ALPHA
WOODS HOLE LABS

~~TRIBS~~ ?
CORE + 717
718

ANALYTICAL REPORT

Prepared for:
NewFields Environmental Forensics Practice
100 Ledgewood Place, Suite 302
Rockland, MA 02370

Project:	Kerr McGee - Milwaukee
ETR:	0512097
Report Date:	January 20, 2006

Certifications and Accreditations
Massachusetts MA030
Connecticut PH-0141
New Hampshire 220602
Rhode Island 64
New Jersey MA015
Maine MA030
New York 11627
Louisiana 03090
Army Corps of Engineers
Department of the Navy
Florida E87814

Sample ID Cross Reference

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee

Lab Code: MA00030
ETR: 0512097

Lab Sample ID	Client Sample ID
0512097-01	MA9-SSRR-A-0-3
0512097-02	MA9-SSRR-A-3-6
0512097-03	MA9-SSRR-A-6-9
0512097-04	MA9-SSRR-A-9-12
0512097-05	MA9-SSRR-A-12-15
0512097-11	MA9-SSRR-718+00
0512097-12	MA9-SSRR-717+60
0512097-13	MA9-SSRR-A-0-3/MA9-SSRR-A-3-6
0512097-14	MA9-SSRR-A-6-9/MA9-SSRR-A-9-12

Gaps in Lab Sample IDs are indicative of samples not analyzed per client request.

Certificate Program Summary

Method numbers assume the most recent EPA revisions. For a complete listing of analytes for the referenced methods please contact your Alpha Woods Hole Lab Project Manager or the Quality Assurance Manager.

Connecticut Department of Public Health Certificate No.: PH-0141 - *Wastewater* (General Chemistry: 120.1, 150.1, 160.1, 160.2, 180.1, 300.0, 310.1, 335.2, 365.2, 405.1, 413.1, COD HACH 8000; Metals: 200.7, 245.1; Organics: 608, 624, 625). *Solid Waste/Soil* (General Chemistry: 1010, 9010/9014, 9045, 9056, 9060; Metals: 6010, 6020, 7041, 7471; Organics: 8081, 8082, 8260, 8270, ETPH).

Florida Department of Health Certificate No.: E87814 - Secondary NELAP Accreditation for *Wastewater* (General Chemistry: 120.1/2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, SM2320B, 335.2, 365.2, 413.1, 420.1, SM2540G, COD HACH 8000; Metals: 200.7, 204.2, 206.2, 239.2, 245.1, 270.2, 279.2; Organics: 608, 624, 625). *Solid and Hazardous Waste* (General Chemistry: 9010/9014, 9045, 9050, 9056, 9060, 9065; Metals: 6010, 6020, 7041, 7060, 7421, 7470, 7471, 7740, 7841; Organics: 8081, 8082, 8260, 8270).

Louisiana Department of Environmental Quality Certificate No.: 03090 - Primary NELAP Accrediting Authority for *Wastewater* (General Chemistry: 120.1/2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 365.2, 376.2, 405.1, 413.1, 420.1, SM2540G, COD HACH 8000; Metals: 200.7, 204.2, 206.2, 239.2, 245.1, 270.2, 279.2; Organics: 608, 624, 625). *Solid and Hazardous Waste* (General Chemistry: 1010, 1311, 9010/9014, 9045, 9056, 9060; Metals: 6010, 6020, 7041, 7060, 7191, 7421, 7470, 7471, 7740, 7841; Organics: 8081, 8082, 8260, 8270).

Maine Department of Human Services Certificate No.: MA030 - *Wastewater* (General Chemistry: 120.1/2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 365.2, 405.1, 413.1, 420.1, COD HACH 8000; Metals: 200.7, 239.2, 245.1, 270.2, 279.2; Organics: 608, 624).

Massachusetts Department of Environmental Protection Certificate No.: M-MA030 - *Wastewater* (General Chemistry: 120.1/2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 365.2, 405.1, 413.1, 420.1, COD HACH 8000; Metals: 200.7, 239.2, 245.1, 270.2, 279.2; Organics: 608, 624).

New Hampshire Department of Environmental Services Certificate No.: 220604 - Secondary NELAP Accreditation for *Wastewater* (General Chemistry: 120.1/2510B, 150.1, 160.1/SM2540C, 160.2/SM2540D, 180.1, 300.0, 310.1/SM2320B, 335.2, 365.2, 376.2, 405.1, 413.1, 420.1, COD HACH 8000, SM2540G; Metals: 200.7, 204.2, 206.2, 239.2, 245.1, 270.2, 279.2; Organics: 608, 624, 625).

New Jersey Department of Environmental Protection Certificate No.: MA015 - *Solid and Hazardous Waste* (General Chemistry: 1010, 1311, 3060, 7196, 9010/9014, 9045, 9056, 9060; Metals: 3010, 3015, 3020, 3050, 3051, 6010, 6020, 7041, 7060, 7131, 7191, 7211, 7421, 7470, 7471, 7520, 7740, 7761, 7841; Organics: 3510, 3545, 5030, 5035, 3620, 3630, 3640, 3660, 8081, 8082, 8100, 8260, 8270).

New York Department of Health Certificate No.: 11627 - Secondary NELAP Accreditation for *Wastewater* (Metals: 200.7, 204.2, 206.2, 239.2, 245.1, 270.2, 279.2; Organics: 608, 624, 625). *Solid and Hazardous Waste* (Metals: 6010, 7041, 7060, 7470, 7471, 7740; Organics: 8081, 8082, 8260, 8270).

Rhode Island Department of Health Certificate No.: 00064 - Chemistry: *Organic and Inorganic in Surface Water, Wastewater/Sewage and Soil* (Method numbers not specified with certificate.)

U.S. Army Corps of Engineers - General Chemistry: 9010/9014, 9071/418.1, 9060; Organics: 8081, 8082, 8260, 8270, 8270-SIM; Metals: 6010, 6020, 7000.

Department of the Navy - General Chemistry: 9010/9014, 9060; Organics: 8081, 8082, 8015-mod, 8260, 8270, 8270-SIM; Metals: 6010, 6020.

CASE NARRATIVE
Alpha Woods Hole Labs

ETR: 0512097
Project: Kerr McGee-Milwaukee

All analyses were performed according to Alpha Woods Hole Lab quality assurance program and documented Standard Operating Procedures (SOPs). The analytical results contained in this report meet all applicable agency and/or NELAC standards, were performed within holding time, and with appropriate quality control measures, except where noted. Blank correction of results is not performed in the laboratory for any parameter. Soil/sediment samples are reported on a dry weight basis unless otherwise noted. Tissue and sediment samples are not certifiable under the NELAC accreditation.

Alkylated Polynuclear Aromatic Hydrocarbons

Polynuclear aromatic hydrocarbons were analyzed following Alpha Woods Hole Lab SOP *Analysis of Parent and Alkylated Polynuclear Aromatic Hydrocarbons and Selected Heterocyclic Compounds by Gas Chromatography/Mass Spectrometry with Selected Ion Monitoring (Revision 2.0, 06/28/02).* Soil samples (approximately 5-20g) are spiked with surrogate compounds and extracted by *Shaker Table Extraction (Revision 0.0, 02/20/02).* Solvent extracts are dried over sodium sulfate and concentrated to an appropriate final volume based on oil content as determined by gravimetric weighing. A pre-determined volume of the extract was alumina cleaned (*Alumina Column Cleanup of Organic Extracts, Revision 0.0, 02/21/1999*) and again concentrated to a final effective volume determined by gravimetric weight. All extracts were treated with activated copper to remove sulfur interferences. Qualitative identifications are confirmed by analyzing standards under the same conditions used for samples, comparing mass spectra, GC retention times, and patterns generated from reference oils. Quantification is based on response factors derived from a multi-level initial calibration using internal standard techniques. Alkyl homologues are quantified using the response factor of the parent PAH compound.

1. The soil method blank SS122105B06 contained low-level target compounds, detected below the reporting limit. Associated field sample results are flagged with "B" qualifiers if the concentration of the analyte in the sample is less than 5X the concentration in the blank.

2. Samples MA9-SSRR-718+00 (0512097-11) and MA9-SSRR-717+60 (0512097-12) required dilutions due to over-calibration concentration of target compounds. The diluted analyses are only quantified for the compounds that were out of range in the un-diluted analysis.

3. Sample MA9-SSRR-A-9-12 (0512097-04) and its duplicate (0512097-04D) have several of the compounds above the 30% relative percent difference QC limit due to potential matrix in-homogeneity. The integrations in the native sample and the duplicate were reviewed and found to be appropriate.

4. Concentrations for compounds flagged with "G" qualifiers may be biased high due to matrix interference included in the quantitation.

Total Petroleum Hydrocarbons by GC/FID

Soil samples were analyzed following the procedures in Alpha Woods Lab SOP *Total Petroleum Hydrocarbons by Gas Chromatography/Flame Ionization Detector (Revision 1.1)* Method 8100/8015mod and SOP *Addendum for Saturated Hydrocarbons, Rev. 1.0, 2004.* Samples were prepared as stated above for the PAH analysis. A portion of the final extract for solid samples was split for GC/FID analysis. Solid samples were analyzed by GC/FID (gas chromatography with flame ionization detection). A multi-level initial calibration over the n-alkane range from C9-C40 was evaluated and quantified using internal standard techniques prior to sample analysis.

1. All quality control parameters met the specified criteria.

The enclosed results of analyses are representative of the samples as received by the laboratory. Alpha Woods Hole Lab makes no representations or certifications as to the method of sample collection, sample identification, or transporting/handling procedures used prior to the receipt of samples by Alpha Woods Hole Lab. To the best of my knowledge, the information contained in this report is accurate and complete.

Approved by: Elizabeth Porta Title: QA manager Date: 1/20/06
Elizabeth Porta
Quality Assurance Manager

Alkylated Polynuclear Aromatic Hydrocarbons By Selective Ion Monitoring

Form I
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: MA9-SSRR-A-0-3
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: 0512097-01
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Date Analyzed	Percent Solid	Sample Amount (g)	Final Volume (ml)	Dilution Factor	Analyst
12/12/05	12/14/05	12/21/05	01/09/06	65.4	10.30	2.5	1	AC

Parameter	Result		Parameter	Result	
cis/trans-Decalin	0.60	J	C1-Dibenzothiophenes	21	
C1-Decalins	0.99	U	C2-Dibenzothiophenes	49	
C2-Decalins	0.99	U	C3-Dibenzothiophenes	64	
C3-Decalins	0.99	U	C4-Dibenzothiophenes	48	
C4-Decalins	0.99	U	Benzo(b)fluorene	160	
Benzothiophene	0.92	J	Fluoranthene	1400	
C1-Benzo(b)thiophenes	8.2		Pyrene	1000	
C2-Benzo(b)thiophenes	3.5	J	C1-Fluoranthenes/Pyrenes	470	
C3-Benzo(b)thiophenes	13	G	C2-Fluoranthenes/Pyrenes	210	
C4-Benzo(b)thiophenes	5.5		C3-Fluoranthenes/Pyrenes	110	
Naphthalene	9.9		C4-Fluoranthenes/Pyrenes	68	
C1-Naphthalenes	6.9		Naphthobenzothiophenes	99	
C2-Naphthalenes	14		C1-Naphthobenzothiophenes	49	
C3-Naphthalenes	24		C2-Naphthobenzothiophenes	41	
C4-Naphthalenes	38		C3-Naphthobenzothiophenes	41	
Biphenyl	3.6	J	C4-Naphthobenzothiophenes	36	
Dibenzofuran	17		Benz[a]anthracene	670	
Acenaphthylene	82		Chrysene/Triphenylene	760	
Acenaphthene	84		C1-Chrysenes	250	
Fluorene	45		C2-Chrysenes	130	
C1-Fluorenes	30		C3-Chrysenes	150	
C2-Fluorenes	43		C4-Chrysenes	72	
C3-Fluorenes	88		Benzo[b]fluoranthene	710	
Anthracene	220		Benzo[k]fluoranthene	570	
Phenanthrene	340		Benzo[a]fluoranthene	120	
C1-Phenanthrenes/Anthracenes	140		Benzo[e]pyrene	510	
C2-Phenanthrenes/Anthracenes	95		Benzo[a]pyrene	610	
C3-Phenanthrenes/Anthracenes	85		Perylene	190	
C4-Phenanthrenes/Anthracenes	55		Indeno[1,2,3-cd]pyrene	570	
Retene	14		Dibenz[a,h]anthracene	110	
Dibenzothiophene	27		Benzo[g,h,i]perylene	490	

180.9
14.8%
5270.9
4,490
85.2%
506.72
10,764.4

Surrogate	% Recovery	Acceptance Range (%)
2-Methylnaphthalene-d10	69	50-130
Pyrene-d10	55	50-130
Benzo[b]fluoranthene-d12	62	50-130

N/A - Not Applicable
J - Estimated value, below quantitation limit.
U - The analyte was analyzed for but not detected at the sample specific level reported.
G - Matrix Interference

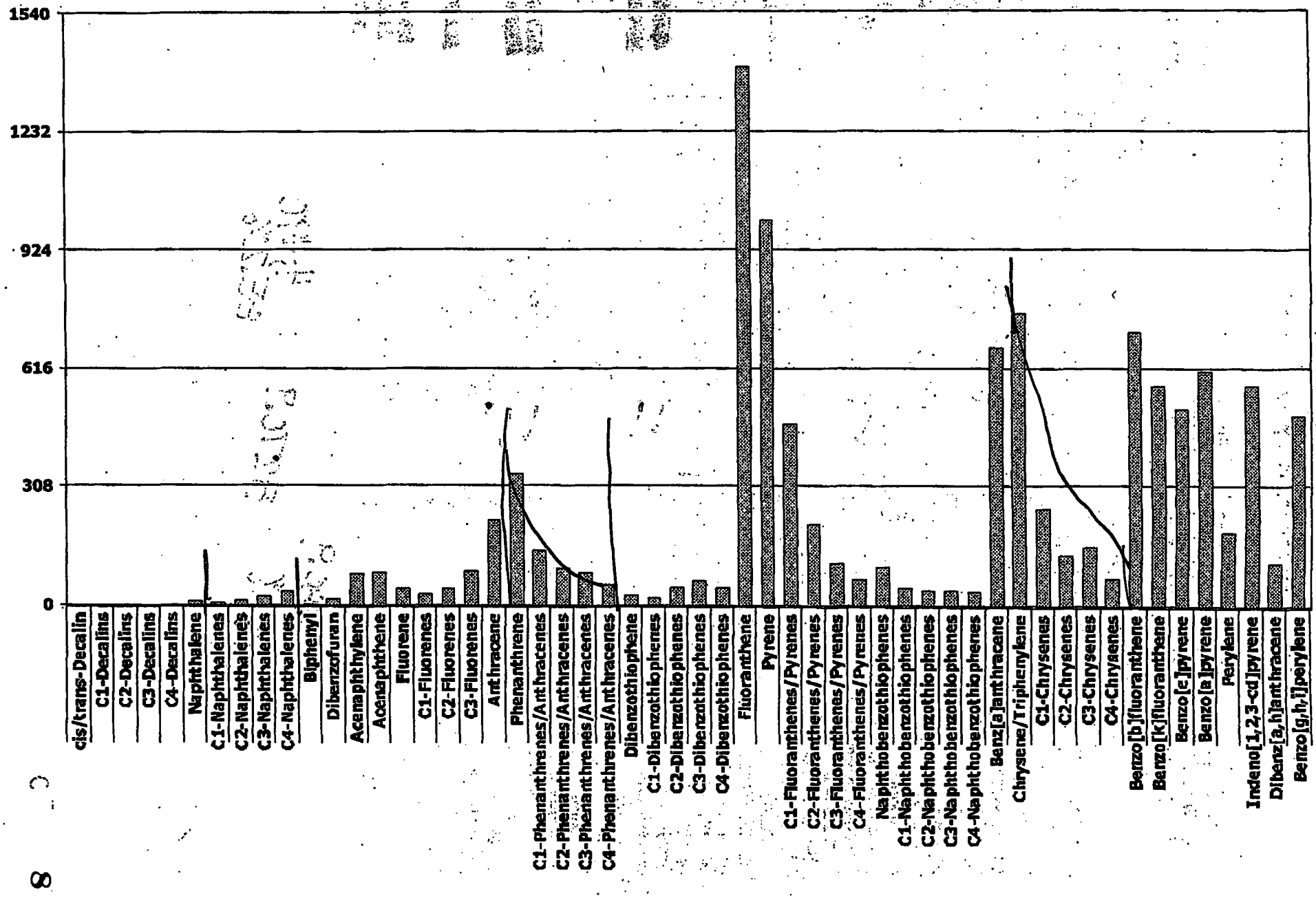
01/19/06 11:39

Alkylated Polynuclear Aromatic Hydrocarbons Distributions

Client ID: MA9-SSRR-A-0-3

Lab ID: 0512097-01

Concentration: µg/Kg



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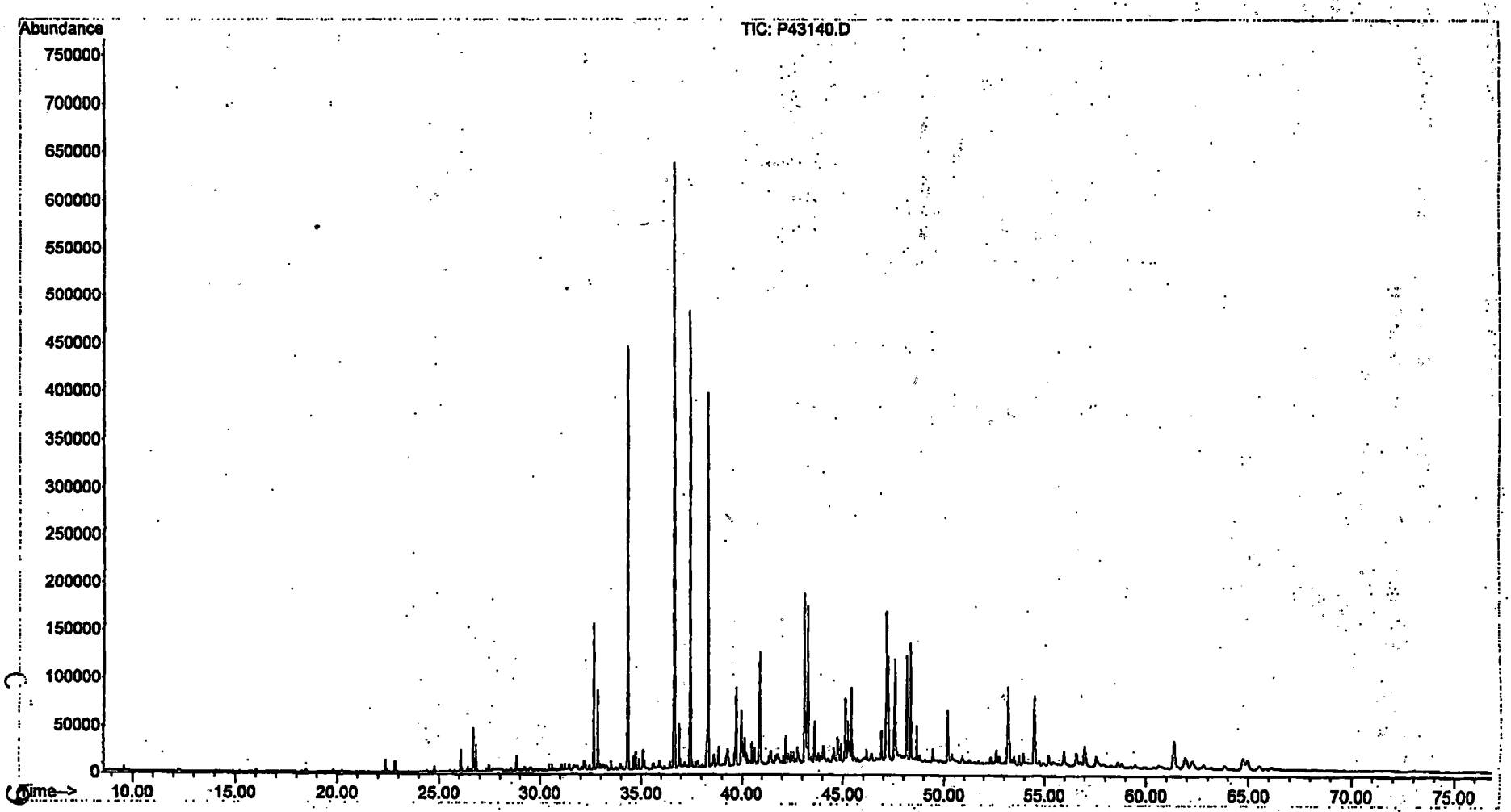
Data File : P43140.D
Acq On : 9 Jan 2006 11:39 pm
Operator : AC
Sample : 0512097-01
Misc : 1X
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jan 16 21:03:44 2006
Quant Method : C:\MSDCHEM\1\DATA\2006\PAH4\METHODS-SEQUENCE\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Fri Jan 13 11:58:23 2006
Response via : Initial Calibration



Form I
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: MA9-SSRR-A-3-6
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: 0512097-02
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Date Analyzed	Percent Solid	Sample Amount (g)	Final Volume (ml)	Dilution Factor	Analyst
12/12/05	12/14/05	12/21/05	01/10/06	73.5	20.24	5	1	AC

Parameter	Result	Parameter	Result
cis/trans-Decalin	0.79 J	C1-Dibenzothiophenes	17
C1-Decalins	2.6 J	C2-Dibenzothiophenes	42
C2-Decalins	5.1	C3-Dibenzothiophenes	51
C3-Decalins	6.5	C4-Dibenzothiophenes	35
C4-Decalins	12	Benzo(b)fluorene	120
Benzothiophene	1.3 J	Fluoranthene	820
C1-Benzo(b)thiophenes	9.5	Pyrene	600
C2-Benzo(b)thiophenes	6.9	C1-Fluoranthenes/Pyrenes	370
C3-Benzo(b)thiophenes	17 G	C2-Fluoranthenes/Pyrenes	180
C4-Benzo(b)thiophenes	8.7	C3-Fluoranthenes/Pyrenes	110
Naphthalene	100	C4-Fluoranthenes/Pyrenes	66
C1-Naphthalenes	11	Naphthobenzothiophenes	60
C2-Naphthalenes	17	C1-Naphthobenzothiophenes	38
C3-Naphthalenes	29	C2-Naphthobenzothiophenes	32
C4-Naphthalenes	48	C3-Naphthobenzothiophenes	34
Biphenyl	33	C4-Naphthobenzothiophenes	29
Dibenzofuran	16	Benz[a]anthracene	380
Acenaphthylene	81	Chrysene/Triphenylene	460
Acenaphthene	120	C1-Chrysenes	200
Fluorene	39	C2-Chrysenes	110
C1-Fluorenes	42	C3-Chrysenes	160
C2-Fluorenes	46	C4-Chrysenes	83
C3-Fluorenes	54	Benzo[b]fluoranthene	480
Anthracene	150	Benzo[k]fluoranthene	360
Phenanthrene	150	Benzo[a]fluoranthene	92
C1-Phenanthrenes/Anthracenes	88	Benzo[e]pyrene	460
C2-Phenanthrenes/Anthracenes	76	Benzo[a]pyrene	410
C3-Phenanthrenes/Anthracenes	71	Perylene	250
C4-Phenanthrenes/Anthracenes	38	Indeno[1,2,3-cd]pyrene	420
Retene	8.2	Dibenz[a,h]anthracene	83
Dibenzothiophene	22	Benzo[g,h,i]perylene	350

7,781.2

Surrogate	% Recovery	Acceptance Range (%)
2-Methylnaphthalene-d10	82	50-130
Pyrene-d10	61	50-130
Benzo[b]fluoranthene-d12	68	50-130

N/A - Not Applicable
J - Estimated value, below quantitation limit.
G - Matrix Interference

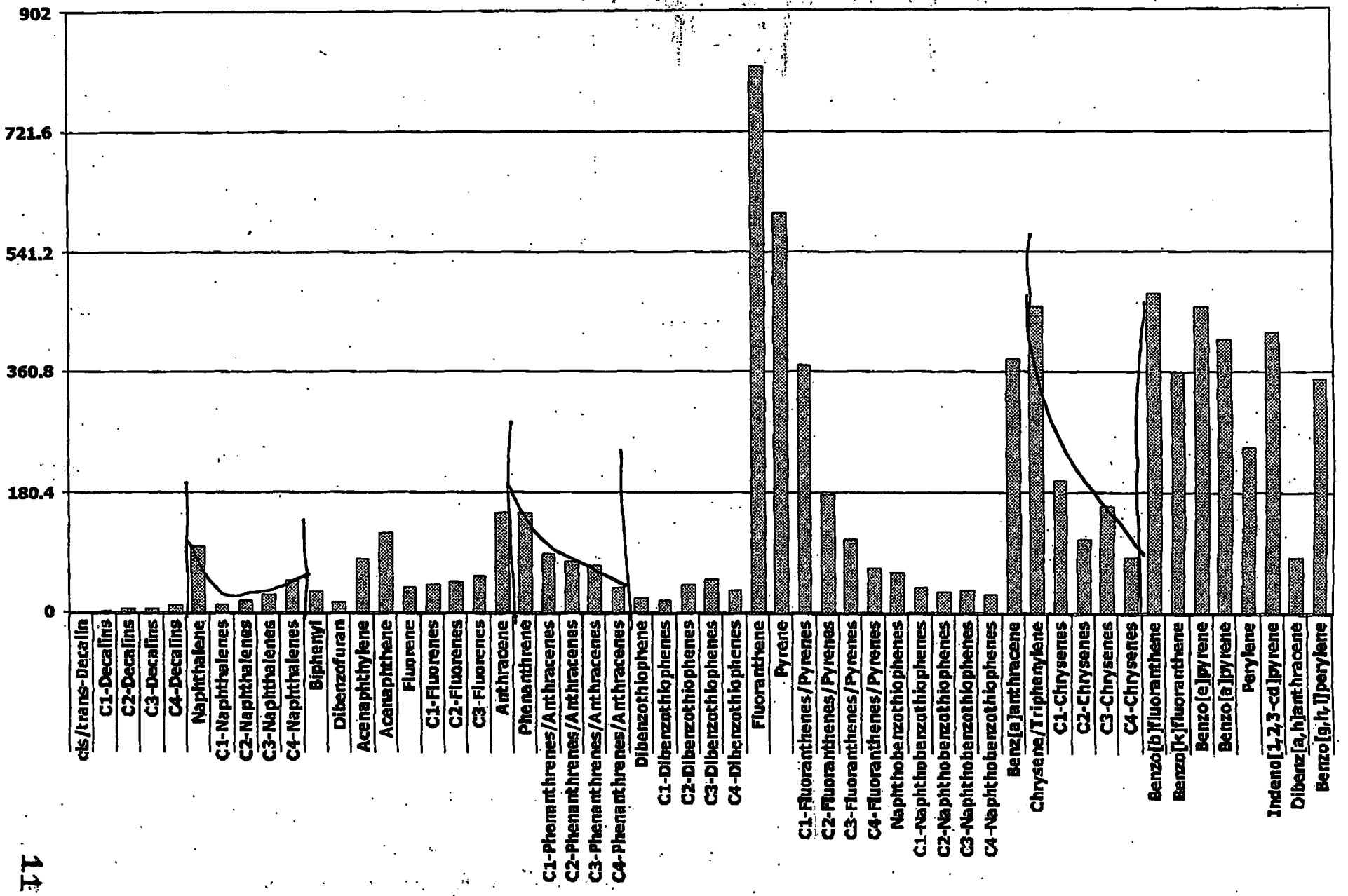
375 Paramount Drive, Suite 2, Raynham, Massachusetts 02767, (508) 822-9300, Fax (508) 822-3288

Alkylated Polynuclear Aromatic Hydrocarbons Distributions

Client ID: MA9-SSRR-A-3-6

Lab ID: 0512097-02

Concentration: µg/Kg



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ALS Vial : 10 Sample Multiplier: 1

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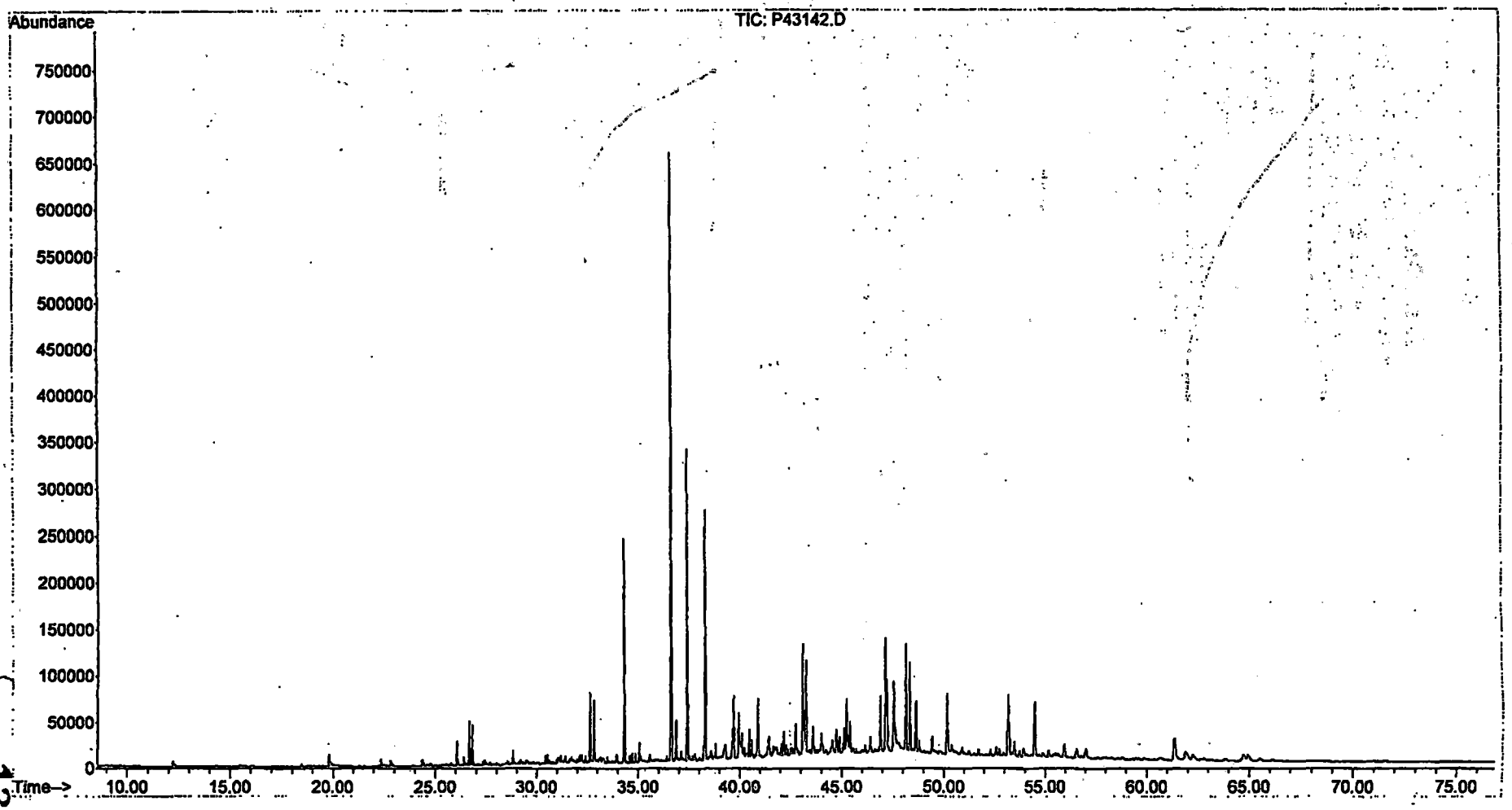
QLast Update : Fri Jan 13 11:58:23 2006
Response via : Initial Calibration



Form I
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: MA9-SSRR-A-6-9
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: 0512097-03
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Date Analyzed	Percent Solid	Sample Amount (g)	Final Volume (ml)	Dilution Factor	Analyst
12/12/05	12/14/05	12/21/05	01/10/06	77.7	20.77	2	1	AC

Parameter	Result	Parameter	Result
cis/trans-Decalin	1.7	C1-Dibenzothiophenes	8.9
C1-Decalins	5.1	C2-Dibenzothiophenes	15
C2-Decalins	12	C3-Dibenzothiophenes	23
C3-Decalins	17	C4-Dibenzothiophenes	17
C4-Decalins	32	Benzo(b)fluorene	22
Benzothiophene	2.3	Fluoranthene	190
C1-Benzo(b)thiophenes	17	Pyrene	150
C2-Benzo(b)thiophenes	8.3	C1-Fluoranthenes/Pyrenes	84
C3-Benzo(b)thiophenes	11 G	C2-Fluoranthenes/Pyrenes	50
C4-Benzo(b)thiophenes	6.0	C3-Fluoranthenes/Pyrenes	41
Naphthalene	8.1	C4-Fluoranthenes/Pyrenes	29
C1-Naphthalenes	3.4	Naphthobenzothiophenes	17
C2-Naphthalenes	14	C1-Naphthobenzothiophenes	18
C3-Naphthalenes	25	C2-Naphthobenzothiophenes	15
C4-Naphthalenes	36	C3-Naphthobenzothiophenes	10
Biphenyl	5.4	C4-Naphthobenzothiophenes	8.1
Dibenzofuran	31	Benz[a]anthracene	75
Acenaphthylene	6.1	Chrysene/Triphenylene	100
Acenaphthene	300	C1-Chrysenes	54
Fluorene	83	C2-Chrysenes	63
C1-Fluorenes	18	C3-Chrysenes	62
C2-Fluorenes	18	C4-Chrysenes	28
C3-Fluorenes	28	Benzo[b]fluoranthene	73
Anthracene	37	Benzo[k]fluoranthene	55
Phenanthrene	44	Benzo[a]fluoranthene	13
C1-Phenanthrenes/Anthracenes	28	Benzo[e]pyrene	56
C2-Phenanthrenes/Anthracenes	32	Benzo[a]pyrene	61
C3-Phenanthrenes/Anthracenes	62	Perylene	48
C4-Phenanthrenes/Anthracenes	35	Indeno[1,2,3-cd]pyrene	46
Retene	6.2	Dibenz[a,h]anthracene	9.8
Dibenzothiophene	17	Benzo[g,h,i]perylene	50

Surrogate	% Recovery	Acceptance Range (%)
2-Methylnaphthalene-d10	78	50-130
Pyrene-d10	58	50-130
Benzo[b]fluoranthene-d12	68	50-130

N/A - Not Applicable
G - Matrix Interference

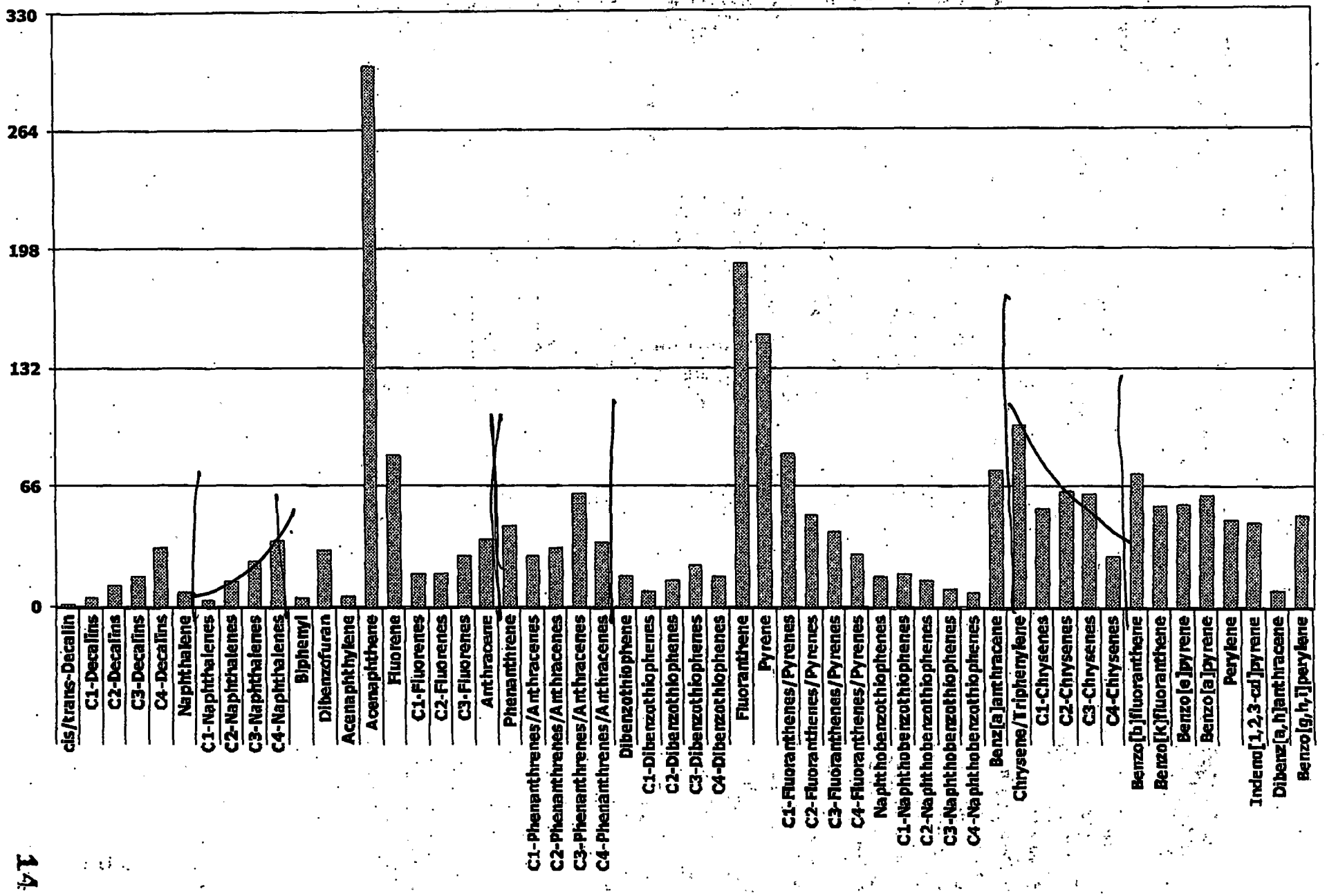
375 Paramount Drive, Suite 2, Raynham, Massachusetts 02767, (508) 822-9300, Fax (508) 822-3288

Alkylated Polynuclear Aromatic Hydrocarbons Distributions

Client ID: MA9-SSRR-A-6-9

Lab ID: 0512097-03

Concentration: µg/Kg



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ALS Vial : 11 Sample Multiplier: 1

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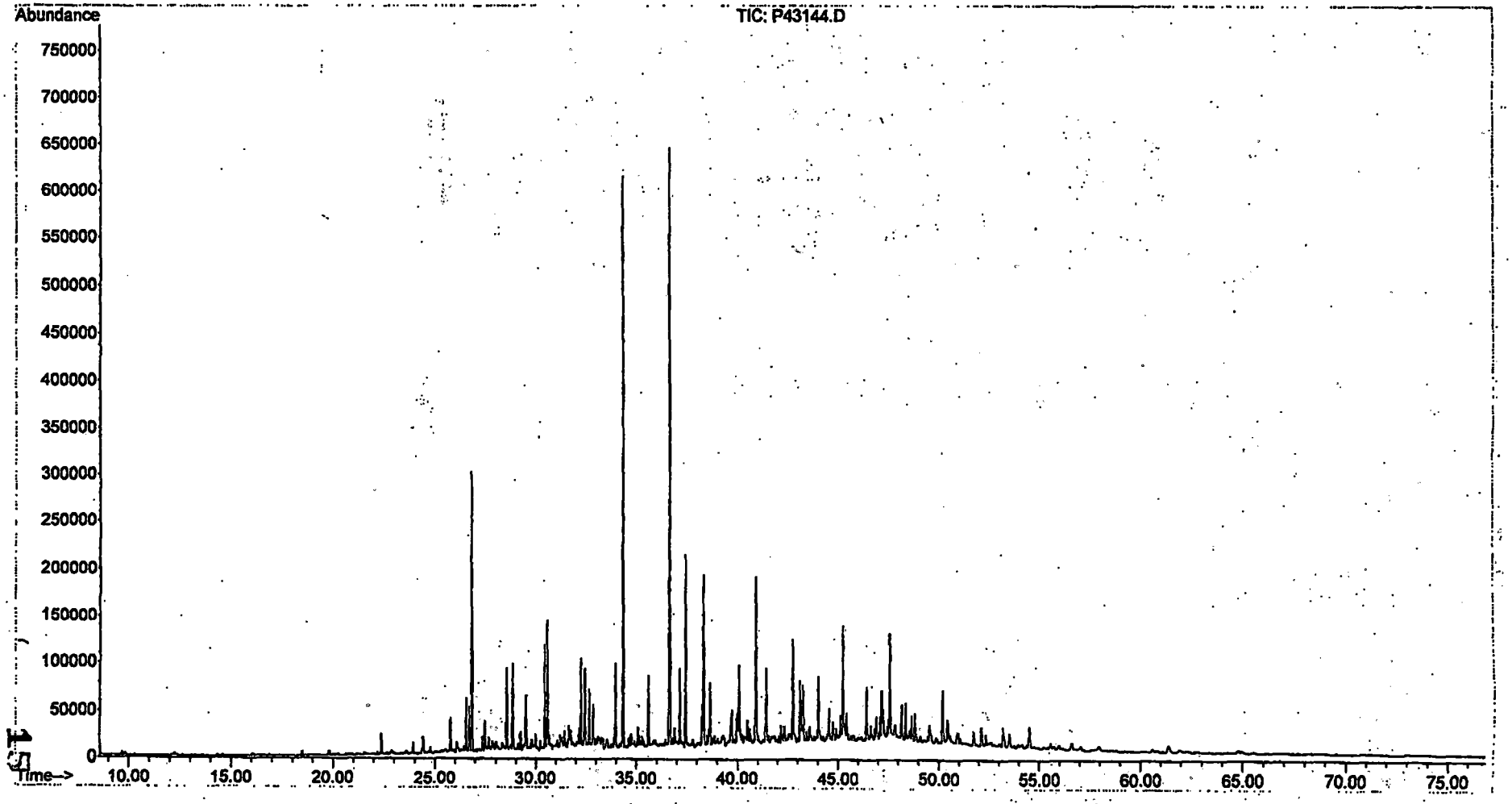
Quant Title : Decalins & Alkylated PAH's
QLast Update : Fri Jan 13 11:58:23 2006
Response via : Initial Calibration



Form I
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: MA9-SSRR-A-9-12
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: 0512097-04
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Date Analyzed	Percent Solid	Sample Amount (g)	Final Volume (ml)	Dilution Factor	Analyst
12/12/05	12/14/05	12/21/05	01/10/06	78.3	10.67	2	1	AC

Parameter	Result	Parameter	Result
cis/trans-Decalin	1.8 J	C1-Dibenzothiophenes	4.8
C1-Decalins	6.8	C2-Dibenzothiophenes	14
C2-Decalins	18	C3-Dibenzothiophenes	25
C3-Decalins	27	C4-Dibenzothiophenes	22
C4-Decalins	51	Benzo(b)fluorene	3.5
Benzothiophene	3.0	Fluoranthene	32
C1-Benzo(b)thiophenes	16	Pyrene	32
C2-Benzo(b)thiophenes	3.2	C1-Fluoranthenes/Pyrenes	28
C3-Benzo(b)thiophenes	2.7	C2-Fluoranthenes/Pyrenes	30
C4-Benzo(b)thiophenes	4.3	C3-Fluoranthenes/Pyrenes	37
Naphthalene	3.6	C4-Fluoranthenes/Pyrenes	35
C1-Naphthalenes	3.4	Naphthobenzothiophenes	9.4
C2-Naphthalenes	8.8	C1-Naphthobenzothiophenes	19
C3-Naphthalenes	17	C2-Naphthobenzothiophenes	16
C4-Naphthalenes	34	C3-Naphthobenzothiophenes	11
Biphenyl	3.8	C4-Naphthobenzothiophenes	8.2
Dibenzofuran	4.0	Benz[a]anthracene	13
Acenaphthylene	3.1	Chrysene/Triphenylene	35
Acenaphthene	70	C1-Chrysenes	34
Fluorene	10	C2-Chrysenes	65
C1-Fluorenes	4.1	C3-Chrysenes	72
C2-Fluorenes	8.2	C4-Chrysenes	36
C3-Fluorenes	23	Benzo[b]fluoranthene	19
Anthracene	7.1	Benzo[k]fluoranthene	11
Phenanthrene	10	Benzo[a]fluoranthene	4.9
C1-Phenanthrenes/Anthracenes	17	Benzo[e]pyrene	19
C2-Phenanthrenes/Anthracenes	30	Benzo[a]pyrene	13
C3-Phenanthrenes/Anthracenes	67	Perylene	42
C4-Phenanthrenes/Anthracenes	38	Indeno[1,2,3-cd]pyrene	14
Retene	7.2	Dibenz[a,h]anthracene	3.5
Dibenzothiophene	4.2	Benzo[g,h,i]perylene	27

Surrogate	% Recovery	Acceptance Range (%)
2-Methylnaphthalene-d10	95	50-130
Pyrene-d10	70	50-130
Benzo[b]fluoranthene-d12	82	50-130

N/A - Not Applicable
J - Estimated value, below quantitation limit.

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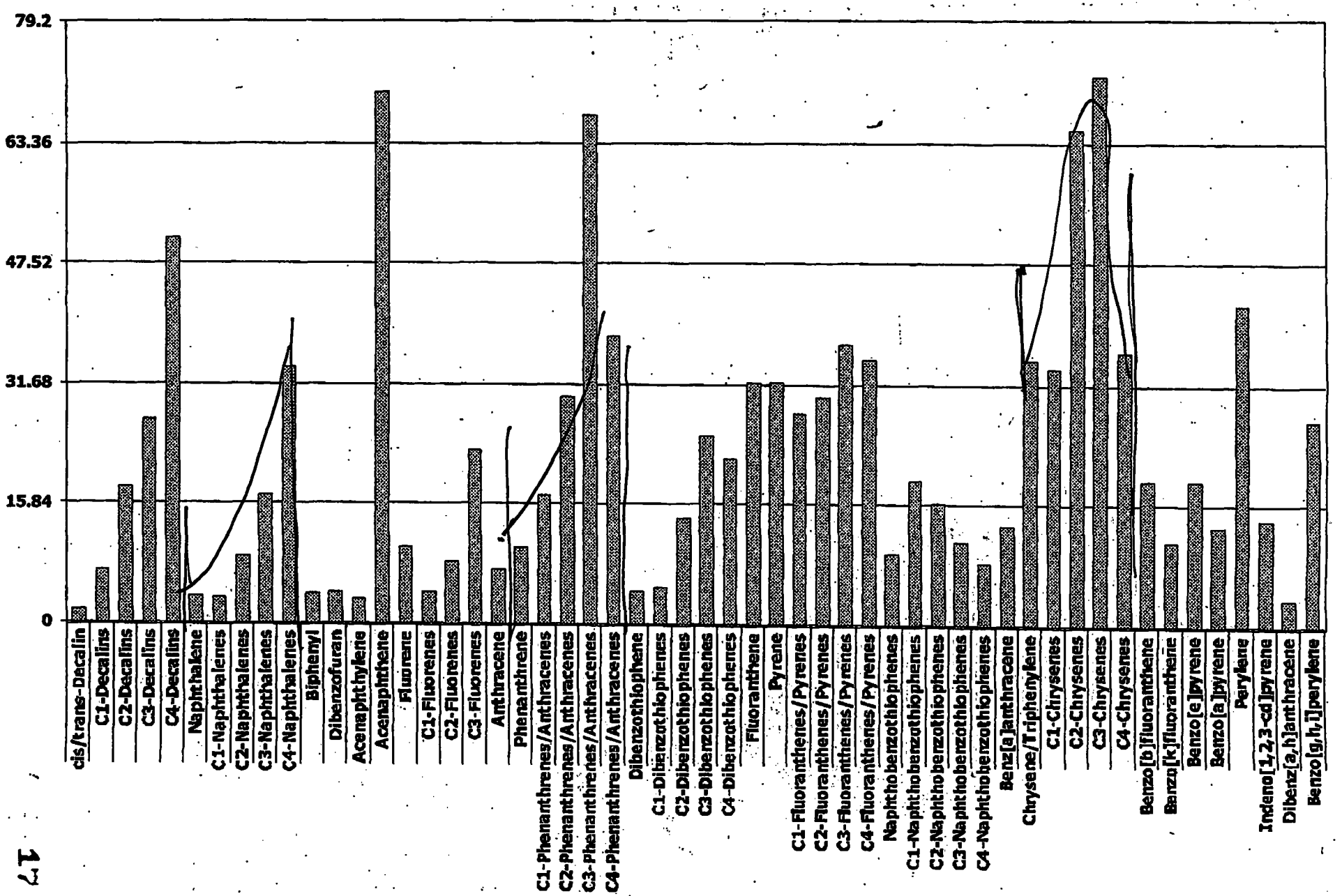
Alkylated Polynuclear Aromatic Hydrocarbons Distributions

Client ID: MA9-SSRR-A-9-12

Lab ID: 0512097-04

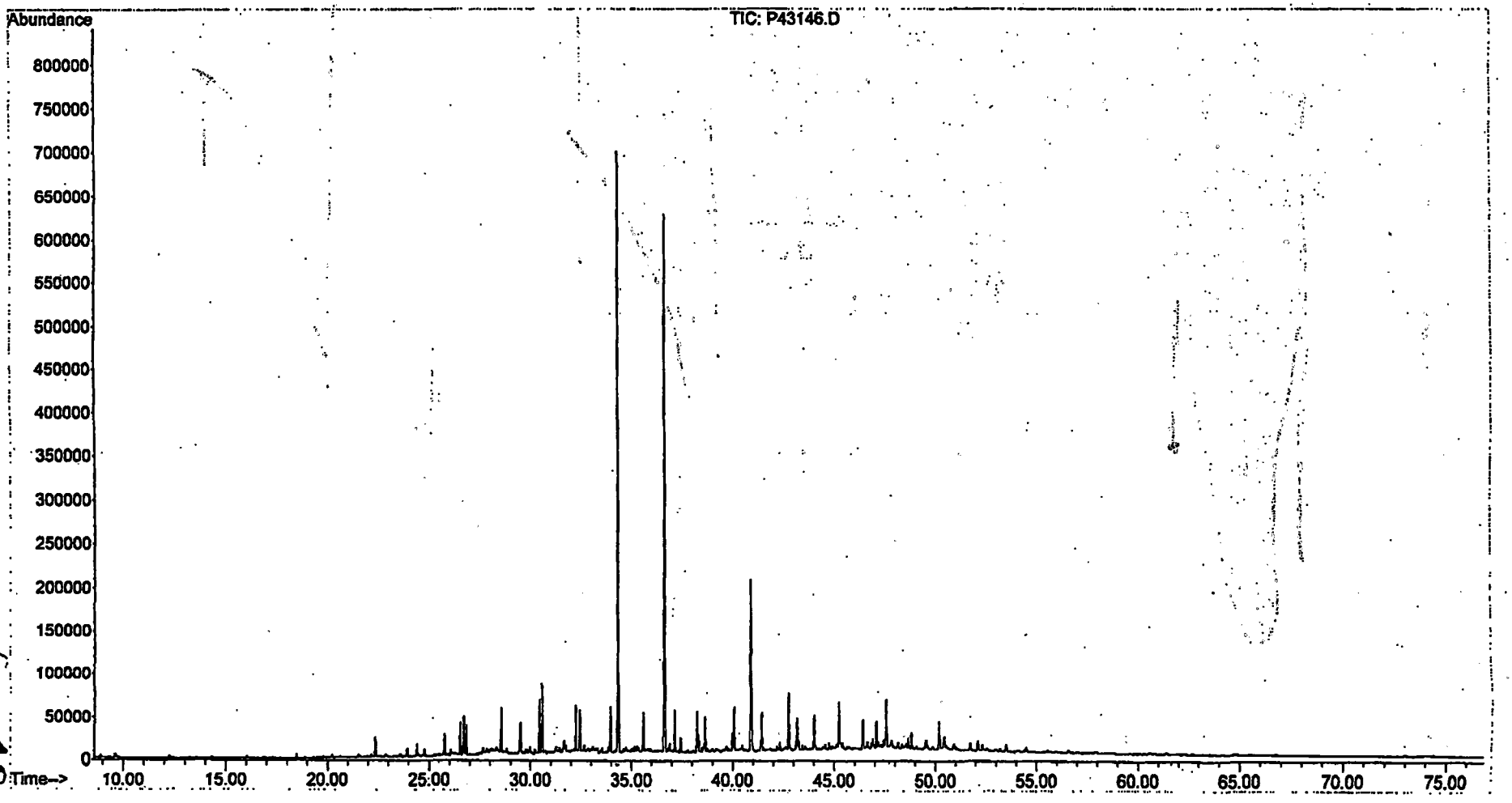
Concentration: µg/Kg



Quantitation Report (QT Re

Data Path : O:\FORENSICS\DATA\PAH4\JANUARY\JAN09\
Data File : P43146.D
Acq On : 10 Jan 2006 4:07 am
Operator : AC
Sample : 0512097-04
Misc : 1X
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jan 19 10:45:18 2006
Quant Method : C:\MSDCHEM\1\DATA\2006\PAH4\METHODS-SEQUENCE\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Fri Jan 13 11:58:23 2006
Response via : Initial Calibration



Form I
Duplicate
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: MA9-SSRR-A-9-12
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: 0512097-04 D
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Date Analyzed	Percent Solid	Sample Amount (g)	Final Volume (ml)	Dilution Factor	Analyst
12/12/05	12/14/05	12/21/05	01/10/06	78.3	10.35	2	1	AC

Parameter	Result	Parameter	Result
cis/trans-Decalin	1.6 J	C1-Dibenzothiophenes	6.5
C1-Decalins	6.6	C2-Dibenzothiophenes	14
C2-Decalins	16	C3-Dibenzothiophenes	24
C3-Decalins	21	C4-Dibenzothiophenes	21
C4-Decalins	49	Benzo(b)fluorene	6.2
Benzothiophene	3.3	Fluoranthene	53
C1-Benzo(b)thiophenes	20	Pyrene	47
C2-Benzo(b)thiophenes	4.0	C1-Fluoranthenes/Pyrenes	35
C3-Benzo(b)thiophenes	2.6	C2-Fluoranthenes/Pyrenes	33
C4-Benzo(b)thiophenes	4.5	C3-Fluoranthenes/Pyrenes	38
Naphthalene	4.8	C4-Fluoranthenes/Pyrenes	29
C1-Naphthalenes	4.3	Naphthobenzothiophenes	11
C2-Naphthalenes	11	C1-Naphthobenzothiophenes	17
C3-Naphthalenes	18	C2-Naphthobenzothiophenes	16
C4-Naphthalenes	34	C3-Naphthobenzothiophenes	12
Biphenyl	2.7	C4-Naphthobenzothiophenes	9.1
Dibenzofuran	7.4	Benz[a]anthracene	23
Acenaphthylene	5.2	Chrysene/Triphenylene	46
Acenaphthene	140	C1-Chrysenes	35
Fluorene	22	C2-Chrysenes	61
C1-Fluorenes	5.3	C3-Chrysenes	74
C2-Fluorenes	12	C4-Chrysenes	36
C3-Fluorenes	26	Benzo[b]fluoranthene	29
Anthracene	13	Benzo[k]fluoranthene	21
Phenanthrene	16	Benzo[a]fluoranthene	6.8
C1-Phenanthrenes/Anthracenes	21	Benzo[e]pyrene	30
C2-Phenanthrenes/Anthracenes	32	Benzo[a]pyrene	22
C3-Phenanthrenes/Anthracenes	68	Perylene	88
C4-Phenanthrenes/Anthracenes	38	Indeno[1,2,3-cd]pyrene	29
Retene	6.8	Dibenz[a,h]anthracene	6.1
Dibenzothiophene	5.0	Benzo[g,h,i]perylene	42

Surrogate	% Recovery	Acceptance Range (%)
2-Methylnaphthalene-d10	95	50-130
Pyrene-d10	72	50-130
Benzo[b]fluoranthene-d12	83	50-130

N/A - Not Applicable
J - Estimated value, below quantitation limit.

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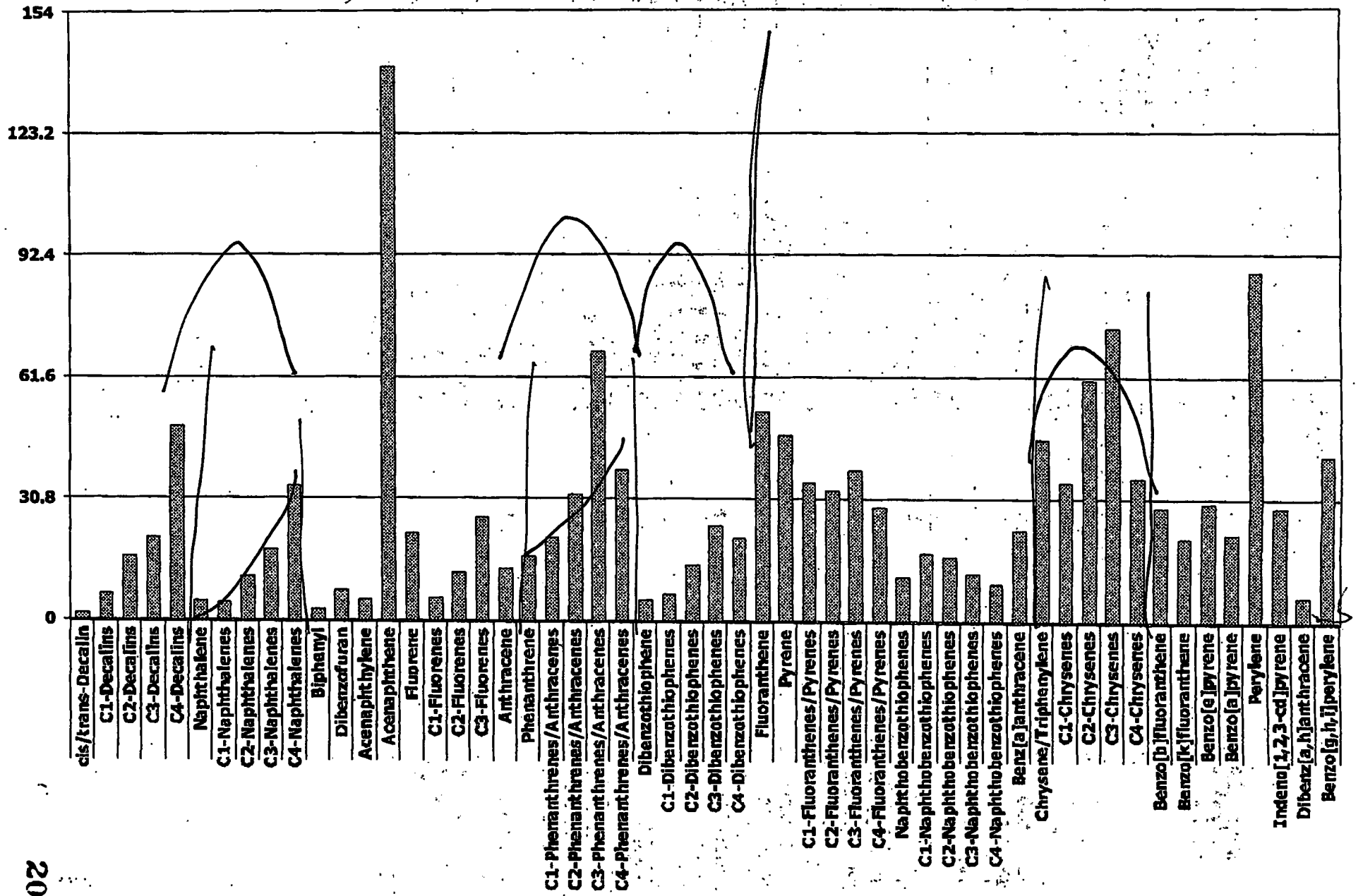
Alkylated Polynuclear Aromatic Hydrocarbons Distributions

Client ID: MA9-SSRR-A-9-12

Lab ID: 0512097-04 D

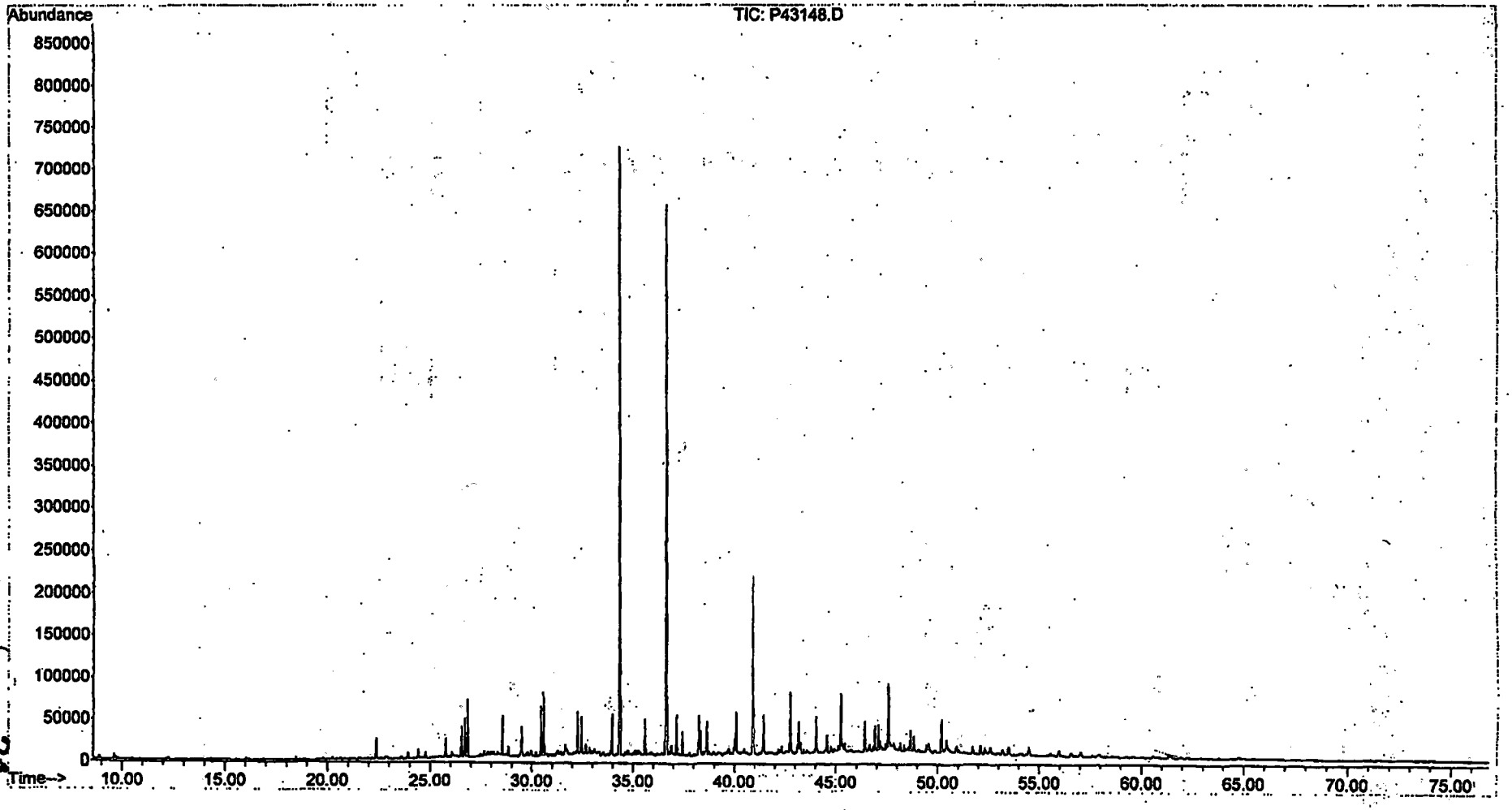
Concentration: µg/Kg



Quantitation Report (QT Re

Data Path : O:\FORENSICS\DATA\PAH4\JANUARY\JAN09\
Data File : P43148.D
Acq On : 10 Jan 2006 5:36 am
Operator : AC
Sample : 0512097-04D
Misc : 1X
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jan 19 11:03:44 2006
Quant Method : C:\MSDCHEM\1\DATA\2006\PAH4\METHODS-SEQUENCE\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Fri Jan 13 11:58:23 2006
Response via : Initial Calibration



Duplicate
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: MA9-SSRR-A-9-12
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: 0512097-04
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Percent Solid	Analyst
12/12/05	12/14/05	12/21/05	78.3	AC

Parameter	Sample Result	Duplicate Result	RPD	RPD Limit
cis/trans-Decalin	1.8 J	1.6 J	12	30
C1-Decalins	6.8	6.6	3	30
C2-Decalins	18	16	17	30
C3-Decalins	27	21	27	30
C4-Decalins	51	49	5	30
Benzothiophene	3.0	3.3	11	30
C1-Benzo(b)thiophenes	16	20	19	30
C2-Benzo(b)thiophenes	3.2	4.0	22	30
C3-Benzo(b)thiophenes	2.7	2.6	3	30
C4-Benzo(b)thiophenes	4.3	4.5	5	30
Naphthalene	3.6	4.8	28	30
C1-Naphthalenes	3.4	4.3	24	30
C2-Naphthalenes	8.8	11	21	30
C3-Naphthalenes	17	18	2	30
C4-Naphthalenes	34	34	0	30
Biphenyl	3.8	2.7	33[a]	30
Dibenzofuran	4.0	7.4	60[a]	30
Acenaphthylene	3.1	5.2	51[a]	30
Acenaphthene	70	140	66[a]	30
Fluorene	10	22	71[a]	30
C1-Fluorenes	4.1	5.3	27	30
C2-Fluorenes	8.2	12	36[a]	30
C3-Fluorenes	23	26	13	30
Anthracene	7.1	13	60[a]	30
Phenanthrene	10	16	43[a]	30
C1-Phenanthrenes/Anthracenes	17	21	24	30
C2-Phenanthrenes/Anthracenes	30	32	6	30
C3-Phenanthrenes/Anthracenes	67	68	1	30
C4-Phenanthrenes/Anthracenes	38	38	2	30
Retene	7.2	6.8	5	30
Dibenzothiophene	4.2	5.0	18	30
C1-Dibenzothiophenes	4.8	6.5	29	30
C2-Dibenzothiophenes	14	14	1	30
C3-Dibenzothiophenes	25	24	6	30
C4-Dibenzothiophenes	22	21	5	30

N/A - Not Applicable
[a] - Value outside of QC Limits.
J - Estimated value, below quantitation limit.

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Duplicate
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: MA9-SSRR-A-9-12
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: 0512097-04
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Percent Solid	Analyst
12/12/05	12/14/05	12/21/05	78.3	AC

Parameter	Sample Result	Duplicate Result	RPD	RPD Limit
Benzo(b)fluorene	3.5	6.2	56[a]	30
Fluoranthene	32	53	49[a]	30
Pyrene	32	47	37[a]	30
C1-Fluoranthenes/Pyrenes	28	35	24	30
C2-Fluoranthenes/Pyrenes	30	33	9	30
C3-Fluoranthenes/Pyrenes	37	38	3	30
C4-Fluoranthenes/Pyrenes	35	29	19	30
Naphthobenzothiophenes	9.4	11	17	30
C1-Naphthobenzothiophenes	19	17	9	30
C2-Naphthobenzothiophenes	16	16	2	30
C3-Naphthobenzothiophenes	11	12	6	30
C4-Naphthobenzothiophenes	8.2	9.1	11	30
Benz[a]anthracene	13	23	55[a]	30
Chrysene/Triphenylene	35	46	28	30
C1-Chrysenes	34	35	4	30
C2-Chrysenes	65	61	7	30
C3-Chrysenes	72	74	3	30
C4-Chrysenes	36	36	1	30
Benzo[b]fluoranthene	19	29	42[a]	30
Benzo[k]fluoranthene	11	21	61[a]	30
Benzo[a]fluoranthene	4.9	6.8	31[a]	30
Benzo[e]pyrene	19	30	45[a]	30
Benzo[a]pyrene	13	22	49[a]	30
Perylene	42	88	71[a]	30
Indeno[1,2,3-cd]pyrene	14	29	72[a]	30
Dibenz[a,h]anthracene	3.5	6.1	54[a]	30
Benzo[g,h,i]perylene	27	42	43[a]	30

21 34% RPD

Surrogate	% Recovery		Acceptance Range (%)
2-Methylnaphthalene-d10	95	95	50-130
Pyrene-d10	70	72	50-130
Benzo[b]fluoranthene-d12	82	83	50-130

N/A - Not Applicable
[a] - Value outside of QC Limits.

Concentrations reported as calculated values, which includes rounding for significant figures. RPD values are reported based on the unrounded calculated result.

01/19/06 11:34

Form I
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: MA9-SSRR-A-12-15
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: 0512097-05
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Date Analyzed	Percent Solid	Sample Amount (g)	Final Volume (ml)	Dilution Factor	Analyst
12/12/05	12/14/05	12/21/05	01/10/06	79.7	20.78	2	1	AC

Parameter	Result
cis/trans-Decalin	1.7
C1-Decalins	5.4
C2-Decalins	15
C3-Decalins	20
C4-Decalins	40
Benzothiophene	1.1 J
C1-Benzo(b)thiophenes	4.9
C2-Benzo(b)thiophenes	1.6
C3-Benzo(b)thiophenes	2.2
C4-Benzo(b)thiophenes	3.9
Naphthalene	2.1
C1-Naphthalenes	2.3
C2-Naphthalenes	5.6
C3-Naphthalenes	12
C4-Naphthalenes	27
Biphenyl	0.72 J
Dibenzofuran	1.5
Acenaphthylene	2.3
Acenaphthene	16
Fluorene	2.8
C1-Fluorenes	3.0
C2-Fluorenes	8.0
C3-Fluorenes	22
Anthracene	6.1
Phenanthrene	12
C1-Phenanthrenes/Anthracenes	12
C2-Phenanthrenes/Anthracenes	26
C3-Phenanthrenes/Anthracenes	65
C4-Phenanthrenes/Anthracenes	35
Retene	6.2
Dibenzothiophene	2.3

Parameter	Result
C1-Dibenzothiophenes	4.6
C2-Dibenzothiophenes	12
C3-Dibenzothiophenes	20
C4-Dibenzothiophenes	16
Benzo(b)fluorene	3.9
Fluoranthene	36
Pyrene	33
C1-Fluoranthenes/Pyrenes	27
C2-Fluoranthenes/Pyrenes	30
C3-Fluoranthenes/Pyrenes	32
C4-Fluoranthenes/Pyrenes	26
Naphthobenzothiophenes	10
C1-Naphthobenzothiophenes	18
C2-Naphthobenzothiophenes	14
C3-Naphthobenzothiophenes	9.0
C4-Naphthobenzothiophenes	7.8
Benz[a]anthracene	16
Chrysene/Triphenylene	40
C1-Chrysenes	30
C2-Chrysenes	54
C3-Chrysenes	56
C4-Chrysenes	31
Benzo[b]fluoranthene	24
Benzo[k]fluoranthene	15
Benzo[a]fluoranthene	4.8
Benzo[e]pyrene	21
Benzo[a]pyrene	17
Perylene	24
Indeno[1,2,3-cd]pyrene	17
Dibenz[a,h]anthracene	3.7
Benzo[g,h,i]perylene	27

Surrogate	% Recovery	Acceptance Range (%)
2-Methylnaphthalene-d10	83	50-130
Pyrene-d10	59	50-130
Benzo[b]fluoranthene-d12	71	50-130

N/A - Not Applicable
J - Estimated value, below quantitation limit.

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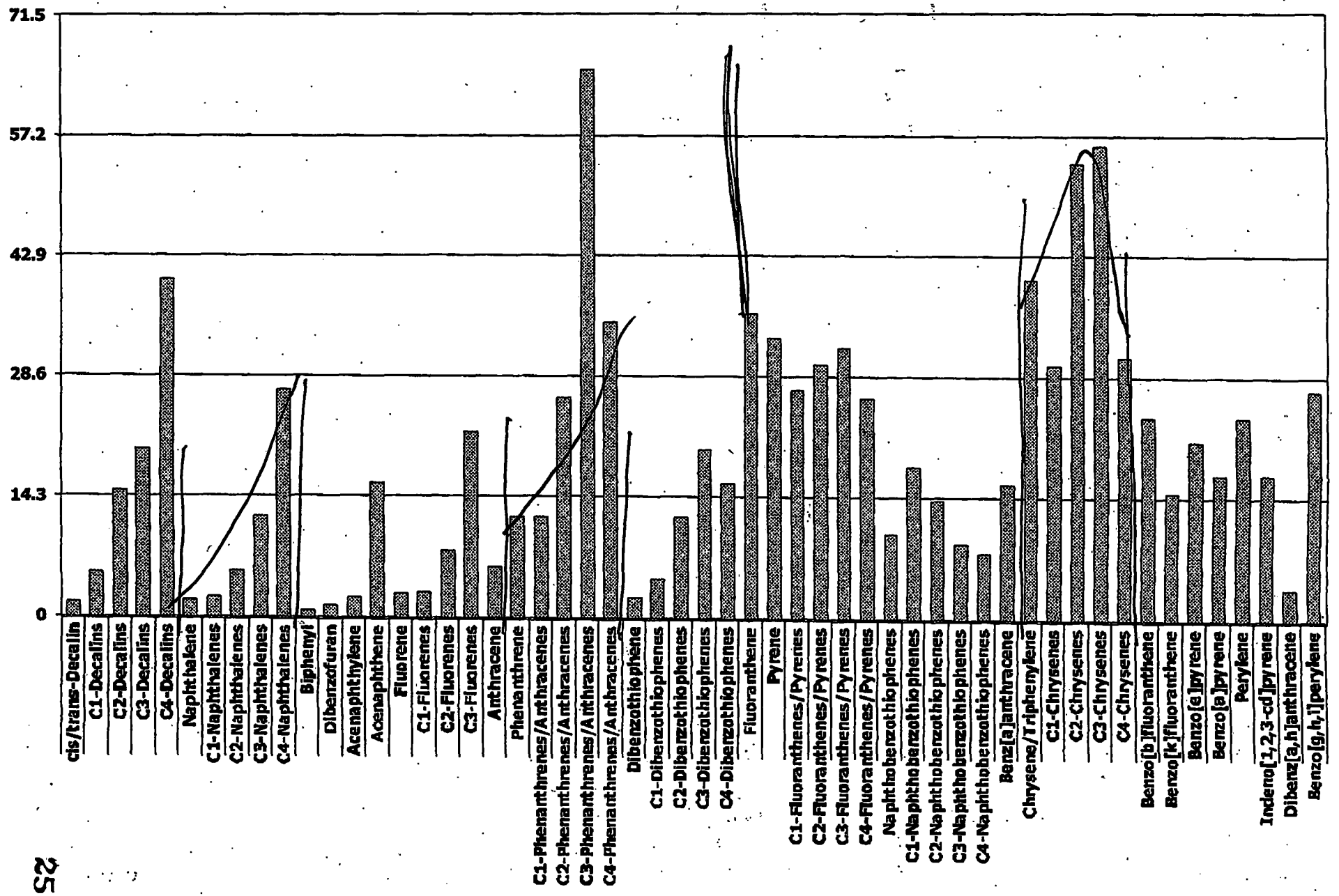
Alkylated Polynuclear Aromatic Hydrocarbons Distributions

Client ID: MA9-SSRR-A-12-15

Lab ID: 0512097-05

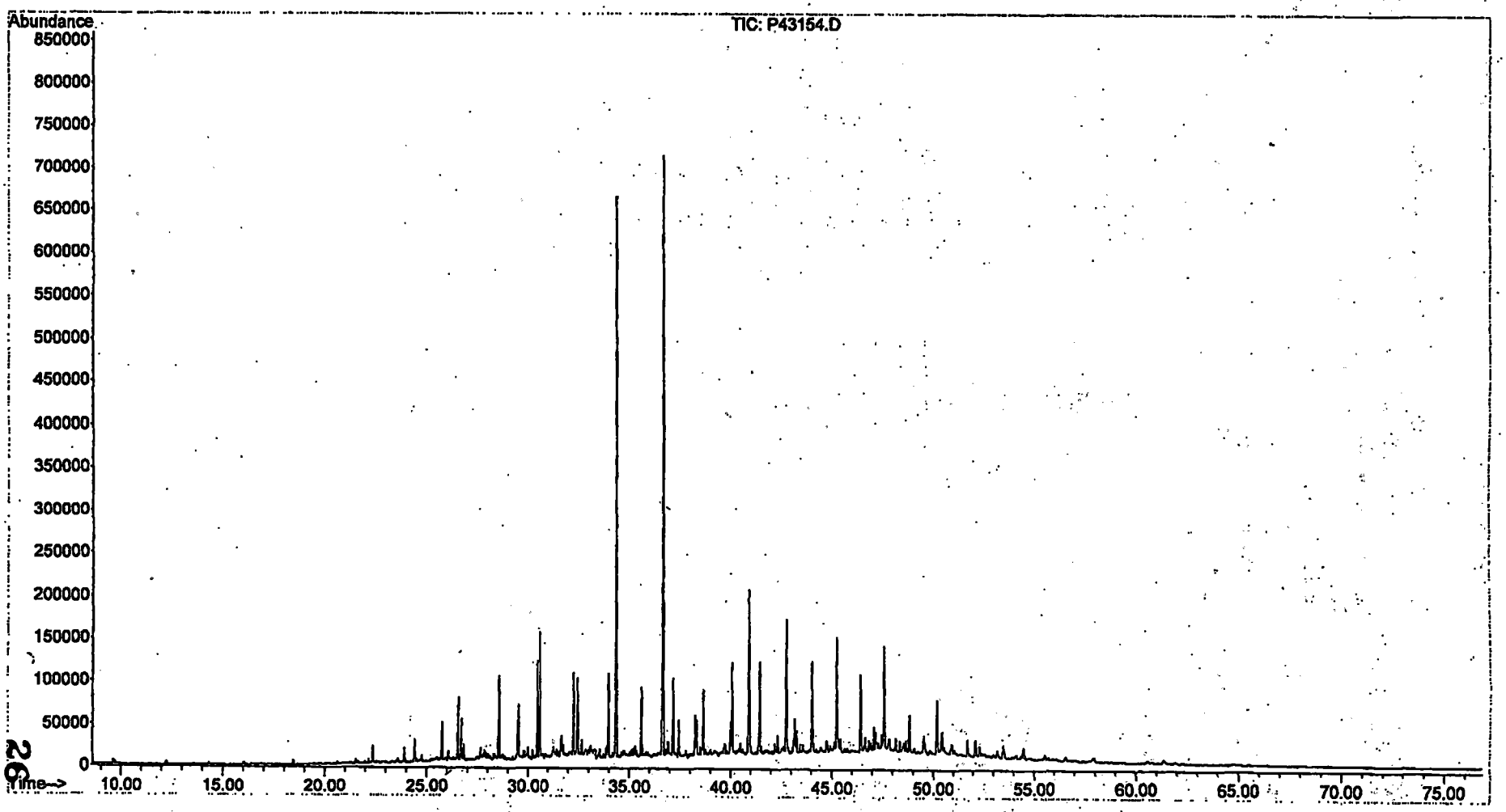
Concentration: µg/Kg



Quantitation Report (QT Reviewed)

Data Path : O:\FORENSICS\DATA\PAH4\JANUARY\JAN09\
Data File : P43154.D
Acq On : 10 Jan 2006 10:02 am
Operator : AC
Sample : 0512097-05
Misc : 1X
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jan 19 10:49:12 2006
Quant Method : C:\MSDCHEM\1\DATA\2006\PAH4\METHODS-SEQUENCE\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Fri Jan 13 11:58:23 2006
Response via : Initial Calibration



Form I
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: MA9-SSRR-718+00
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: 0512097-11
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Date Analyzed	Percent Solid	Sample Amount (g)	Final Volume (ml)	Dilution Factor	Analyst
12/14/05	12/15/05	12/21/05	01/10/06	56.8	5.18	8.33	1	AC

Parameter	Result		Parameter	Result	
cis/trans-Decalin	31		C1-Dibenzothiophenes	13000	
C1-Decalins	100		C2-Dibenzothiophenes	17000	
C2-Decalins	180		C3-Dibenzothiophenes	15000	
C3-Decalins	240		C4-Dibenzothiophenes	7200	
C4-Decalins	450		Benzo(b)fluorene	17000	
Benzothiophene	2800		Fluoranthene	260000	E
C1-Benzo(b)thiophenes	4500		Pyrene	170000	E
C2-Benzo(b)thiophenes	4400		C1-Fluoranthenes/Pyrenes	42000	
C3-Benzo(b)thiophenes	5000		C2-Fluoranthenes/Pyrenes	11000	
C4-Benzo(b)thiophenes	4200		C3-Fluoranthenes/Pyrenes	5600	
Naphthalene	120000	E	C4-Fluoranthenes/Pyrenes	3000	
C1-Naphthalenes	130000	E	Naphthobenzothiophenes	6900	
C2-Naphthalenes	54000		C1-Naphthobenzothiophenes	2700	
C3-Naphthalenes	36000		C2-Naphthobenzothiophenes	2400	
C4-Naphthalenes	21000		C3-Naphthobenzothiophenes	1900	
Biphenyl	23000		C4-Naphthobenzothiophenes	1100	
Dibenzofuran	180000	E	Benz[a]anthracene	45000	E
Acenaphthylene	1200		Chrysene/Triphenylene	40000	E
Acenaphthene	270000	E	C1-Chrysenes	10000	
Fluorene	190000	E	C2-Chrysenes	5600	
C1-Fluorenes	16000		C3-Chrysenes	5000	
C2-Fluorenes	13000		C4-Chrysenes	2200	
C3-Fluorenes	11000		Benzo[b]fluoranthene	17000	
Anthracene	38000	E	Benzo[k]fluoranthene	13000	
Phenanthrene	470000	E	Benzo[a]fluoranthene	2300	
C1-Phenanthrenes/Anthracenes	57000		Benzo[e]pyrene	9100	
C2-Phenanthrenes/Anthracenes	32000		Benzo[a]pyrene	13000	
C3-Phenanthrenes/Anthracenes	18000		Perylene	3200	
C4-Phenanthrenes/Anthracenes	8100		Indeno[1,2,3-cd]pyrene	5300	
Retene	4.1	U	Dibenz[a,h]anthracene	1200	
Dibenzothiophene	26000		Benzo[g,h,i]perylene	3800	

1,089,200
88.7% 11.3% 1,227,500 138,300
All 2,487,701
Total PAHs 2,379,500
7.85

Surrogate	% Recovery	Acceptance Range (%)
2-Methylnaphthalene-d10	114	50-130
Pyrene-d10	78	50-130
Benzo[b]fluoranthene-d12	93	50-130

N/A - Not Applicable
E - Estimated value, exceeds the upper limit of calibration.
U - The analyte was analyzed for but not detected at the sample specific level reported.

CPAHs 183.3

Thiophene 78,200
5%

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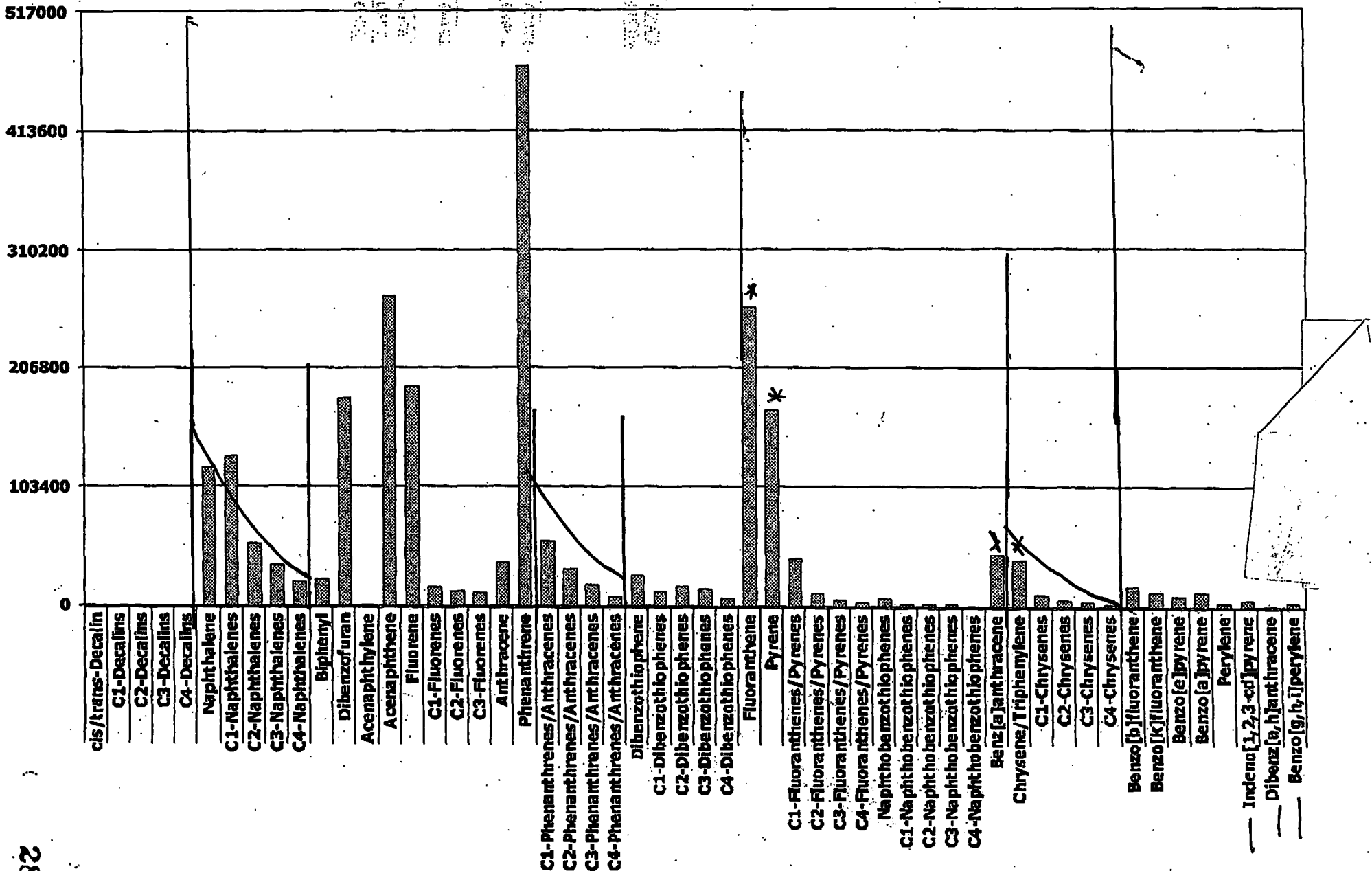
Alkylated Polynuclear Aromatic Hydrocarbons Distributions

Client ID: MA9-SSRR-718+00

Lab ID: 0512097-11

Concentration: µg/Kg



Quantitation Report (QT Re

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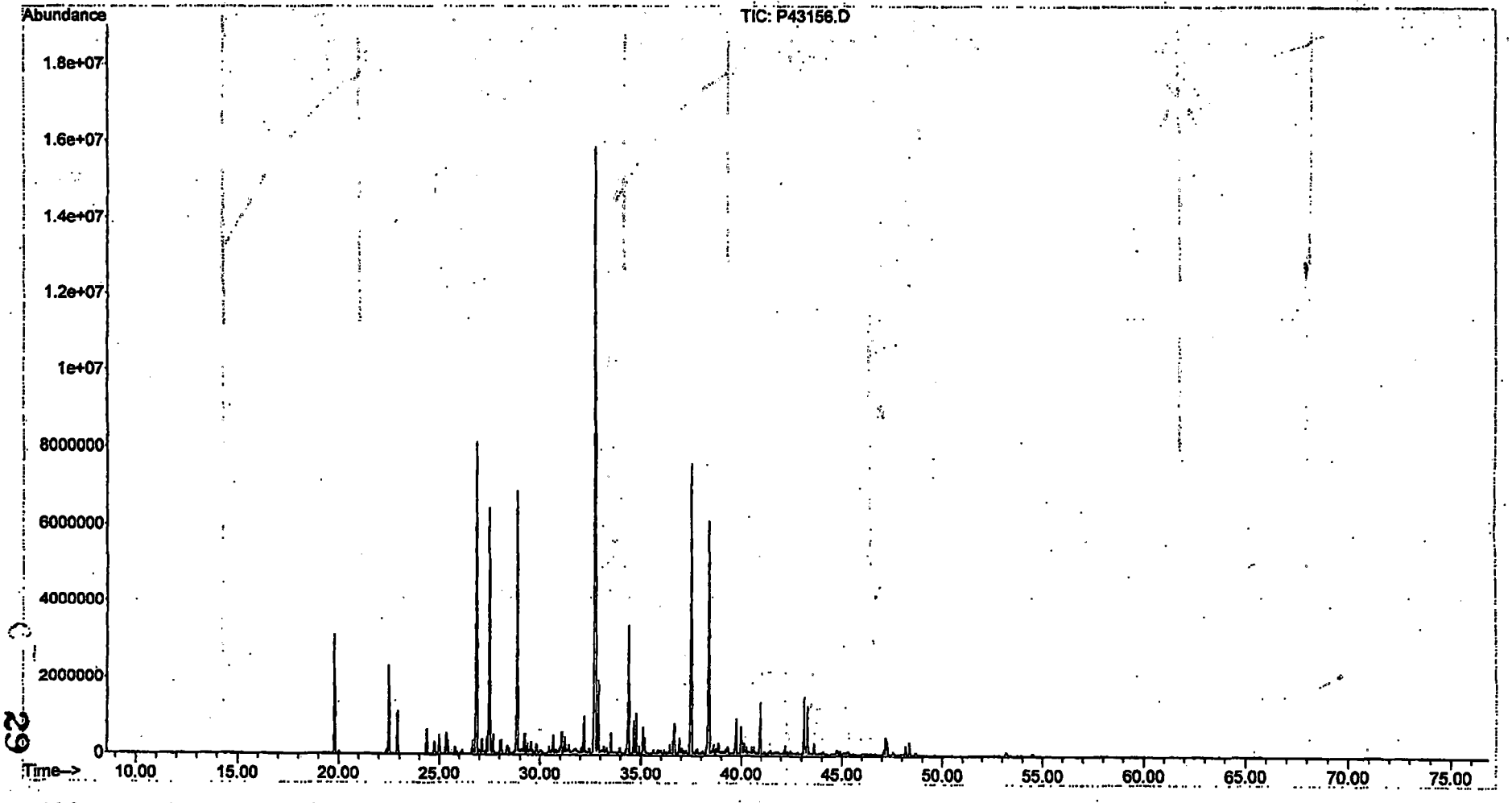
Data File : P43156.D
Acq On : 10 Jan 2006 11:49 am
Operator : AC
Sample : 0512097-11
Misc : 1X
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jan 16 22:23:02 2006
Quant Method : C:\MSDCHEM\1\DATA\2006\PAH4\METHODS-SEQUENCE\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Fri Jan 13 11:58:23 2006
Response via : Initial Calibration



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Form I
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: MA9-SSRR-718+00
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: 0512097-11E
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Date Analyzed	Percent Solid	Sample Amount (g)	Final Volume (ml)	Dilution Factor	Analyst
12/14/05	12/15/05	12/21/05	01/10/06	56.8	5.18	8.33	20	AC

Parameter	Result		Parameter	Result	
cis/trans-Decalin	150	U	C1-Dibenzothiophenes	63	U
C1-Decalins	150	U	C2-Dibenzothiophenes	63	U
C2-Decalins	150	U	C3-Dibenzothiophenes	63	U
C3-Decalins	150	U	C4-Dibenzothiophenes	63	U
C4-Decalins	150	U	Benzo(b)fluorene	57	U
Benzothiophene	74	U	Fluoranthene	230000	
C1-Benzo(b)thiophenes	74	U	Pyrene	150000	
C2-Benzo(b)thiophenes	74	U	C1-Fluoranthenes/Pyrenes	50	U
C3-Benzo(b)thiophenes	74	U	C2-Fluoranthenes/Pyrenes	50	U
C4-Benzo(b)thiophenes	74	U	C3-Fluoranthenes/Pyrenes	50	U
Naphthalene	110000		C4-Fluoranthenes/Pyrenes	50	U
C1-Naphthalenes	120000		Naphthobenzothiophenes	68	U
C2-Naphthalenes	94	U	C1-Naphthobenzothiophenes	68	U
C3-Naphthalenes	94	U	C2-Naphthobenzothiophenes	68	U
C4-Naphthalenes	94	U	C3-Naphthobenzothiophenes	68	U
Biphenyl	52	U	C4-Naphthobenzothiophenes	68	U
Dibenzofuran	160000		Benz[a]anthracene	43000	
Acenaphthylene	100	U	Chrysene/Triphenylene	39000	
Acenaphthene	240000		C1-Chrysenes	61	U
Fluorene	170000		C2-Chrysenes	61	U
C1-Fluorenes	65	U	C3-Chrysenes	61	U
C2-Fluorenes	65	U	C4-Chrysenes	61	U
C3-Fluorenes	65	U	Benzo[b]fluoranthene	60	U
Anthracene	41000		Benzo[k]fluoranthene	120	U
Phenanthrene	420000		Benzo[a]fluoranthene	120	U
C1-Phenanthrenes/Anthracenes	82	U	Benzo[e]pyrene	78	U
C2-Phenanthrenes/Anthracenes	82	U	Benzo[a]pyrene	79	U
C3-Phenanthrenes/Anthracenes	82	U	Perylene	99	U
C4-Phenanthrenes/Anthracenes	82	U	Indeno[1,2,3-cd]pyrene	140	U
Retene	82	U	Dibenz[a,h]anthracene	110	U
Dibenzothiophene	63	U	Benzo[g,h,i]perylene	100	U

Surrogate	% Recovery	Acceptance Range (%)
2-Methylnaphthalene-d10	109	50-130
Pyrene-d10	91	50-130
Benzo[b]fluoranthene-d12	97	50-130

N/A - Not Applicable
U - The analyte was analyzed for but not detected at the sample specific level reported.

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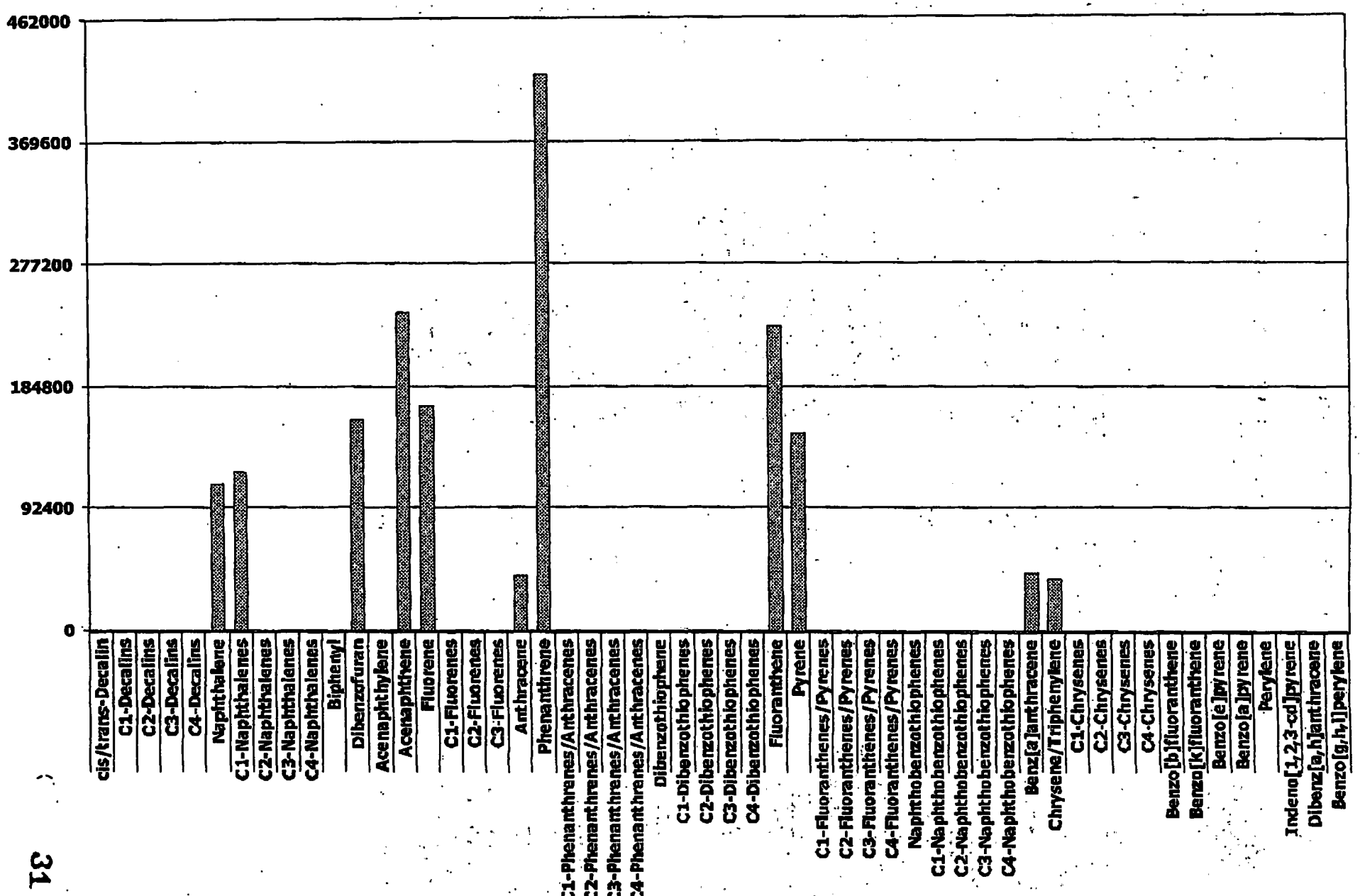
Alkylated Polynuclear Aromatic Hydrocarbons Distributions

Client ID: MA9-SSRR-718+00

Lab ID: 0512097-11

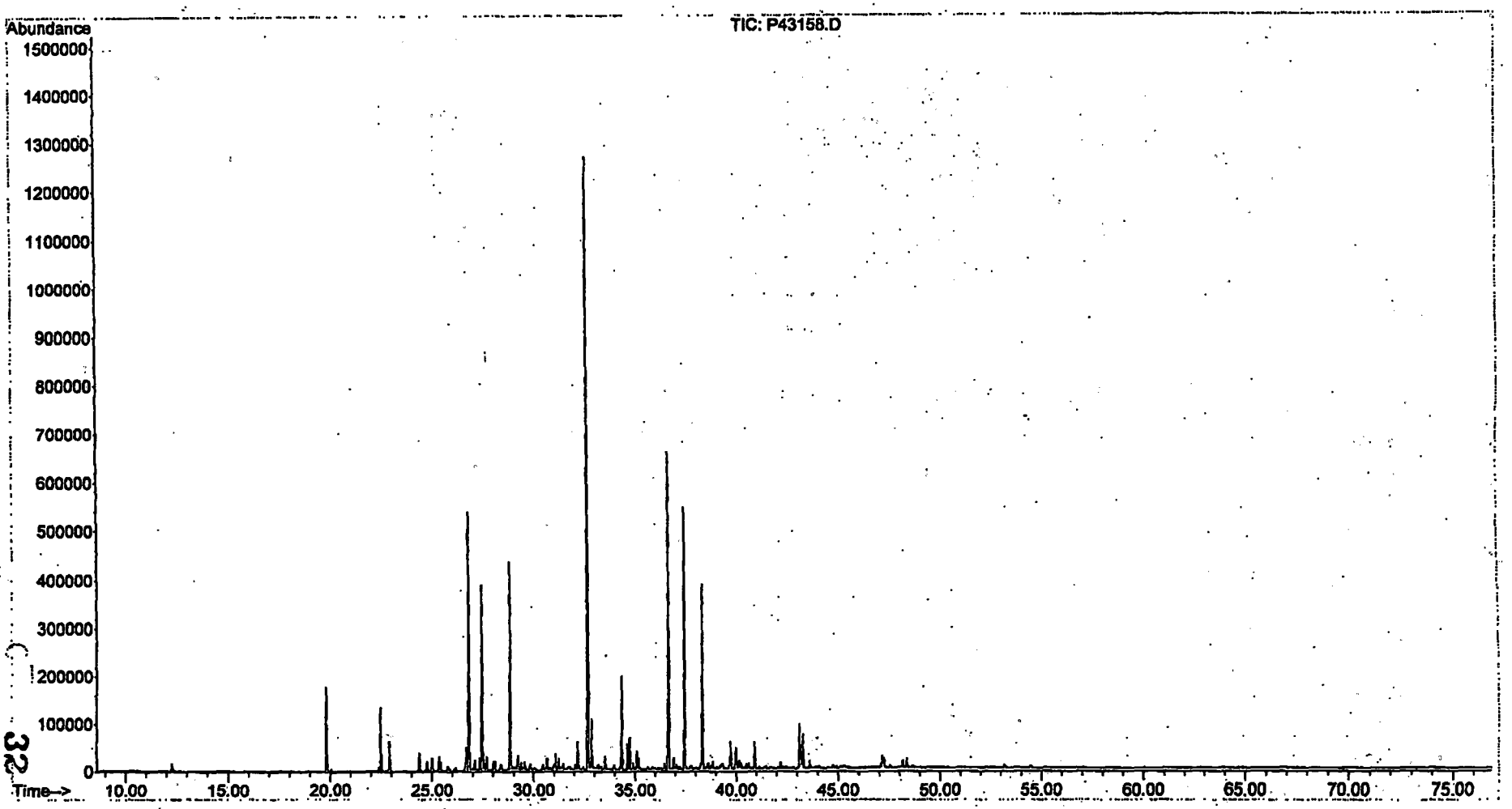
Concentration: µg/Kg



Quantitation Report (QT Reviewed)

Data Path : O:\FORENSICS\DATA\PAH4\JANUARY\JAN09\
Data File : P43158.D
Acq On : 10 Jan 2006 1:18 pm
Operator : AC
Sample : 0512097-11-RE
Misc : 20X
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jan 16 22:28:00 2006
Quant Method : C:\MSDCHEM\1\DATA\2006\PAH4\METHODS-SEQUENCE\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Fri Jan 13 11:58:23 2006
Response via : Initial Calibration



Form I
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: MA9-SSRR-717+60
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: 0512097-12
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Date Analyzed	Percent Solid	Sample Amount (g)	Final Volume (ml)	Dilution Factor	Analyst
12/08/05	12/15/05	12/21/05	01/10/06	57.3	5.02	14.29	1	AC

Parameter	Result		Parameter	Result	
cis/trans-Decalin	310		C1-Dibenzothiophenes	36000	
C1-Decalins	260		C2-Dibenzothiophenes	58000	
C2-Decalins	220		C3-Dibenzothiophenes	55000	
C3-Decalins	230		C4-Dibenzothiophenes	25000	
C4-Decalins	520		Benzo(b)fluorene	44000	
Benzothiophene	41	J	Fluoranthene	660000	E
C1-Benzo(b)thiophenes	2300		Pyrene	450000	E
C2-Benzo(b)thiophenes	5400		C1-Fluoranthenes/Pyrenes	120000	
C3-Benzo(b)thiophenes	9300		C2-Fluoranthenes/Pyrenes	49000	
C4-Benzo(b)thiophenes	9400		C3-Fluoranthenes/Pyrenes	32000	
Naphthalene	730		C4-Fluoranthenes/Pyrenes	16000	
C1-Naphthalenes	40000	E	Naphthobenzothiophenes	20000	
C2-Naphthalenes	62000		C1-Naphthobenzothiophenes	10000	
C3-Naphthalenes	72000		C2-Naphthobenzothiophenes	11000	
C4-Naphthalenes	50000		C3-Naphthobenzothiophenes	9000	
Biphenyl	550		C4-Naphthobenzothiophenes	5100	
Dibenzofuran	280000	E	Benz[a]anthracene	120000	E
Acenaphthylene	2700		Chrysene/Triphenylene	120000	E
Acenaphthene	430000	E	C1-Chrysenes	44000	
Fluorene	350000	E	C2-Chrysenes	36000	
C1-Fluorenes	38000		C3-Chrysenes	32000	
C2-Fluorenes	40000		C4-Chrysenes	13000	
C3-Fluorenes	41000		Benzo[b]fluoranthene	45000	
Anthracene	77000	E	Benzo[k]fluoranthene	36000	
Phenanthrene	860000	E	Benzo[a]fluoranthene	5800	
C1-Phenanthrenes/Anthracenes	160000		Benzo[e]pyrene	25000	
C2-Phenanthrenes/Anthracenes	140000		Benzo[a]pyrene	36000	
C3-Phenanthrenes/Anthracenes	100000		Perylene	9000	
C4-Phenanthrenes/Anthracenes	45000		Indeno[1,2,3-cd]pyrene	12000	
Retene	7.2	U	Dibenz[a,h]anthracene	3100	
Dibenzothiophene	53000	E	Benzo[g,h,i]perylene	9400	

All 5,016,361

4,32 81.2 1,720,430
18.8 2101930 381,500 Total PAHs 4,724,280

Surrogate	% Recovery	Acceptance Range (%)
2-Methylnaphthalene-d10	115	50-130
Pyrene-d10	71	50-130
Benzo[b]fluoranthene-d12	97	50-130

N/A - Not Applicable
E - Estimated value, exceeds the upper limit of calibration.
J - Estimated value, below quantitation limit.
U - The analyte was analyzed for but not detected at the sample specific level reported.

34

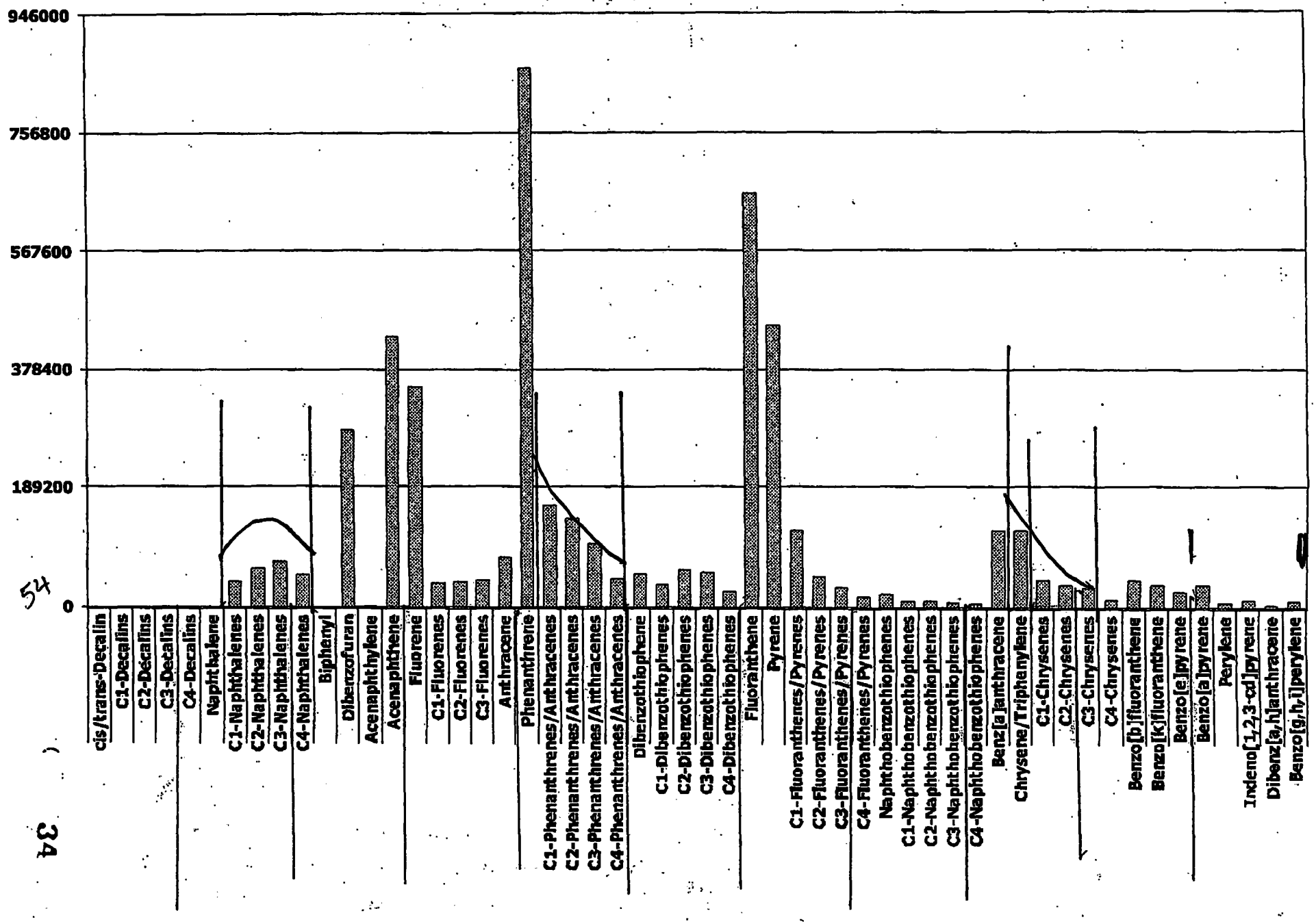
01/19/06 11:48

Alkylated Polynuclear Aromatic Hydrocarbons Distributions

Client ID: MA9-SSRR-717+60

Lab ID: 0512097-12

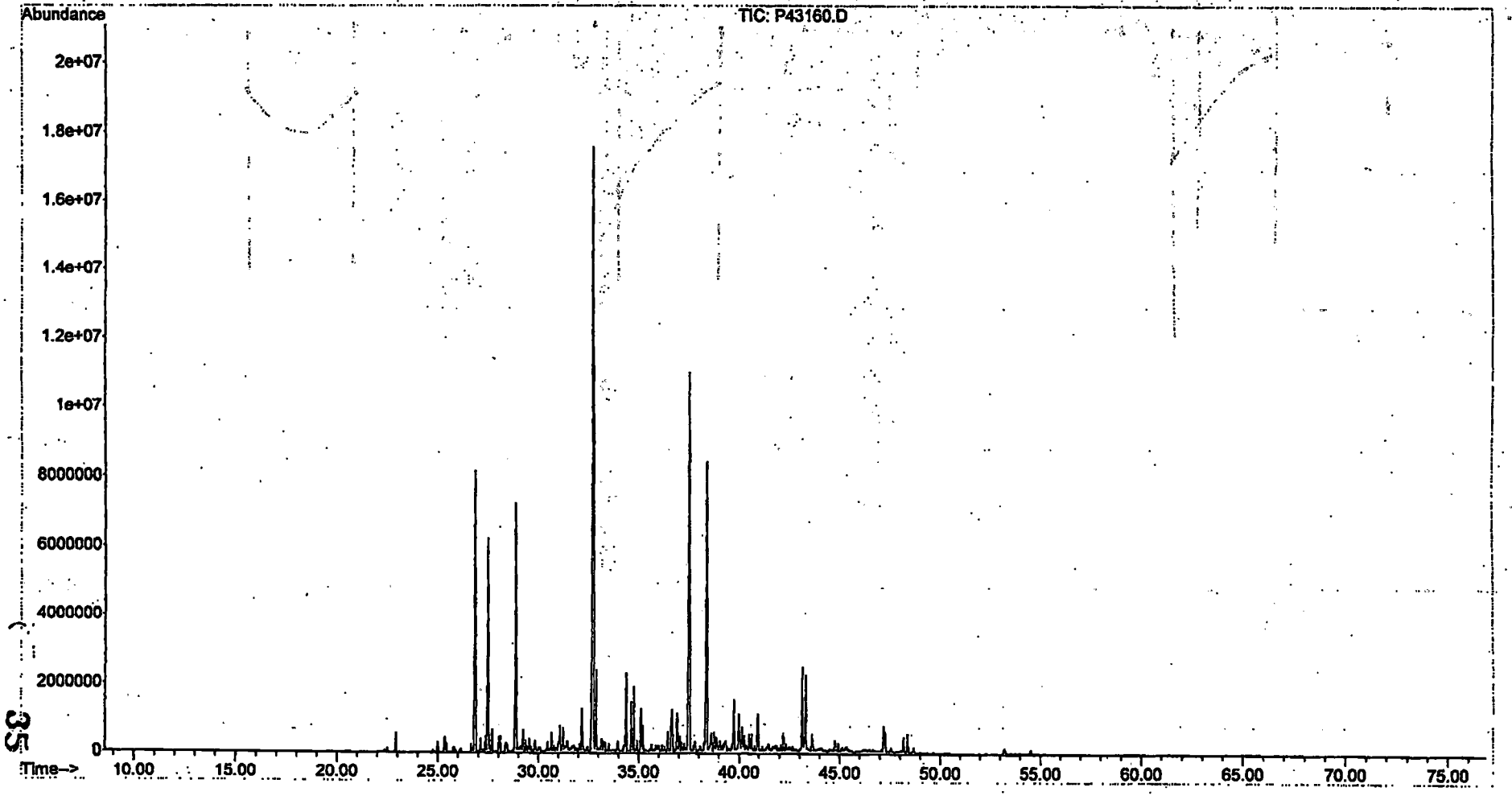
Concentration: µg/Kg



Quantitation Report (QT Reviewed)

Data Path : O:\FORENSICS\DATA\PAH4\JANUARY\JAN09\
Data File : P43160.D
Acq On : 10 Jan 2006 2:47 pm
Operator : AC
Sample : 0512097-12
Misc : 1X
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jan 16 22:37:00 2006
Quant Method : C:\MSDCHEM\1\DATA\2006\PAH4\METHODS-SEQUENCE\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Fri Jan 13 11:58:23 2006
Response via : Initial Calibration



Form I
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: MA9-SSRR-717+60
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: 0512097-12E
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Date Analyzed	Percent Solid	Sample Amount (g)	Final Volume (ml)	Dilution Factor	Analyst
12/08/05	12/15/05	12/21/05	01/10/06	57.3	5.02	14.29	20	AC

Parameter	Result		Parameter	Result	
cis/trans-Decalin	270	U	C1-Dibenzothiophenes	110	U
C1-Decalins	270	U	C2-Dibenzothiophenes	110	U
C2-Decalins	270	U	C3-Dibenzothiophenes	110	U
C3-Decalins	270	U	C4-Dibenzothiophenes	110	U
C4-Decalins	270	U	Benzo(b)fluorene	100	U
Benzothiophene	130	U	Fluoranthene	540000	
C1-Benzo(b)thiophenes	130	U	Pyrene	370000	
C2-Benzo(b)thiophenes	130	U	C1-Fluoranthenes/Pyrenes	88	U
C3-Benzo(b)thiophenes	130	U	C2-Fluoranthenes/Pyrenes	88	U
C4-Benzo(b)thiophenes	130	U	C3-Fluoranthenes/Pyrenes	88	U
Naphthalene	160	U	C4-Fluoranthenes/Pyrenes	88	U
C1-Naphthalenes	36000		Naphthobenzothiophenes	120	U
C2-Naphthalenes	160	U	C1-Naphthobenzothiophenes	120	U
C3-Naphthalenes	160	U	C2-Naphthobenzothiophenes	120	U
C4-Naphthalenes	160	U	C3-Naphthobenzothiophenes	120	U
Biphenyl	90	U	C4-Naphthobenzothiophenes	120	U
Dibenzofuran	250000		Benz[a]anthracene	110000	
Acenaphthylene	180	U	Chrysene/Triphenylene	110000	
Acenaphthene	370000		C1-Chrysenes	110	U
Fluorene	300000		C2-Chrysenes	110	U
C1-Fluorenes	110	U	C3-Chrysenes	110	U
C2-Fluorenes	110	U	C4-Chrysenes	110	U
C3-Fluorenes	110	U	Benzo[b]fluoranthene	100	U
Anthracene	77000		Benzo[k]fluoranthene	200	U
Phenanthrene	780000		Benzo[a]fluoranthene	200	U
C1-Phenanthrenes/Anthracenes	140	U	Benzo[e]pyrene	140	U
C2-Phenanthrenes/Anthracenes	140	U	Benzo[a]pyrene	140	U
C3-Phenanthrenes/Anthracenes	140	U	Perylene	170	U
C4-Phenanthrenes/Anthracenes	140	U	Indeno[1,2,3-cd]pyrene	240	U
Retene	140	U	Dibenz[a,h]anthracene	190	U
Dibenzothiophene	54000		Benzo[g,h,i]perylene	180	U

Surrogate	% Recovery	Acceptance Range (%)
2-Methylnaphthalene-d10	105	50-130
Pyrene-d10	88	50-130
Benzo[b]fluoranthene-d12	99	50-130

N/A - Not Applicable
U - The analyte was analyzed for but not detected at the sample specific level reported.

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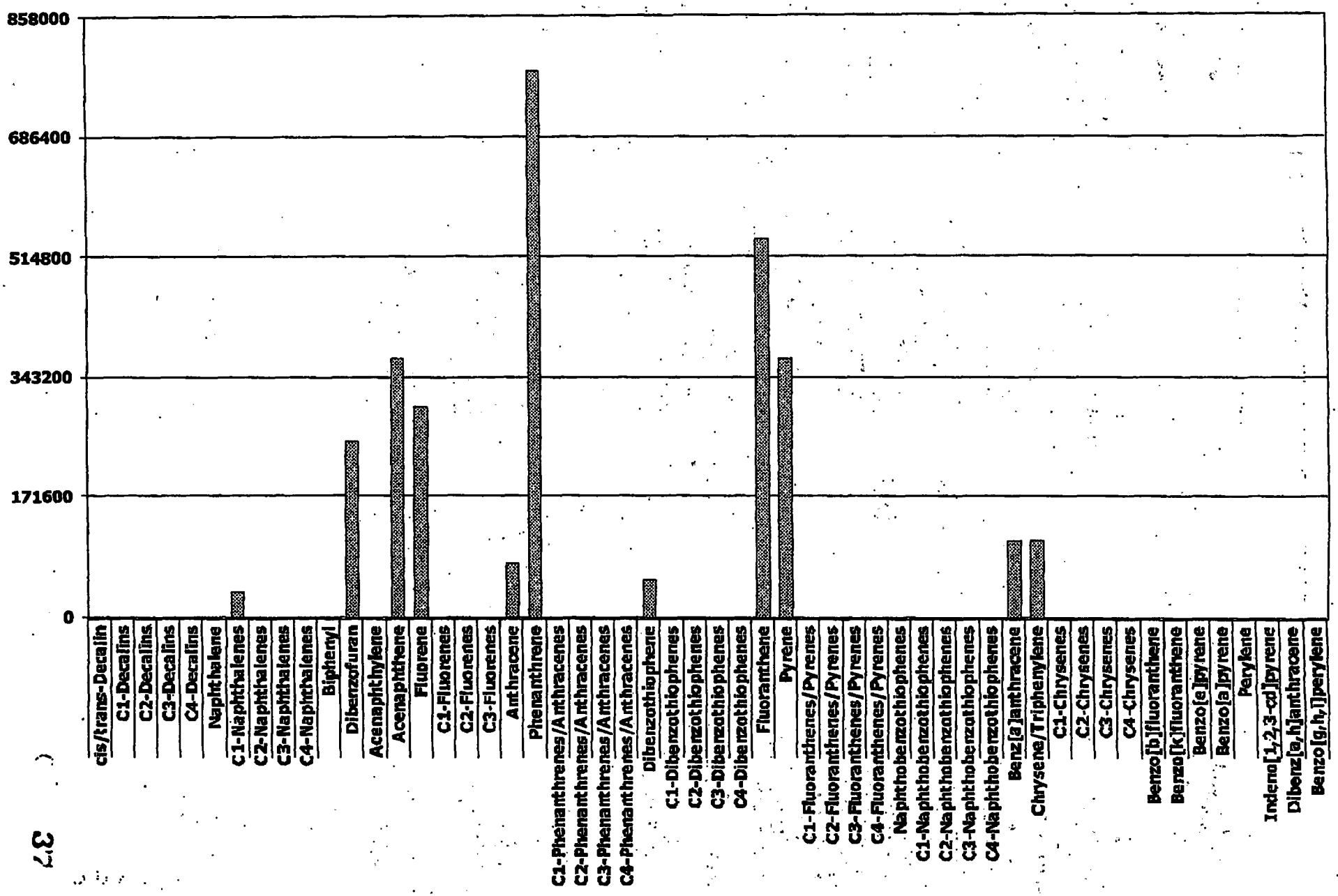
Alkylated Polynuclear Aromatic Hydrocarbons Distributions

Client ID: MA9-SSRR-717+60

Lab ID: 0512097-12

Concentration: µg/Kg



Quantitation Report (QT Re

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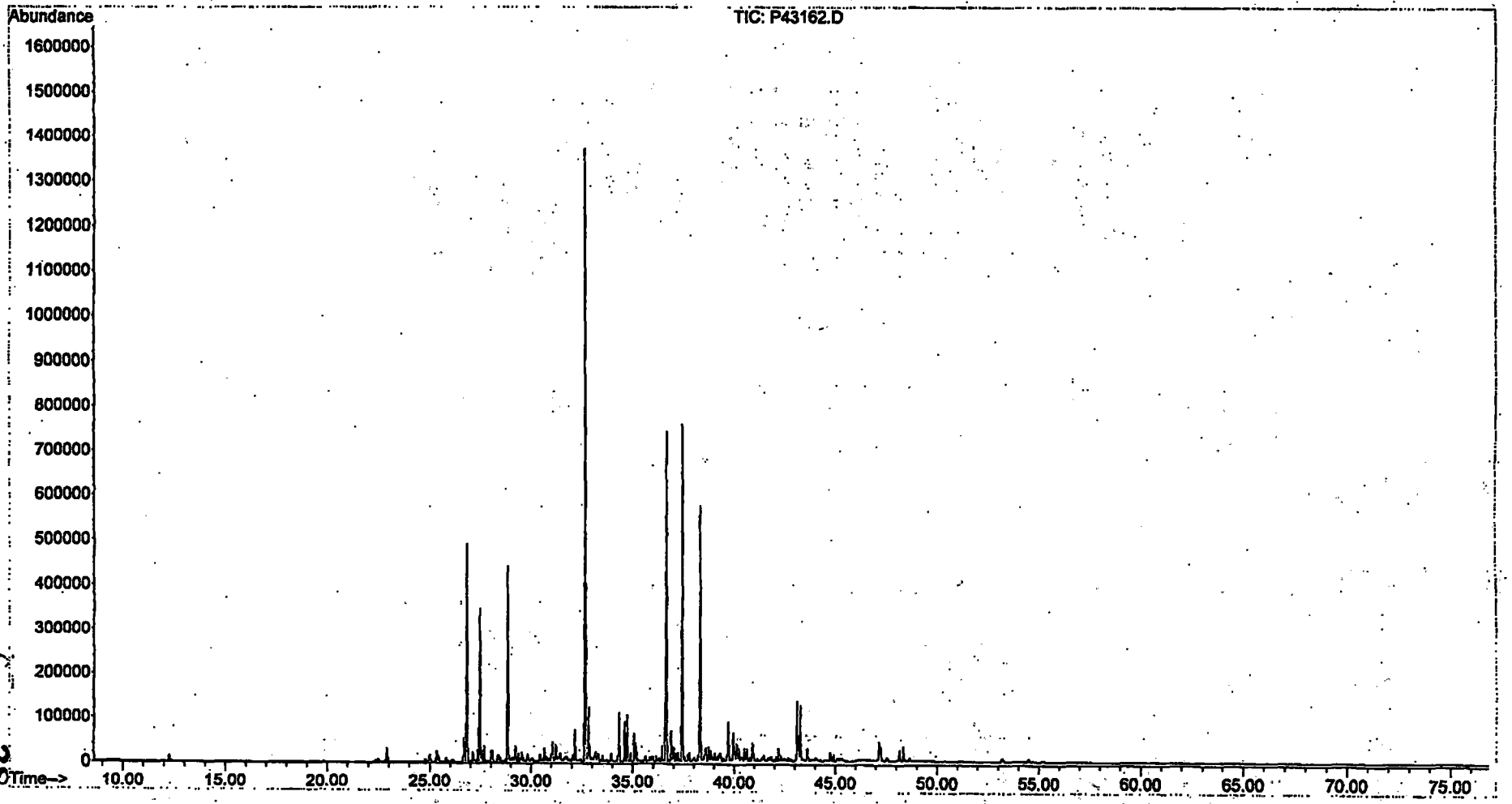
Data File : P43162.D
Acq On : 10 Jan 2006 4:17 pm
Operator : AC
Sample : 0512097-12-RE
Misc : 20X
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jan 16 22:41:48 2006
Quant Method : C:\MSDCHEM\1\DATA\2006\PAH4\METHODS-SEQUENCE\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Fri Jan 13 11:58:23 2006
Response via : Initial Calibration



Form I
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: MA9-SSRR-A-0-3/MA9-SSRR-A-3-6
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: 0512097-13
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Date Analyzed	Percent Solid	Sample Amount (g)	Final Volume (ml)	Dilution Factor	Analyst
12/12/05	12/14/05	12/21/05	01/10/06	69.7	10.54	2.78	1	AC

Parameter	Result		Parameter	Result
cis/trans-Decalin	0.89	J	C1-Dibenzothiophenes	24
C1-Decalins	1.9	J	C2-Dibenzothiophenes	61
C2-Decalins	6.0		C3-Dibenzothiophenes	73
C3-Decalins	8.6		C4-Dibenzothiophenes	54
C4-Decalins	16		Benzo(b)fluorene	160
Benzothiophene	1.1	J	Fluoranthene	1500
C1-Benzo(b)thiophenes	8.3		Pyrene	1100
C2-Benzo(b)thiophenes	7.0		C1-Fluoranthenes/Pyrenes	530
C3-Benzo(b)thiophenes	13	G	C2-Fluoranthenes/Pyrenes	250
C4-Benzo(b)thiophenes	9.8		C3-Fluoranthenes/Pyrenes	140
Naphthalene	18		C4-Fluoranthenes/Pyrenes	70
C1-Naphthalenes	11		Naphthobenzothiophenes	110
C2-Naphthalenes	17		C1-Naphthobenzothiophenes	62
C3-Naphthalenes	33		C2-Naphthobenzothiophenes	49
C4-Naphthalenes	59		C3-Naphthobenzothiophenes	50
Biphenyl	5.0		C4-Naphthobenzothiophenes	44
Dibenzofuran	30		Benz[a]anthracene	670
Acenaphthylene	97		Chrysene/Triphenylene	830
Acenaphthene	150		C1-Chrysenes	300
Fluorene	60		C2-Chrysenes	150
C1-Fluorenes	42		C3-Chrysenes	180
C2-Fluorenes	60		C4-Chrysenes	90
C3-Fluorenes	77		Benzo[b]fluoranthene	830
Anthracene	200		Benzo[k]fluoranthene	660
Phenanthrene	420		Benzo[a]fluoranthene	140
C1-Phenanthrenes/Anthracenes	140		Benzo[e]pyrene	690
C2-Phenanthrenes/Anthracenes	100		Benzo[a]pyrene	700
C3-Phenanthrenes/Anthracenes	96		Perylene	280
C4-Phenanthrenes/Anthracenes	56		Indeno[1,2,3-cd]pyrene	680
Retene	13		Dibenz[a,h]anthracene	130
Dibenzothiophene	38		Benzo[g,h,i]perylene	580

Surrogate	% Recovery	Acceptance Range (%)
2-Methylnaphthalene-d10	87	50-130
Pyrene-d10	73	50-130
Benzo[b]fluoranthene-d12	83	50-130

N/A - Not Applicable
J - Estimated value, below quantitation limit.
G - Matrix Interference

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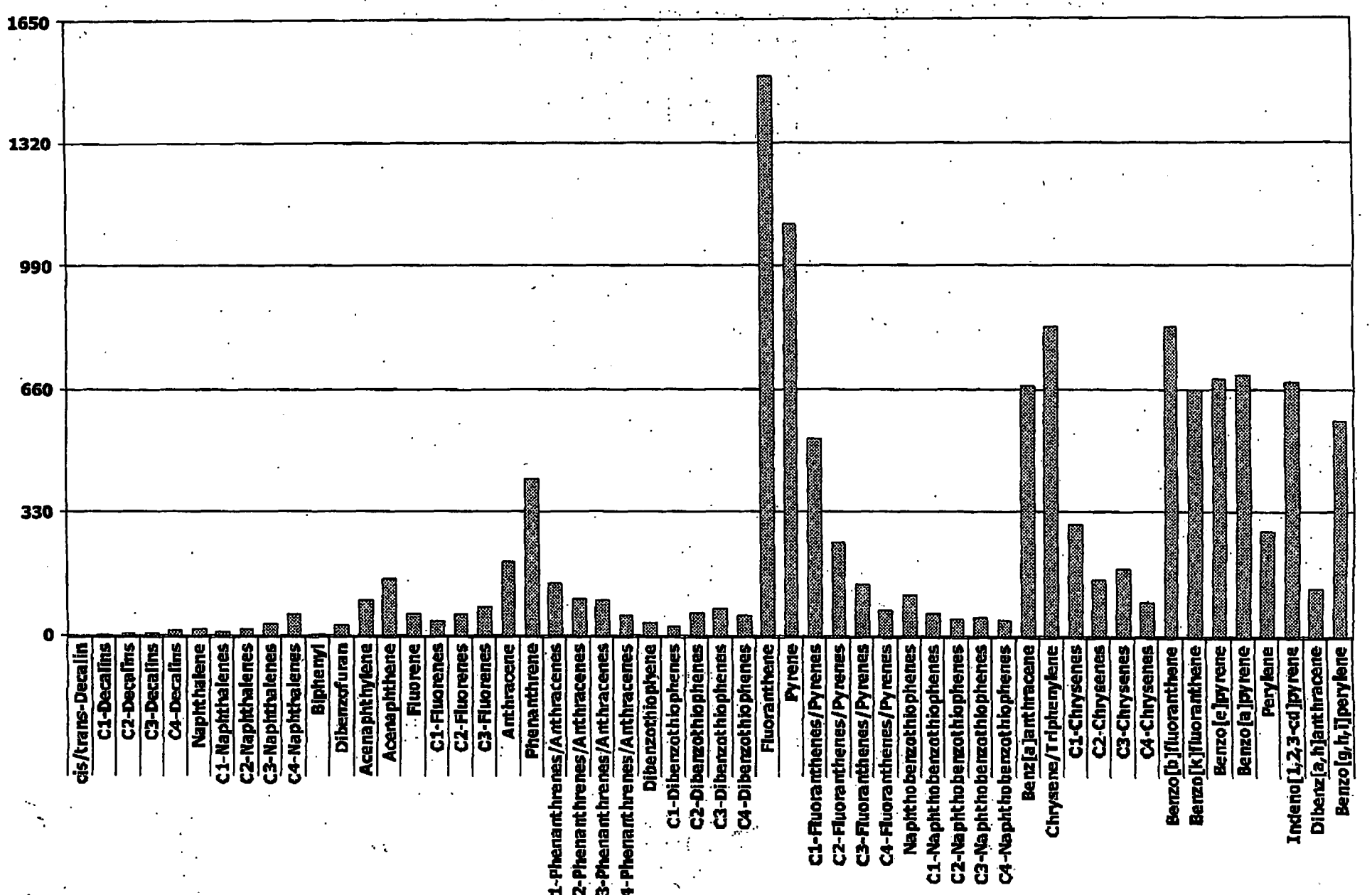
Alkylated Polynuclear Aromatic Hydrocarbons Distributions

Client ID: MA9-SSRR-A-0-3/MA9-SSRR-A-3-6

Lab ID: 0512097-13

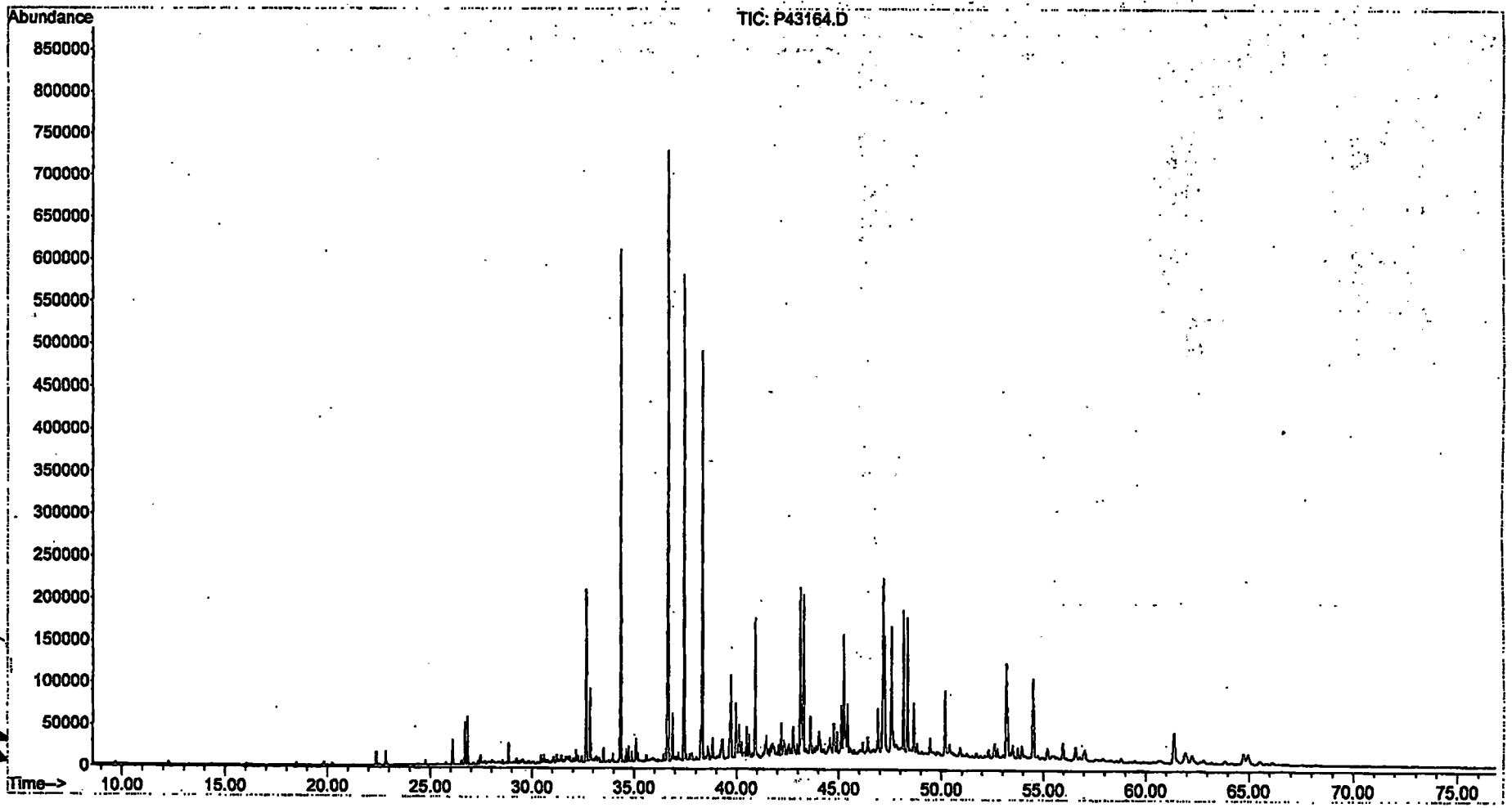
Concentration: µg/Kg



Quantitation Report (QT Re

Data Path : O:\FORENSICS\DATA\PAH4\JANUARY\JAN09\
Data File : P43164.D
Acq On : 10 Jan 2006 5:47 pm
Operator : AC
Sample : 0512097-13
Misc : 1X
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Jan 16 22:50:50 2006
Quant Method : C:\MSDCHEM\1\DATA\2006\PAH4\METHODS-SEQUENCE\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Fri Jan 13 11:58:23 2006
Response via : Initial Calibration



Form I
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: MA9-SSRR-A-6-9/MA9-SSRR-A-9-12
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: 0512097-14
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Date Analyzed	Percent Solid	Sample Amount (g)	Final Volume (ml)	Dilution Factor	Analyst
12/12/05	12/14/05	12/21/05	01/10/06	78.0	5.65	2	1	AC

Parameter	Result	Parameter	Result
cis/trans-Decalin	1.6 J	C1-Dibenzothiophenes	12
C1-Decalins	7.0	C2-Dibenzothiophenes	22
C2-Decalins	14	C3-Dibenzothiophenes	35
C3-Decalins	22	C4-Dibenzothiophenes	28
C4-Decalins	49	Benzo(b)fluorene	24
Benzothiophene	1.6 J	Fluoranthene	160
C1-Benzo(b)thiophenes	17	Pyrene	170
C2-Benzo(b)thiophenes	7.2	C1-Fluoranthenes/Pyrenes	120
C3-Benzo(b)thiophenes	5.8	C2-Fluoranthenes/Pyrenes	75
C4-Benzo(b)thiophenes	6.3	C3-Fluoranthenes/Pyrenes	54
Naphthalene	4.6	C4-Fluoranthenes/Pyrenes	37
C1-Naphthalenes	3.6 J	Naphthobenzothiophenes	20
C2-Naphthalenes	13	C1-Naphthobenzothiophenes	26
C3-Naphthalenes	27	C2-Naphthobenzothiophenes	20
C4-Naphthalenes	46	C3-Naphthobenzothiophenes	14
Biphenyl	3.2 J	C4-Naphthobenzothiophenes	10
Dibenzofuran	8.7	Benz[a]anthracene	67
Acenaphthylene	6.9	Chrysene/Triphenylene	140
Acenaphthene	140	C1-Chrysenes	66
Fluorene	25	C2-Chrysenes	67
C1-Fluorenes	17	C3-Chrysenes	85
C2-Fluorenes	21	C4-Chrysenes	40
C3-Fluorenes	41	Benzo[b]fluoranthene	72
Anthracene	34	Benzo[k]fluoranthene	56
Phenanthrene	31	Benzo[a]fluoranthene	12
C1-Phenanthrenes/Anthracenes	28	Benzo[e]pyrene	59
C2-Phenanthrenes/Anthracenes	42	Benzo[a]pyrene	58
C3-Phenanthrenes/Anthracenes	96	Perylene	55
C4-Phenanthrenes/Anthracenes	48	Indeno[1,2,3-cd]pyrene	43
Retene	7.2	Dibenz[a,h]anthracene	10
Dibenzothiophene	12	Benzo[g,h,i]perylene	54

Surrogate	% Recovery	Acceptance Range (%)
2-Methylnaphthalene-d10	94	50-130
Pyrene-d10	74	50-130
Benzo[b]fluoranthene-d12	83	50-130

N/A - Not Applicable
J - Estimated value, below quantitation limit.

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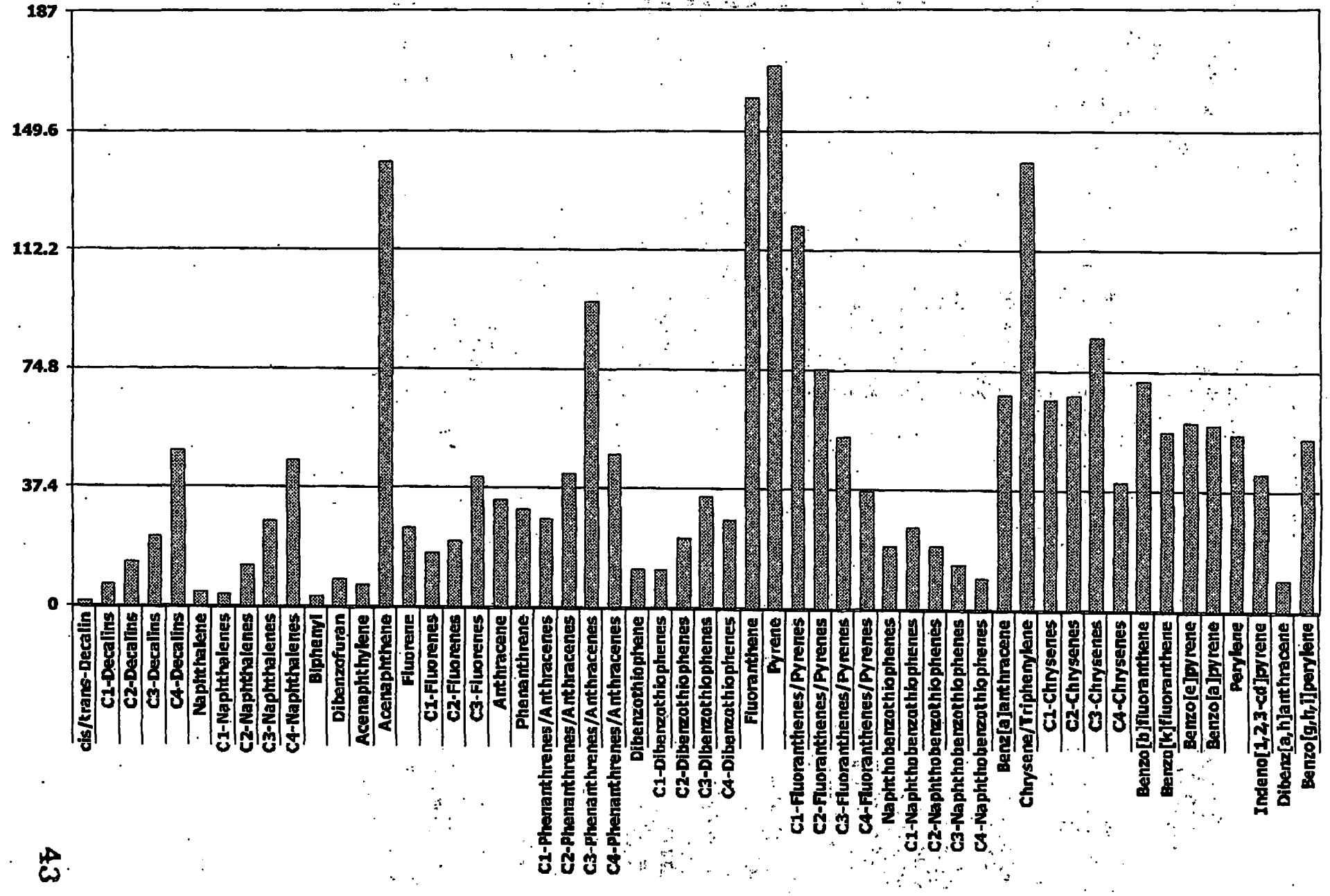
Alkylated Polynuclear Aromatic Hydrocarbons Distributions

Client ID: MA9-SSRR-A-6-9/MA9-SSRR-A-9-12

Lab ID: 0512097-14

Concentration: µg/Kg



Quantitation Report (QT Re

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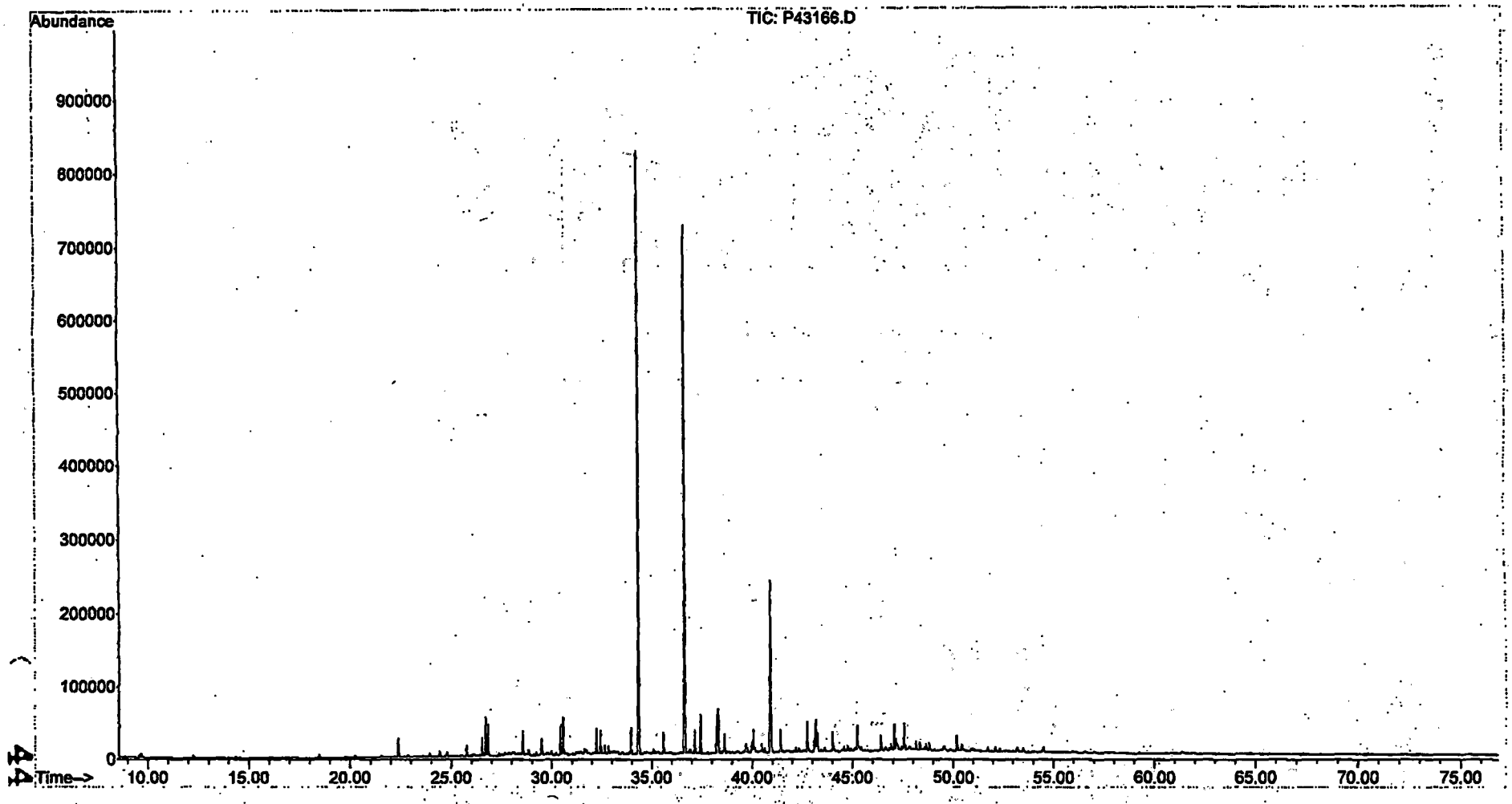
Data File : P43166.D
Acq On : 10 Jan 2006 7:16 pm
Operator : AC
Sample : 0512097-14
Misc : 1X
ALS Vial : 22 Sample Multiplier: 1

Quant Time: Jan 19 10:50:44 2006
Quant Method : C:\MSDCHEM\1\DATA\2006\PAH4\METHODS-SEQUENCE\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Fri Jan 13 11:58:23 2006
Response via : Initial Calibration



Form I
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: Blank
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: SS122105B06
Associated Blank: N/A
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Date Analyzed	Percent Solid	Sample Amount (g)	Final Volume (ml)	Dilution Factor	Analyst
N/A	N/A	12/21/05	01/09/06	100	30.00	2	1	AC

Parameter	Result		Parameter	Result	
cis/trans-Decalin	0.18	U	C1-Dibenzothiophenes	0.19	J
C1-Decalins	0.18	U	C2-Dibenzothiophenes	0.074	U
C2-Decalins	0.18	U	C3-Dibenzothiophenes	0.074	U
C3-Decalins	0.18	U	C4-Dibenzothiophenes	0.074	U
C4-Decalins	0.18	U	Benzo(b)fluorene	0.067	U
Benzothiophene	0.087	U	Fluoranthene	0.087	J
C1-Benzo(b)thiophenes	0.087	U	Pyrene	0.17	J
C2-Benzo(b)thiophenes	0.087	U	C1-Fluoranthenes/Pyrenes	0.46	J
C3-Benzo(b)thiophenes	0.087	U	C2-Fluoranthenes/Pyrenes	0.059	U
C4-Benzo(b)thiophenes	0.087	U	C3-Fluoranthenes/Pyrenes	0.059	U
Naphthalene	0.29	J	C4-Fluoranthenes/Pyrenes	0.059	U
C1-Naphthalenes	0.20	J	Naphthobenzothiophenes	0.081	U
C2-Naphthalenes	0.16	J	C1-Naphthobenzothiophenes	0.081	U
C3-Naphthalenes	0.11	U	C2-Naphthobenzothiophenes	0.081	U
C4-Naphthalenes	0.11	U	C3-Naphthobenzothiophenes	0.081	U
Biphenyl	0.13	J	C4-Naphthobenzothiophenes	0.081	U
Dibenzofuran	0.055	J	Benz[a]anthracene	0.033	J
Acenaphthylene	0.33	J	Chrysene/Triphenylene	0.050	J
Acenaphthene	0.092	J	C1-Chrysenes	0.072	U
Fluorene	0.086	J	C2-Chrysenes	0.072	U
C1-Fluorenes	0.077	U	C3-Chrysenes	0.072	U
C2-Fluorenes	0.077	U	C4-Chrysenes	0.072	U
C3-Fluorenes	0.077	U	Benzo[b]fluoranthene	0.071	U
Anthracene	0.054	J	Benzo[k]fluoranthene	0.14	U
Phenanthrene	0.22	J	Benzo[a]fluoranthene	0.14	U
C1-Phenanthrenes/Anthracenes	0.34	J	Benzo[e]pyrene	0.091	U
C2-Phenanthrenes/Anthracenes	0.25	J	Benzo[a]pyrene	0.093	U
C3-Phenanthrenes/Anthracenes	0.097	U	Perylene	0.12	U
C4-Phenanthrenes/Anthracenes	0.097	U	Indeno[1,2,3-cd]pyrene	0.16	U
Retene	0.32	J	Dibenz[a,h]anthracene	0.13	U
Dibenzothiophene	0.031	J	Benzo[g,h,i]perylene	0.12	U

Surrogate	% Recovery	Acceptance Range (%)
2-Methylnaphthalene-d10	88	50-130
Pyrene-d10	82	50-130
Benzo[b]fluoranthene-d12	84	50-130

N/A - Not Applicable
J - Estimated value, below quantitation limit.
U - The analyte was analyzed for but not detected at the sample specific level reported.

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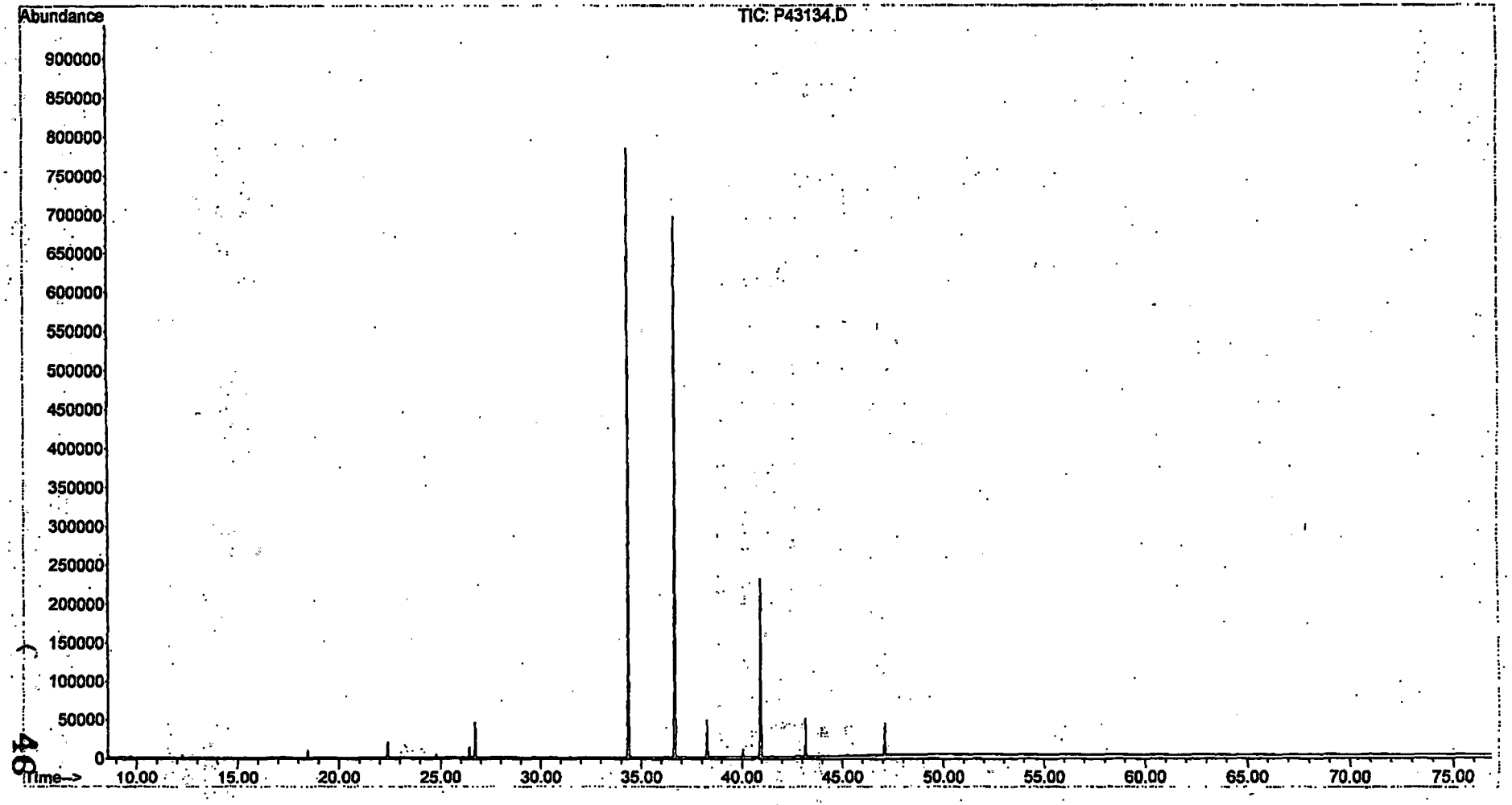
Quantitation Report (QT Re

Data Path : O:\FORENSICS\DATA\PAH4\JANUARY\JAN09\
Data File : P43134.D
Acq On : 9 Jan 2006 7:12 pm
Operator : AC
Sample : SS122105B06
Misc : 1X ETR0512097
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jan 19 10:28:54 2006
Quant Method : O:\FORENSICS\METHODS\PAH4\DEC05\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Mon Jan 09 09:39:53 2006
Response via : Initial Calibration



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Form III
Spike Recovery Summary
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: Laboratory Control Sample
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: See Below
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Percent Solid	Analyst
N/A	N/A	12/21/05	100	AC

Lab ID: SS122105B06 SS122105LCS04 SS122105LCSD04

Parameter	Blank Conc.		LCS Conc.	LCS % Recovery	LCSD Conc.	LCSD % Recovery	% RPD	RPD Limit	% Recovery Limits
Naphthalene	0.29		36	107	34	101	5	30	50-130
Acenaphthylene	0.33		29	86	27	81	6	30	50-130
Acenaphthene	0.092		29	87	28	83	6	30	50-130
Fluorene	0.086		30	90	28	85	6	30	50-130
Anthracene	0.054		27	81	26	77	4	30	50-130
Phenanthrene	0.22		27	80	26	77	4	30	50-130
Fluoranthene	0.087		27	82	27	80	2	30	50-130
Pyrene	0.17		28	84	27	81	3	30	50-130
Benz[a]anthracene	0.033		33	99	32	97	2	30	50-130
Chrysene/Triphenylene	0.050		31	93	30	90	3	30	50-130
Benzo[b]fluoranthene	0.071	U	28	84	28	83	2	30	50-130
Benzo[k]fluoranthene	0.14	U	26	77	25	75	2	30	50-130
Benzo[a]pyrene	0.093	U	29	86	28	83	3	30	50-130
Indeno[1,2,3-cd]pyrene	0.16	U	33	100	33	100	0	30	50-130
Dibenz[a,h]anthracene	0.13	U	33	99	32	97	2	30	50-130
Benzo[g,h,i]perylene	0.12	U	30	89	29	86	4	30	50-130

Surrogate	% Recovery		Acceptance Range (%)
2-Methylnaphthalene-d10	98	96	50-130
Pyrene-d10	84	84	50-130
Benzo[b]fluoranthene-d12	73	74	50-130

N/A - Not Applicable
U - The analyte was analyzed for but not detected at the sample specific level reported.

Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values are calculated from the unrounded result.

01/19/06 11:53

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Form I
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: Laboratory Control Sample
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: SS122105LCS04
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Date Analyzed	Percent Solid	Sample Amount (g)	Final Volume (ml)	Dilution Factor	Analyst
N/A	N/A	12/21/05	01/09/06	100	30.00	2	1	AC

Parameter	Result		Parameter	Result	
cis/trans-Decalin	0.18	U	C1-Dibenzothiophenes	0.074	U
C1-Decalins	0.18	U	C2-Dibenzothiophenes	0.074	U
C2-Decalins	0.18	U	C3-Dibenzothiophenes	0.074	U
C3-Decalins	0.18	U	C4-Dibenzothiophenes	0.074	U
C4-Decalins	0.18	U	Benzo(b)fluorene	0.067	U
Benzothiophene	0.087	U	Fluoranthene	27	S
C1-Benzo(b)thiophenes	0.087	U	Pyrene	28	S
C2-Benzo(b)thiophenes	0.087	U	C1-Fluoranthenes/Pyrenes	0.059	U
C3-Benzo(b)thiophenes	0.087	U	C2-Fluoranthenes/Pyrenes	0.059	U
C4-Benzo(b)thiophenes	0.087	U	C3-Fluoranthenes/Pyrenes	0.059	U
Naphthalene	36	S	C4-Fluoranthenes/Pyrenes	0.059	U
C1-Naphthalenes	0.11	U	Naphthobenzothiophenes	0.081	U
C2-Naphthalenes	0.11	U	C1-Naphthobenzothiophenes	0.081	U
C3-Naphthalenes	0.11	U	C2-Naphthobenzothiophenes	0.081	U
C4-Naphthalenes	0.11	U	C3-Naphthobenzothiophenes	0.081	U
Biphenyl	0.061	U	C4-Naphthobenzothiophenes	0.081	U
Dibenzofuran	0.079	U	Benz[a]anthracene	33	S
Acenaphthylene	29	S	Chrysene/Triphenylene	31	S
Acenaphthene	29	S	C1-Chrysenes	0.072	U
Fluorene	30	S	C2-Chrysenes	0.072	U
C1-Fluorenes	0.077	U	C3-Chrysenes	0.072	U
C2-Fluorenes	0.077	U	C4-Chrysenes	0.072	U
C3-Fluorenes	0.077	U	Benzo[b]fluoranthene	28	S
Anthracene	27	S	Benzo[k]fluoranthene	26	S
Phenanthrene	27	S	Benzo[a]fluoranthene	0.14	U
C1-Phenanthrenes/Anthracenes	0.097	U	Benzo[e]pyrene	0.091	U
C2-Phenanthrenes/Anthracenes	0.097	U	Benzo[a]pyrene	29	S
C3-Phenanthrenes/Anthracenes	0.097	U	Perylene	0.12	U
C4-Phenanthrenes/Anthracenes	0.097	U	Indeno[1,2,3-cd]pyrene	33	S
Retene	0.097	U	Dibenz[a,h]anthracene	33	S
Dibenzothiophene	0.074	U	Benzo[g,h,i]perylene	30	S

Surrogate	% Recovery	Acceptance Range (%)
2-Methylnaphthalene-d10	98	50-130
Pyrene-d10	84	50-130
Benzo[b]fluoranthene-d12	73	50-130

N/A - Not Applicable
U - The analyte was analyzed for but not detected at the sample specific level reported.
S - Spike compound.

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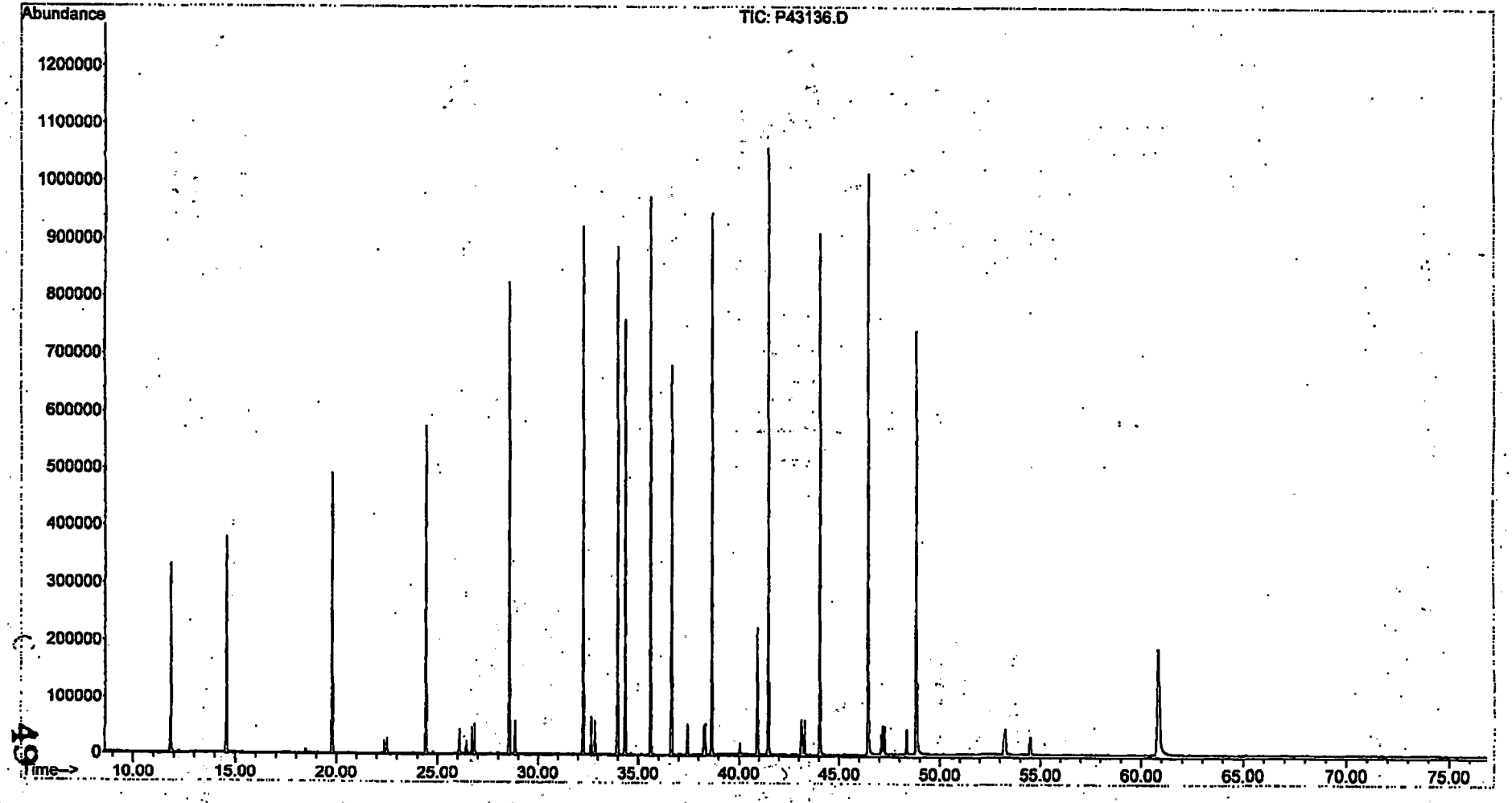
Quantitation Report (QT Re

Data Path : O:\FORENSICS\DATA\PAH4\JANUARY\JAN09\
Data File : P43136.D
Acq On : 9 Jan 2006 8:40 pm
Operator : AC
Sample : SS122105LCS04
Misc : 1X ETR0512097
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jan 13 15:06:16 2006
Quant Method : O:\FORENSICS\METHODS\PAH4\DEC05\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Mon Jan 09 09:39:53 2006
Response via : Initial Calibration



Form I
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: Laboratory Control Sample Dup
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: SS122105LCSD04
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Date Analyzed	Percent Solid	Sample Amount (g)	Final Volume (ml)	Dilution Factor	Analyst
N/A	N/A	12/21/05	01/09/06	100	30.00	2	1	AC

Parameter	Result		Parameter	Result	
cis/trans-Decalin	0.18	U	C1-Dibenzothiophenes	0.074	U
C1-Decalins	0.18	U	C2-Dibenzothiophenes	0.074	U
C2-Decalins	0.18	U	C3-Dibenzothiophenes	0.074	U
C3-Decalins	0.18	U	C4-Dibenzothiophenes	0.074	U
C4-Decalins	0.18	U	Benzo(b)fluorene	0.067	U
Benzothiophene	0.087	U	Fluoranthene	27	S
C1-Benzo(b)thiophenes	0.087	U	Pyrene	27	S
C2-Benzo(b)thiophenes	0.087	U	C1-Fluoranthenes/Pyrenes	0.059	U
C3-Benzo(b)thiophenes	0.087	U	C2-Fluoranthenes/Pyrenes	0.059	U
C4-Benzo(b)thiophenes	0.087	U	C3-Fluoranthenes/Pyrenes	0.059	U
Naphthalene	34	S	C4-Fluoranthenes/Pyrenes	0.059	U
C1-Naphthalenes	0.11	U	Naphthobenzothiophenes	0.081	U
C2-Naphthalenes	0.11	U	C1-Naphthobenzothiophenes	0.081	U
C3-Naphthalenes	0.11	U	C2-Naphthobenzothiophenes	0.081	U
C4-Naphthalenes	0.11	U	C3-Naphthobenzothiophenes	0.081	U
Biphenyl	0.061	U	C4-Naphthobenzothiophenes	0.081	U
Dibenzofuran	0.079	U	Benz[a]anthracene	32	S
Acenaphthylene	27	S	Chrysene/Triphenylene	30	S
Acenaphthene	28	S	C1-Chrysenes	0.072	U
Fluorene	28	S	C2-Chrysenes	0.072	U
C1-Fluorenes	0.077	U	C3-Chrysenes	0.072	U
C2-Fluorenes	0.077	U	C4-Chrysenes	0.072	U
C3-Fluorenes	0.077	U	Benzo[b]fluoranthene	28	S
Anthracene	26	S	Benzo[k]fluoranthene	25	S
Phenanthrene	26	S	Benzo[a]fluoranthene	0.14	U
C1-Phenanthrenes/Anthracenes	0.097	U	Benzo[e]pyrene	0.091	U
C2-Phenanthrenes/Anthracenes	0.097	U	Benzo[a]pyrene	28	S
C3-Phenanthrenes/Anthracenes	0.097	U	Perylene	0.12	U
C4-Phenanthrenes/Anthracenes	0.097	U	Indeno[1,2,3-cd]pyrene	33	S
Retene	0.097	U	Dibenz[a,h]anthracene	32	S
Dibenzothiophene	0.074	U	Benzo[g,h,i]perylene	29	S

Surrogate	% Recovery	Acceptance Range (%)
2-Methylnaphthalene-d10	96	50-130
Pyrene-d10	84	50-130
Benzo[b]fluoranthene-d12	74	50-130

N/A - Not Applicable
U - The analyte was analyzed for but not detected at the sample specific level reported.
S - Spike compound.

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Form I
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: Laboratory Control Sample Dup
Case: N/A SDG: N/A
Matrix: Soil

Lab Code: MA00030
ETR: 0512097
Lab ID: SS122105LCSD04
Associated Blank: SS122105B06
Concentration Units: µg/Kg

Date Collected	Date Received	Date Extracted	Date Analyzed	Percent Solid	Sample Amount (g)	Final Volume (ml)	Dilution Factor	Analyst
N/A	N/A	12/21/05	01/09/06	100	30.00	2	1	AC

Parameter	Result		Parameter	Result	
cis/trans-Decalin	0.18	U	C1-Dibenzothiophenes	0.074	U
C1-Decalins	0.18	U	C2-Dibenzothiophenes	0.074	U
C2-Decalins	0.18	U	C3-Dibenzothiophenes	0.074	U
C3-Decalins	0.18	U	C4-Dibenzothiophenes	0.074	U
C4-Decalins	0.18	U	Benzo(b)fluorene	0.067	U
Benzothiophene	0.087	U	Fluoranthene	27	S
C1-Benzo(b)thiophenes	0.087	U	Pyrene	27	S
C2-Benzo(b)thiophenes	0.087	U	C1-Fluoranthenes/Pyrenes	0.059	U
C3-Benzo(b)thiophenes	0.087	U	C2-Fluoranthenes/Pyrenes	0.059	U
C4-Benzo(b)thiophenes	0.087	U	C3-Fluoranthenes/Pyrenes	0.059	U
Naphthalene	34	S	C4-Fluoranthenes/Pyrenes	0.059	U
C1-Naphthalenes	0.11	U	Naphthobenzothiophenes	0.081	U
C2-Naphthalenes	0.11	U	C1-Naphthobenzothiophenes	0.081	U
C3-Naphthalenes	0.11	U	C2-Naphthobenzothiophenes	0.081	U
C4-Naphthalenes	0.11	U	C3-Naphthobenzothiophenes	0.081	U
Biphenyl	0.061	U	C4-Naphthobenzothiophenes	0.081	U
Dibenzofuran	0.079	U	Benz[a]anthracene	32	S
Acenaphthylene	27	S	Chrysene/Triphenylene	30	S
Acenaphthene	28	S	C1-Chrysenes	0.072	U
Fluorene	28	S	C2-Chrysenes	0.072	U
C1-Fluorenes	0.077	U	C3-Chrysenes	0.072	U
C2-Fluorenes	0.077	U	C4-Chrysenes	0.072	U
C3-Fluorenes	0.077	U	Benzo[b]fluoranthene	28	S
Anthracene	26	S	Benzo[k]fluoranthene	25	S
Phenanthrene	26	S	Benzo[a]fluoranthene	0.14	U
C1-Phenanthrenes/Anthracenes	0.097	U	Benzo[e]pyrene	0.091	U
C2-Phenanthrenes/Anthracenes	0.097	U	Benzo[a]pyrene	28	S
C3-Phenanthrenes/Anthracenes	0.097	U	Perylene	0.12	U
C4-Phenanthrenes/Anthracenes	0.097	U	Indeno[1,2,3-cd]pyrene	33	S
Retene	0.097	U	Dibenz[a,h]anthracene	32	S
Dibenzothiophene	0.074	U	Benzo[g,h,i]perylene	29	S

Surrogate	% Recovery	Acceptance Range (%)
2-Methylnaphthalene-d10	96	50-130
Pyrene-d10	84	50-130
Benzo[b]fluoranthene-d12	74	50-130

N/A - Not Applicable
U - The analyte was analyzed for but not detected at the sample specific level reported.
S - Spike compound.

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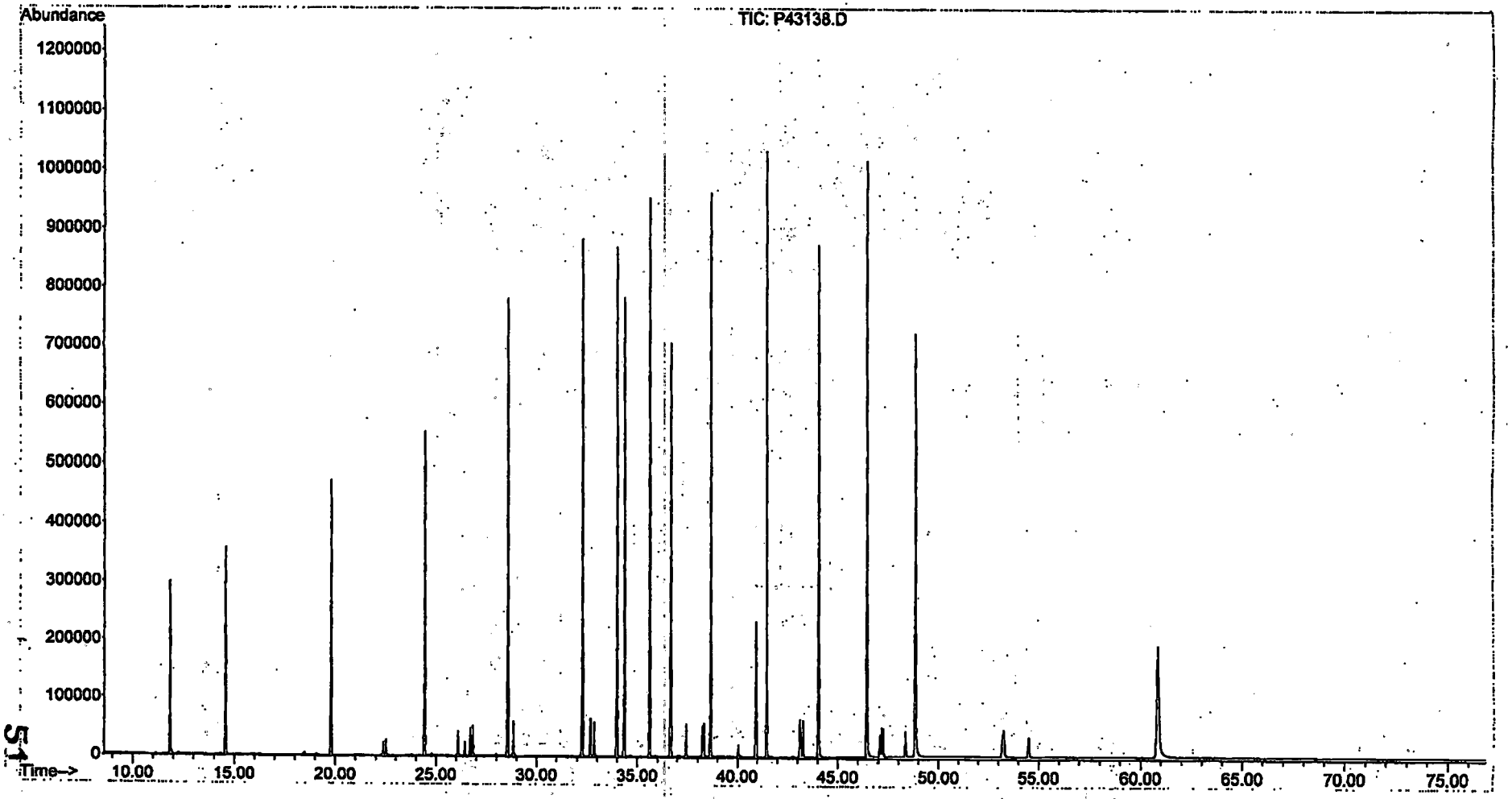
Quantitation Report (QT Re

Data Path : O:\FORENSICS\DATA\PAH4\JANUARY\JAN09\
Data File : P43138.D
Acq On : 9 Jan 2006 10:09 pm
Operator : AC
Sample : SS122105LCSD04
Misc : 1X ETR0512097
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jan 13 15:20:06 2006
Quant Method : O:\FORENSICS\METHODS\PAH4\DEC05\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Mon Jan 09 09:39:53 2006
Response via : Initial Calibration



Form III
Spike Recovery Summary
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: Alaska North Slope Crude
Case: N/A SDG: N/A
Matrix: Oil

Lab Code: MA00030
ETR: 0512097
Lab ID: SS010406AWS01
Associated Blank: N/A
Concentration Units: mg/Kg

Date Collected	Date Received	Date Extracted	Percent Solid	Analyst
N/A	N/A	N/A	100	NLJr

Parameter	True Conc.	Conc.	% Recovery	% Recovery Limits
C1-Decalins	903.62	840	93	65-135
C2-Decalins	869.2	780	90	65-135
C3-Decalins	444.65	420	96	65-135
C4-Decalins	443.92	410	93	65-135
Naphthalene	714.43	910	127	65-135
C1-Naphthalenes	1534.53	1800	120	65-135
C2-Naphthalenes	1897.27	2200	115	65-135
C3-Naphthalenes	1436.53	1600	110	65-135
C4-Naphthalenes	773.42	900	116	65-135
Biphenyl	216.49	260	119	65-135
Acenaphthene	15.55	20	126	65-135
Fluorene	87.56	84	96	65-135
C1-Fluorenes	219.89	230	106	65-135
C2-Fluorenes	341.2	340	100	65-135
C3-Fluorenes	299.61	310	105	65-135
Phenanthrene	272.58	240	89	65-135
C1-Phenanthrenes/Anthracenes	564.81	500	89	65-135
C2-Phenanthrenes/Anthracenes	660.43	580	88	65-135
C3-Phenanthrenes/Anthracenes	448.76	410	90	65-135
C4-Phenanthrenes/Anthracenes	175.88	160	91	65-135
Dibenzothiophene	218.8	210	96	65-135
C1-Dibenzothiophenes	434.54	390	90	65-135
C2-Dibenzothiophenes	551.44	520	94	65-135
C3-Dibenzothiophenes	460.96	450	97	65-135
C4-Dibenzothiophenes	236.77	240	103	65-135
Fluoranthene	4.26	3.5	81	65-135
Pyrene	15.56	12	78	65-135
C1-Fluoranthenes/Pyrenes	78.43	76	97	65-135
C2-Fluoranthenes/Pyrenes	132.93	110	85	65-135
C3-Fluoranthenes/Pyrenes	111.33	120	110	65-135
Chrysene/Triphenylene	50.99	47	92	65-135
C1-Chrysenes	81.69	84	103	65-135
C2-Chrysenes	95.93	100	106	65-135

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Form III
Spike Recovery Summary
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: Alaska North Slope Crude
Case: N/A SDG: N/A
Matrix: Oil

Lab Code: MA00030
ETR: 0512097
Lab ID: SS010406AWS01
Associated Blank: N/A
Concentration Units: mg/Kg

Date Collected	Date Received	Date Extracted	Percent Solid	Analyst
N/A	N/A	N/A	100	NLJr

Parameter	True Conc.	Conc.	% Recovery	% Recovery Limits
C3-Chrysenes	89.87	120	130	65-135
C4-Chrysenes	51.86	64	124	65-135
Benzo[b]fluoranthene	6.54	6.5	99	65-135
Benzo[e]pyrene	12.88	12	91	65-135
Dibenz[a,h]anthracene	1.02	0.93	91	65-135
Benzo[g,h,i]perylene	3.35	3.6	106	65-135
Hopane	118.8	140	117	65-135

N/A - Not Applicable

Concentrations reported as calculated values, which includes rounding for significant figures. Percent recoveries and RPD values are calculated from the unrounded result.

01/19/06 11:52

375 Paramount Drive, Suite 2, Raynham, Massachusetts 02767, (508) 822-9300, Fax (508) 822-3288

Form I
Alaska North Slope Crude
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Client ID: Alaska North Slope Crude
Case: N/A SDG: N/A
Matrix: Oil

Lab Code: MA00030
ETR: 0512097
Lab ID: SS010406AWS01
Associated Blank: N/A
Concentration Units: mg/Kg

Date Collected	Date Received	Date Extracted	Date Analyzed	Percent Solid	Sample Amount (g)	Final Volume (ml)	Dilution Factor	Analyst
N/A	N/A	N/A	12/18/05	100	0.051	10	1	NLJr

Parameter	Result		Parameter	Result	
cis/trans-Decalin	500		C1-Dibenzothiophenes	390	
C1-Decalins	840		C2-Dibenzothiophenes	520	
C2-Decalins	780		C3-Dibenzothiophenes	450	
C3-Decalins	420		C4-Dibenzothiophenes	240	
C4-Decalins	410		Benzo(b)fluorene	0.20	U
Benzothiophene	7.8		Fluoranthene	3.5	
C1-Benzo(b)thiophenes	44		Pyrene	12	
C2-Benzo(b)thiophenes	69		C1-Fluoranthenes/Pyrenes	76	
C3-Benzo(b)thiophenes	140		C2-Fluoranthenes/Pyrenes	110	
C4-Benzo(b)thiophenes	130		C3-Fluoranthenes/Pyrenes	120	
Naphthalene	910		C4-Fluoranthenes/Pyrenes	98	
C1-Naphthalenes	1800		Naphthobenzothiophenes	46	
C2-Naphthalenes	2200		C1-Naphthobenzothiophenes	130	
C3-Naphthalenes	1600		C2-Naphthobenzothiophenes	160	
C4-Naphthalenes	900		C3-Naphthobenzothiophenes	120	
Biphenyl	260		C4-Naphthobenzothiophenes	84	
Dibenzofuran	76		Benz[a]anthracene	1.6	J
Acenaphthylene	7.4		Chrysene/Triphenylene	47	
Acenaphthene	20		C1-Chrysenes	84	
Fluorene	84		C2-Chrysenes	100	
C1-Fluorenes	230		C3-Chrysenes	120	
C2-Fluorenes	340		C4-Chrysenes	64	
C3-Fluorenes	310		Benzo[b]fluoranthene	6.5	
Anthracene	0.26	U	Benzo[k]fluoranthene	0.40	U
Phenanthrene	240		Benzo[a]fluoranthene	0.40	U
C1-Phenanthrenes/Anthracenes	500		Benzo[e]pyrene	12	
C2-Phenanthrenes/Anthracenes	580		Benzo[a]pyrene	1.7	J
C3-Phenanthrenes/Anthracenes	410		Perylene	1.4	J
C4-Phenanthrenes/Anthracenes	160		Indeno[1,2,3-cd]pyrene	1.2	J
Retene	0.28	U	Dibenz[a,h]anthracene	0.93	J
Dibenzothiophene	210		Benzo[g,h,i]perylene	3.6	

N/A - Not Applicable
J - Estimated value, below quantitation limit.
U - The analyte was analyzed for but not detected at the sample specific level reported.

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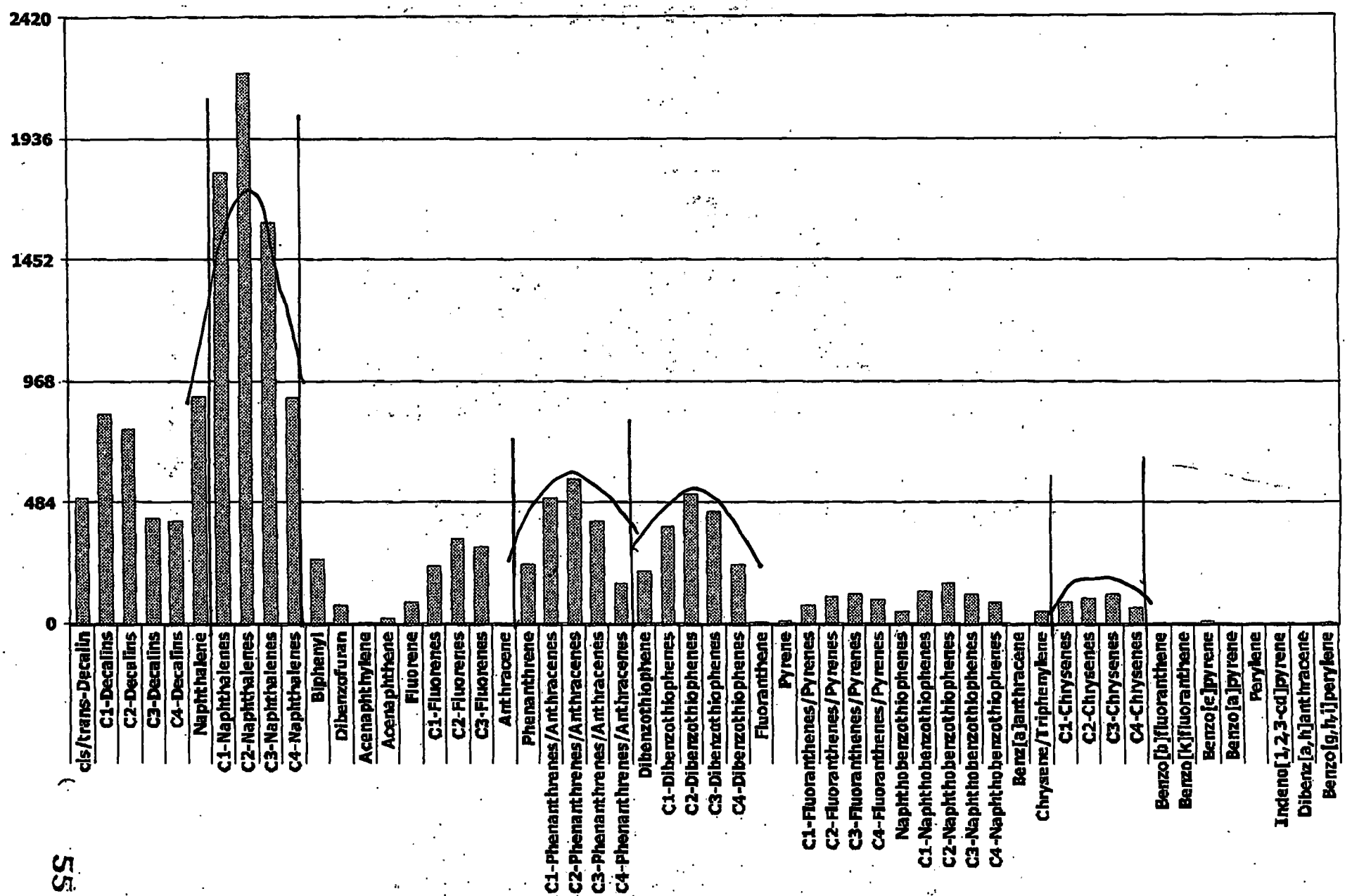
Alkylated Polynuclear Aromatic Hydrocarbons Distributions

Client ID: Alaska North Slope Crude

Lab ID: SS010406AWS01

Concentration: mg/Kg

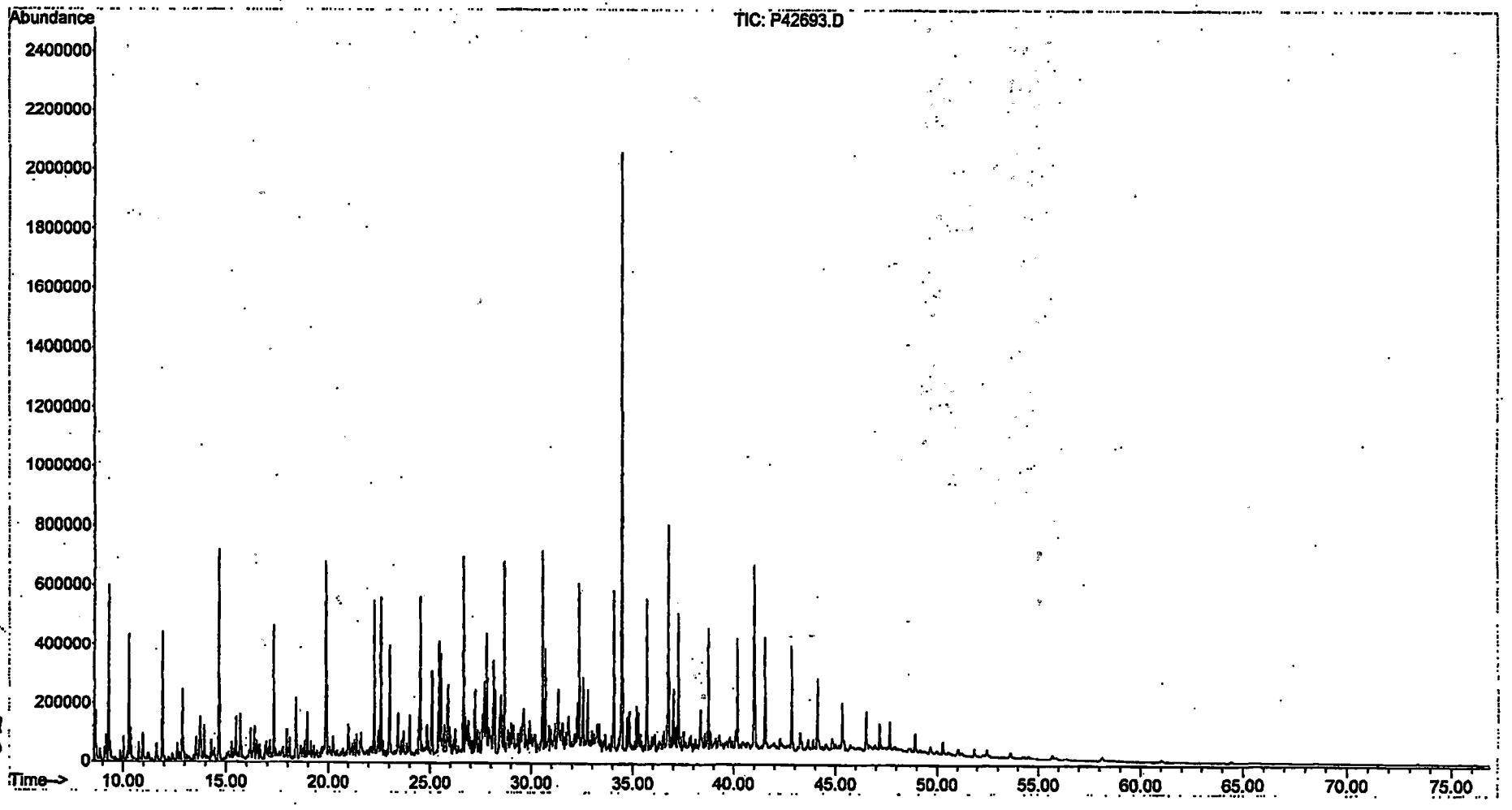


SS

Quantitation Report (QT Reviewed)

Data Path : O:\Forensics\Data\PAH4\DECEMBER\DEC16\
Data File : P42693.D
Acq On : 18 Dec 2005 4:16 am
Operator : NLJr
Sample : SS010406AWS01
Misc : ANS4121701
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jan 04 08:56:40 2006
Quant Method : C:\MSDCHEM\1\DATA\2005\PAH #4\METHODS-SEQ\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Mon Dec 26 20:20:22 2005
Response via : Initial Calibration



Supporting Quality Control Results

Form IV
Method Blank Summary
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Case: N/A SDG: N/A

Lab Code: MA00030
ETR: 0512097
Lab ID: SS122105B06
Date Analyzed: 01/09/06 19:12

Client ID	Lab ID	Date/Time Analyzed
LCS	SS122105LCS04	01/09/06 20:40
LCSD	SS122105LCSD04	01/09/06 22:09
MA9-SSRR-A-0-3	0512097-01	01/09/06 23:39
MA9-SSRR-A-3-6	0512097-02	01/10/06 01:09
MA9-SSRR-A-6-9	0512097-03	01/10/06 02:38
MA9-SSRR-A-9-12	0512097-04	01/10/06 04:07
MA9-SSRR-A-9-12	0512097-04 D	01/10/06 05:36
MA9-SSRR-A-12-15	0512097-05	01/10/06 10:02
MA9-SSRR-718+00	0512097-11	01/10/06 11:49
MA9-SSRR-718+00	0512097-11E	01/10/06 13:18
MA9-SSRR-717+60	0512097-12	01/10/06 14:47
MA9-SSRR-717+60	0512097-12E	01/10/06 16:17
MA9-SSRR-A-0-3/MA9-SSRR-A-3-6	0512097-13	01/10/06 17:47
MA9-SSRR-A-6-9/MA9-SSRR-A-9-12	0512097-14	01/10/06 19:16

N/A - Not Applicable

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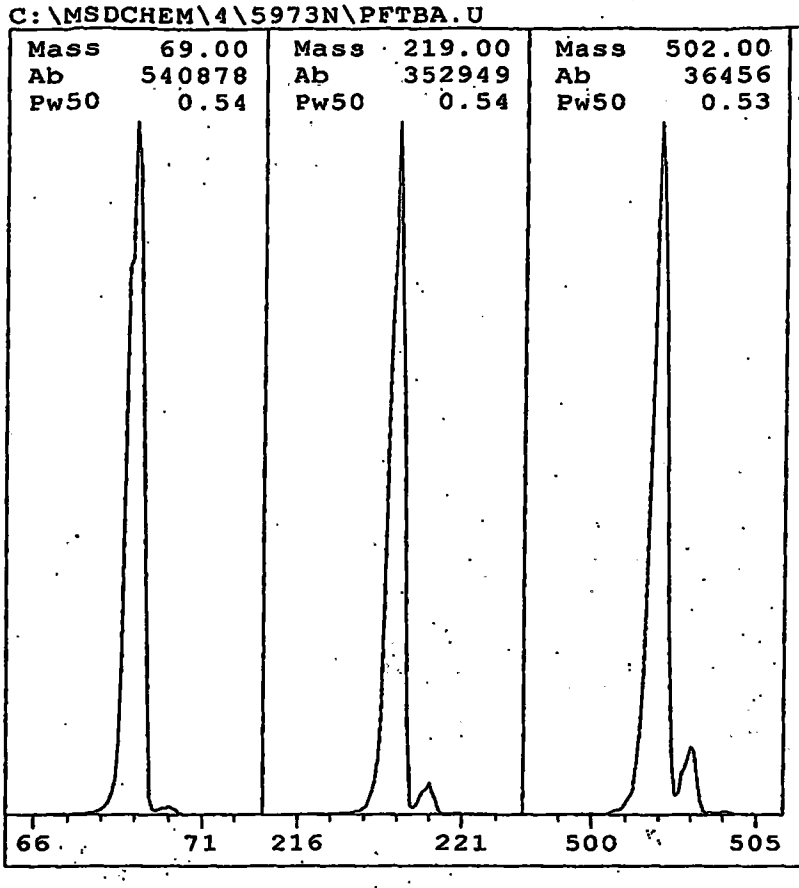
5973

12/17/05

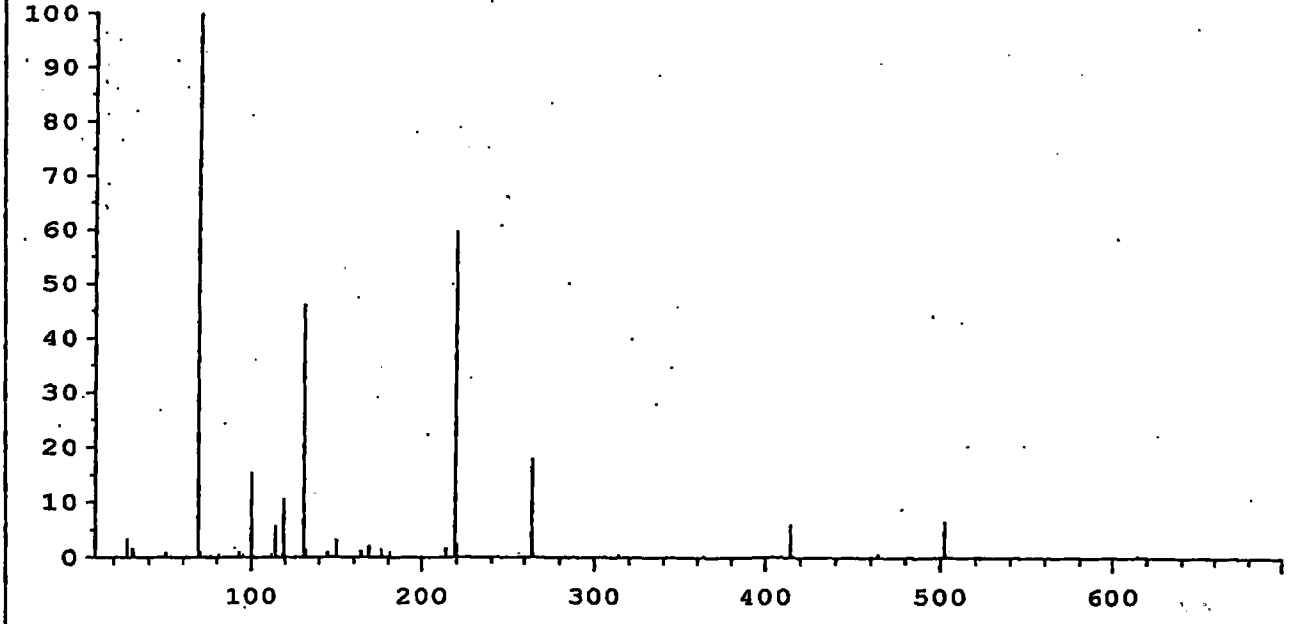
Sat Dec 17 11:56:06 2005
C:\MSDCHEM\4\5973N\PFTBA.U

Instrument: PAH-4



Ion Pol	POS	MassGain	211
		MassOffs	-12
Emission	34.6	AmuGain	2382
ElEnrgy	69.9	AmuOffs	132
Filament	1	Wid219	-0.018
		DC Pol	POS
Repeller	34.81		
IonFcus	90.2	HEDEnab	ON
EntLens	0.0	EMVolts	2106
EntOffs	VAR		
		Samples	8
PFTBA	OPEN	Averages	3
		Stepsize	0.10
Zones:			
MS Source	230	TurboSpd	100
MS Quad	150		

Scan: 10.00 - 700.00 Samples: 8 Thresh: 100 Step: 0.10
110 peaks Base: 69.00 Abundance: 474688



Mass	Abund	Rel Abund	Iso Mass	Iso Abund	Iso Ratio
69.00	474688	100.00	70.00	5050	1.06
219.00	283456	59.71	220.00	12070	4.26
502.00	31064	6.54	503.00	3318	10.68

TARGET MASS:	50	69	131	219	414	502
DYNAMIC ENT OFFSET:	17.1	21.3	19.8	20.3	20.8	22.6
TARGET ABUND(%):	1.0	100.0	45.0	55.0	5.0	6.0
ACTUAL TUNE ABUND(%):	1.0	100.0	46.3	59.7	5.8	6.5

Response Factor Report PAH-4

Method Path : O:\FORENSICS\METHODS\PAH4\DEC05\
Method File : PAH41217.M
Title : Decalins & Alkylated PAH's
Last Update : Tue Dec 20 10:14:11 2005
Response Via : Initial Calibration

10,000=P42687

12/21/05

Calibration Files
10 =P42675.D 25 =P42677.D 100 =P42679.D
500 =P42681.D 1250=P42683.D 5000=P42685.D

MS 12/20/05

		Compound	10	25	100	500	1250	5000	Avg	%RSD
1)	i	Acenaphthene-d10				ISTD				
2)	t	Decalin	0.494	0.505	0.452	0.410	0.422	0.422	0.446	8.92
3)	A1	trans-Decalin	0.532	0.564	0.486	0.459	0.475	0.478	0.494	7.80
4)	t	cis-Decalin	0.453	0.407	0.373	0.355	0.364	0.365	0.382	9.38
5)	A2	C1-Decalins	0.532	0.564	0.486	0.459	0.475	0.478	0.494	7.80
6)	A2	C2-Decalins	0.532	0.564	0.486	0.459	0.475	0.478	0.494	7.80
7)	A2	C3-Decalins	0.532	0.564	0.486	0.459	0.475	0.478	0.494	7.80
8)	A2	C4-Decalins	0.532	0.564	0.486	0.459	0.475	0.478	0.494	7.80
9)	A1	Naphthalene	1.662	1.648	1.772	1.978	2.128	2.204	1.942	12.71
10)	A2	C1-Naphthalenes	1.662	1.648	1.772	1.978	2.128	2.204	1.942	12.71
11)	A2	C2-Naphthalenes	1.662	1.648	1.772	1.978	2.128	2.204	1.942	12.71
12)	A2	C3-Naphthalenes	1.662	1.648	1.772	1.978	2.128	2.204	1.942	12.71
13)	A2	C4-Naphthalenes	1.662	1.648	1.772	1.978	2.128	2.204	1.942	12.71
14)	s	2-Methylnaphthale	0.699	0.704	0.837	1.017	1.082	1.159	0.949	21.01
15)	t	2-Methylnaphthale	0.891	0.938	1.090	1.315	1.435	1.498	1.237	21.12
16)	t	1-Methylnaphthale	1.071	1.095	1.147	1.261	1.352	1.402	1.246	11.43
17)	A1	Benzothiophene	1.377	1.402	1.543	1.666	1.824	1.884	1.653	13.14
18)	A2	C1-Benzo(b)thioph	1.377	1.402	1.543	1.666	1.824	1.884	1.653	13.14
19)	A2	C2-Benzo(b)thioph	1.377	1.402	1.543	1.666	1.824	1.884	1.653	13.14
20)	A2	C3-Benzo(b)thioph	1.377	1.402	1.543	1.666	1.824	1.884	1.653	13.14
21)	A2	C4-Benzo(b)thioph	1.377	1.402	1.543	1.666	1.824	1.884	1.653	13.14
22)	t	Biphenyl	1.039	1.093	1.271	1.599	1.744	1.811	1.482	22.95
23)	t	2,6-Dimethylnapht	0.860	0.797	0.905	1.116	1.224	1.300	1.073	20.17
24)	t	Dibenzofuran	1.248	1.458	1.596	1.839	1.955	2.019	1.734	17.55
25)	t	Acenaphthylene	2.428	2.118	1.891	2.015	2.172	2.288	2.173	8.44
26)	t	Acenaphthene	1.339	1.252	1.255	1.295	1.363	1.406	1.331	4.96
27)	t	2,3,5-Trimethylna	0.984	1.064	0.983	1.075	1.147	1.214	1.098	8.91
28)	A1	Fluorene	1.252	1.306	1.254	1.439	1.529	1.594	1.426	10.97
29)	A2	C1-Fluorenes	1.252	1.306	1.254	1.439	1.529	1.594	1.426	10.97
30)	A2	C2-Fluorenes	1.252	1.306	1.254	1.439	1.529	1.594	1.426	10.97
31)	A2	C3-Fluorenes	1.252	1.306	1.254	1.439	1.529	1.594	1.426	10.97
32)	A1	Dibenzothiophene	1.894	2.008	2.004	2.098	2.197	2.281	2.114	7.44
33)	A2	4-Methyldibenzoth	1.894	2.008	2.004	2.098	2.197	2.281	2.114	7.44
34)	A2	2/3-Methyldibenzo	1.894	2.008	2.004	2.098	2.197	2.281	2.114	7.44
35)	A2	1-Methyldibenzoth	1.894	2.008	2.004	2.098	2.197	2.281	2.114	7.44
36)	A2	OTP	1.894	2.008	2.004	2.098	2.197	2.281	2.114	7.44
37)	A2	C1-Dibenzothiophe	1.894	2.008	2.004	2.098	2.197	2.281	2.114	7.44
38)	A2	C2-Dibenzothiophe	1.894	2.008	2.004	2.098	2.197	2.281	2.114	7.44
39)	A2	C3-Dibenzothiophe	1.894	2.008	2.004	2.098	2.197	2.281	2.114	7.44
40)	A2	C4-Dibenzothiophe	1.894	2.008	2.004	2.098	2.197	2.281	2.114	7.44
41)	A1	Phenanthrene	2.798	2.460	2.094	2.189	2.298	2.389	2.378	9.52
42)	A2	3-Methylphenanthr	2.798	2.460	2.094	2.189	2.298	2.389	2.378	9.52
43)	A2	2/4-Methylphenant	2.798	2.460	2.094	2.189	2.298	2.389	2.378	9.52
44)	A2	2-Methylanthracen	2.798	2.460	2.094	2.189	2.298	2.389	2.378	9.52
45)	A2	9-Methylphenanthr	2.798	2.460	2.094	2.189	2.298	2.389	2.378	9.52
46)	A2	1-Methylphenanthr	2.798	2.460	2.094	2.189	2.298	2.389	2.378	9.52
47)	A2	C1-Phenanthrenes/	2.798	2.460	2.094	2.189	2.298	2.389	2.378	9.52
48)	A2	C2-Phenanthrenes/	2.798	2.460	2.094	2.189	2.298	2.389	2.378	9.52
49)	A2	5AA IS BKGD	2.798	2.460	2.094	2.189	2.298	2.389	2.378	9.52
50)	A2	C3-Phenanthrenes/	2.798	2.460	2.094	2.189	2.298	2.389	2.378	9.52
51)	A2	C4-Phenanthrenes/	2.798	2.460	2.094	2.189	2.298	2.389	2.378	9.52
52)	t	Retene	0.592	0.585	0.561	0.571	0.606	0.666	0.610	7.81
53)	t	Anthracene	2.246	2.109	1.929	2.061	2.195	2.309	2.172	6.84
54)	t	Carbazole	1.444	1.256	1.496	1.750	1.927	2.063	1.721	19.23
55)	t	1-Methylphenanthr	1.473	1.460	1.409	1.506	1.616	1.741	1.570	9.29
56)	A1	Fluoranthene	2.430	2.382	2.207	2.334	2.493	2.631	2.452	6.81
57)	t	Benzo(b)fluorene	1.279	1.255	1.261	1.387	1.524	1.653	1.436	13.09

Response Factor Report PAH-4

Method Path : O:\FORENSICS\METHODS\PAH4\DEC05\
Method File : PAH41217.M
Title : Decalins & Alkylated PAH's
Last Update : Tue Dec 20 10:14:11 2005
Response Via : Initial Calibration

Calibration Files
10 =P42675.D 25 =P42677.D 100 =P42679.D
500 =P42681.D 1250=P42683.D 5000=P42685.D

		Compound	10	25	100	500	1250	5000	Avg	%RSD
58)	s	Pyrene-d10	2.242	2.215	2.199	2.309	2.373	2.549	2.358	7.07
59)	A1	Pyrene	2.563	2.500	2.355	2.464	2.568	2.658	2.543	4.57
60)	A2	C1-Fluoranthenes/	2.563	2.500	2.355	2.464	2.568	2.658	2.543	4.57
61)	A2	C2-Fluoranthenes/	2.563	2.500	2.355	2.464	2.568	2.658	2.543	4.57
62)	A2	C3-Fluoranthenes/	2.563	2.500	2.355	2.464	2.568	2.658	2.543	4.57
63)	A2	C4-Fluoranthenes/	2.563	2.500	2.355	2.464	2.568	2.658	2.543	4.57
64)	A1	Naphthobenzothiop	2.176	2.152	2.163	2.209	2.363	2.530	2.312	8.03
65)	A2	Naphthobenzothiop	2.176	2.152	2.163	2.209	2.363	2.530	2.312	8.03
66)	A2	Naphthobenzothiop	2.176	2.152	2.163	2.209	2.363	2.530	2.312	8.03
67)	A2	Naphthobenzothiop	2.176	2.152	2.163	2.209	2.363	2.530	2.312	8.03
68)	A2	C1-Naphthobenzoth	2.176	2.152	2.163	2.209	2.363	2.530	2.312	8.03
69)	A2	C2-Naphthobenzoth	2.176	2.152	2.163	2.209	2.363	2.530	2.312	8.03
70)	A2	C3-Naphthobenzoth	2.176	2.152	2.163	2.209	2.363	2.530	2.312	8.03
71)	A2	C4-Naphthobenzoth	2.176	2.152	2.163	2.209	2.363	2.530	2.312	8.03
72)	i	Chrysene-d12	----------	----------	----------	ISTD	----------	----------	----------	
73)	t	Benz[a]anthracene	1.045	1.083	1.126	1.151	1.235	1.333	1.189	10.10
74)	A1	Chrysene	1.147	1.119	1.130	1.206	1.253	1.297	1.207	6.36
75)	A2	Chrysene/Tripheny	1.147	1.119	1.130	1.206	1.253	1.297	1.207	6.36
76)	A2	C1-Chrysenes	1.147	1.119	1.130	1.206	1.253	1.297	1.207	6.36
77)	A2	C2-Chrysenes	1.147	1.119	1.130	1.206	1.253	1.297	1.207	6.36
78)	A2	BBF-d12 Surr BKGD	1.147	1.119	1.130	1.206	1.253	1.297	1.207	6.36
79)	A2	C3-Chrysenes	1.147	1.119	1.130	1.206	1.253	1.297	1.207	6.36
80)	A2	C4-Chrysenes	1.147	1.119	1.130	1.206	1.253	1.297	1.207	6.36
81)	s	Benzo[b]fluoranth	0.940	0.956	0.998	1.044	1.059	1.159	1.047	8.83
82)	t	Benzo[b]fluoranth	1.047	1.021	1.105	1.261	1.327	1.423	1.236	14.63
83)	A1	Benzo[k]fluoranth	1.300	1.299	1.314	1.366	1.451	1.524	1.394	7.02
84)	A2	Benzo[a]fluoranth	1.300	1.299	1.314	1.366	1.451	1.524	1.394	7.02
85)	t	Benzo[e]pyrene	1.235	1.139	1.176	1.218	1.270	1.335	1.246	6.20
86)	t	Benzo[a]pyrene	1.039	1.032	1.077	1.221	1.282	1.369	1.201	12.67
87)	t	Perylene	1.068	1.087	1.093	1.182	1.239	1.324	1.189	9.42
88)	t	Indeno[1,2,3-cd]p	1.075	1.010	1.005	1.047	1.126	1.236	1.115	10.42
89)	t	Dibenz[a,h]anthra	0.929	0.978	1.020	1.181	1.259	1.346	1.152	15.32
90)	t	Benzo[g,h,i]peryl	1.360	1.145	1.174	1.239	1.294	1.342	1.271	6.77
91)	A1	17a(H),21B(H)-hop	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
92)	A2	Hopane (T19)	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
93)	A2	C23 Tricyclic Ter	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
94)	A2	C24 Tricyclic Ter	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
95)	A2	C25 Tricyclic Ter	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
96)	A2	C24 Tetracyclic T	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
97)	A2	C26 Tricyclic Ter	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
98)	A2	C26 Tricyclic Ter	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
99)	A2	C28 Tricyclic Ter	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
100)	A2	C28 Tricyclic Ter	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
101)	A2	C29 Tricyclic Ter	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
102)	A2	C29 Tricyclic Ter	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
103)	A2	18a-22,29,30-Tris	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
104)	A2	C30 Tricyclic Ter	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
105)	A2	C30 Tricyclic Ter	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
106)	A2	17a(H)-22,29,30-T	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
107)	A2	17a/b,21b/a 28,30	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
108)	A2	17a(H),21b(H)-25-	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
109)	A2	30-Norhopane (T15	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
110)	A2	18a(H)-30-Norneoh	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
111)	A2	17a(H)-Diahopane	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
112)	A2	30-Normoretane (T	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
113)	A2	18a(H)&18b(H)-Ole	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
114)	A2	Moretane (T20)	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81

Response Factor Report PAH-4

Method Path : O:\FORENSICS\METHODS\PAH4\DEC05\
Method File : PAH41217.M
Title : Decalins & Alkylated PAH's
Last Update : Tue Dec 20 10:14:11 2005
Response Via : Initial Calibration

Calibration Files
10 =P42675.D 25 =P42677.D 100 =P42679.D
500 =P42681.D 1250=P42683.D 5000=P42685.D

		Compound	10	25	100	500	1250	5000	Avg	%RSD
115)	A2	30-Homohopane-22S	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
116)	A2	30-Homohopane-22R	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
117)	A2	30,31-Bishomohopa	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
118)	A2	30,31-Bishomohopa	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
119)	A2	30,31-Trishomohop	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
120)	A2	30,31-Trishomohop	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
121)	A2	Tetrakishomohopan	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
122)	A2	Tetrakishomohopan	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
123)	A2	Pentakishomohopan	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
124)	A2	Pentakishomohopan	0.565	0.477	0.478	0.491	0.480	0.447	0.481	8.81
125)	SA1	5B(H)Cholane - Su	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00
126)	A2	13b(H),17a(H)-20S	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00
127)	A2	13b(H),17a(H)-20R	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00
128)	A2	13b,17a-20S-Methy	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00
129)	A2	14a(H),17a(H)-20S	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00
130)	A2	14a(H),17a(H)-20R	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00
131)	A2	13b,17a-20R-Ethyl	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00
132)	A2	13a,17b-20S-Ethyl	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00
133)	A2	14a,17a-20S-Methy	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00
134)	A2	14a,17a-20R-Methy	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00
135)	A2	14a(H),17a(H)-20S	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00
136)	A2	14a(H),17a(H)-20R	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00
137)	A2	14b(H),17b(H)-20R	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00
138)	A2	14b(H),17b(H)-20S	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00
139)	A2	14b,17b-20R-Methy	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00
140)	A2	14b,17b-20S-Methy	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00
141)	A2	14b(H),17b(H)-20R	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00
142)	A2	14b(H),17b(H)-20S	0.216	0.216	0.218	0.217	0.228	0.246	0.226	6.00

(#) = Out of Range ### Number of calibration levels exceeded format ###

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\PAH4\DECEMBER\DEC16\
Data File : P42691.D
Acq On : 18 Dec 2005 2:48 am
Operator : NLJr
Sample : Q4121701
Misc : ICC
ALS Vial : 11 Sample Multiplier: 1

12/21/05

Quant Time: Dec 20 10:22:32 2005
Quant Method : O:\FORENSICS\METHODS\PAH4\DEC05\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Tue Dec 20 10:14:11 2005
Response via : Initial Calibration

12/21/2005

Min. RRF : 0.050 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

20%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	i	Acenaphthene-d10	1.000	1.000	0.0	93	0.00
2	t	Decalin	0.446	0.000#	100.0#	0#	-16.48#
3	A1	trans-Decalin	0.494	0.000#	100.0#	0#	-16.48#
4	t	cis-Decalin	0.382	0.000#	100.0#	0#	-17.70#
5	A2	C1-Decalins	0.494	0.000#	100.0#	0#	-18.56#
6	A2	C2-Decalins	0.494	0.000#	100.0#	0#	-19.89#
7	A2	C3-Decalins	0.494	0.000#	100.0#	0#	-22.37#
8	A2	C4-Decalins	0.494	0.000#	100.0#	0#	-25.76#
9	A1	Naphthalene	1.942	1.797	7.5	84	0.00
10	A2	C1-Naphthalenes	1.942	0.000#	100.0#	0#	-22.78#
11	A2	C2-Naphthalenes	1.942	0.000#	100.0#	0#	-25.62#
12	A2	C3-Naphthalenes	1.942	0.000#	100.0#	0#	-27.96#
13	A2	C4-Naphthalenes	1.942	0.000#	100.0#	0#	-30.73#
14	s	2-Methylnaphthalene-d10	0.949	1.031	-8.6	94	0.00
15	t	2-Methylnaphthalene	1.237	1.223	1.1	86	0.00
16	t	1-Methylnaphthalene	1.246	1.251	-0.4	92	0.00
17	A1	Benzothiophene	1.653	0.000#	100.0#	0#	-20.11#
18	A2	C1-Benzo(b)thiophenes	1.653	0.000#	100.0#	0#	-22.32#
19	A2	C2-Benzo(b)thiophenes	1.653	0.000#	100.0#	0#	-25.82#
20	A2	C3-Benzo(b)thiophenes	1.653	0.000#	100.0#	0#	-27.79#
21	A2	C4-Benzo(b)thiophenes	1.653	0.000#	100.0#	0#	-29.54#
22	t	Biphenyl	1.482	1.569	-5.9	91	0.00
23	t	2,6-Dimethylnaphthalene	1.073	1.099	-2.4	91	0.00
24	t	Dibenzofuran	1.734	1.817	-4.8	92	0.00
25	t	Acenaphthylene	2.173	1.878	13.6	87	0.00
26	t	Acenaphthene	1.331	1.250	6.1	90	0.00
27	t	2,3,5-Trimethylnaphthalene	1.098	1.109	-1.0	96	0.00
28	A1	Fluorene	1.426	1.337	6.2	86	0.00
29	A2	C1-Fluorenes	1.426	0.000#	100.0#	0#	-31.51#
30	A2	C2-Fluorenes	1.426	0.000#	100.0#	0#	-33.71#
31	A2	C3-Fluorenes	1.426	0.000#	100.0#	0#	-35.54#
32	A1	Dibenzothiophene	2.114	0.000#	100.0#	0#	-32.26#
33	A2	4-Methyldibenzothiophene(4M	2.114	0.000#	100.0#	0#	-34.25#
34	A2	2/3-Methyldibenzothiophene(	2.114	0.000#	100.0#	0#	-34.59#
35	A2	1-Methyldibenzothiophene(1M	2.114	0.000#	100.0#	0#	-35.02#
36	A2	OTP	2.114	0.000#	100.0#	0#	-34.62#
37	A2	C1-Dibenzothiophenes	2.114	0.000#	100.0#	0#	-34.25#
38	A2	C2-Dibenzothiophenes	2.114	0.000#	100.0#	0#	-35.94#
39	A2	C3-Dibenzothiophenes	2.114	0.000#	100.0#	0#	-37.74#
40	A2	C4-Dibenzothiophenes	2.114	0.000#	100.0#	0#	-39.42#
41	A1	Phenanthrene	2.378	1.994	16.1	85	0.00
42	A2	3-Methylphenanthrene(3MP)	2.378	0.000#	100.0#	0#	-35.26#
43	A2	2/4-Methylphenanthrene(2MP)	2.378	0.000#	100.0#	0#	-35.06#
44	A2	2-Methylanthracene(2MA)	2.378	0.000#	100.0#	0#	-35.18#
45	A2	9-Methylphenanthrene(9MP)	2.378	0.000#	100.0#	0#	-35.39#
46	A2	1-Methylphenanthrene(1MP)	2.378	0.000#	100.0#	0#	-35.49#
47	A2	C1-Phenanthrenes/Anthracene	2.378	0.000#	100.0#	0#	-35.39#
48	A2	C2-Phenanthrenes/Anthracene	2.378	0.000#	100.0#	0#	-37.20#
49	A2	5AA IS BKGD	2.378	0.000#	100.0#	0#	-36.91#
50	A2	C3-Phenanthrenes/Anthracene	2.378	0.000#	100.0#	0#	-39.04#

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\PAH4\DECEMBER\DEC16\
Data File : P42691.D
Acq On : 18 Dec 2005 2:48 am
Operator : NLJr
Sample : Q4121701
Misc : ICC
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 20 10:22:32 2005
Quant Method : O:\FORENSICS\METHODS\PAH4\DEC05\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Tue Dec 20 10:14:11 2005
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
51	A2	C4-Phenanthrenes/Anthracene	2.378	0.000#	100.0#	0#	-41.22#
52	t	Retene	0.610	0.000#	100.0#	0#	-39.75#
53	t	Anthracene	2.172	1.848	14.9	83	0.00
54	t	Carbazole	1.721	0.000#	100.0#	0#	-33.60#
55	t	1-Methylphenanthrene	1.570	1.559	0.7	96	0.00
56	A1	Fluoranthene	2.452	2.175	11.3	87	0.00
57	t	Benzo(b)fluorene	1.436	0.000#	100.0#	0#	-40.05#
58	s	Pyrene-d10	2.358	2.268	3.8	91	0.00
59	A1	Pyrene	2.543	2.364	7.0	89	0.00
60	A2	C1-Fluoranthenes/Pyrenes	2.543	0.000#	100.0#	0#	-40.06#
61	A2	C2-Fluoranthenes/Pyrenes	2.543	0.000#	100.0#	0#	-41.86#
62	A2	C3-Fluoranthenes/Pyrenes	2.543	0.000#	100.0#	0#	-43.87#
63	A2	C4-Fluoranthenes/Pyrenes	2.543	0.000#	100.0#	0#	-45.21#
64	A1	Naphthobenzothiophene	2.312	0.000#	100.0#	0#	-42.27#
65	A2	Naphthobenzothiophene-2,1-D	2.312	0.000#	100.0#	0#	-42.27#
66	A2	Naphthobenzothiophene-1,2-D	2.312	0.000#	100.0#	0#	-42.87#
67	A2	Naphthobenzothiophene-2,3-D	2.312	0.000#	100.0#	0#	-43.20#
68	A2	C1-Naphthobenzothiophenes	2.312	0.000#	100.0#	0#	-43.92#
69	A2	C2-Naphthobenzothiophenes	2.312	0.000#	100.0#	0#	-45.96#
70	A2	C3-Naphthobenzothiophenes	2.312	0.000#	100.0#	0#	-47.53#
71	A2	C4-Naphthobenzothiophenes	2.312	0.000#	100.0#	0#	-48.61#
72	i	Chrysene-d12	1.000	1.000	0.0	92	0.00
73	t	Benz[a]anthracene	1.189	1.175	1.2	94	0.00
74	A1	Chrysene	1.207	1.176	2.6	90	0.00
75	A2	Chrysene/Triphenylene	1.207	1.177	2.5	90	0.00
76	A2	C1-Chrysenes	1.207	0.000#	100.0#	0#	-45.08#
77	A2	C2-Chrysenes	1.207	0.000#	100.0#	0#	-46.81#
78	A2	BBF-d12 Surr BKGD	1.207	0.000#	100.0#	0#	-47.45#
79	A2	C3-Chrysenes	1.207	0.000#	100.0#	0#	-48.56#
80	A2	C4-Chrysenes	1.207	0.000#	100.0#	0#	-50.05#
81	s	Benzo[b]fluoranthene-d12	1.047	1.071	-2.3	94	0.00
82	t	Benzo[b]fluoranthene	1.236	1.128	8.7	82	0.00
83	A1	Benzo[k]fluoranthene	1.394	1.279	8.2	86	0.00
84	A2	Benzo[a]fluoranthene	1.394	0.000#	100.0#	0#	-48.25#
85	t	Benzo[e]pyrene	1.246	1.208	3.0	91	0.00
86	t	Benzo[a]pyrene	1.201	1.082	9.9	81	0.00
87	t	Perylene	1.189	1.182	0.6	92	0.00
88	t	Indeno[1,2,3-cd]pyrene	1.115	0.952	14.6	84	0.00
89	t	Dibenz[a,h]anthracene	1.152	1.084	5.9	84	0.00
90	t	Benzo[g,h,i]perylene	1.271	1.140	10.3	84	0.00
91	A1	17a(H),21B(H)-hopane - C30H	0.481	0.000#	100.0#	0#	-52.46#
92	A2	Hopane (T19)	0.481	0.000#	100.0#	0#	-52.46#
93	A2	C23 Tricyclic Terpane (T4)	0.481	0.000#	100.0#	0#	-41.07#
94	A2	C24 Tricyclic Terpane (T5)	0.481	0.000#	100.0#	0#	-41.79#
95	A2	C25 Tricyclic Terpane (T6)	0.481	0.000#	100.0#	0#	-43.27#
96	A2	C24 Tetracyclic Terpane (T6	0.481	0.000#	100.0#	0#	-44.61#
97	A2	C26 Tricyclic Terpane-22S (	0.481	0.000#	100.0#	0#	-44.33#
98	A2	C26 Tricyclic Terpane-22R (	0.481	0.000#	100.0#	0#	-44.42#
99	A2	C28 Tricyclic Terpane-22S (	0.481	0.000#	100.0#	0#	-46.71#

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\PAH4\DECEMBER\DEC16\
Data File : P42691.D
Acq On : 18 Dec 2005 2:48 am
Operator : NLJr
Sample : Q4121701
Misc : ICC
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Dec 20 10:22:32 2005
Quant Method : O:\FORENSICS\METHODS\PAH4\DEC05\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Tue Dec 20 10:14:11 2005
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
100	A2	C28 Tricyclic Terpane-22R (	0.481	0.000#	100.0#	0#	-46.87#
101	A2	C29 Tricyclic Terpane-22S (	0.481	0.000#	100.0#	0#	-47.41#
102	A2	C29 Tricyclic Terpane-22R (	0.481	0.000#	100.0#	0#	-47.60#
103	A2	18a-22,29,30-Trisnorneohopa	0.481	0.000#	100.0#	0#	-48.78#
104	A2	C30 Tricyclic Terpane-22S	0.481	0.000#	100.0#	0#	-48.85#
105	A2	C30 Tricyclic Terpane-22R	0.481	0.000#	100.0#	0#	-49.11#
106	A2	17a(H)-22,29,30-Trisnorhopa	0.481	0.000#	100.0#	0#	-49.35#
107	A2	17a/b,21b/a 28,30-Bisnorhop	0.481	0.000#	100.0#	0#	-50.57#
108	A2	17a(H),21b(H)-25-Norhopane	0.481	0.000#	100.0#	0#	-50.33#
109	A2	30-Norhopane (T15)	0.481	0.000#	100.0#	0#	-51.26#
110	A2	18a(H)-30-Norneohopane-C29T	0.481	0.000#	100.0#	0#	-51.37#
111	A2	17a(H)-Diahopane (X)	0.481	0.000#	100.0#	0#	-51.50#
112	A2	30-Normoretane (T17)	0.481	0.000#	100.0#	0#	-52.06#
113	A2	18a(H)&18b(H)-Oleananes (T1	0.481	0.000#	100.0#	0#	-52.50#
114	A2	Moretane (T20)	0.481	0.000#	100.0#	0#	-53.39#
115	A2	30-Homohopane-22S (T21)	0.481	0.000#	100.0#	0#	-54.54#
116	A2	30-Homohopane-22R (T22)	0.481	0.000#	100.0#	0#	-54.78#
117	A2	30,31-Bishomohopane-22S (T2	0.481	0.000#	100.0#	0#	-56.15#
118	A2	30,31-Bishomohopane-22R (T2	0.481	0.000#	100.0#	0#	-56.55#
119	A2	30,31-Trishomohopane-22S (T	0.481	0.000#	100.0#	0#	-58.37#
120	A2	30,31-Trishomohopane-22R (T	0.481	0.000#	100.0#	0#	-59.01#
121	A2	Tetrakishomohopane-22S (T32	0.481	0.000#	100.0#	0#	-61.11#
122	A2	Tetrakishomohopane-22R (T33	0.481	0.000#	100.0#	0#	-62.04#
123	A2	Pentakishomohopane-22S (T34	0.481	0.000#	100.0#	0#	-64.39#
124	A2	Pentakishomohopane-22R (T35	0.481	0.000#	100.0#	0#	-65.74#
125	SA1	5B(H)Cholane - Surr	0.226	0.213	5.8	90	0.00
126	A2	13b(H),17a(H)-20S-Diacholes	0.226	0.000#	100.0#	0#	-45.55#
127	A2	13b(H),17a(H)-20R-Diacholes	0.226	0.000#	100.0#	0#	-45.96#
128	A2	13b,17a-20S-Methyldiacholes	0.226	0.000#	100.0#	0#	-46.66#
129	A2	14a(H),17a(H)-20S-Cholestan	0.226	0.000#	100.0#	0#	-47.55#
130	A2	14a(H),17a(H)-20R-Cholestan	0.226	0.000#	100.0#	0#	-48.09#
131	A2	13b,17a-20R-Ethyldiacholest	0.226	0.000#	100.0#	0#	-48.36#
132	A2	13a,17b-20S-Ethyldiacholest	0.226	0.000#	100.0#	0#	-48.63#
133	A2	14a,17a-20S-Methylcholestan	0.226	0.000#	100.0#	0#	-48.82#
134	A2	14a,17a-20R-Methylcholestan	0.226	0.000#	100.0#	0#	-49.55#
135	A2	14a(H),17a(H)-20S-Ethylchol	0.226	0.000#	100.0#	0#	-49.89#
136	A2	14a(H),17a(H)-20R-Ethylchol	0.226	0.000#	100.0#	0#	-50.84#
137	A2	14b(H),17b(H)-20R-Cholestan	0.226	0.000#	100.0#	0#	-47.65#
138	A2	14b(H),17b(H)-20S-Cholestan	0.226	0.000#	100.0#	0#	-47.72#
139	A2	14b,17b-20R-Methylcholestan	0.226	0.000#	100.0#	0#	-48.98#
140	A2	14b,17b-20S-Methylcholestan	0.226	0.000#	100.0#	0#	-49.06#
141	A2	14b(H),17b(H)-20R-Ethylchol	0.226	0.000#	100.0#	0#	-50.15#
142	A2	14b(H),17b(H)-20S-Ethylchol	0.226	0.000#	100.0#	0#	-50.19#

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

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\PAH4\JANUARY\JAN09\
Data File : P43126.D
Acq On : 9 Jan 2006 11:51 am
Operator : AC
Sample : C4010901
Misc : pah std
ALS Vial : 2 Sample Multiplier: 1

1/9/06

Quant Time: Jan 09 13:34:52 2006
Quant Method : O:\FORENSICS\METHODS\PAH4\DEC05\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Mon Jan 09 09:39:53 2006
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	i	Acenaphthene-d10	1.000	1.000	0.0	87	-0.02
2	t	Decalin	0.446	0.390	12.6	82	-0.02
3	A1	trans-Decalin	0.494	0.438	11.3	83	-0.02
4	t	cis-Decalin	0.382	0.339	11.3	82	-0.02
5	A2	C1-Decalins	0.494	0.000#	100.0#	0#	-18.35#
6	A2	C2-Decalins	0.494	0.000#	100.0#	0#	-19.68#
7	A2	C3-Decalins	0.494	0.000#	100.0#	0#	-22.15#
8	A2	C4-Decalins	0.494	0.000#	100.0#	0#	-25.55#
9	A1	Naphthalene	1.942	2.029	-4.5	89	-0.02
10	A2	C1-Naphthalenes	1.942	0.000#	100.0#	0#	-22.54#
11	A2	C2-Naphthalenes	1.942	0.000#	100.0#	0#	-25.38#
12	A2	C3-Naphthalenes	1.942	0.000#	100.0#	0#	-27.72#
13	A2	C4-Naphthalenes	1.942	0.000#	100.0#	0#	-30.49#
14	s	2-Methylnaphthalene-d10	0.949	1.059	-11.6	90	-0.02
15	t	2-Methylnaphthalene	1.237	1.364	-10.3	90	-0.02
16	t	1-Methylnaphthalene	1.246	1.293	-3.8	89	-0.02
17	A1	Benzothiophene	1.653	1.707	-3.3	89	-0.02
18	A2	C1-Benzo(b)thiophenes	1.653	0.000#	100.0#	0#	-22.10#
19	A2	C2-Benzo(b)thiophenes	1.653	0.000#	100.0#	0#	-25.58#
20	A2	C3-Benzo(b)thiophenes	1.653	0.000#	100.0#	0#	-27.56#
21	A2	C4-Benzo(b)thiophenes	1.653	0.000#	100.0#	0#	-29.30#
22	t	Biphenyl	1.482	1.660	-12.0	90	-0.02
23	t	2,6-Dimethylnaphthalene	1.073	1.170	-9.0	91	-0.02
24	t	Dibenzofuran	1.734	1.840	-6.1	87	-0.02
25	t	Acenaphthylene	2.173	2.086	4.0	90	-0.02
26	t	Acenaphthene	1.331	1.279	3.9	85	-0.02
27	t	2,3,5-Trimethylnaphthalene	1.098	1.058	3.6	85	-0.02
28	A1	Fluorene	1.426	1.415	0.8	85	-0.02
29	A2	C1-Fluorenes	1.426	0.000#	100.0#	0#	-31.25#
30	A2	C2-Fluorenes	1.426	0.000#	100.0#	0#	-33.45#
31	A2	C3-Fluorenes	1.426	0.000#	100.0#	0#	-35.29#
32	A1	Dibenzothiophene	2.114	1.893	10.5	78	-0.02
33	A2	4-Methyldibenzothiophene(4M	2.114	0.000#	100.0#	0#	-33.98#
34	A2	2/3-Methyldibenzothiophene(	2.114	0.000#	100.0#	0#	-34.33#
35	A2	1-Methyldibenzothiophene(1M	2.114	0.000#	100.0#	0#	-34.75#
36	A2	OTP	2.114	0.000#	100.0#	0#	-34.42#
37	A2	C1-Dibenzothiophenes	2.114	0.000#	100.0#	0#	-33.98#
38	A2	C2-Dibenzothiophenes	2.114	0.000#	100.0#	0#	-35.67#
39	A2	C3-Dibenzothiophenes	2.114	0.000#	100.0#	0#	-37.48#
40	A2	C4-Dibenzothiophenes	2.114	0.000#	100.0#	0#	-38.37#
41	A1	Phenanthrene	2.378	1.923	19.1	76	-0.02
42	A2	3-Methylphenanthrene(3MP)	2.378	0.000#	100.0#	0#	-34.67#
43	A2	2/4-Methylphenanthrene(2MP)	2.378	0.000#	100.0#	0#	-34.78#
44	A2	2-Methylanthracene(2MA)	2.378	0.000#	100.0#	0#	-34.94#
45	A2	9-Methylphenanthrene(9MP)	2.378	0.000#	100.0#	0#	-35.12#
46	A2	1-Methylphenanthrene(1MP)	2.378	0.000#	100.0#	0#	-35.21#
47	A2	C1-Phenanthrenes/Anthracene	2.378	0.000#	100.0#	0#	-35.12#
48	A2	C2-Phenanthrenes/Anthracene	2.378	0.000#	100.0#	0#	-36.95#
49	A2	5AA IS BKGD	2.378	0.000#	100.0#	0#	-36.72#
50	A2	C3-Phenanthrenes/Anthracene	2.378	0.000#	100.0#	0#	-38.78#

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\PAH4\JANUARY\JAN09\
Data File : P43126.D
Acq On : 9 Jan 2006 11:51 am
Operator : AC
Sample : C4010901
Misc : pah std
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 09 13:34:52 2006
Quant Method : O:\FORENSICS\METHODS\PAH4\DEC05\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Mon Jan 09 09:39:53 2006
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
51	A2	C4-Phenanthrenes/Anthracene	2.378	0.000#	100.0#	0#	-40.97#
52	t	Retene	0.610	0.592	3.0	90	-0.02
53	t	Anthracene	2.172	1.751	19.4	74	-0.02
54	t	Carbazole	1.721	1.741	-1.2	86	-0.02
55	t	1-Methylphenanthrene	1.570	1.453	7.5	83	-0.02
56	A1	Fluoranthene	2.452	2.318	5.5	86	-0.02
57	t	Benzo(b)fluorene	1.436	1.397	2.7	87	-0.02
58	s	Pyrene-d10	2.358	2.286	3.1	86	-0.02
59	A1	Pyrene	2.543	2.365	7.0	83	-0.02
60	A2	C1-Fluoranthenes/Pyrenes	2.543	0.000#	100.0#	0#	-39.76#
61	A2	C2-Fluoranthenes/Pyrenes	2.543	0.000#	100.0#	0#	-41.57#
62	A2	C3-Fluoranthenes/Pyrenes	2.543	0.000#	100.0#	0#	-43.58#
63	A2	C4-Fluoranthenes/Pyrenes	2.543	0.000#	100.0#	0#	-44.94#
64	A1	Naphthobenzothiophene	2.312	2.205	4.6	86	-0.02
65	A2	Naphthobenzothiophene-2,1-D	2.312	2.205	4.6	86	-0.02
66	A2	Naphthobenzothiophene-1,2-D	2.312	0.000#	100.0#	0#	-42.56#
67	A2	Naphthobenzothiophene-2,3-D	2.312	0.000#	100.0#	0#	-42.86#
68	A2	C1-Naphthobenzothiophenes	2.312	0.000#	100.0#	0#	-43.62#
69	A2	C2-Naphthobenzothiophenes	2.312	0.000#	100.0#	0#	-45.63#
70	A2	C3-Naphthobenzothiophenes	2.312	0.000#	100.0#	0#	-47.22#
71	A2	C4-Naphthobenzothiophenes	2.312	0.000#	100.0#	0#	-48.32#
72	i	Chrysene-d12	1.000	1.000	0.0	84	-0.02
73	t	Benz[a]anthracene	1.189	1.198	-0.8	88	-0.02
74	A1	Chrysene	1.207	1.183	2.0	83	-0.02
75	A2	Chrysene/Triphenylene	1.207	1.183	2.0	83	-0.02
76	A2	C1-Chrysenes	1.207	0.000#	100.0#	0#	-44.79#
77	A2	C2-Chrysenes	1.207	0.000#	100.0#	0#	-46.87#
78	A2	BBF-d12 Surr BKGD	1.207	0.000#	100.0#	0#	-47.12#
79	A2	C3-Chrysenes	1.207	0.000#	100.0#	0#	-49.59#
80	A2	C4-Chrysenes	1.207	0.000#	100.0#	0#	-49.19#
81	s	Benzo[b]fluoranthene-d12	1.047	0.992	5.3	80	-0.02
82	t	Benzo[b]fluoranthene	1.236	1.218	1.5	81	-0.02
83	A1	Benzo[k]fluoranthene	1.394	1.268	9.0	78	-0.02
84	A2	Benzo[a]fluoranthene	1.394	0.000#	100.0#	0#	-47.56#
85	t	Benzo[e]pyrene	1.246	1.133	9.1	78	-0.02
86	t	Benzo[a]pyrene	1.201	1.136	5.4	78	-0.02
87	t	Perylene	1.189	1.085	8.7	77	-0.02
88	t	Indeno[1,2,3-cd]pyrene	1.115	1.080	3.1	87	-0.02
89	t	Dibenz[a,h]anthracene	1.152	1.097	4.8	78	-0.02
90	t	Benzo[g,h,i]perylene	1.271	1.092	14.1	74	-0.02
91	A1	17a(H),21B(H)-hopane - C30H	0.481	0.359	25.4	62	-0.03
92	A2	Hopane (T19)	0.481	0.359	25.4	62	-0.03
93	A2	C23 Tricyclic Terpane (T4)	0.481	0.000#	100.0#	0#	-40.87#
94	A2	C24 Tricyclic Terpane (T5)	0.481	0.000#	100.0#	0#	-41.60#
95	A2	C25 Tricyclic Terpane (T6)	0.481	0.000#	100.0#	0#	-43.08#
96	A2	C24 Tetracyclic Terpane (T6	0.481	0.000#	100.0#	0#	-44.41#
97	A2	C26 Tricyclic Terpane-22S (	0.481	0.000#	100.0#	0#	-44.14#
98	A2	C26 Tricyclic Terpane-22R (	0.481	0.000#	100.0#	0#	-44.24#
99	A2	C28 Tricyclic Terpane-22S (	0.481	0.000#	100.0#	0#	-46.53#

NT CV 1/20/06

Evaluate Continuing Calibration Report

Data Path : O:\Forensics\Data\PAH4\JANUARY\JAN09\
Data File : P43126.D
Acq On : 9 Jan 2006 11:51 am
Operator : AC
Sample : C4010901
Misc : pah std
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 09 13:34:52 2006
Quant Method : O:\FORENSICS\METHODS\PAH4\DEC05\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Mon Jan 09 09:39:53 2006
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
100	A2	C28 Tricyclic Terpane-22R (	0.481	0.000#	100.0#	0#	-46.69#
101	A2	C29 Tricyclic Terpane-22S (	0.481	0.000#	100.0#	0#	-47.22#
102	A2	C29 Tricyclic Terpane-22R (	0.481	0.000#	100.0#	0#	-47.41#
103	A2	18a-22,29,30-Trisnorneohopa	0.481	0.000#	100.0#	0#	-48.55#
104	A2	C30 Tricyclic Terpane-22S	0.481	0.000#	100.0#	0#	-48.65#
105	A2	C30 Tricyclic Terpane-22R	0.481	0.000#	100.0#	0#	-48.89#
106	A2	17a(H)-22,29,30-Trisnorhopa	0.481	0.000#	100.0#	0#	-49.11#
107	A2	17a/b,21b/a 28,30-Bisnorhop	0.481	0.000#	100.0#	0#	-50.33#
108	A2	17a(H),21b(H)-25-Norhopane	0.481	0.000#	100.0#	0#	-50.11#
109	A2	30-Norhopane (T15)	0.481	0.000#	100.0#	0#	-51.00#
110	A2	18a(H)-30-Norneohopane-C29T	0.481	0.000#	100.0#	0#	-51.10#
111	A2	17a(H)-Diahopane (X)	0.481	0.000#	100.0#	0#	-51.22#
112	A2	30-Normoretane (T17)	0.481	0.000#	100.0#	0#	-51.79#
113	A2	18a(H)&18b(H)-Oleananes (T1	0.481	0.000#	100.0#	0#	-52.19#
114	A2	Moretane (T20)	0.481	0.000#	100.0#	0#	-53.10#
115	A2	30-Homohopane-22S (T21)	0.481	0.000#	100.0#	0#	-54.22#
116	A2	30-Homohopane-22R (T22)	0.481	0.000#	100.0#	0#	-54.45#
117	A2	30,31-Bishomohopane-22S (T2	0.481	0.000#	100.0#	0#	-55.80#
118	A2	30,31-Bishomohopane-22R (T2	0.481	0.000#	100.0#	0#	-56.20#
119	A2	30,31-Trishomohopane-22S (T	0.481	0.000#	100.0#	0#	-57.99#
120	A2	30,31-Trishomohopane-22R (T	0.481	0.000#	100.0#	0#	-58.63#
121	A2	Tetrakishomohopane-22S (T32	0.481	0.000#	100.0#	0#	-60.70#
122	A2	Tetrakishomohopane-22R (T33	0.481	0.000#	100.0#	0#	-61.61#
123	A2	Pentakishomohopane-22S (T34	0.481	0.000#	100.0#	0#	-63.91#
124	A2	Pentakishomohopane-22R (T35	0.481	0.000#	100.0#	0#	-65.25#
125	SA1	5B(H)Cholane - Surr	0.226	0.217	4.0	84	-0.02
126	A2	13b(H),17a(H)-20S-Diacholes	0.226	0.000#	100.0#	0#	-45.36#
127	A2	13b(H),17a(H)-20R-Diacholes	0.226	0.000#	100.0#	0#	-45.78#
128	A2	13b,17a-20S-Methyldiacholes	0.226	0.000#	100.0#	0#	-46.49#
129	A2	14a(H),17a(H)-20S-Cholestan	0.226	0.000#	100.0#	0#	-47.35#
130	A2	14a(H),17a(H)-20R-Cholestan	0.226	0.000#	100.0#	0#	-47.88#
131	A2	13b,17a-20R-Ethyldiacholest	0.226	0.000#	100.0#	0#	-48.16#
132	A2	13a,17b-20S-Ethyldiacholest	0.226	0.000#	100.0#	0#	-48.43#
133	A2	14a,17a-20S-Methylcholestan	0.226	0.000#	100.0#	0#	-48.58#
134	A2	14a,17a-20R-Methylcholestan	0.226	0.000#	100.0#	0#	-49.31#
135	A2	14a(H),17a(H)-20S-Ethylchol	0.226	0.000#	100.0#	0#	-49.66#
136	A2	14a(H),17a(H)-20R-Ethylchol	0.226	0.000#	100.0#	0#	-50.60#
137	A2	14b(H),17b(H)-20R-Cholestan	0.226	0.000#	100.0#	0#	-47.44#
138	A2	14b(H),17b(H)-20S-Cholestan	0.226	0.000#	100.0#	0#	-47.53#
139	A2	14b,17b-20R-Methylcholestan	0.226	0.000#	100.0#	0#	-48.76#
140	A2	14b,17b-20S-Methylcholestan	0.226	0.000#	100.0#	0#	-48.85#
141	A2	14b(H),17b(H)-20R-Ethylchol	0.226	0.000#	100.0#	0#	-49.92#
142	A2	14b(H),17b(H)-20S-Ethylchol	0.226	0.000#	100.0#	0#	-49.97#

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

Evaluate Continuing Calibration Report

Data Path : O:\FORENSICS\DATA\PAH4\JANUARY\JAN09\
Data File : P43150.D
Acq On : 10 Jan 2006 7:05 am
Operator : AC
Sample : C4010902
Misc : PAH STD
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jan 11 07:29:52 2006
Quant Method : O:\FORENSICS\METHODS\PAH4\DEC05\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Mon Jan 09 09:39:53 2006
Response via : Initial Calibration

CMS 1/11/06

Min. RRF : 0.050 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	i	Acenaphthene-d10	1.000	1.000	0.0	89	-0.03
2	t	Decalin	0.446	0.395	11.4	86	-0.02
3	A1	trans-Decalin	0.494	0.441	10.7	86	-0.02
4	t	cis-Decalin	0.382	0.343	10.2	86	-0.03
5	A2	C1-Decalins	0.494	0.000#	100.0#	0#	-18.35#
6	A2	C2-Decalins	0.494	0.000#	100.0#	0#	-19.68#
7	A2	C3-Decalins	0.494	0.000#	100.0#	0#	-22.15#
8	A2	C4-Decalins	0.494	0.000#	100.0#	0#	-25.55#
9	A1	Naphthalene	1.942	2.012	-3.6	91	-0.02
10	A2	C1-Naphthalenes	1.942	0.000#	100.0#	0#	-22.54#
11	A2	C2-Naphthalenes	1.942	0.000#	100.0#	0#	-25.38#
12	A2	C3-Naphthalenes	1.942	0.000#	100.0#	0#	-27.72#
13	A2	C4-Naphthalenes	1.942	0.000#	100.0#	0#	-30.49#
14	s	2-Methylnaphthalene-d10	0.949	1.051	-10.7	92	-0.02
15	t	2-Methylnaphthalene	1.237	1.355	-9.5	92	-0.02
16	t	1-Methylnaphthalene	1.246	1.280	-2.7	91	-0.02
17	A1	Benzothiophene	1.653	1.673	-1.2	90	-0.02
18	A2	C1-Benzo(b)thiophenes	1.653	0.000#	100.0#	0#	-22.10#
19	A2	C2-Benzo(b)thiophenes	1.653	0.000#	100.0#	0#	-25.58#
20	A2	C3-Benzo(b)thiophenes	1.653	0.000#	100.0#	0#	-27.56#
21	A2	C4-Benzo(b)thiophenes	1.653	0.000#	100.0#	0#	-29.30#
22	t	Biphenyl	1.482	1.648	-11.2	92	-0.02
23	t	2,6-Dimethylnaphthalene	1.073	1.167	-8.8	94	-0.02
24	t	Dibenzofuran	1.734	1.811	-4.4	88	-0.02
25	t	Acenaphthylene	2.173	2.063	5.1	92	-0.02
26	t	Acenaphthene	1.331	1.268	4.7	88	-0.03
27	t	2,3,5-Trimethylnaphthalene	1.098	1.072	2.4	89	-0.02
28	A1	Fluorene	1.426	1.405	1.5	87	-0.02
29	A2	C1-Fluorenes	1.426	0.000#	100.0#	0#	-31.25#
30	A2	C2-Fluorenes	1.426	0.000#	100.0#	0#	-33.45#
31	A2	C3-Fluorenes	1.426	0.000#	100.0#	0#	-35.29#
32	A1	Dibenzothiophene	2.114	1.935	8.5	82	-0.02
33	A2	4-Methyldibenzothiophene(4M	2.114	0.000#	100.0#	0#	-33.98#
34	A2	2/3-Methyldibenzothiophene(	2.114	0.000#	100.0#	0#	-34.33#
35	A2	1-Methyldibenzothiophene(1M	2.114	0.000#	100.0#	0#	-34.75#
36	A2	OTP	2.114	0.000#	100.0#	0#	-34.42#
37	A2	C1-Dibenzothiophenes	2.114	0.000#	100.0#	0#	-33.98#
38	A2	C2-Dibenzothiophenes	2.114	0.000#	100.0#	0#	-35.67#
39	A2	C3-Dibenzothiophenes	2.114	0.000#	100.0#	0#	-37.48#
40	A2	C4-Dibenzothiophenes	2.114	0.000#	100.0#	0#	-38.37#
41	A1	Phenanthrene	2.378	1.993	16.2	81	-0.03
42	A2	3-Methylphenanthrene(3MP)	2.378	0.000#	100.0#	0#	-34.67#
43	A2	2/4-Methylphenanthrene(2MP)	2.378	0.000#	100.0#	0#	-34.78#
44	A2	2-Methylanthracene(2MA)	2.378	0.000#	100.0#	0#	-34.94#
45	A2	9-Methylphenanthrene(9MP)	2.378	0.000#	100.0#	0#	-35.12#
46	A2	1-Methylphenanthrene(1MP)	2.378	0.000#	100.0#	0#	-35.21#
47	A2	C1-Phenanthrenes/Anthracene	2.378	0.000#	100.0#	0#	-35.12#
48	A2	C2-Phenanthrenes/Anthracene	2.378	0.000#	100.0#	0#	-36.95#
49	A2	5AA IS BKGD	2.378	0.000#	100.0#	0#	-36.72#
50	A2	C3-Phenanthrenes/Anthracene	2.378	0.000#	100.0#	0#	-38.78#

Evaluate Continuing Calibration Report

Data Path : O:\FORENSICS\DATA\PAH4\JANUARY\JAN09\
Data File : P43150.D
Acq On : 10 Jan 2006 7:05 am
Operator : AC
Sample : C4010902
Misc : PAH STD
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jan 11 07:29:52 2006
Quant Method : O:\FORENSICS\METHODS\PAH4\DEC05\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Mon Jan 09 09:39:53 2006
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
51	A2	C4-Phenanthrenes/Anthracene	2.378	0.000#	100.0#	0#	-40.97#
52	t	Retene	0.610	0.584	4.3	91	-0.03
53	t	Anthracene	2.172	1.946	10.4	84	-0.03
54	t	Carbazole	1.721	1.808	-5.1	92	-0.02
55	t	1-Methylphenanthrene	1.570	1.466	6.6	87	-0.03
56	A1	Fluoranthene	2.452	2.263	7.7	87	-0.03
57	t	Benzo(b)fluorene	1.436	1.432	0.3	92	-0.03
58	s	Pyrene-d10	2.358	2.264	4.0	88	-0.03
59	A1	Pyrene	2.543	2.339	8.0	85	-0.03
60	A2	C1-Fluoranthenes/Pyrenes	2.543	0.000#	100.0#	0#	-39.76#
61	A2	C2-Fluoranthenes/Pyrenes	2.543	0.000#	100.0#	0#	-41.57#
62	A2	C3-Fluoranthenes/Pyrenes	2.543	0.000#	100.0#	0#	-43.58#
63	A2	C4-Fluoranthenes/Pyrenes	2.543	0.000#	100.0#	0#	-44.94#
64	A1	Naphthobenzothiophene	2.312	2.170	6.1	88	-0.03
65	A2	Naphthobenzothiophene-2,1-D	2.312	2.170	6.1	88	-0.03
66	A2	Naphthobenzothiophene-1,2-D	2.312	0.000#	100.0#	0#	-42.56#
67	A2	Naphthobenzothiophene-2,3-D	2.312	0.000#	100.0#	0#	-42.86#
68	A2	C1-Naphthobenzothiophenes	2.312	0.000#	100.0#	0#	-43.62#
69	A2	C2-Naphthobenzothiophenes	2.312	0.000#	100.0#	0#	-45.63#
70	A2	C3-Naphthobenzothiophenes	2.312	0.000#	100.0#	0#	-47.22#
71	A2	C4-Naphthobenzothiophenes	2.312	0.000#	100.0#	0#	-48.32#
72	i	Chrysene-d12	1.000	1.000	0.0	86	-0.03
73	t	Benz[a]anthracene	1.189	1.216	-2.3	91	-0.03
74	A1	Chrysene	1.207	1.191	1.3	85	-0.03
75	A2	Chrysene/Triphenylene	1.207	1.191	1.3	85	-0.03
76	A2	C1-Chrysenes	1.207	0.000#	100.0#	0#	-44.79#
77	A2	C2-Chrysenes	1.207	0.000#	100.0#	0#	-46.87#
78	A2	BBF-d12 Surr BKGD	1.207	0.000#	100.0#	0#	-47.12#
79	A2	C3-Chrysenes	1.207	0.000#	100.0#	0#	-49.59#
80	A2	C4-Chrysenes	1.207	0.000#	100.0#	0#	-49.19#
81	s	Benzo[b]fluoranthene-d12	1.047	0.980	6.4	81	-0.02
82	t	Benzo[b]fluoranthene	1.236	1.205	2.5	82	-0.02
83	A1	Benzo[k]fluoranthene	1.394	1.248	10.5	79	-0.02
84	A2	Benzo[a]fluoranthene	1.394	0.000#	100.0#	0#	-47.56#
85	t	Benzo[e]pyrene	1.246	1.107	11.2	78	-0.03
86	t	Benzo[a]pyrene	1.201	1.119	6.8	79	-0.02
87	t	Perylene	1.189	1.070	10.0	78	-0.03
88	t	Indeno[1,2,3-cd]pyrene	1.115	0.964	13.5	79	-0.04
89	t	Dibenz[a,h]anthracene	1.152	1.050	8.9	76	-0.04
90	t	Benzo[g,h,i]perylene	1.271	1.041	18.1	72	-0.05
91	A1	17a(H),21B(H)-hopane - C30H	0.481	0.348	27.7	61	-0.05
92	A2	Hopane (T19)	0.481	0.348	27.7	61	-0.05
93	A2	C23 Tricyclic Terpane (T4)	0.481	0.000#	100.0#	0#	-40.87#
94	A2	C24 Tricyclic Terpane (T5)	0.481	0.000#	100.0#	0#	-41.60#
95	A2	C25 Tricyclic Terpane (T6)	0.481	0.000#	100.0#	0#	-43.08#
96	A2	C24 Tetracyclic Terpane (T6	0.481	0.000#	100.0#	0#	-44.41#
97	A2	C26 Tricyclic Terpane-22S (	0.481	0.000#	100.0#	0#	-44.14#
98	A2	C26 Tricyclic Terpane-22R (	0.481	0.000#	100.0#	0#	-44.24#
99	A2	C28 Tricyclic Terpane-22S (	0.481	0.000#	100.0#	0#	-46.53#

NT 1/30/06

Evaluate Continuing Calibration Report

Data Path : O:\FORENSICS\DATA\PAH4\JANUARY\JAN09\
Data File : P43150.D
Acq On : 10 Jan 2006 7:05 am
Operator : AC
Sample : C4010902
Misc : PAH STD
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jan 11 07:29:52 2006
Quant Method : O:\FORENSICS\METHODS\PAH4\DEC05\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Mon Jan 09 09:39:53 2006
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
100	A2	C28 Tricyclic Terpane-22R (	0.481	0.000#	100.0#	0#	-46.69#
101	A2	C29 Tricyclic Terpane-22S (	0.481	0.000#	100.0#	0#	-47.22#
102	A2	C29 Tricyclic Terpane-22R (	0.481	0.000#	100.0#	0#	-47.41#
103	A2	18a-22,29,30-Trisnorneohopa	0.481	0.000#	100.0#	0#	-48.55#
104	A2	C30 Tricyclic Terpane-22S	0.481	0.000#	100.0#	0#	-48.65#
105	A2	C30 Tricyclic Terpane-22R	0.481	0.000#	100.0#	0#	-48.89#
106	A2	17a(H)-22,29,30-Trisnorhopa	0.481	0.000#	100.0#	0#	-49.11#
107	A2	17a/b,21b/a 28,30-Bisnorhop	0.481	0.000#	100.0#	0#	-50.33#
108	A2	17a(H),21b(H)-25-Norhopane	0.481	0.000#	100.0#	0#	-50.11#
109	A2	30-Norhopane (T15)	0.481	0.000#	100.0#	0#	-51.00#
110	A2	18a(H)-30-Norneohopane-C29T	0.481	0.000#	100.0#	0#	-51.10#
111	A2	17a(H)-Diahopane (X)	0.481	0.000#	100.0#	0#	-51.22#
112	A2	30-Normoretane (T17)	0.481	0.000#	100.0#	0#	-51.79#
113	A2	18a(H)&18b(H)-Oleananes (T1	0.481	0.000#	100.0#	0#	-52.19#
114	A2	Moretane (T20)	0.481	0.000#	100.0#	0#	-53.10#
115	A2	30-Homohopane-22S (T21)	0.481	0.000#	100.0#	0#	-54.22#
116	A2	30-Homohopane-22R (T22)	0.481	0.000#	100.0#	0#	-54.45#
117	A2	30,31-Bishomohopane-22S (T2	0.481	0.000#	100.0#	0#	-55.80#
118	A2	30,31-Bishomohopane-22R (T2	0.481	0.000#	100.0#	0#	-56.20#
119	A2	30,31-Trishomohopane-22S (T	0.481	0.000#	100.0#	0#	-57.99#
120	A2	30,31-Trishomohopane-22R (T	0.481	0.000#	100.0#	0#	-58.63#
121	A2	Tetrakishomohopane-22S (T32	0.481	0.000#	100.0#	0#	-60.70#
122	A2	Tetrakishomohopane-22R (T33	0.481	0.000#	100.0#	0#	-61.61#
123	A2	Pentakishomohopane-22S (T34	0.481	0.000#	100.0#	0#	-63.91#
124	A2	Pentakishomohopane-22R (T35	0.481	0.000#	100.0#	0#	-65.25#
125	SA1	5B(H)Cholane - Surr	0.226	0.222	1.8	88	-0.03
126	A2	13b(H),17a(H)-20S-Diacholes	0.226	0.000#	100.0#	0#	-45.36#
127	A2	13b(H),17a(H)-20R-Diacholes	0.226	0.000#	100.0#	0#	-45.78#
128	A2	13b,17a-20S-Methyldiacholes	0.226	0.000#	100.0#	0#	-46.49#
129	A2	14a(H),17a(H)-20S-Cholestan	0.226	0.000#	100.0#	0#	-47.35#
130	A2	14a(H),17a(H)-20R-Cholestan	0.226	0.000#	100.0#	0#	-47.88#
131	A2	13b,17a-20R-Ethyldiacholest	0.226	0.000#	100.0#	0#	-48.16#
132	A2	13a,17b-20S-Ethyldiacholest	0.226	0.000#	100.0#	0#	-48.43#
133	A2	14a,17a-20S-Methylcholestan	0.226	0.000#	100.0#	0#	-48.58#
134	A2	14a,17a-20R-Methylcholestan	0.226	0.000#	100.0#	0#	-49.31#
135	A2	14a(H),17a(H)-20S-Ethylchol	0.226	0.000#	100.0#	0#	-49.66#
136	A2	14a(H),17a(H)-20R-Ethylchol	0.226	0.000#	100.0#	0#	-50.60#
137	A2	14b(H),17b(H)-20R-Cholestan	0.226	0.000#	100.0#	0#	-47.44#
138	A2	14b(H),17b(H)-20S-Cholestan	0.226	0.000#	100.0#	0#	-47.53#
139	A2	14b,17b-20R-Methylcholestan	0.226	0.000#	100.0#	0#	-48.76#
140	A2	14b,17b-20S-Methylcholestan	0.226	0.000#	100.0#	0#	-48.85#
141	A2	14b(H),17b(H)-20R-Ethylchol	0.226	0.000#	100.0#	0#	-49.92#
142	A2	14b(H),17b(H)-20S-Ethylchol	0.226	0.000#	100.0#	0#	-49.97#

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

Evaluate Continuing Calibration Report

Data Path : O:\FORENSICS\DATA\PAH4\JANUARY\JAN09\
Data File : P43168.D
Acq On : 10 Jan 2006 8:45 pm
Operator : AC
Sample : C4010903
Misc : PAH STD
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jan 11 07:25:24 2006
Quant Method : O:\FORENSICS\METHODS\PAH4\DEC05\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Mon Jan 09 09:39:53 2006
Response via : Initial Calibration

MS 1/11/06

Min. RRF : 0.050 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	i	Acenaphthene-d10	1.000	1.000	0.0	86	-0.03
2	t	Decalin	0.446	0.386	13.5	82	-0.02
3	A1	trans-Decalin	0.494	0.436	11.7	82	-0.02
4	t	cis-Decalin	0.382	0.337	11.8	82	-0.03
5	A2	C1-Decalins	0.494	0.000#	100.0#	0#	-18.35#
6	A2	C2-Decalins	0.494	0.000#	100.0#	0#	-19.68#
7	A2	C3-Decalins	0.494	0.000#	100.0#	0#	-22.15#
8	A2	C4-Decalins	0.494	0.000#	100.0#	0#	-25.55#
9	A1	Naphthalene	1.942	2.021	-4.1	88	-0.02
10	A2	C1-Naphthalenes	1.942	0.000#	100.0#	0#	-22.54#
11	A2	C2-Naphthalenes	1.942	0.000#	100.0#	0#	-25.38#
12	A2	C3-Naphthalenes	1.942	0.000#	100.0#	0#	-27.72#
13	A2	C4-Naphthalenes	1.942	0.000#	100.0#	0#	-30.49#
14	s	2-Methylnaphthalene-d10	0.949	1.052	-10.9	89	-0.02
15	t	2-Methylnaphthalene	1.237	1.365	-10.3	90	-0.02
16	t	1-Methylnaphthalene	1.246	1.284	-3.0	88	-0.02
17	A1	Benzothiophene	1.653	1.685	-1.9	87	-0.02
18	A2	C1-Benzo(b)thiophenes	1.653	0.000#	100.0#	0#	-22.10#
19	A2	C2-Benzo(b)thiophenes	1.653	0.000#	100.0#	0#	-25.58#
20	A2	C3-Benzo(b)thiophenes	1.653	0.000#	100.0#	0#	-27.56#
21	A2	C4-Benzo(b)thiophenes	1.653	0.000#	100.0#	0#	-29.30#
22	t	Biphenyl	1.482	1.653	-11.5	89	-0.02
23	t	2,6-Dimethylnaphthalene	1.073	1.170	-9.0	91	-0.02
24	t	Dibenzofuran	1.734	1.807	-4.2	85	-0.03
25	t	Acenaphthylene	2.173	2.063	5.1	88	-0.02
26	t	Acenaphthene	1.331	1.274	4.3	85	-0.03
27	t	2,3,5-Trimethylnaphthalene	1.098	1.073	2.3	86	-0.02
28	A1	Fluorene	1.426	1.409	1.2	85	-0.02
29	A2	C1-Fluorenes	1.426	0.000#	100.0#	0#	-31.25#
30	A2	C2-Fluorenes	1.426	0.000#	100.0#	0#	-33.45#
31	A2	C3-Fluorenes	1.426	0.000#	100.0#	0#	-35.29#
32	A1	Dibenzothiophene	2.114	1.939	8.3	80	-0.02
33	A2	4-Methyldibenzothiophene(4M	2.114	0.000#	100.0#	0#	-33.98#
34	A2	2/3-Methyldibenzothiophene(	2.114	0.000#	100.0#	0#	-34.33#
35	A2	1-Methyldibenzothiophene(1M	2.114	0.000#	100.0#	0#	-34.75#
36	A2	OTP	2.114	0.000#	100.0#	0#	-34.42#
37	A2	C1-Dibenzothiophenes	2.114	0.000#	100.0#	0#	-33.98#
38	A2	C2-Dibenzothiophenes	2.114	0.000#	100.0#	0#	-35.67#
39	A2	C3-Dibenzothiophenes	2.114	0.000#	100.0#	0#	-37.48#
40	A2	C4-Dibenzothiophenes	2.114	0.000#	100.0#	0#	-38.37#
41	A1	Phenanthrene	2.378	1.988	16.4	78	-0.03
42	A2	3-Methylphenanthrene(3MP)	2.378	0.000#	100.0#	0#	-34.67#
43	A2	2/4-Methylphenanthrene(2MP)	2.378	0.000#	100.0#	0#	-34.78#
44	A2	2-Methylanthracene(2MA)	2.378	0.000#	100.0#	0#	-34.94#
45	A2	9-Methylphenanthrene(9MP)	2.378	0.000#	100.0#	0#	-35.12#
46	A2	1-Methylphenanthrene(1MP)	2.378	0.000#	100.0#	0#	-35.21#
47	A2	C1-Phenanthrenes/Anthracene	2.378	0.000#	100.0#	0#	-35.12#
48	A2	C2-Phenanthrenes/Anthracene	2.378	0.000#	100.0#	0#	-36.95#
49	A2	5AA IS BKGD	2.378	0.000#	100.0#	0#	-36.72#
50	A2	C3-Phenanthrenes/Anthracene	2.378	0.000#	100.0#	0#	-38.78#

Evaluate Continuing Calibration Report

Data Path : O:\FORENSICS\DATA\PAH4\JANUARY\JAN09\
Data File : P43168.D
Acq On : 10 Jan 2006 8:45 pm
Operator : AC
Sample : C4010903
Misc : PAH STD
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jan 11 07:25:24 2006
Quant Method : O:\FORENSICS\METHODS\PAH4\DEC05\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Mon Jan 09 09:39:53 2006
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
51	A2	C4-Phenanthrenes/Anthracene	2.378	0.000#	100.0#	0#	-40.97#
52	t	Retene	0.610	0.582	4.6	88	-0.03
53	t	Anthracene	2.172	1.983	8.7	83	-0.03
54	t	Carbazole	1.721	1.790	-4.0	88	-0.02
55	t	1-Methylphenanthrene	1.570	1.462	6.9	84	-0.03
56	A1	Fluoranthene	2.452	2.281	7.0	84	-0.03
57	t	Benzo(b)fluorene	1.436	1.437	-0.1	89	-0.03
58	s	Pyrene-d10	2.358	2.281	3.3	85	-0.03
59	A1	Pyrene	2.543	2.347	7.7	82	-0.03
60	A2	C1-Fluoranthenes/Pyrenes	2.543	0.000#	100.0#	0#	-39.76#
61	A2	C2-Fluoranthenes/Pyrenes	2.543	0.000#	100.0#	0#	-41.57#
62	A2	C3-Fluoranthenes/Pyrenes	2.543	0.000#	100.0#	0#	-43.58#
63	A2	C4-Fluoranthenes/Pyrenes	2.543	0.000#	100.0#	0#	-44.94#
64	A1	Naphthobenzothiophene	2.312	2.168	6.2	85	-0.03
65	A2	Naphthobenzothiophene-2,1-D	2.312	2.168	6.2	85	-0.03
66	A2	Naphthobenzothiophene-1,2-D	2.312	0.000#	100.0#	0#	-42.56#
67	A2	Naphthobenzothiophene-2,3-D	2.312	0.000#	100.0#	0#	-42.86#
68	A2	C1-Naphthobenzothiophenes	2.312	0.000#	100.0#	0#	-43.62#
69	A2	C2-Naphthobenzothiophenes	2.312	0.000#	100.0#	0#	-45.63#
70	A2	C3-Naphthobenzothiophenes	2.312	0.000#	100.0#	0#	-47.22#
71	A2	C4-Naphthobenzothiophenes	2.312	0.000#	100.0#	0#	-48.32#
72	i	Chrysene-d12	1.000	1.000	0.0	83	-0.03
73	t	Benz[a]anthracene	1.189	1.217	-2.4	88	-0.03
74	A1	Chrysene	1.207	1.182	2.1	81	-0.03
75	A2	Chrysene/Triphenylene	1.207	1.182	2.1	81	-0.03
76	A2	C1-Chrysenes	1.207	0.000#	100.0#	0#	-44.79#
77	A2	C2-Chrysenes	1.207	0.000#	100.0#	0#	-46.87#
78	A2	BBF-d12 Surr BKGD	1.207	0.000#	100.0#	0#	-47.12#
79	A2	C3-Chrysenes	1.207	0.000#	100.0#	0#	-49.59#
80	A2	C4-Chrysenes	1.207	0.000#	100.0#	0#	-49.19#
81	s	Benzo[b]fluoranthene-d12	1.047	0.988	5.6	78	-0.02
82	t	Benzo[b]fluoranthene	1.236	1.211	2.0	80	-0.02
83	A1	Benzo[k]fluoranthene	1.394	1.251	10.3	76	-0.02
84	A2	Benzo[a]fluoranthene	1.394	0.000#	100.0#	0#	-47.56#
85	t	Benzo[e]pyrene	1.246	1.123	9.9	76	-0.03
86	t	Benzo[a]pyrene	1.201	1.123	6.5	76	-0.02
87	t	Perylene	1.189	1.071	9.9	75	-0.03
88	t	Indeno[1,2,3-cd]pyrene	1.115	0.972	12.8	77	-0.04
89	t	Dibenz[a,h]anthracene	1.152	1.056	8.3	74	-0.04
90	t	Benzo[g,h,i]perylene	1.271	1.058	16.8	71	-0.05
91	A1	17a(H),21B(H)-hopane - C30H	0.481	0.354	26.4	60	-0.05 NT
92	A2	Hopane (T19)	0.481	0.354	26.4	60	-0.05
93	A2	C23 Tricyclic Terpane (T4)	0.481	0.000#	100.0#	0#	-40.87#
94	A2	C24 Tricyclic Terpane (T5)	0.481	0.000#	100.0#	0#	-41.60#
95	A2	C25 Tricyclic Terpane (T6)	0.481	0.000#	100.0#	0#	-43.08#
96	A2	C24 Tetracyclic Terpane (T6	0.481	0.000#	100.0#	0#	-44.41#
97	A2	C26 Tricyclic Terpane-22S (	0.481	0.000#	100.0#	0#	-44.14#
98	A2	C26 Tricyclic Terpane-22R (	0.481	0.000#	100.0#	0#	-44.24#
99	A2	C28 Tricyclic Terpane-22S (	0.481	0.000#	100.0#	0#	-46.53#

Evaluate Continuing Calibration Report

Data Path : O:\FORENSICS\DATA\PAH4\JANUARY\JAN09\
Data File : P43168.D
Acq On : 10 Jan 2006 8:45 pm
Operator : AC
Sample : C4010903
Misc : PAH STD
ALS Vial : 23 Sample Multiplier: 1

Quant Time: Jan 11 07:25:24 2006
Quant Method : O:\FORENSICS\METHODS\PAH4\DEC05\PAH41217.M
Quant Title : Decalins & Alkylated PAH's
QLast Update : Mon Jan 09 09:39:53 2006
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 10% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
100	A2	C28 Tricyclic Terpane-22R (	0.481	0.000#	100.0#	0#	-46.69#
101	A2	C29 Tricyclic Terpane-22S (	0.481	0.000#	100.0#	0#	-47.22#
102	A2	C29 Tricyclic Terpane-22R (	0.481	0.000#	100.0#	0#	-47.41#
103	A2	18a-22,29,30-Trisnorneohopa	0.481	0.000#	100.0#	0#	-48.55#
104	A2	C30 Tricyclic Terpane-22S	0.481	0.000#	100.0#	0#	-48.65#
105	A2	C30 Tricyclic Terpane-22R	0.481	0.000#	100.0#	0#	-48.89#
106	A2	17a(H)-22,29,30-Trisnorhopa	0.481	0.000#	100.0#	0#	-49.11#
107	A2	17a/b,21b/a 28,30-Bisnorhop	0.481	0.000#	100.0#	0#	-50.33#
108	A2	17a(H),21b(H)-25-Norhopane	0.481	0.000#	100.0#	0#	-50.11#
109	A2	30-Norhopane (T15)	0.481	0.000#	100.0#	0#	-51.00#
110	A2	18a(H)-30-Norneohopane-C29T	0.481	0.000#	100.0#	0#	-51.10#
111	A2	17a(H)-Diahopane (X)	0.481	0.000#	100.0#	0#	-51.22#
112	A2	30-Normoretane (T17)	0.481	0.000#	100.0#	0#	-51.79#
113	A2	18a(H)&18b(H)-Oleananes (T1	0.481	0.000#	100.0#	0#	-52.19#
114	A2	Moretane (T20)	0.481	0.000#	100.0#	0#	-53.10#
115	A2	30-Homohopane-22S (T21)	0.481	0.000#	100.0#	0#	-54.22#
116	A2	30-Homohopane-22R (T22)	0.481	0.000#	100.0#	0#	-54.45#
117	A2	30,31-Bishomohopane-22S (T2	0.481	0.000#	100.0#	0#	-55.80#
118	A2	30,31-Bishomohopane-22R (T2	0.481	0.000#	100.0#	0#	-56.20#
119	A2	30,31-Trishomohopane-22S (T	0.481	0.000#	100.0#	0#	-57.99#
120	A2	30,31-Trishomohopane-22R (T	0.481	0.000#	100.0#	0#	-58.63#
121	A2	Tetrakishomohopane-22S (T32	0.481	0.000#	100.0#	0#	-60.70#
122	A2	Tetrakishomohopane-22R (T33	0.481	0.000#	100.0#	0#	-61.61#
123	A2	Pentakishomohopane-22S (T34	0.481	0.000#	100.0#	0#	-63.91#
124	A2	Pentakishomohopane-22R (T35	0.481	0.000#	100.0#	0#	-65.25#
125	SA1	5B(H)Cholane - Surr	0.226	0.225	0.4	86	-0.03
126	A2	13b(H),17a(H)-20S-Diacholes	0.226	0.000#	100.0#	0#	-45.36#
127	A2	13b(H),17a(H)-20R-Diacholes	0.226	0.000#	100.0#	0#	-45.78#
128	A2	13b,17a-20S-Methyldiacholes	0.226	0.000#	100.0#	0#	-46.49#
129	A2	14a(H),17a(H)-20S-Cholestan	0.226	0.000#	100.0#	0#	-47.35#
130	A2	14a(H),17a(H)-20R-Cholestan	0.226	0.000#	100.0#	0#	-47.88#
131	A2	13b,17a-20R-Ethyldiacholest	0.226	0.000#	100.0#	0#	-48.16#
132	A2	13a,17b-20S-Ethyldiacholest	0.226	0.000#	100.0#	0#	-48.43#
133	A2	14a,17a-20S-Methylcholestan	0.226	0.000#	100.0#	0#	-48.58#
134	A2	14a,17a-20R-Methylcholestan	0.226	0.000#	100.0#	0#	-49.31#
135	A2	14a(H),17a(H)-20S-Ethylchol	0.226	0.000#	100.0#	0#	-49.66#
136	A2	14a(H),17a(H)-20R-Ethylchol	0.226	0.000#	100.0#	0#	-50.60#
137	A2	14b(H),17b(H)-20R-Cholestan	0.226	0.000#	100.0#	0#	-47.44#
138	A2	14b(H),17b(H)-20S-Cholestan	0.226	0.000#	100.0#	0#	-47.53#
139	A2	14b,17b-20R-Methylcholestan	0.226	0.000#	100.0#	0#	-48.76#
140	A2	14b,17b-20S-Methylcholestan	0.226	0.000#	100.0#	0#	-48.85#
141	A2	14b(H),17b(H)-20R-Ethylchol	0.226	0.000#	100.0#	0#	-49.92#
142	A2	14b(H),17b(H)-20S-Ethylchol	0.226	0.000#	100.0#	0#	-49.97#

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

Form VIII
Internal Standard Summary
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Case: N/A SDG: N/A

Lab Code: MA00030
ETR: 0512097
Lab ID: C4010901

		Chrysene-d12		Acenaphthene-d10	
		Area	RT	Area	RT
Standard:		91134	43.18	50074	26.71
Upper Limit:		182268	43.68	100148	27.21
Lower Limit:		45567	42.68	25037	26.21
Client ID	**Lab ID**				
Blank	SS122105B06	93893	43.18	55418	26.70
LCS	SS122105LCS04	90052	43.18	54638	26.70
LCSD	SS122105LCSD04	91132	43.18	55221	26.70
MA9-SSRR-A-0-3	0512097-01	65822	43.18	53453	26.70
MA9-SSRR-A-3-6	0512097-02	68652	43.18	55765	26.70
MA9-SSRR-A-6-9	0512097-03	67160	43.18	53790	26.70
MA9-SSRR-A-9-12	0512097-04	65889	43.18	52802	26.70
MA9-SSRR-A-9-12	0512097-04 D	68382	43.18	54659	26.70
CCV	C4010902	92836	43.17	51735	26.70

N/A - Not Applicable

Area Upper Limit = +100% of internal standard.
Area Lower Limit = -50% of internal standard.
RT = Retention Time.
RT Upper Limit = +0.5 minutes of internal standard RT.
RT Lower Limit = -0.5 minutes of internal standard RT.

375 Paramount Drive, Suite 2, Raynham, Massachusetts 02767, (508) 822-9300, Fax (508) 822-3288

Form VIII
Internal Standard Summary
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Case: N/A SDG: N/A

Lab Code: MA00030
ETR: 0512097
Lab ID: C4010901

		Chrysene-d12		Acenaphthene-d10	
		Area	RT	Area	RT
Standard:		91134	43.18	50074	26.71
Upper Limit:		182268	43.68	100148	27.21
Lower Limit:		45567	42.68	25037	26.21
Client ID	Lab ID				
Blank	SSI22105B06	93893	43.18	55418	26.70
LCS	SSI22105LCS04	90052	43.18	54638	26.70
LCSD	SSI22105LCSD04	91132	43.18	55221	26.70
MA9-SSRR-A-0-3	0512097-01	65822	43.18	53453	26.70
MA9-SSRR-A-3-6	0512097-02	68652	43.18	55765	26.70
MA9-SSRR-A-6-9	0512097-03	67160	43.18	53790	26.70
MA9-SSRR-A-9-12	0512097-04	65889	43.18	52802	26.70
MA9-SSRR-A-9-12	0512097-04 D	68382	43.18	54659	26.70
CCV	C4010902	92836	43.17	51735	26.70

N/A - Not Applicable

Area Upper Limit = +100% of internal standard.
Area Lower Limit = -50% of internal standard.
RT = Retention Time.
RT Upper Limit = +0.5 minutes of internal standard RT.
RT Lower Limit = -0.5 minutes of internal standard RT.

375 Paramount Drive, Suite 2, Raynham, Massachusetts 02767, (508) 822-9300, Fax (508) 822-3288

Form VIII
Internal Standard Summary
Alkylated Polynuclear Aromatic Hydrocarbons

ALPHA WOODS HOLE LABS

Client: NewFields Environmental Forensics Practice
Project: Kerr McGee - Milwaukee
Case: N/A SDG: N/A

Lab Code: MA00030
ETR: 0512097
Lab ID: C4010902

		Chrysene-d12		Acenaphthene-d10	
		Area	RT	Area	RT
Standard:		92836	43.17	51735	26.70
Upper Limit:		185672	43.67	103470	27.20
Lower Limit:		46418	42.67	25868	26.20
Client ID	Lab ID				
MA9-SSRR-A-12-15	0512097-05	70596	43.18	55681	26.70
MA9-SSRR-718+00	0512097-11	64101	43.19	47148	26.71
MA9-SSRR-718+00	0512097-11E	81784	43.17	55162	26.70
MA9-SSRR-717+60	0512097-12	69525	43.21	49915	26.71
MA9-SSRR-717+60	0512097-12E	83012	43.17	57272	26.70
MA9-SSRR-A-0-3/MA9-SSRR-A-3	0512097-13	73941	43.18	60836	26.70
MA9-SSRR-A-6-9/MA9-SSRR-A-4	0512097-14	76712	43.18	59534	26.70
CCV	C4010903	89541	43.17	50011	26.70

N/A - Not Applicable

Area Upper Limit = +100% of internal standard.
Area Lower Limit = -50% of internal standard.
RT = Retention Time.
RT Upper Limit = +0.5 minutes of internal standard RT.
RT Lower Limit = -0.5 minutes of internal standard RT.

375 Paramount Drive, Suite 2, Raynham, Massachusetts 02767, (508) 822-9300, Fax (508) 822-3288

Alpha Woods Hole Lab
Batch Prep Report
12/21/2005 0512097ST - OP NEWFIE

Lab ID	QC Type	Prep Method	Analyst	Prep Start Date	Prep Completed	TCLP Date	Initial Amount	Final Volume	Solvent Ex	Conc. Analyst	Conc. Date	Conc. Method	Transfer Volume	Vialed By	Vialed Date	Cell Number
0512097-01	SAM	Shaker	KLA	12/21/05	12/28/05		10.3	2.5	False	KLA	12/23/05	KD Flask	0.15	DMP	12/28/05	
0512097-02	SAM	Shaker	KLA	12/21/05	12/28/05		20.24	5	False	KLA	12/23/05	KD Flask	0.15	DMP	12/28/05	
0512097-03	SAM	Shaker	KLA	12/21/05	12/28/05		20.77	2	False	KLA	12/23/05	KD Flask	0.15	DMP	12/28/05	
0512097-04	D	Shaker	KLA	12/21/05	12/28/05		10.35	2	False	KLA	12/23/05	KD Flask	0.15	DMP	12/28/05	
0512097-04	SAM	Shaker	KLA	12/21/05	12/28/05		10.67	2	False	KLA	12/23/05	KD Flask	0.15	DMP	12/28/05	
0512097-05	SAM	Shaker	KLA	12/21/05	12/28/05		20.78	2	False	KLA	12/23/05	KD Flask	0.15	DMP	12/28/05	
0512097-11	SAM	Shaker	KLA	12/21/05	12/28/05		5.18	8.33	False	KLA	12/23/05	KD Flask	0.15	DMP	12/28/05	
0512097-12	SAM	Shaker	KLA	12/21/05	12/28/05		5.02	14.29	False	KLA	12/23/05	KD Flask	0.15	DMP	12/28/05	
0512097-13	SAM	Shaker	KLA	12/21/05	12/28/05		10.54	2.78	False	KLA	12/23/05	KD Flask	0.15	DMP	12/28/05	
0512097-14	SAM	Shaker	KLA	12/21/05	12/28/05		5.65	2	False	KLA	12/23/05	KD Flask	0.15	DMP	12/28/05	
SS122105B06	B	Shaker	KLA	12/21/05	12/28/05		30	2	False	KLA	12/23/05	KD Flask	0.15	DMP	12/28/05	
SS122105LCS04	LCS	Shaker	KLA	12/21/05	12/28/05		30	2	False	KLA	12/23/05	KD Flask	0.15	DMP	12/28/05	
SS122105LCSD04	LCSD	Shaker	KLA	12/21/05	12/28/05		30	2	False	KLA	12/23/05	KD Flask	0.15	DMP	12/28/05	

Alpha Woods Hole Lab
Batch Prep Report
12/21/2005 0512097ST - OP NEWFIE

Lab ID	Notes
0512097-01	1st Prep
0512097-02	1st Prep
0512097-03	1st Prep
0512097-04	1st Prep
0512097-04	1st Prep
0512097-05	1st Prep
0512097-11	1st Prep
0512097-12	1st Prep
0512097-13	1st Prep
0512097-14	1st Prep
SS122105B06	1st Prep
SS122105LCS04	1st Prep
SS122105LCSD04	1st Prep

Alpha Woods Hole Lab
Batch Weight Report
12/21/2005

Lab ID	QC Type	0512097ST - Sample
0512097-01	SAM	10.3
0512097-02	SAM	20.24
0512097-03	SAM	20.77
0512097-04	D	10.35
0512097-04	SAM	10.67
0512097-05	SAM	20.78
0512097-11	SAM	5.18
0512097-12	SAM	5.02
0512097-13	SAM	10.54
0512097-14	SAM	5.65
SS122105B06	B	30
SS122105LCS04LCS	OP NEWFIE	30
SS122105LCS04LCS	OP SHC	30
SS122105LCSD04LCSD	NEWFIE	30
SS122105LCSD04LCSD	SHC	30

METHYLENE CHLORIDE: B44E66(tank) B32E08(bottle)
HEXANE: B45E60(tank) B36E18(bottle)
ACETONE: B27E38 COPPER: A49597
SULFURIC ACID: 3104070 ALUMINA: 183
GLASS WOOL: +H1084303302$ PENTANE: B11E31
SODIUM SULFATE: B26593 SILICA(923): 0617MC

Alpha Woods Hole Lab
Batch Prep Spike Report

12/21/2005 0512097ST - OP NEWFIE Analyst: DMP Witness: NLJr

Lab ID	QC Type	OP NEWFIE - surr	Vol OP NEWFIE - surr	Units OP NEWFIE - surr	OP NEWFIE - spk 1	Vol OP NEWFIE - spk 1	Units OP NEWFIE - spk 1	OP NEWFIE - spk 2	Vol OP NEWFIE - spk 2	Units OP NEWFIE - spk 2
0512097-01	SAM	WHAB63	100	µl						
0512097-02	SAM	WHAB63	100	µl						
0512097-03	SAM	WHAB63	100	µl						
0512097-04	D	WHAB63	100	µl						
0512097-04	SAM	WHAB63	100	µl						
0512097-05	SAM	WHAB63	100	µl						
0512097-11	SAM	WHAC11	200	µl						
0512097-12	SAM	WHAC11	200	µl						
0512097-13	SAM	WHAB63	100	µl						
0512097-14	SAM	WHAB63	100	µl						
SS122105B06	B	WHAB63	100	µl						
SS122105LCS04	LCS	WHAB63	100	µl	WHAB85	100	µl			
SS122105LCSD04	LCSD	WHAB63	100	µl	WHAB85	100	µl			
TS010906AWS01	AWS	-99	-99	-99	-99	-99	-99	-99	-99	-99

Test: PAH/SHC

Standard Type: Surrogate / LCS / MS-MSD

LFB / Other _____

ID# WHAB63

Conc. 10ug/ml 500ug/ml

Test: ALK-PAH/SHC (High)

Standard Type: Surrogate / LCS / MS-MSD

LFB / Other _____

ID# WHAC11

Conc. 100ug/ml / 5000ug/ml

Test: ALK-PAH/SHC

Standard Type: Surrogate / LCS / MS-MSD

LFB / Other _____

ID# WHAB85

Conc. 10ug/ml / 500ug/ml

Gravimetric Determination for Column

Analyst: RPR
Date: 12/27/2005

BATCH: 0512097ST

Entered by: RPR
Verified by: RPR

		LCS	10000	50	NA	0.230	NA	46.00	NA	NA	NA	92%
0512097	01		5000	50	NA	0.135	NA	13.50	2000	5.40	2.50	
0512097	02		5000	50	NA	0.204	NA	20.40	1000	4.08	5.00	
0512097	03		5000	50	NA	0.096	NA	9.60	1250	2.40	4.00	
0512097	04	D	5000	50	NA	0.032	NA	3.20	2500	1.60	2.00	17%
0512097	04		5000	50	NA	0.027	NA	2.70	2500	1.35	2.00	
0512097	05		5000	50	NA	0.041	NA	4.10	1250	1.03	4.00	
0512097	11		5000	50	NA	0.374	NA	37.40	600	4.49	8.33	
0512097	12		5000	50	NA	0.659	NA	65.90	350	4.61	14.29	
0512097	13		5000	50	NA	0.154	NA	15.40	1800	5.54	2.78	
0512097	14		5000	50	NA	0.057	NA	5.70	2500	2.85	2.00	

Total Extract Oil Weight (mg) = (Final Volume of Extract / Aliquot Removed) * Aliquot Weight
Sample Weight (mg/mL) = 20 * Aliquot Weight (mg)
LCS TV = 5 mg/mL

Oil to Column = Total Extract Oil Weight (mg) / Dilution Factor
Dilution Factor = Final Volumne of Extract (ul) / Volume Removed For Column (ul)

TEMPLATE: GravimetricT.XLT
Duplicates should agree within +/- 10%.

Gravimetric Determination for Column

Analyst: RPR
Date: 12/27/05

BATCH: 0512097ST

Entered by: RPR
Verified by:

		LCS	10000	50	NA	0.230	NA						0%
0512097	01		5000	50		0.135							
0512097	02		5000	50		0.204							
0512097	03		5000	50		0.096							
0512097	04	D	5000	50		0.032							#VALUE!
0512097	04		5000	50		0.027							
0512097	05		5000	50		0.041							
0512097	11		5000	50		0.374							
0512097	12		5000	50		0.659							
0512097	13		5000	50		0.154							
0512097	14		5000	50	↓	0.057	↓						

Total Extract Oil Weight (mg) = (Final Volume of Extract / Aliquot Removed) * Aliquot Weight
Sample Weight (mg/mL) = 20 * Aliquot Weight (mg)
LCS TV = 5 mg/mL

Oil to Column = Total Extract Oil Weight (mg) / Dilution Factor
Dilution Factor = Final Volumne of Extract (ul) / Volume Removed For Column (ul)

TEMPLATE: GravimetricT.XLT
Duplicates should agree within +/- 10%.

Alpha Woods Hole Lab
Batch Clean Up Report
12/21/2005 0512097ST - OP NEWFIE

Lab ID	QC Type	Clean Up Method	Analyst	Clean Up Date	Flow Rate	Coll. Start	Coll. End	Concentration Analyst	Conc. Date	Solvent Ex.	Prefraction Volume	Fractionation Amount	Fractionation Factor	Transfer Volume
0512097-01	SAM	3610	DMP	1/6/2006				DMP	1/6/2006	False	5	2	0	0.15
0512097-02	SAM	3610	DMP	1/6/2006				DMP	1/6/2006	False	5	1	0	0.15
0512097-03	SAM	3610	DMP	1/6/2006				DMP	1/6/2006	False	5	1.25	0	0.15
0512097-04	D	3610	DMP	1/6/2006				DMP	1/6/2006	False	5	2.5	0	0.15
0512097-04	SAM	3610	DMP	1/6/2006				DMP	1/6/2006	False	5	2.5	0	0.15
0512097-05	SAM	3610	DMP	1/6/2006				DMP	1/6/2006	False	5	1.25	0	0.15
0512097-11	SAM	3610	DMP	1/6/2006				DMP	1/6/2006	False	5	0.6	0	0.15
0512097-12	SAM	3610	DMP	1/6/2006				DMP	1/6/2006	False	5	0.35	0	0.15
0512097-13	SAM	3610	DMP	1/6/2006				DMP	1/6/2006	False	5	1.8	0	0.15
0512097-14	SAM	3610	DMP	1/6/2006				DMP	1/6/2006	False	5	2.5	0	0.15
SS122105B06	B	3610	DMP	1/6/2006				DMP	1/6/2006	False	2	0.5	0	0.15
SS122105LCS04	LCS	3610	DMP	1/6/2006				DMP	1/6/2006	False	2	0.5	0	0.15
SS122105LCSD04	LCSD	3610	DMP	1/6/2006				DMP	1/6/2006	False	2	0.5	0	0.15

Alpha Woods Hole Lab
Batch Clean Up Report
12/21/2005 0512097ST - OP NEWFIE

Lab ID	Notes
0512097-01	
0512097-02	
0512097-03	
0512097-04	
0512097-04	
0512097-05	
0512097-11	
0512097-12	
0512097-13	
0512097-14	
SS122105B06	
SS122105LCS04	
SS122105LCSD04	

Alpha Woods Hole Labs Internal Std Tracking Form

Project Name:KERR-MCGEE-MILWUAKEE
ETR: 0512097

0512097-01	900	WHAB38#5	100	1000	2.5	DMP	150	150	1/6/06
0512097-02	900	WHAB38#5	100	1000	5	DMP	150	150	1/6/06
0512097-03	450	WHAB38#5	50	500	2	DMP	150	150	1/6/06
0512097-04D	900	WHAB38#5	100	1000	2	DMP	150	150	1/6/06
0512097-04	900	WHAB38#5	100	1000	2	DMP	150	150	1/6/06
0512097-05	450	WHAB38#5	50	500	2	DMP	150	150	1/6/06
0512097-11	900	WHAB38#5	100	1000	8.33	DMP	150	150	1/6/06
0512097-12	900	WHAB38#5	100	1000	14.29	DMP	150	150	1/6/06
0512097-13	900	WHAB38#5	100	1000	2.78	DMP	150	150	1/6/06
0512097-14	900	WHAB38#5	100	1000	2	DMP	150	150	1/6/06
SS122105B06	450	WHAB38#5	50	500	2	DMP	150	150	1/6/06
SS122105LCS04	450	WHAB38#5	50	500	2	DMP	150	150	1/6/06
SS122105LCSD04	450	WHAB38#5	50	500	2	DMP	150	150	1/6/06

* Includes Internal Std

Alpha Woods Hole Lab
Batch Weight Report
12/22/2005

Lab ID	QC Type	PS122205B - Pan Weight	PS122205B - Wet Weight	PS122205B - Dry Weight	PS122205B - Dry Weight #2	PS122205B - Dry Weight #3	Percent Solid	RPD
0512097-01	SAM	1	5.51	3.95	3.95		65.41	
0512097-02	D	1	4.8	3.74	3.74		72.11	1.95%
0512097-02	SAM	1.03	5.11	4.03	4.03		73.53	
0512097-03	SAM	1.02	5.19	4.26	4.26		77.7	
0512097-04	SAM	1.01	5.57	4.58	4.58		78.29	
0512097-05	SAM	1.01	5.73	4.77	4.77		79.66	
0512097-11	SAM	1	8.45	5.23	5.23		56.78	
0512097-12	SAM	1	6.72	4.29	4.28		57.34	
0512097-13	SAM	1.02	5.91	4.43	4.43		69.73	
0512097-14	SAM	1.01	5.32	4.37	4.37		77.96	
PSS122205B05	B	1.02	1.02	1.02	1.02		100	

Initial: 12/22/2005 3:36:49 PM KJB
Weight #1: 12/23/2005 9:52:09 AM KJB
Weight #2: 12/23/2005 11:25:18 AM KJB

Forensic Preparation Checklist

ETR: 0512097 Client: Newfie Project: Kerr-McGee - Milwaukee

Workplan Present	N/A

Workplan Reviewed With Project Manager	N/A

Test Requested	
ALK-PAH	X
CHROMATOGRAM	
DENSITY	
HOMOLOG	
Pb	
SHC	X
TPH	
WHOLE OIL	
BIOMARKER	
PHENOL	
OTHER	

Required Cleanup	
No Cleanup Required	
Copper	X
Conc. Sulfuric Acid	
GPC	
Silica Gel 923 Grade Glass Column	
Alumina (Super I) Glass Column	X
Alumina (F20) Glass Column	

Sample Preparation Observations			
~~Normal Weight/Volume Extracted~~ Silhouette ⊗	✓	Lesser Amount Used - Sheen Present On Sample	
Lesser Amount Used - Low Sample Volume Provided ⊗	✓	Lesser Amount Used - Suspected High Target Analytes	
Lesser Amount Used - Strong Hydrocarbon Odor		Sediment At Bottom Of Water Sample Jar	
Project Specific Weight Used		No Observations	

Other: Composites 097-1,-2 → 097-13
097-3,-4 → 097-14
⊗-1
Sheen - 11,12
Wet - 11,12

Extraction Observations		Identify Matrix - Circle One
Emulsions During Shake		(Soil) / Sediment / Water / Sheen / NAPL / Solid / Tissue / Product
Samples Extracted Outside Of Hold Time		
No Observations	X	

Other:

	Date	Initials
1st Extraction	12/27/05	DMP
2nd Extraction	↓	↓
3rd Extraction		

Concentration Notes			
Greater Final Volume - High Viscosity		Greater Final Volume - Inability To Concentrate Further	
Precipitate Formed During Concentration		No Observations	X

Other:

Columns cleaned 1/6/06
CW, 1/20/06

Batch Completed
Analyst: DMP
Date: 12/28/05

Forensic Dilution Sheet

Client Name:	NewFields
Project	Kerr McGee - Milwaukee
ETR # :	0512097
Matrix :	Soil
Analysis Type :	GC/MS

Relinquished By:	NA	Received By:	NA
Date:	NA	Date:	NA

Sample ID	Init. Sample Vol (uL) *Measured*	Init. Sample Vol (uL) *Adjusted*	Aliquot removed from initial Sample Volume	Final Volume for GC Analysis (ul)	Diluted Sample ID	Dilution Spiked With: STD ID/ul AMT	Date/ Initials	Dilution of Conc.	Total Dilution of Amount
0512097-11*	1000	1000	50	1000	0512097-11-RE	WHAB38 95UL	1/6/06 DMP	20	20
0512097-12*	1000	1000	50	1000	0512097-12-RE	WHAB38 95UL	↓	20	20

* Sample dilutions done prior to submitting samples to instrument room for analysis. Sample dilutions calculated from primary run of samples. 1/6/05 RPR

Dilution Calculations Validated by:	RPR 1/6 RAL	Dilutions performed by:	DMP
Date:	~~1/6/2006~~ 1/6/06	Date	1/6/06

Sequence Name: C:\MSDChem\4\sequence\S4121602.S
Comment:
Operator: NLJr
Data Path: C:\MSDCHEM\4\DATA\DECEMBER\DEC16\

Top Pre-Seq Cmd:
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Top Post-Seq Cmd:
Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

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

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

Line					Sample Name/Misc Info
1)	DualTwr				
2)	SepGC1				
3)	RearSamp	51	P42650	FRNC4B	PRIMER-AFID
4)	Sample	1	P42651	FRNC4B	
5)	RearSamp	51	P42652	FRNC4B	C4121601-AFID
6)	Sample	1	P42653	FRNC4B	
7)	RearSamp	52	P42654	FRNC4B	DCM-AFID
8)	Sample	1	P42655	FRNC4B	
9)	RearSamp	53	P42656	FRNC4B	ANS4121601-AFID
10)	Sample	1	P42657	FRNC4B	
11)	RearSamp	54	P42658	FRNC4B	LA4121601-AFID
12)	Sample	1	P42659	FRNC4B	
13)	RearSamp	55	P42660	FRNC4B	SSFSW4121601-AFID
14)	Sample	1	P42661	FRNC4B	
15)	RearSamp	56	P42662	FRNC4B	SSFCO4121601-AFID
16)	Sample	1	P42663	FRNC4B	
17)	RearSamp	57	P42664	FRNC4B	SACO4121601-AFID
18)	Sample	1	P42665	FRNC4B	
19)	RearSamp	58	P42666	FRNC4B	SSFN4121601-AFID
20)	Sample	1	P42667	FRNC4B	
21)	RearSamp	59	P42668	FRNC4B	SSFS4121601-AFID
22)	Sample	1	P42669	FRNC4B	
23)	RearSamp	18	P42670	FRNC4B	AG4121601-AFID
24)	Sample	1	P42671	FRNC4B	DCM
25)	RearSamp	54	P42672	FRNC4B	C4121602-AFID
26)	Sample	2	P42673	FRNC4B	DCM
27)	RearSamp	55	P42674	FRNC4B	DCM-AFID
28)	Sample	3	P42675	FRNC4B	~~*~~I4121701
29)	RearSamp	56	P42676	FRNC4B	
30)	Sample	4	P42677	FRNC4B	~~*~~I4121702
31)	RearSamp	57	P42678	FRNC4B	
32)	Sample	5	P42679	FRNC4B	~~*~~I4121703
33)	RearSamp	58	P42680	FRNC4B	
34)	Sample	6	P42681	FRNC4B	~~*~~I4121704
35)	RearSamp	56	P42682	FRNC4B	
36)	Sample	7	P42683	FRNC4B	~~*~~I4121705
37)	RearSamp	57	P42684	FRNC4B	
38)	Sample	8	P42685	FRNC4B	~~*~~I4121706
39)	RearSamp	58	P42686	FRNC4B	
40)	Sample	9	P42687	FRNC4B	~~*~~I4121707
41)	RearSamp	56	P42688	FRNC4B	
42)	Sample	10	P42689	FRNC4B	DCM
43)	RearSamp	57	P42690	FRNC4B	

~~*~~ICAL PAH41217.M

CMS 12/28/05

Last Modified: Sat Dec 17 11:31:19 2005

Sequence Name: C:\MSDChem\4\sequence\S4121602.S

	Line Type	Vial	DataFile	Method	Sample Name
44)	Sample	11	P42691	FRNC4B	Q4121701
45)	RearSamp	58	P42692	FRNC4B	
46)	Sample	12	P42693	FRNC4B	ANS4121701
47)	RearSamp	56	P42694	FRNC4B	
48)	Sample	13	P42695	FRNC4B	LA4121701
49)	RearSamp	57	P42696	FRNC4B	
50)	Sample	14	P42697	FRNC4B	SFFSW4121701
51)	RearSamp	58	P42698	FRNC4B	
52)	Sample	15	P42699	FRNC4B	SFFCO4121701
53)	RearSamp	56	P42700	FRNC4B	
54)	Sample	16	P42701	FRNC4B	SACO4121701
55)	RearSamp	57	P42702	FRNC4B	
56)	Sample	17	P42703	FRNC4B	SFFN4121701
57)	RearSamp	58	P42704	FRNC4B	
58)	Sample	18	P42705	FRNC4B	AG4121701
59)	RearSamp	56	P42706	FRNC4B	
60)	Sample	19	P42707	FRNC4B	SFFS4121701
61)	RearSamp	57	P42708	FRNC4B	
62)	Sample	20	P42709	FRNC4B	DCM
63)	RearSamp	58	P42710	FRNC4B	
64)	Sample	21	P42711	FRNC4B	C4121701
65)	RearSamp	56	P42712	FRNC4B	

ICAL4121 7

SS010406AWS01

MB 12/28/05

Sequence Name: C:\MSDChem\4\sequence\S4010901.S
Comment:
Operator: AC
Data Path: C:\MSDCHEM\4\DATA\JANUARY06\JAN09\

Top Pre-Seq Cmd:
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Top Post-Seq Cmd:
Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

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

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

1/10/06

Line					Sample Name/Misc Info
1)	Debug				
2)	DualTwr				
3)	SepGC1				
4)	RearSamp	51	P43123	FRNC4B	alk std
5)	Sample	1	P43124	FRNC4B	pah std
6)	RearSamp	52	P43125	FRNC4B	dcm
7)	Sample	2	P43126	FRNC4B	C4010901 PASS
8)	RearSamp	53	P43127	FRNC4B	ANS4010901-AFID
9)	Sample	3	P43128	FRNC4B	ANS4010901
10)	RearSamp	54	P43129	FRNC4B	DCM-AFID
11)	Sample	4	P43130	FRNC4B	DCM
12)	RearSamp	55	P43131	FRNC4B	DCM-AFID ✓
13)	Sample	5	P43132	FRNC4B	DCM
14)	RearSamp	56	P43133	FRNC4B	SS122105B06-AFID
15)	Sample	6	P43134	FRNC4B	SS122105B06 ✓
16)	RearSamp	57	P43135	FRNC4B	SS122105LCS04-AFID
17)	Sample	7	P43136	FRNC4B	SS122105LCS04 ✓
18)	RearSamp	58	P43137	FRNC4B	SS122105LCSD04-AFID
19)	Sample	8	P43138	FRNC4B	SS122105LCSD04 ✓
20)	RearSamp	59	P43139	FRNC4B	0512097-01-AFID
21)	Sample	9	P43140	FRNC4B	0512097-01 ✓
22)	RearSamp	60	P43141	FRNC4B	0512097-02-AFID
23)	Sample	10	P43142	FRNC4B	0512097-02 ✓
24)	RearSamp	61	P43143	FRNC4B	0512097-03-AFID
25)	Sample	11	P43144	FRNC4B	0512097-03 ✓
26)	RearSamp	62	P43145	FRNC4B	0512097-04-AFID
27)	Sample	12	P43146	FRNC4B	0512097-04 ✓
28)	RearSamp	63	P43147	FRNC4B	0512097-04D-AFID
29)	Sample	13	P43148	FRNC4B	0512097-04D ✓
30)	RearSamp	64	P43149	FRNC4B	C4010902-AFID PASS
31)	Sample	14	P43150	FRNC4B	C4010902 PASS
32)	RearSamp	65	P43151	FRNC4B	DCM-AFID
33)	Sample	15	P43152	FRNC4B	DCM
34)	RearSamp	66	P43153	FRNC4B	0512097-05-AFID
35)	Sample	16	P43154	FRNC4B	0512097-05 ✓
36)	RearSamp	67	P43155	FRNC4B	0512097-11-AFID
37)	Sample	17	P43156	FRNC4B	0512097-11 ✓
38)	RearSamp	68	P43157	FRNC4B	0512097-11-RE-AFID
39)	Sample	18	P43158	FRNC4B	0512097-11-RE ✓
40)	RearSamp	69	P43159	FRNC4B	0512097-12-AFID
41)	Sample	19	P43160	FRNC4B	0512097-12 ✓
42)	RearSamp	70	P43161	FRNC4B	0512097-12-RE-AFID
43)	Sample	20	P43162	FRNC4B	0512097-12-RE ✓

✓ run used

MB 1-12-06

PAH #4 Sequence Information

SHC Continuing Calibration: WHAC10 ✓ Conc.: 50ug/mL
PAH Continuing Calibration: WHAC13 ✓ Conc.: 500ng/mL

Alaska North Slope Crude Standard: WHAB79 ✓ Conc.: 5.096mg/mL

FID Process Method: HC40908.M ✓ PAH Process Method: PAH41217.M ✓

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Last Modified: Fri Jan 06 12:39:03 2006 Page: 1

Sequence Name: C:\MSDChem\4\sequence\S4010901.S

Line	Type	Vial	DataFile	Method	Sample Name
44)	RearSamp	71	P43163	FRNC4B	0512097-13-AFID
45)	Sample	21	P43164	FRNC4B	0512097-13 ✓
46)	RearSamp	72	P43165	FRNC4B	0512097-14-AFID
47)	Sample	22	P43166	FRNC4B	0512097-14 ✓
48)	RearSamp	73	P43167	FRNC4B	C4010903-AFID PASS
49)	Sample	23	P43168	FRNC4B	C4010903 PASS
50)	RearSamp	74	P43169	FRNC4B	DCM-AFID
51)	Sample	24	P43170	FRNC4B	DCM

✓ run used

MRS 1-12-06

Last Modified: Fri Jan 06 12:39:03 2006