter with rainbow sheen radiating out	Approximately 10 particles of oil up to 1 mm in diameter, approximately 20% rainbow sheen coverage	0	70
D-60	12	2	Evidence of oil not observed in test pi	Evidence of oil not observed in bucke	45	60
D-60	12	4	Evidence of oil not observed in test pi	Evidence of oil not observed in bucke	45	60
D-60	12	6	2 particles of oil less than 1 mm in diameter with rainbow sheen stringer radiating out approximately 5 mm wide and 5 cm long	7 particles of oil up to 1 mm in diameter with rainbow sheen stringers radiating out up to 18 cm long and 5 mm wide	45	60
E-60	12	2	Evidence of oil not observed in test pit; organic "scum" observed on surface of test pit with approximately 50% coverage	Evidence of oil not observed in bucket	60	60
E-60	12	4	Evidence of oil not observed in test pit	Evidence of oil not observed in bucket	60	60
E-60	12	6	Evidence of oil not observed in test pit	3 sheens up to 3 mm in diameter, less than 5% sheen coverage	60	60

Notes:
1. Test pits were excavated on July 10, 2007.
2. Depths are approximate values.
3. Coordinates are reported in feet.
4. Trenches were excavated at 10-foot intervals along the transect.
5. mm = millimeters
6. cm = centimeters
7. Observations:

- Evidence of oil not observed
- Sheen
- 1 to 5 particles of oil
- 6 to 10 particles of oil
- 11 to 20 particles of oil
- 21 to 100 particles of oil
- Greater than 100 particles of oil

APPENDIX E

HEALTH AND SAFETY PLAN

SITE-SPECIFIC HEALTH & SAFETY PLAN

for

Project Name:
Bouchard B120 Oil Spill
Buzzards Bay, Massachusetts

Project Location:
Brandt Island West (Leisure Shores and Howard's Beach)
Mattapoisett, Massachusetts

Project Number: 3871-002

Prepared by:

GeoInsight, Inc.
5 Lan Drive, Suite 200
Westford, MA 01886

Reviewed by:

Health &
Safety Officer: _____ Date: _____
Christene A. Binger

Project Manager: _____ Date: _____
Kevin D. Trainer

Field Team Leader/
On-Site Safety Officer: _____ Date: _____
Kristin E. Zeman

Field Personnel: (1) _____ Date: _____

(2) _____ Date: _____

(3) _____ Date: _____

(4) _____ Date: _____

(5) _____ Date: _____

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SITE-SPECIFIC HEALTH & SAFETY PLAN

1.0 INTRODUCTION

The purpose of this Site Health & Safety Plan (HASP) is to define personal protection and monitoring protocols to be followed during remedial activities at the Leisure Shores and Howard's Beach portions of Brandt Island West in Mattapoisett, Massachusetts (the site). This HASP was prepared according to the requirements of 29 CFR 1910.120. These requirements and protocols are applicable to GeoInsight, Inc. (GeoInsight) employees and visitors. GeoInsight personnel, contractors, subcontractors, and visitors will be informed of the site emergency procedures and potential safety hazards involved with the anticipated activities. Subcontractors will be solely responsible for the health and safety of their personnel and will prepare and enforce their own HASP, which will be, at a minimum, consistent with the provisions of this HASP. This HASP summarizes those hazards and identifies personal protective measures required for this site. This plan must be reviewed by personnel prior to entering the site, and an agreement to comply with the requirements specified in the plan must be signed.

GeoInsight does not guarantee the health and safety of any person entering this site. Due to the hazardous nature of this site, and the activity occurring thereon, it is not possible to discover, evaluate, and provide protection for all possible hazards that may be encountered. Strict adherence to the health and safety guidelines set forth herein will reduce, but not entirely eliminate, the potential for injury at this site. The health and safety guidelines in this plan were prepared specifically for GeoInsight and this site, and should not be used on any other site without prior review and evaluation by trained health and safety personnel.

2.0 BACKGROUND INFORMATION

2.1 GENERAL SITE INFORMATION

The site is located at the Leisure Shores and Howard's Beach portions of Brandt Island West in Mattapoisett, Massachusetts. Refer to Figure 1 for the location of the site. Brandt Island West consists of Howard's Beach and Leisure Shores that are located on the western portion of the segment. An approximately 1,500 foot causeway connects to Brandt Island. This segment consists of the western portion of the causeway and western portion of Brandt Island. Nasketucket bay is located to the southwest, an unnamed pond is located to the north, and Buzzards Bay is located to the south and southeast of the segment. The primary shoreline consists of rip rap seawalls, bulkheads, piers, docks, and pilings. Residents and visitors use the beaches located at Leisure Shores which is primarily a mixed sand and gravel with cobble shoreline. In general, people use these shorelines primarily for seasonal recreational activities, including sunbathing, swimming, fishing, walking, and boating. Figure 2 shows the proposed work area, which is located in the intertidal zone in areas of the Leisure Shores and Howard's Beach portions of Brandt Island West.

2.2 HISTORICAL INFORMATION

Portions of the intertidal zone at Leisure Shores and Howard's Beach were impacted by Number 6 (No. 6) fuel oil released from Bouchard Barge B120 on April 23, 2003. Cleanup operations removed most of the No. 6 fuel oil stranded in the shoreline, but small amounts of No. 6 fuel oil remain present at the site. The residual oil consists primarily of "flecks" of oil in the sediment, sheen, isolated tarballs, and limited areas of buried oily sediment. In general, the oil is soft and tacky to the touch. Small areas of sheen are often produced when oiled sediment is disturbed (i.e., excavating test pits/trenches, removing oiled sediment/cobbles).

2.3 ANTICIPATED ACTIVITIES

The proposed field activities consist of digging test pits and trenches and conducting visual inspections to further characterize the extent or residual oil, and to identify whether additional cleanup activities are warranted. If warranted, cleanup activities will include using hand tools and/or light equipment to remove residual oil. Post-cleanup visual inspections will also be conducted to evaluate the cleanup effectiveness. During the cleanup activities, residual pavement will be removed from oil-impacted portions of the intertidal zone using hand tools (e.g., gardening trowels) and potentially light equipment (i.e., small excavator). Rocks with residual oil splatter will be either cleaned in-place using hand tools (e.g., wire brushes) or removed for disposal. It is anticipated that the characterization and cleanup activities will be initiated in September 2007.

A subcontractor may assist GeoInsight during cleanup activities. A representative from ENTRIX, Inc., the environmental consulting firm assisting with the Natural Resource Damage Assessment process, will be present during the cleanup and post-cleanup inspection activities.

Work will be conducted during the low tide “window” (i.e., approximately three hours before and after low tide).

3.0 POTENTIAL ON-SITE HAZARDS

3.1 OVERALL HAZARD

( ) High ( ) Moderate
(X) Low ( ) Unknown

3.2 HAZARD TYPES

1) Physical Hazards (check all that apply):

X	Slips, Trips, Falls	X	Direct Sunlight
	Electrical Equipment		Poisonous Plants
	Traffic	X	Insects
	Open Excavations		Poisonous Animals
	Heavy Equipment		Noise Exposures
	Sharps		Underground Utilities
X	Cold/Heat Stress		Overhead Electric Lines
	Flammable Liquids		Other:
	Corrosive Liquids		Other:
X	Manual Lifting		Other:

2) Chemical Hazards

Potential chemical hazards identified based upon historical operations at the site resulted from a release of No. 6 fuel oil. Specific compounds of concern in media at the site are polynuclear aromatic hydrocarbons (PAH) that were likely derived from this source. Because the residual oil at this site is weathered and not volatile, the expected exposure pathway for these compounds is dermal exposure.

3) Biological Hazards (check all that apply):

	Raw Sewage/Septic Wastes		Viruses
	Medical Waste		Bacteria
	Bloodborne Pathogens	X	Biting/Stinging Insects

3.3 WASTE TYPES

Petroleum Hydrocarbons

Health Hazard: Causes eye irritation, skin irritation including redness, and a burning sensation. Prolonged or repeated contact can cause drying and cracking of the skin leading to dermatitis (inflammation). Harmful effects from skin adsorption are not expected.

First Aid:
Eye – if irritation or redness develops, immediately flush eyes with clean water for 5 minutes.
Skin – wipe material from skin, remove contaminated clothing, wash affected area with mild soap and water.
For all other issues or if symptoms persist, seek medical attention.

Polynuclear Aromatic Hydrocarbons (PAHs)
Health Hazard: Causes eye, skin, and respiratory tract irritation, other symptoms include headache, nausea, confusion, and excitement. Chronic ingestion may result in gastrointestinal and kidney pain. Some PAHs are carcinogenic.

First Aid:
Eye – if irritation or redness develops, immediately flush eyes with clean water for 5 minutes.
Skin – wipe material from skin, remove contaminated clothing, wash affected area with mild soap and water.
For all other issues or if symptoms persist, seek medical attention.

4.0 MONITORING PROTOCOL/INSTRUMENTATION

Because residual oil is present in small isolated areas and is typically weathered and often hardened on the surface, this oil does not contain sufficient volatiles to adversely affect ambient air, field monitoring of VOCs in ambient air will not be conducted.

Ambient air temperature will be monitored periodically and work periods will be adjusted to provide adequate rest and cool down periods for personnel. Personnel will be checked periodically for symptoms of heat-related problems. If high temperatures cause personnel to exhibit signs of heat stroke, heat exhaustion or dehydration, then field activities will be immediately halted and personnel will seek shelter and consumable liquids.

5.0 PERSONAL PROTECTIVE EQUIPMENT (PPE)

5.1 LEVELS OF PROTECTION

Level D

Tasks: *Cleanup oversight and visual inspections*

Modified Level D (based upon potential for dermal contact)

Tasks: C*leanup activities.*

Level C

Tasks: *None*

5.2 PPE FOR SPECIFIED PROTECTION LEVELS

LEVEL D:
Work clothes
Steel toe workboots
Safety glasses with side shields
:

MODIFIED LEVEL D:
Level D PPE and;
Tyvek outer suit (spun olefin)
Chemical resistant boots or disposable, protective boot covers
Nitrile gloves

6.0 PERSONAL DECONTAMINATION

On-site personnel will employ some measure of decontamination when leaving the work zone. PPE to be decontaminated may include boots, chemical resistant gloves, and other reusable equipment or materials that may have contacted affected media. Actual decontamination procedures will ultimately depend upon the level of protection, field screening results, and the results of ambient air monitoring. Typical decontamination procedures for the anticipated work levels are summarized below.

Level D:
Wash hands prior to eating and remove or clean work boots before returning to office.

Modified Level D:
Segregated equipment drop, boot and glove wash/rinse, boot removal, Tyvek suit removal, outer glove removal, field wash. Disposable items that become contaminated will be segregated and disposed.

Cleaning Solution:
Mixture of "Alconox" and potable water.
Rinse: potable water.

Field personnel can use alcohol-based or detergent "hand wipes" to remove oil adhered to fingers.

7.0 WORK ZONE DELINEATION

7.1 GENERAL

Work areas at the facility will vary with the type of work or task being conducted. The Site Health and Safety Officer (SHSO) will delineate the work zones prior to the start of work and document them in the project field logbook. The SHSO will use the following descriptions to determine the work zones.

7.2 DESCRIPTION OF WORK ZONES

Support Zone

Support activities, such as equipment deliveries, preparation for site activities, and meetings with personnel unauthorized to enter work zones will be performed within the designated Support Zone. The Support Zone is located a safe distance away from work activities at the site. The exact location of this zone will vary depending on where the work is being performed at the site, but should remain at least 20 feet away from the Work Zone.

Decontamination Zone

The Decontamination Zone will be adjacent to, but separate from, the Support Zone. Final decontamination of personnel and equipment will take place within the Decontamination Zone, as necessary, to minimize relocation or spreading of impacted materials. Certain initial decontamination activities, such as removal of large quantities of debris from equipment, will be performed within exclusion zones to the extent practicable to minimize the amount of material brought into the Decontamination Zone.

Work Zone

The Work Zone (exclusion area) will depend on the type of work being performed. Localized Work Zones will include the immediate vicinity of drilling and excavation activities, remote monitoring wells, and surface water sampling locations. Persons not directly involved in the site activities will be required to remain at least 20 feet away from the perimeter of an established Work Zone.

8.0 ON-SITE ORGANIZATION AND CONTROL

8.1 ORGANIZATION

Project Manager (*Kevin Trainer*):
Responsible for allocation of resources for the implementation of the HASP; assignment of personnel who meet the medical and training requirements of the HASP; and allocation of resources to resolve health and safety issues identified during the performance of project tasks.

GeoInsight Corporate Health and Safety Officer (CHSO: *Michael Redding*):
The CHSO is responsible for the overall coordination of the GeoInsight Corporate Health and Safety Program. The CHSO should be informed of any exceedence of a PEL, injuries, near misses, and general health and safety concerns.

GeoInsight Office Health and Safety Officer (OHSO: *Christene Binger*):
The OHSO is responsible to the CHSO in matters related to health and safety, including investigation of health and safety related incidents at a site.

Site Health and Safety Officer (*Kristin Zeman*):
Responsible to the GeoInsight CHSO in matters related to health and safety the on site, including development and implementation of the site-specific HASP; conducting site safety meetings and site-specific training of site personnel; investigation of health and safety related incidents at the site; accompanying authorized visitors on site tours; and updating and modifying this HASP, as necessary, if site or environmental conditions change. GeoInsight is not responsible for public present at the site, municipal employees, or contractors.

8.2 SITE SECURITY

The field team leader will control access to the site during GeoInsight site activities. GeoInsight personnel present at the site will be recorded in the field log of daily activities. The site HSO or field team leader will be responsible for enforcing adherence to work zone delineations described above.

8.3 COMMUNICATION

Because of the relatively small size of the site and the level of protection typically used, voice and hand signals will likely be sufficient for the anticipated work activities.

8.4 MEDICAL MONITORING REQUIREMENTS

GeoInsight personnel who perform on-site activities where there is potential for exposure to hazardous substances must have completed a medical monitoring examination no earlier than 12 months prior to commencing these site activities. The examination must comply with requirements specified by 29 CFR 1910.120 (f). A certification, signed by a medical doctor, must indicate work limitations, if any, placed on the individual. The certification must also

specify that the individual is capable of working while wearing respiratory protection equipment. The certification must be in the corporate health and safety file before the individual may begin on-site activities.

8.5 TRAINING REQUIREMENTS

Personnel who perform activities where there is potential for exposure to hazardous substances must have completed an initial Hazardous Waste Operations and Emergency Response (HAZWOPER) course or an annual refresher course of the initial training, within 12 months prior to the beginning of site activities. The HAZWOPER training must comply with requirements outlined in 29 CFR 1910.120 (e). A certificate indicating successful completion of this training must be in GeoInsight's project file for GeoInsight personnel.

Subcontractors performing excavation and trenching work are required to have a "competent person," as defined by OSHA and requiring OSHA-specified training, on-site while this type of work is in progress.

The site HSO will hold daily meetings with field personnel before work commences to discuss safety issues. During the meeting, personnel working on-site will be provided access to this HASP. The HASP will be reviewed and discussed and questions answered. Personnel who will work on-site will sign this HASP (or, in the case of subcontractor personnel, the subcontractor's HASP) to indicate that they have reviewed and understand site conditions and agree to comply with HASP requirements. The site HSO will record the daily meetings on the form titled "Daily Safety Meeting Form," a copy of which is attached in Appendix A.

9.0 GENERAL HEALTH AND SAFETY REQUIREMENTS

9.1 STANDING ORDERS

The following standing orders apply to the activities anticipated to be performed at the site during the project:

1. No eating, drinking, chewing tobacco or toothpicks, application of cosmetics, storing food or food containers or open flames permitted within the Work Zone.

2. No smoking within the perimeter of the site.

3. Wear the appropriate level of protection as defined in this HASP.

4. Wear latex or nitrile surgical gloves and use a physical barrier when providing emergency first aid or CPR.

5. Work must be restricted to daylight hours only.

6. Maintain close contact with your work partner while in the Exclusion Zone.

7. Persons with beards and mustaches that interfere with respirator fit and seal will not be allowed to work at activities requiring Level C or Level B protection.

8. Report any unusual conditions to the field team leader immediately.

9.2 INCIDENT REPORTING

Any incident or accident involving field personnel must be documented. Situations covered by this requirement include, but are not limited to, fires, explosions, exposures above the Permissible Exposure Limit (PEL) or Short Term Exposure Limit (STEL), illness and injuries, however minor. The site HSO or field team leader must be notified immediately so that first aid requirements can be assessed and transportation to the nearest medical treatment facility provided, if required. Reports of the incident must be provided to the GeoInsight Corporate HSO within 24 hours of the incident and includes completion of the accident reporting form in Appendix B.

10.0 APPENDED INFORMATION

The following documents (attached in Appendix B) provide additional information regarding issues that are considered applicable to anticipated site activities:

1. PPE Checklist
2. Heat Stress and Heat Stroke Prevention Guidelines
3. Emergency First Aid

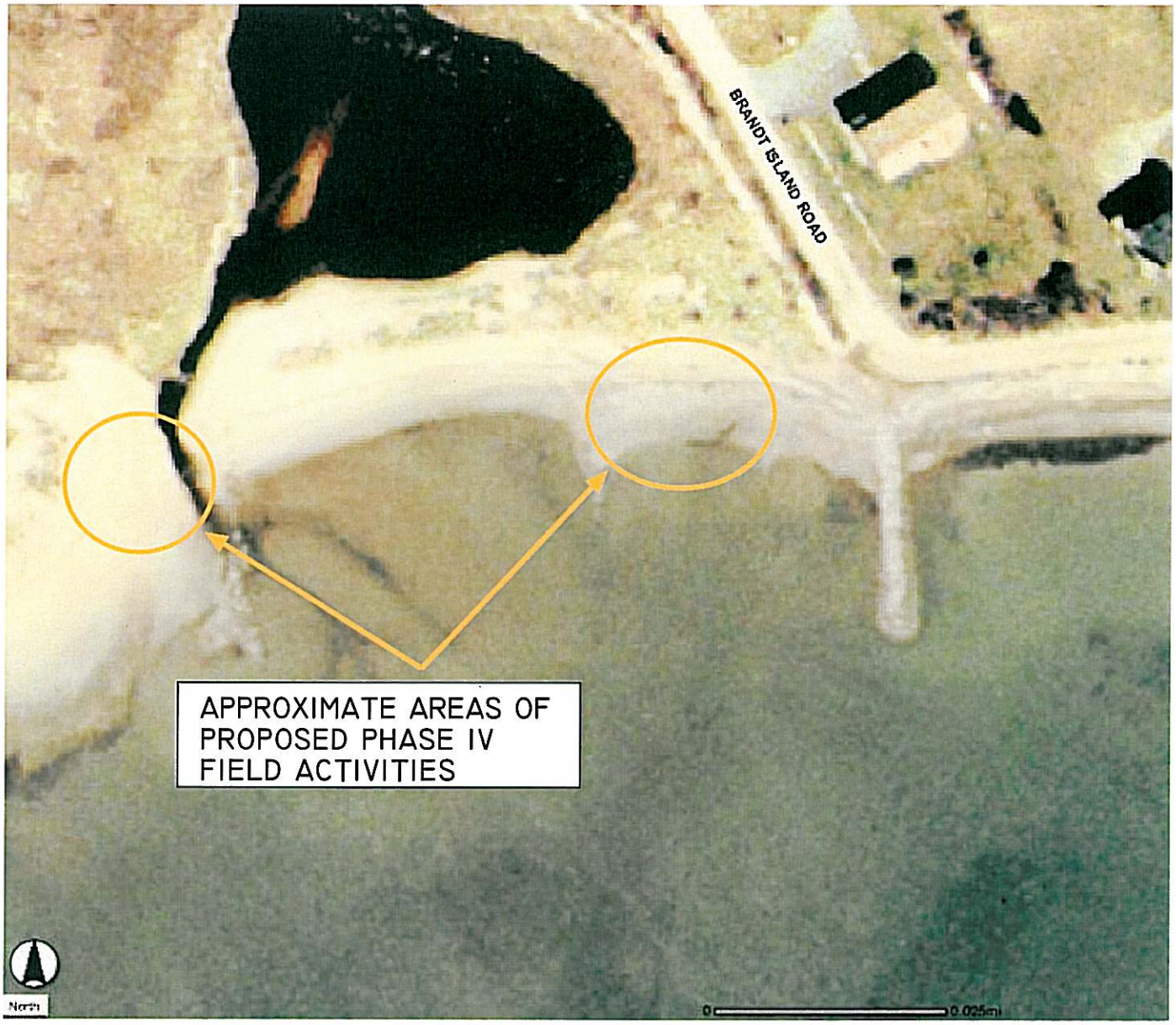
0 250 500 1,000 Feet

N

GEO Insight INC.

ENTRIX

W1F-02
Brandt Island West
Bouchard B No. 120 Oil Spill
Buzzards Bay, MA



SOURCE:

MASSACHUSETTS GEOGRAPHIC INFORMATION SYSTEMS (MASSGIS)

2001 AERIAL PHOTOGRAPH

NORTH

PROJECT: B120 OIL SPILL			
LOCATION: WIF-02 MATTAPOISETT, MASSACHUSETTS			
TITLE: APPROXIMATE LOCATIONS OF PROPOSE PHASE IV FIELD ACTIVITIES			
DESIGNED: KEZ	DRAWN: KEZ	CHECKED: KDT	APPROVED: MJW
SCALE: AS SHOWN	DATE: 08/03/07	FILE NO.: 3871-OILING	PROJECT NO.: 3871-002

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FIGURE NO.: 4

11.0 EMERGENCY INFORMATION/REFERENCES

EMERGENCY PHONE NUMBERS (for the Town of Fairhaven)

AMBULANCE: 911
POLICE: 911
FIRE: 911

POISON CONTROL CENTER: 1-800-562-8236

HOSPITAL *St Luke's Hospital*
101 Page Street
New Bedford, MA
508-997-1515

HOSPITAL ROUTE: *(Refer to attached map and directions*)

OTHER CONTACTS	PHONE NUMBERS
GeoInsight Inc.	978-692-1114
Christene Binger – OHSO (cell)	617-803-8108
Kevin Trainer – Project Manager (cell)	978-790-5294

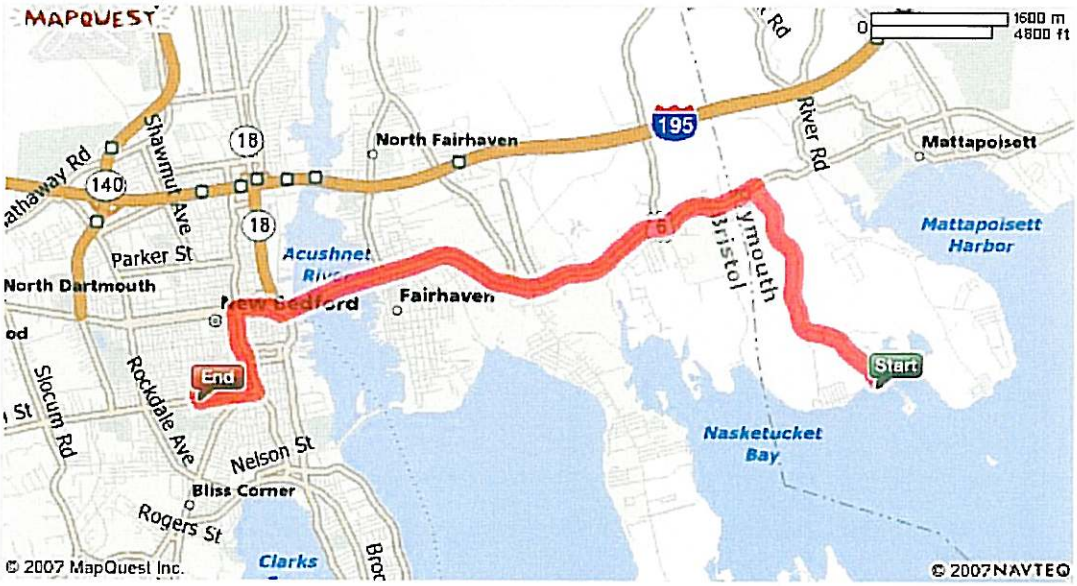
MAPQUEST

Start: **190 Brandt Island Rd**
Mattapoisett, MA 02739-1789, US

End: **101 Page St**
New Bedford, MA 02740-3464, US

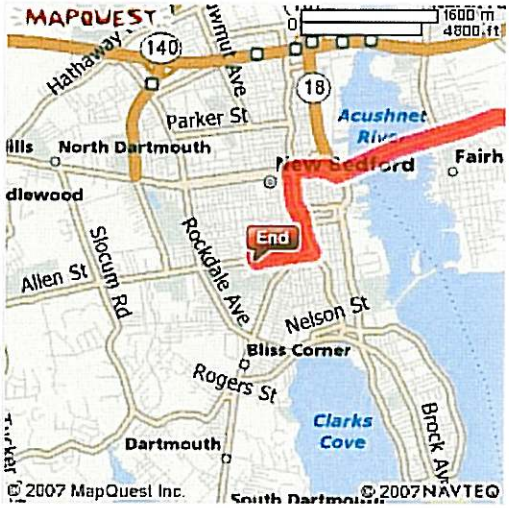
Notes:
Only text visible within note field will print.

Directions		Distance
Total Est. Time: 21 minutes	**Total Est. Distance:** 8.62 miles	
START	**1:** Start out going NORTHWEST on BRANDT ISLAND RD toward DAVID ST.	2.2 miles
WEST 6	**2:** Turn LEFT onto FAIRHAVEN RD / US-6. Continue to follow US-6 W.	4.9 miles
	3: Turn LEFT onto COUNTY ST.	0.7 miles
	4: Turn RIGHT onto ALLEN ST.	0.4 miles
	5: Turn RIGHT onto PAGE ST.	<0.1 miles
END	**6:** End at **101 Page St** New Bedford, MA 02740-3464, US	
Total Est. Time: 21 minutes	**Total Est. Distance:** 8.62 miles	



Start:
190 Brandt Island Rd
Mattapoisett, MA 02739-1789, US

End:
101 Page St
New Bedford, MA 02740-3464, US



APPENDIX A

DAILY SAFETY MEETING AND EMPLOYEE INJURY REPORT FORMS

GeoInsight®
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Daily Safety Meeting Form

Weather Conditions:_____ Site Location:_____

Site Conditions:_____ GeoInsight Proj. #:_____

Date:_____

TOPICS DISCUSSED (Please Check Ones That Apply)

___ Health & Safety Emergency Numbers
___ Hospital Locations
___ Work Areas Posted
___ Designated Smoking Areas
___ Confined Space Entry
___ Slip, Trip, & Fall
___ Manual Lifting
___ Utility Locations
___ Mechanical Hazards
___ Bonding & Grounding
___ Heavy Equipment
___ Traffic Hazards
___ Heat or Cold Stress
___ Air Compressor
___ Lock Out/Tag Out
___ Excavation Hazards
___ Venting/Inerting

PERSONAL PROTECTIVE EQUIPMENT

___ Eye Protection
___ Hearing Protection
___ Gloves
___ Respiratory Protection
___ Engineering Controls
___ Hard Hat
___ Protective Clothing
___ Retrieval System
___ Backup System

ADDITIONAL COMMENTS:_____
_____
_____

MEETING ATTENDED BY THE FOLLOWING:

_____ _____

_____ _____

_____ _____

This meeting was conducted by: _____ on _____.

Tracking #_____

EMPLOYEE INJURY REPORT

Please answer all questions completely. This report must be forwarded to the Corporate Heath and Safety Officer within 24 hours of the injury.

Injured's Name_____ Sex_____ S.S.#_____ Birth date_____

Home Address_____

City_____ State_____ Zip_____ Phone _____

Job Title_____ Hire Date_____ Hourly wage_____

Number of days worked per week:_____

Date of Incident_____ Time_____ Time reported_____ To whom?_____

Project Name_____ Project #_____ Time work began_____

Has employee returned to work? ___ Yes ___ No When?_____ Did the employee miss scheduled work? _____

At what position?_____

Medical attention: ____ None ____ First aid on-site ____Doctor's office ____Hospital ER ____Hospitalized

Doctor/Hospital name_____ Address_____

Witness name(s)_____ Statement attached? ___ Yes ___ No

Nature of injury or Illness_____ Exact body part_____

Job assignment at time of incident_____

Was this his/her regular occupation? If not, state regular occupation._____

Describe incident_____

_____

Physical address where injury occurred._____

What was the employee doing just before the incident occurred?_____

What object or substance directly harmed the employee?_____

What unsafe physical condition or unsafe act caused the incident?_____

_____

What corrective action has been taken to prevent recurrence?_____

_____

Group Manager	_____	_____	_____
	Print	Signature	Date
Project Manager	_____	_____	_____
	Print	Signature	Date
Site Safety Officer	_____	_____	_____
	Print	Signature	Date

Comments on incident and corrective action_____

_____

Manager's name	_____	_____	_____
	Print	Signature	Date

Concur with action taken? ___ Yes ___ No Remarks_____

_____

_____

Reviewed by Corporate H&S Officer

Name_____	_____	_____	
	Print	Signature	Date

Completed by_____ Title_____ Phone_____ Date _____

APPENDIX B

GUIDELINES AND ADDITIONAL INFORMATION FOR SITE-SPECIFIC ACTIVITIES

PPE INSPECTION CHECKLIST

Before using personal protective clothing (PPE), inspect each article for defects, according to the checklist below.

Determine that appropriate clothing material is compatible with the anticipated chemical and exposure conditions of the project and its required tasks.

Visually inspect for:
X imperfect seams;
X non-uniform coatings;
X tears; and
X defective zippers and other closures.
Hold up to the light and check for pinholes.

X Flex the product and inspect it for:
X cracks; and
X any defects which indicate that the product=s shelf life has been exceeded.
X If the product has been used previously, inspect it inside and out for signs of chemical attack.
For example:
X discoloration;
X swelling; or
X stiffness.

Before using gloves, pressurize each one with air to make sure that it has no holes. Also, visually inspect the gloves for the following defects:

X imperfect seams;
X tears; and
X non-uniform coating.

While performing work, be alert for evidence of PPE failure, breakthrough, or excessive wear-and-tear, as described below.

X Evidence of chemical attack such as discoloration, swelling, stiffening and softening.
Keep in mind, however, that chemical permeation can occur without any visible effects.
X Closure failure.
X Tears.
X Punctures.
X Seam discontinuities.

HEAT STRESS AND HEAT STROKE PREVENTION GUIDELINES

Because protective outerwear decreases ventilation, some fieldwork in hot weather increases the potential for heat-related casualties. Thus, field personnel must be alert to the symptoms of heat stress and must respond to them promptly and effectively.

1.0 PREVENTION OF HEAT STRESS AND HEAT STROKE

One of the major causes of heat stress and stroke is the depletion of body fluids. On-site there should be enough potable fluids available to prevent this. Personnel should replace water and salts lost in perspiration. Salts can be replaced either by consuming a 0.1% salt solution, more heavily salted foods, or commercial products such as Gatorade. Commercial products may be the preferred choice for personnel on low sodium diets.

A work schedule should be established so that the majority of work will be performed early in the day, before ambient air temperatures peak.

No work should be permitted at any site under Level B protection without prior approval of the Corporate HSO. A work/rest guideline will be implemented for personnel who wear Level B protection, as follows:

Ambient Temperatures	Maximum Work Time Between 15 min. Rest Periods
Above 90ºF	1/2 hour
80ºF to 90ºF	1 hour
70ºF to 80ºF	2 hours
60ºF to 70ºF	3 hours
<60ºF	4 hours

Adequate time will be allowed for personnel to cool down. This may require shifts of workers during field activities.

2.0 HEAT STRESS MONITORING

One of both of the following techniques should be used to determine each site worker's ability to recuperate from working under hot conditions. Personnel wearing protective clothing should be monitored first when the ambient temperature is 70ºF or above. They should be monitored with increasing frequency as the ambient temperature increases or if they are slow to recover after a rest work period. If temperatures exceed 80ºF, workers must be monitored for heat stress after each work period.

X Heart Rate - Heart rate (HR) should be measured by the radial pulse for 30 seconds, as early as possible during the resting period. The HR at the beginning of the rest period should not exceed 110 beats per minute. If the HR is higher, the next work period should be shortened by 10 minutes (or 33%), while the length of the rest period stays the same. If the pulse rate is 110 beats per minute at the beginning of the next rest period, the following work period should be shortened by 33%.

X Body Temperature - Body temperature should be measured orally with a clinical thermometer as early as possible during the resting period. Oral Temperature (OT) at the beginning of the rest period should not exceed 99ºF. If it does, the next work period should be shortened by 10 minutes (or 33%), while the length of the rest period stays the same. If, however, the OT exceeds 99ºF at the beginning of the next work period, the following work period should be further shortened by 33%. OT should be measured again at the end of the rest period to make sure that it has dropped below 99ºF. It the OT exceeds 100.6ºF, the individual should be removed from their chemical protective clothing.

Good Hygienic standards must be maintained by frequent change of clothing and daily showering. Clothing should be permitted to dry during rest periods. Personnel who notice skin problems should immediately consult medical processionals.

3.0 HEAT EXHAUSTION - IDENTIFICATION AND TREATMENT

3.1 Symptoms

Heat Exhaustion usually begins with muscular weakness, dizziness, nausea, and a staggering gait. Vomiting is frequent. The bowels may move involuntarily. The victim may be very pale, his/her skin may be clammy, may perspire profusely and may faint unless he/she lies down. This may pass, but sometimes it remains as heat stress progresses to heat stroke, a life-threatening condition.

3.2 First Aid

Immediately remove the victim to the Contamination Reduction Zone, preferably in a shady or cool area with good air circulation. Remove all protective outer wear. Call a physician. Treat the victim for shock:

X Make the victim lie down;

X Raise the victim’s feet 6 to 12 inches above his/her head; and

X Keep the victim warm but loosen all clothing.

If the victim is conscious, it may be helpful to administer sips of a salt water solution: one teaspoon of salt to ton 8-ounce glass of water. Transport the victim to a medical facility as soon as possible.

4.0 HEAT STROKE - IDENTIFICATION AND TREATMENT

4.1 Symptoms

This is the most serious of heat casualties because the body overheats to potentially life-threatening levels. Body temperatures of heat stroke victims may rise rapidly to between 107 to 110^{o}F. First, the victim may experience headache, dizziness, and nausea. Almost always the victim's skin will be dry, red, and hot. Unconsciousness follows quickly and death is imminent if exposure continues. Onset of heat stroke usually is sudden.

4.2 First Aid

Immediately evacuate the victim to a cool, shady area in the Contamination Reduction Zone. Remove all protective outerwear and all personal clothing. Lay the victim on the back with the head and shoulder slightly elevated. It is imperative that the body temperature be lowered immediately. Apply cold, wet towels, ice bags, etc. to the head, sponge off the bare skin with cool water or rubbing alcohol, if available, or even place the victim in a tub of cool water. The main objective is to cool the victim without chilling him/her. Give no stimulants. Transport the victim to a medical facility as soon as possible.

EMERGENCY FIRST AID PROCEDURES

Red Cross first aid procedures should be used to treat personnel who are injured while working in both contaminated and uncontaminated areas. If the injured person can be moved, he/she should be taken outside of the work area or the Contamination Reduction Zone, as appropriate. Any contaminated clothing should be removed, if possible, and fist aid should be administered. Depending on the nature and severity of the injury, fist aid should continue during transport to a medical facility and until treatment is obtained.

For most injuries, the earliest measures, described below, will be among the most important to effectively administer first aid.

- First, survey the scene. Is the injured person in imminent danger or further injury if left in place until his/her injuries can be assessed? Are others in the area in danger of injury?

- Perform a primary survey of injuries to determine if emergency first aid measures are needed (e.g., as in the case of severe bleeding, etc.) before moving the victim outside the work area or to the Contamination Reduction Zone. Determine if it is safe for those other than emergency medical personnel to move the victim and, if so, which methods are appropriate to avoid compounding his/her injuries. Request emergency medical services (EMS) if the primary survey indicates that this is necessary because of the nature or severity of the injuries.

- Perform a secondary survey of the victim's injuries. Determine if there are signs and symptoms of internal bleeding, imminent shock, or other potentially life-threatening conditions. If such symptoms are suspected, request EMS if this has not already been done, then immediately administer appropriate first aid until medical treatment is obtained.

- Control any external bleeding using direct pressure. Elevate injured or bleeding areas, unless a fracture is suspected. Monitor the victim's airway, breathing, and level of consciousness frequently. Reassure the victim and keep him/her warm and as comfortable as possible. Even if symptoms of shock are not apparent, keep in mind that onset of shock may be sudden. Take measures to avoid shock immediately should it occur. If the victim vomits, place him/her on his/her side, and clear the airway if it becomes obstructed.

- To reduce the risk of being infected by the victim when attempting to control bleeding, the caregiver should use some sort of barrier (e.g., several dressings, latex gloves, or a piece of plastic wrap). Hands should always be washed thoroughly after first aid is given. If there is more than one victim, a caregiver should always change gloves or wash his/her hands after touching one victim and before touching another (or any other individual) to prevent crossing-contamination.

APPENDIX F

NOTICE OF DOCUMENT AVAILABILITY

GeoInsight®
Environmental Strategy & Engineering
Practical in Nature

August 2, 2007

GeoInsight Project 3871-002
delivered by Certified Mail

Chief Municipal Officer
Town Hall
16 Main Street
Mattapoisett, Massachusetts 02739

RE: Notice of Document Availability
Phase IV Remedy Implementation Plan
Barge B120 Spill
Buzzards Bay, Massachusetts
Release Tracking Number (RTN) 4-17786

Dear Chief Municipal Officer:

In accordance with Public Notification requirements of the Massachusetts Contingency Plan (MCP; 310 CMR 40.1403), please accept this letter as notification that a Phase IV Remedy Implementation Plan to remediate a small amount of residual oil located at portions of Leisure Shores and Howard's Beach will be filed with and available for your review after August 3, 2007 at:

Massachusetts Department of Environmental Protection
Southeast Regional Office, Bureau of Waste Site Cleanup
20 Riverside Drive
Lakeville, Massachusetts 02347
Service Center: 508-946-2718
Fax: 508-946-2865
http://www.mass.gov/dep/about/region/serofile.htm

File reviews are conducted Tuesdays and Wednesdays from 9:00 a.m. to 11:30 a.m. and 2:00 p.m. to 4:30 p.m. (except state holidays). An electronic copy of this report will also be posted at www.buzzardsbay.org. Field activities are scheduled to be conducted in September 2007.

GeoInsight, Inc.
25 Sundial Ave., Suite 515 West
Manchester, NH 03103-7244
Tel (603) 314-0820
Fax (603) 314-0821
www.geoinsightinc.com

GeoInsight, Inc.
5 Lan Drive, Suite 200
Westford, MA 01886-3538
Tel (978) 692-1114
Fax (978) 692-1115

GeoInsight, Inc.
Corporate Ten Center
1781 Highland Ave., Suite 207
Cheshire, CT 06410-1254
Tel (203) 271-8036
Fax (203) 271-8038

We trust this information is sufficient for your files. Please contact me at (978) 692-1114 if you have questions regarding the Phase IV Remedy Implementation Plan.

Sincerely,
GEOINSIGHT, INC.

Kevin D. Trainer, C.P.G., P.G., LS.P.
Senior Project Geologist

cc: MADEP, SERO – Lakeville, Massachusetts
Mattapoisett Board of Health – Daniel C. Lee, Jr.
Richard J. Wozmak, P.E., P.H., L.S.P. – EnviroLogic LLC.