Paragon Analytics

Total Extractable Hydrocarbons (Diesel) Case Narrative

Cordilleran Compliance Services, Inc.

Rulison Area Well monitoring

Order Number - 0811110

1. This report consists of 2 water samples. The samples were received cool and intact by Paragon on 11/14/2008.

2. The water samples were extracted by adding hexane to the water sample and shaking the resulting two phase solution according to Paragon Analytics Standard Operating Procedure 603 Revision 10, which was developed at Paragon Analytics. The hydrocarbons partition into the hexane layer, which is then removed for analysis.

3. The extracts were then analyzed using GC with a DB-5.625 capillary column and a flame ionization detector (FID) according to Paragon Analytics Standard Operating Procedure 406 Revision 13 generally based on SW-846 Method 8000B and Method 8015B. The procedures are based on this general method because SW-846 does not have a specific method for total extractable petroleum hydrocarbons (TEPH) or diesel range organics. The only true modification from this method is that TEPH is a multicomponent mixture and is quantitated by summing the entire range, rather than individual peaks. All positive results were quantitated using the responses from the initial calibration curve using the external standard technique. Also, a confirmation column is not used, because the analyte is a multicomponent mixture and the specific carbon range of the peaks detected is specified on the individual sample reporting forms.

4. All initial and continuing calibration criteria were met.

5. The method blank associated with this project was below the MDL for diesel range organics.

6. All laboratory control sample and laboratory control sample duplicate recoveries and RPDs were within the acceptance criteria.

7. Matrix spikes and matrix spike duplicates could not be performed because of insufficient sample. A laboratory control sample and laboratory control sample duplicate were performed instead.

8. All samples were extracted and analyzed within the established holding time.

9. All surrogate recoveries were within the acceptance criteria.

10. The samples were analyzed at a dilution in order to bring the target analyte within the calibration range of the instrument. The reporting limits have been adjusted accordingly.

11. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in Paragon Analytics Standard Operating Procedure 939 Revision 3. Whenever manual integrations are performed, before and after chromatograms of the peak that was manually integrated are included in the report along with the reason why the re-integration was necessary.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, Paragon Analytics certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Mindy Norton — 12.1.08
Mindy Norton
Organics Primary Data Reviewer
Date

Joe Nolte — 12.2.08
Organics Final Data Reviewer
Date

Paragon Analytics
Data Qualifier Flags
Fuels

G: **This flag indicates that a pattern resembling gasoline was detected in this sample.**

D: **This flag indicates that a pattern resembling diesel was detected in this sample.**

M: **This flag indicates that a pattern resembling motor oil was detected in this sample.**

C: **This flag indicates that a pattern resembling crude oil was detected in this sample.**

4: **This flag indicates that a pattern resembling JP-4 was detected in this sample.**

5: **This flag indicates that a pattern resembling JP-5 was detected in this sample.**

H: **This flag indicates that the fuel pattern was in the heavier end of the retention time window for the analyte of interest.**

L: **This flag indicates that the fuel pattern was in the lighter end of the retention time window for the analyte of interest.**

Z: **This flag indicates that a significant fraction of the reported result did not resemble the patterns of any of the following petroleum hydrocarbon products:**
gasoline
JP-8
diesel
mineral spirits
motor oil
Stoddard solvent
bunker C

Multiple flags may be used to indicate the presence of more than one product or component.

Paragon Analytics, Inc.
Data Qualifier Flags
Chromatography and Mass Spectrometry

U or ND:	**This flag indicates that the compound was analyzed for but not detected.**
J:	**This flag indicates an estimated value. This flag is used as follows : (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); (3) when the data indicate the presence of a compound that meets the identification criteria, and the result is less than the RL but greater than the MDL; and (4) the reported value is estimated.**
B:	**This flag is used when the analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user. This flag shall be used for a tentatively identified compound (TIC) as well as for a positively identified target compound.**
E:	**This flag identifies compounds whose concentration exceeds the upper level of the calibration range.**
A:	**This flag indicates that a tentatively identified compound is a suspected aldol-condensation product.**
X:	**This flag indicates that the analyte was diluted below an accurate quantitation level.**
***:**	**This flag indicates that a spike recovery is outside the control criteria.**
+:	**This flag indicates that the relative percent difference (RPD) exceeds the control criteria.**

Paragon Analytics

Sample Number(s) Cross-Reference Table

Paragon OrderNum: 0811110
Client Name: Cordilleran Compliance Services, Inc.
Client Project Name: Rulison Area Well monitoring
Client Project Number:
Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
A11-15D	0811110-1		WATER	13-Nov-08	8:40
A11-15B	0811110-2		WATER	13-Nov-08	8:30

Paragon Analytics
A Division of DataChem Laboratories, Inc.

225 Commerce Drive Fort Collins, CO 80524
800-443-1511 or (970) 490-1511 (970) 490-1522 Fax

Accession Number (LAB ID) 081110

Chain-of-Custody Date 11/13/08 Page 1 of 1

Originator: Retain pink copy!

Project Name/No.: Rulison Area Well Monitoring Sampler(s): TPD Turnaround (circle one) **Standard** or **Rush** (Due _____) Dispose: **Date** _____ or **Return to Client**

Report To: James Hix
Phone: (303) 237.2072
Fax: (303) 237 2659
E-mail: jameshix@cordcomp.com
Company: Cordilleran Compliance Services, Inc.
Address: ~~826 21½ Road~~
4690 Table Mountain Dr. #200
Golden, CO 80403

Circle method (right); provide additional information as needed (comments).

Sample ID	Date	Time *	Lab ID	Matrix	Preservative (indicate type... HCl, etc.)	No. of Containers	VOCs SW8260B	BTEX ~~(only)~~ MTBE SW8021B	SVOCs SW8270C	OC Pesticides SW8081A	PCBs SW8082	Herbicides SW8151A	Explosives SW8330	TCLP Organics SW1311 SW8260B 8270C 8081A 8151A	TCLP Metals SW1311 Hg SW6010B 7470	Total Metals by ICP Hg SW6010B 7470 7471 E200.7	Dissolved Metals by ICP Hg SW6010B 7470 E200.7	Total Metals by ICP/MS SW6020A E200.8	Dissolved Metals by ICP/MS SW6020A E200.8	Hexavalent Chromium SW7196A Alkaline Digest? Y / N	Inorganic Anions SW9056 E300.0 (specify in comments)	Solids: Total E160.3 TDS E160.1 TSS E160.2	pH SW9040B SW9045C	TPH SW8015B GRO DRO (circle one or both)	Gross Alpha / Beta SW9310 E900.0	Actinides by Paragon SOP Pu / U / Am / Th / Cm / ___	Tritium E906.0	Total Alpha-Emitting Radium SW9315 E903.0	Radium 226 E903.1	Radium 228 SW9320 E904.0	Strontium 90 (Total RadioSr) D5811-00	Gamma Isotopes E901.1	Radon 222 SM7510Rn	RSK	NH_3, NO_x, T-Phos
A11-15D	11/13/08	0840	1	W	HNO3, HCl, H2SO4	17		X										X			X			X	X		X			X	X	X
A11-15B	11/13/08	0830	2	W	"	17		X										X			X			X	X		X			X	X	X

* Time Zone: EST CST MST PST **Matrix Key:** O = oil, S = soil, NS = non-soil solid, W = water, L = liquid, E = extract, F = filter

Comments:

Relinquished By: (1)	Relinquished By: (2)
Signature	Signature
Printed Name T.M. DOBRANSKY	Printed Name
Date 11/13/08 Time 1600	Date Time
Company CORDILLERAN COMPLIANCE	Company
Received By: (1)	**Received By:** (2)
Signature	Signature
Printed Name JOackland	Printed Name
Date 11/14/08 Time 0950	Date Time
Company PA	Company

Form 202r6.xls (6/16/06)

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CONDITION OF SAMPLE UPON RECEIPT FORM **Paragon Analytics**

Client: Cordillieran Workorder No: 0811110

Project Manager: LS Initials: CO Date: 11-14-08

1.	Does this project require any **special handling** in addition to standard Paragon procedures?		YES	(NO)
2.	Are custody **seals on shipping containers** intact?	NONE	(YES)	NO
3.	Are Custody seals on **sample containers** intact?	NONE	(YES)	NO
4.	Is there a **COC (Chain-of-Custody) present** or other representative documents?		(YES)	NO
5.	Are the **COC and bottle labels complete and legible**?		(YES)	NO
6.	Is the **COC in agreement** with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7.	Were **airbills / shipping documents** present and/or removable?	DROP OFF	(YES)	NO
8.	Are all aqueous **samples requiring preservation preserved correctly?** (excluding volatiles)	N/A	YES	(NO)
9.	Are all aqueous **non-preserved samples pH 4-9**?	N/A	(YES)	NO
10.	Is there **sufficient sample** for the requested analyses?		(YES)	NO
11.	Were all samples placed in the **proper containers** for the requested analyses?		(YES)	NO
12.	Are all samples within **holding times** for the requested analyses?		(YES)	NO
13.	Were all sample containers received **intact**? (not broken or leaking, etc.)		(YES)	NO
14.	Are all samples requiring **no** headspace (**VOC, GRO, RSK/MEE, Rx CN/S, radon**) headspace free? **Size of bubble:** V < green pea ___ > green pea	N/A	YES	(NO)
15.	Do perchlorate LCMS-MS samples **have** headspace? (at least 1/3 of container required)	(N/A)	YES	NO
16.	Were samples checked for and free from the presence of **residual chlorine?** (Applicable when PM has indicated samples are from a chlorinated water source; note if field preservation with sodium thiosulfate was not observed.)	(N/A)	YES	NO
17.	Were the samples **shipped on ice**?		(YES)	NO
18.	Were cooler temperatures **measured at 0.1-6.0°C**? **IR gun used*:** (#2) #4	RAD ONLY	(YES)	NO

Cooler #:	1							
Temperature (°C):	3.4							
No. of custody seals on cooler:	1							
DOT Survey/ Acceptance Information — External µR/hr reading:	14							
Background µR/hr reading:	13							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

Headspace Bottle # (1) 1, 2, 3, 6, 7, 9

2 - 1, 2

Slime layer in -1-15 & -1-16 (Organic?)

If applicable, was the client contacted? (YES) / NO / NA Contact: J. Hix Date/Time: ___

Project Manager Signature / Date: 11/12/08

*IR Gun #2: Oakton, SN 29922500201-0066 *IR Gun #4: Oakton, SN 2372220101-0002

CONDITION OF SAMPLE UPON RECEIPT FORM **Paragon Analytics**

Client: Cordillieran Workorder No: 0811110

Project Manager: LS Initials: AO Date: 11-14-08

Additional Information:

Was the laboratory directed to proceed with the analysis of any samples yielding the presence of residual chlorine? **YES / NO / NA**

NOTE:

No pH adjustments shall be made without prior consent of Project Manager. After pH adjustments, hold metals and radchem samples ≥ 24 hrs. before analysis.

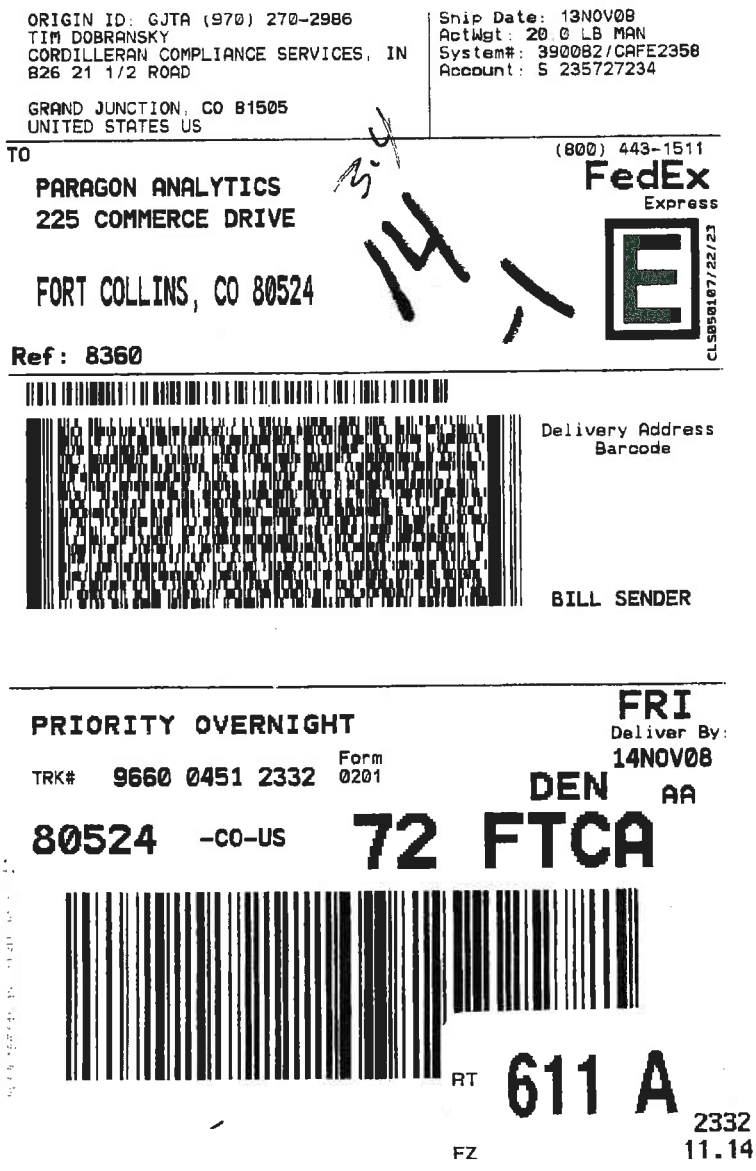
Was the pH of any sample adjusted by the laboratory? **YES** (See Table below) / **NO**

pH Excursion:

Paragon Sample ID	Client Sample ID	Initial pH	Final pH	Reagent Used	Volume Added (mL)	Lot No. of Reagent	Requested Analysis	Initials / Date / Time
-1-12		7	1.6	conc HNO3	1mL			Ow 11/14/08 1030
-1-15		↓	↓	↓	↓			↓
-1-16								
-1-17								
-2-12								
-2-15								
-2-16								
-2-17		↓	↓	↓	↓			↓

If applicable, was the client contacted? **YES / NO / NA** Contact: _____ Date/Time: _____

Project Manager Signature / Date: 11/17/08


ORIGIN ID: GJTA (970) 270-2986
TIM DOBRANSKY
CORDILLERAN COMPLIANCE SERVICES, IN
826 21 1/2 ROAD
GRAND JUNCTION, CO 81505
UNITED STATES US
Ship Date: 13NOV08
ActWgt: 20.0 LB MAN
System#: 390082/CAFE2358
Account: S 235727234
TO
(800) 443-1511
FedEx
Express
PARAGON ANALYTICS
225 COMMERCE DRIVE
FORT COLLINS, CO 80524
14, 1
Ref: 8360
CLS050107/22/23
Delivery Address
Barcode
BILL SENDER
PRIORITY OVERNIGHT
FRI
Deliver By:
14NOV08
TRK# 9660 0451 2332
Form
0201
DEN
AA
80524 -CO-US
72 FTCA
RT
611 A
2332
FZ
11.14

Analytical Results

Diesel Range Organics

Method SW8015MB

Method Blank

Lab Name: Paragon Analytics
Work Order Number: 0811110
Client Name: Cordilleran Compliance Services, Inc.
ClientProject ID: Rulison Area Well monitoring

Lab ID: EX081118-4MB

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 18-Nov-08
Date Analyzed: 20-Nov-08
Prep Method: METHOD

Prep Batch: EX081118-4
QCBatchID: EX081118-4-1
Run ID: HCD081120-3A
Cleanup: NONE
Basis: N/A
File Name: F3F32996

Sample Aliquot: 160 ml
Final Volume: 4 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	DF	Result	Reporting Limit	Result Qualifier	EPA Qualifier
68334-30-5	Diesel Range Organics	1	0.5	0.5	U	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
84-15-1	O-TERPHENYL	1.09		1.25	87	57 - 132

Data Package ID: *HCD0811110-1*

Diesel Range Organics

Method SW8015MB

Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0811110
Client Name: Cordilleran Compliance Services, Inc.
ClientProject ID: Rulison Area Well monitoring

Field ID: A11-15D
Lab ID: 0811110-1

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 13-Nov-08
Date Extracted: 18-Nov-08
Date Analyzed: 20-Nov-08
Prep Method: METHOD

Prep Batch: EX081118-4
QCBatchID: EX081118-4-1
Run ID: HCD081120-3A
Cleanup: NONE
Basis: As Received
File Name: F3F32999

Sample Aliquot: 160 ml
Final Volume: 4 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
68334-30-5	Diesel Range Organics	2	67	1	L	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
84-15-1	O-TERPHENYL	1.06		1.25	84	57 - 132

The chromatogram for Diesel Range Organics indicates the presence of hydrocarbons in the range of C7-C18.

Data Package ID: *HCD0811110-1*

Diesel Range Organics

Method SW8015MB

Sample Results

Lab Name: Paragon Analytics
Work Order Number: 0811110
Client Name: Cordilleran Compliance Services, Inc.
ClientProject ID: Rulison Area Well monitoring

Field ID: A11-15B
Lab ID: 0811110-2

Sample Matrix: WATER
% Moisture: N/A
Date Collected: 13-Nov-08
Date Extracted: 18-Nov-08
Date Analyzed: 20-Nov-08
Prep Method: METHOD

Prep Batch: EX081118-4
QCBatchID: EX081118-4-1
Run ID: HCD081120-3A
Cleanup: NONE
Basis: As Received
File Name: F3F33000

Sample Aliquot: 160 ml
Final Volume: 4 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Reporting Limit	Result Qualifier	EPA Qualifier
68334-30-5	Diesel Range Organics	2	100	1	L	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
84-15-1	O-TERPHENYL	1.09		1.25	87	57 - 132

The chromatogram for Diesel Range Organics indicates the presence of hydrocarbons in the range of C7-C28.

Data Package ID: *HCD0811110-1*

Supporting QA/QC Data

Surrogate Summary for Diesel Range Organics

Method SW8015MB

Lab Name: Paragon Analytics
Work Order Number: 0811110
Client Name: Cordilleran Compliance Services, Inc.
ClientProject ID: Rulison Area Well monitoring

PrepBatchID: EX081118-4
QC Batch ID: EX081118-4-1
Date Extracted: 11/18/2008

Surrogate Compound	Control Limits Lower	Upper
o-terphenyl	57	132

Lab ID	Client Sample ID	Date Collected	Date Received	% Recovery
EX081118-4MB	XXXXXXX	11/18/2008	11/14/2008	87
EX081118-4LCS	XXXXXXX	11/18/2008	11/14/2008	88
EX081118-4LCSD	XXXXXXX	11/18/2008	11/14/2008	87
0811110-1	A11-15D	11/13/2008	11/14/2008	84
0811110-2	A11-15B	11/13/2008	11/14/2008	87

Data Package ID: *HCD0811110-1*

Diesel Range Organics

Method SW8015MB

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: Paragon Analytics
Work Order Number: 0811110
Client Name: Cordilleran Compliance Services, Inc.
ClientProject ID: Rulison Area Well monitoring

Lab ID: EX081118-4LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 11/18/2008
Date Analyzed: 11/20/2008
Prep Method: METHOD

Prep Batch: EX081118-4
QCBatchID: EX081118-4-1
Run ID: HCD081120-3A
Cleanup: NONE
Basis: N/A
File Name: F3F32997

Sample Aliquot: 160 ml
Final Volume: 4 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
68334-30-5	Diesel Range Organics	5	4.89	0.5		98	36 - 150%

Lab ID: EX081118-4LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 11/18/2008
Date Analyzed: 11/20/2008
Prep Method: METHOD

Prep Batch: EX081118-4
QCBatchID: EX081118-4-1
Run ID: HCD081120-3A
Cleanup: NONE
Basis: N/A
File Name: F3F32998

Sample Aliquot: 160 ml
Final Volume: 4 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
68334-30-5	Diesel Range Organics	5	4.91	0.5		98	20	0

Surrogate Recovery LCS/LCSD

CASNO	Target Analyte	Spike Added	LCS % Rec.	LCS Flag	LCSD % Rec.	LCSD Flag	Control Limits
84-15-1	O-TERPHENYL	1.25	88		87		57 - 132

Data Package ID: *HCD0811110-1*

Prep Batch ID: EX081118-4

Start Date: 11/18/08
Start Time: 14:20
Prep Analyst: Sean Collins
End Date: 11/18/08
End Time: 14:30
Concentration Method: NONE
Extract Method: METHOD
Initial Volume Units: ml
Final Volume Units: ml
Batch Created By: sjc
Date Created: 11/18/08
Time Created: 15:30
Validated By: sjc
Date Validated: 11/18/08
Time Validated: 15:01

Comments:

QC Batch ID: EX081118-4-1

Lab ID	QC Type	Field ID	Matrix	Date Collected	Initial Wt/Vol	Final Wt/Vol	Cleanup Method	Cleanup DF	Order Number
EX081118-4	MB	XXXXXX	WATER	XXXXXX	160	4	NONE	1	0811110
EX081118-4	LCS	XXXXXX	WATER	XXXXXX	160	4	NONE	1	0811110
EX081118-4	LCSD	XXXXXX	WATER	XXXXXX	160	4	NONE	1	0811110
0811110-1	SMP	A11-15D	WATER	11/13/2008	160	4	NONE	1	0811110
0811110-2	SMP	A11-15B	WATER	11/13/2008	160	4	NONE	1	0811110

In generating this benchsheet, prep analyst states that all aspects of sample preparation as set forth in the appropriate PAR SOP's (including Kuderna-Danish temperatures, proper flow settings on the N-evap, and final volumes) were properly adhered to (unless otherwise noted herein).

QC Types

CAR	Carrier reference sample	DUP	Laboratory Duplicate
LCS	Laboratory Control Sample	LCSD	Laboratory Control Sample Duplicat
MB	Method Blank	MS	Laboratory Matrix Spike
MSD	Laboratory Matrix Spike Duplicate	REP	Sample replicate
SMP	Field Sample	SYS	Sample Yield Spike

Initial Calibration Summary

Paragon Analytics

Inst. ID: FUELS3

C:\HPCHEM\5\METHODS\D111208.M
Calibration Date:11/12/08

1 = F3F32866.D 2 = F3F32867.D 3 = F3F32868.D 4 = F3F32869.D
5 = F3F32870.D 6 = F3F32871.D 7 = 8 =

	Calibration Factors								
Compounds	1	2	3	4	5	6	7	8	
TEPH	4621.57	4684.28	4844.43	4818.68	5769.21	9243.50			
o-terphenyl	5026.92	5090.10	5185.69	4930.10	5018.60	5157.50			

	Ave. CF	%RSD	Corr.	Curve fit	Linear curve info			
Compounds			r2	type	slope	y-int	x*x	
TEPH	5663.6	31.8	1.000	Linear	4599.013	141417.51	0.00	
o-terphenyl	5068.2	1.9	0.019	Average	5068.152	0.00	0.00	

	Calibration Level (µg/ml)								
Compounds	1	2	3	4	5	6	7	8	
TEPH	5000	2000	1000	500	100	20			
o-terphenyl	500	200	100	50	10	2			

EB 11/11/08

Calibration Verification Summary

Paragon Analytics

Sample: 500ug/mL DRO ICV

Data File #1: C:\HPCHEM\5\DATA\11122008\F3F32872.D Column #1: DB-5.625

	Column #1				Col. #1	Col. #1
COMPOUND	Exp. RT (min)	Found RT (min)	Dev (min)	Nom Conc µg/ml	Conc µg/ml	%D
TEPH	15.000	15.000	0.000	500	475	5

EB 11/7/08

Calibration Verification Summary

Paragon Analytics

Sample: 1000ug/mL DRO CCV

Data File #1: C:\HPCHEM\5\DATA\11202008\F3F32995.D Column #1: DB-5.625

	Column #1				Col. #1	Col. #1
COMPOUND	Exp. RT (min)	Found RT (min)	Dev (min)	Nom Conc µg/ml	Conc µg/ml	%D
o-terphenyl	15.660	15.660	0.000	100	89	11
TEPH	15.000	15.000	0.000	1000	984	2

EB 11/21/08

Calibration Verification Summary

Paragon Analytics

Sample: 1000ug/mL DRO CCV2

Data File #1: C:\HPCHEM\5\DATA\11202008\F3F33007.D Column #1: DB-5.625

	Column #1				Col. #1	Col. #1
COMPOUND	Exp. RT (min)	Found RT (min)	Dev (min)	Nom Conc µg/ml	Conc µg/ml	%D
o-terphenyl	15.660	15.660	0.000	100	96	4
TEPH	15.000	15.000	0.000	1000	1024	2

EB 1/21/09

Supporting Raw Data

Instrument Name Fuels 3

Paragon Analytics

Logbook No./Page 369308

Sequence File: C:\HPCHEM\ 5 \SEQUENCE\ 111220008.S Date Analyzed 11/12 - 11/15/08 Operator SKS GC Method TEPH 12

Data Path: C:\HPCHEM\ 5 \DATA\ 111220008 Analytical Method 8015m PRO SOP 406 Rev. 13

Hexane Lot 080013 Dichloromethane Lot NA **Reviewed by / date** _____ Form 531r2.xls (9/14/2001)

Vial	Data File	Method	Sample Name		Comments	IT?
1	F3F32865	D111208	HYDROCARBON MIX		25µl STO71213-5 + 475µL HEXANE	NO
2	F3F32866	D111208	5000ug/mL DRO ICAL		STO80516-1	
3	F3F32867	D111208	2000ug/mL DRO ICAL		400µL STO80516-1 + 600µL HEXANE	
4	F3F32868	D111208	1000ug/mL DRO ICAL		200µL STO80516-1 + 800µL HEXANE	
5	F3F32869	D111208	500ug/mL DRO ICAL		100µL STO80516-1 + 900µL HEXANE	
6	F3F32870	D111208	100ug/mL DRO ICAL		20µL STO80516-1 + 980µL HEXANE	
7	F3F32871	D111208	20ug/mL DRO ICAL		4µL STO80516-1 + 996µL HEXANE	
8	F3F32872	D111208	500ug/mL DRO ICV	PASS	100µL STO80825-7 + 900µL HEXANE	
9	F3F32873	D111208	EX081030-8MB			
10	F3F32874	D111208	EX081030-8LCS			
11	F3F32875	D111208	EX081030-8LCSD			
12	F3F32876	D111208	EX081029-6MB			
13	F3F32877	D111208	EX081029-6LCS			
14	F3F32878	D111208	EX081029-6LCSD			
15	F3F32879	D111208	0810235-12			
16	F3F32880	D111208	Hexane			
17	F3F32881	D111208	Hexane			
18	F3F32882	D111208	Hexane			
19	F3F32883	D111208	1000ug/mL DRO CCV1	PASS	200µL STO80516-1 + 800µL HEXANE	
20	F3F32884	D111208	0810235-2			
21	F3F32885	D111208	0810235-3			
22	F3F32886	D111208	0810235-5			
23	F3F32887	D111208	0810235-6			
24	F3F32888	D111208	0810235-7			
25	F3F32889	D111208	0810235-7MS			
26	F3F32890	D111208	0810235-7MSD			
27	F3F32891	D111208	0810235-10			
28	F3F32892	D111208	0810235-11			
29	F3F32893	D111208	0810235-18			
30	F3F32894	D111208	1000ug/mL DRO CCV2	PASS	200µL STO80516-1 + 800µL HEXANE	
31	F3F32895	D111208	0810235-16 2X			

11/17/08 SKS

CONTINUED ON NEXT PAGE

Instrument Name Fuels 3

Paragon Analytics

Logbook No./Page 369315

Sequence File: C:\HPCHEM\ 5 \SEQUENCE\ 11202008.S Date Analyzed 11/20/08 Operator SB GC Method TEPH 12

Data Path: C:\HPCHEM\ 5 \DATA\ 11202008 Analytical Method 8015M DRO SOP 406 Rev. 13

Hexane Lot 080013 Dichloromethane Lot N/A **Reviewed by / date** _____ Form 531r2.xls (9/14/2001)

Vial	Data File	Method	Sample Name	Comments	rr?
100	F3F32994	D111208	BLANK		NO
1	F3F32995	D111208	1000ug/mL DRO CCV	200µL STO81119-3 + 800µL HEXANE	
2	F3F32996	D111208	EX081118-4MB		
3	F3F32997	D111208	EX081118-4LCS		
4	F3F32998	D111208	EX081118-4LCSD		
5	F3F32999	D111208	0811110-1 2X	150µL SAMPLE + 150µL HEXANE	
6	F3F33000	D111208	0811110-2 2X	150µL SAMPLE + 150µL HEXANE	
7	F3F33001	D111208	HEXANE		
8	F3F33002	D111208	EX081119-1MB		
9	F3F33003	D111208	EX081119-1LCS		
10	F3F33004	D111208	EX081119-1LCSD		
11	F3F33005	D111208	0811116-2		
12	F3F33006	D111208	0811116-1		
13	F3F33007	D111208	1000ug/mL DRO CCV2	200µL STO81119-3 + 800µL HEXANE	
14	F3F33008	D111208	0811117-2		
15	F3F33009	D111208	0811117-1		
16	F3F33010	D111208	HEXANE		
17	F3F33011	D111208	1000ug/mL DRO CCV3	200µL STO81119-3 + 800µL HEXANE	

11/21/08

11/21/08

Calibration Raw Data

Quantitation Report

Data File : C:\HPCHEM\5\DATA\11122008\F3F32865.D Vial: 1
Acq On : 12 Nov 08 01:42 PM Operator: edb
Sample : HYDROCARBON MIX Inst : FUELS3
Misc : 25uL ST071213-5 + 475uL HEXANE Multiplr: 1.00
Quant Time: Nov 12 14:24 19108

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Wed Nov 12 12:55:51 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-terphenyl	0.00	0	N.D. µg/ml
	Recovery	=	0.00%
Target Compounds			
1) H TEPH	15.00	1493987	340.97 µg/ml

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

11/17/08

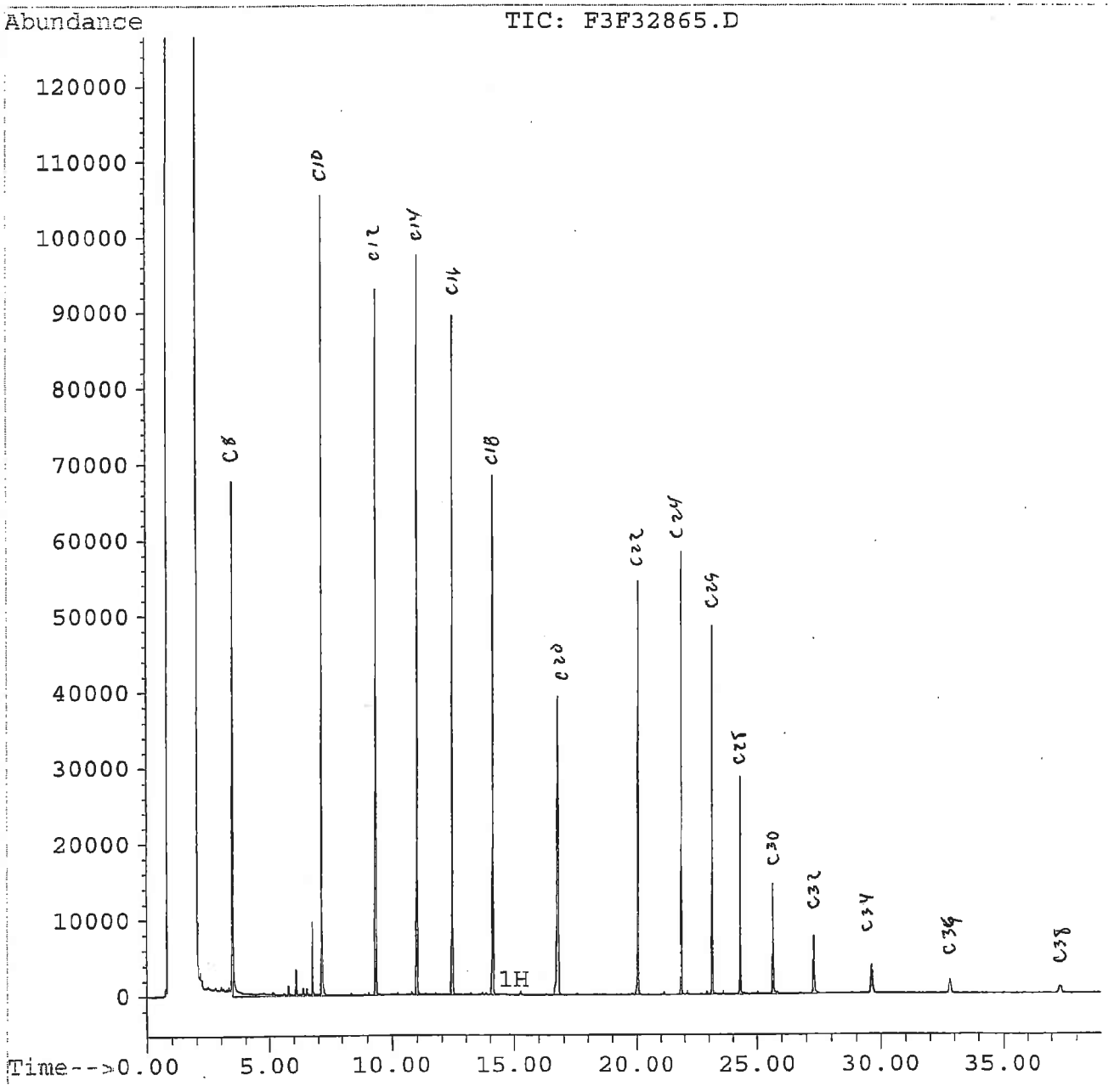
Quantitation Report

Data File : C:\HPCHEM\5\DATA\11122008\F3F32865.D
Acq On : 12 Nov 08 01:42 PM
Sample : HYDROCARBON MIX
Misc : 25uL ST071213-5 + 475uL HEXANE
Quant Time: Nov 12 14:24 19108

Vial: 1
Operator: edb
Inst : FUELS3
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Wed Nov 12 12:55:51 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID



Quantitation Report

Data File : C:\HPCHEM\5\DATA\11122008\F3F32866.D Vial: 2
Acq On : 12 Nov 08 02:29 PM Operator: edb
Sample : 5000ug/mL DRO ICAL Inst : FUELS3
Misc : ST080516-1 Multiplr: 1.00
Quant Time: Nov 12 15:13 19108

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Wed Nov 12 15:13:37 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-terphenyl	15.86f	2513462	500.00 µg/ml
	Recovery	= 1000.00%	
Target Compounds			
1) H TEPH	15.00	23107873	5000.00 µg/ml

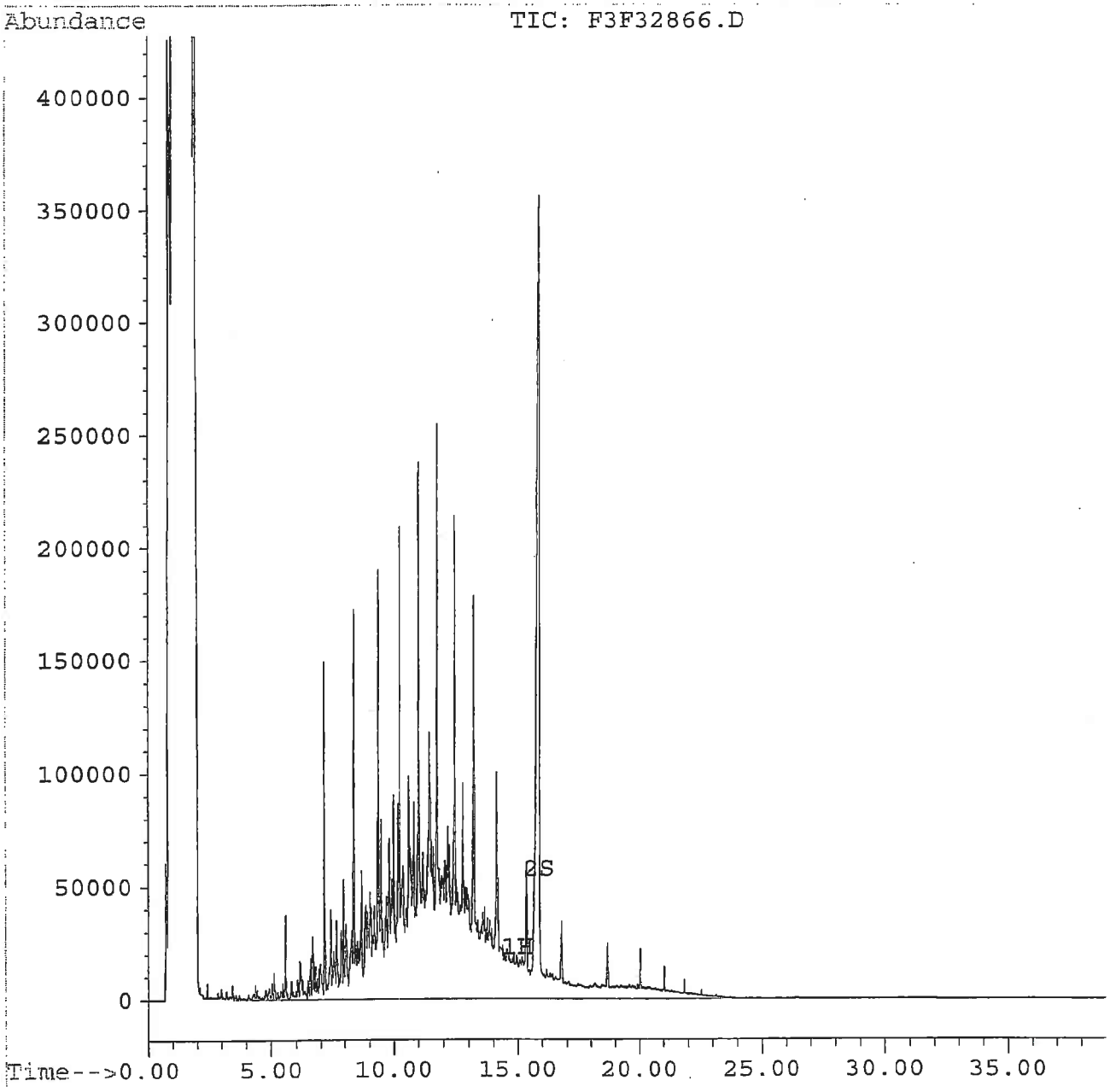
(f)=RT Delta > 1/2 Window (m)=manual int.

Quantitation Report

Data File : C:\HPCHEM\5\DATA\11122008\F3F32866.D Vial: 2
Acq On : 12 Nov 08 02:29 PM Operator: edb
Sample : 5000ug/mL DRO ICAL Inst : FUELS3
Misc : ST080516-1 Multiplr: 1.00
Quant Time: Nov 12 15:13 19108

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Wed Nov 12 15:13:37 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID



Quantitation Report

Data File : C:\HPCHEM\5\DATA\11122008\F3F32867.D Vial: 3
Acq On : 12 Nov 08 03:15 PM Operator: edb
Sample : 2000ug/mL DRO ICAL Inst : FUELS3
Misc : 400uL ST080516-1 + 600uL HEXANE Multiplr: 1.00
Quant Time: Nov 12 16:01 19108

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Wed Nov 12 15:13:37 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-terphenyl	15.79	1018019	202.51 µg/ml
	Recovery =		405.02%
Target Compounds			
1) H TEPH	15.00	9368563	2027.14 µg/ml

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

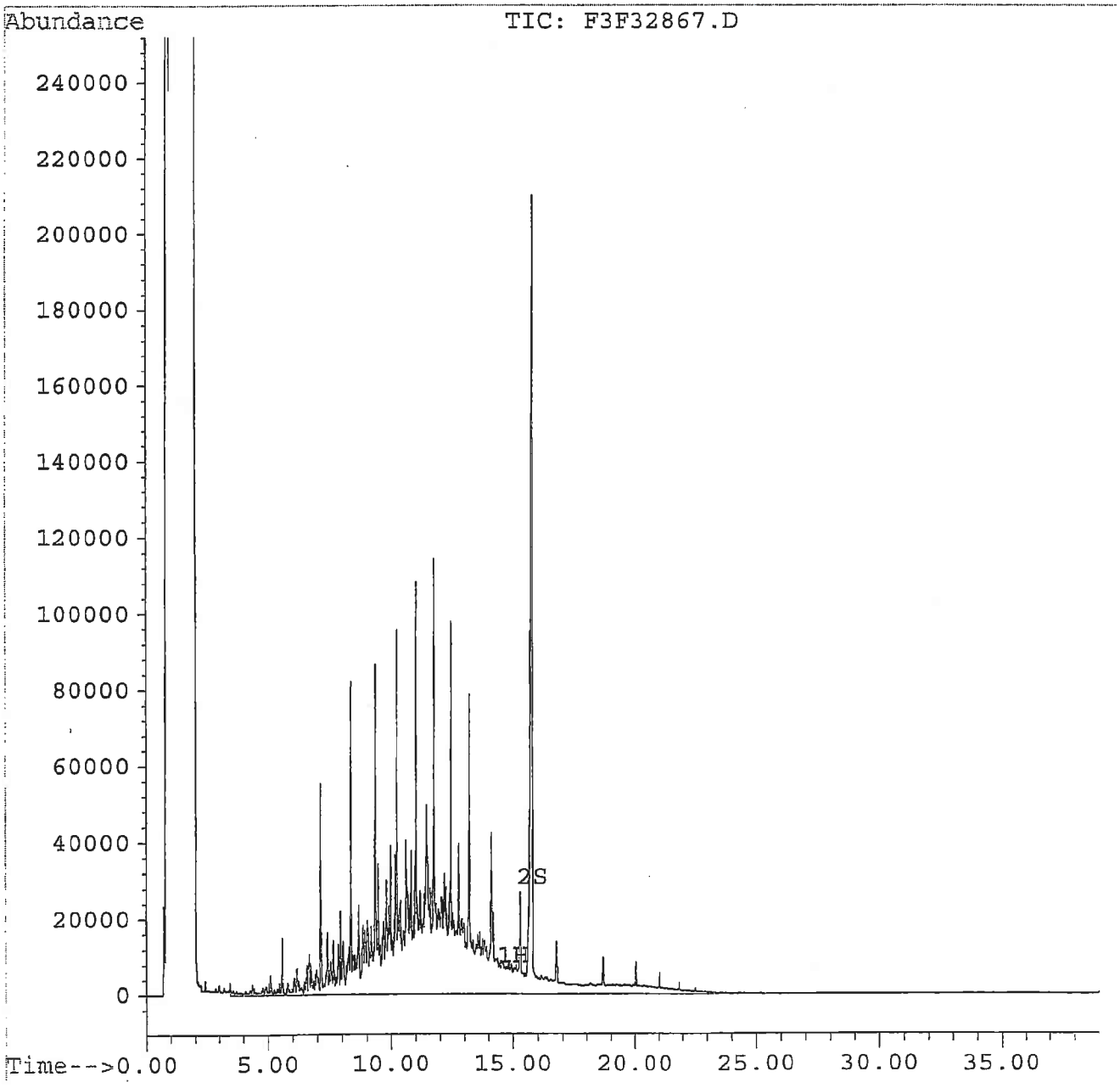
Quantitation Report

Data File : C:\HPCHEM\5\DATA\11122008\F3F32867.D
Acq On : 12 Nov 08 03:15 PM
Sample : 2000ug/mL DRO ICAL
Misc : 400uL ST080516-1 + 600uL HEXANE
Quant Time: Nov 12 16:01 19108

Vial: 3
Operator: edb
Inst : FUELS3
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Wed Nov 12 15:13:37 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID



Quantitation Report

Data File : C:\HPCHEM\5\DATA\11122008\F3F32868.D Vial: 4
Acq On : 12 Nov 08 04:01 PM Operator: edb
Sample : 1000ug/mL DRO ICAL Inst : FUELS3
Misc : 200uL ST080516-1 + 800uL HEXANE Multiplr: 1.00
Quant Time: Nov 12 16:43 19108

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Wed Nov 12 16:01:31 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-terphenyl	15.75f	518569	102.51 µg/ml
	Recovery	=	205.02%
Target Compounds			
1) H TEPH	15.00	4844428	1041.16 µg/ml

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

EB 11/17/08

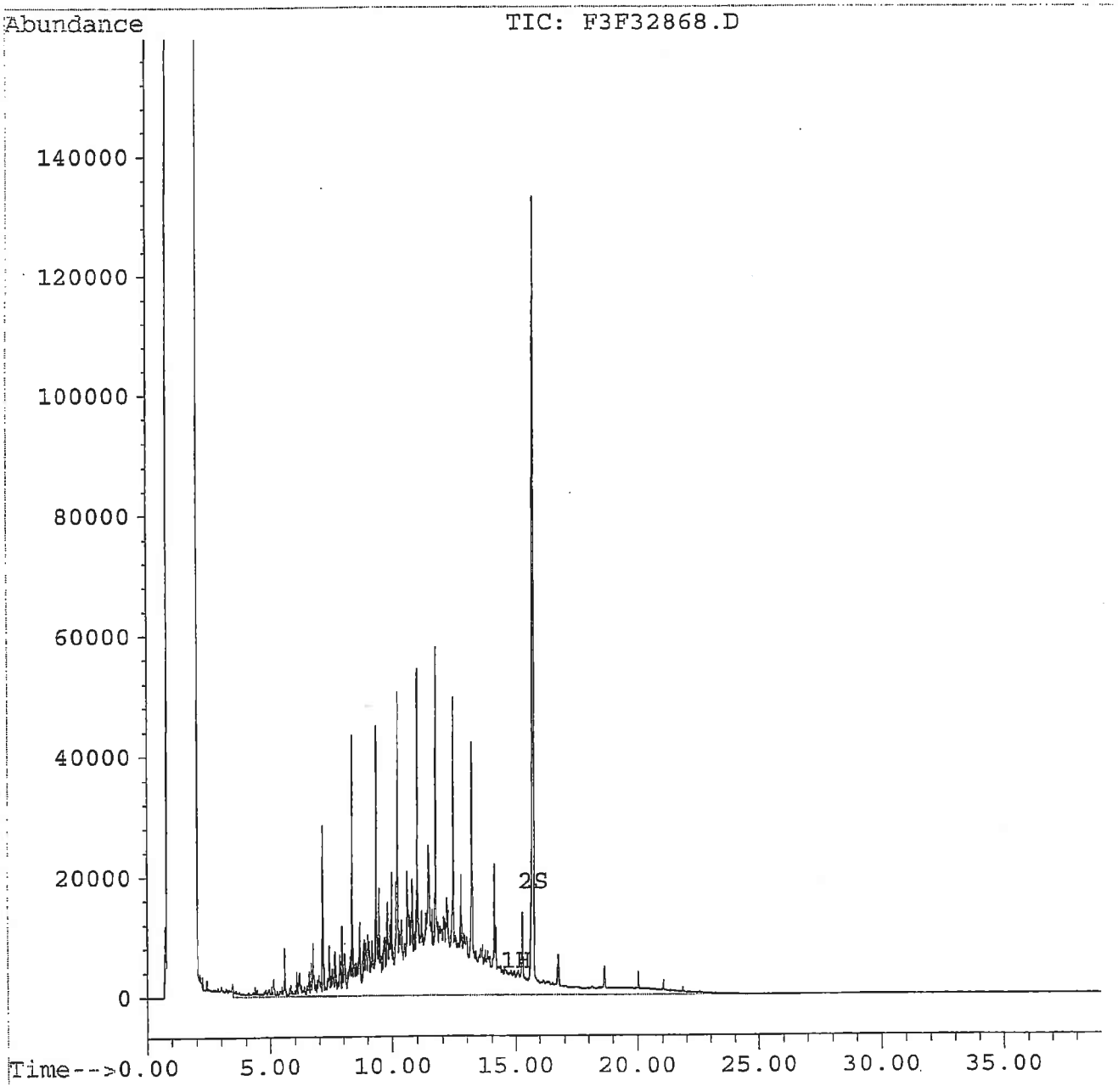
Quantitation Report

Data File : C:\HPCHEM\5\DATA\11122008\F3F32868.D
Acq On : 12 Nov 08 04:01 PM
Sample : 1000ug/mL DRO ICAL
Misc : 200uL ST080516-1 + 800uL HEXANE
Quant Time: Nov 12 16:43 19108

Vial: 4
Operator: edb
Inst : FUELS3
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Wed Nov 12 16:01:31 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID



Quantitation Report

Data File : C:\HPCHEM\5\DATA\11122008\F3F32869.D
Acq On : 12 Nov 08 04:48 PM
Sample : 500ug/mL DRO ICAL
Misc : 100uL ST080516-1 + 900uL HEXANE
Quant Time: Nov 12 17:28 19108

Vial: 5
Operator: edb
Inst : FUELS3
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Wed Nov 12 16:43:24 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-terphenyl	15.73f	246505	48.33 µg/ml
	Recovery	=	96.66%
Target Compounds			
1) H TEPH	15.00	2409338	510.80 µg/ml

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

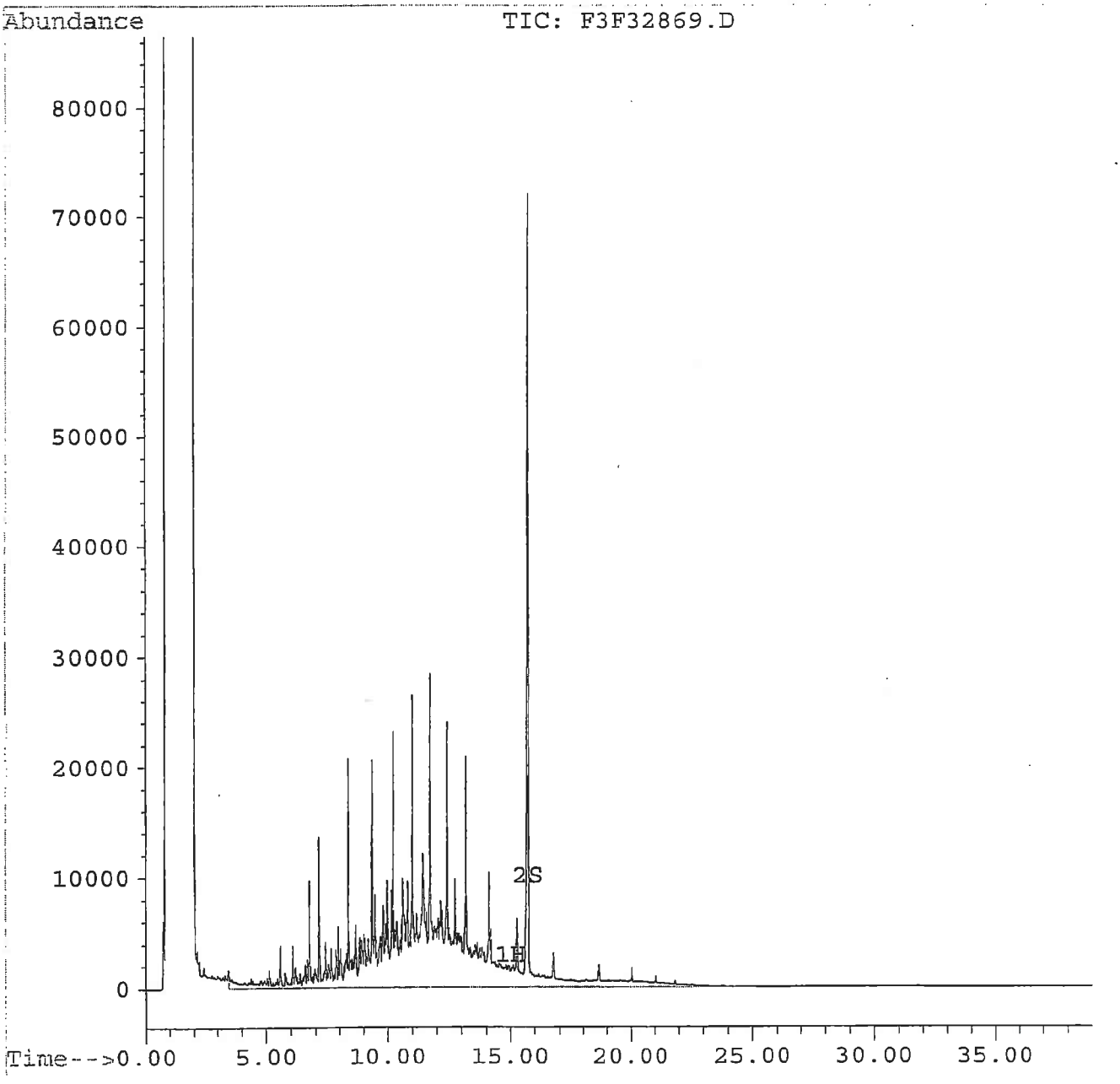
EB 11/17/08

Quantitation Report

Data File : C:\HPCHEM\5\DATA\11122008\F3F32869.D Vial: 5
Acq On : 12 Nov 08 04:48 PM Operator: edb
Sample : 500ug/mL DRO ICAL Inst : FUELS3
Misc : 100uL ST080516-1 + 900uL HEXANE Multiplr: 1.00
Quant Time: Nov 12 17:28 19108

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Wed Nov 12 16:43:24 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID



Quantitation Report

Data File : C:\HPCHEM\5\DATA\11122008\F3F32870.D Vial: 6
Acq On : 12 Nov 08 05:34 PM Operator: edb
Sample : 100ug/mL DRO ICAL Inst : FUELS3
Misc : 20uL ST080516-1 + 980uL HEXANE Multiplr: 1.00
Quant Time: Nov 12 18:27 19108

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Wed Nov 12 17:29:44 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-terphenyl	15.70f	50186	9.92 µg/ml
	Recovery	=	19.84%
Target Compounds			
1) H TEPH	15.00	576921	121.66 µg/ml

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

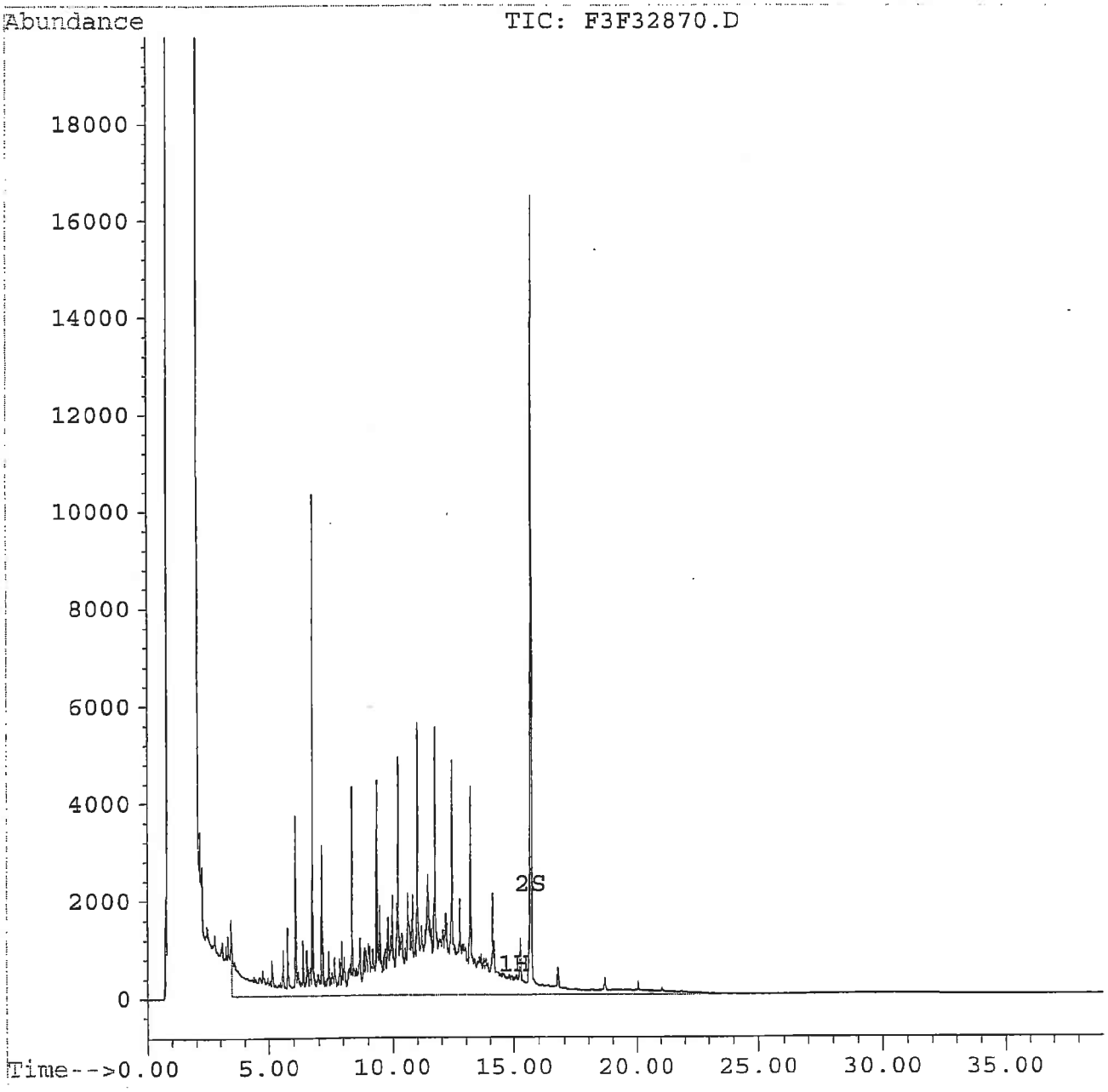
8/11/08

Quantitation Report

Data File : C:\HPCHEM\5\DATA\11122008\F3F32870.D Vial: 6
Acq On : 12 Nov 08 05:34 PM Operator: edb
Sample : 100ug/mL DRO ICAL Inst : FUELS3
Misc : 20uL ST080516-1 + 980uL HEXANE Multiplr: 1.00
Quant Time: Nov 12 18:27 19108

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Wed Nov 12 17:29:44 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID



Quantitation Report

Data File : C:\HPCHEM\5\DATA\11122008\F3F32871.D
Acq On : 12 Nov 08 06:20 PM
Sample : 20ug/mL DRO ICAL
Misc : 4uL ST080516-1 + 996uL HEXANE
Quant Time: Nov 12 19:09 19108

Vial: 7
Operator: edb
Inst : FUELS3
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Wed Nov 12 19:09:08 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-terphenyl	15.70f	10315	2.04 µg/ml
	Recovery	=	4.08%
Target Compounds			
1) H TEPH	15.00	184870	17.37 µg/ml

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

EB 11/13/08

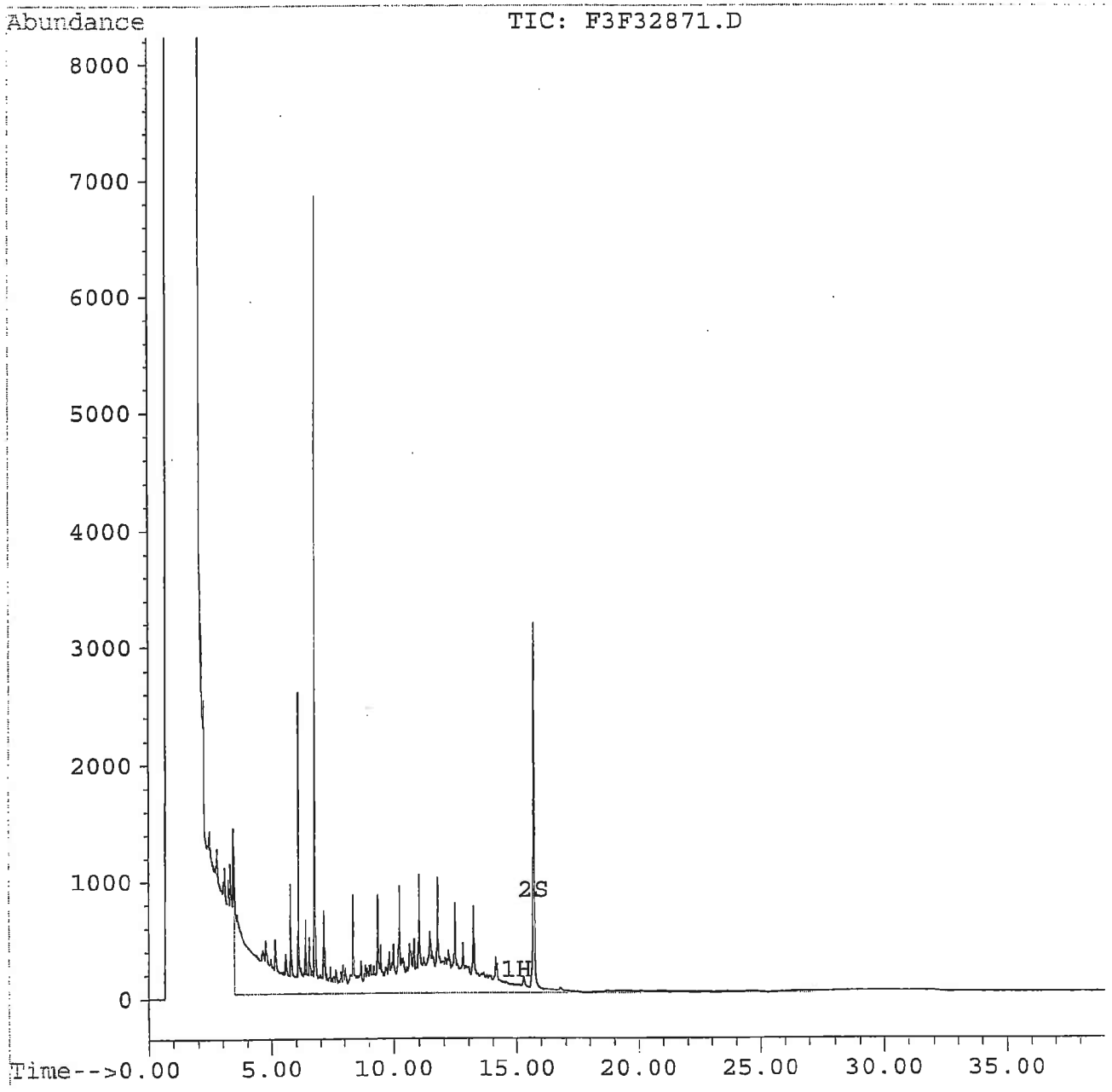
Quantitation Report

Data File : C:\HPCHEM\5\DATA\11122008\F3F32871.D
Acq On : 12 Nov 08 06:20 PM
Sample : 20ug/mL DRO ICAL
Misc : 4uL ST080516-1 + 996uL HEXANE
Quant Time: Nov 12 19:09 19108

Vial: 7
Operator: edb
Inst : FUELS3
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Wed Nov 12 19:09:08 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID



Quantitation Report

Data File : C:\HPCHEM\5\DATA\11122008\F3F32872.D
Acq On : 12 Nov 08 07:06 PM
Sample : 500ug/mL DRO ICV
Misc : 100uL ST080825-7 + 900uL HEXANE
Quant Time: Nov 13 9:05 19108

Vial: 8
Operator: edb
Inst : FUELS3
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Wed Nov 12 20:36:13 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-terphenyl	0.00	0	N.D. µg/ml
	Recovery	=	0.00%
Target Compounds			
1) H TEPH	15.00	2326967	475.22 µg/ml

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

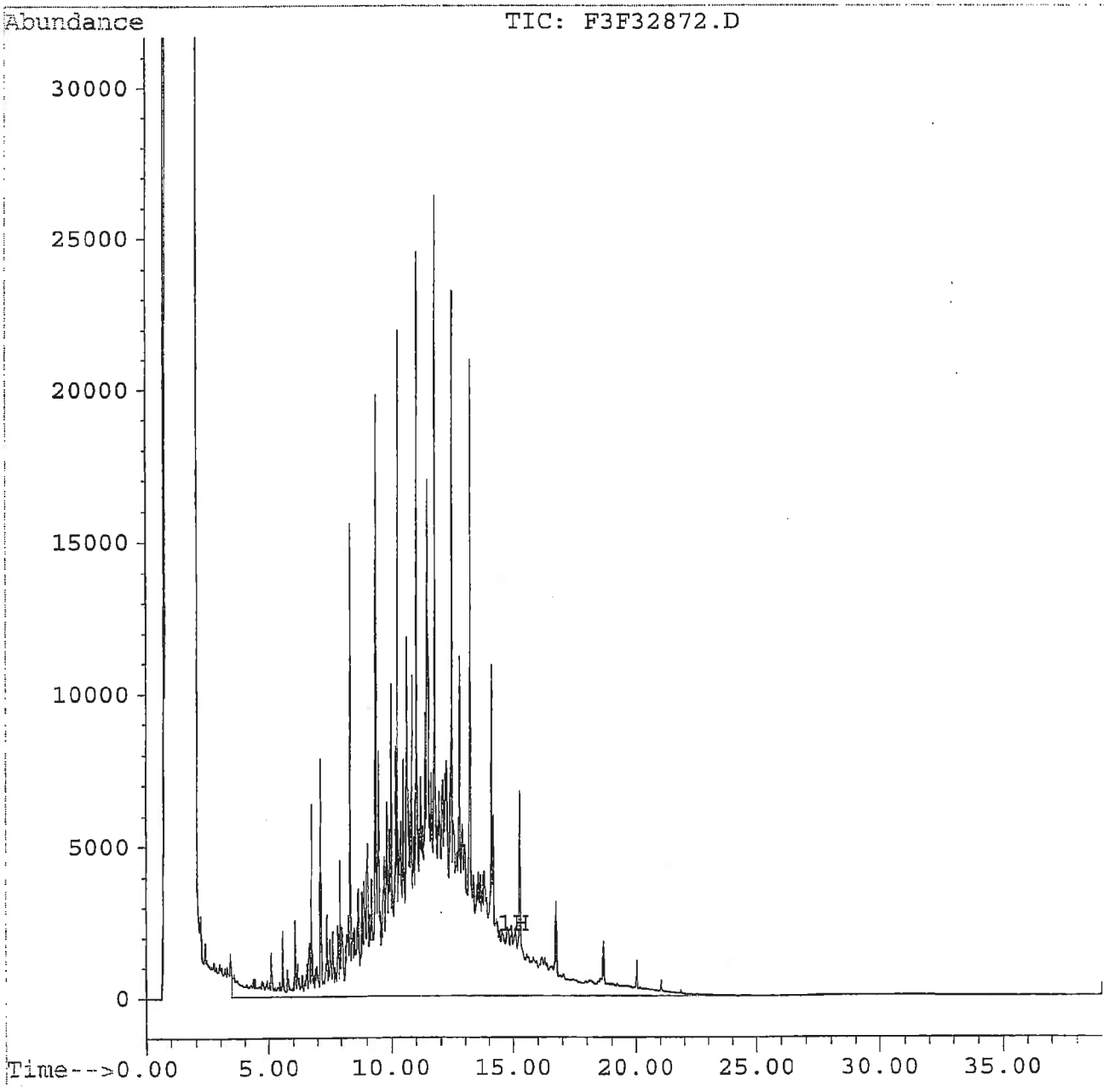
SK 1/7/09

Quantitation Report

Data File : C:\HPCHEM\5\DATA\11122008\F3F32872.D Vial: 8
Acq On : 12 Nov 08 07:06 PM Operator: edb
Sample : 500ug/mL DRO ICV Inst : FUELS3
Misc : 100uL ST080825-7 + 900uL HEXANE Multiplr: 1.00
Quant Time: Nov 13 9:05 19108

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Wed Nov 12 20:36:13 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID



Quantitation Report

Data File : C:\HPCHEM\5\DATA\11202008\F3F32995.D Vial: 1
Acq On : 20 Nov 08 03:57 PM Operator: edb
Sample : 1000ug/mL DRO CCV Inst : FUELS3
Misc : 200uL ST081119-3 + 800uL HEXANE Multiplr: 1.00
Quant Time: Nov 21 11:19 19108

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Thu Nov 20 12:03:46 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-terphenyl	15.66	453547	89.49 µg/ml
	Recovery	=	178.98%
Target Compounds			
1) H TEPH	15.00	4668113	984.28 µg/ml

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

EB 11/2/16

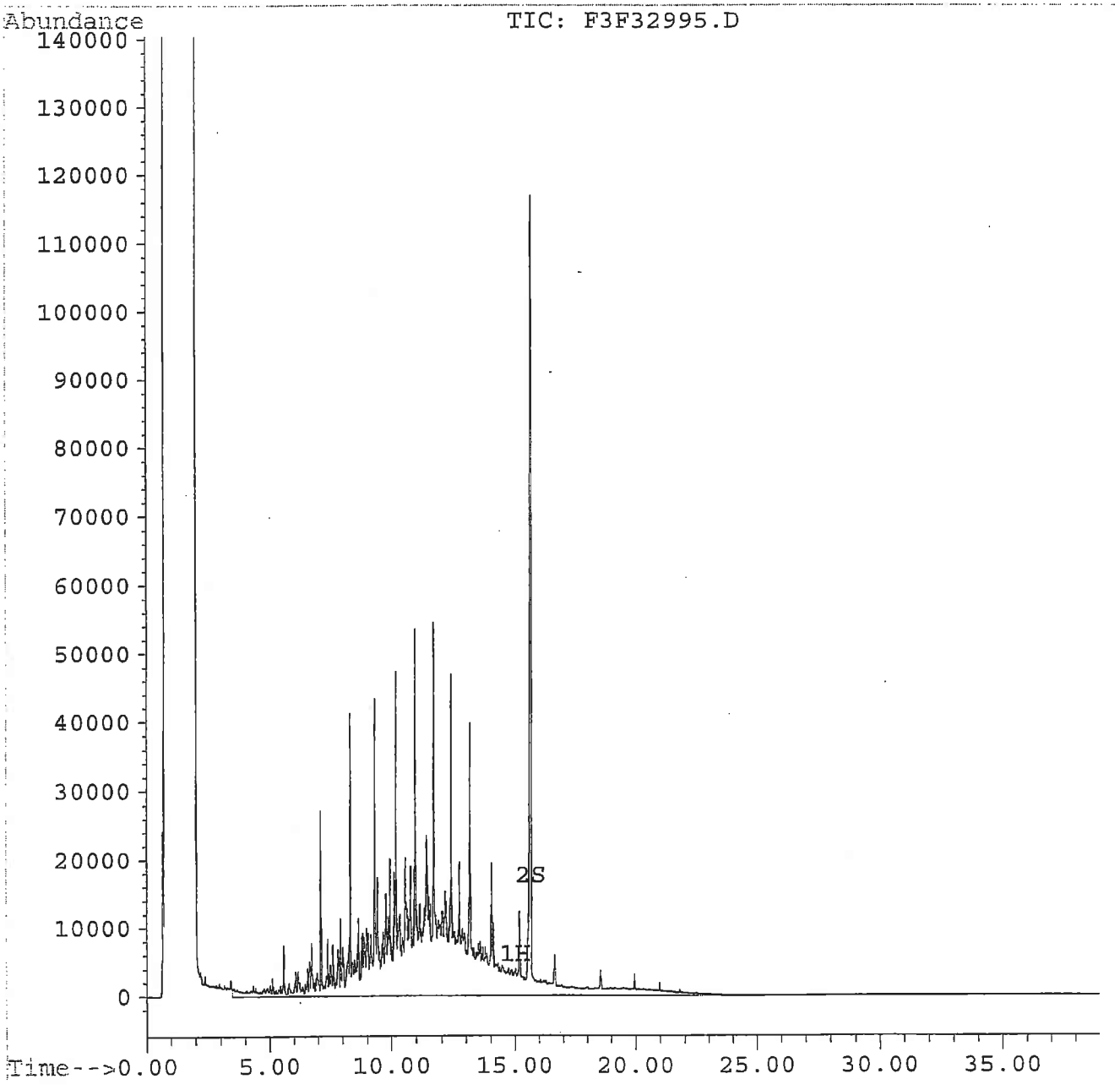
Quantitation Report

Data File : C:\HPCHEM\5\DATA\11202008\F3F32995.D
Acq On : 20 Nov 08 03:57 PM
Sample : 1000ug/mL DRO CCV
Misc : 200uL ST081119-3 + 800uL HEXANE
Quant Time: Nov 21 11:19 19108

Vial: 1
Operator: edb
Inst : FUELS3
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Thu Nov 20 12:03:46 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID



Quantitation Report

Data File : C:\HPCHEM\5\DATA\11202008\F3F33007.D Vial: 13
Acq On : 21 Nov 08 01:09 AM Operator: edb
Sample : 1000ug/mL DRO CCV2 Inst : FUELS3
Misc : 200uL ST081119-3 + 800uL HEXANE Multiplr: 1.00
Quant Time: Nov 21 12:11 19108

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Thu Nov 20 12:03:46 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-terphenyl	15.66	486818	96.05 µg/ml
	Recovery	=	192.10%
Target Compounds			
1) H TEPH	15.00	4850273	1023.88 µg/ml

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

EB 11/21/08

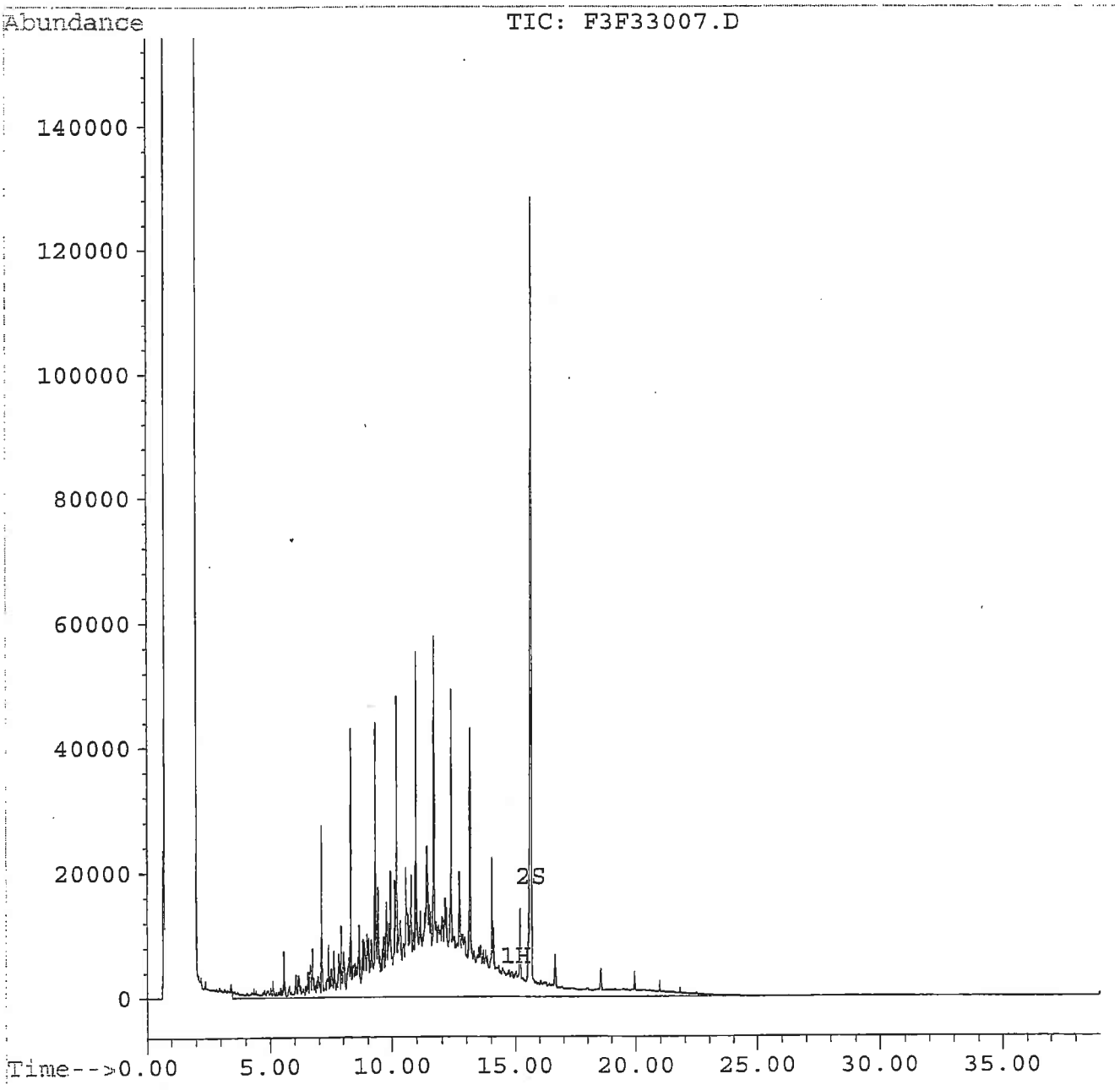
Quantitation Report

Data File : C:\HPCHEM\5\DATA\11202008\F3F33007.D
Acq On : 21 Nov 08 01:09 AM
Sample : 1000ug/mL DRO CCV2
Misc : 200uL ST081119-3 + 800uL HEXANE
Quant Time: Nov 21 12:11 19108

Vial: 13
Operator: edb
Inst : FUELS3
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Thu Nov 20 12:03:46 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID



Sample Raw Data

Quantitation Report

Data File : C:\HPCHEM\5\DATA\11202008\F3F32996.D
Acq On : 20 Nov 08 04:43 PM
Sample : EX081118-4MB
Misc : EX081118-4
Quant Time: Nov 21 12:14 19108

Vial: 2
Operator: edb
Inst : FUELS3
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Thu Nov 20 12:03:46 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-terphenyl	15.63	221015	43.61 µg/ml
	Recovery	=	87.22%
Target Compounds			
1) H TEPH	15.00	139133	N.D. µg/ml

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

EB 11/21/08

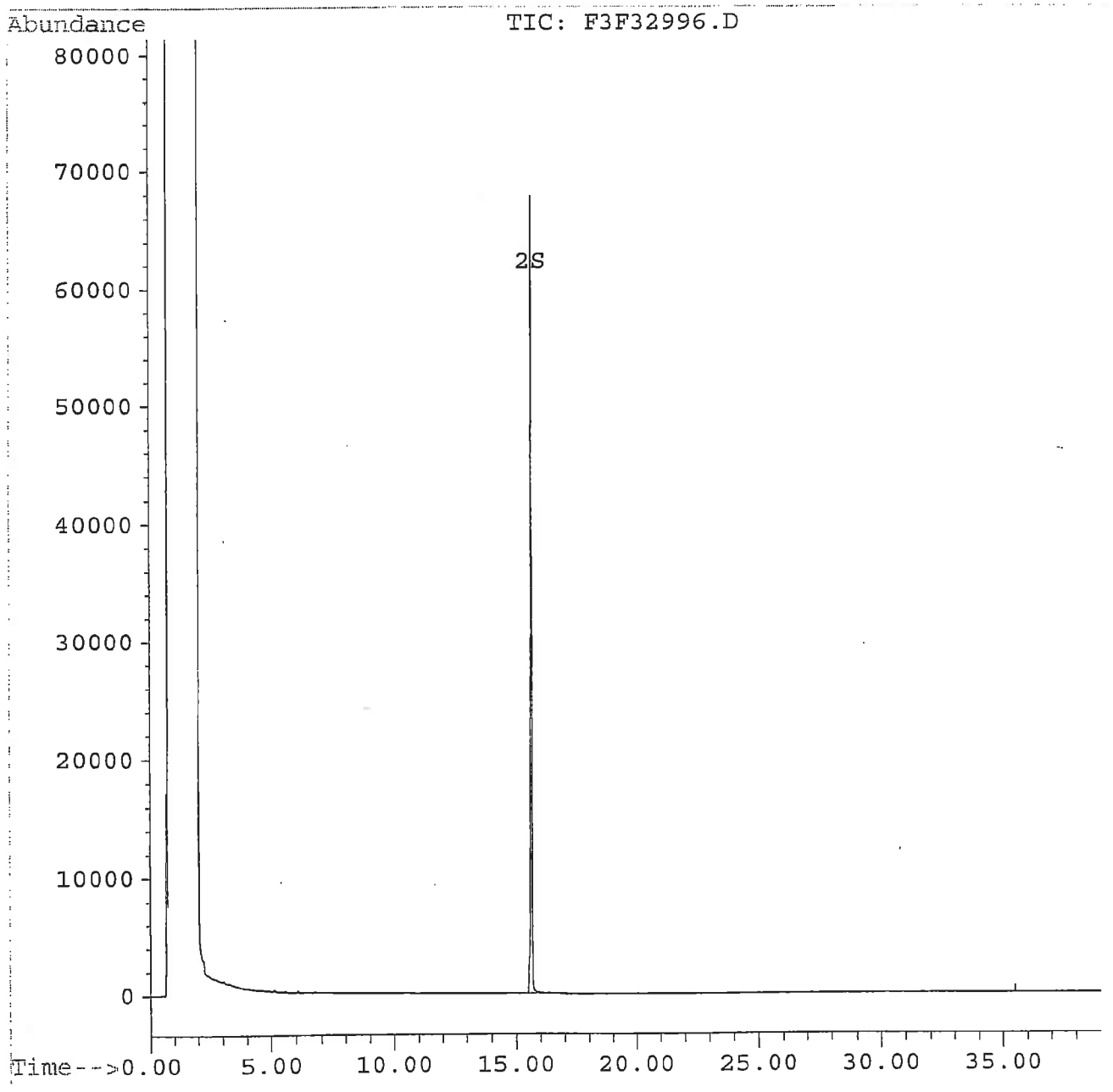
Quantitation Report

Data File : C:\HPCHEM\5\DATA\11202008\F3F32996.D
Acq On : 20 Nov 08 04:43 PM
Sample : EX081118-4MB
Misc : EX081118-4
Quant Time: Nov 21 12:14 19108

Vial: 2
Operator: edb
Inst : FUELS3
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Thu Nov 20 12:03:46 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID



Quantitation Report

Data File : C:\HPCHEM\5\DATA\11202008\F3F32999.D Vial: 5
Acq On : 20 Nov 08 07:01 PM Operator: edb
Sample : 0811110-1 2X Inst : FUELS3
Misc : EX081118-4; 150uL Sample + 150uL Hexane Multiplr: 1.00
Quant Time: Nov 21 12:15 19108

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Thu Nov 20 12:03:46 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-terphenyl	15.62	107044	21.12 µg/ml (2x) 84%
	Recovery	=	42.24%
Target Compounds			
1) H TEPH	15.00	6341534	1348.14 µg/ml L
		TEPH	C7-C18

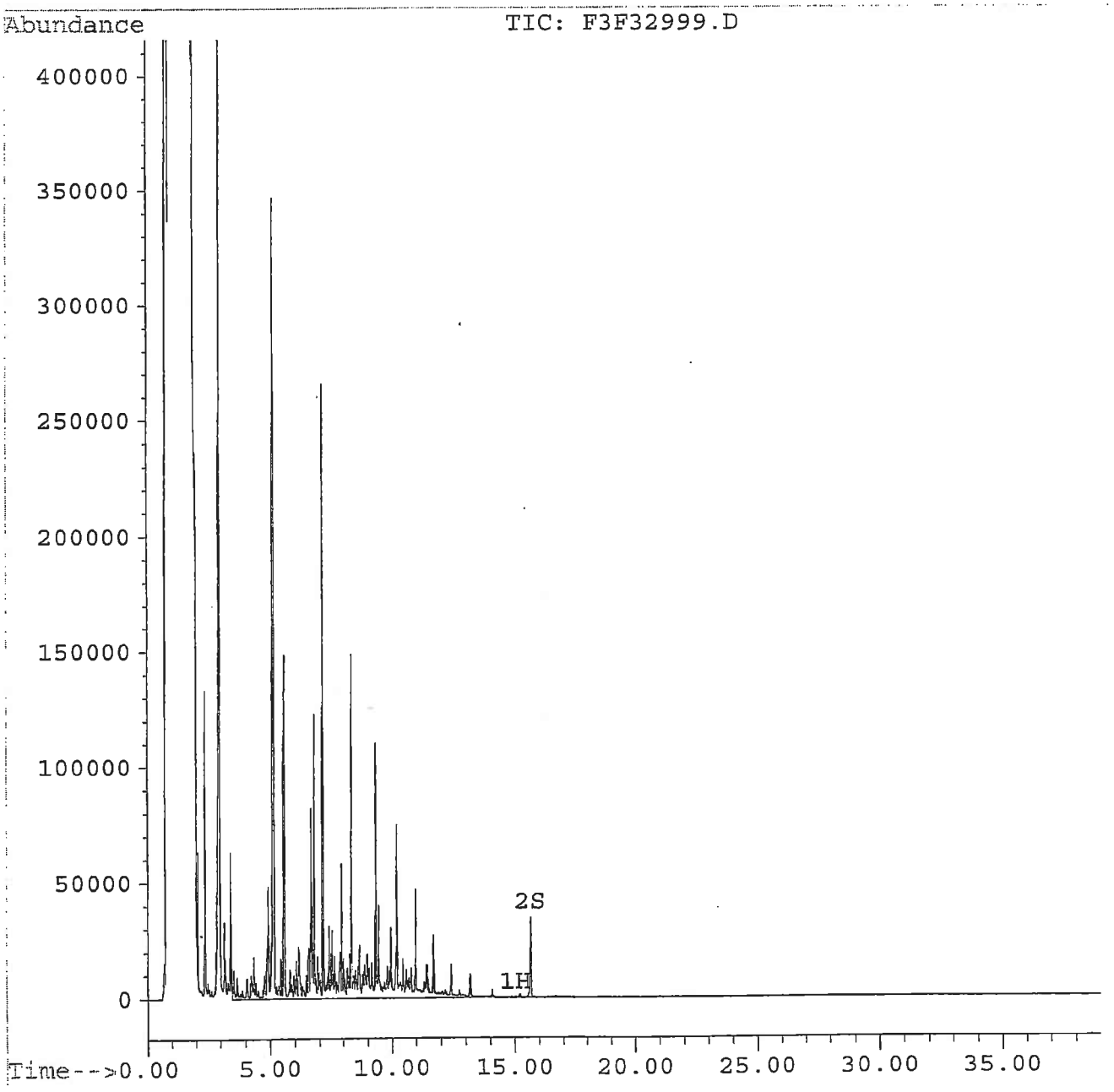
(f)=RT Delta > 1/2 Window (m)=manual int.
F3F32999.D D111208.M Fri Nov 21 12:15:14 2008 EB 11/21/08 Page 1
49

Quantitation Report

Data File : C:\HPCHEM\5\DATA\11202008\F3F32999.D Vial: 5
Acq On : 20 Nov 08 07:01 PM Operator: edb
Sample : 0811110-1 2X Inst : FUELS3
Misc : EX081118-4; 150uL Sample + 150uL Hexane Multiplr: 1.00
Quant Time: Nov 21 12:15 19108

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Thu Nov 20 12:03:46 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID



Quantitation Report

Data File : C:\HPCHEM\5\DATA\11202008\F3F33000.D Vial: 6
Acq On : 20 Nov 08 07:47 PM Operator: edb
Sample : 0811110-2 2X Inst : FUELS3
Misc : EX081118-4; 150uL Sample + 150uL Hexane Multiplr: 1.00
Quant Time: Nov 21 12:15 19108

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Thu Nov 20 12:03:46 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-terphenyl	15.62	110241	21.75 µg/ml
	Recovery	=	43.50%
Target Compounds			
1) H TEPH	15.00	9631923	2063.60 µg/ml

TEPH C7-C28

(f)=RT Delta > 1/2 Window (m)=manual int.
F3F33000.D D111208.M Fri Nov 21 12:15:18 2008 Page 1

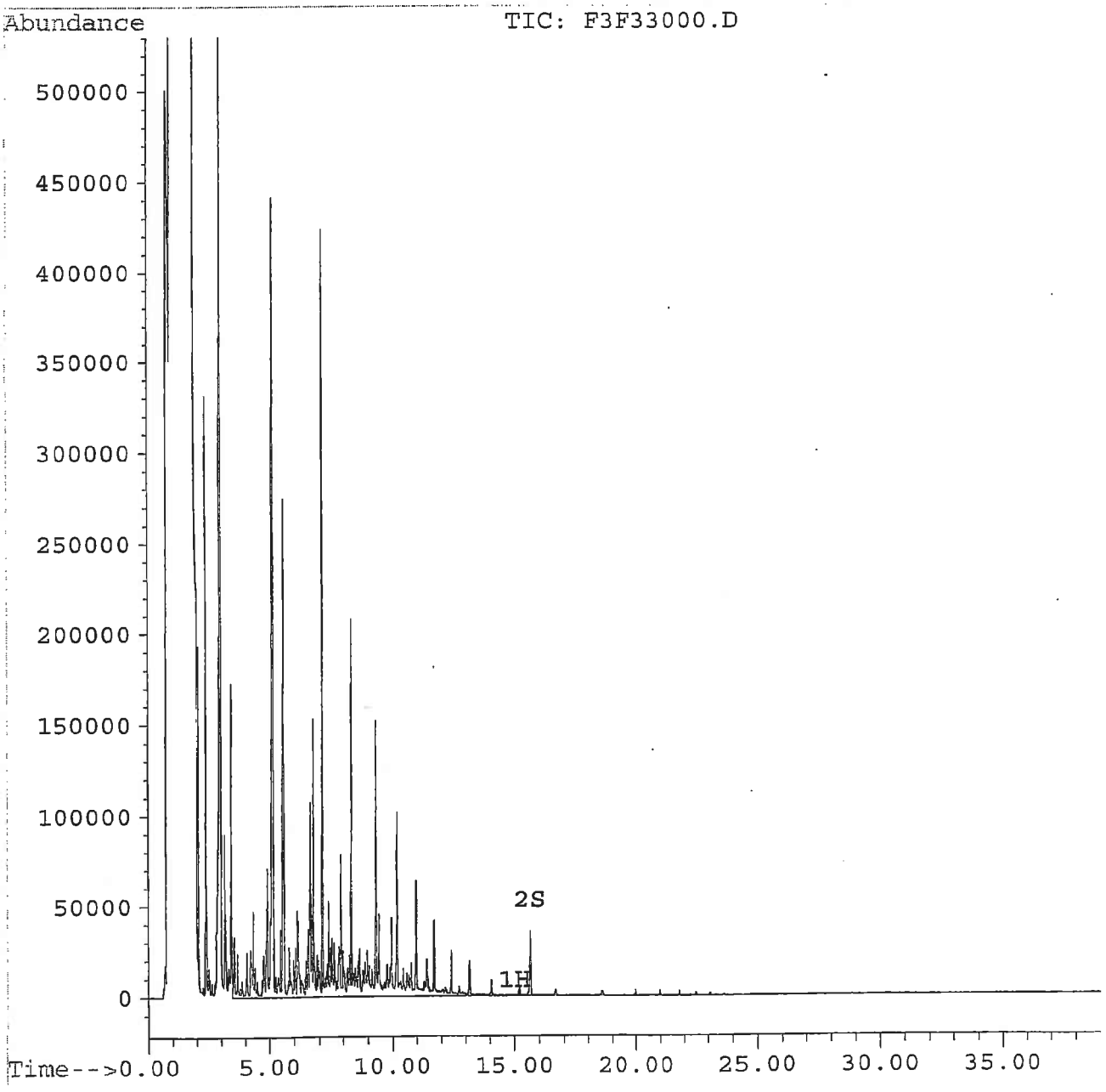
11/21/08

Quantitation Report

Data File : C:\HPCHEM\5\DATA\11202008\F3F33000.D Vial: 6
Acq On : 20 Nov 08 07:47 PM Operator: edb
Sample : 0811110-2 2X Inst : FUELS3
Misc : EX081118-4; 150uL Sample + 150uL Hexane Multiplr: 1.00
Quant Time: Nov 21 12:15 19108

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Thu Nov 20 12:03:46 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID



Raw Data Quality Control Samples

Quantitation Report

Data File : C:\HPCHEM\5\DATA\11202008\F3F32997.D
Acq On : 20 Nov 08 05:29 PM
Sample : EX081118-4LCS
Misc : EX081118-4
Quant Time: Nov 21 12:15 19108

Vial: 3
Operator: edb
Inst : FUELS3
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Thu Nov 20 12:03:46 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-terphenyl	15.63	221793	43.76 µg/ml
	Recovery	=	87.52%
Target Compounds			
1) H TEPH	15.00	1041145	195.63 µg/ml 98%

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

EB 11/21/08

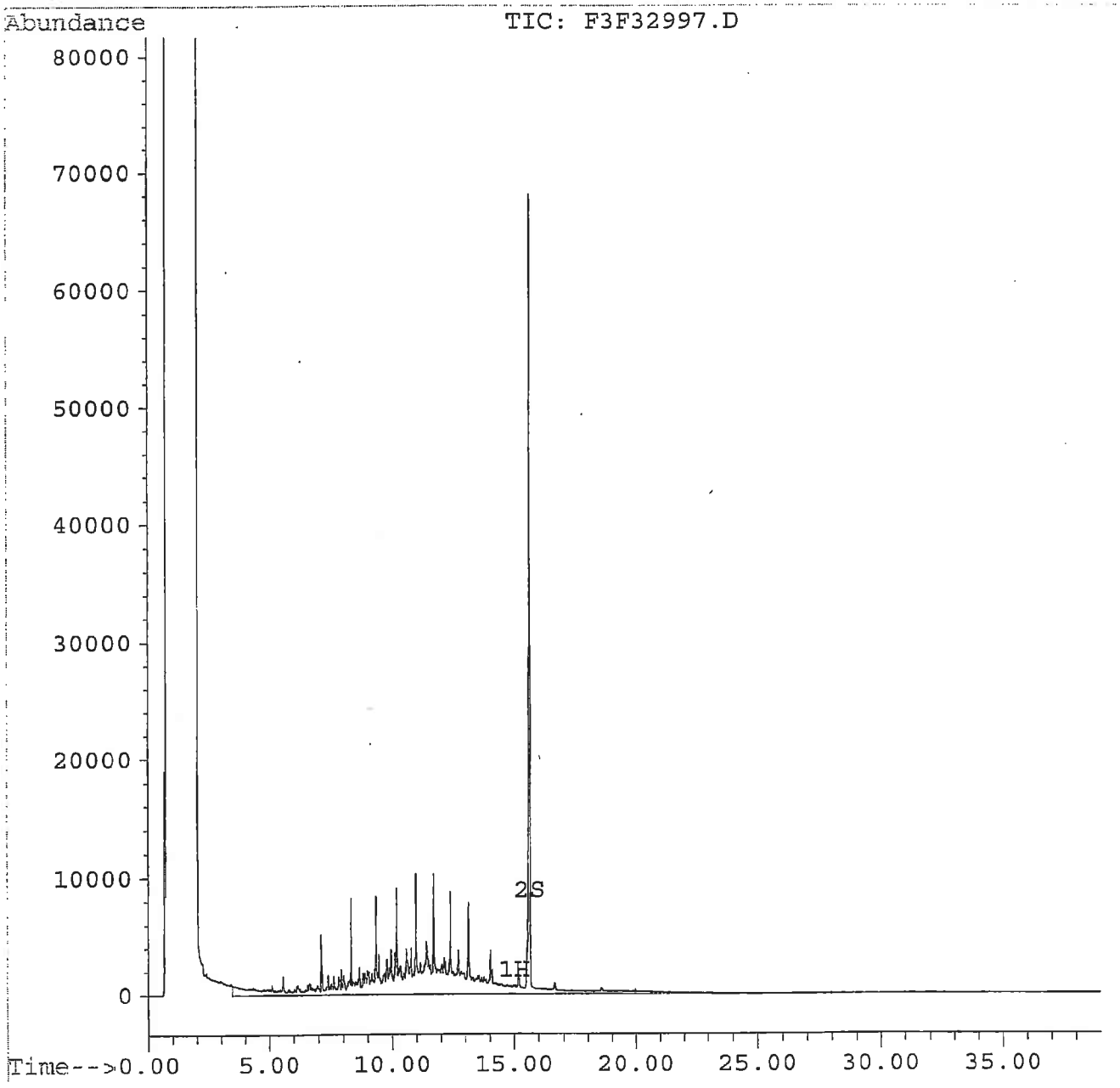
Quantitation Report

Data File : C:\HPCHEM\5\DATA\11202008\F3F32997.D
Acq On : 20 Nov 08 05:29 PM
Sample : EX081118-4LCS
Misc : EX081118-4
Quant Time: Nov 21 12:15 19108

Vial: 3
Operator: edb
Inst : FUELS3
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Thu Nov 20 12:03:46 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID



Quantitation Report

Data File : C:\HPCHEM\5\DATA\11202008\F3F32998.D
Acq On : 20 Nov 08 06:15 PM
Sample : EX081118-4LCSD
Misc : EX081118-4
Quant Time: Nov 21 12:15 19108

Vial: 4
Operator: edb
Inst : FUELS3
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Thu Nov 20 12:03:46 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID

Compound	R.T.	Response	Conc Units
System Monitoring Compounds			
2) S o-terphenyl	15.64	219861	43.38 µg/ml
	Recovery =		86.76%
Target Compounds			
1) H TEPH	15.00	1044022	196.26 µg/ml 98%

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

EB 11/21/08

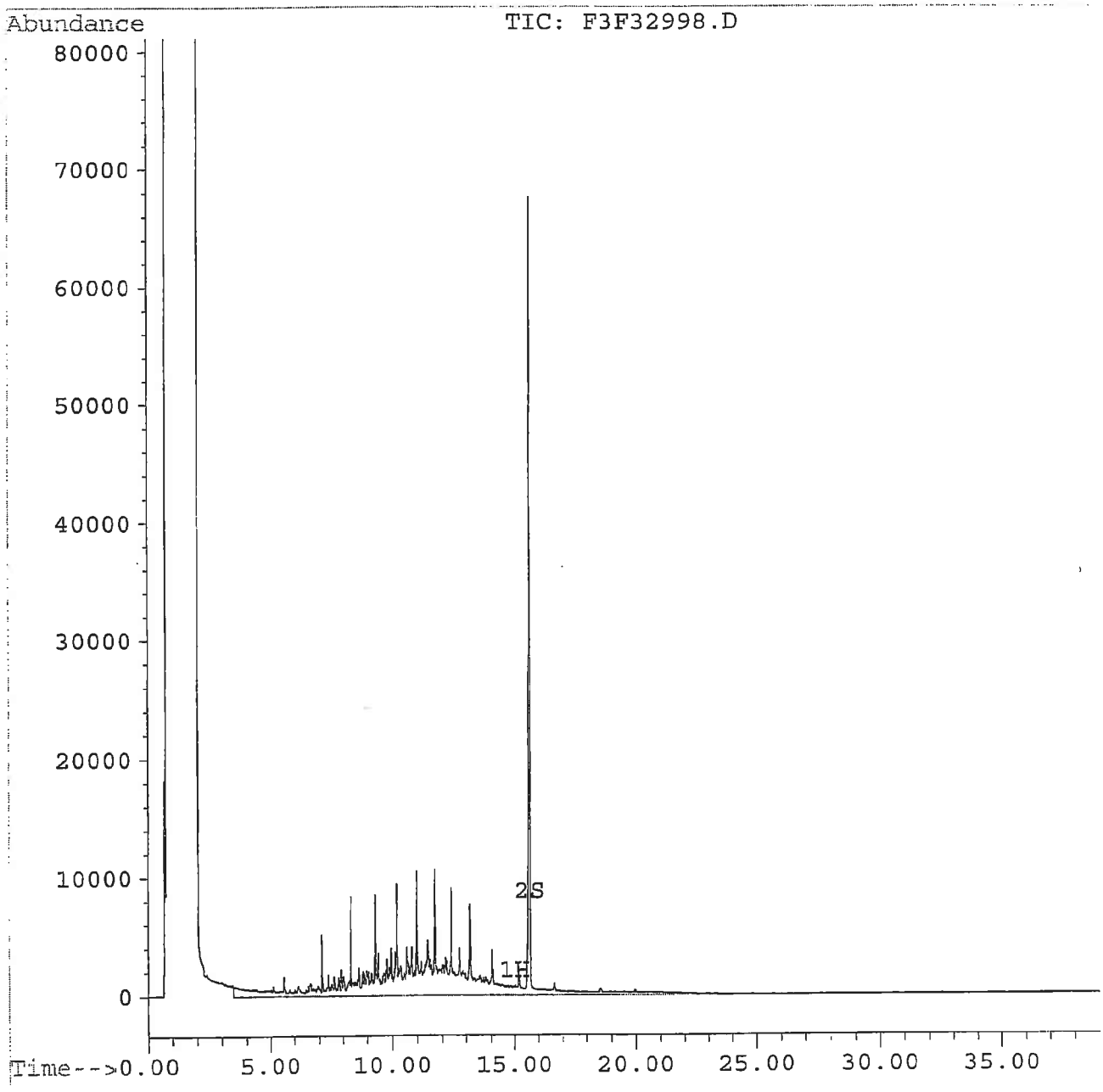
Quantitation Report

Data File : C:\HPCHEM\5\DATA\11202008\F3F32998.D
Acq On : 20 Nov 08 06:15 PM
Sample : EX081118-4LCSD
Misc : EX081118-4
Quant Time: Nov 21 12:15 19108

Vial: 4
Operator: edb
Inst : FUELS3
Multiplr: 1.00

Method : C:\HPCHEM\5\METHODS\D111208.M
Title : 8015Bmod, CALuft
Last Update : Thu Nov 20 12:03:46 2008
Response via : Multiple Level Calibration

Volume Inj. : 1uL
Signal Phase : DB-5.625, 30m, 0.25mm 0.5µm
Signal Info : FID



Miscellaneous

DIESEL RANGE ORGANICS (DRO) -- EXTRACTION BENCHSHEET 369701

WO #s 0811110 Matrix: (AQ) SO N/A Batch # EX081118-4 Surrogate Code ST080619-1 M Spike Code ST081107-9 Initials EB Balance ID N/A

Extr. Start Date/Time 11/18/08 1420 Stop Date/Time 11/18/08 1430 Ext Code (8015M) Cal Luft Method (8015M) Cal Luft SOP 603 Rev 10 Reviewed by / Date [illegible] 11/18/08

SAMPLE							EXTRACT		
Sample Number	Amount (g / (mL))	Surrogate (mL)	Matrix Spike (mL)	Initials Spike Witness	Extract Solvent	Solvent Volume (mL)	Final Volume (mL)	Date Vialed	Comments
WMB	160.0	0.8	N/A	EB / JAK	Hexane	3.2	4.0	11/18/08	
0811110-1	160.0	↓	↓	↓ ↓	↓	↓	↓	↓	Samples were taken from aqueous phase only.
-2	160.0	↓	↓	↓ ↓	↓	↓	↓	↓	
MS	160.0		0.8	EB 11/18/08		2.4			Not enough sample for MS/MSD.
MSD	160.0	↓	↓	↓ ↓	↓	↓	↓	↓	
WLCS	160.0	0.8	N/A	EB / JAK	Hexane	2.4	4.0	11/18/08	
WLCSD	160.0	↓	↓	↓ ↓	↓	↓	↓	↓	

Reagents: MeOH N/A DCM N/A 80% MeOH / 20% H_2O Prep ID/ Date N/A Hexane 080013 Na_2SO_4 083053 Form 602r10.doc (7/20/05)