Semi-Volatile Organic Compounds
EPA Method 8270C

Organic Analysis:
Semi-Volatile Organic Compounds by GC/MS

Summary Package

Sample and QC Results

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04

Cover Page - Organic Analysis Data Package
Semi-Volatile Organic Compounds by GC/MS

Sample Name	Lab Code	Date Collected	Date Received
DCI 4-1	K0810000-001	10/09/2008	10/10/2008
DCI 4-1a	K0810000-002	10/09/2008	10/10/2008

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: Carl Dazzo

Date: 11/4/08 Title: Org Supervisor

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	10/09/2008
Sample Matrix:	Soil	**Date Received:**	10/10/2008

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	DCI 4-1	**Units:**	ug/Kg
Lab Code:	K0810000-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	30	2.0	1	10/23/08	10/31/08	KWG0811326	
Benzyl Alcohol	ND	U	20	2.1	1	10/23/08	10/31/08	KWG0811326	
1,2-Dichlorobenzene	ND	U	10	2.9	1	10/23/08	10/31/08	KWG0811326	
2-Methylphenol	ND	U	10	1.5	1	10/23/08	10/31/08	KWG0811326	
1,4-Dichlorobenzene	ND	U	10	2.9	1	10/23/08	10/31/08	KWG0811326	
4-Methylphenol†	ND	U	10	1.5	1	10/23/08	10/31/08	KWG0811326	
2,4-Dimethylphenol	ND	U	50	5.5	1	10/23/08	10/31/08	KWG0811326	
Benzoic Acid	ND	U	200	96	1	10/23/08	10/31/08	KWG0811326	
1,2,4-Trichlorobenzene	ND	U	10	2.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobutadiene	ND	U	10	2.5	1	10/23/08	10/31/08	KWG0811326	
Dimethyl Phthalate	ND	U	10	1.0	1	10/23/08	10/31/08	KWG0811326	
Diethyl Phthalate	**1.5**	J	10	1.3	1	10/23/08	10/31/08	KWG0811326	
N-Nitrosodiphenylamine	ND	U	10	1.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobenzene	ND	U	10	1.2	1	10/23/08	10/31/08	KWG0811326	
Pentachlorophenol	ND	U	100	20	1	10/23/08	10/31/08	KWG0811326	
Di-n-butyl Phthalate	ND	U	20	7.9	1	10/23/08	10/31/08	KWG0811326	
Butyl Benzyl Phthalate	ND	U	10	3.2	1	10/23/08	10/31/08	KWG0811326	
Bis(2-ethylhexyl) Phthalate	ND	U	100	7.0	1	10/23/08	10/31/08	KWG0811326	
Di-n-octyl Phthalate	ND	U	10	1.7	1	10/23/08	10/31/08	KWG0811326	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	51	15-103	10/31/08	Acceptable
Nitrobenzene-d5	52	10-108	10/31/08	Acceptable
2-Fluorobiphenyl	50	10-105	10/31/08	Acceptable
2,4,6-Tribromophenol	58	16-122	10/31/08	Acceptable
Terphenyl-d14	81	31-126	10/31/08	Acceptable

Comments:

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	10/09/2008
Sample Matrix:	Soil	**Date Received:**	10/10/2008

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	DCI 4-1	**Units:**	ug/Kg
Lab Code:	K0810000-001	**Basis:**	Dry

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	10/09/2008
Sample Matrix:	Soil	**Date Received:**	10/10/2008

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	DCI 4-1a	**Units:**	ug/Kg
Lab Code:	K0810000-002	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	30	2.0	1	10/23/08	10/31/08	KWG0811326	
Benzyl Alcohol	ND	U	20	2.1	1	10/23/08	10/31/08	KWG0811326	
1,2-Dichlorobenzene	ND	U	10	2.9	1	10/23/08	10/31/08	KWG0811326	
2-Methylphenol	ND	U	10	1.5	1	10/23/08	10/31/08	KWG0811326	
1,4-Dichlorobenzene	ND	U	10	2.9	1	10/23/08	10/31/08	KWG0811326	
4-Methylphenol†	ND	U	10	1.5	1	10/23/08	10/31/08	KWG0811326	
2,4-Dimethylphenol	ND	U	50	5.5	1	10/23/08	10/31/08	KWG0811326	
Benzoic Acid	ND	U	200	96	1	10/23/08	10/31/08	KWG0811326	
1,2,4-Trichlorobenzene	ND	U	10	2.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobutadiene	ND	U	10	2.5	1	10/23/08	10/31/08	KWG0811326	
Dimethyl Phthalate	ND	U	10	1.0	1	10/23/08	10/31/08	KWG0811326	
Diethyl Phthalate	**1.4**	J	10	1.3	1	10/23/08	10/31/08	KWG0811326	
N-Nitrosodiphenylamine	ND	U	10	1.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobenzene	ND	U	10	1.2	1	10/23/08	10/31/08	KWG0811326	
Pentachlorophenol	ND	U	100	20	1	10/23/08	10/31/08	KWG0811326	
Di-n-butyl Phthalate	ND	U	20	7.9	1	10/23/08	10/31/08	KWG0811326	
Butyl Benzyl Phthalate	ND	U	10	3.2	1	10/23/08	10/31/08	KWG0811326	
Bis(2-ethylhexyl) Phthalate	**18**	J	100	7.0	1	10/23/08	10/31/08	KWG0811326	
Di-n-octyl Phthalate	ND	U	10	1.7	1	10/23/08	10/31/08	KWG0811326	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	51	15-103	10/31/08	Acceptable
Nitrobenzene-d5	54	10-108	10/31/08	Acceptable
2-Fluorobiphenyl	48	10-105	10/31/08	Acceptable
2,4,6-Tribromophenol	55	16-122	10/31/08	Acceptable
Terphenyl-d14	76	31-126	10/31/08	Acceptable

Comments:

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	10/09/2008
Sample Matrix:	Soil	**Date Received:**	10/10/2008

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	DCI 4-1a	**Units:**	ug/Kg
Lab Code:	K0810000-002	**Basis:**	Dry

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG0811326-5

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	15	2.0	1	10/23/08	10/31/08	KWG0811326	
Benzyl Alcohol	ND	U	10	2.1	1	10/23/08	10/31/08	KWG0811326	
1,2-Dichlorobenzene	ND	U	5.0	2.9	1	10/23/08	10/31/08	KWG0811326	
2-Methylphenol	ND	U	5.0	1.5	1	10/23/08	10/31/08	KWG0811326	
1,4-Dichlorobenzene	ND	U	5.0	2.9	1	10/23/08	10/31/08	KWG0811326	
4-Methylphenol†	ND	U	5.0	1.5	1	10/23/08	10/31/08	KWG0811326	
2,4-Dimethylphenol	ND	U	25	5.5	1	10/23/08	10/31/08	KWG0811326	
Benzoic Acid	ND	U	100	96	1	10/23/08	10/31/08	KWG0811326	
1,2,4-Trichlorobenzene	ND	U	5.0	2.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobutadiene	ND	U	5.0	2.5	1	10/23/08	10/31/08	KWG0811326	
Dimethyl Phthalate	ND	U	5.0	1.0	1	10/23/08	10/31/08	KWG0811326	
Diethyl Phthalate	ND	U	5.0	1.3	1	10/23/08	10/31/08	KWG0811326	
N-Nitrosodiphenylamine	ND	U	5.0	1.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobenzene	ND	U	5.0	1.2	1	10/23/08	10/31/08	KWG0811326	
Pentachlorophenol	ND	U	50	20	1	10/23/08	10/31/08	KWG0811326	
Di-n-butyl Phthalate	ND	U	10	7.9	1	10/23/08	10/31/08	KWG0811326	
Butyl Benzyl Phthalate	ND	U	5.0	3.2	1	10/23/08	10/31/08	KWG0811326	
Bis(2-ethylhexyl) Phthalate	ND	U	50	7.0	1	10/23/08	10/31/08	KWG0811326	
Di-n-octyl Phthalate	ND	U	5.0	1.7	1	10/23/08	10/31/08	KWG0811326	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	49	15-103	10/31/08	Acceptable
Nitrobenzene-d5	51	10-108	10/31/08	Acceptable
2-Fluorobiphenyl	48	10-105	10/31/08	Acceptable
2,4,6-Tribromophenol	49	16-122	10/31/08	Acceptable
Terphenyl-d14	86	31-126	10/31/08	Acceptable

Comments:

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG0811326-5	**Basis:**	Dry

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4	Sur5
DCI 4-1	K0810000-001	51	52	50	58	81
DCI 4-1a	K0810000-002	51	54	48	55	76
Method Blank	KWG0811326-5	49	51	48	49	86
Batch QC	K0810048-003	46	48	46	58	72
Batch QCMS	KWG0811326-1	50	52	50	63	78
Batch QCDMS	KWG0811326-2	51	52	49	68	80
Lab Control Sample	KWG0811326-3	46	48	47	55	82
Duplicate Lab Control Sample	KWG0811326-4	51	54	50	57	84

Surrogate Recovery Control Limits (%)

Sur1 = Phenol-d6	15-103	Sur5 = Terphenyl-d14	31-126
Sur2 = Nitrobenzene-d5	10-108		
Sur3 = 2-Fluorobiphenyl	10-105		
Sur4 = 2,4,6-Tribromophenol	16-122		

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/31/2008
Time Analyzed: 13:34

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS17\DATA\103108\1031F006.D
Instrument ID: MS17
Analysis Method: 8270C

Lab Code: KWG0811769-2
Analysis Lot: KWG0811769

		1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	72,636	6.38	268,098	7.52	158,771	9.17
	Upper Limit ==>	145,272	6.88	536,196	8.02	317,542	9.67
	Lower Limit ==>	36,318	5.88	134,049	7.02	79,386	8.67
	ICAL Result ==>	74,249	6.40	280,404	7.54	162,106	9.18
Associated Analyses							
Method Blank	KWG0811326-5	58,533	6.38	224,896	7.52	138,082	9.17
Lab Control Sample	KWG0811326-3	68,356	6.38	245,724	7.52	151,562	9.17
Duplicate Lab Control Sample	KWG0811326-4	64,331	6.38	248,535	7.52	149,636	9.17
Batch QCMS	KWG0811326-1	64,846	6.38	251,959	7.52	153,364	9.17
Batch QCDMS	KWG0811326-2	65,391	6.39	251,288	7.52	151,933	9.17
DCI 4-1	K0810000-001	69,876	6.39	269,647	7.53	160,019	9.17
DCI 4-1a	K0810000-002	67,785	6.39	264,315	7.53	160,473	9.17
Batch QC	K0810048-003	67,666	6.40	256,599	7.53	163,038	9.18

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/31/2008
Time Analyzed: 13:34

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS17\DATA\103108\1031F006.D
Instrument ID: MS17
Analysis Method: 8270C

Lab Code: KWG0811769-2
Analysis Lot: KWG0811769

		Phenanthrene-d10		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	268,489	10.58	339,697	13.53	378,513	15.86
	Upper Limit ==>	536,978	11.08	679,394	14.03	757,026	16.36
	Lower Limit ==>	134,245	10.08	169,849	13.03	189,257	15.36
	ICAL Result ==>	277,239	10.59	352,815	13.54	397,899	15.88
Associated Analyses							
Method Blank	KWG0811326-5	227,970	10.58	277,951	13.52	287,856	15.86
Lab Control Sample	KWG0811326-3	245,893	10.58	306,935	13.52	314,528	15.86
Duplicate Lab Control Sample	KWG0811326-4	247,158	10.58	308,718	13.52	315,408	15.86
Batch QCMS	KWG0811326-1	254,850	10.58	325,409	13.53	338,113	15.86
Batch QCDMS	KWG0811326-2	253,688	10.58	324,932	13.53	329,816	15.87
DCI 4-1	K0810000-001	269,349	10.58	342,681	13.53	365,809	15.87
DCI 4-1a	K0810000-002	265,009	10.58	332,917	13.53	347,987	15.87
Batch QC	K0810048-003	264,308	10.59	337,005	13.55	353,610	15.90

Results flagged with an asterisk (*) indicate values outside control criteria.

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Extracted:**	10/23/2008
Sample Matrix:	Soil	**Date Analyzed:**	10/31/2008

Matrix Spike/Duplicate Matrix Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Batch QC	**Units:**	ug/Kg
Lab Code:	K0810048-003	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C	**Extraction Lot:**	KWG0811326

Analyte Name	Sample Result	Batch QCMS KWG0811326-1 Matrix Spike			Batch QCDMS KWG0811326-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Phenol	ND	126	250	50	117	246	48	10-120	7	40
1,4-Dichlorobenzene	ND	112	250	45	108	246	44	10-105	4	40
1,2,4-Trichlorobenzene	ND	124	250	50	116	246	47	10-102	7	40
Pentachlorophenol	ND	138	250	55	144	246	59	10-146	4	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000
Date Extracted: 10/23/2008
Date Analyzed: 10/31/2008

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG0811326

	Lab Control Sample KWG0811326-3 Lab Control Spike			Duplicate Lab Control Sample KWG0811326-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Phenol	118	250	47	109	250	44	34-101	8	40
Benzyl Alcohol	122	250	49	117	250	47	30-101	5	40
1,2-Dichlorobenzene	120	250	48	111	250	44	10-98	8	40
2-Methylphenol	109	250	44	98.8	250	40	10-93	10	40
1,4-Dichlorobenzene	99.6	250	40	101	250	40	10-98	1	40
4-Methylphenol	111	250	45	102	250	41	10-98	9	40
2,4-Dimethylphenol	70.9	250	28	51.5	250	21	10-81	32	40
Benzoic Acid	94.7	750	13	95.2	750	13	10-50	1	40
1,2,4-Trichlorobenzene	129	250	52	113	250	45	18-96	13	40
Hexachlorobutadiene	133	250	53	112	250	45	14-100	17	40
Dimethyl Phthalate	139	250	55	127	250	51	44-99	9	40
Diethyl Phthalate	150	250	60	134	250	54	46-104	11	40
N-Nitrosodiphenylamine	141	250	56	130	250	52	20-100	8	40
Hexachlorobenzene	144	250	57	128	250	51	42-98	12	40
Pentachlorophenol	95.9	250	38	85.9	250	34	28-100	11	40
Di-n-butyl Phthalate	187	250	75	163	250	65	47-129	14	40
Butyl Benzyl Phthalate	192	250	77	172	250	69	50-119	11	40
Bis(2-ethylhexyl) Phthalate	197	250	79	172	250	69	48-127	14	40
Di-n-octyl Phthalate	218	250	87	191	250	77	52-126	13	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Extracted:**	10/23/2008
Sample Matrix:	Soil	**Date Analyzed:**	10/31/2008
		Time Analyzed:	14:00

Method Blank Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**File ID:**	J:\MS17\DATA\103108\1031F007.D
Lab Code:	KWG0811326-5	**Instrument ID:**	MS17
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C	**Extraction Lot:**	KWG0811326

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0811326-3	J:\MS17\DATA\103108\1031F008.D	10/31/08	14:26
Duplicate Lab Control Sample	KWG0811326-4	J:\MS17\DATA\103108\1031F009.D	10/31/08	14:52
Batch QCMS	KWG0811326-1	J:\MS17\DATA\103108\1031F010.D	10/31/08	15:18
Batch QCDMS	KWG0811326-2	J:\MS17\DATA\103108\1031F011.D	10/31/08	15:44
DCI 4-1	K0810000-001	J:\MS17\DATA\103108\1031F016.D	10/31/08	17:54
DCI 4-1a	K0810000-002	J:\MS17\DATA\103108\1031F017.D	10/31/08	18:20
Batch QC	K0810048-003	J:\MS17\DATA\103108\1031F022.D	10/31/08	20:30

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Lab Control Sample/Duplicate Lab Control Sample Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Sample Name:**	Duplicate Lab Control Sample
Lab Code:	KWG0811326-3	**Lab Code:**	KWG0811326-4
File ID:	J:\MS17\DATA\103108\1031F008.D	**File ID:**	J:\MS17\DATA\103108\1031F009.D
Instrument ID:	MS17	**Instrument ID:**	MS17
Date Extracted:	10/23/2008	**Date Extracted:**	10/23/2008
Date Analyzed:	10/31/2008	**Date Analyzed:**	10/31/2008
Time Analyzed:	14:26	**Time Analyzed:**	14:52

Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C	**Extraction Lot:**	KWG0811326

These Lab Control Samples apply to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0811326-5	J:\MS17\DATA\103108\1031F007.D	10/31/08	14:00
Batch QCMS	KWG0811326-1	J:\MS17\DATA\103108\1031F010.D	10/31/08	15:18
Batch QCDMS	KWG0811326-2	J:\MS17\DATA\103108\1031F011.D	10/31/08	15:44
DCI 4-1	K0810000-001	J:\MS17\DATA\103108\1031F016.D	10/31/08	17:54
DCI 4-1a	K0810000-002	J:\MS17\DATA\103108\1031F017.D	10/31/08	18:20
Batch QC	K0810048-003	J:\MS17\DATA\103108\1031F022.D	10/31/08	20:30

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/31/2008
Time Analyzed: 13:07

Tune Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS17\DATA\103108\1031F005.D
Instrument ID: MS17
Column:

Analysis Method: 8270C
Analysis Lot: KWG0811769

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	36.2	45714	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	37.5	47298	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	43.7	55178	PASS
197	198	0	2	0.5	693	PASS
198	442	30	100	65.8	126133	PASS
199	198	5	9	6.9	8754	PASS
275	198	10	60	35.0	44189	PASS
365	442	1	50	2.9	5573	PASS
441	443	0	100	87.1	31981	PASS
442	442	100	100	100.0	191597	PASS
443	442	15	24	19.2	36714	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0811769-2	J:\MS17\DATA\103108\1031F006.D	10/31/2008	13:34	
Method Blank	KWG0811326-5	J:\MS17\DATA\103108\1031F007.D	10/31/2008	14:00	
Lab Control Sample	KWG0811326-3	J:\MS17\DATA\103108\1031F008.D	10/31/2008	14:26	
Duplicate Lab Control Sample	KWG0811326-4	J:\MS17\DATA\103108\1031F009.D	10/31/2008	14:52	
Batch QCMS	KWG0811326-1	J:\MS17\DATA\103108\1031F010.D	10/31/2008	15:18	
Batch QCDMS	KWG0811326-2	J:\MS17\DATA\103108\1031F011.D	10/31/2008	15:44	
DCI 4-1	K0810000-001	J:\MS17\DATA\103108\1031F016.D	10/31/2008	17:54	
DCI 4-1a	K0810000-002	J:\MS17\DATA\103108\1031F017.D	10/31/2008	18:20	
Batch QC	K0810048-003	J:\MS17\DATA\103108\1031F022.D	10/31/2008	20:30	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04 **Calibration Date:** 10/26/2008

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL7891 **Column:** MS
Instrument ID: MS17

Level ID	File ID	Level ID	File ID
A	J:\MS17\DATA\102608\1024F003.D	F	J:\MS17\DATA\102608\1024F008.D
B	J:\MS17\DATA\102608\1024F004.D	G	J:\MS17\DATA\102608\1024F009.D
C	J:\MS17\DATA\102608\1024F005.D	H	J:\MS17\DATA\102608\1024F010.D
D	J:\MS17\DATA\102608\1024F006.D	I	J:\MS17\DATA\102608\1024F011.D
E	J:\MS17\DATA\102608\1024F007.D	J	J:\MS17\DATA\102608\1024F012.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
‡ Phenol	A	50	1.58	B	100	1.64	C	200	1.60	D	500	1.62	E	1000	1.64
	F	2000	1.67	G	3000	1.66	H	5000	1.76	I	7000	1.69	J	10000	1.72
Benzyl Alcohol	A	50	0.745	B	100	0.764	C	200	0.826	D	500	0.804	E	1000	0.864
	F	2000	0.896	G	3000	0.891	H	5000	0.948	I	7000	0.914	J	10000	0.931
1,2-Dichlorobenzene	A	50	1.65	B	100	1.52	C	200	1.65	D	500	1.54	E	1000	1.58
	F	2000	1.60	G	3000	1.57	H	5000	1.66	I	7000	1.60	J	10000	1.60
2-Methylphenol	A	50	1.22	B	100	1.04	C	200	1.16	D	500	1.08	E	1000	1.12
	F	2000	1.17	G	3000	1.12	H	5000	1.21	I	7000	1.14	J	10000	1.16
‡ 1,4-Dichlorobenzene	A	50	1.69	B	100	1.67	C	200	1.64	D	500	1.60	E	1000	1.67
	F	2000	1.69	G	3000	1.67	H	5000	1.76	I	7000	1.70	J	10000	1.69
4-Methylphenol	A	50	1.63	B	100	1.59	C	200	1.60	D	500	1.60	E	1000	1.70
	F	2000	1.69	G	3000	1.68	H	5000	1.80	I	7000	1.73	J	10000	1.75
2,4-Dimethylphenol	A	50	0.347	B	100	0.324	C	200	0.336	D	500	0.315	E	1000	0.326
	F	2000	0.334	G	3000	0.337	H	5000	0.337	I	7000	0.332	J	10000	0.333
Benzoic Acid													E	1000	0.119
	F	2000	0.191	G	3000	0.212	H	5000	0.238	I	7000	0.260	J	10000	0.277
1,2,4-Trichlorobenzene	A	50	0.391	B	100	0.370	C	200	0.382	D	500	0.354	E	1000	0.363
	F	2000	0.373	G	3000	0.370	H	5000	0.387	I	7000	0.376	J	10000	0.374
‡ Hexachlorobutadiene	A	50	0.249	B	100	0.228	C	200	0.232	D	500	0.225	E	1000	0.216
	F	2000	0.233	G	3000	0.231	H	5000	0.242	I	7000	0.236	J	10000	0.235
Dimethyl Phthalate	A	50	1.51	B	100	1.42	C	200	1.48	D	500	1.41	E	1000	1.38
	F	2000	1.45	G	3000	1.44	H	5000	1.53	I	7000	1.46	J	10000	1.46
Diethyl Phthalate	A	50	1.44	B	100	1.32	C	200	1.40	D	500	1.27	E	1000	1.31
	F	2000	1.37	G	3000	1.37	H	5000	1.47	I	7000	1.38	J	10000	1.39
‡ N-Nitrosodiphenylamine	A	50	1.13	B	100	1.08	C	200	1.09	D	500	0.984	E	1000	0.965
	F	2000	1.00	G	3000	0.995	H	5000	1.07	I	7000	1.02	J	10000	1.04
Hexachlorobenzene	A	50	0.394	B	100	0.397	C	200	0.364	D	500	0.356	E	1000	0.357
	F	2000	0.376	G	3000	0.371	H	5000	0.384	I	7000	0.379	J	10000	0.382

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04 **Calibration Date:** 10/26/2008

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL7891 **Column:** MS
Instrument ID: MS17

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
‡ Pentachlorophenol										D	500	0.195	E	1000	0.197
	F	2000	0.215	G	3000	0.226	H	5000	0.237	I	7000	0.243	J	10000	0.249
Di-n-butyl Phthalate	A	50	1.64	B	100	1.47	C	200	1.40	D	500	1.28	E	1000	1.33
	F	2000	1.39	G	3000	1.38	H	5000	1.43	I	7000	1.40	J	10000	1.39
Butyl Benzyl Phthalate	A	50	0.471	B	100	0.430	C	200	0.447	D	500	0.449	E	1000	0.456
	F	2000	0.474	G	3000	0.470	H	5000	0.497	I	7000	0.483	J	10000	0.478
Bis(2-ethylhexyl) Phthalate	A	50	0.665	B	100	0.600	C	200	0.650	D	500	0.617	E	1000	0.636
	F	2000	0.677	G	3000	0.666	H	5000	0.707	I	7000	0.699	J	10000	0.687
‡ Di-n-octyl Phthalate	A	50	0.912	B	100	0.835	C	200	0.878	D	500	0.904	E	1000	0.927
	F	2000	1.00	G	3000	0.985	H	5000	1.06	I	7000	1.04	J	10000	1.02
Phenol-d6	A	50	1.53	B	100	1.54	C	200	1.57	D	500	1.59	E	1000	1.67
	F	2000	1.69	G	3000	1.66	H	5000	1.76	I	7000	1.69	J	10000	1.71
Nitrobenzene-d5	A	50	1.25	B	100	1.27	C	200	1.24	D	500	1.26	E	1000	1.29
	F	2000	1.35	G	3000	1.34	H	5000	1.42	I	7000	1.37	J	10000	1.37
2-Fluorobiphenyl	A	50	1.72	B	100	1.50	C	200	1.56	D	500	1.47	E	1000	1.46
	F	2000	1.50	G	3000	1.49	H	5000	1.61	I	7000	1.51	J	10000	1.50
2,4,6-Tribromophenol	A	50	0.194	B	100	0.197	C	200	0.192	D	500	0.185	E	1000	0.189
	F	2000	0.199	G	3000	0.203	H	5000	0.212	I	7000	0.211	J	10000	0.218
Terphenyl-d14	A	50	1.06	B	100	0.897	C	200	0.908	D	500	0.858	E	1000	0.855
	F	2000	0.884	G	3000	0.868	H	5000	0.906	I	7000	0.884	J	10000	0.874
† 4-Nitrophenol				B	100	0.173	C	200	0.216	D	500	0.217	E	1000	0.228
	F	2000	0.248	G	3000	0.257	H	5000	0.273	I	7000	0.261	J	10000	0.264
‡ 2,4-Dichlorophenol	A	50	0.311	B	100	0.305	C	200	0.334	D	500	0.317	E	1000	0.310
	F	2000	0.328	G	3000	0.327	H	5000	0.344	I	7000	0.335	J	10000	0.333
‡ Fluoranthene	A	50	1.58	B	100	1.47	C	200	1.49	D	500	1.42	E	1000	1.45
	F	2000	1.49	G	3000	1.46	H	5000	1.52	I	7000	1.49	J	10000	1.47
‡ Benzo(a)pyrene	A	50	1.13	B	100	1.01	C	200	1.07	D	500	1.03	E	1000	1.04
	F	2000	1.08	G	3000	1.06	H	5000	1.12	I	7000	1.10	J	10000	1.08
† 2,4-Dinitrophenol															
	F	2000	0.182	G	3000	0.201	H	5000	0.237	I	7000	0.240	J	10000	0.252
‡ 4-Chloro-3-methylphenol	A	50	0.294	B	100	0.298	C	200	0.317	D	500	0.296	E	1000	0.289
	F	2000	0.310	G	3000	0.307	H	5000	0.326	I	7000	0.316	J	10000	0.315
† N-Nitrosodi-n-propylamine	A	50	1.03	B	100	0.967	C	200	0.934	D	500	0.965	E	1000	0.957
	F	2000	0.997	G	3000	0.988	H	5000	1.06	I	7000	1.01	J	10000	1.02

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 10/26/2008

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL7891
Instrument ID: MS17

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
† Hexachlorocyclopentadiene										D	500	0.427	E	1000	0.442
	F	2000	0.474	G	3000	0.486	H	5000	0.536	I	7000	0.510	J	10000	0.520
‡ Acenaphthene	A	50	1.28	B	100	1.17	C	200	1.24	D	500	1.14	E	1000	1.15
	F	2000	1.21	G	3000	1.19	H	5000	1.25	I	7000	1.21	J	10000	1.19
‡ 2,4,6-Trichlorophenol	A	50	0.488	B	100	0.385	C	200	0.425	D	500	0.420	E	1000	0.421
	F	2000	0.437	G	3000	0.436	H	5000	0.482	I	7000	0.458	J	10000	0.457
‡ 2-Nitrophenol	A	50	0.197	B	100	0.191	C	200	0.200	D	500	0.192	E	1000	0.196
	F	2000	0.212	G	3000	0.214	H	5000	0.226	I	7000	0.221	J	10000	0.219

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound**

‡ **CCC Compound**

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04 **Calibration Date:** 10/26/2008

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL7891 **Column:** MS
Instrument ID: MS17

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
‡ Phenol	MS	AverageRF	% RSD	3.3		≤ 15	1.66		0.01
Benzyl Alcohol	TRG	AverageRF	% RSD	8.2		≤ 15	0.858		0.01
1,2-Dichlorobenzene	TRG	AverageRF	% RSD	3.0		≤ 15	1.60		0.01
2-Methylphenol	TRG	AverageRF	% RSD	4.8		≤ 15	1.14		0.01
‡ 1,4-Dichlorobenzene	MS	AverageRF	% RSD	2.5		≤ 15	1.68		0.01
4-Methylphenol	TRG	AverageRF	% RSD	4.2		≤ 15	1.68		0.01
2,4-Dimethylphenol	TRG	AverageRF	% RSD	2.6		≤ 15	0.332		0.01
Benzoic Acid	TRG	Quadratic	COD	1.000		≥ 0.990	0.216		0.01
1,2,4-Trichlorobenzene	MS	AverageRF	% RSD	3.0		≤ 15	0.374		0.01
‡ Hexachlorobutadiene	TRG	AverageRF	% RSD	3.9		≤ 15	0.233		0.01
Dimethyl Phthalate	TRG	AverageRF	% RSD	3.0		≤ 15	1.45		0.01
Diethyl Phthalate	TRG	AverageRF	% RSD	4.4		≤ 15	1.37		0.01
‡ N-Nitrosodiphenylamine	TRG	AverageRF	% RSD	5.2		≤ 15	1.04		0.01
Hexachlorobenzene	TRG	AverageRF	% RSD	3.7		≤ 15	0.376		0.01
‡ Pentachlorophenol	MS	AverageRF	% RSD	9.7		≤ 15	0.223		0.01
Di-n-butyl Phthalate	TRG	AverageRF	% RSD	6.8		≤ 15	1.41		0.01
Butyl Benzyl Phthalate	TRG	AverageRF	% RSD	4.2		≤ 15	0.466		0.01
Bis(2-ethylhexyl) Phthalate	TRG	AverageRF	% RSD	5.3		≤ 15	0.660		0.01
‡ Di-n-octyl Phthalate	TRG	AverageRF	% RSD	7.9		≤ 15	0.956		0.01
Phenol-d6	SURR	AverageRF	% RSD	4.7		≤ 15	1.64		0.01
Nitrobenzene-d5	SURR	AverageRF	% RSD	4.6		≤ 15	1.32		0.01
2-Fluorobiphenyl	SURR	AverageRF	% RSD	5.1		≤ 15	1.53		0.01
2,4,6-Tribromophenol	SURR	AverageRF	% RSD	5.5		≤ 15	0.200		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	6.6		≤ 15	0.899		0.01
† 4-Nitrophenol	MS	AverageRF	% RSD	13.5		≤ 15	0.237		0.05
‡ 2,4-Dichlorophenol	TRG	AverageRF	% RSD	4.0		≤ 15	0.324		0.01
‡ Fluoranthene	TRG	AverageRF	% RSD	3.0		≤ 15	1.48		0.01
‡ Benzo(a)pyrene	TRG	AverageRF	% RSD	3.6		≤ 15	1.07		0.01
† 2,4-Dinitrophenol	TRG	AverageRF	% RSD	13.2		≤ 15	0.223		0.05
‡ 4-Chloro-3-methylphenol	MS	AverageRF	% RSD	3.9		≤ 15	0.307		0.01
† N-Nitrosodi-n-propylamine	MS	AverageRF	% RSD	3.8		≤ 15	0.992		0.05
† Hexachlorocyclopentadiene	TRG	AverageRF	% RSD	8.3		≤ 15	0.485		0.05
‡ Acenaphthene	MS	AverageRF	% RSD	3.6		≤ 15	1.20		0.01
‡ 2,4,6-Trichlorophenol	TRG	AverageRF	% RSD	7.1		≤ 15	0.441		0.01
‡ 2-Nitrophenol	TRG	AverageRF	% RSD	6.3		≤ 15	0.207		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Calibration Date:**	10/26/2008
		Date Analyzed:	10/26/2008

Second Source Calibration Verification
Semi-Volatile Organic Compounds by GC/MS

Calibration Type:	Internal Standard	**Calibration ID:**	CAL7891
Analysis Method:	8270C	**Units:**	ng/ml

File ID: J:\MS17\DATA\102608\1024F013.D
J:\MS17\DATA\102608\1024F014.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3100	1.66	1.72	4	NA	± 20 %	AverageRF
Benzyl Alcohol	3000	3100	0.858	0.892	4	NA	± 30 %	AverageRF
1,2-Dichlorobenzene	3000	3000	1.60	1.60	0	NA	± 30 %	AverageRF
2-Methylphenol	3000	3000	1.14	1.15	1	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	3000	1.68	1.70	1	NA	± 20 %	AverageRF
4-Methylphenol	3000	3000	1.68	1.66	-1	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	2900	0.332	0.324	-2	NA	± 30 %	AverageRF
Benzoic Acid	3000	2900	0.216	0.206	NA	-3	± 30 %	Quadratic
1,2,4-Trichlorobenzene	3000	2900	0.374	0.367	-2	NA	± 30 %	AverageRF
‡ Hexachlorobutadiene	3000	2900	0.233	0.225	-3	NA	± 20 %	AverageRF
Dimethyl Phthalate	3000	3000	1.45	1.44	-1	NA	± 30 %	AverageRF
Diethyl Phthalate	3000	2900	1.37	1.33	-3	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3100	1.04	1.06	2	NA	± 20 %	AverageRF
Hexachlorobenzene	3000	3000	0.376	0.370	-2	NA	± 30 %	AverageRF
‡ Pentachlorophenol	3000	3400	0.223	0.254	14	NA	± 20 %	AverageRF
Di-n-butyl Phthalate	3000	2900	1.41	1.35	-5	NA	± 30 %	AverageRF
Butyl Benzyl Phthalate	3000	3000	0.466	0.466	0	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3000	0.660	0.662	0	NA	± 30 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3100	0.956	1.00	5	NA	± 20 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	3100	0.441	0.453	3	NA	± 20 %	AverageRF
‡ 2,4-Dichlorophenol	3000	3100	0.324	0.331	2	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	2800	0.223	0.207	-7	NA	± 30 %	AverageRF
‡ 2-Nitrophenol	3000	3100	0.207	0.211	2	NA	± 20 %	AverageRF
‡ 4-Chloro-3-methylphenol	3000	3100	0.307	0.312	2	NA	± 20 %	AverageRF
† 4-Nitrophenol	3000	3200	0.237	0.252	6	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	3000	1.20	1.19	-1	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	3100	1.07	1.11	4	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	3000	1.48	1.48	0	NA	± 30 %	AverageRF
† Hexachlorocyclopentadiene	3000	2600	0.485	0.415	-14	NA	± 30 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	2800	0.992	0.925	-7	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/31/2008

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270C

Calibration Date: 10/26/2008
Calibration ID: CAL7891
Analysis Lot: KWG0811769
Units: ng/ml

File ID: J:\MS17\DATA\103108\1031F006.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3000	0.01	1.66	1.65	-1	NA	± 20 %	AverageRF
Benzyl Alcohol	3000	3100	0.01	0.858	0.878	2	NA	± 30 %	AverageRF
1,2-Dichlorobenzene	3000	3000	0.01	1.60	1.62	2	NA	± 30 %	AverageRF
2-Methylphenol	3000	2900	0.01	1.14	1.12	-2	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	3000	0.01	1.68	1.68	0	NA	± 20 %	AverageRF
4-Methylphenol	3000	3000	0.01	1.68	1.70	1	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	2900	0.01	0.332	0.323	-3	NA	± 30 %	AverageRF
Benzoic Acid	3000	2700	0.01	0.216	0.187	NA	-10	± 30 %	Quadratic
1,2,4-Trichlorobenzene	3000	3100	0.01	0.374	0.392	5	NA	± 30 %	AverageRF
‡ Hexachlorobutadiene	3000	3200	0.01	0.233	0.245	5	NA	± 20 %	AverageRF
Dimethyl Phthalate	3000	3100	0.01	1.45	1.50	3	NA	± 30 %	AverageRF
Diethyl Phthalate	3000	3100	0.01	1.37	1.42	3	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3100	0.01	1.04	1.06	2	NA	± 20 %	AverageRF
Hexachlorobenzene	3000	3000	0.01	0.376	0.379	1	NA	± 30 %	AverageRF
‡ Pentachlorophenol	3000	2600	0.01	0.223	0.190	-15	NA	± 20 %	AverageRF
Di-n-butyl Phthalate	3000	3000	0.01	1.41	1.42	0	NA	± 30 %	AverageRF
Butyl Benzyl Phthalate	3000	3100	0.01	0.466	0.485	4	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3100	0.01	0.660	0.684	4	NA	± 30 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3200	0.01	0.956	1.01	6	NA	± 20 %	AverageRF
Phenol-d6	3000	3000	0.01	1.64	1.65	1	NA	± 30 %	AverageRF
Nitrobenzene-d5	3000	3100	0.01	1.32	1.36	3	NA	± 30 %	AverageRF
2-Fluorobiphenyl	3000	3000	0.01	1.53	1.54	0	NA	± 30 %	AverageRF
2,4,6-Tribromophenol	3000	3000	0.01	0.200	0.200	0	NA	± 30 %	AverageRF
Terphenyl-d14	3000	3000	0.01	0.899	0.897	0	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	3000	0.01	1.20	1.22	1	NA	± 30 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	3100	0.01	0.441	0.454	3	NA	± 20 %	AverageRF
† 4-Nitrophenol	3000	3000	0.05	0.237	0.239	1	NA	± 30 %	AverageRF
‡ 2,4-Dichlorophenol	3000	3200	0.01	0.324	0.342	5	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	3100	0.01	1.48	1.52	3	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	3100	0.01	1.07	1.11	4	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	2500	0.05	0.223	0.188	-15	NA	± 30 %	AverageRF
‡ 4-Chloro-3-methylphenol	3000	3200	0.01	0.307	0.323	5	NA	± 20 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	3000	0.05	0.992	0.984	-1	NA	± 30 %	AverageRF
† Hexachlorocyclopentadiene	3000	2700	0.05	0.485	0.441	-9	NA	± 30 %	AverageRF
‡ 2-Nitrophenol	3000	3200	0.01	0.207	0.218	5	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04

Analysis Run Log
Semi-Volatile Organic Compounds by GC/MS

Analysis Method: 8270C **Analysis Lot:** KWG0811769
Instrument ID: MS17

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1031F005.D	GC/MS Tuning - Generic	KWG0811769-1	10/31/2008	13:07		10/31/2008	13:25
1031F006.D	Continuing Calibration Verification	KWG0811769-2	10/31/2008	13:34		10/31/2008	13:52
1031F007.D	Method Blank	KWG0811326-5	10/31/2008	14:00		10/31/2008	14:18
1031F008.D	Lab Control Sample	KWG0811326-3	10/31/2008	14:26		10/31/2008	14:44
1031F009.D	Duplicate Lab Control Sample	KWG0811326-4	10/31/2008	14:52		10/31/2008	15:10
1031F010.D	Batch QCMS	KWG0811326-1	10/31/2008	15:18		10/31/2008	15:36
1031F011.D	Batch QCDMS	KWG0811326-2	10/31/2008	15:44		10/31/2008	16:02
1031F012.D	ZZZZZZ	ZZZZZZ	10/31/2008	16:10		10/31/2008	16:28
1031F013.D	ZZZZZZ	ZZZZZZ	10/31/2008	16:36		10/31/2008	16:54
1031F014.D	ZZZZZZ	ZZZZZZ	10/31/2008	17:02		10/31/2008	17:20
1031F015.D	ZZZZZZ	ZZZZZZ	10/31/2008	17:28		10/31/2008	17:46
1031F016.D	DCI 4-1	K0810000-001	10/31/2008	17:54		10/31/2008	18:12
1031F017.D	DCI 4-1a	K0810000-002	10/31/2008	18:20		10/31/2008	18:38
1031F018.D	ZZZZZZ	ZZZZZZ	10/31/2008	18:46		10/31/2008	19:04
1031F019.D	ZZZZZZ	ZZZZZZ	10/31/2008	19:12		10/31/2008	19:30
1031F020.D	ZZZZZZ	ZZZZZZ	10/31/2008	19:38		10/31/2008	19:56
1031F021.D	ZZZZZZ	ZZZZZZ	10/31/2008	20:04		10/31/2008	20:22
1031F022.D	Batch QC	K0810048-003	10/31/2008	20:30		10/31/2008	20:48
1031F023.D	ZZZZZZ	ZZZZZZ	10/31/2008	20:56		10/31/2008	21:14
1031F024.D	ZZZZZZ	ZZZZZZ	10/31/2008	21:22		10/31/2008	21:40
1031F025.D	ZZZZZZ	ZZZZZZ	10/31/2008	21:48		10/31/2008	22:06
1031F026.D	ZZZZZZ	ZZZZZZ	10/31/2008	22:15		10/31/2008	22:33
1031F027.D	ZZZZZZ	ZZZZZZ	10/31/2008	22:41		10/31/2008	22:59
1031F028.D	ZZZZZZ	ZZZZZZ	10/31/2008	23:07		10/31/2008	23:25
1031F029.D	ZZZZZZ	ZZZZZZ	10/31/2008	23:33		10/31/2008	23:51
1031F030.D	ZZZZZZ	ZZZZZZ	10/31/2008	23:59		11/1/2008	00:17
1031F031.D	ZZZZZZ	ZZZZZZ	11/1/2008	00:25		11/1/2008	00:43
1031F032.D	ZZZZZZ	ZZZZZZ	11/1/2008	00:51		11/1/2008	01:09

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000
Date Extracted: 10/23/2008

Extraction Prep Log
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541
Analysis Method: 8270C

Extraction Lot: KWG0811326
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
DCI 4-1	K0810000-001	10/09/08	10/10/08	23.21g	2ml	86.7	
DCI 4-1a	K0810000-002	10/09/08	10/10/08	23.42g	2ml	85.7	
Method Blank	KWG0811326-5	NA	NA	40.06g	2ml	NA	
Batch QC	K0810048-003	NA	NA	23.68g	2ml	85.4	
Batch QCMS	KWG0811326-1	NA	NA	23.46g	2ml	85.4	
Batch QCDMS	KWG0811326-2	NA	NA	23.83g	2ml	85.4	
Lab Control Sample	KWG0811326-3	NA	NA	20.00g	2ml	NA	
Duplicate Lab Control Sample	KWG0811326-4	NA	NA	20.00g	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Organic Analysis:
Semi-Volatile Organic Compounds by GC/MS

Validation Package

Organic Analysis:
Semi-Volatile Organic Compounds by GC/MS

Validation Package

QC Reports

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541 **Units:** PERCENT
Analysis Method: 8270C **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4	Sur5
DCI 4-1	K0810000-001	51	52	50	58	81
DCI 4-1a	K0810000-002	51	54	48	55	76
Method Blank	KWG0811326-5	49	51	48	49	86
Batch QC	K0810048-003	46	48	46	58	72
Batch QCMS	KWG0811326-1	50	52	50	63	78
Batch QCDMS	KWG0811326-2	51	52	49	68	80
Lab Control Sample	KWG0811326-3	46	48	47	55	82
Duplicate Lab Control Sample	KWG0811326-4	51	54	50	57	84

Surrogate Recovery Control Limits (%)

Sur1 = Phenol-d6	15-103	Sur5 = Terphenyl-d14	31-126
Sur2 = Nitrobenzene-d5	10-108		
Sur3 = 2-Fluorobiphenyl	10-105		
Sur4 = 2,4,6-Tribromophenol	16-122		

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/31/2008
Time Analyzed: 13:34

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS17\DATA\103108\1031F006.D
Instrument ID: MS17
Analysis Method: 8270C

Lab Code: KWG0811769-2
Analysis Lot: KWG0811769

		1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	72,636	6.38	268,098	7.52	158,771	9.17
	Upper Limit ==>	145,272	6.88	536,196	8.02	317,542	9.67
	Lower Limit ==>	36,318	5.88	134,049	7.02	79,386	8.67
	ICAL Result ==>	74,249	6.40	280,404	7.54	162,106	9.18
Associated Analyses							
Method Blank	KWG0811326-5	58,533	6.38	224,896	7.52	138,082	9.17
Lab Control Sample	KWG0811326-3	68,356	6.38	245,724	7.52	151,562	9.17
Duplicate Lab Control Sample	KWG0811326-4	64,331	6.38	248,535	7.52	149,636	9.17
Batch QCMS	KWG0811326-1	64,846	6.38	251,959	7.52	153,364	9.17
Batch QCDMS	KWG0811326-2	65,391	6.39	251,288	7.52	151,933	9.17
DCI 4-1	K0810000-001	69,876	6.39	269,647	7.53	160,019	9.17
DCI 4-1a	K0810000-002	67,785	6.39	264,315	7.53	160,473	9.17
Batch QC	K0810048-003	67,666	6.40	256,599	7.53	163,038	9.18

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/31/2008
Time Analyzed: 13:34

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS17\DATA\103108\1031F006.D
Instrument ID: MS17
Analysis Method: 8270C

Lab Code: KWG0811769-2
Analysis Lot: KWG0811769

		Phenanthrene-d10		Chrysene-d12		Perylene-d12	
		Area	RT	Area	RT	Area	RT
	Results ==>	268,489	10.58	339,697	13.53	378,513	15.86
	Upper Limit ==>	536,978	11.08	679,394	14.03	757,026	16.36
	Lower Limit ==>	134,245	10.08	169,849	13.03	189,257	15.36
	ICAL Result ==>	277,239	10.59	352,815	13.54	397,899	15.88
Associated Analyses							
Method Blank	KWG0811326-5	227,970	10.58	277,951	13.52	287,856	15.86
Lab Control Sample	KWG0811326-3	245,893	10.58	306,935	13.52	314,528	15.86
Duplicate Lab Control Sample	KWG0811326-4	247,158	10.58	308,718	13.52	315,408	15.86
Batch QCMS	KWG0811326-1	254,850	10.58	325,409	13.53	338,113	15.86
Batch QCDMS	KWG0811326-2	253,688	10.58	324,932	13.53	329,816	15.87
DCI 4-1	K0810000-001	269,349	10.58	342,681	13.53	365,809	15.87
DCI 4-1a	K0810000-002	265,009	10.58	332,917	13.53	347,987	15.87
Batch QC	K0810048-003	264,308	10.59	337,005	13.55	353,610	15.90

Results flagged with an asterisk (*) indicate values outside control criteria.

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Extracted:**	10/23/2008
Sample Matrix:	Soil	**Date Analyzed:**	10/31/2008

Matrix Spike/Duplicate Matrix Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Batch QC	**Units:**	ug/Kg
Lab Code:	K0810048-003	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C	**Extraction Lot:**	KWG0811326

Analyte Name	Sample Result	Batch QCMS KWG0811326-1 Matrix Spike			Batch QCDMS KWG0811326-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Phenol	ND	126	250	50	117	246	48	10-120	7	40
1,4-Dichlorobenzene	ND	112	250	45	108	246	44	10-105	4	40
1,2,4-Trichlorobenzene	ND	124	250	50	116	246	47	10-102	7	40
Pentachlorophenol	ND	138	250	55	144	246	59	10-146	4	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000
Date Extracted: 10/23/2008
Date Analyzed: 10/31/2008

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry
Level: Low
Extraction Lot: KWG0811326

	Lab Control Sample KWG0811326-3 Lab Control Spike			Duplicate Lab Control Sample KWG0811326-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Phenol	118	250	47	109	250	44	34-101	8	40
Benzyl Alcohol	122	250	49	117	250	47	30-101	5	40
1,2-Dichlorobenzene	120	250	48	111	250	44	10-98	8	40
2-Methylphenol	109	250	44	98.8	250	40	10-93	10	40
1,4-Dichlorobenzene	99.6	250	40	101	250	40	10-98	1	40
4-Methylphenol	111	250	45	102	250	41	10-98	9	40
2,4-Dimethylphenol	70.9	250	28	51.5	250	21	10-81	32	40
Benzoic Acid	94.7	750	13	95.2	750	13	10-50	1	40
1,2,4-Trichlorobenzene	129	250	52	113	250	45	18-96	13	40
Hexachlorobutadiene	133	250	53	112	250	45	14-100	17	40
Dimethyl Phthalate	139	250	55	127	250	51	44-99	9	40
Diethyl Phthalate	150	250	60	134	250	54	46-104	11	40
N-Nitrosodiphenylamine	141	250	56	130	250	52	20-100	8	40
Hexachlorobenzene	144	250	57	128	250	51	42-98	12	40
Pentachlorophenol	95.9	250	38	85.9	250	34	28-100	11	40
Di-n-butyl Phthalate	187	250	75	163	250	65	47-129	14	40
Butyl Benzyl Phthalate	192	250	77	172	250	69	50-119	11	40
Bis(2-ethylhexyl) Phthalate	197	250	79	172	250	69	48-127	14	40
Di-n-octyl Phthalate	218	250	87	191	250	77	52-126	13	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Extracted:**	10/23/2008
Sample Matrix:	Soil	**Date Analyzed:**	10/31/2008
		Time Analyzed:	14:00

Method Blank Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**File ID:**	J:\MS17\DATA\103108\1031F007.D
Lab Code:	KWG0811326-5	**Instrument ID:**	MS17
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C	**Extraction Lot:**	KWG0811326

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0811326-3	J:\MS17\DATA\103108\1031F008.D	10/31/08	14:26
Duplicate Lab Control Sample	KWG0811326-4	J:\MS17\DATA\103108\1031F009.D	10/31/08	14:52
Batch QCMS	KWG0811326-1	J:\MS17\DATA\103108\1031F010.D	10/31/08	15:18
Batch QCDMS	KWG0811326-2	J:\MS17\DATA\103108\1031F011.D	10/31/08	15:44
DCI 4-1	K0810000-001	J:\MS17\DATA\103108\1031F016.D	10/31/08	17:54
DCI 4-1a	K0810000-002	J:\MS17\DATA\103108\1031F017.D	10/31/08	18:20
Batch QC	K0810048-003	J:\MS17\DATA\103108\1031F022.D	10/31/08	20:30

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Lab Control Sample/Duplicate Lab Control Sample Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Sample Name:**	Duplicate Lab Control Sample
Lab Code:	KWG0811326-3	**Lab Code:**	KWG0811326-4
File ID:	J:\MS17\DATA\103108\1031F008.D	**File ID:**	J:\MS17\DATA\103108\1031F009.D
Instrument ID:	MS17	**Instrument ID:**	MS17
Date Extracted:	10/23/2008	**Date Extracted:**	10/23/2008
Date Analyzed:	10/31/2008	**Date Analyzed:**	10/31/2008
Time Analyzed:	14:26	**Time Analyzed:**	14:52

Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C	**Extraction Lot:**	KWG0811326

These Lab Control Samples apply to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0811326-5	J:\MS17\DATA\103108\1031F007.D	10/31/08	14:00
Batch QCMS	KWG0811326-1	J:\MS17\DATA\103108\1031F010.D	10/31/08	15:18
Batch QCDMS	KWG0811326-2	J:\MS17\DATA\103108\1031F011.D	10/31/08	15:44
DCI 4-1	K0810000-001	J:\MS17\DATA\103108\1031F016.D	10/31/08	17:54
DCI 4-1a	K0810000-002	J:\MS17\DATA\103108\1031F017.D	10/31/08	18:20
Batch QC	K0810048-003	J:\MS17\DATA\103108\1031F022.D	10/31/08	20:30

Organic Analysis:
Semi-Volatile Organic Compounds by GC/MS

Validation Package

Raw Data

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000
Date Collected: 10/09/2008
Date Received: 10/10/2008

Semi-Volatile Organic Compounds by GC/MS

Sample Name: DCI 4-1
Lab Code: K0810000-001

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	30	2.0	1	10/23/08	10/31/08	KWG0811326	
Benzyl Alcohol	ND	U	20	2.1	1	10/23/08	10/31/08	KWG0811326	
1,2-Dichlorobenzene	ND	U	10	2.9	1	10/23/08	10/31/08	KWG0811326	
2-Methylphenol	ND	U	10	1.5	1	10/23/08	10/31/08	KWG0811326	
1,4-Dichlorobenzene	ND	U	10	2.9	1	10/23/08	10/31/08	KWG0811326	
4-Methylphenol†	ND	U	10	1.5	1	10/23/08	10/31/08	KWG0811326	
2,4-Dimethylphenol	ND	U	50	5.5	1	10/23/08	10/31/08	KWG0811326	
Benzoic Acid	ND	U	200	96	1	10/23/08	10/31/08	KWG0811326	
1,2,4-Trichlorobenzene	ND	U	10	2.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobutadiene	ND	U	10	2.5	1	10/23/08	10/31/08	KWG0811326	
Dimethyl Phthalate	ND	U	10	1.0	1	10/23/08	10/31/08	KWG0811326	
Diethyl Phthalate	**1.5**	J	10	1.3	1	10/23/08	10/31/08	KWG0811326	
N-Nitrosodiphenylamine	ND	U	10	1.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobenzene	ND	U	10	1.2	1	10/23/08	10/31/08	KWG0811326	
Pentachlorophenol	ND	U	100	20	1	10/23/08	10/31/08	KWG0811326	
Di-n-butyl Phthalate	ND	U	20	7.9	1	10/23/08	10/31/08	KWG0811326	
Butyl Benzyl Phthalate	ND	U	10	3.2	1	10/23/08	10/31/08	KWG0811326	
Bis(2-ethylhexyl) Phthalate	ND	U	100	7.0	1	10/23/08	10/31/08	KWG0811326	
Di-n-octyl Phthalate	ND	U	10	1.7	1	10/23/08	10/31/08	KWG0811326	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	51	15-103	10/31/08	Acceptable
Nitrobenzene-d5	52	10-108	10/31/08	Acceptable
2-Fluorobiphenyl	50	10-105	10/31/08	Acceptable
2,4,6-Tribromophenol	58	16-122	10/31/08	Acceptable
Terphenyl-d14	81	31-126	10/31/08	Acceptable

Comments:

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	10/09/2008
Sample Matrix:	Soil	**Date Received:**	10/10/2008

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	DCI 4-1	**Units:**	ug/Kg
Lab Code:	K0810000-001	**Basis:**	Dry

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS17\DATA\103108\1031F016.D
Lab ID: K0810000-001
RunType: SMPL
Matrix: SOIL

Date Acquired: 10/31/2008 17:54
Date Quantitated: 11/03/2008 12:00
Batch ID: KWG0811769
Analysis Method: 8270C
ListJoinID: LJ2934

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: LB 11/3/08

Secondary Review: MDT 11-3-08

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8270C SVO_LL	**Collect Date:**	10/09/2008	**Receive Date:**	10/10/2008

Analysis Lot:	KWG0811769	**Prep Lot:**	KWG0811326	**Report Group:**	K0810000
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	771015	**Prep Date:**	10/23/2008		

Quant Method:	J:\MS17\METHODS\FULL_SCAN\102608SVOLL.	**Calibration ID:**	CAL7891
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ2934
Tune Ref:	J:\MS17\DATA\103108\1031F005.D	**Method ID:**	MJ142
MB Ref:	J:\MS17\DATA\103108\1031F007.D	**Quant based on Report List**	

Data File:	J:\MS17\DATA\103108\1031F016.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 17:54	**Quant Date:**	11/03/2008 12:00	**Vial:**	14
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810000-001			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	6.39	0.01	152	69876	1,000.00	OK
2	Naphthalene-d8	7.53	0.01	136	269647	1,000.00	OK
3	Acenaphthene-d10	9.17	0.00	164	160019	1,000.00	OK
4	Phenanthrene-d10	10.58	0.00	188	269349	1,000.00	OK
5	Chrysene-d12	13.53	0.00	240	342681	1,000.00	OK
6	Perylene-d12	15.87	0.01	264	365809	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	5.31	0.03	0.00	112	146982**m**	1,731	46	10-89	OK	
1	Phenol-d6	6.08	0.01	0.00	99	220200	1,921	51	15-103	OK	
1	Nitrobenzene-d5	6.88	0.00	0.00	82	120513	1,310	52	10-108	OK	
3	2-Fluorobiphenyl	8.53	0.00	0.00	172	306761	1,251	50	10-105	OK	
4	2,4,6-Tribromophenol	9.92	0.00	0.00	330	116603	2,165	58	16-122	OK	
5	Terphenyl-d14	12.16	0.00	0.00	244	627937	2,037	81	31-126	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0**d**		2.0	U	
1	1,4-Dichlorobenzene				146	0		2.9	U	
1	1,2-Dichlorobenzene				146	0		2.9	U	
1	Benzyl Alcohol				108	0		2.1	U	
1	2-Methylphenol				107	0		1.5	U	
1	4-Methylphenol				107	0		1.5	U	
2	2,4-Dimethylphenol				122	0**d**		5.5	U	
2	Benzoic Acid				105	0**d**		96	U	
2	1,2,4-Trichlorobenzene				180	0		2.6	U	
2	Naphthalene				128	0		2.3	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS17\DATA\103108\1031F016.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 17:54	**Quant Date:**	11/03/2008 12:00	**Vial:**	14
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810000-001			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Hexachlorobutadiene				225	0		2.5	U	
2	2-Methylnaphthalene				142	0		2.2	U	
3	Acenaphthylene				152	0		1.2	U	
3	Dimethyl Phthalate				163	0d		1.0	U	
3	Acenaphthene				154	0		1.4	U	
3	Dibenzofuran				168	0d		1.2	U	
3	Fluorene				166	0d		1.1	U	
3	Diethyl Phthalate	9.59		0.00	149	3306	15.05	1.5	J	
3	N-Nitrosodiphenylamine				169	0d		1.6	U	
4	Hexachlorobenzene				284	0		1.2	U	
4	Pentachlorophenol				266	0		20	U	
4	Phenanthrene	10.60		0.00	178	3858	11.11	1.4	U	
4	Anthracene				178	0d		1.6	U	
4	Di-n-butyl Phthalate	11.15		0.00	149	24719	65.11	7.9	U	
4	Fluoranthene	11.75		0.00	202	4021	10.06	1.6	U	
5	Pyrene	11.98		0.00	202	4272	10.34	1.5	U	
5	Butyl Benzyl Phthalate				149	0d		3.2	U	
5	Benz(a)anthracene				228	0d		1.7	U	
5	Chrysene				228	0d		1.5	U	
5	Bis(2-ethylhexyl) Phthalate	13.62		0.00	149	10059	44.44	7.0	U	
6	Di-n-octyl Phthalate				149	0d		1.7	U	
6	Benzo(b)fluoranthene				252	0d		1.2	U	
6	Benzo(k)fluoranthene				252	0d		1.4	U	
6	Benzo(a)pyrene				252	0d		1.7	U	
6	Indeno(1,2,3-cd)pyrene				276	0d		1.5	U	
6	Dibenz(a,h)anthracene				278	0d		1.5	U	
6	Benzo(g,h,i)perylene				276	0d		1.5	U	

Prep Amount:	23.21 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	86.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F016.D
Acq On : 31 Oct 2008 5:54 pm
Sample : K0810000-001
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:41:20 2008

Vial: 14
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.39	152	69876	1000.00	ng/ml	-0.01
22) Naphthalene-d8	7.53	136	269647	1000.00	ng/ml	0.00
36) Acenaphthene-d10	9.17	164	160019	1000.00	ng/ml	0.00
60) Phenanthrene-d10	10.58	188	269349	1000.00	ng/ml	0.00
70) Chrysene-d12	13.53	240	342681	1000.00	ng/ml	-0.02
79) Perylene-d12	15.87	264	365809	1000.00	ng/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	5.31	112	146982m	1731.36	ng/ml	0.00
Spiked Amount 3750.000	Range 25 - 121		Recovery =	46.17%		
7) Phenol-d6	6.08	99	220200	1921.28	ng/ml	0.00
Spiked Amount 3750.000	Range 24 - 113		Recovery =	51.23%		
20) Nitrobenzene-d5	6.88	82	120513	1310.46	ng/ml	0.00
Spiked Amount 2500.000	Range 23 - 120		Recovery =	52.42%		
40) 2-Fluorobiphenyl	8.53	172	306761	1251.09	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 115		Recovery =	50.04%		
61) 2,4,6-Tribromophenol	9.92	330	116603	2164.75	ug/ml	0.00
Spiked Amount 3750.000	Range 19 - 122		Recovery =	57.73%		
73) Terphenyl-d14	12.16	244	627937	2037.19	ng/ml	-0.01
Spiked Amount 2500.000	Range 30 - 140		Recovery =	81.49%		
Target Compounds						Qvalue
17) Acetophenone	6.76	105	6284	47.19	ng/ml	94
55) Diethyl Phthalate	9.59	149	3306	15.05	ng/ml	96
65) Phenanthrene	10.60	178	3858	11.11	ng/ml	88
68) Di-n-butyl Phthalate	11.15	149	24719	65.11	ng/ml	99
69) Fluoranthene	11.75	202	4021	10.06	ng/ml	80
72) Pyrene	11.98	202	4272	10.34	ng/ml	86
78) Bis(2-ethylhexyl) Phthalat	13.62	149	10059	44.44	ng/ml	94

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

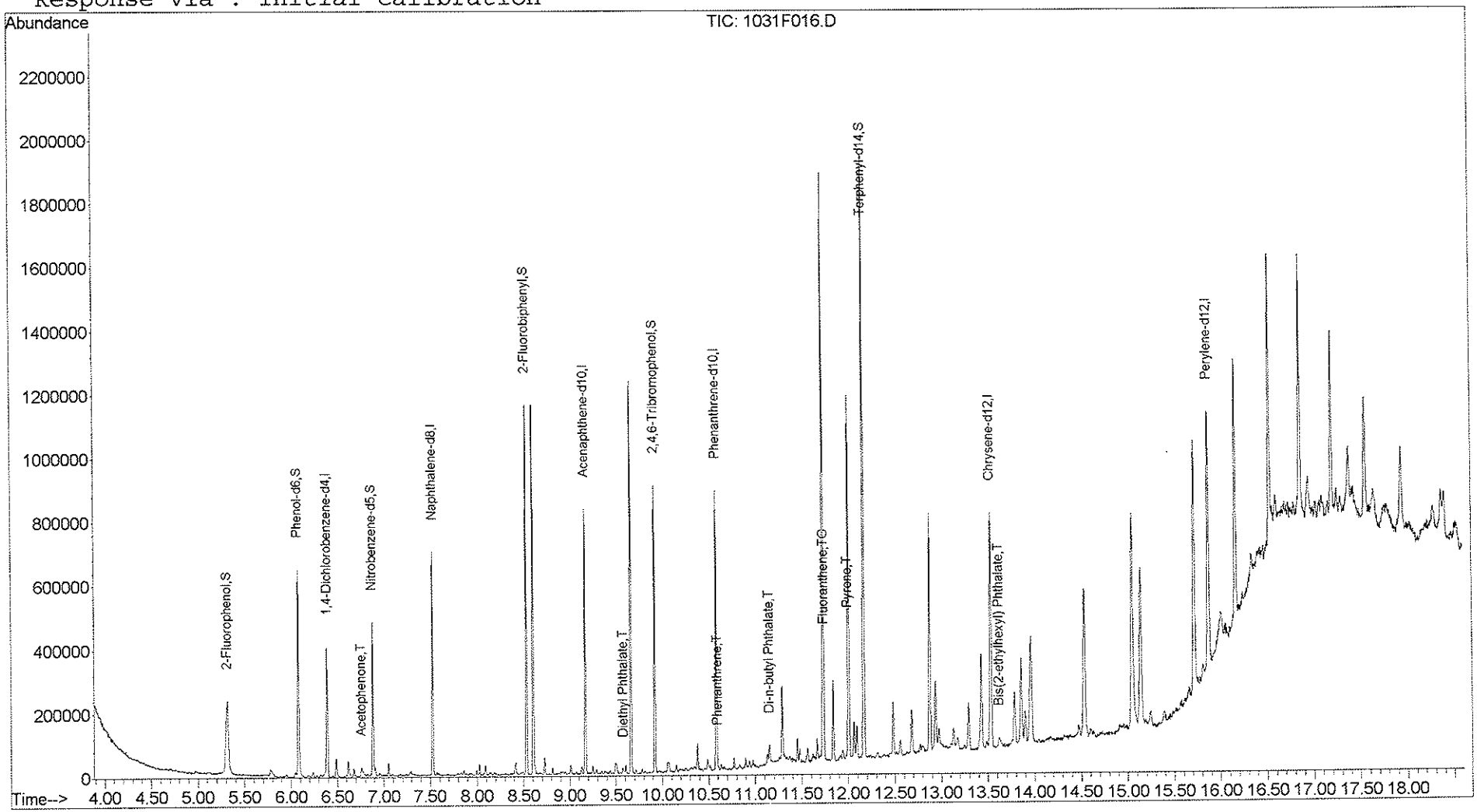
Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F016.D
Acq On : 31 Oct 2008 5:54 pm
Sample : K0810000-001
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 12:00 2008

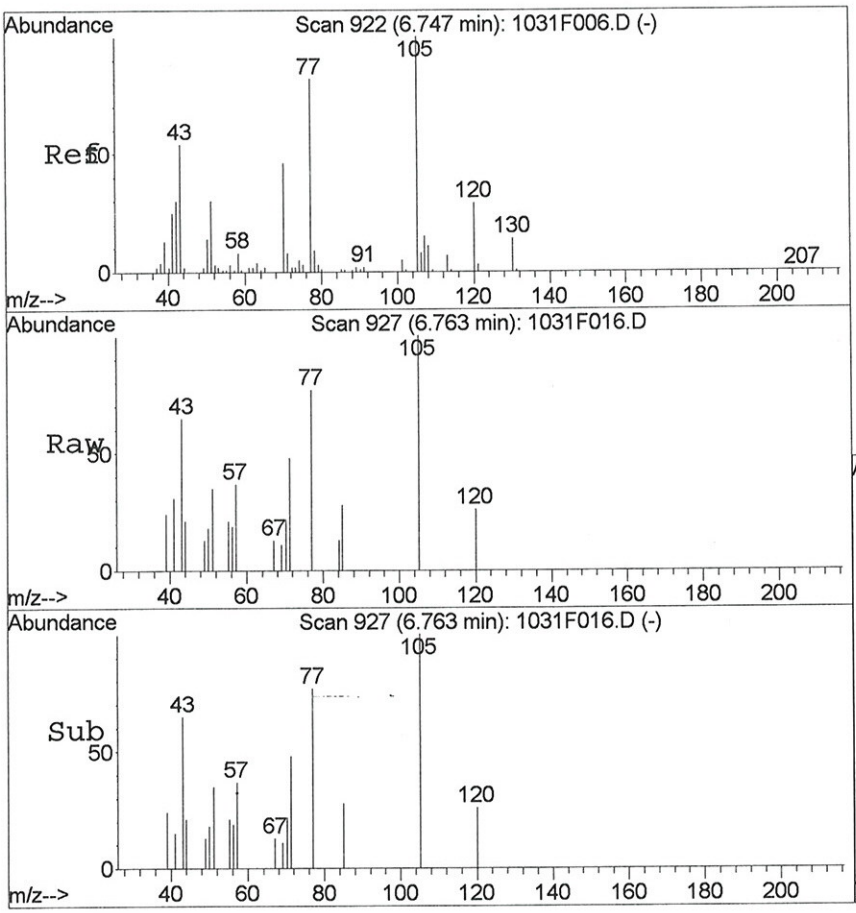
Vial: 14
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration



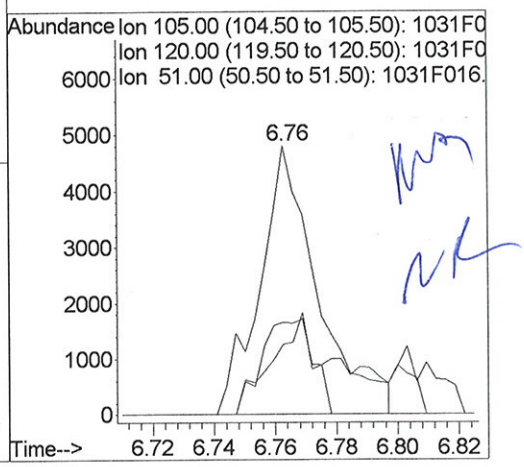
533

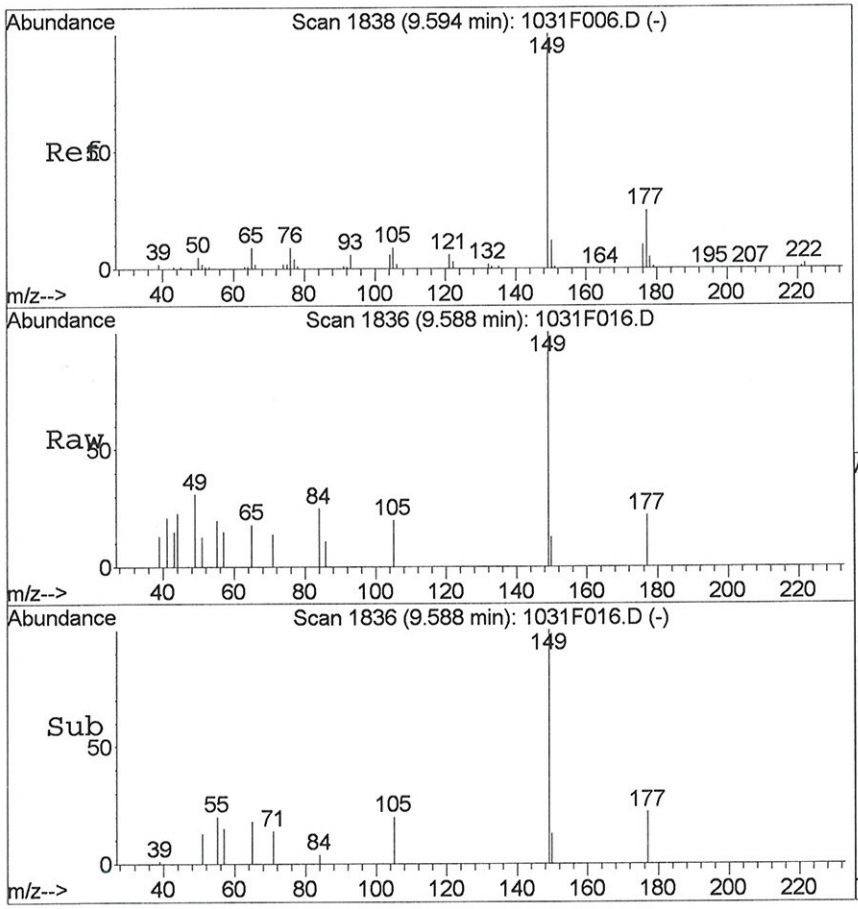


#17
Acetophenone
Concen: 47.19 ng/ml
RT: 6.76 min Scan# 927
Delta R.T. 0.01 min
Lab File: 1031F016.D
Acq: 31 Oct 2008 5:54 pm

Tgt Ion:105 Resp: 6284

Ion	Ratio	Lower	Upper
105	100		
120	26.3	0.0	58.9
51	34.5	0.8	60.8

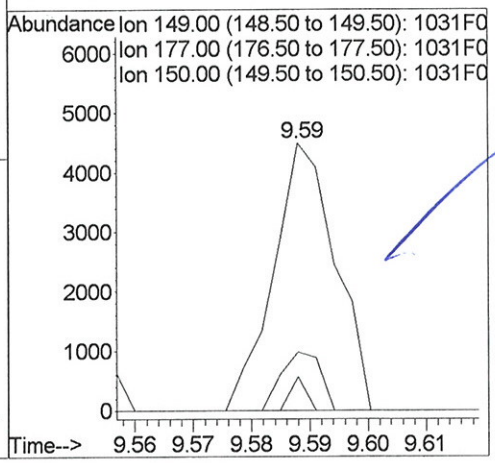




#55
Diethyl Phthalate
Concen: 15.05 ng/ml
RT: 9.59 min Scan# 1836
Delta R.T. -0.02 min
Lab File: 1031F016.D
Acq: 31 Oct 2008 5:54 pm

Tgt Ion:149 Resp: 3306

Ion	Ratio	Lower	Upper
149	100		
177	21.8	0.0	54.6
150	12.6	0.0	42.9

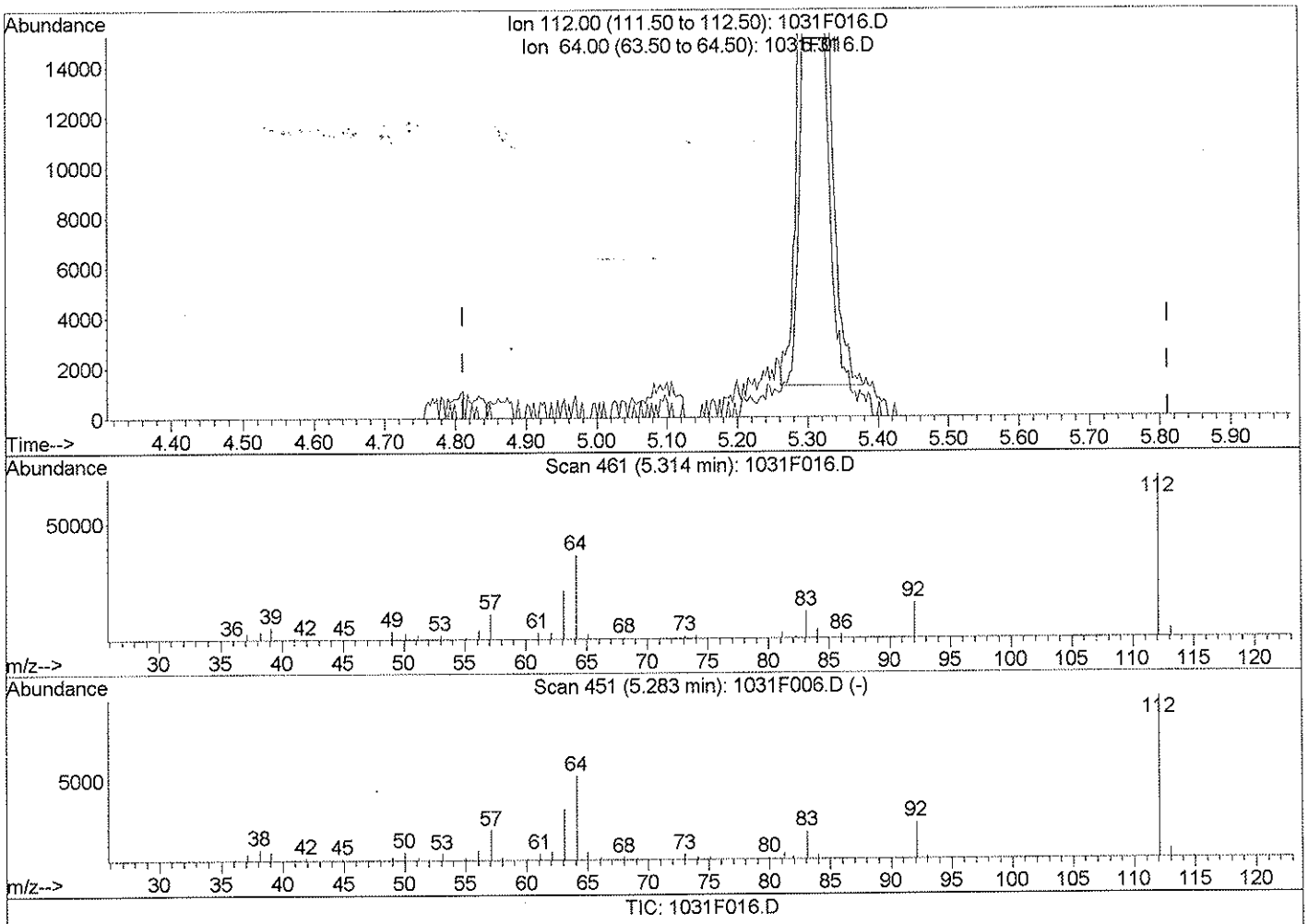


Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F016.D
Acq On : 31 Oct 2008 5:54 pm
Sample : K0810000-001
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:41 2008

Vial: 14
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration



TIC: 1031F016.D

(4) 2-Fluorophenol (S)

5.31min 1526.78ng/ml

response 129614

Ion	Exp%	Act%
112.00	100	100
64.00	55.10	52.37
0.00	0.00	0.00
0.00	0.00	0.00

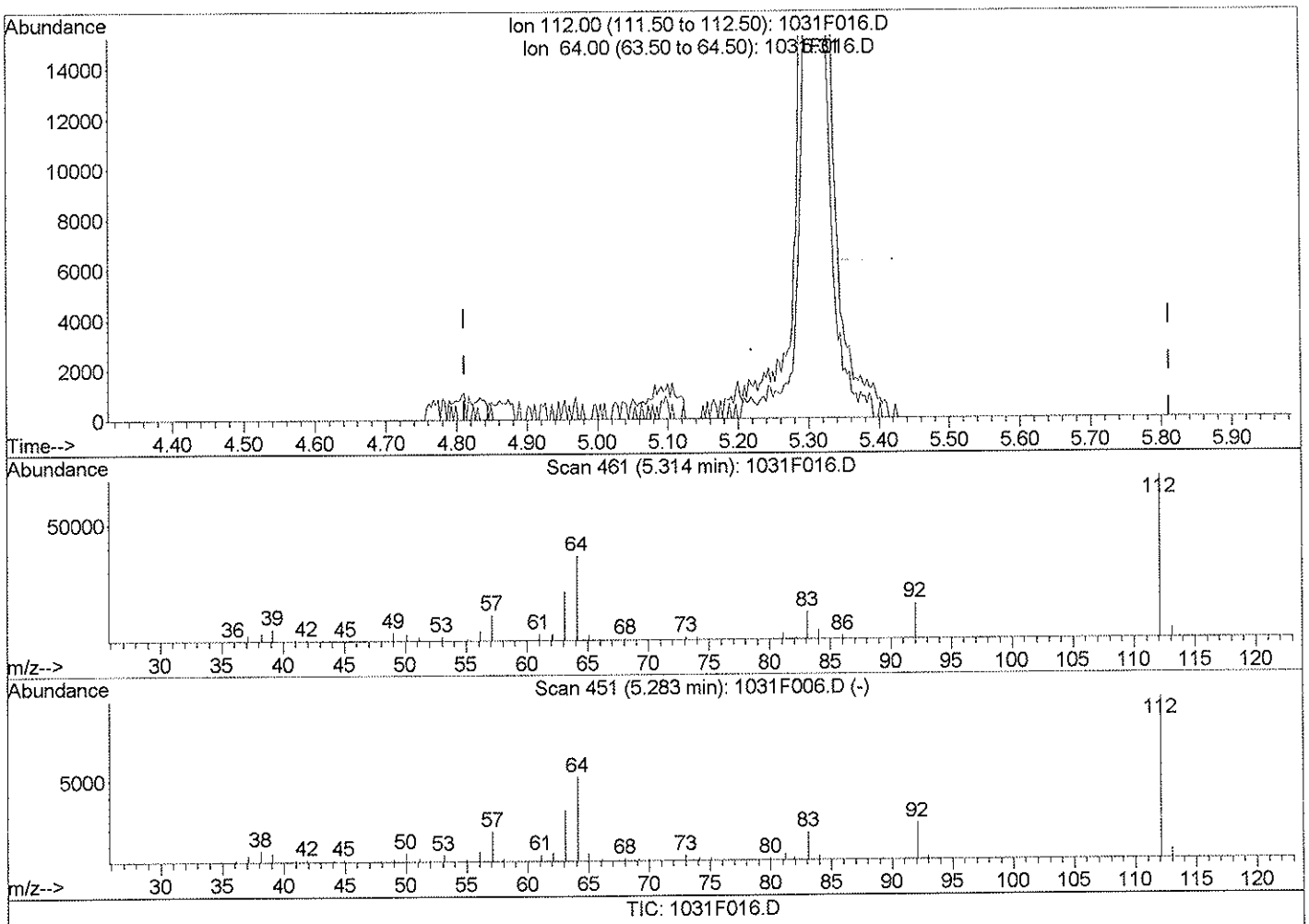
1031F016.D 102608SVOLL.M Mon Nov 03 11:58:15 2008

Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F016.D
Acq On : 31 Oct 2008 5:54 pm
Sample : K0810000-001
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:58 2008

Vial: 14
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration



TIC: 1031F016.D

(4) 2-Fluorophenol (S)

5.31min 1731.36ng/ml m

response 146982

Ion	Exp%	Act%
112.00	100	100
64.00	55.10	52.68
0.00	0.00	0.00
0.00	0.00	0.00

1c
LB 113108

1031F016.D 102608SVOLL.M Mon Nov 03 11:58:20 2008

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000
Date Collected: 10/09/2008
Date Received: 10/10/2008

Semi-Volatile Organic Compounds by GC/MS

Sample Name: DCI 4-1a
Lab Code: K0810000-002

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	30	2.0	1	10/23/08	10/31/08	KWG0811326	
Benzyl Alcohol	ND	U	20	2.1	1	10/23/08	10/31/08	KWG0811326	
1,2-Dichlorobenzene	ND	U	10	2.9	1	10/23/08	10/31/08	KWG0811326	
2-Methylphenol	ND	U	10	1.5	1	10/23/08	10/31/08	KWG0811326	
1,4-Dichlorobenzene	ND	U	10	2.9	1	10/23/08	10/31/08	KWG0811326	
4-Methylphenol†	ND	U	10	1.5	1	10/23/08	10/31/08	KWG0811326	
2,4-Dimethylphenol	ND	U	50	5.5	1	10/23/08	10/31/08	KWG0811326	
Benzoic Acid	ND	U	200	96	1	10/23/08	10/31/08	KWG0811326	
1,2,4-Trichlorobenzene	ND	U	10	2.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobutadiene	ND	U	10	2.5	1	10/23/08	10/31/08	KWG0811326	
Dimethyl Phthalate	ND	U	10	1.0	1	10/23/08	10/31/08	KWG0811326	
Diethyl Phthalate	**1.4**	J	10	1.3	1	10/23/08	10/31/08	KWG0811326	
N-Nitrosodiphenylamine	ND	U	10	1.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobenzene	ND	U	10	1.2	1	10/23/08	10/31/08	KWG0811326	
Pentachlorophenol	ND	U	100	20	1	10/23/08	10/31/08	KWG0811326	
Di-n-butyl Phthalate	ND	U	20	7.9	1	10/23/08	10/31/08	KWG0811326	
Butyl Benzyl Phthalate	ND	U	10	3.2	1	10/23/08	10/31/08	KWG0811326	
Bis(2-ethylhexyl) Phthalate	**18**	J	100	7.0	1	10/23/08	10/31/08	KWG0811326	
Di-n-octyl Phthalate	ND	U	10	1.7	1	10/23/08	10/31/08	KWG0811326	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	51	15-103	10/31/08	Acceptable
Nitrobenzene-d5	54	10-108	10/31/08	Acceptable
2-Fluorobiphenyl	48	10-105	10/31/08	Acceptable
2,4,6-Tribromophenol	55	16-122	10/31/08	Acceptable
Terphenyl-d14	76	31-126	10/31/08	Acceptable

Comments:

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	10/09/2008
Sample Matrix:	Soil	**Date Received:**	10/10/2008

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	DCI 4-1a	**Units:**	ug/Kg
Lab Code:	K0810000-002	**Basis:**	Dry

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS17\DATA\103108\1031F017.D
Lab ID: K0810000-002
RunType: SMPL
Matrix: SOIL

Date Acquired: 10/31/2008 18:20
Date Quantitated: 11/03/2008 12:01
Batch ID: KWG0811769
Analysis Method: 8270C
ListJoinID: LJ2934

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: LB 11/3/08

Secondary Review: MM 11-3-08

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8270C SVO_LL	**Collect Date:**	10/09/2008	**Receive Date:**	10/10/2008

Analysis Lot:	KWG0811769	**Prep Lot:**	KWG0811326	**Report Group:**	K0810000
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	771002	**Prep Date:**	10/23/2008		

Quant Method:	J:\MS17\METHODS\FULL_SCAN\102608SVOLL.	**Calibration ID:**	CAL7891
Title:	Semi-Volatile Organic Compounds by GC/MS	**Report List ID:**	LJ2934
Tune Ref:	J:\MS17\DATA\103108\1031F005.D	**Method ID:**	MJ142
MB Ref:	J:\MS17\DATA\103108\1031F007.D	**Quant based on Report List**	

Data File:	J:\MS17\DATA\103108\1031F017.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 18:20	**Quant Date:**	11/03/2008 12:01	**Vial:**	15
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810000-002			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	6.39	0.01	152	67785	1,000.00	OK
2	Naphthalene-d8	7.53	0.01	136	264315	1,000.00	OK
3	Acenaphthene-d10	9.17	0.00	164	160473	1,000.00	OK
4	Phenanthrene-d10	10.58	0.00	188	265009	1,000.00	OK
5	Chrysene-d12	13.53	0.00	240	332917	1,000.00	OK
6	Perylene-d12	15.87	0.01	264	347987	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	5.32	0.04	0.00	112	141524m	1,719	46	10-89	OK	
1	Phenol-d6	6.08	0.01	0.00	99	214617	1,930	51	15-103	OK	
1	Nitrobenzene-d5	6.88	0.00	0.00	82	120320	1,349	54	10-108	OK	
3	2-Fluorobiphenyl	8.53	0.00	0.00	172	297736	1,211	48	10-105	OK	
4	2,4,6-Tribromophenol	9.92	0.00	0.00	330	110039	2,076	55	16-122	OK	
5	Terphenyl-d14	12.16	0.00	0.00	244	565276	1,888	76	31-126	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Phenol				94	0d		2.0	U	
1	1,4-Dichlorobenzene				146	0		2.9	U	
1	1,2-Dichlorobenzene				146	0		2.9	U	
1	Benzyl Alcohol				108	0		2.1	U	
1	2-Methylphenol				107	0		1.5	U	
1	4-Methylphenol				107	0		1.5	U	
2	2,4-Dimethylphenol				122	0d		5.5	U	
2	Benzoic Acid	7.28	-0.04	-0.01	105	2465	560.70	96	U	
2	1,2,4-Trichlorobenzene				180	0		2.6	U	
2	Naphthalene				128	0d		2.3	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS17\DATA\103108\1031F017.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 18:20	**Quant Date:**	11/03/2008 12:01	**Vial:**	15
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810000-002			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Hexachlorobutadiene				225	0		2.5	U	
2	2-Methylnaphthalene				142	0		2.2	U	
3	Acenaphthylene				152	0		1.2	U	
3	Dimethyl Phthalate				163	0d		1.0	U	
3	Acenaphthene				154	0		1.4	U	
3	Dibenzofuran				168	0d		1.2	U	
3	Fluorene				166	0d		1.1	U	
3	Diethyl Phthalate	9.59		0.00	149	3033	13.77	1.4	J	
3	N-Nitrosodiphenylamine				169	0d		1.6	U	
4	Hexachlorobenzene				284	0		1.2	U	
4	Pentachlorophenol				266	0		20	U	
4	Phenanthrene	10.60		0.00	178	3725	10.91	1.4	U	
4	Anthracene				178	0d		1.6	U	
4	Di-n-butyl Phthalate	11.15		0.00	149	20032	53.63	7.9	U	
4	Fluoranthene	11.75		0.00	202	3995	10.16	1.6	U	
5	Pyrene	11.98		0.00	202	3760	9.37	1.5	U	
5	Butyl Benzyl Phthalate				149	0d		3.2	U	
5	Benz(a)anthracene				228	0d		1.7	U	
5	Chrysene				228	0d		1.5	U	
5	Bis(2-ethylhexyl) Phthalate	13.62		0.00	149	40589	184.59	18	J	
6	Di-n-octyl Phthalate				149	0d		1.7	U	
6	Benzo(b)fluoranthene				252	0d		1.2	U	
6	Benzo(k)fluoranthene				252	0d		1.4	U	
6	Benzo(a)pyrene				252	0d		1.7	U	
6	Indeno(1,2,3-cd)pyrene				276	0d		1.5	U	
6	Dibenz(a,h)anthracene				278	0d		1.5	U	
6	Benzo(g,h,i)perylene				276	0d		1.5	U	

Prep Amount:	23.42 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	85.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F017.D
Acq On : 31 Oct 2008 6:20 pm
Sample : K0810000-002
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:41:21 2008

Vial: 15
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.39	152	67785	1000.00	ng/ml	0.00
22) Naphthalene-d8	7.53	136	264315	1000.00	ng/ml	0.00
36) Acenaphthene-d10	9.17	164	160473	1000.00	ng/ml	0.00
60) Phenanthrene-d10	10.58	188	265009	1000.00	ng/ml	0.00
70) Chrysene-d12	13.53	240	332917	1000.00	ng/ml	-0.02
79) Perylene-d12	15.87	264	347987	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	5.32	112	141524m	1718.50	ng/ml	0.00
Spiked Amount 3750.000	Range 25 - 121		Recovery =	45.83%		
7) Phenol-d6	6.08	99	214617	1930.33	ng/ml	0.00
Spiked Amount 3750.000	Range 24 - 113		Recovery =	51.48%		
20) Nitrobenzene-d5	6.88	82	120320	1348.72	ng/ml	0.00
Spiked Amount 2500.000	Range 23 - 120		Recovery =	53.95%		
40) 2-Fluorobiphenyl	8.53	172	297736	1210.85	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 115		Recovery =	48.43%		
61) 2,4,6-Tribromophenol	9.92	330	110039	2076.35	ug/ml	0.00
Spiked Amount 3750.000	Range 19 - 122		Recovery =	55.37%		
73) Terphenyl-d14	12.16	244	565276	1887.69	ng/ml	-0.01
Spiked Amount 2500.000	Range 30 - 140		Recovery =	75.51%		
Target Compounds						Qvalue
17) Acetophenone	6.77	105	6096	47.19	ng/ml	98
28) Benzoic Acid	7.28	105	2465	560.70	ng/ml	85
55) Diethyl Phthalate	9.59	149	3033	13.77	ng/ml	95
65) Phenanthrene	10.60	178	3725	10.91	ng/ml	97
68) Di-n-butyl Phthalate	11.15	149	20032	53.63	ng/ml	96
69) Fluoranthene	11.75	202	3995	10.16	ng/ml	96
72) Pyrene	11.98	202	3760	9.37	ng/ml	81
78) Bis(2-ethylhexyl) Phthalat	13.62	149	40589	184.59	ng/ml	96

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

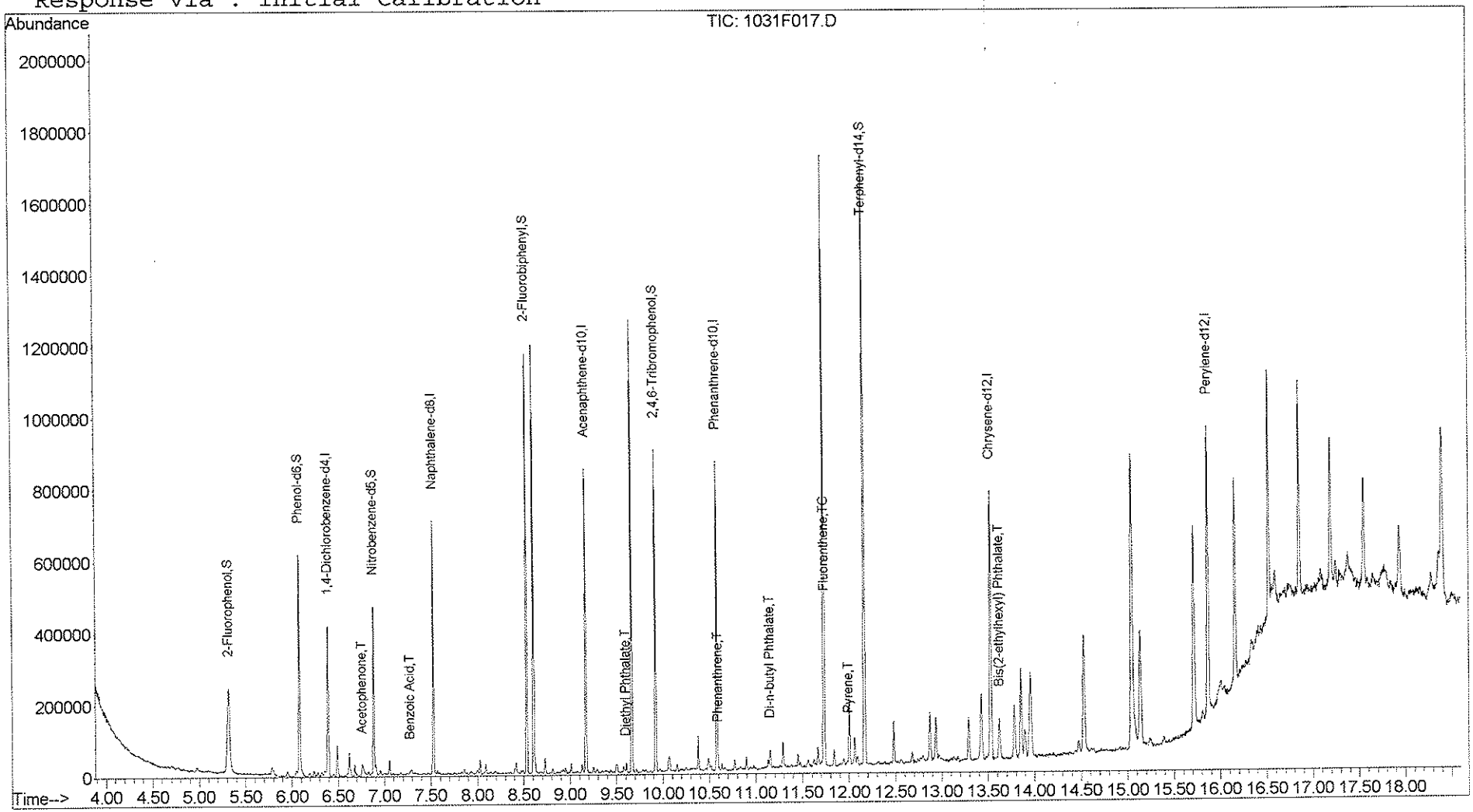
Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F017.D
Acq On : 31 Oct 2008 6:20 pm
Sample : K0810000-002
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 12:01 2008

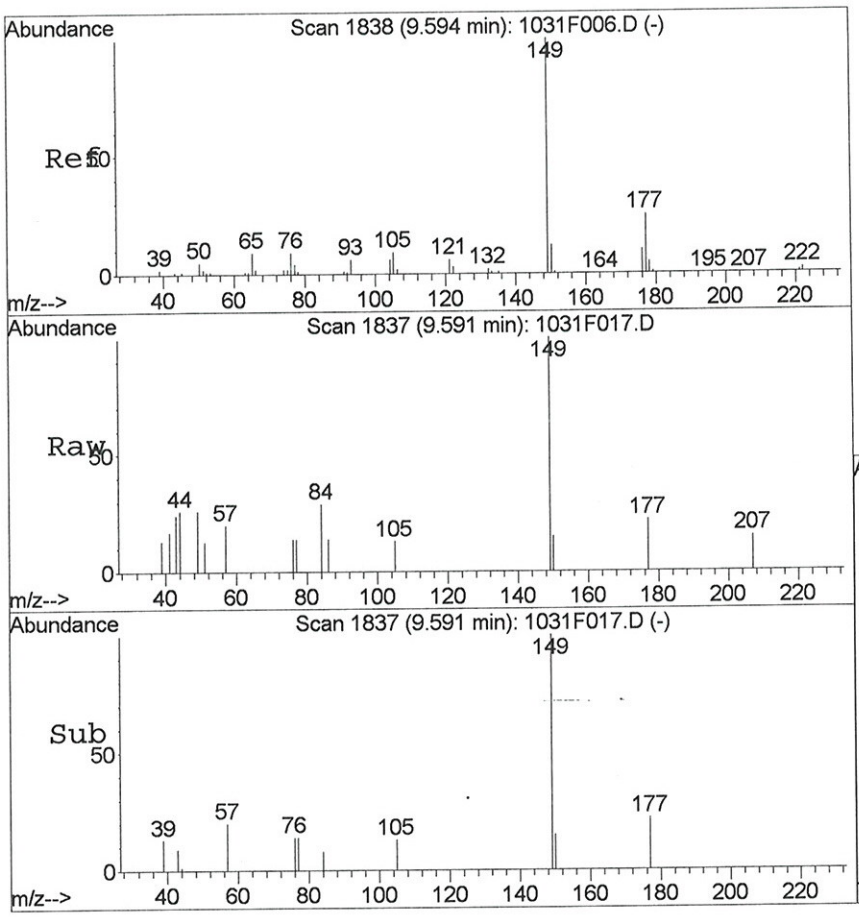
Vial: 15
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration



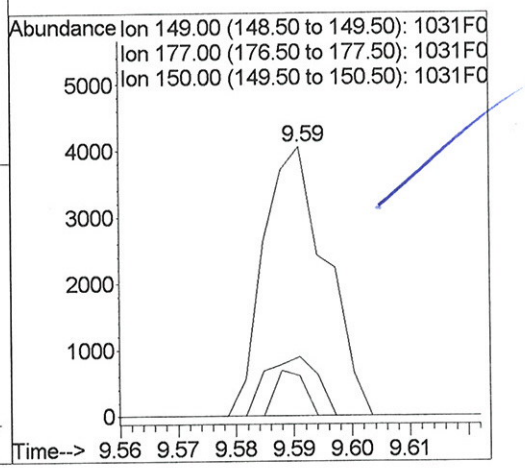
543

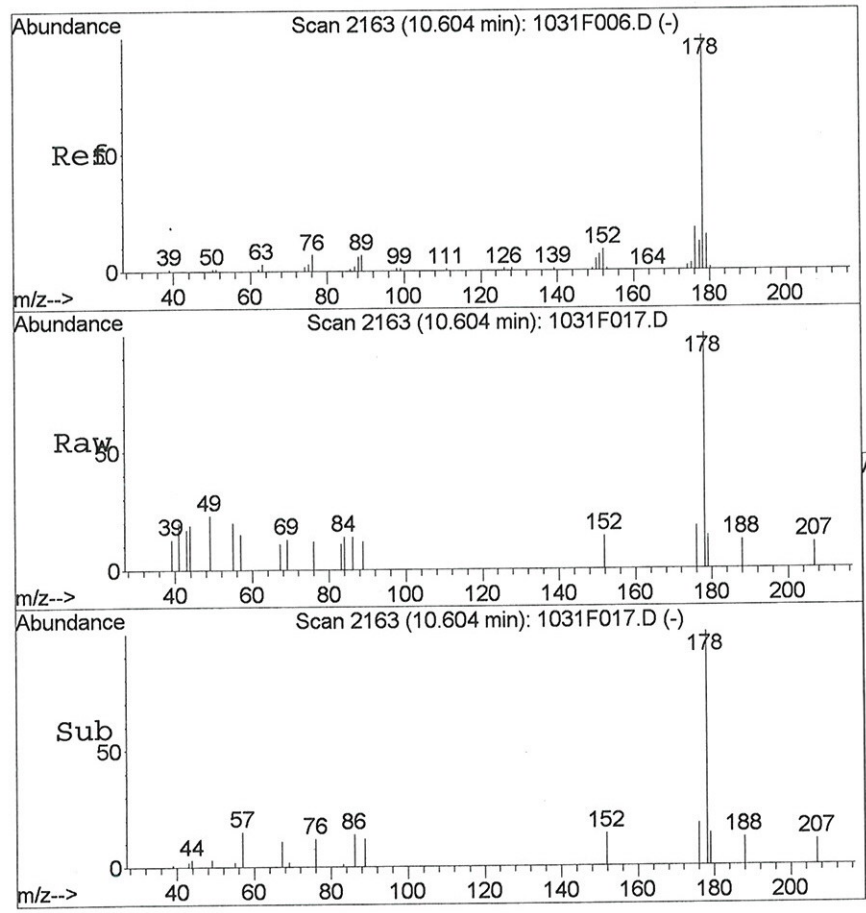


#55
Diethyl Phthalate
Concen: 13.77 ng/ml
RT: 9.59 min Scan# 1837
Delta R.T. -0.01 min
Lab File: 1031F017.D
Acq: 31 Oct 2008 6:20 pm

Tgt Ion:149 Resp: 3033

Ion	Ratio	Lower	Upper
149	100		
177	22.0	0.0	54.6
150	14.9	0.0	42.9

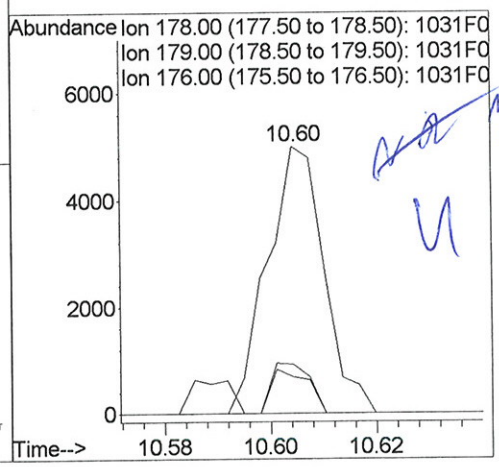




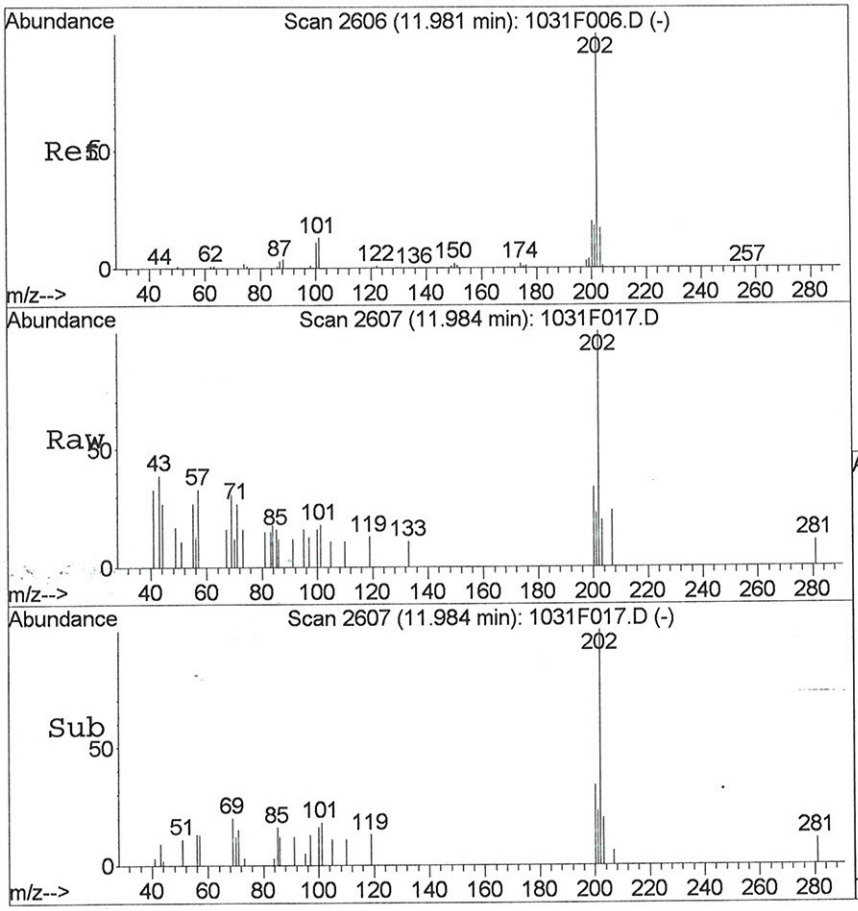
#65
Phenanthrene
Concen: 10.91 ng/ml
RT: 10.60 min Scan# 2163
Delta R.T. -0.01 min
Lab File: 1031F017.D
Acq: 31 Oct 2008 6:20 pm

Tgt Ion:178 Resp: 3725

Ion	Ratio	Lower	Upper
178	100		
179	13.8	0.0	45.6
176	18.4	0.0	47.7



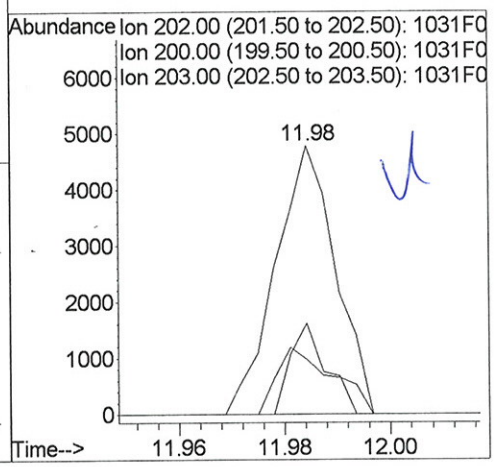
11-3-08

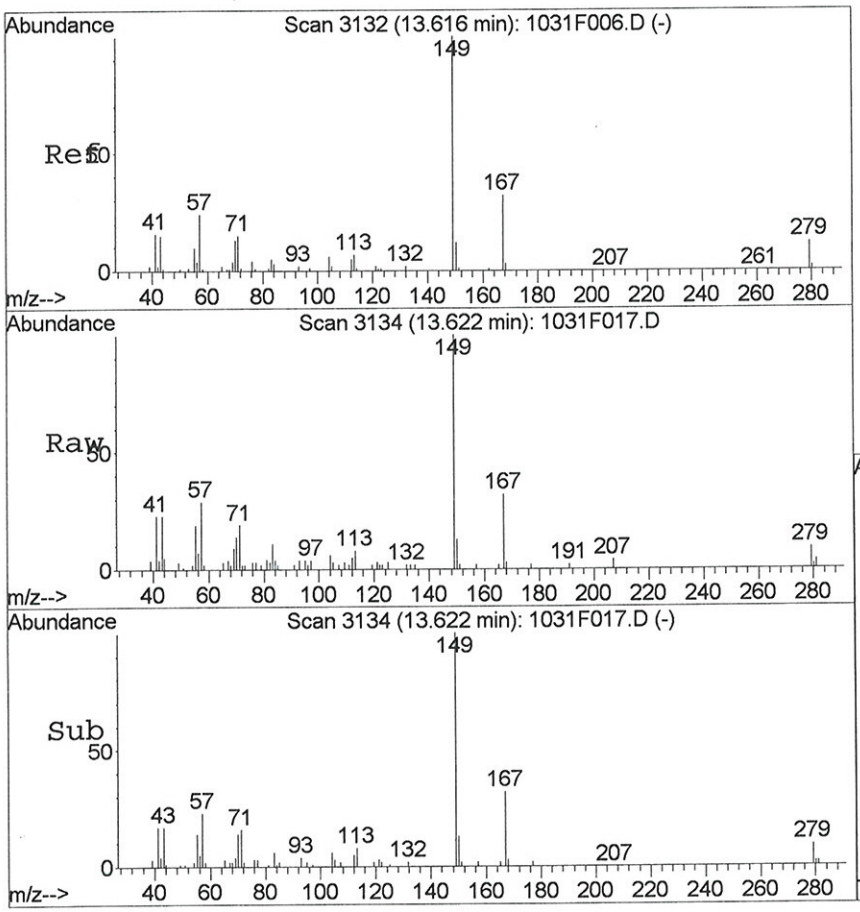


#72
Pyrene
Concen: 9.37 ng/ml
RT: 11.98 min Scan# 2607
Delta R.T. -0.01 min
Lab File: 1031F017.D
Acq: 31 Oct 2008 6:20 pm

Tgt Ion:202 Resp: 3760

Ion	Ratio	Lower	Upper
202	100		
200	33.8	0.0	49.7
203	20.3	0.0	47.6

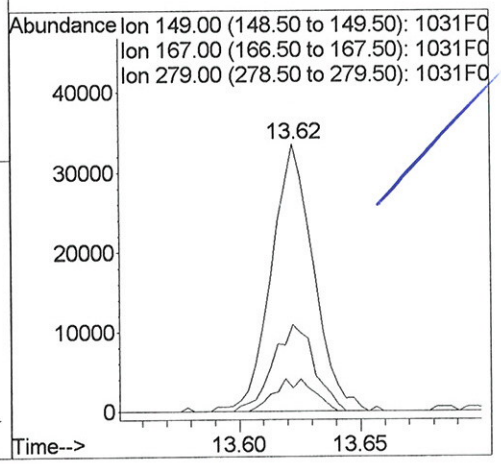




#78
Bis(2-ethylhexyl) Phthalate
Concen: 184.59 ng/ml
RT: 13.62 min Scan# 3134
Delta R.T. -0.02 min
Lab File: 1031F017.D
Acq: 31 Oct 2008 6:20 pm

Tgt Ion:149 Resp: 40589

Ion	Ratio	Lower	Upper
149	100		
167	32.5	1.3	61.3
279	8.8	0.0	42.0



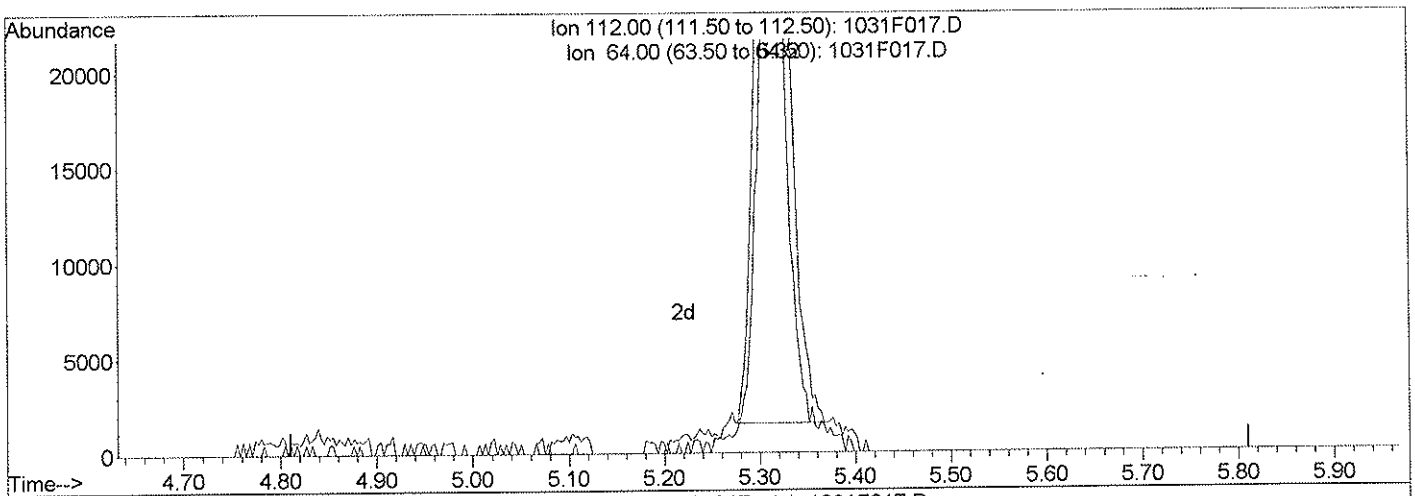
Quantitation Report (Qedit)

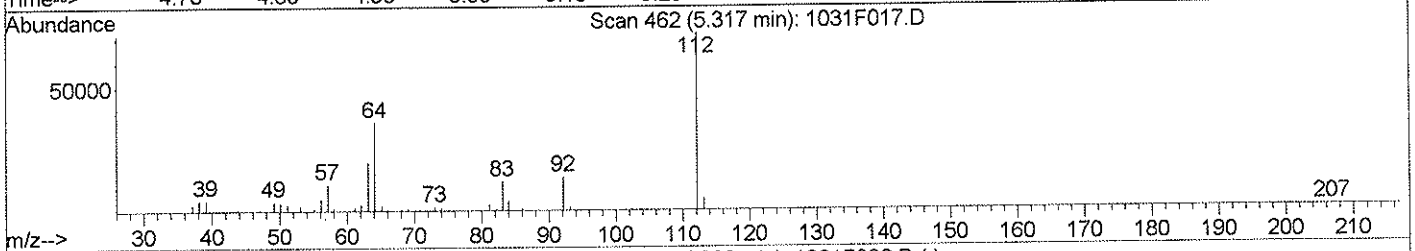
Data File : J:\MS17\DATA\103108\1031F017.D
Acq On : 31 Oct 2008 6:20 pm
Sample : K0810000-002
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:41 2008

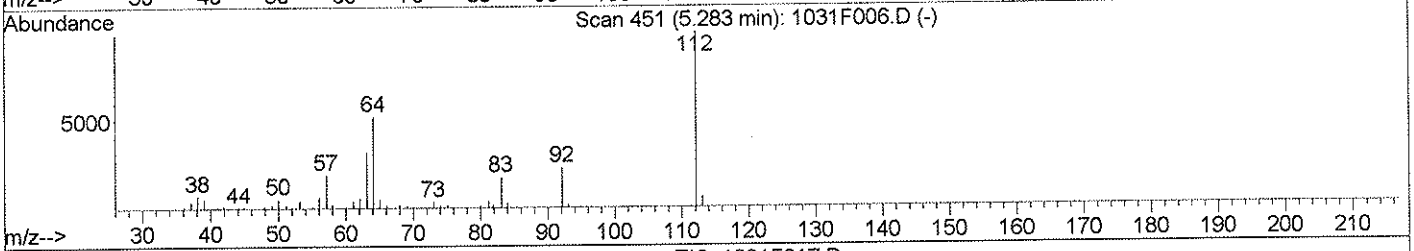
Vial: 15
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration







TIC: 1031F017.D

(4) 2-Fluorophenol (S)

5.32min 1526.98ng/ml

response 125752

Ion	Exp%	Act%
112.00	100	100
64.00	55.10	50.07
0.00	0.00	0.00
0.00	0.00	0.00

1031F017.D 102608SVOLL.M Mon Nov 03 12:00:11 2008

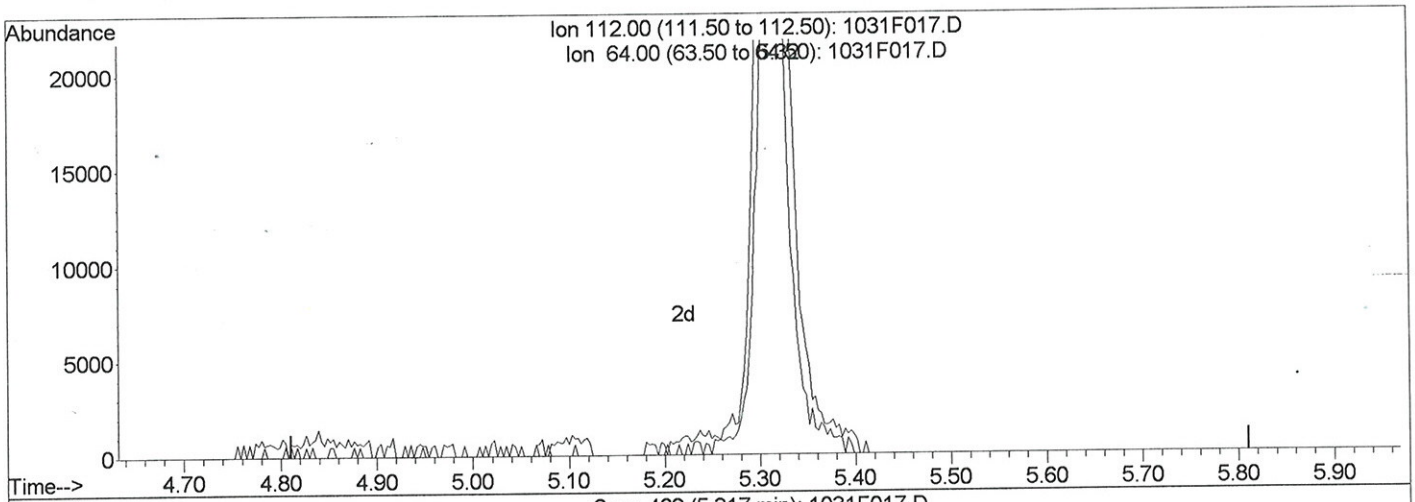
Quantitation Report (Qedit)

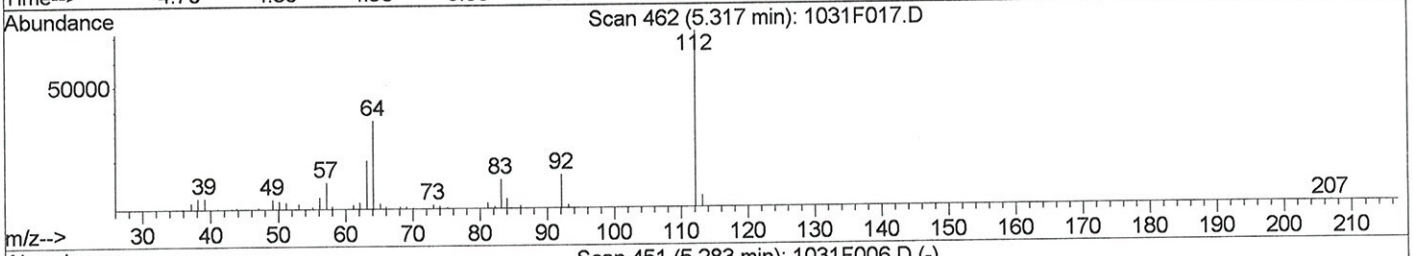
Data File : J:\MS17\DATA\103108\1031F017.D
Acq On : 31 Oct 2008 6:20 pm
Sample : K0810000-002
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 12:00 2008

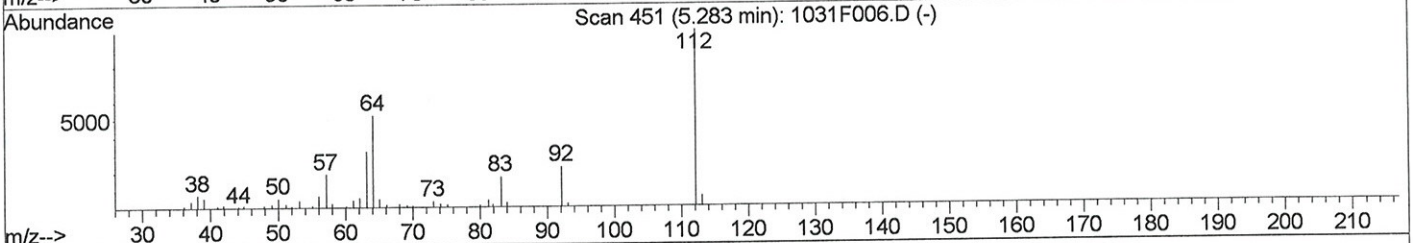
Vial: 15
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration







TIC: 1031F017.D

(4) 2-Fluorophenol (S)

5.32min 1718.50ng/ml m

response 141524

Ion	Exp%	Act%
112.00	100	100
64.00	55.10	50.34
0.00	0.00	0.00
0.00	0.00	0.00

IC
LB 1113108
11-3-08

1031F017.D 102608SVOLL.M Mon Nov 03 12:00:16 2008

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG0811326-5

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	15	2.0	1	10/23/08	10/31/08	KWG0811326	
Benzyl Alcohol	ND	U	10	2.1	1	10/23/08	10/31/08	KWG0811326	
1,2-Dichlorobenzene	ND	U	5.0	2.9	1	10/23/08	10/31/08	KWG0811326	
2-Methylphenol	ND	U	5.0	1.5	1	10/23/08	10/31/08	KWG0811326	
1,4-Dichlorobenzene	ND	U	5.0	2.9	1	10/23/08	10/31/08	KWG0811326	
4-Methylphenol†	ND	U	5.0	1.5	1	10/23/08	10/31/08	KWG0811326	
2,4-Dimethylphenol	ND	U	25	5.5	1	10/23/08	10/31/08	KWG0811326	
Benzoic Acid	ND	U	100	96	1	10/23/08	10/31/08	KWG0811326	
1,2,4-Trichlorobenzene	ND	U	5.0	2.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobutadiene	ND	U	5.0	2.5	1	10/23/08	10/31/08	KWG0811326	
Dimethyl Phthalate	ND	U	5.0	1.0	1	10/23/08	10/31/08	KWG0811326	
Diethyl Phthalate	ND	U	5.0	1.3	1	10/23/08	10/31/08	KWG0811326	
N-Nitrosodiphenylamine	ND	U	5.0	1.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobenzene	ND	U	5.0	1.2	1	10/23/08	10/31/08	KWG0811326	
Pentachlorophenol	ND	U	50	20	1	10/23/08	10/31/08	KWG0811326	
Di-n-butyl Phthalate	ND	U	10	7.9	1	10/23/08	10/31/08	KWG0811326	
Butyl Benzyl Phthalate	ND	U	5.0	3.2	1	10/23/08	10/31/08	KWG0811326	
Bis(2-ethylhexyl) Phthalate	ND	U	50	7.0	1	10/23/08	10/31/08	KWG0811326	
Di-n-octyl Phthalate	ND	U	5.0	1.7	1	10/23/08	10/31/08	KWG0811326	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	49	15-103	10/31/08	Acceptable
Nitrobenzene-d5	51	10-108	10/31/08	Acceptable
2-Fluorobiphenyl	48	10-105	10/31/08	Acceptable
2,4,6-Tribromophenol	49	16-122	10/31/08	Acceptable
Terphenyl-d14	86	31-126	10/31/08	Acceptable

Comments:

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG0811326-5	**Basis:**	Dry

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS17\DATA\103108\1031F007.D
Lab ID: KWG0811326-5
RunType: MB
Matrix: SOIL

Date Acquired: 10/31/2008 14:00
Date Quantitated: 11/03/2008 11:43
Batch ID: KWG0811769
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

L10010 2x
L10000
L10032
L10048

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Std MRL Unsupported by ICAL	2,3,4,6-Tetrachlorophenol	25	5.0	NA	NT

Primary Review: LB 11/3/08
Secondary Review: JW 11-3-08

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8270C SVO_LL	**Collect Date:**		**Receive Date:**	10/30/2008

Analysis Lot:	KWG0811769	**Prep Lot:**	KWG0811326	**Report Group:**	
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	771020	**Prep Date:**	10/23/2008		

Quant Method:	J:\MS17\METHODS\FULL_SCAN\102608SVOLL.	**Calibration ID:**	CAL7891
Title:			
Tune Ref:	J:\MS17\DATA\103108\1031F005.D	**Method ID:**	MJ142
MB Ref:		**Quant based on Method**	

Data File:	J:\MS17\DATA\103108\1031F007.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 14:00	**Quant Date:**	11/03/2008 11:43	**Vial:**	5
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG0811326-5			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	6.38	0.00	152	58533	1,000.00	OK
2	Naphthalene-d8	7.52	0.00	136	224896	1,000.00	OK
3	Acenaphthene-d10	9.17	0.00	164	138082	1,000.00	OK
4	Phenanthrene-d10	10.58	0.00	188	227970	1,000.00	OK
5	Chrysene-d12	13.52	-0.01	240	277951	1,000.00	OK
6	Perylene-d12	15.86	0.00	264	287856	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	5.29	0.01	0.00	112	120051**m**	1,688	45	10-89	OK	
1	Phenol-d6	6.07	0.00	0.00	99	176430	1,838	49	15-103	OK	
1	Nitrobenzene-d5	6.88	0.00	0.00	82	97481	1,265	51	10-108	OK	
3	2-Fluorobiphenyl	8.53	0.00	0.00	172	251908	1,191	48	10-105	OK	
4	2,4,6-Tribromophenol	9.91	-0.01	0.00	330	84297	1,849	49	16-122	OK	
5	Terphenyl-d14	12.16	0.00	0.00	244	540109	2,160	86	31-126	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine				74	0		6.1	U	
1	Pyridine				79	0		25	U	
1	Aniline				93	0		1.5	U	
1	Bis(2-chloroethyl) Ether				93	0		1.9	U	
1	Phenol				94	0**d**		2.0	U	
1	2-Chlorophenol				128	0		2.0	U	
1	1,3-Dichlorobenzene				146	0		3.0	U	
1	1,4-Dichlorobenzene				146	0		2.9	U	
1	1,2-Dichlorobenzene				146	0		2.9	U	
1	Benzyl Alcohol				108	0		2.1	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS17\DATA\103108\1031F007.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 14:00	**Quant Date:**	11/03/2008 11:43	**Vial:**	5
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG0811326-5			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether				45	0d		2.6	U	
1	2-Methylphenol				107	0		1.5	U	
1	Hexachloroethane				117	0d		3.1	U	
1	Acetophenone	6.77	0.02	0.00	105	7401	66.34	12	U	
1	N-Nitrosodi-n-propylamine				70	0d		2.4	U	
1	4-Methylphenol				107	0		1.5	U	
1	Nitrobenzene				77	0d		2.2	U	
2	Isophorone				82	0d		1.0	U	
2	2-Nitrophenol				139	0		1.5	U	
2	2,4-Dimethylphenol				122	0		5.5	U	
2	Bis(2-chloroethoxy)methane				93	0		1.5	U	
2	2,4-Dichlorophenol				162	0		1.0	U	
2	Benzoic Acid				105	0		96	U	
2	1,2,4-Trichlorobenzene				180	0		2.6	U	
2	Naphthalene				128	0		2.3	U	
2	4-Chloroaniline				127	0		1.9	U	
2	Hexachlorobutadiene				225	0		2.5	U	
2	4-Chloro-3-methylphenol				107	0		1.4	U	
2	2-Methylnaphthalene				142	0		2.2	U	
2	1-Methylnaphthalene				142	0d		2.2	U	
3	Hexachlorocyclopentadiene				237	0		29	U	
3	2,4,6-Trichlorophenol				196	0		1.4	U	
3	2,4,5-Trichlorophenol				196	0		1.5	U	
3	2-Chloronaphthalene				162	0d		1.6	U	
3	2-Nitroaniline				65	0		3.2	U	
3	Acenaphthylene				152	0		1.2	U	
3	Dimethyl Phthalate				163	0d		1.0	U	
3	2,6-Dinitrotoluene				165	0d		2.0	U	
3	Acenaphthene				154	0		1.4	U	
3	3-Nitroaniline				138	0		2.5	U	
3	2,4-Dinitrophenol				184	0		17	U	
3	Dibenzofuran				168	0d		1.2	U	
3	4-Nitrophenol				65	0		18	U	
3	2,4-Dinitrotoluene				165	0d		1.5	U	
3	2,3,4,6-Tetrachlorophenol				232	0		1.7	U	
3	Fluorene				166	0d		1.1	U	
3	4-Chlorophenyl Phenyl Ether				204	0		1.4	U	
3	Diethyl Phthalate	9.59		0.00	149	2517	13.28	1.3	U	
3	4-Nitroaniline				138	0		1.8	U	
3	2-Methyl-4,6-dinitrophenol				198	0		1.4	U	
3	N-Nitrosodiphenylamine				169	0d		1.6	U	
3	Azobenzene				77	0		1.1	U	

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c: check for co-elution

Data File:	J:\MS17\DATA\103108\1031F007.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 14:00	**Quant Date:**	11/03/2008 11:43	**Vial:**	5
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG0811326-5			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	4-Bromophenyl Phenyl Ether				248	0d		1.6	U	
4	Hexachlorobenzene				284	0		1.2	U	
4	Pentachlorophenol				266	0		20	U	
4	Phenanthrene				178	0d		1.4	U	
4	Anthracene				178	0d		1.6	U	
4	Carbazole				167	0		1.3	U	
4	Di-n-butyl Phthalate	11.15		0.00	149	18380	57.20	7.9	U	
4	Fluoranthene				202	0d		1.6	U	
5	Benzidine				184	0d		100	U	
5	Pyrene	11.97	-0.01	0.00	202	2792	8.33	1.5	U	
5	Butyl Benzyl Phthalate	12.76	-0.01	0.00	149	1388	10.73	3.2	U	
5	3,3'-Dichlorobenzidine				252	0		3.7	U	
5	Benz(a)anthracene				228	0d		1.7	U	
5	Chrysene				228	0d		1.5	U	
5	Bis(2-ethylhexyl) Phthalate	13.62		0.00	149	4606	25.09	7.0	U	
6	Di-n-octyl Phthalate				149	0		1.7	U	
6	Benzo(b)fluoranthene				252	0		1.2	U	
6	Benzo(k)fluoranthene				252	0		1.4	U	
6	Benzo(a)pyrene				252	0d		1.7	U	
6	Indeno(1,2,3-cd)pyrene				276	0		1.5	U	
6	Dibenz(a,h)anthracene				278	0		1.5	U	
6	Benzo(g,h,i)perylene				276	0		1.5	U	
	Guaiacol				0	0		15	U	NR

Prep Amount:	40.06 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

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E: Analyte concentration above high point of ICAL
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D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

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#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F007.D
Acq On : 31 Oct 2008 2:00 pm
Sample : KWG0811326-5 | MB
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:41:10 2008

Vial: 5
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:39:24 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

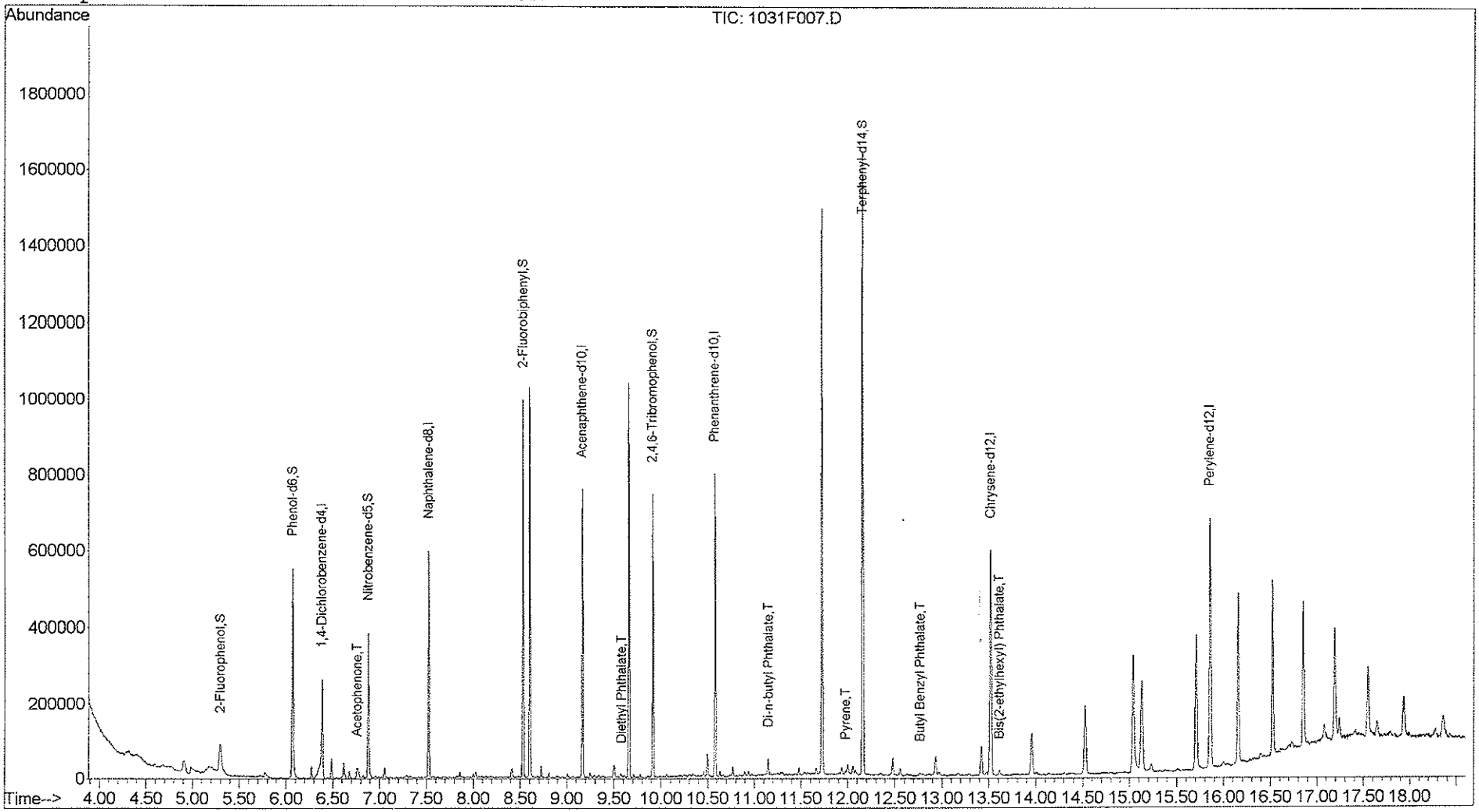
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.38	152	58533	1000.00	ng/ml	-0.02
22) Naphthalene-d8	7.52	136	224896	1000.00	ng/ml	-0.01
36) Acenaphthene-d10	9.17	164	138082	1000.00	ng/ml	-0.01
60) Phenanthrene-d10	10.58	188	227970	1000.00	ng/ml	-0.02
70) Chrysene-d12	13.52	240	277951	1000.00	ng/ml	-0.03
79) Perylene-d12	15.86	264	287856	1000.00	ng/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	5.29	112	120051m	1688.17	ng/ml	-0.02
Spiked Amount 3750.000	Range 25 - 121		Recovery = 45.02%			
7) Phenol-d6	6.07	99	176430	1837.69	ng/ml	0.00
Spiked Amount 3750.000	Range 24 - 113		Recovery = 49.01%			
20) Nitrobenzene-d5	6.88	82	97481	1265.43	ng/ml	-0.01
Spiked Amount 2500.000	Range 23 - 120		Recovery = 50.62%			
40) 2-Fluorobiphenyl	8.53	172	251908	1190.60	ng/ml	-0.01
Spiked Amount 2500.000	Range 30 - 115		Recovery = 47.62%			
61) 2,4,6-Tribromophenol	9.91	330	84297	1849.05	ug/ml	-0.02
Spiked Amount 3750.000	Range 19 - 122		Recovery = 49.31%			
73) Terphenyl-d14	12.16	244	540109	2160.32	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 140		Recovery = 86.41%			
Target Compounds						Qvalue
17) Acetophenone	6.77	105	7401	66.34	ng/ml	94
55) Diethyl Phthalate	9.59	149	2517	13.28	ng/ml	86
68) Di-n-butyl Phthalate	11.15	149	18380	57.20	ng/ml	98
72) Pyrene	11.97	202	2792	8.33	ng/ml	75
74) Butyl Benzyl Phthalate	12.76	149	1388	10.73	ng/ml	80
78) Bis(2-ethylhexyl) Phthalat	13.62	149	4606	25.09	ng/ml	83

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

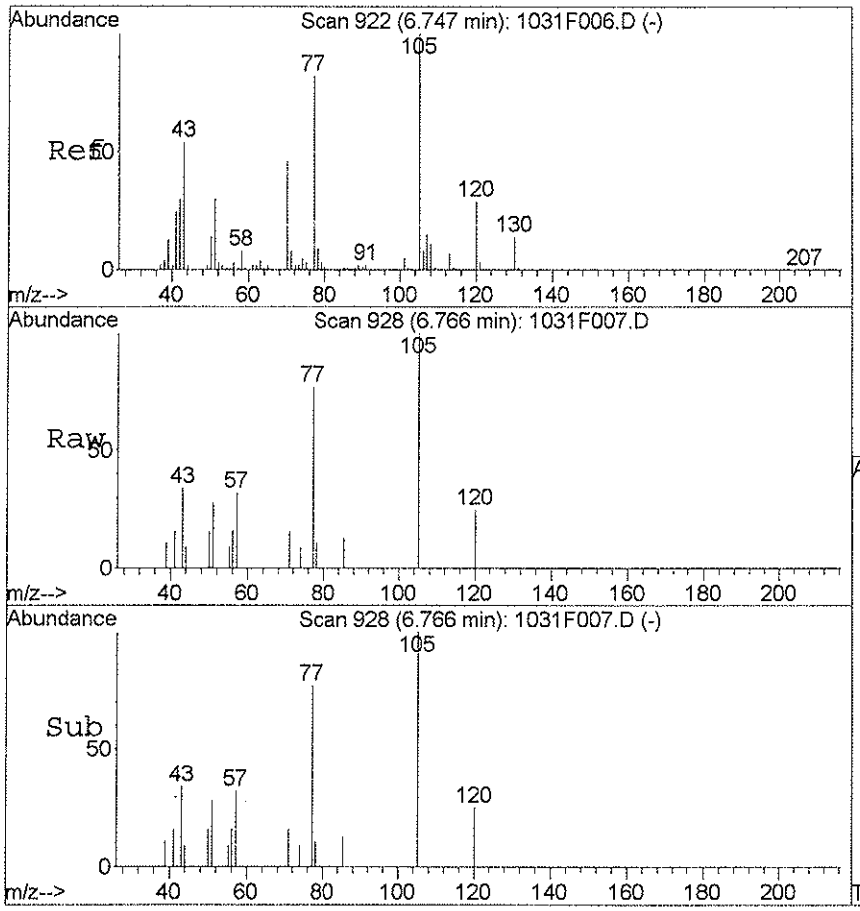
Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F007.D Vial: 5
Acq On : 31 Oct 2008 2:00 pm Operator: KBAILEY
Sample : KWG0811326-5 | MB Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:43 2008 Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration



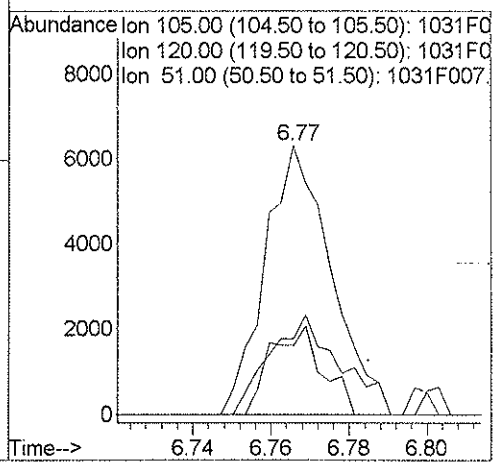
555

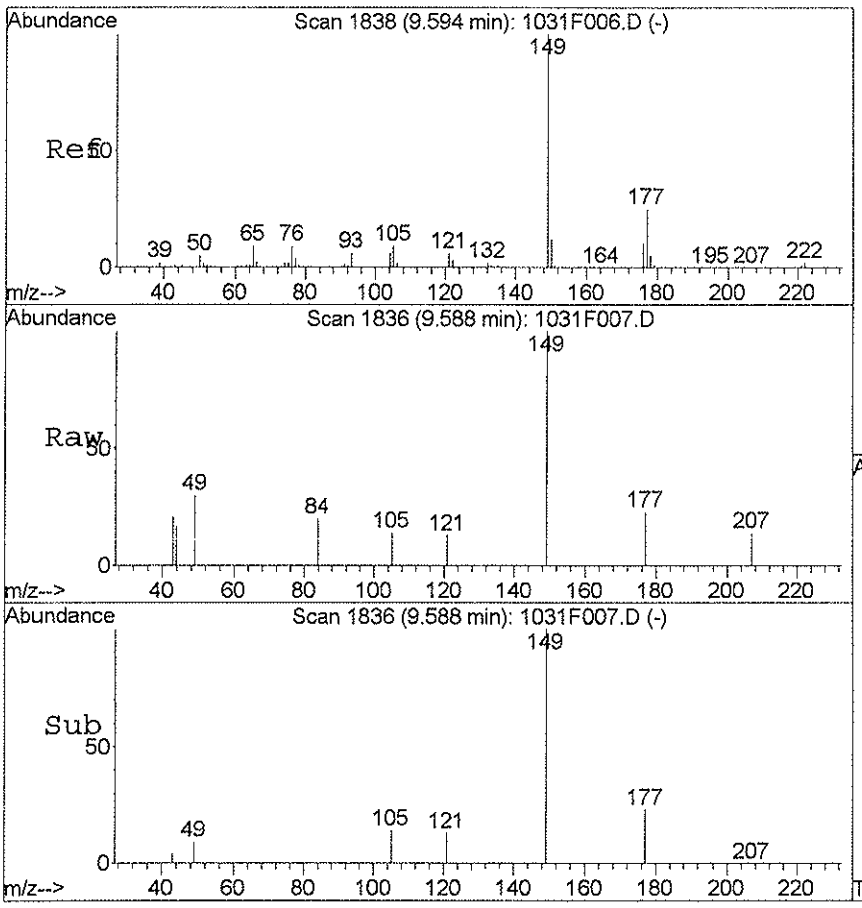


#17
Acetophenone
Concen: 66.34 ng/ml
RT: 6.77 min Scan# 928
Delta R.T. 0.01 min
Lab File: 1031F007.D
Acq: 31 Oct 2008 2:00 pm

Tgt Ion:105 Resp: 7401

Ion	Ratio	Lower	Upper
105	100		
120	25.5	0.0	58.9
51	28.0	0.8	60.8

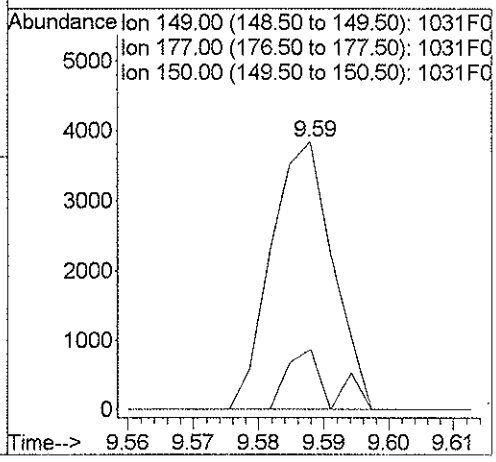


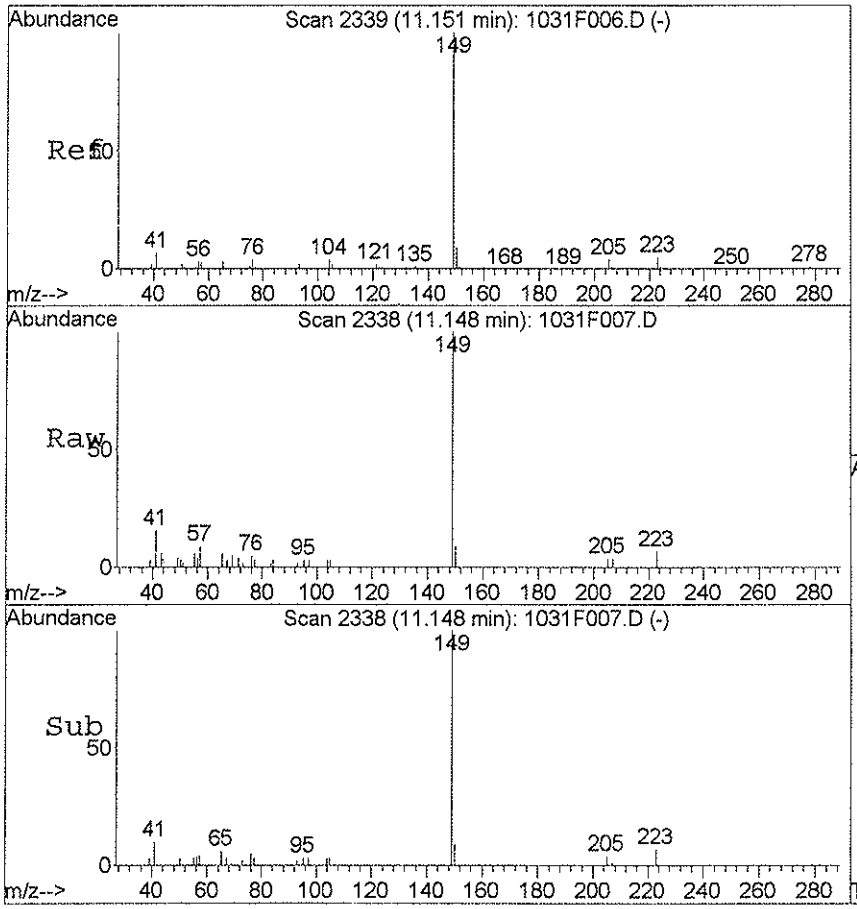


#55
Diethyl Phthalate
Concen: 13.28 ng/ml
RT: 9.59 min Scan# 1836
Delta R.T. -0.02 min
Lab File: 1031F007.D
Acq: 31 Oct 2008 2:00 pm

Tgt Ion:149 Resp: 2517

Ion	Ratio	Lower	Upper
149	100		
177	22.7	0.0	54.6
150	0.0	0.0	42.9

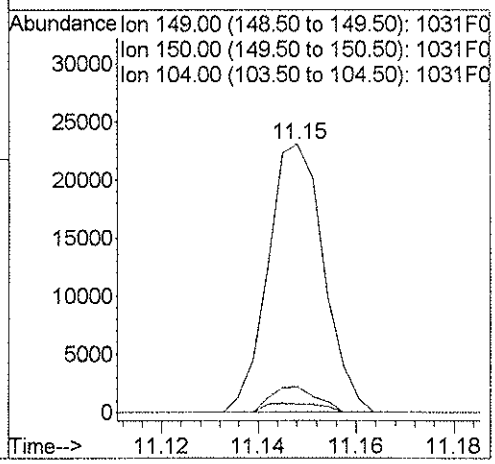


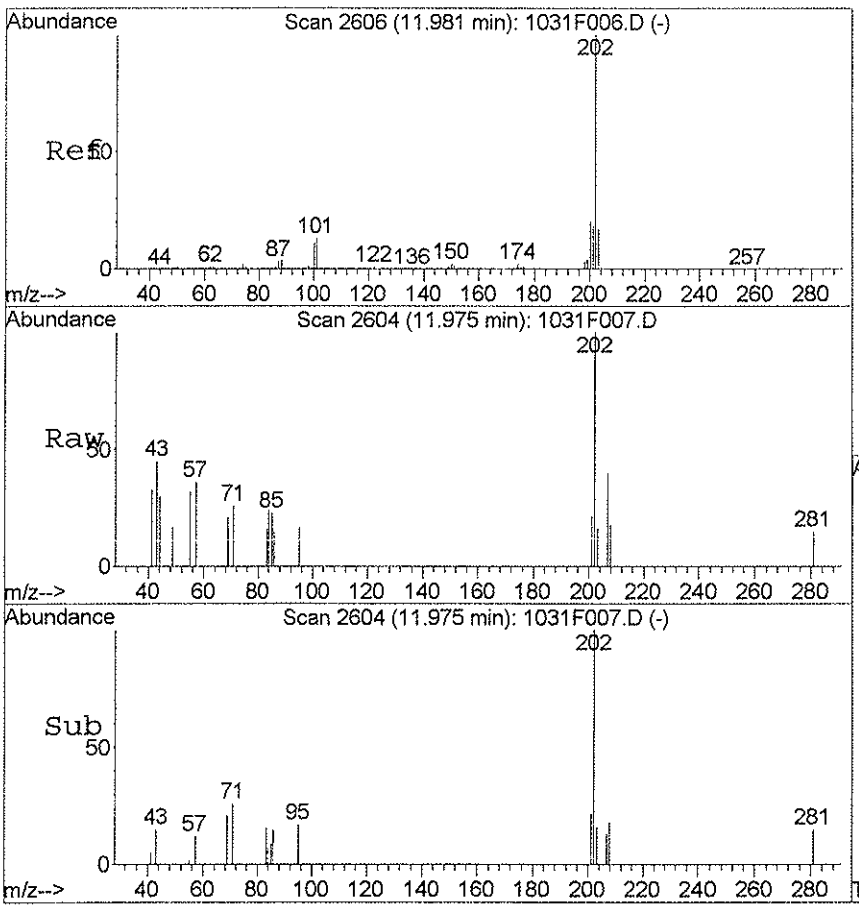


#68
Di-n-butyl Phthalate
Concen: 57.20 ng/ml
RT: 11.15 min Scan# 2338
Delta R.T. -0.02 min
Lab File: 1031F007.D
Acq: 31 Oct 2008 2:00 pm

Tgt Ion:149 Resp: 18380

Ion	Ratio	Lower	Upper
149	100		
150	9.4	0.0	39.0
104	3.0	0.0	34.1

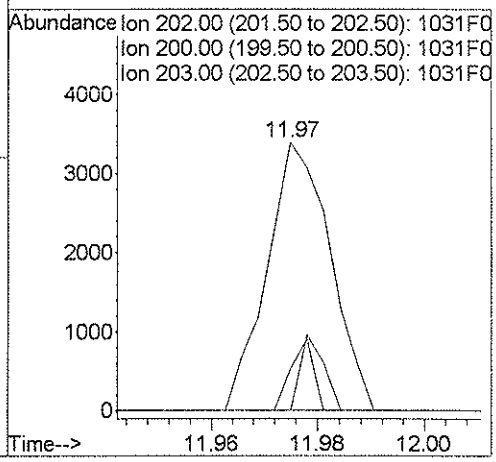


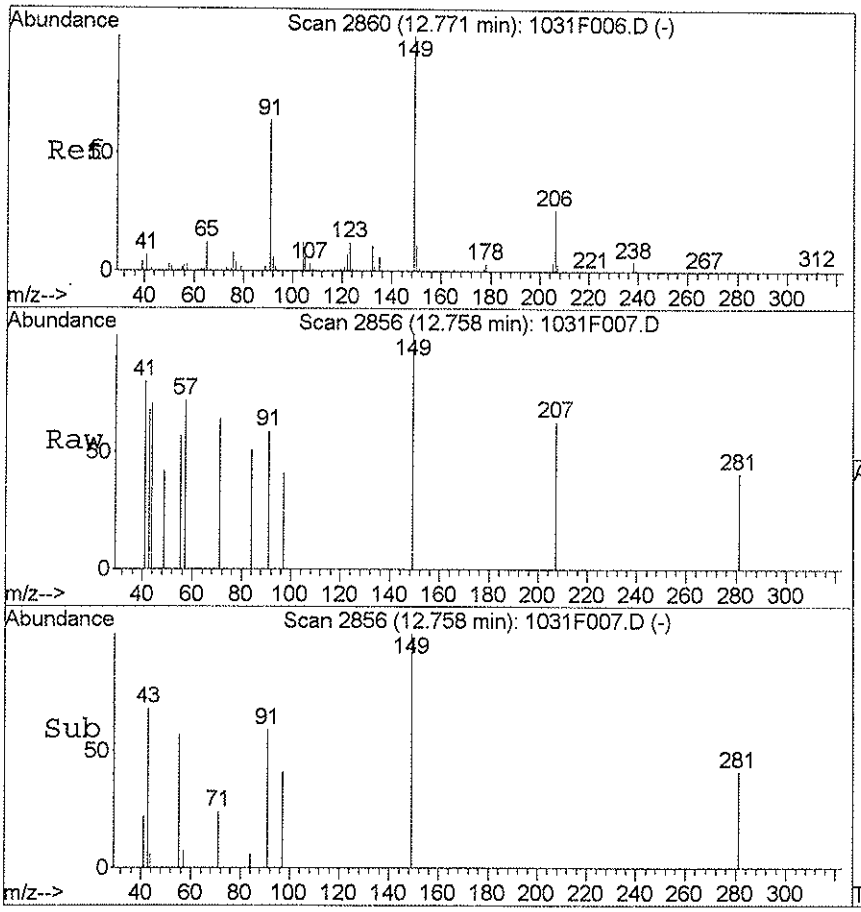


#72
Pyrene
Concen: 8.33 ng/ml
RT: 11.97 min Scan# 2604
Delta R.T. -0.02 min
Lab File: 1031F007.D
Acq: 31 Oct 2008 2:00 pm

Tgt Ion:202 Resp: 2792

Ion	Ratio	Lower	Upper
202	100		
200	0.0	0.0	49.7
203	15.8	0.0	47.6

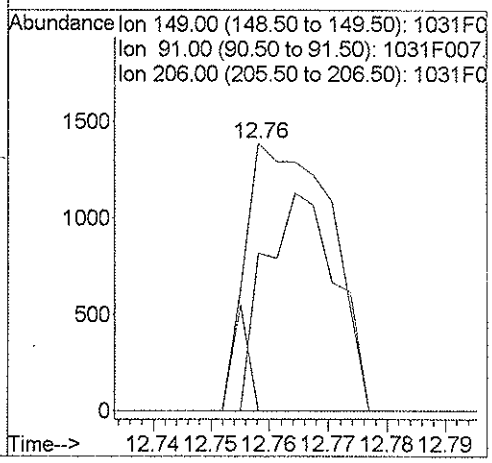


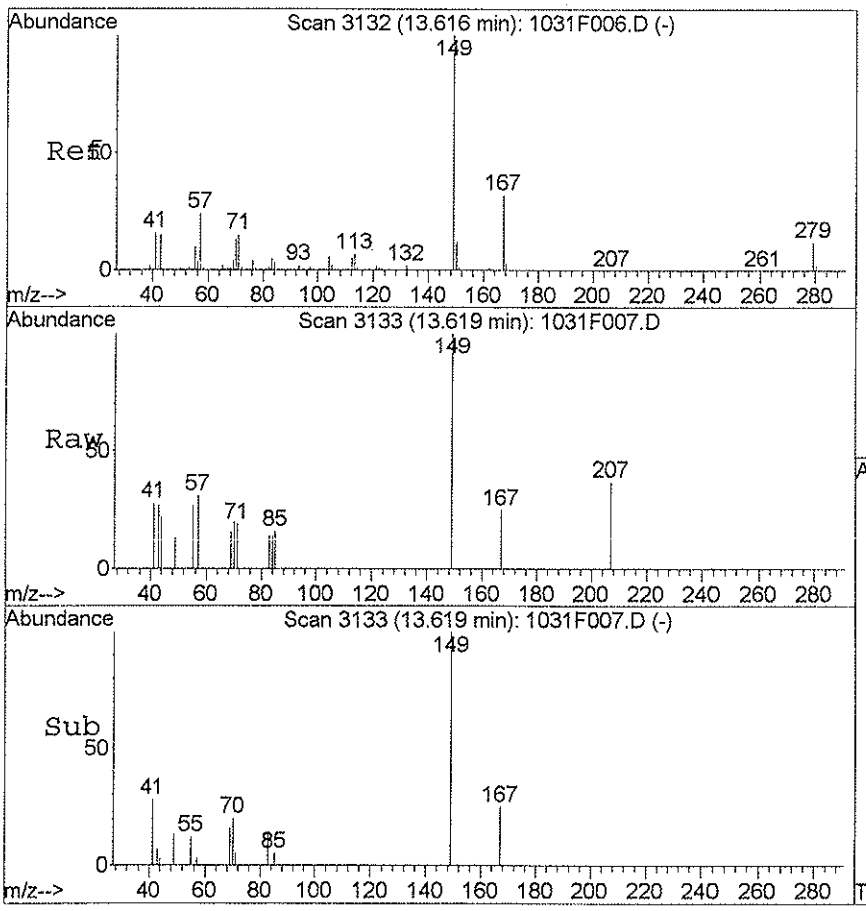


#74
Butyl Benzyl Phthalate
Concen: 10.73 ng/ml
RT: 12.76 min Scan# 2856
Delta R.T. -0.03 min
Lab File: 1031F007.D
Acq: 31 Oct 2008 2:00 pm

Tgt Ion:149 Resp: 1388

Ion	Ratio	Lower	Upper
149	100		
91	59.0	34.7	94.7
206	0.0	0.0	56.1

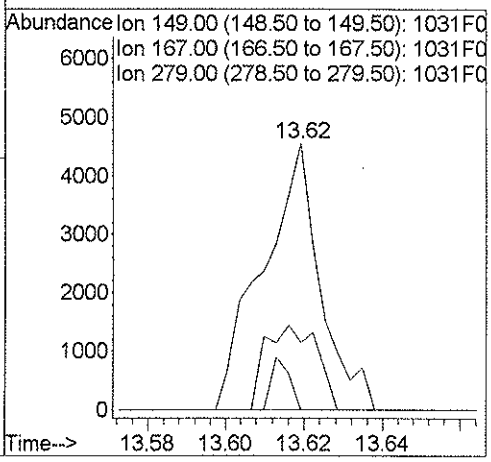




#78
Bis(2-ethylhexyl) Phthalate
Concen: 25.09 ng/ml
RT: 13.62 min Scan# 3133
Delta R.T. -0.03 min
Lab File: 1031F007.D
Acq: 31 Oct 2008 2:00 pm

Tgt Ion:149 Resp: 4606

Ion	Ratio	Lower	Upper
149	100		
167	25.1	1.3	61.3
279	0.0	0.0	42.0

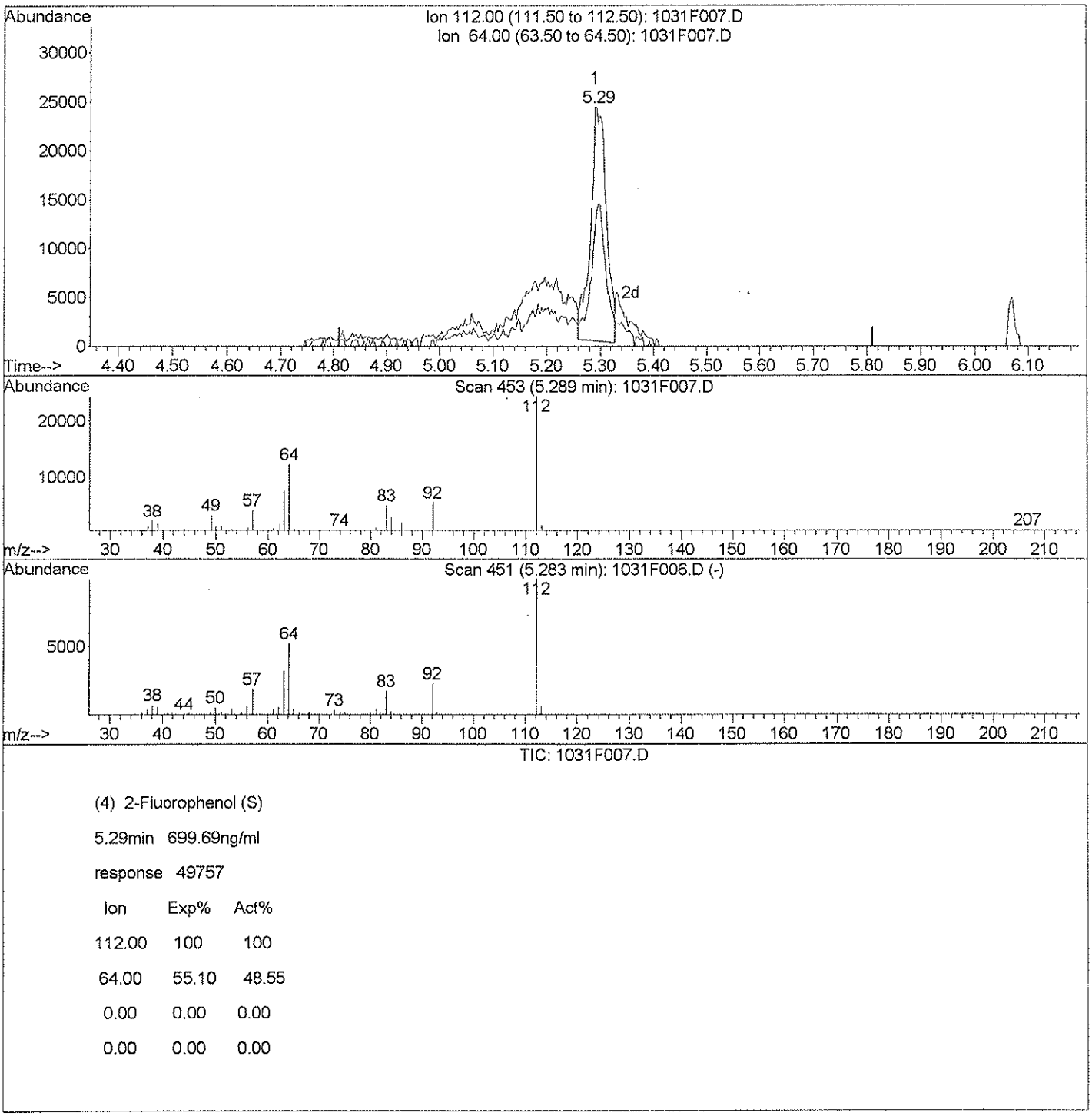


Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F007.D
Acq On : 31 Oct 2008 2:00 pm
Sample : KWG0811326-5 | MB
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:41 2008

Vial: 5
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration



TIC: 1031F007.D

(4) 2-Fluorophenol (S)

5.29min 699.69ng/ml

response 49757

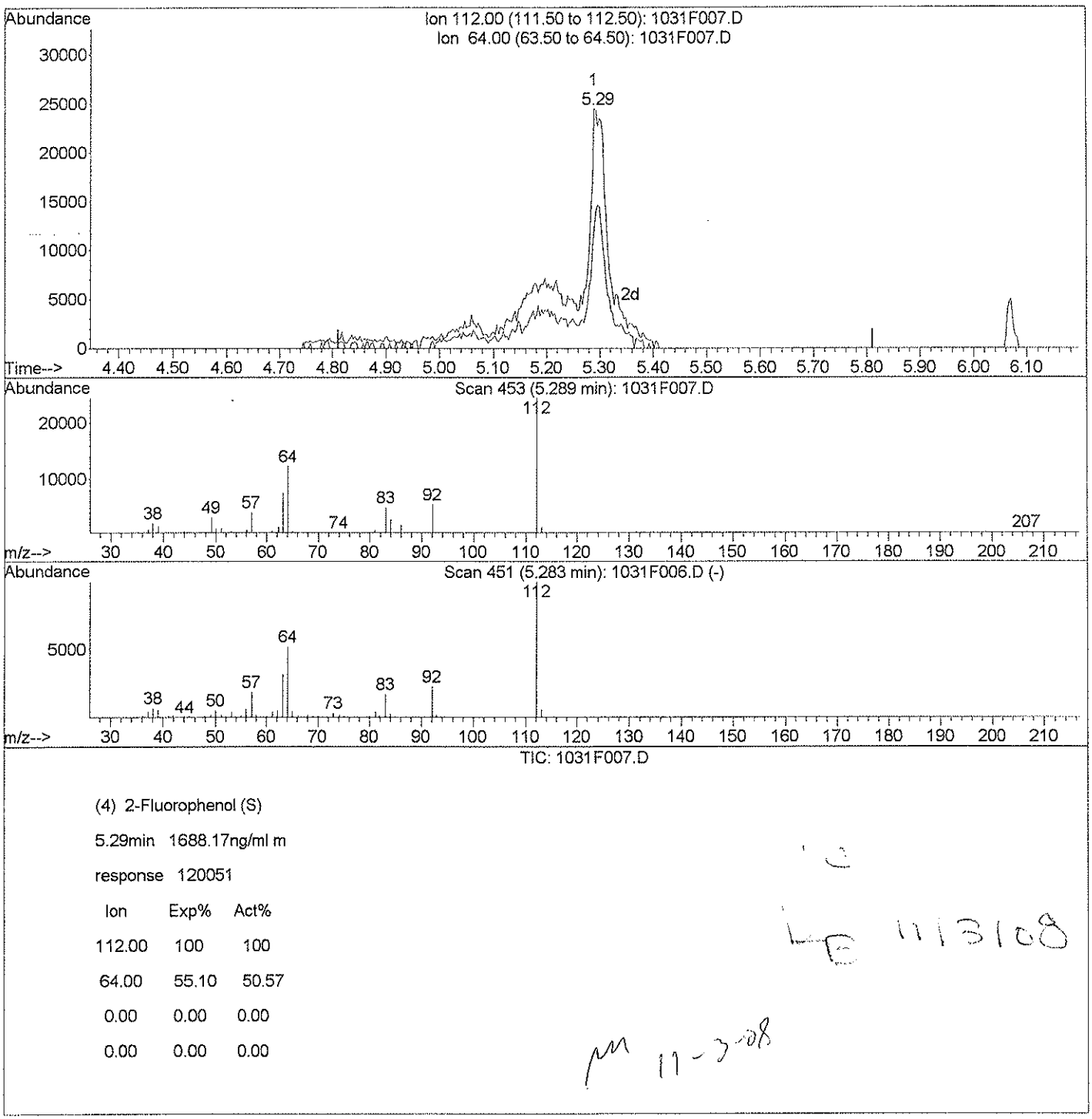
Ion	Exp%	Act%
112.00	100	100
64.00	55.10	48.55
0.00	0.00	0.00
0.00	0.00	0.00

1031F007.D 102608SVOLL.M Mon Nov 03 11:42:07 2008

Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F007.D Vial: 5
Acq On : 31 Oct 2008 2:00 pm Operator: KBAILEY
Sample : KWG0811326-5 | MB Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:42 2008 Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration



TIC: 1031F007.D

(4) 2-Fluorophenol (S)

5.29min 1688.17ng/ml m

response 120051

Ion	Exp%	Act%
112.00	100	100
64.00	55.10	50.57
0.00	0.00	0.00
0.00	0.00	0.00

LE 113108

MM 11-3-08

1031F007.D 102608SVOLL.M Mon Nov 03 11:42:35 2008

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Batch QC	**Units:**	ug/Kg
Lab Code:	K0810048-003	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	ND	U	30	2.0	1	10/23/08	10/31/08	KWG0811326	
Benzyl Alcohol	ND	U	20	2.1	1	10/23/08	10/31/08	KWG0811326	
1,2-Dichlorobenzene	ND	U	9.9	2.9	1	10/23/08	10/31/08	KWG0811326	
2-Methylphenol	ND	U	9.9	1.5	1	10/23/08	10/31/08	KWG0811326	
1,4-Dichlorobenzene	ND	U	9.9	2.9	1	10/23/08	10/31/08	KWG0811326	
4-Methylphenol†	ND	U	9.9	1.5	1	10/23/08	10/31/08	KWG0811326	
2,4-Dimethylphenol	ND	U	50	5.5	1	10/23/08	10/31/08	KWG0811326	
Benzoic Acid	ND	U	200	96	1	10/23/08	10/31/08	KWG0811326	
1,2,4-Trichlorobenzene	ND	U	9.9	2.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobutadiene	ND	U	9.9	2.5	1	10/23/08	10/31/08	KWG0811326	
Dimethyl Phthalate	ND	U	9.9	1.0	1	10/23/08	10/31/08	KWG0811326	
Diethyl Phthalate	ND	U	9.9	1.3	1	10/23/08	10/31/08	KWG0811326	
N-Nitrosodiphenylamine	ND	U	9.9	1.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobenzene	ND	U	9.9	1.2	1	10/23/08	10/31/08	KWG0811326	
Pentachlorophenol	ND	U	99	20	1	10/23/08	10/31/08	KWG0811326	
Di-n-butyl Phthalate	ND	U	20	7.9	1	10/23/08	10/31/08	KWG0811326	
Butyl Benzyl Phthalate	ND	U	9.9	3.2	1	10/23/08	10/31/08	KWG0811326	
Bis(2-ethylhexyl) Phthalate	ND	U	99	7.0	1	10/23/08	10/31/08	KWG0811326	
Di-n-octyl Phthalate	ND	U	9.9	1.7	1	10/23/08	10/31/08	KWG0811326	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	46	15-103	10/31/08	Acceptable
Nitrobenzene-d5	48	10-108	10/31/08	Acceptable
2-Fluorobiphenyl	46	10-105	10/31/08	Acceptable
2,4,6-Tribromophenol	58	16-122	10/31/08	Acceptable
Terphenyl-d14	72	31-126	10/31/08	Acceptable

Comments:

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Batch QC	**Units:**	ug/Kg
Lab Code:	K0810048-003	**Basis:**	Dry

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS17\DATA\103108\1031F022.D
Lab ID: K0810048-003
RunType: SMPL
Matrix: SOIL

Date Acquired: 10/31/2008 20:30
Date Quantitated: 11/03/2008 12:13
Batch ID: KWG0811769
Analysis Method: 8270C
ListJoinID: LJ9608

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA		x
Duplicate Lab Control Spike	NA	NA	NA		x
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Batch QC:
L9010 RX
K10000
K10032

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Lab Control Spike	2,4-Dimethylphenol	28	30	105	*
	2,4,5-Trichlorophenol	49	50	110	
Duplicate Lab Control Spike	2,4-Dimethylphenol	21	30	105	
	Dibenzofuran	45	50	105	
	2,6-Dinitrotoluene	48	50	110	
	Isophorone	44	45	110	
	2,4,6-Trichlorophenol	43	45	110	

*: Needs response to Quality Tracking Form

Primary Review: LB 11/3/08
Secondary Review: MG 11-3-08

Exception Report

Data File: J:\MS17\DATA\103108\1031F022.D
Lab ID: K0810048-003
RunType: SMPL
Matrix: SOIL

Date Acquired: 10/31/2008 20:30
Date Quantitated: 11/03/2008 12:13
Batch ID: KWG0811769
Analysis Method: 8270C
ListJoinID: LJ9608

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
	2-Chloronaphthalene	43	45	105	*
	1,2-Dichlorobenzene	44	45	95		
	2-Chlorophenol	44	45	105		
	2,4,5-Trichlorophenol	44	50	110	+

Primary Review: LB 11/3/08

Secondary Review: MM 11-3-08

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8270C SVO_LL	**Collect Date:**	10/11/2008	**Receive Date:**	10/14/2008

Analysis Lot:	KWG0811769	**Prep Lot:**	KWG0811326	**Report Group:**	K0810048
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	771007	**Prep Date:**	10/23/2008		

Quant Method:	J:\MS17\METHODS\FULL_SCAN\102608SVOLL.	**Calibration ID:**	CAL7891
Title:	Semivolatile Organic Compounds by GC/MS	**Report List ID:**	LJ9608
Tune Ref:	J:\MS17\DATA\103108\1031F005.D	**Method ID:**	MJ851
MB Ref:	J:\MS17\DATA\103108\1031F007.D	**Quant based on Report List**	

Data File:	J:\MS17\DATA\103108\1031F022.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 20:30	**Quant Date:**	11/03/2008 12:13	**Vial:**	20
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810048-003			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	6.40	0.00	152	67666	1,000.00	OK
2	Naphthalene-d8	7.53	-0.01	136	256599	1,000.00	OK
3	Acenaphthene-d10	9.18	0.00	164	163038	1,000.00	OK
4	Phenanthrene-d10	10.59	0.00	188	264308	1,000.00	OK
5	Chrysene-d12	13.55	0.01	240	337005	1,000.00	OK
6	Perylene-d12	15.90	0.02	264	353610	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	5.34	0.06	0.01	112	131956	1,605	43	35-105	OK	
1	Phenol-d6	6.10	0.03	0.00	99	192327	1,733	46	40-100	OK	
1	Nitrobenzene-d5	6.89	0.01	0.00	82	106977	1,201	48	35-100	OK	
3	2-Fluorobiphenyl	8.54	0.01	0.00	172	285863	1,144	46	45-105	OK	
4	2,4,6-Tribromophenol	9.93	0.01	0.00	330	115568	2,186	58	35-125	OK	
5	Terphenyl-d14	12.18	0.02	0.00	244	543645	1,793	72	30-125	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine				74	0		6.1	U	
1	Bis(2-chloroethyl) Ether				93	0d		2.4	U	
1	Phenol				94	0d		1.9	U	
1	2-Chlorophenol				128	0		1.7	U	
1	1,3-Dichlorobenzene				146	0		1.6	U	
1	1,4-Dichlorobenzene				146	0		1.9	U	
1	1,2-Dichlorobenzene				146	0		1.3	U	
1	Benzyl Alcohol				108	0d		3.7	U	
1	Bis(2-chloroisopropyl) Ether				45	0d		1.2	U	
1	2-Methylphenol				107	0d		3.4	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS17\DATA\103108\1031F022.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 20:30	**Quant Date:**	11/03/2008 12:13	**Vial:**	20
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810048-003			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Hexachloroethane				117	0d		2.2	U	
1	N-Nitrosodi-n-propylamine				70	0d		3.2	U	
1	4-Methylphenol				107	0d		2.9	U	
1	Nitrobenzene				77	0d		2.0	U	
2	Isophorone				82	0d		1.6	U	
2	2-Nitrophenol				139	0		2.6	U	
2	2,4-Dimethylphenol				122	0d		5.5	U	
2	Bis(2-chloroethoxy)methane				93	0		1.3	U	
2	2,4-Dichlorophenol				162	0		1.8	U	
2	Benzoic Acid	7.31	-0.01	0.00	105	9045	665.24	96	U	
2	1,2,4-Trichlorobenzene				180	0		1.5	U	
2	4-Chloroaniline				127	0		2.1	U	
2	Hexachlorobutadiene				225	0		1.4	U	
2	4-Chloro-3-methylphenol				107	0d		2.1	U	
3	2,4,6-Trichlorophenol				196	0		1.8	U	
3	2,4,5-Trichlorophenol				196	0		3.0	U	
3	2-Chloronaphthalene				162	0d		3.6	U	
3	2-Nitroaniline				65	0d		2.7	U	
3	Dimethyl Phthalate				163	0d		1.8	U	
3	2,6-Dinitrotoluene				165	0d		2.8	U	
3	3-Nitroaniline				138	0		2.6	U	
3	2,4-Dinitrophenol				184	0		36	U	
3	Dibenzofuran				168	0d		1.3	U	
3	4-Nitrophenol				65	0d		30	U	
3	2,4-Dinitrotoluene				165	0d		2.8	U	
3	4-Chlorophenyl Phenyl Ether				204	0		2.0	U	
3	Diethyl Phthalate	9.60	0.01	0.00	149	2785	12.44	3.5	U	
3	4-Nitroaniline				138	0		3.4	U	
3	2-Methyl-4,6-dinitrophenol				198	0		1.7	U	
3	N-Nitrosodiphenylamine				169	0d		2.2	U	
3	Azobenzene				77	0d		2.4	U	
4	4-Bromophenyl Phenyl Ether				248	0d		1.4	U	
4	Hexachlorobenzene				284	0		2.1	U	
4	Pentachlorophenol				266	0		8.5	U	
4	Carbazole				167	0d		1.3	U	
4	Di-n-butyl Phthalate	11.16	0.01	0.00	149	27592	74.06	7.3	J	
5	Butyl Benzyl Phthalate				149	0d		1.5	U	
5	3,3'-Dichlorobenzidine				252	0d		3.7	U	
5	Bis(2-ethylhexyl) Phthalate	13.63	0.01	0.00	149	9885	44.41	4.4	J	
6	Di-n-octyl Phthalate				149	0d		1.2	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS17\DATA\103108\1031F022.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 20:30	**Quant Date:**	11/03/2008 12:13	**Vial:**	20
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810048-003			**Soln Conc. Units:**	ng/ml

Prep Amount:	23.68 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	85.4 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F022.D Vial: 20
Acq On : 31 Oct 2008 8:30 pm Operator: KBAILEY
Sample : K0810048-003 Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:41:29 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

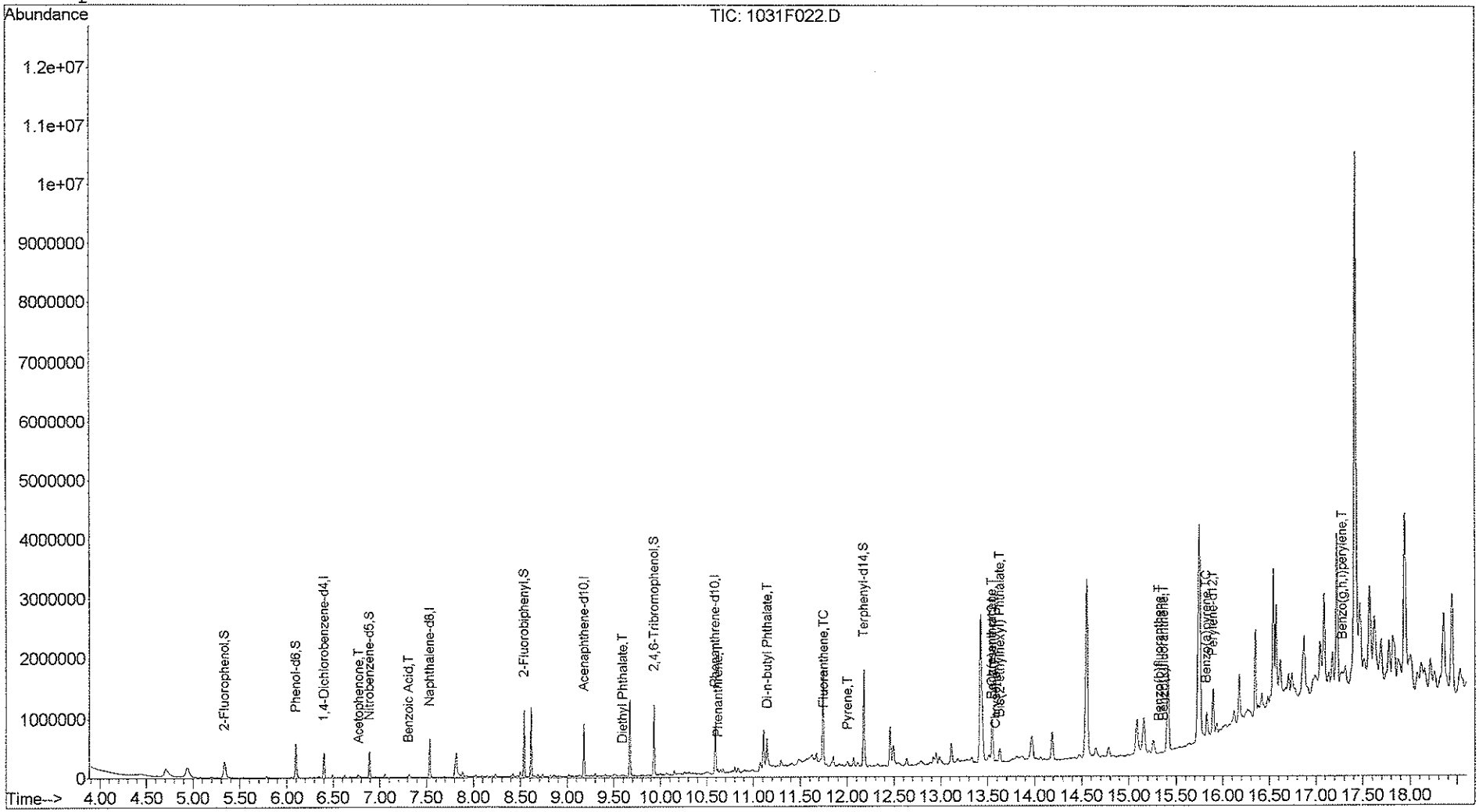
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.40	152	67666	1000.00	ng/ml	0.00
22) Naphthalene-d8	7.53	136	256599	1000.00	ng/ml	0.00
36) Acenaphthene-d10	9.18	164	163038	1000.00	ng/ml	0.00
60) Phenanthrene-d10	10.59	188	264308	1000.00	ng/ml	0.00
70) Chrysene-d12	13.55	240	337005	1000.00	ng/ml	0.00
79) Perylene-d12	15.90	264	353610	1000.00	ng/ml	0.02
System Monitoring Compounds						
4) 2-Fluorophenol	5.34	112	131956	1605.13	ng/ml	0.03
Spiked Amount 3750.000	Range 25 - 121		Recovery = 42.80%			
7) Phenol-d6	6.10	99	192327	1732.89	ng/ml	0.02
Spiked Amount 3750.000	Range 24 - 113		Recovery = 46.21%			
20) Nitrobenzene-d5	6.89	82	106977	1201.26	ng/ml	0.00
Spiked Amount 2500.000	Range 23 - 120		Recovery = 48.05%			
40) 2-Fluorobiphenyl	8.54	172	285863	1144.27	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 115		Recovery = 45.77%			
61) 2,4,6-Tribromophenol	9.93	330	115568	2186.46	ug/ml	0.00
Spiked Amount 3750.000	Range 19 - 122		Recovery = 58.31%			
73) Terphenyl-d14	12.18	244	543645	1793.43	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 140		Recovery = 71.74%			
Target Compounds						Qvalue
17) Acetophenone	6.78	105	14641	113.53	ng/ml	98
28) Benzoic Acid	7.31	105	9045	665.24	ng/ml	96
55) Diethyl Phthalate	9.60	149	2785	12.44	ng/ml	95
65) Phenanthrene	10.62	178	4996	14.67	ng/ml	91
68) Di-n-butyl Phthalate	11.16	149	27592	74.06	ng/ml	98
69) Fluoranthene	11.76	202	11165	28.46	ng/ml	93
72) Pyrene	12.00	202	9547	23.49	ng/ml	94
76) Benz(a)anthracene	13.53	228	6447	15.49	ng/ml	87
77) Chrysene	13.59	228	7566	19.42	ng/ml	90
78) Bis(2-ethylhexyl) Phthalat	13.63	149	9885	44.41	ng/ml	89
81) Benzo(b)fluoranthene	15.32	252	9861	23.84	ng/ml	83
82) Benzo(k)fluoranthene	15.36	252	4431	10.62	ng/ml	69
83) Benzo(a)pyrene	15.81	252	7532	19.84	ng/ml	90
86) Benzo(g,h,i)perylene	17.29	276	5741	12.72	ng/ml	79

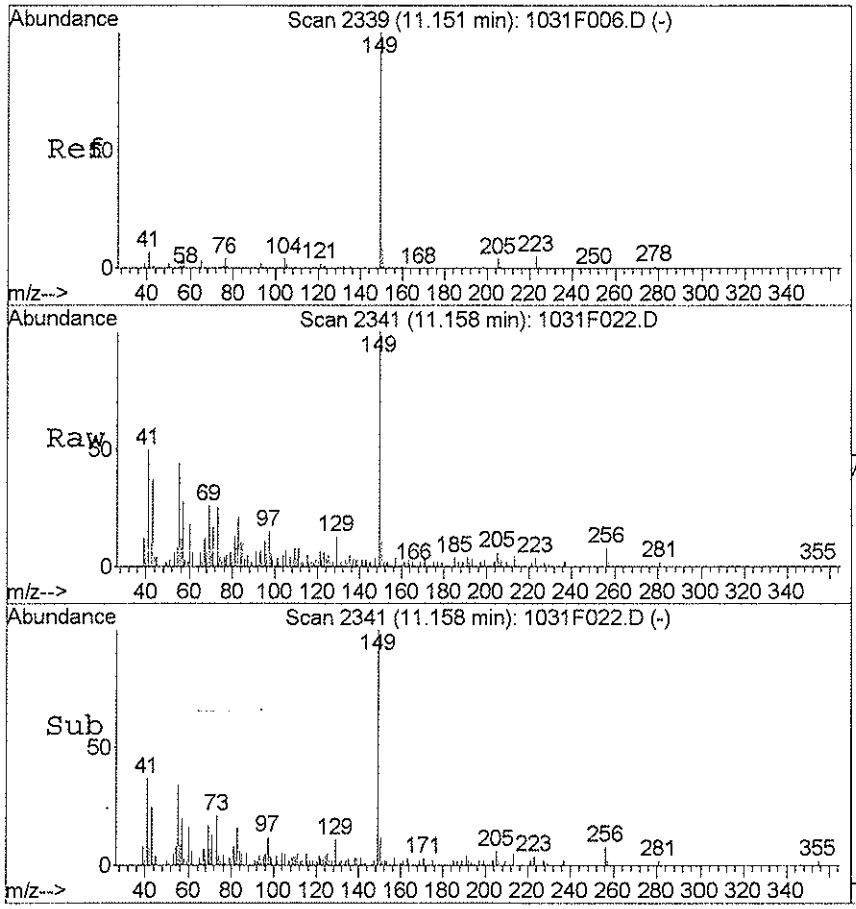
(#) = qualifier out of range (m) = manual integration

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F022.D Vial: 20
Acq On : 31 Oct 2008 8:30 pm Operator: KBAILEY
Sample : K0810048-003 Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 12:13 2008 Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration

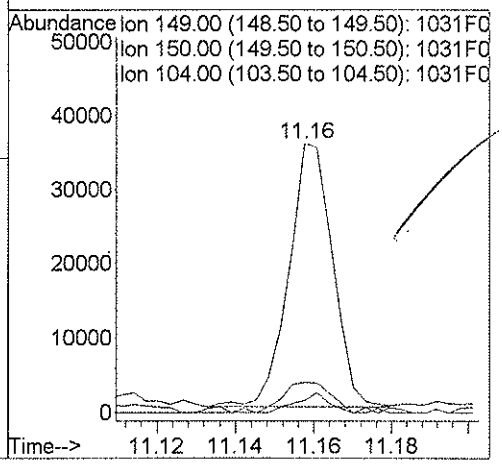


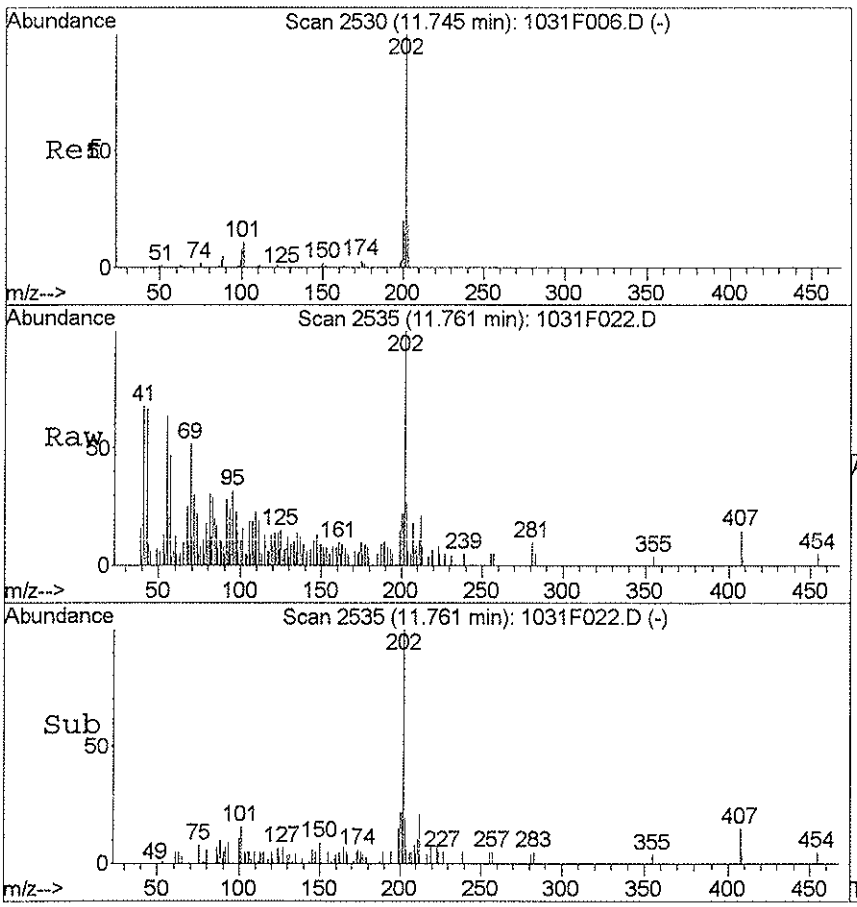


#68
Di-n-butyl Phthalate
Concen: 74.06 ng/ml
RT: 11.16 min Scan# 2341
Delta R.T. -0.01 min
Lab File: 1031F022.D
Acq: 31 Oct 2008 8:30 pm

Tgt Ion:149 Resp: 27592

Ion	Ratio	Lower	Upper
149	100		
150	10.0	0.0	39.0
104	4.7	0.0	34.1

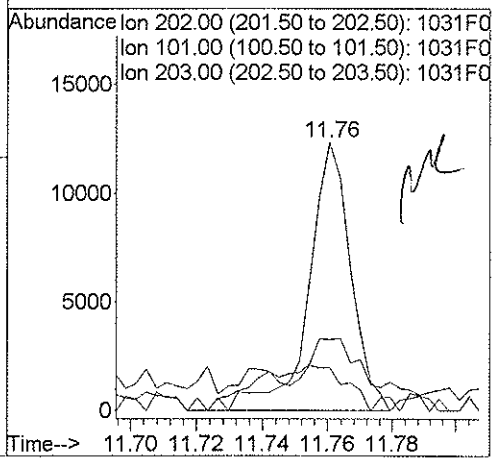


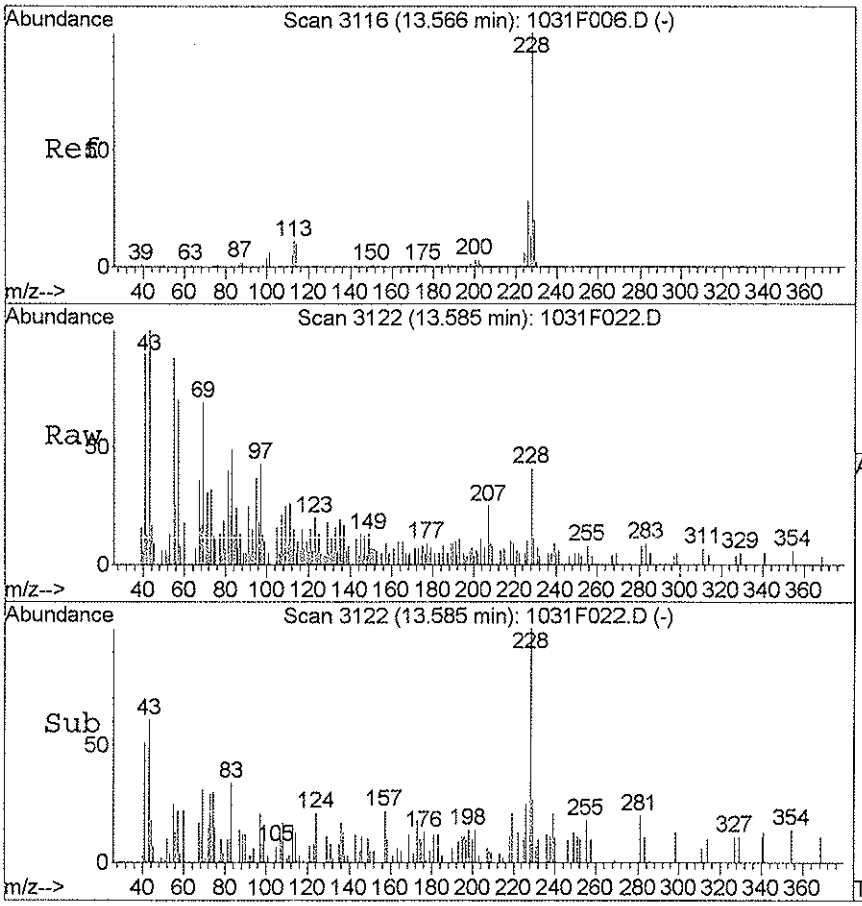


#69
Fluoranthene
Concen: 28.46 ng/ml
RT: 11.76 min Scan# 2535
Delta R.T. 0.00 min
Lab File: 1031F022.D
Acq: 31 Oct 2008 8:30 pm

Tgt Ion:202 Resp: 11165

Ion	Ratio	Lower	Upper
202	100		
101	16.3	0.0	42.1
203	15.8	0.0	47.5

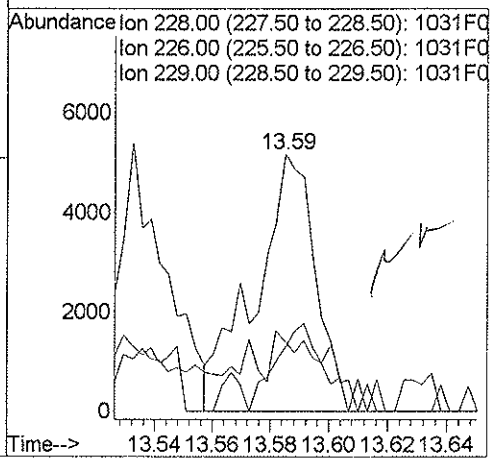


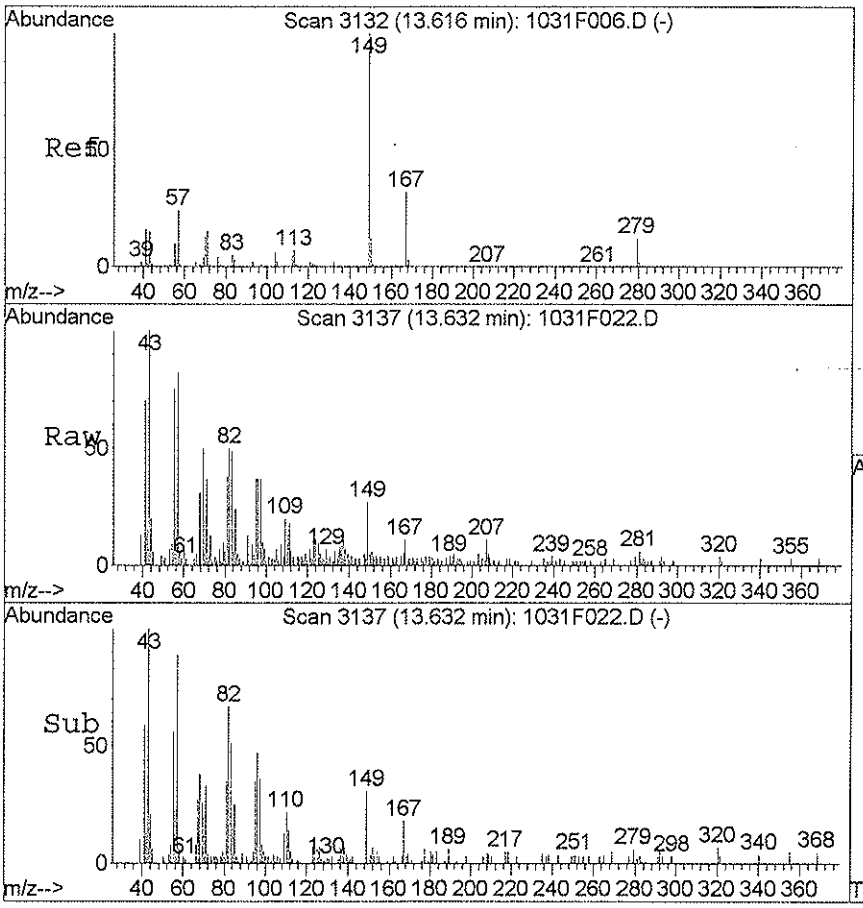


#77
Chrysene
Concen: 19.42 ng/ml
RT: 13.59 min Scan# 3122
Delta R.T. 0.00 min
Lab File: 1031F022.D
Acq: 31 Oct 2008 8:30 pm

Tgt Ion:228 Resp: 7566

Ion	Ratio	Lower	Upper
228	100		
226	24.7	0.0	57.8
229	27.2	0.0	49.5

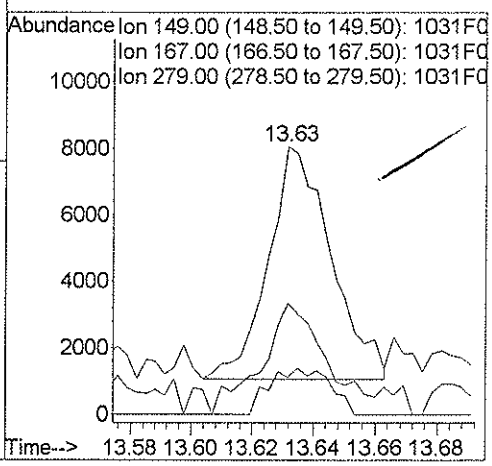




#78
Bis(2-ethylhexyl) Phthalate
Concen: 44.41 ng/ml
RT: 13.63 min Scan# 3137
Delta R.T. -0.02 min
Lab File: 1031F022.D
Acq: 31 Oct 2008 8:30 pm

Tgt Ion:149 Resp: 9885

Ion	Ratio	Lower	Upper
149	100		
167	37.1	1.3	61.3
279	16.1	0.0	42.0



Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Batch QCMS
Lab Code: KWG0811326-1

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	**126**		30	2.0	1	10/23/08	10/31/08	KWG0811326	
Benzyl Alcohol	**134**		20	2.1	1	10/23/08	10/31/08	KWG0811326	
1,2-Dichlorobenzene	**122**		10	2.9	1	10/23/08	10/31/08	KWG0811326	
2-Methylphenol	**80.6**		10	1.5	1	10/23/08	10/31/08	KWG0811326	
1,4-Dichlorobenzene	**112**		10	2.9	1	10/23/08	10/31/08	KWG0811326	
4-Methylphenol†	**82.5**		10	1.5	1	10/23/08	10/31/08	KWG0811326	
2,4-Dimethylphenol	**15.3**	J	50	5.5	1	10/23/08	10/31/08	KWG0811326	
Benzoic Acid	**96.7**	J	200	96	1	10/23/08	10/31/08	KWG0811326	
1,2,4-Trichlorobenzene	**124**		10	2.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobutadiene	**124**		10	2.5	1	10/23/08	10/31/08	KWG0811326	
Dimethyl Phthalate	**139**		10	1.0	1	10/23/08	10/31/08	KWG0811326	
Diethyl Phthalate	**153**		10	1.3	1	10/23/08	10/31/08	KWG0811326	
N-Nitrosodiphenylamine	**153**		10	1.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobenzene	**150**		10	1.2	1	10/23/08	10/31/08	KWG0811326	
Pentachlorophenol	**138**		100	20	1	10/23/08	10/31/08	KWG0811326	
Di-n-butyl Phthalate	**182**		20	7.9	1	10/23/08	10/31/08	KWG0811326	
Butyl Benzyl Phthalate	**182**		10	3.2	1	10/23/08	10/31/08	KWG0811326	
Bis(2-ethylhexyl) Phthalate	**185**		100	7.0	1	10/23/08	10/31/08	KWG0811326	
Di-n-octyl Phthalate	**205**		10	1.7	1	10/23/08	10/31/08	KWG0811326	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	50	15-103	10/31/08	Acceptable
Nitrobenzene-d5	52	10-108	10/31/08	Acceptable
2-Fluorobiphenyl	50	10-105	10/31/08	Acceptable
2,4,6-Tribromophenol	63	16-122	10/31/08	Acceptable
Terphenyl-d14	78	31-126	10/31/08	Acceptable

Comments:

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Batch QCMS	**Units:**	ug/Kg
Lab Code:	KWG0811326-1	**Basis:**	Dry

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS17\DATA\103108\1031F010.D
Lab ID: KWG0811326-1 -- K0810048-003MS
RunType: MS
Matrix: SOIL

Date Acquired: 10/31/2008 15:18
Date Quantitated: 11/03/2008 11:48
Batch ID: KWG0811769
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Batch QC:
L9010 Rx
K10000
K10032

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Std MRL Unsupported by ICAL	2,3,4,6-Tetrachlorophenol	50	10	NA	NT

Primary Review: LB 11/3/08
Secondary Review: MM 11-3-08

Printed: 11/03/2008 13:48:27
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8270C SVO_LL	**Collect Date:**		**Receive Date:**	10/30/2008

Analysis Lot:	KWG0811769	**Prep Lot:**	KWG0811326	**Report Group:**	
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	771016	**Prep Date:**	10/23/2008		

Quant Method:	J:\MS17\METHODS\FULL_SCAN\102608SVOLL.	**Calibration ID:**	CAL7891
Title:			
Tune Ref:	J:\MS17\DATA\103108\1031F005.D	**Method ID:**	MJ142
MB Ref:	J:\MS17\DATA\103108\1031F007.D	**Quant based on Method**	

Data File:	J:\MS17\DATA\103108\1031F010.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 15:18	**Quant Date:**	11/03/2008 11:48	**Vial:**	8
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG0811326-1 -- K0810048-003MS			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	6.38	0.00	152	64846	1,000.00	OK
2	Naphthalene-d8	7.52	0.00	136	251959	1,000.00	OK
3	Acenaphthene-d10	9.17	0.00	164	153364	1,000.00	OK
4	Phenanthrene-d10	10.58	0.00	188	254850	1,000.00	OK
5	Chrysene-d12	13.53	0.00	240	325409	1,000.00	OK
6	Perylene-d12	15.86	0.00	264	338113	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	5.29	0.01	0.00	112	137997m	1,752	47	10-89	OK	
1	Phenol-d6	6.07	0.00	0.00	99	199803	1,879	50	15-103	OK	
1	Nitrobenzene-d5	6.88	0.00	0.00	82	111147	1,302	52	10-108	OK	
3	2-Fluorobiphenyl	8.53	0.00	0.00	172	293088	1,247	50	10-105	OK	
4	2,4,6-Tribromophenol	9.92	0.00	0.00	330	120399	2,362	63	16-122	OK	
5	Terphenyl-d14	12.16	0.00	0.00	244	568619	1,943	78	31-126	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	4.41	0.03	0.00	74	56375m	1,199	120		
1	Pyridine	4.45	0.05	0.01	79	162973m	1,785	178	JN	
1	Aniline	6.14	0.03	0.00	93	34730	268.48	26.8		
1	Bis(2-chloroethyl) Ether	6.16		0.00	93	121936m	1,450	145		
1	Phenol	6.08		0.00	94	135718	1,262	126		
1	2-Chlorophenol	6.21	0.01	0.00	128	110407	1,199	120		
1	1,3-Dichlorobenzene	6.33		0.00	146	130125	1,231	123		
1	1,4-Dichlorobenzene	6.40		0.00	146	122606	1,127	112		
1	1,2-Dichlorobenzene	6.53		0.00	146	126335	1,220	122		
1	Benzyl Alcohol	6.51		0.00	108	74653	1,341	134		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS17\DATA\103108\1031F010.D		**Instrument:** MS17
Acqu Date:	10/31/2008 15:18	**Quant Date:** 11/03/2008 11:48	**Vial:** 8
Run Type:	MS		**Dilution:** 1.0
Lab ID:	KWG0811326-1 -- K0810048-003MS		**Soln Conc. Units:** ng/ml

Target Compounds — **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether	6.62		0.00	45	140179	1,168	117		
1	2-Methylphenol	6.60		0.00	107	59895	807.86	80.6		
1	Hexachloroethane	6.83		0.00	117	43653	1,201	120		
1	Acetophenone				105	0d		12	U	
1	N-Nitrosodi-n-propylamine	6.74		0.00	70	81984	1,275	127		
1	4-Methylphenol	6.74		0.00	107	89871	826.91	82.5		
1	Nitrobenzene	6.89	-0.01	0.00	77	115134	1,265	126		
2	Isophorone	7.11		0.00	82	219133	1,291	129		
2	2-Nitrophenol	7.18		0.00	139	65642	1,259	126		
2	2,4-Dimethylphenol	7.22		0.00	122	12831	153.36	15.3	J	
2	Bis(2-chloroethoxy)methane	7.30	-0.01	0.00	93	125696	1,252	125		
2	2,4-Dichlorophenol	7.40		0.00	162	106575	1,304	130		
2	Benzoic Acid	7.28	-0.04	-0.01	105	27989	968.68	96.7	J	
2	1,2,4-Trichlorobenzene	7.47		0.00	180	117320	1,245	124		
2	Naphthalene	7.54	-0.01	0.00	128	349465	1,255	125		
2	4-Chloroaniline	7.61	0.01	0.00	127	74962	655.42	65.4		
2	Hexachlorobutadiene	7.65		0.00	225	73091	1,246	124		
2	4-Chloro-3-methylphenol	8.05		0.00	107	105726	1,367	137		
2	2-Methylnaphthalene	8.19		0.00	142	243139	1,278	128		
2	1-Methylnaphthalene	8.28		0.00	142	238275	1,328	133		
3	Hexachlorocyclopentadiene	8.33		0.00	237	64043	860.99	85.9		
3	2,4,6-Trichlorophenol	8.45		0.00	196	87912	1,301	130		
3	2,4,5-Trichlorophenol	8.48		0.00	196	104084	1,421	142		
3	2-Chloronaphthalene	8.64		0.00	162	241916	1,220	122		
3	2-Nitroaniline	8.75		0.00	65	71356	1,397	140		
3	Acenaphthylene	9.03		0.00	152	401339	1,288	129		
3	Dimethyl Phthalate	8.92		0.00	163	309486	1,388	139		
3	2,6-Dinitrotoluene	8.98		0.00	165	70340	1,400	140		
3	Acenaphthene	9.20		0.00	154	239880	1,300	130		
3	3-Nitroaniline	9.14		0.00	138	33340	644.17	64.3		
3	2,4-Dinitrophenol	9.24		0.00	184	21314	624.32	62.3	J	
3	Dibenzofuran	9.36		0.00	168	384939	1,321	132		
3	4-Nitrophenol	9.30	-0.01	0.00	65	62315	1,712	171		
3	2,4-Dinitrotoluene	9.36		0.00	165	102757	1,523	152		
3	2,3,4,6-Tetrachlorophenol	9.48		0.00	232	98468	1,488	149		
3	Fluorene	9.69		0.00	166	321563	1,378	138		
3	4-Chlorophenyl Phenyl Ether	9.69		0.00	204	168734	1,370	137		
3	Diethyl Phthalate	9.59		0.00	149	322909	1,534	153		
3	4-Nitroaniline	9.72		0.00	138	30673	576.97	57.6		
3	2-Methyl-4,6-dinitrophenol	9.74	-0.01	0.00	198	55641	1,253	125		
3	N-Nitrosodiphenylamine	9.81		0.00	169	243046	1,529	153		
3	Azobenzene	9.84		0.00	77	264657	1,360	136		

U: Undetected at or above MDL
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E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS17\DATA\103108\1031F010.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 15:18	**Quant Date:**	11/03/2008 11:48	**Vial:**	8
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG0811326-1 -- K0810048-003MS			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	4-Bromophenyl Phenyl Ether	10.16		0.00	248	119688	1,518	152		
4	Hexachlorobenzene	10.20	-0.01	0.00	284	143859	1,502	150		
4	Pentachlorophenol	10.40		0.00	266	78524	1,380	138		
4	Phenanthrene	10.60		0.00	178	547069	1,666	166		
4	Anthracene	10.65		0.00	178	509878	1,511	151		
4	Carbazole	10.81		0.00	167	513830	1,657	165		
4	Di-n-butyl Phthalate	11.15		0.00	149	653222	1,818	182		
4	Fluoranthene	11.75		0.00	202	686805	1,816	181		
5	Benzidine				184	0d		200	U	
5	Pyrene	11.98		0.00	202	695441	1,772	177		
5	Butyl Benzyl Phthalate	12.77		0.00	149	276375	1,824	182		
5	3,3'-Dichlorobenzidine				252	0d		3.7	U	
5	Benz(a)anthracene	13.51		0.00	228	694139	1,728	172		
5	Chrysene	13.56	-0.01	0.00	228	669609	1,780	178		
5	Bis(2-ethylhexyl) Phthalate	13.62		0.00	149	398259	1,853	185		
6	Di-n-octyl Phthalate	14.73		0.00	149	663803	2,053	205		
6	Benzo(b)fluoranthene	15.28		0.00	252	781938	1,977	197		
6	Benzo(k)fluoranthene	15.33		0.00	252	767760	1,924	192		
6	Benzo(a)pyrene	15.79		0.00	252	690148	1,901	190		
6	Indeno(1,2,3-cd)pyrene	16.99		0.00	276	801179	1,921	192		
6	Dibenz(a,h)anthracene	17.02		0.00	278	825771	1,889	189		
6	Benzo(g,h,i)perylene	17.26	0.01	0.00	276	828591	1,920	192		
	Guaiacol				0	0		30	UJ	NR

Prep Amount:	23.46 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	85.4 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F010.D Vial: 8
Acq On : 31 Oct 2008 3:18 pm Operator: KBAILEY
Sample : K0810048-003MS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:41:13 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.38	152	64846	1000.00	ng/ml	-0.02
22) Naphthalene-d8	7.52	136	251959	1000.00	ng/ml	-0.01
36) Acenaphthene-d10	9.17	164	153364	1000.00	ng/ml	-0.01
60) Phenanthrene-d10	10.58	188	254850	1000.00	ng/ml	-0.01
70) Chrysene-d12	13.53	240	325409	1000.00	ng/ml	-0.02
79) Perylene-d12	15.86	264	338113	1000.00	ng/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	5.29	112	137997m	1751.61	ng/ml	-0.02
Spiked Amount 3750.000	Range 25 - 121		Recovery =	46.71%		
7) Phenol-d6	6.07	99	199803	1878.54	ng/ml	0.00
Spiked Amount 3750.000	Range 24 - 113		Recovery =	50.09%		
20) Nitrobenzene-d5	6.88	82	111147	1302.36	ng/ml	-0.01
Spiked Amount 2500.000	Range 23 - 120		Recovery =	52.09%		
40) 2-Fluorobiphenyl	8.53	172	293088	1247.20	ng/ml	-0.01
Spiked Amount 2500.000	Range 30 - 115		Recovery =	49.89%		
61) 2,4,6-Tribromophenol	9.92	330	120399	2362.39	ug/ml	-0.01
Spiked Amount 3750.000	Range 19 - 122		Recovery =	63.00%		
73) Terphenyl-d14	12.16	244	568619	1942.66	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 140		Recovery =	77.71%		
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.41	74	56375m	1198.50	ng/ml	
3) Pyridine	4.45	79	162973m	1785.03	ng/ml	
5) Aniline	6.14	93	34730	268.48	ng/ml	88
6) Bis(2-chloroethyl) Ether	6.16	93	121936m	1449.99	ng/ml	
8) Phenol	6.08	94	135718	1262.16	ng/ml	97
9) 2-Chlorophenol	6.21	128	110407	1199.40	ng/ml	98
10) 1,3-Dichlorobenzene	6.33	146	130125	1231.07	ng/ml	98
11) 1,4-Dichlorobenzene	6.40	146	122606	1126.79	ng/ml	95
12) 1,2-Dichlorobenzene	6.53	146	126335	1220.10	ng/ml	99
13) Benzyl Alcohol	6.51	108	74653	1341.37	ng/ml	94
14) Bis(2-chloroisopropyl) Eth	6.62	45	140179	1167.80	ng/ml	95
15) 2-Methylphenol	6.60	107	59895	807.86	ng/ml	98
16) Hexachloroethane	6.83	117	43653	1200.77	ng/ml	97
18) N-Nitrosodi-n-propylamine	6.74	70	81984	1274.64	ng/ml	96
19) 4-Methylphenol	6.74	107	89871	826.91	ng/ml	95
21) Nitrobenzene	6.89	77	115134	1264.86	ng/ml	99
23) Isophorone	7.11	82	219133	1290.76	ng/ml	99
24) 2-Nitrophenol	7.18	139	65642	1258.86	ng/ml	94
25) 2,4-Dimethylphenol	7.22	122	12831	153.36	ng/ml	91
26) Bis(2-chloroethoxy)methane	7.30	93	125696	1251.94	ng/ml	98

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

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F010.D Vial: 8
Acq On : 31 Oct 2008 3:18 pm Operator: KBAILEY
Sample : K0810048-003MS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:41:13 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
27)	2,4-Dichlorophenol	7.40	162	106575	1303.68	ng/ml	97
28)	Benzoic Acid	7.28	105	27989	968.68	ng/ml	92
29)	1,2,4-Trichlorobenzene	7.47	180	117320	1245.28	ng/ml	94
30)	Naphthalene	7.54	128	349465	1255.17	ng/ml	100
31)	4-Chloroaniline	7.61	127	74962	655.42	ng/ml	99
32)	Hexachlorobutadiene	7.65	225	73091	1245.99	ng/ml	97
33)	4-Chloro-3-methylphenol	8.05	107	105726	1367.43	ng/ml	99
34)	2-Methylnaphthalene	8.19	142	243139	1278.04	ng/ml	98
35)	1-Methylnaphthalene	8.28	142	238275	1327.64	ng/ml	96
37)	Hexachlorocyclopentadiene	8.33	237	64043	860.99	ng/ml	99
38)	2,4,6-Trichlorophenol	8.45	196	87912	1300.61	ng/ml	96
39)	2,4,5-Trichlorophenol	8.48	196	104084	1421.01	ng/ml	98
41)	2-Chloronaphthalene	8.64	162	241916	1219.82	ng/ml	99
42)	2-Nitroaniline	8.75	65	71356	1397.45	ng/ml	91
43)	Acenaphthylene	9.03	152	401339	1288.11	ng/ml	99
44)	Dimethyl Phthalate	8.92	163	309486	1387.55	ng/ml	98
45)	2,6-Dinitrotoluene	8.98	165	70340	1399.98	ng/ml	96
46)	Acenaphthene	9.20	154	239880	1299.72	ng/ml	98
47)	3-Nitroaniline	9.14	138	33340	644.17	ng/ml	96
48)	2,4-Dinitrophenol	9.24	184	21314	624.32	ng/ml	90
49)	Dibenzofuran	9.36	168	384939	1320.53	ng/ml	99
50)	4-Nitrophenol	9.30	65	62315	1711.83	ng/ml	97
51)	2,4-Dinitrotoluene	9.36	165	102757	1522.58	ng/ml	97
52)	2,3,4,6-Tetrachlorophenol	9.48	232	98468	1488.02	ng/ml	95
53)	Fluorene	9.69	166	321563	1377.53	ng/ml	98
54)	4-Chlorophenyl Phenyl Ethe	9.69	204	168734	1370.25	ng/ml	99
55)	Diethyl Phthalate	9.59	149	322909	1533.79	ng/ml	99
56)	4-Nitroaniline	9.72	138	30673	576.97	ng/ml	87
57)	2-Methyl-4,6-dinitrophenol	9.74	198	55641	1252.51	ng/ml	96
58)	N-Nitrosodiphenylamine	9.81	169	243046	1529.01	ng/ml	99
59)	Azobenzene	9.84	77	264657	1360.23	ng/ml	99
62)	4-Bromophenyl Phenyl Ether	10.16	248	119688	1517.68	ng/ml	97
63)	Hexachlorobenzene	10.20	284	143859	1501.54	ng/ml	98
64)	Pentachlorophenol	10.40	266	78524	1379.58	ng/ml	95
65)	Phenanthrene	10.60	178	547069	1665.52	ng/ml	99
66)	Anthracene	10.65	178	509878	1511.43	ng/ml	98
67)	Carbazole	10.81	167	513830	1657.24	ng/ml	100
68)	Di-n-butyl Phthalate	11.15	149	653222	1818.44	ng/ml	99
69)	Fluoranthene	11.75	202	686805	1815.92	ng/ml	98
72)	Pyrene	11.98	202	695441	1772.17	ng/ml	99
74)	Butyl Benzyl Phthalate	12.77	149	276375	1824.34	ng/ml	99

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

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F010.D Vial: 8
Acq On : 31 Oct 2008 3:18 pm Operator: KBAILEY
Sample : K0810048-003MS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:41:13 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

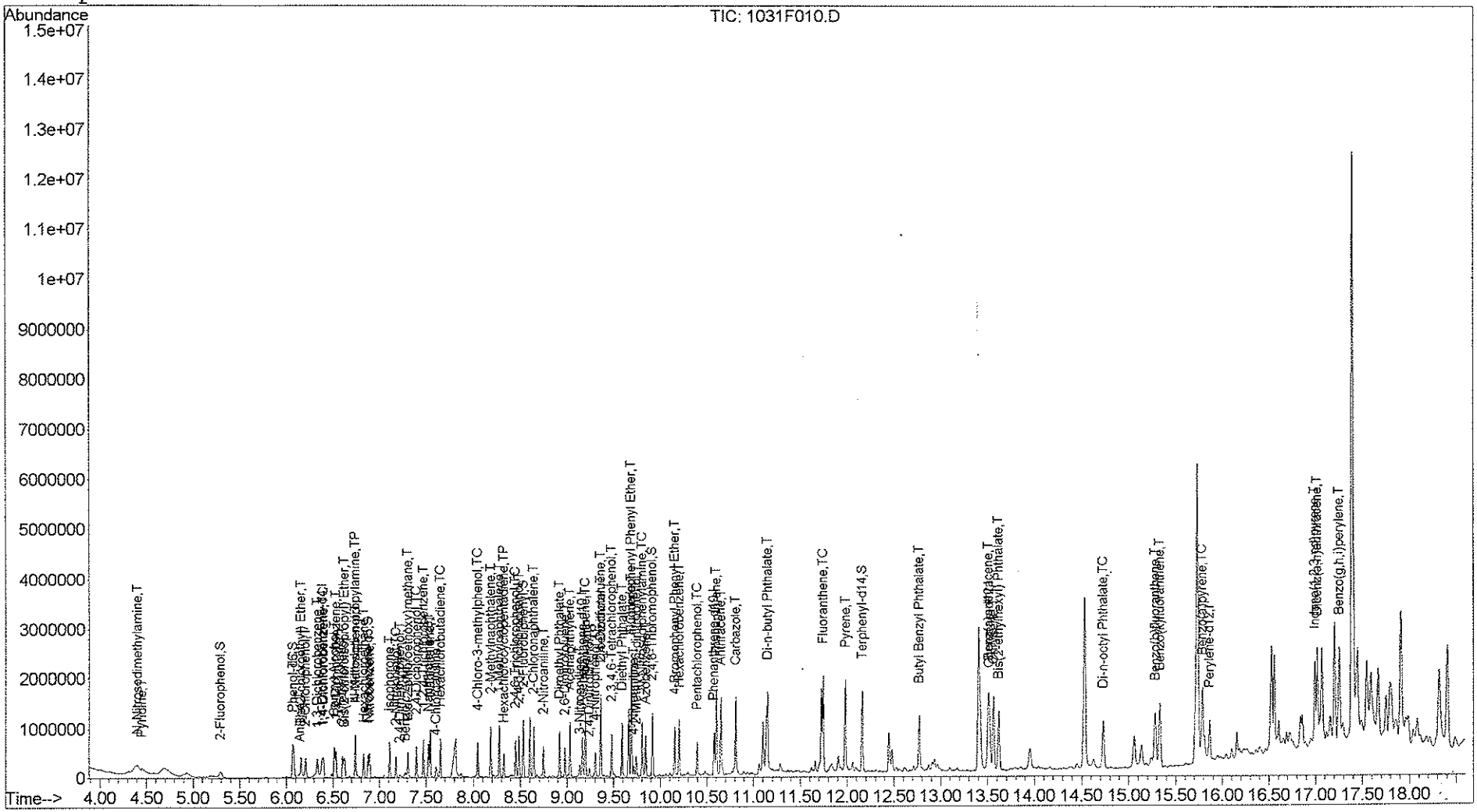
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76)	Benz(a)anthracene	13.51	228	694139	1727.51	ng/ml	99
77)	Chrysene	13.56	228	669609	1780.41	ng/ml	99
78)	Bis(2-ethylhexyl) Phthalat	13.62	149	398259	1852.95	ng/ml	98
80)	Di-n-octyl Phthalate	14.73	149	663803	2053.33	ng/ml	99
81)	Benzo(b)fluoranthene	15.28	252	781938	1977.40	ng/ml	98
82)	Benzo(k)fluoranthene	15.33	252	767760	1924.25	ng/ml	98
83)	Benzo(a)pyrene	15.79	252	690148	1900.94	ng/ml	98
84)	Indeno(1,2,3-cd)pyrene	16.99	276	801179	1921.18	ng/ml	99
85)	Dibenz(a,h)anthracene	17.02	278	825771	1889.25	ng/ml	100
86)	Benzo(g,h,i)perylene	17.26	276	828591	1919.88	ng/ml	98

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

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F010.D Vial: 8
Acq On : 31 Oct 2008 3:18 pm Operator: KBAILEY
Sample : K0810048-003MS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:48 2008 Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration



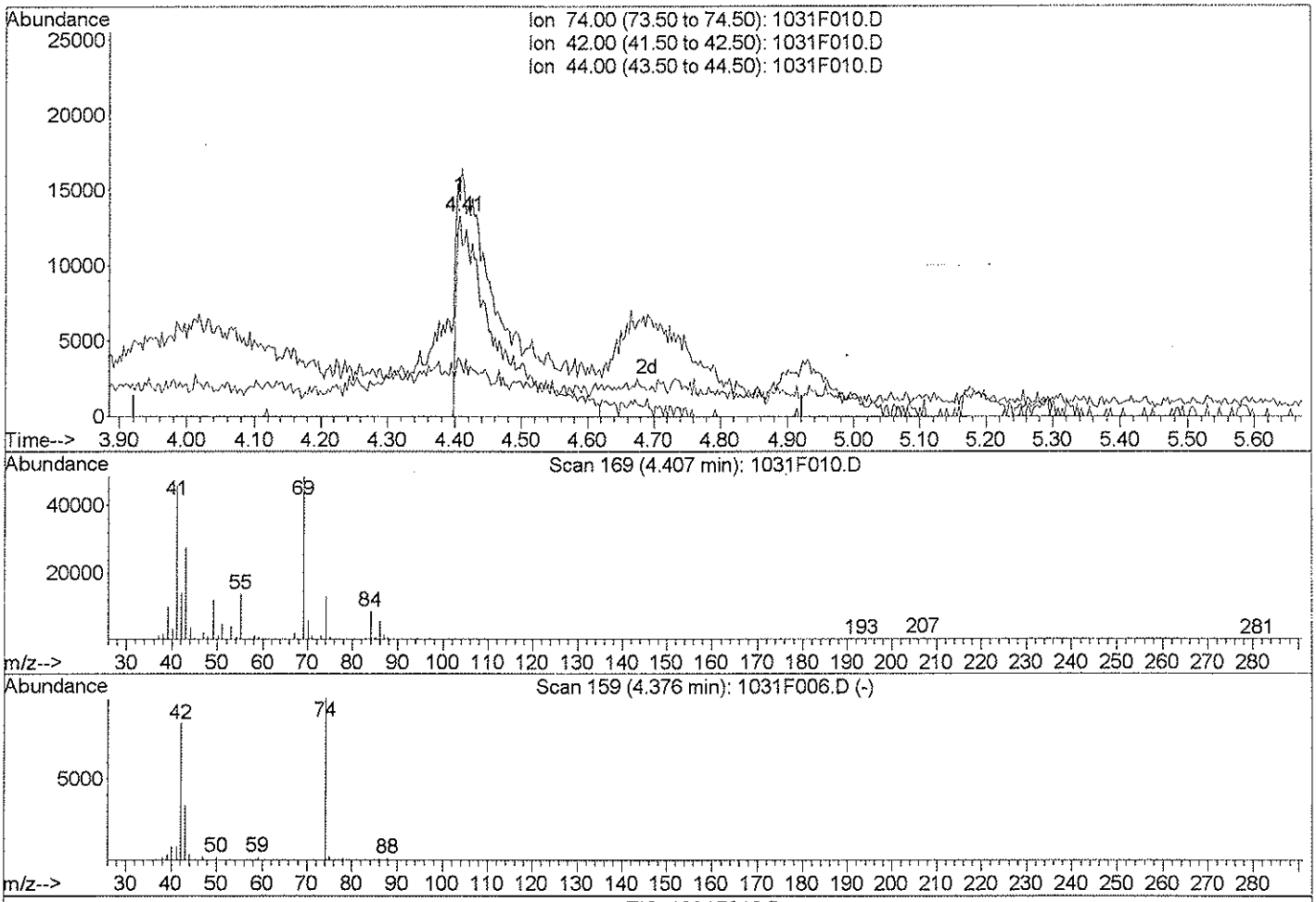
581

Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F010.D
Acq On : 31 Oct 2008 3:18 pm
Sample : K0810048-003MS
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:41 2008

Vial: 8
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Single Level Calibration



TIC: 1031F010.D

(2) N-Nitrosodimethylamine (T)

4.41min 1169.54ng/ml

response 55013

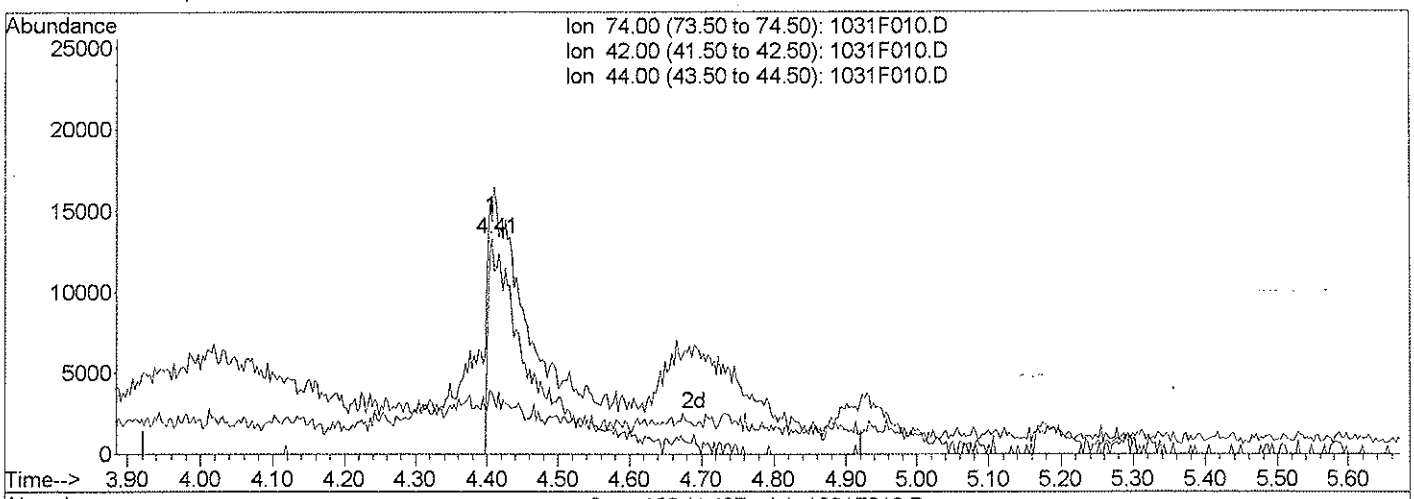
Ion	Exp%	Act%
74.00	100	100
42.00	83.40	83.89
44.00	5.80	13.79
0.00	0.00	0.00

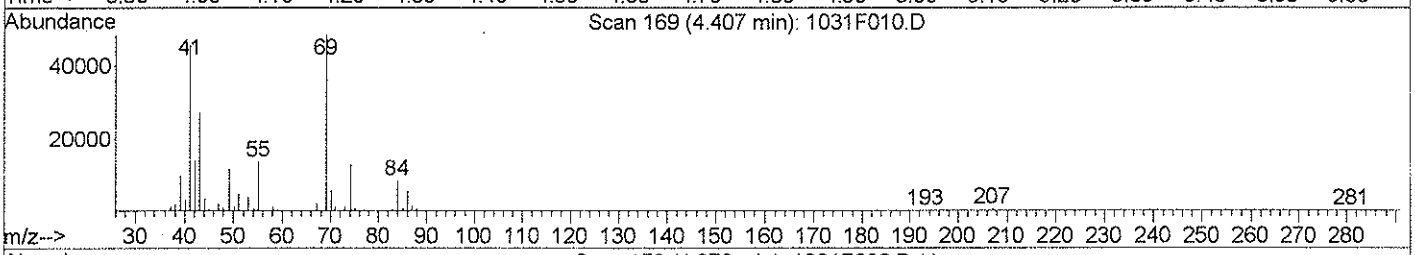
1031F010.D 102608SVOLL.M Mon Nov 03 11:47:27 2008

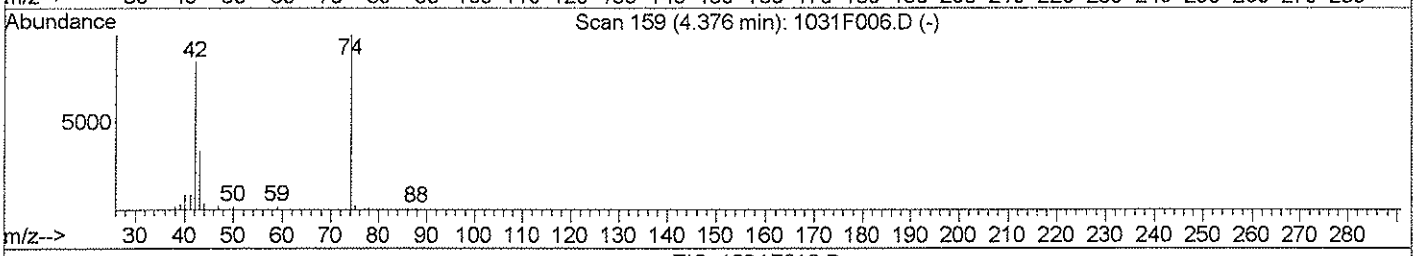
Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F010.D Vial: 8
Acq On : 31 Oct 2008 3:18 pm Operator: KBAILEY
Sample : K0810048-003MS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:47 2008 Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Single Level Calibration







TIC: 1031F010.D

(2) N-Nitrosodimethylamine (T)

4.41min 1198.50ng/ml m

response 56375

Ion	Exp%	Act%
74.00	100	100
42.00	83.40	107.48
44.00	5.80	28.37
0.00	0.00	0.00

LB 111308

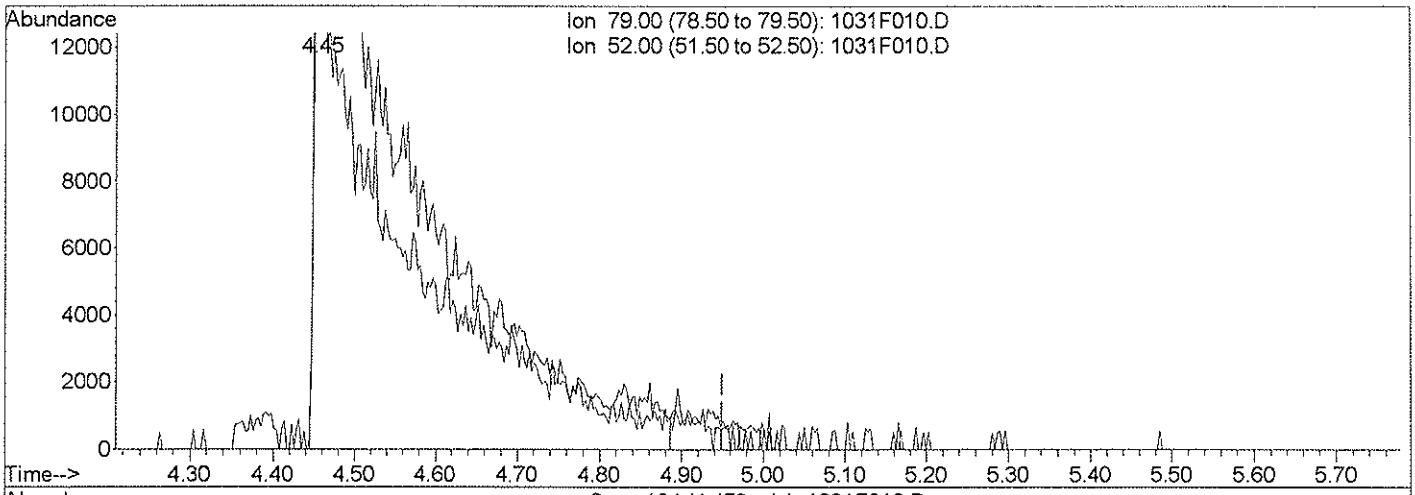
11-3-08

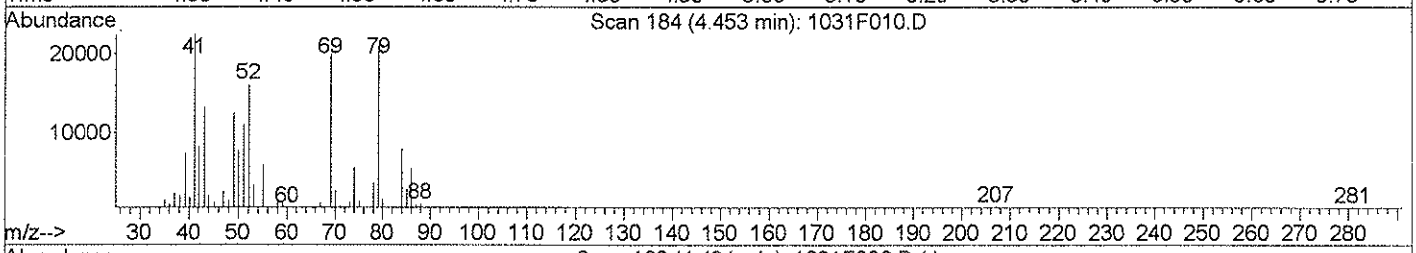
1031F010.D 102608SVOLL.M Mon Nov 03 11:47:30 2008

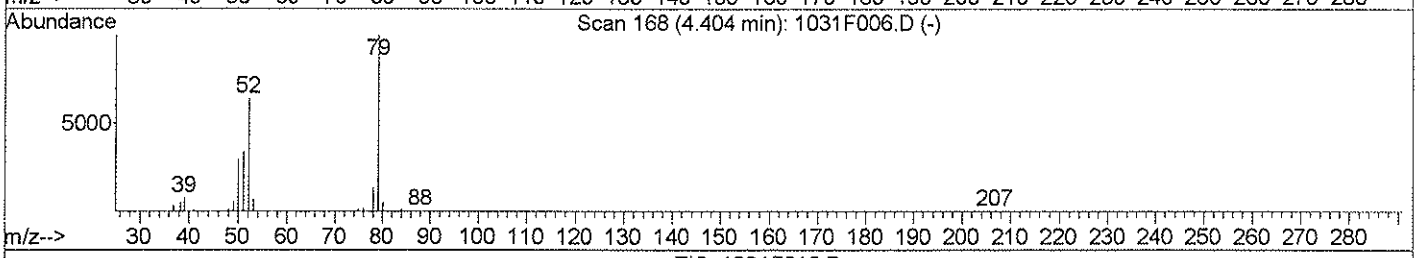
Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F010.D Vial: 8
Acq On : 31 Oct 2008 3:18 pm Operator: KBAILEY
Sample : K0810048-003MS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:47 2008 Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Single Level Calibration







TIC: 1031F010.D

(3) Pyridine (T)

4.45min 1733.05ng/ml

response 158228

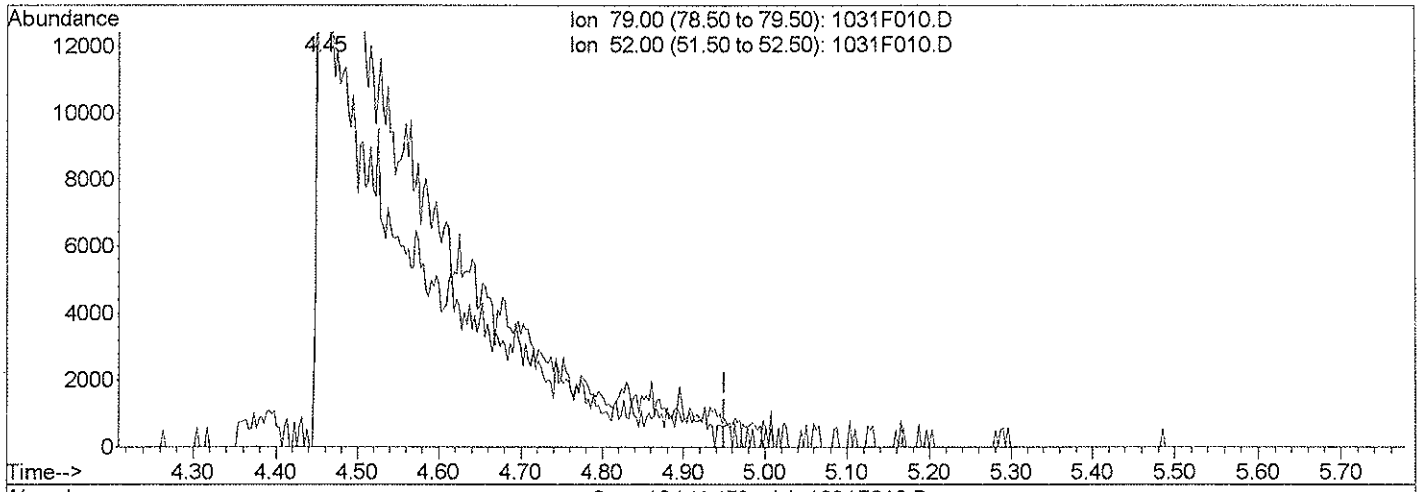
Ion	Exp%	Act%
79.00	100	100
52.00	66.00	76.53
0.00	0.00	0.00
0.00	0.00	0.00

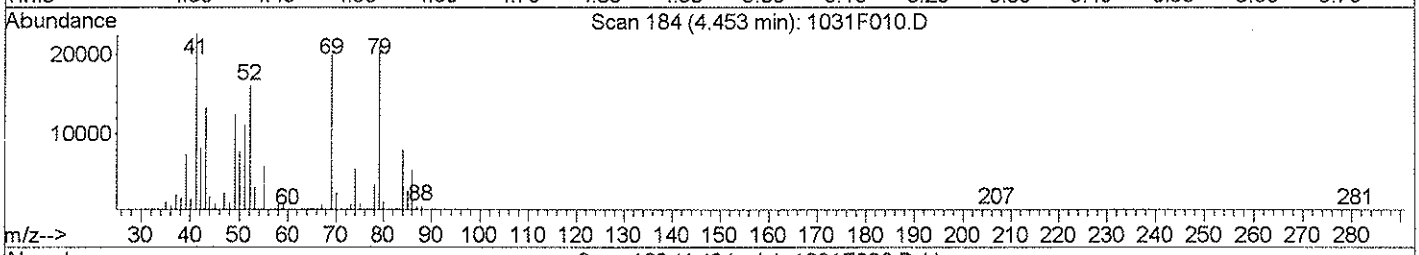
1031F010.D 102608SVOLL.M Mon Nov 03 11:47:35 2008

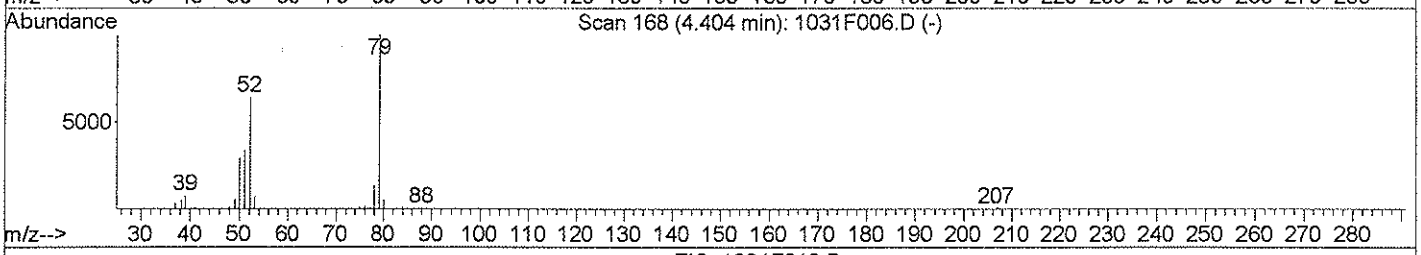
Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F010.D Vial: 8
Acq On : 31 Oct 2008 3:18 pm Operator: KBAILEY
Sample : K0810048-003MS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:47 2008 Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Single Level Calibration







TIC: 1031F010.D

(3) Pyridine (T)

4.45min 1785.03ng/ml m

response 162973

Ion	Exp%	Act%
79.00	100	100
52.00	66.00	76.53
0.00	0.00	0.00
0.00	0.00	0.00

1C
LB
11/3/08
MM 11-3-08

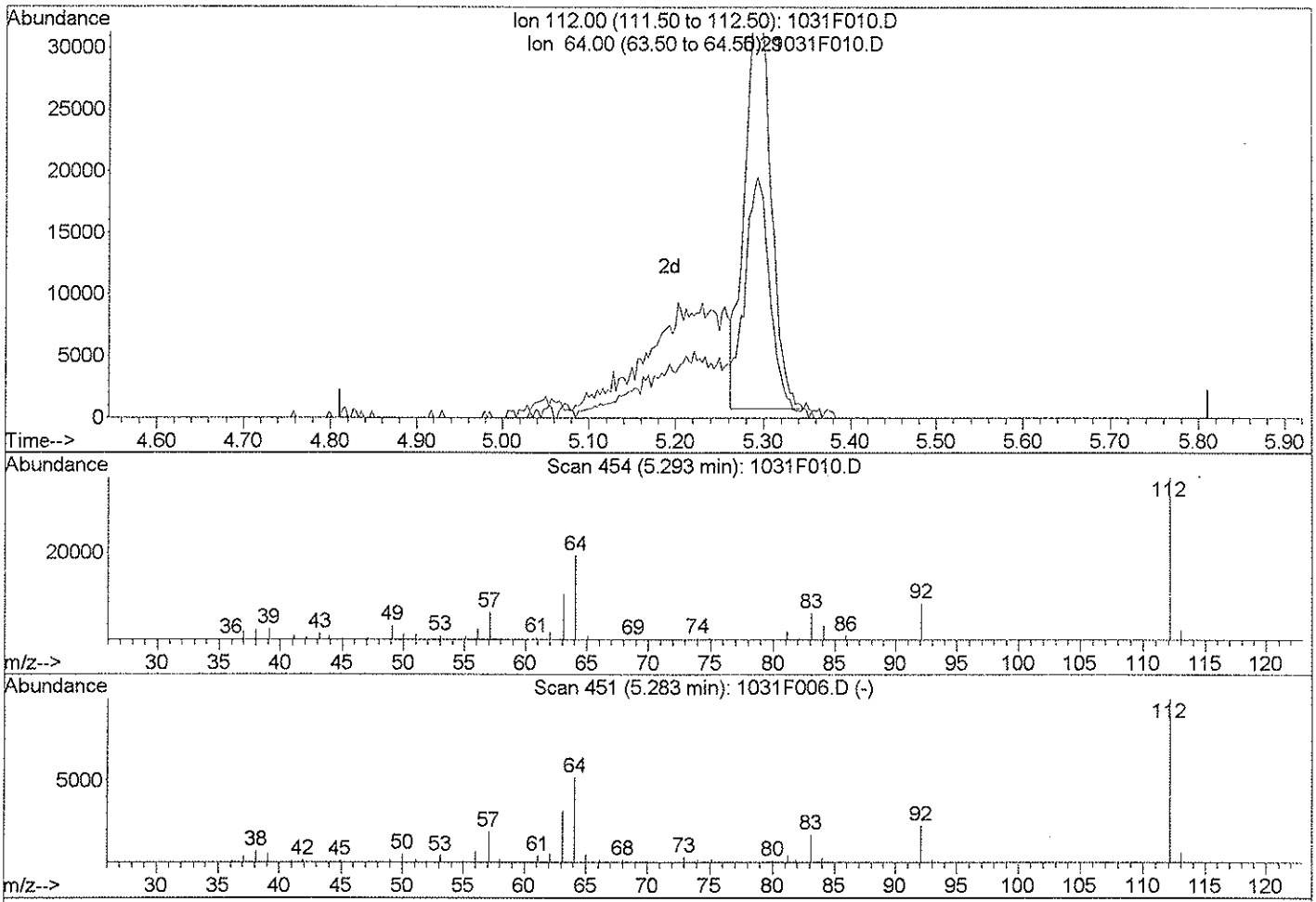
1031F010.D 102608SVOLL.M Mon Nov 03 11:47:40 2008

Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F010.D
Acq On : 31 Oct 2008 3:18 pm
Sample : K0810048-003MS
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:47 2008

Vial: 8
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration



TIC: 1031F010.D

(4) 2-Fluorophenol (S)

5.29min 888.96ng/ml

response 70035

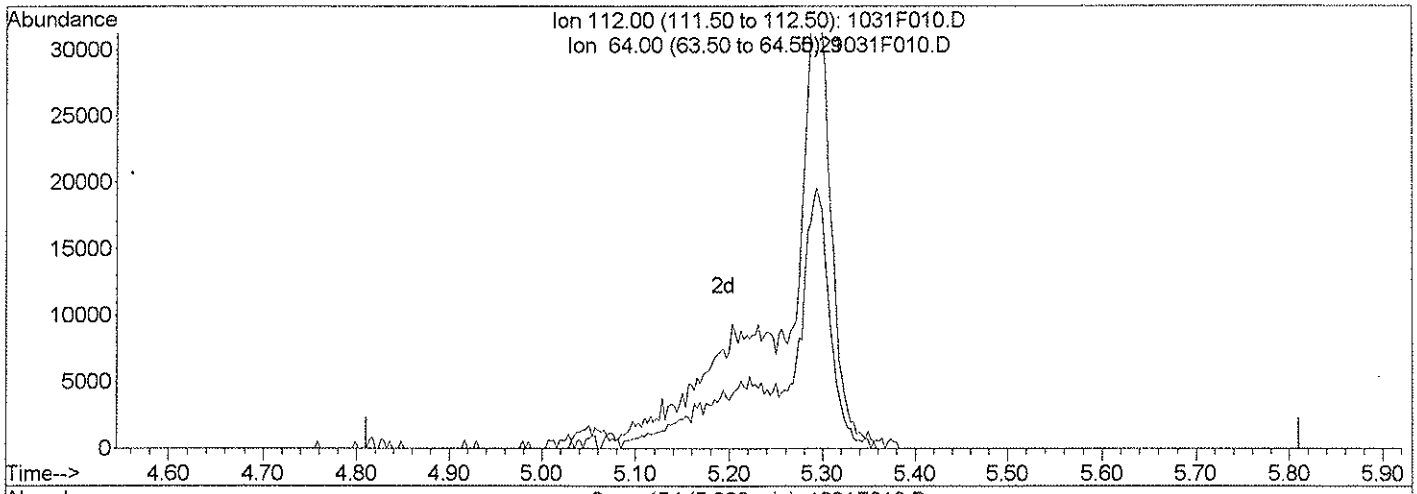
Ion	Exp%	Act%
112.00	100	100
64.00	55.10	51.87
0.00	0.00	0.00
0.00	0.00	0.00

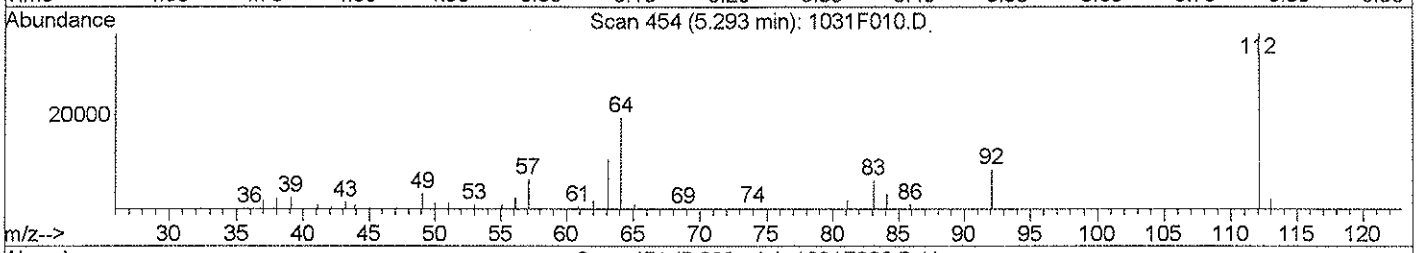
1031F010.D 102608SVOLL.M Mon Nov 03 11:47:44 2008

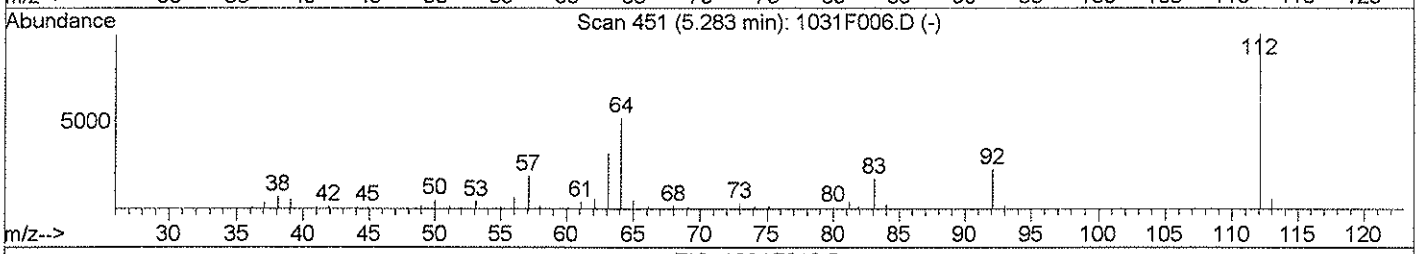
Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F010.D Vial: 8
Acq On : 31 Oct 2008 3:18 pm Operator: KBAILEY
Sample : K0810048-003MS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:47 2008 Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration







TIC: 1031F010.D

(4) 2-Fluorophenol (S)

5.29min 1751.61ng/ml m

response 137997

Ion	Exp%	Act%
112.00	100	100
64.00	55.10	52.97
0.00	0.00	0.00
0.00	0.00	0.00

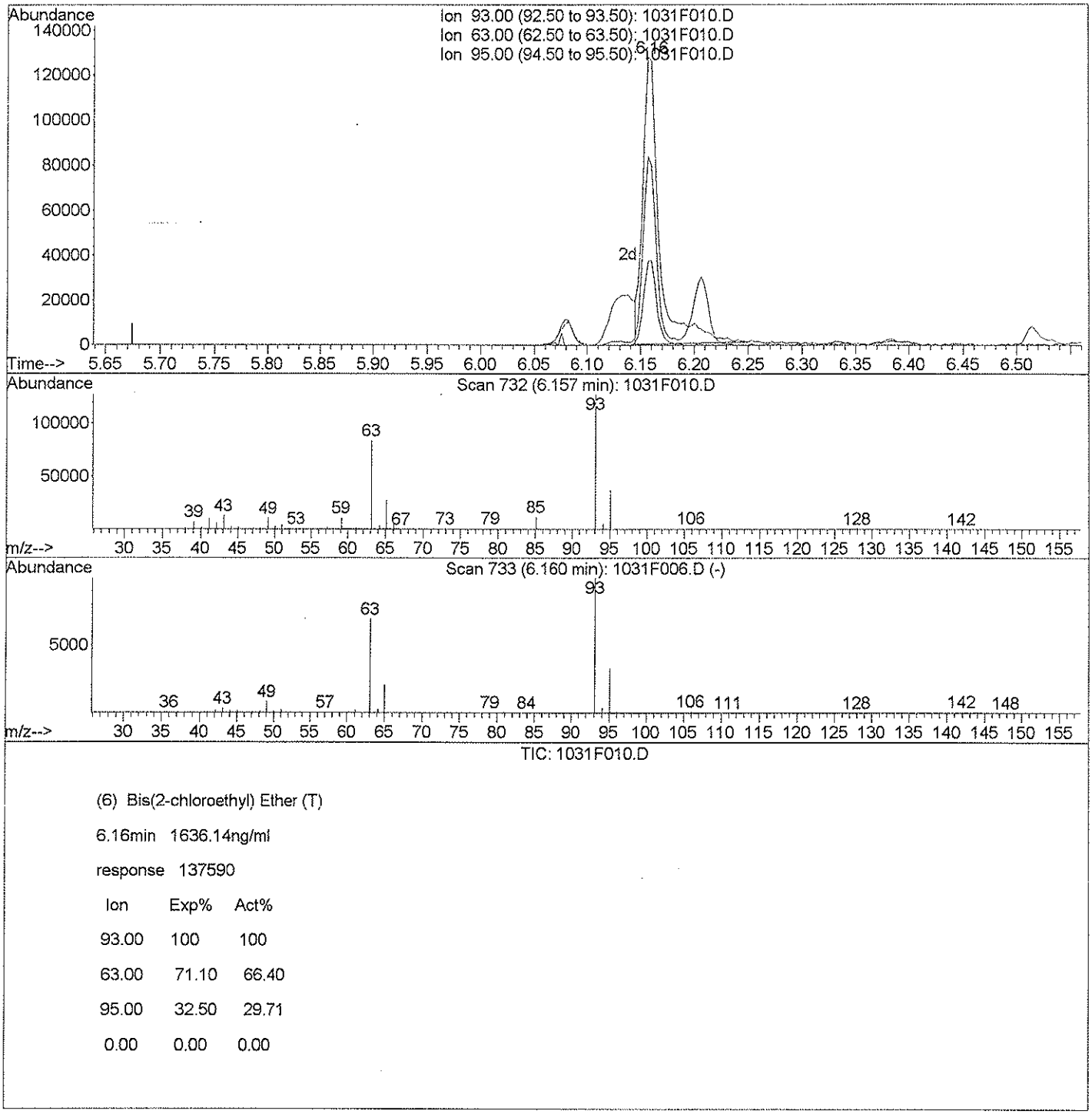
1C
LB 11/3/08
M 11-7-08

1031F010.D 102608SVOLL.M Mon Nov 03 11:47:52 2008

Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F010.D Vial: 8
Acq On : 31 Oct 2008 3:18 pm Operator: KBAILEY
Sample : K0810048-003MS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:47 2008 Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration



TIC: 1031F010.D

(6) Bis(2-chloroethyl) Ether (T)

6.16min 1636.14ng/ml

response 137590

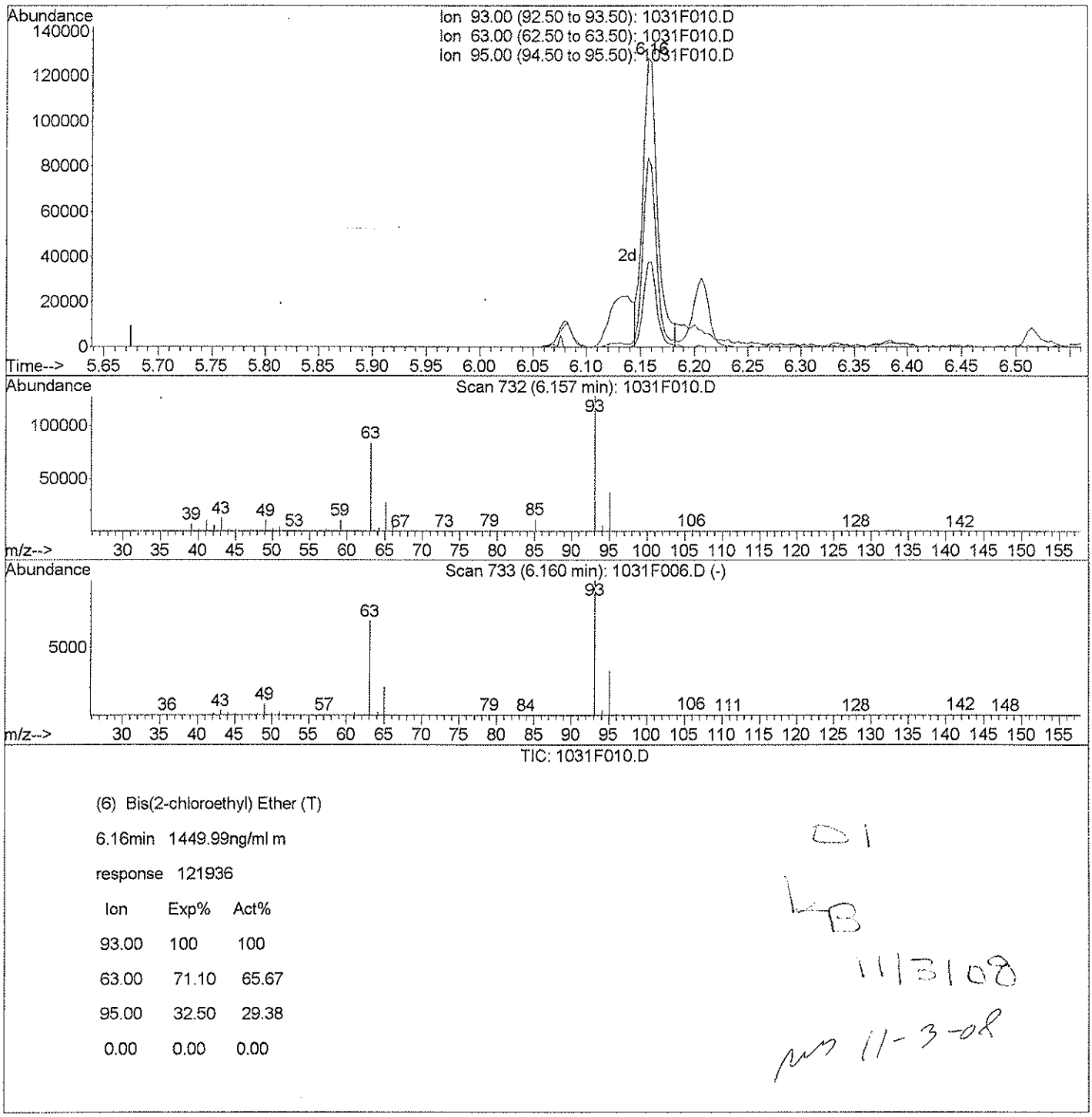
Ion	Exp%	Act%
93.00	100	100
63.00	71.10	66.40
95.00	32.50	29.71
0.00	0.00	0.00

1031F010.D 102608SVOLL.M Mon Nov 03 11:48:01 2008

Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F010.D Vial: 8
Acq On : 31 Oct 2008 3:18 pm Operator: KBAILEY
Sample : K0810048-003MS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:48 2008 Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration



TIC: 1031F010.D

(6) Bis(2-chloroethyl) Ether (T)

6.16min 1449.99ng/ml m

response 121936

Ion	Exp%	Act%
93.00	100	100
63.00	71.10	65.67
95.00	32.50	29.38
0.00	0.00	0.00

D1
LB
11/3/08
MM 11-3-08

1031F010.D 102608SVOLL.M Mon Nov 03 11:48:05 2008

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Batch QCDMS
Lab Code: KWG0811326-2

Extraction Method: EPA 3541
Analysis Method: 8270C

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	**117**		30	2.0	1	10/23/08	10/31/08	KWG0811326	
Benzyl Alcohol	**126**		20	2.1	1	10/23/08	10/31/08	KWG0811326	
1,2-Dichlorobenzene	**115**		9.9	2.9	1	10/23/08	10/31/08	KWG0811326	
2-Methylphenol	**81.5**		9.9	1.5	1	10/23/08	10/31/08	KWG0811326	
1,4-Dichlorobenzene	**108**		9.9	2.9	1	10/23/08	10/31/08	KWG0811326	
4-Methylphenol†	**79.0**		9.9	1.5	1	10/23/08	10/31/08	KWG0811326	
2,4-Dimethylphenol	**15.7**	J	50	5.5	1	10/23/08	10/31/08	KWG0811326	
Benzoic Acid	**76.4**	J	200	96	1	10/23/08	10/31/08	KWG0811326	
1,2,4-Trichlorobenzene	**116**		9.9	2.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobutadiene	**118**		9.9	2.5	1	10/23/08	10/31/08	KWG0811326	
Dimethyl Phthalate	**136**		9.9	1.0	1	10/23/08	10/31/08	KWG0811326	
Diethyl Phthalate	**151**		9.9	1.3	1	10/23/08	10/31/08	KWG0811326	
N-Nitrosodiphenylamine	**153**		9.9	1.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobenzene	**147**		9.9	1.2	1	10/23/08	10/31/08	KWG0811326	
Pentachlorophenol	**144**		99	20	1	10/23/08	10/31/08	KWG0811326	
Di-n-butyl Phthalate	**177**		20	7.9	1	10/23/08	10/31/08	KWG0811326	
Butyl Benzyl Phthalate	**177**		9.9	3.2	1	10/23/08	10/31/08	KWG0811326	
Bis(2-ethylhexyl) Phthalate	**183**		99	7.0	1	10/23/08	10/31/08	KWG0811326	
Di-n-octyl Phthalate	**203**		9.9	1.7	1	10/23/08	10/31/08	KWG0811326	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	51	15-103	10/31/08	Acceptable
Nitrobenzene-d5	52	10-108	10/31/08	Acceptable
2-Fluorobiphenyl	49	10-105	10/31/08	Acceptable
2,4,6-Tribromophenol	68	16-122	10/31/08	Acceptable
Terphenyl-d14	80	31-126	10/31/08	Acceptable

Comments:

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Batch QCDMS	**Units:**	ug/Kg
Lab Code:	KWG0811326-2	**Basis:**	Dry

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS17\DATA\103108\1031F011.D
Lab ID: KWG0811326-2 -- K0810048-003DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 10/31/2008 15:44
Date Quantitated: 11/03/2008 11:50
Batch ID: KWG0811769
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Patch QC.
K9010 RX
K10000
K10032

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Std MRL Unsupported by ICAL	2,3,4,6-Tetrachlorophenol	50	9.9	NA	NT

Primary Review: LB 11/3/08

Secondary Review: MM 11/3/08

Printed: 11/03/2008 13:48:30
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8270C SVO_LL	**Collect Date:**		**Receive Date:**	10/30/2008

Analysis Lot:	KWG0811769	**Prep Lot:**	KWG0811326	**Report Group:**	
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	771017	**Prep Date:**	10/23/2008		

Quant Method:	J:\MS17\METHODS\FULL_SCAN\102608SVOLL.	**Calibration ID:**	CAL7891
Title:			
Tune Ref:	J:\MS17\DATA\103108\1031F005.D	**Method ID:**	MJ142
MB Ref:	J:\MS17\DATA\103108\1031F007.D	**Quant based on Method**	

Data File:	J:\MS17\DATA\103108\1031F011.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 15:44	**Quant Date:**	11/03/2008 11:50	**Vial:**	9
Run Type:	DMS			**Dilution:**	1.0
Lab ID:	KWG0811326-2 -- K0810048-003DMS			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	6.39	0.01	152	65391	1,000.00	OK
2	Naphthalene-d8	7.52	0.00	136	251288	1,000.00	OK
3	Acenaphthene-d10	9.17	0.00	164	151933	1,000.00	OK
4	Phenanthrene-d10	10.58	0.00	188	253688	1,000.00	OK
5	Chrysene-d12	13.53	0.00	240	324932	1,000.00	OK
6	Perylene-d12	15.87	0.01	264	329816	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	5.30	0.02	0.00	112	136483m	1,718	46	10-89	OK	
1	Phenol-d6	6.08	0.01	0.00	99	203471	1,897	51	15-103	OK	
1	Nitrobenzene-d5	6.88	0.00	0.00	82	111606	1,297	52	10-108	OK	
3	2-Fluorobiphenyl	8.53	0.00	0.00	172	287405	1,235	49	10-105	OK	
4	2,4,6-Tribromophenol	9.92	0.00	0.00	330	130246	2,567	68	16-122	OK	
5	Terphenyl-d14	12.16	0.00	0.00	244	584727	2,001	80	31-126	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	4.42	0.04	0.01	74	56564	1,192	117		
1	Pyridine	4.46	0.06	0.01	79	168179	1,827	180	JN	
1	Aniline	6.13	0.02	0.00	93	24971	191.43	18.8	J	
1	Bis(2-chloroethyl) Ether	6.16		0.00	93	120953m	1,426	140		
1	Phenol	6.09	0.01	0.00	94	129535	1,195	117		
1	2-Chlorophenol	6.21	0.01	0.00	128	106297	1,145	113		
1	1,3-Dichlorobenzene	6.34	0.01	0.00	146	120787	1,133	111		
1	1,4-Dichlorobenzene	6.40		0.00	146	121051	1,103	108		
1	1,2-Dichlorobenzene	6.53		0.00	146	122263	1,171	115		
1	Benzyl Alcohol	6.52	0.01	0.00	108	71882	1,281	126		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS17\DATA\103108\1031F011.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 15:44	**Quant Date:**	11/03/2008 11:50	**Vial:**	9
Run Type:	DMS			**Dilution:**	1.0
Lab ID:	KWG0811326-2 -- K0810048-003DMS			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether	6.62		0.00	45	132909	1,098	108		
1	2-Methylphenol	6.61	0.01	0.00	107	62029	829.67	81.5		
1	Hexachloroethane	6.83		0.00	117	41097	1,121	110		
1	Acetophenone				105	0d		12	U	
1	N-Nitrosodi-n-propylamine	6.74		0.00	70	78760	1,214	119		
1	4-Methylphenol	6.74		0.00	107	88088	803.74	79.0		
1	Nitrobenzene	6.90		0.00	77	110995	1,209	119		
2	Isophorone	7.11		0.00	82	203487	1,202	118		
2	2-Nitrophenol	7.18		0.00	139	62931	1,210	119		
2	2,4-Dimethylphenol	7.22		0.00	122	13312	159.53	15.7	J	
2	Bis(2-chloroethoxy)methane	7.30	-0.01	0.00	93	116743	1,166	115		
2	2,4-Dichlorophenol	7.40		0.00	162	101066	1,240	122		
2	Benzoic Acid	7.28	-0.04	-0.01	105	15901	777.81	76.4	J	
2	1,2,4-Trichlorobenzene	7.47		0.00	180	111046	1,182	116		
2	Naphthalene	7.55		0.00	128	332379	1,197	118		
2	4-Chloroaniline	7.60		0.00	127	68279	598.59	58.8		
2	Hexachlorobutadiene	7.65		0.00	225	70178	1,200	118		
2	4-Chloro-3-methylphenol	8.05		0.00	107	103111	1,337	131		
2	2-Methylnaphthalene	8.19		0.00	142	231074	1,218	120		
2	1-Methylnaphthalene	8.28		0.00	142	221173	1,236	121		
3	Hexachlorocyclopentadiene	8.33		0.00	237	58541	794.43	78.1		
3	2,4,6-Trichlorophenol	8.45		0.00	196	88999	1,329	131		
3	2,4,5-Trichlorophenol	8.49	0.01	0.00	196	102525	1,413	139		
3	2-Chloronaphthalene	8.64		0.00	162	229482	1,168	115		
3	2-Nitroaniline	8.75		0.00	65	73594	1,455	143		
3	Acenaphthylene	9.03		0.00	152	387105	1,254	123		
3	Dimethyl Phthalate	8.92		0.00	163	304881	1,380	136		
3	2,6-Dinitrotoluene	8.98		0.00	165	70333	1,413	139		
3	Acenaphthene	9.20		0.00	154	231470	1,266	124		
3	3-Nitroaniline	9.14		0.00	138	28899	563.62	55.4		
3	2,4-Dinitrophenol	9.24		0.00	184	21114	624.29	61.4	J	
3	Dibenzofuran	9.36		0.00	168	374148	1,296	127		
3	4-Nitrophenol	9.31		0.00	65	59521	1,650	162		
3	2,4-Dinitrotoluene	9.36		0.00	165	99361	1,486	146		
3	2,3,4,6-Tetrachlorophenol	9.48		0.00	232	100887	1,539	151		
3	Fluorene	9.69		0.00	166	319400	1,381	136		
3	4-Chlorophenyl Phenyl Ether	9.69		0.00	204	165423	1,356	133		
3	Diethyl Phthalate	9.59		0.00	149	321045	1,539	151		
3	4-Nitroaniline	9.72		0.00	138	28239	536.19	52.7		
3	2-Methyl-4,6-dinitrophenol	9.74	-0.01	0.00	198	56463	1,278	126		
3	N-Nitrosodiphenylamine	9.81		0.00	169	245799	1,561	153		
3	Azobenzene	9.84		0.00	77	261273	1,355	133		

U: Undetected at or above MDL
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D: Result from dilution
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d: Compound manually deleted
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*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS17\DATA\103108\1031F011.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 15:44	**Quant Date:**	11/03/2008 11:50	**Vial:**	9
Run Type:	DMS			**Dilution:**	1.0
Lab ID:	KWG0811326-2 -- K0810048-003DMS			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	4-Bromophenyl Phenyl Ether	10.16		0.00	248	120662	1,537	151		
4	Hexachlorobenzene	10.20	-0.01	0.00	284	142176	1,491	147		
4	Pentachlorophenol	10.40		0.00	266	83053	1,466	144		
4	Phenanthrene	10.60		0.00	178	526172	1,609	158		
4	Anthracene	10.65		0.00	178	507831	1,512	149		
4	Carbazole	10.81		0.00	167	512397	1,660	163		
4	Di-n-butyl Phthalate	11.15		0.00	149	644791	1,803	177		
4	Fluoranthene	11.75		0.00	202	659278	1,751	172		
5	Benzidine				184	0d		200	U	
5	Pyrene	11.98		0.00	202	660608	1,686	166		
5	Butyl Benzyl Phthalate	12.77		0.00	149	273152	1,806	177		
5	3,3'-Dichlorobenzidine				252	0d		3.7	U	
5	Benz(a)anthracene	13.51		0.00	228	675566	1,684	165		
5	Chrysene	13.57		0.00	228	643861	1,714	168		
5	Bis(2-ethylhexyl) Phthalate	13.62		0.00	149	398683	1,858	183		
6	Di-n-octyl Phthalate	14.73		0.00	149	652243	2,068	203		
6	Benzo(b)fluoranthene	15.29	0.01	0.00	252	759139	1,968	193		
6	Benzo(k)fluoranthene	15.34	0.01	0.00	252	738355	1,897	186		
6	Benzo(a)pyrene	15.79		0.00	252	662228	1,870	184		
6	Indeno(1,2,3-cd)pyrene	17.00	0.01	0.00	276	785262	1,930	190		
6	Dibenz(a,h)anthracene	17.02		0.00	278	812219	1,905	187		
6	Benzo(g,h,i)perylene	17.26	0.01	0.00	276	806346	1,915	188		
	Guaiacol				0	0		29	UJ	NR

Prep Amount:	23.83 g	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1
Solids:	85.4 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F011.D Vial: 9
Acq On : 31 Oct 2008 3:44 pm Operator: KBAILEY
Sample : K0810048-003DMS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:41:15 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.39	152	65391	1000.00	ng/ml	-0.02
22) Naphthalene-d8	7.52	136	251288	1000.00	ng/ml	-0.01
36) Acenaphthene-d10	9.17	164	151933	1000.00	ng/ml	-0.01
60) Phenanthrene-d10	10.58	188	253688	1000.00	ng/ml	-0.01
70) Chrysene-d12	13.53	240	324932	1000.00	ng/ml	-0.02
79) Perylene-d12	15.87	264	329816	1000.00	ng/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol	5.30	112	136483m	1717.96	ng/ml	0.00
Spiked Amount 3750.000	Range 25 - 121		Recovery = 45.81%			
7) Phenol-d6	6.08	99	203471	1897.08	ng/ml	0.00
Spiked Amount 3750.000	Range 24 - 113		Recovery = 50.59%			
20) Nitrobenzene-d5	6.88	82	111606	1296.84	ng/ml	-0.01
Spiked Amount 2500.000	Range 23 - 120		Recovery = 51.87%			
40) 2-Fluorobiphenyl	8.53	172	287405	1234.53	ng/ml	-0.01
Spiked Amount 2500.000	Range 30 - 115		Recovery = 49.38%			
61) 2,4,6-Tribromophenol	9.92	330	130246	2567.31	ug/ml	-0.01
Spiked Amount 3750.000	Range 19 - 122		Recovery = 68.46%			
73) Terphenyl-d14	12.16	244	584727	2000.63	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 140		Recovery = 80.03%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.42	74	56564	1192.49	ng/ml	87
3) Pyridine	4.46	79	168179	1826.69	ng/ml	94
5) Aniline	6.13	93	24971	191.43	ng/ml	81
6) Bis(2-chloroethyl) Ether	6.16	93	120953m	1426.32	ng/ml	
8) Phenol	6.09	94	129535	1194.62	ng/ml	95
9) 2-Chlorophenol	6.21	128	106297	1145.13	ng/ml	95
10) 1,3-Dichlorobenzene	6.34	146	120787	1133.20	ng/ml	96
11) 1,4-Dichlorobenzene	6.40	146	121051	1103.23	ng/ml	98
12) 1,2-Dichlorobenzene	6.53	146	122263	1170.93	ng/ml	99
13) Benzyl Alcohol	6.52	108	71882	1280.81	ng/ml	97
14) Bis(2-chloroisopropyl) Eth	6.62	45	132909	1098.01	ng/ml	96
15) 2-Methylphenol	6.61	107	62029	829.67	ng/ml	98
16) Hexachloroethane	6.83	117	41097	1121.04	ng/ml	97
18) N-Nitrosodi-n-propylamine	6.74	70	78760	1214.31	ng/ml	99
19) 4-Methylphenol	6.74	107	88088	803.74	ng/ml	94
21) Nitrobenzene	6.90	77	110995	1209.23	ng/ml	100
23) Isophorone	7.11	82	203487	1201.80	ng/ml	98
24) 2-Nitrophenol	7.18	139	62931	1210.09	ng/ml	96
25) 2,4-Dimethylphenol	7.22	122	13312	159.53	ng/ml	86
26) Bis(2-chloroethoxy)methane	7.30	93	116743	1165.87	ng/ml	98

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

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F011.D Vial: 9
Acq On : 31 Oct 2008 3:44 pm Operator: KBAILEY
Sample : K0810048-003DMS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:41:15 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
27)	2,4-Dichlorophenol	7.40	162	101066	1239.59	ng/ml	99
28)	Benzoic Acid	7.28	105	15901	777.81	ng/ml	95
29)	1,2,4-Trichlorobenzene	7.47	180	111046	1181.84	ng/ml	96
30)	Naphthalene	7.55	128	332379	1196.99	ng/ml	99
31)	4-Chloroaniline	7.60	127	68279	598.59	ng/ml	98
32)	Hexachlorobutadiene	7.65	225	70178	1199.53	ng/ml	95
33)	4-Chloro-3-methylphenol	8.05	107	103111	1337.17	ng/ml	95
34)	2-Methylnaphthalene	8.19	142	231074	1217.87	ng/ml	96
35)	1-Methylnaphthalene	8.28	142	221173	1235.64	ng/ml	98
37)	Hexachlorocyclopentadiene	8.33	237	58541	794.43	ng/ml	97
38)	2,4,6-Trichlorophenol	8.45	196	88999	1329.09	ng/ml	95
39)	2,4,5-Trichlorophenol	8.49	196	102525	1412.91	ng/ml	98
41)	2-Chloronaphthalene	8.64	162	229482	1168.02	ng/ml	99
42)	2-Nitroaniline	8.75	65	73594	1454.86	ng/ml	95
43)	Acenaphthylene	9.03	152	387105	1254.13	ng/ml	99
44)	Dimethyl Phthalate	8.92	163	304881	1379.78	ng/ml	100
45)	2,6-Dinitrotoluene	8.98	165	70333	1413.03	ng/ml	98
46)	Acenaphthene	9.20	154	231470	1265.96	ng/ml	99
47)	3-Nitroaniline	9.14	138	28899	563.62	ng/ml	91
48)	2,4-Dinitrophenol	9.24	184	21114	624.29	ng/ml	96
49)	Dibenzofuran	9.36	168	374148	1295.60	ng/ml	97
50)	4-Nitrophenol	9.31	65	59521	1650.48	ng/ml	93
51)	2,4-Dinitrotoluene	9.36	165	99361	1486.12	ng/ml	98
52)	2,3,4,6-Tetrachlorophenol	9.48	232	100887	1538.93	ng/ml	98
53)	Fluorene	9.69	166	319400	1381.15	ng/ml	100
54)	4-Chlorophenyl Phenyl Ethe	9.69	204	165423	1356.01	ng/ml	96
55)	Diethyl Phthalate	9.59	149	321045	1539.30	ng/ml	99
56)	4-Nitroaniline	9.72	138	28239	536.19	ng/ml	96
57)	2-Methyl-4,6-dinitrophenol	9.74	198	56463	1278.01	ng/ml	86
58)	N-Nitrosodiphenylamine	9.81	169	245799	1560.89	ng/ml	98
59)	Azobenzene	9.84	77	261273	1355.49	ng/ml	97
62)	4-Bromophenyl Phenyl Ether	10.16	248	120662	1537.03	ng/ml	96
63)	Hexachlorobenzene	10.20	284	142176	1490.77	ng/ml	98
64)	Pentachlorophenol	10.40	266	83053	1465.83	ng/ml	97
65)	Phenanthrene	10.60	178	526172	1609.24	ng/ml	99
66)	Anthracene	10.65	178	507831	1512.25	ng/ml	98
67)	Carbazole	10.81	167	512397	1660.19	ng/ml	99
68)	Di-n-butyl Phthalate	11.15	149	644791	1803.19	ng/ml	100
69)	Fluoranthene	11.75	202	659278	1751.12	ng/ml	97
72)	Pyrene	11.98	202	660608	1685.88	ng/ml	100
74)	Butyl Benzyl Phthalate	12.77	149	273152	1805.71	ng/ml	99

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

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F011.D Vial: 9
Acq On : 31 Oct 2008 3:44 pm Operator: KBAILEY
Sample : K0810048-003DMS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:41:15 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

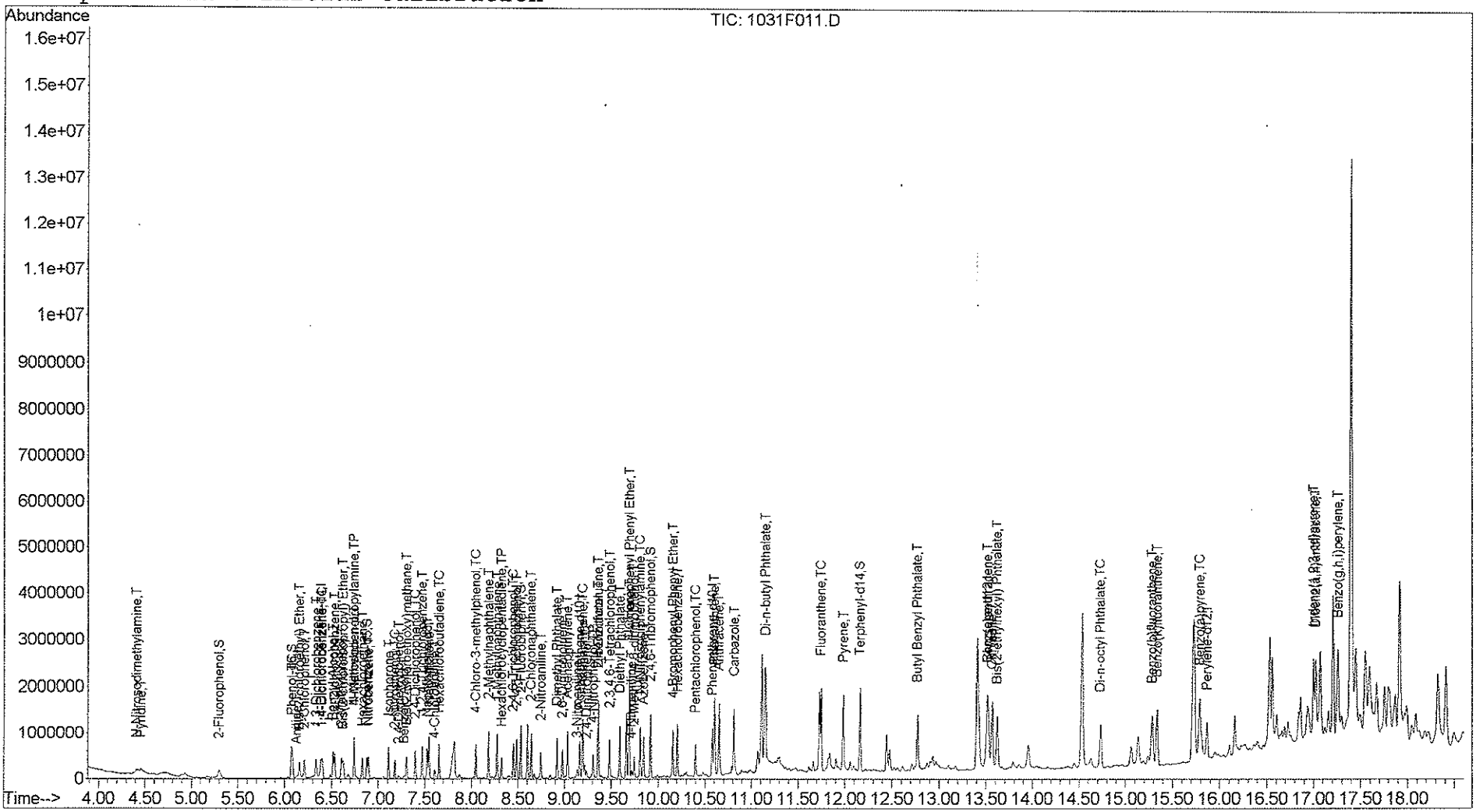
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
76)	Benz(a)anthracene	13.51	228	675566	1683.76	ng/ml	99
77)	Chrysene	13.57	228	643861	1714.46	ng/ml	99
78)	Bis(2-ethylhexyl) Phthalat	13.62	149	398683	1857.65	ng/ml	98
80)	Di-n-octyl Phthalate	14.73	149	652243	2068.32	ng/ml	99
81)	Benzo(b)fluoranthene	15.29	252	759139	1968.04	ng/ml	97
82)	Benzo(k)fluoranthene	15.34	252	738355	1897.10	ng/ml	99
83)	Benzo(a)pyrene	15.79	252	662228	1869.92	ng/ml	98
84)	Indeno(1,2,3-cd)pyrene	17.00	276	785262	1930.39	ng/ml	97
85)	Dibenz(a,h)anthracene	17.02	278	812219	1904.99	ng/ml	99
86)	Benzo(g,h,i)perylene	17.26	276	806346	1915.34	ng/ml	98

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

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F011.D Vial: 9
Acq On : 31 Oct 2008 3:44 pm Operator: KBAILEY
Sample : K0810048-003DMS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:50 2008 Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration



599

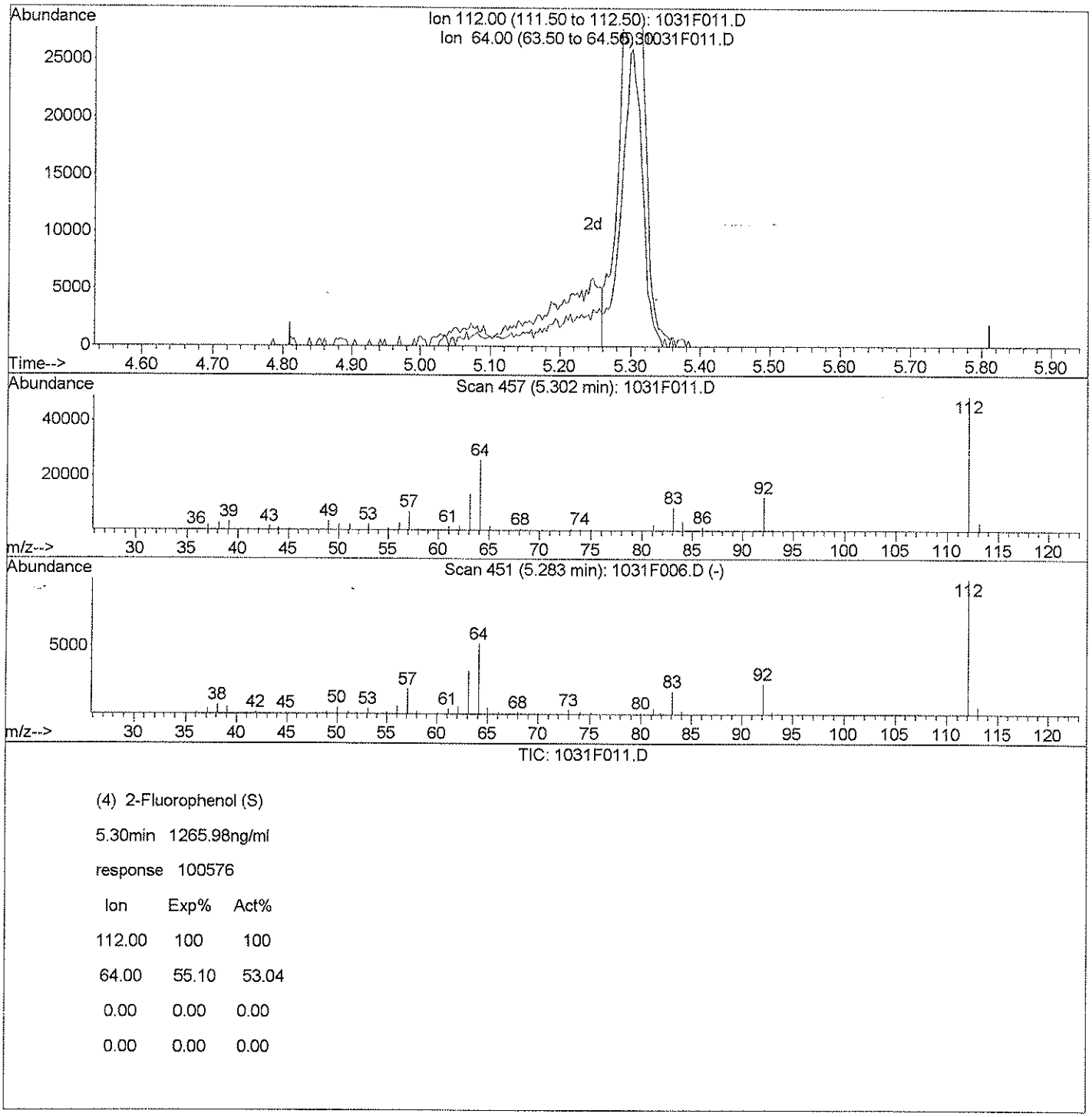
Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F011.D
Acq On : 31 Oct 2008 3:44 pm
Sample : K0810048-003DMS
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:41 2008

Vial: 9
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration



(4) 2-Fluorophenol (S)

5.30min 1265.98ng/ml

response 100576

Ion	Exp%	Act%
112.00	100	100
64.00	55.10	53.04
0.00	0.00	0.00
0.00	0.00	0.00

1031F011.D 102608SVOLL.M Mon Nov 03 11:49:08 2008

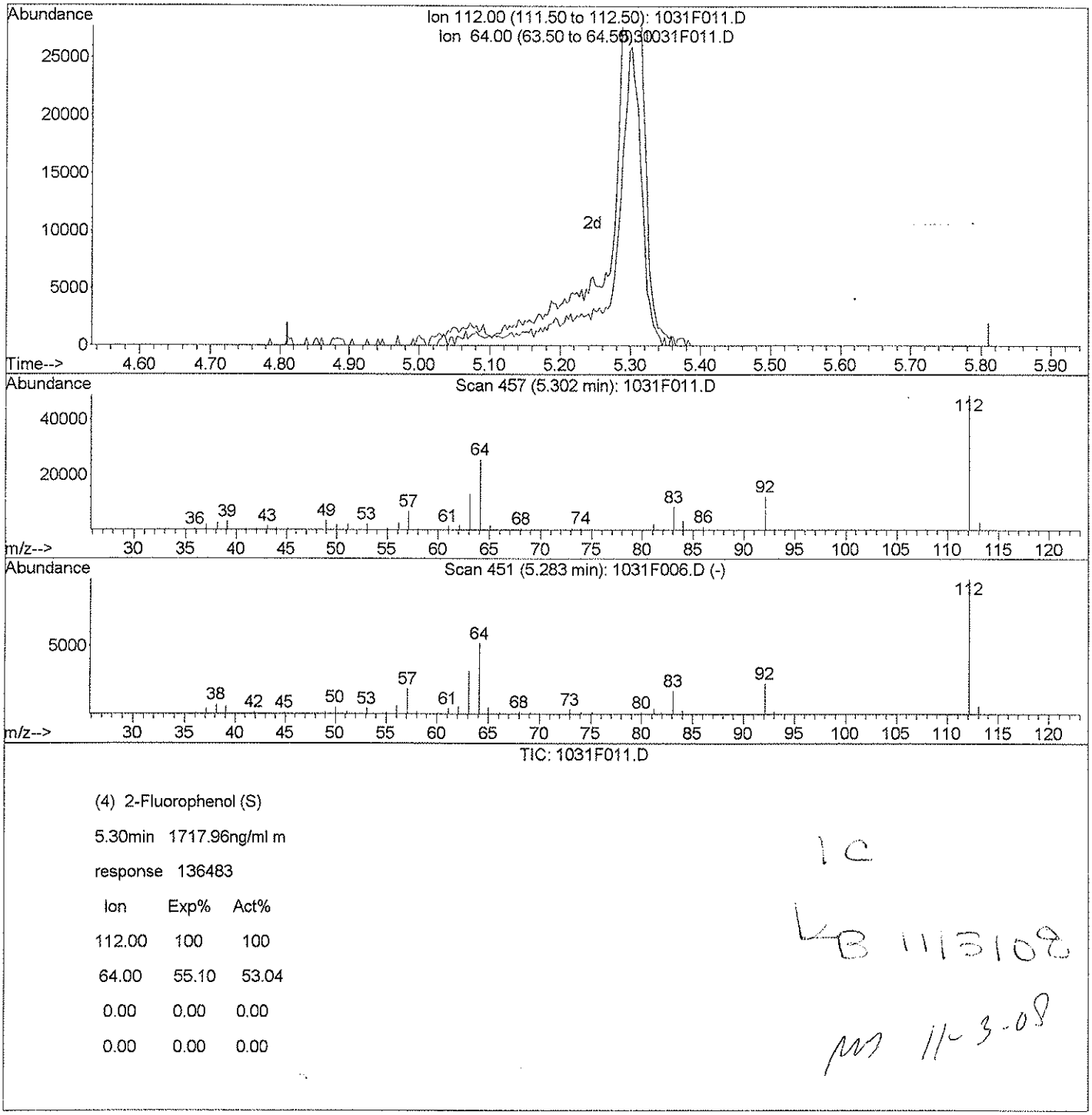
Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F011.D
Acq On : 31 Oct 2008 3:44 pm
Sample : K0810048-003DMS
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:49 2008

Vial: 9
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration



TIC: 1031F011.D

(4) 2-Fluorophenol (S)

5.30min 1717.96ng/ml m

response 136483

Ion	Exp%	Act%
112.00	100	100
64.00	55.10	53.04
0.00	0.00	0.00
0.00	0.00	0.00

1C

LB 111308

MJ 11-3-08

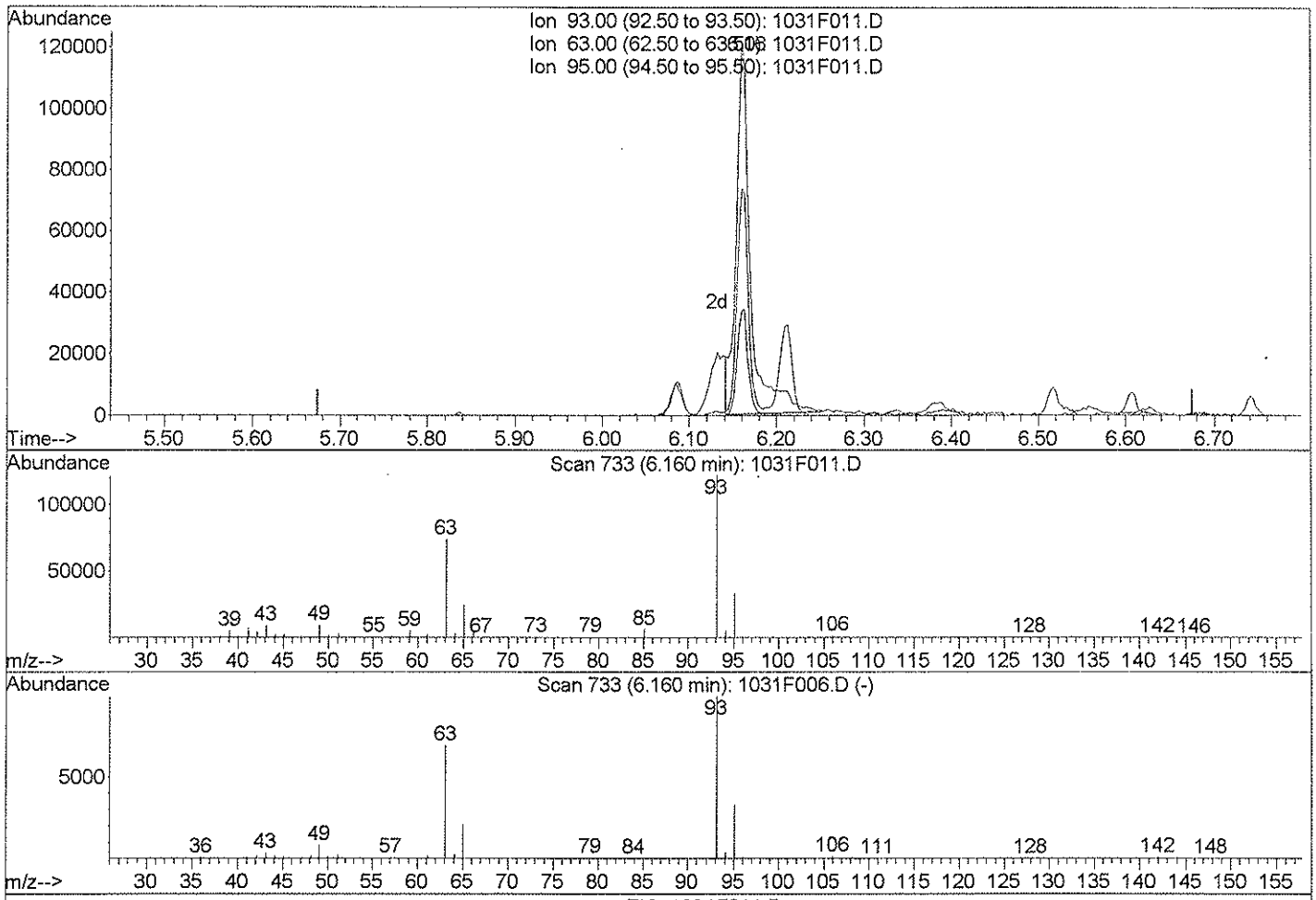
1031F011.D 102608SVOLL.M Mon Nov 03 11:49:13 2008

Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F011.D
Acq On : 31 Oct 2008 3:44 pm
Sample : K0810048-003DMS
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:49 2008

Vial: 9
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration



TIC: 1031F011.D

(6) Bis(2-chloroethyl) Ether (T)

6.16min 1651.76ng/ml

response 140071

Ion	Exp%	Act%
93.00	100	100
63.00	71.10	61.15
95.00	32.50	27.99
0.00	0.00	0.00

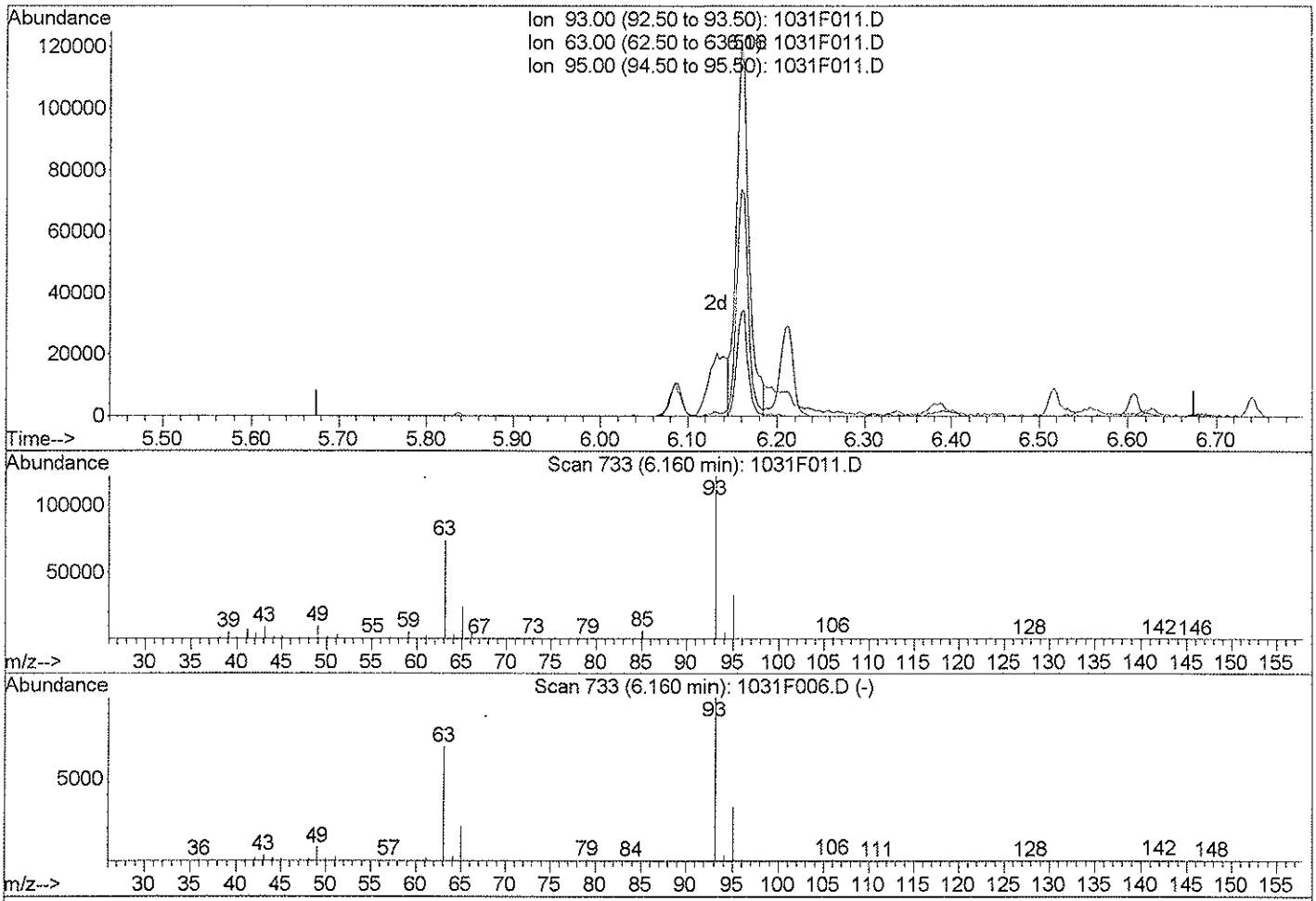
11-3-08

1031F011.D 102608SVOLL.M Mon Nov 03 11:49:20 2008

Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F011.D Vial: 9
Acq On : 31 Oct 2008 3:44 pm Operator: KBAILEY
Sample : K0810048-003DMS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:49 2008 Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration



TIC: 1031F011.D

(6) Bis(2-chloroethyl) Ether (T)

6.16min 1426.32ng/ml m

response 120953

Ion	Exp%	Act%
93.00	100	100
63.00	71.10	60.54
95.00	32.50	27.71
0.00	0.00	0.00

01

LB 11/3/08

11/3/08

1031F011.D 102608SVOLL.M Mon Nov 03 11:49:25 2008

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Units:**	ug/Kg
Lab Code:	KWG0811326-3	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	**118**		30	2.0	1	10/23/08	10/31/08	KWG0811326	
Benzyl Alcohol	**122**		20	2.1	1	10/23/08	10/31/08	KWG0811326	
1,2-Dichlorobenzene	**120**		10	2.9	1	10/23/08	10/31/08	KWG0811326	
2-Methylphenol	**109**		10	1.5	1	10/23/08	10/31/08	KWG0811326	
1,4-Dichlorobenzene	**99.6**		10	2.9	1	10/23/08	10/31/08	KWG0811326	
4-Methylphenol†	**111**		10	1.5	1	10/23/08	10/31/08	KWG0811326	
2,4-Dimethylphenol	**70.9**		50	5.5	1	10/23/08	10/31/08	KWG0811326	
Benzoic Acid	**94.7**	J	200	96	1	10/23/08	10/31/08	KWG0811326	
1,2,4-Trichlorobenzene	**129**		10	2.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobutadiene	**133**		10	2.5	1	10/23/08	10/31/08	KWG0811326	
Dimethyl Phthalate	**139**		10	1.0	1	10/23/08	10/31/08	KWG0811326	
Diethyl Phthalate	**150**		10	1.3	1	10/23/08	10/31/08	KWG0811326	
N-Nitrosodiphenylamine	**141**		10	1.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobenzene	**144**		10	1.2	1	10/23/08	10/31/08	KWG0811326	
Pentachlorophenol	**95.9**	J	100	20	1	10/23/08	10/31/08	KWG0811326	
Di-n-butyl Phthalate	**187**		20	7.9	1	10/23/08	10/31/08	KWG0811326	
Butyl Benzyl Phthalate	**192**		10	3.2	1	10/23/08	10/31/08	KWG0811326	
Bis(2-ethylhexyl) Phthalate	**197**		100	7.0	1	10/23/08	10/31/08	KWG0811326	
Di-n-octyl Phthalate	**218**		10	1.7	1	10/23/08	10/31/08	KWG0811326	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	46	15-103	10/31/08	Acceptable
Nitrobenzene-d5	48	10-108	10/31/08	Acceptable
2-Fluorobiphenyl	47	10-105	10/31/08	Acceptable
2,4,6-Tribromophenol	55	16-122	10/31/08	Acceptable
Terphenyl-d14	82	31-126	10/31/08	Acceptable

Comments:

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Units:**	ug/Kg
Lab Code:	KWG0811326-3	**Basis:**	Dry

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS17\DATA\103108\1031F008.D
Lab ID: KWG0811326-3
RunType: LCS
Matrix: SOIL

Date Acquired: 10/31/2008 14:26
Date Quantitated: 11/03/2008 11:45
Batch ID: KWG0811769
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

L9010 RX
L10000
L10032
L10048

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Std MRL Unsupported by ICAL	2,3,4,6-Tetrachlorophenol	50	10	NA	NT

Primary Review: LB 11/3/08
Secondary Review: MB 11-3-08

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8270C SVO_LL	**Collect Date:**		**Receive Date:**	10/30/2008

Analysis Lot:	KWG0811769	**Prep Lot:**	KWG0811326	**Report Group:**	
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	771018	**Prep Date:**	10/23/2008		

Quant Method:	J:\MS17\METHODS\FULL_SCAN\102608SVOLL.	**Calibration ID:**	CAL7891
Title:			
Tune Ref:	J:\MS17\DATA\103108\1031F005.D	**Method ID:**	MJ142
MB Ref:	J:\MS17\DATA\103108\1031F007.D	**Quant based on Method**	

Data File:	J:\MS17\DATA\103108\1031F008.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 14:26	**Quant Date:**	11/03/2008 11:45	**Vial:**	6
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG0811326-3			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	6.38	0.00	152	68356m	1,000.00	OK
2	Naphthalene-d8	7.52	0.00	136	245724	1,000.00	OK
3	Acenaphthene-d10	9.17	0.00	164	151562	1,000.00	OK
4	Phenanthrene-d10	10.58	0.00	188	245893	1,000.00	OK
5	Chrysene-d12	13.52	-0.01	240	306935	1,000.00	OK
6	Perylene-d12	15.86	0.00	264	314528	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	5.14	-0.14	-0.02	112	114234m	1,376	37	10-89	OK	
1	Phenol-d6	6.07	0.00	0.00	99	193990	1,730	46	15-103	OK	
1	Nitrobenzene-d5	6.88	0.00	0.00	82	107091	1,190	48	10-108	OK	
3	2-Fluorobiphenyl	8.53	0.00	0.00	172	275682	1,187	47	10-105	OK	
4	2,4,6-Tribromophenol	9.92	0.00	0.00	330	100645	2,047	55	16-122	OK	
5	Terphenyl-d14	12.16	0.00	0.00	244	563792	2,042	82	31-126	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	4.42	0.04	0.01	74	57119m	1,152	115		
1	Pyridine	4.45	0.05	0.01	79	148603m	1,544	154	JN	
1	Aniline	6.11		0.00	93	141582	1,038	104		
1	Bis(2-chloroethyl) Ether	6.16		0.00	93	105719	1,193	119		
1	Phenol	6.08		0.00	94	133853	1,181	118		
1	2-Chlorophenol	6.20		0.00	128	114190	1,177	118		
1	1,3-Dichlorobenzene	6.33		0.00	146	141940	1,274	127		
1	1,4-Dichlorobenzene	6.40		0.00	146	114233	995.93	99.6		
1	1,2-Dichlorobenzene	6.53		0.00	146	130788	1,198	120		
1	Benzyl Alcohol	6.51		0.00	108	71639	1,221	122		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS17\DATA\103108\1031F008.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 14:26	**Quant Date:**	11/03/2008 11:45	**Vial:**	6
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG0811326-3			**Soln Conc. Units:**	ng/ml

Target Compounds — **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether	6.62		0.00	45	139611	1,103	110		
1	2-Methylphenol	6.60		0.00	107	85447	1,093	109		
1	Hexachloroethane	6.83		0.00	117	45231	1,180	118		
1	Acetophenone	6.76	0.01	0.00	105	11144	85.54	8.55	J	
1	N-Nitrosodi-n-propylamine	6.74		0.00	70	79488	1,172	117		
1	4-Methylphenol	6.74		0.00	107	127725	1,115	111		
1	Nitrobenzene	6.89	-0.01	0.00	77	116363	1,213	121		
2	Isophorone	7.11		0.00	82	207916	1,256	126		
2	2-Nitrophenol	7.18		0.00	139	65896	1,296	130		
2	2,4-Dimethylphenol	7.22		0.00	122	57878	709.32	70.9		
2	Bis(2-chloroethoxy)methane	7.31		0.00	93	123170	1,258	126		
2	2,4-Dichlorophenol	7.40		0.00	162	102917	1,291	129		
2	Benzoic Acid	7.28	-0.04	-0.01	105	25928	946.52	94.7	J	
2	1,2,4-Trichlorobenzene	7.47		0.00	180	118535	1,290	129		
2	Naphthalene	7.54	-0.01	0.00	128	352598	1,299	130		
2	4-Chloroaniline	7.60		0.00	127	137845	1,236	124		
2	Hexachlorobutadiene	7.65		0.00	225	75909	1,327	133		
2	4-Chloro-3-methylphenol	8.05		0.00	107	98123	1,301	130		
2	2-Methylnaphthalene	8.19		0.00	142	243036	1,310	131		
2	1-Methylnaphthalene	8.28		0.00	142	232819	1,330	133		
3	Hexachlorocyclopentadiene	8.33		0.00	237	53569	728.74	72.9		
3	2,4,6-Trichlorophenol	8.45		0.00	196	78647	1,177	118		
3	2,4,5-Trichlorophenol	8.48		0.00	196	88472	1,222	122		
3	2-Chloronaphthalene	8.64		0.00	162	238042	1,215	121		
3	2-Nitroaniline	8.75		0.00	65	63890	1,266	127		
3	Acenaphthylene	9.03		0.00	152	382737	1,243	124		
3	Dimethyl Phthalate	8.92		0.00	163	305379	1,385	139		
3	2,6-Dinitrotoluene	8.98		0.00	165	64993	1,309	131		
3	Acenaphthene	9.20		0.00	154	226920	1,244	124		
3	3-Nitroaniline	9.14		0.00	138	71936	1,406	141		
3	2,4-Dinitrophenol	9.24		0.00	184	18921	560.81	56.1	J	
3	Dibenzofuran	9.36		0.00	168	357231	1,240	124		
3	4-Nitrophenol	9.30	-0.01	0.00	65	54822	1,524	152		
3	2,4-Dinitrotoluene	9.36		0.00	165	100495	1,507	151		
3	2,3,4,6-Tetrachlorophenol	9.48		0.00	232	77922	1,192	119		
3	Fluorene	9.69		0.00	166	295780	1,282	128		
3	4-Chlorophenyl Phenyl Ether	9.69		0.00	204	154877	1,273	127		
3	Diethyl Phthalate	9.59		0.00	149	312852	1,504	150		
3	4-Nitroaniline	9.72		0.00	138	83594	1,591	159		
3	2-Methyl-4,6-dinitrophenol	9.74	-0.01	0.00	198	52569	1,206	121		
3	N-Nitrosodiphenylamine	9.81		0.00	169	220957	1,407	141		
3	Azobenzene	9.84		0.00	77	247397	1,287	129		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS17\DATA\103108\1031F008.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 14:26	**Quant Date:**	11/03/2008 11:45	**Vial:**	6
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG0811326-3			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	4-Bromophenyl Phenyl Ether	10.16		0.00	248	104863	1,378	138		
4	Hexachlorobenzene	10.20	-0.01	0.00	284	132678	1,435	144		
4	Pentachlorophenol	10.40		0.00	266	52678	959.21	95.9	J	
4	Phenanthrene	10.60		0.00	178	477806	1,508	151		
4	Anthracene	10.65		0.00	178	495748	1,523	152		
4	Carbazole	10.81		0.00	167	518150	1,732	173		
4	Di-n-butyl Phthalate	11.15		0.00	149	648539	1,871	187		
4	Fluoranthene	11.75		0.00	202	666523	1,826	183		
5	Benzidine	11.89	-0.01	0.00	184	39037	191.64	19.2	JN	
5	Pyrene	11.98		0.00	202	675254	1,824	182		
5	Butyl Benzyl Phthalate	12.77		0.00	149	274990	1,924	192		
5	3,3'-Dichlorobenzidine	13.49		0.00	252	273178	1,684	168		
5	Benz(a)anthracene	13.51		0.00	228	725599	1,915	191		
5	Chrysene	13.56	-0.01	0.00	228	680481	1,918	192		
5	Bis(2-ethylhexyl) Phthalate	13.62		0.00	149	399756	1,972	197		
6	Di-n-octyl Phthalate	14.73		0.00	149	654556	2,177	218		
6	Benzo(b)fluoranthene	15.28		0.00	252	788679	2,144	214		
6	Benzo(k)fluoranthene	15.33		0.00	252	795017	2,142	214		
6	Benzo(a)pyrene	15.78	-0.01	0.00	252	723943	2,144	214		
6	Indeno(1,2,3-cd)pyrene	16.99		0.00	276	821190	2,117	212		
6	Dibenz(a,h)anthracene	17.01	-0.01	0.00	278	852055	2,096	210		
6	Benzo(g,h,i)perylene	17.25		0.00	276	852433	2,123	212		
	Guaiacol				0	0		30	UJ	NR

Prep Amount: 20.00 g **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1
Solids: %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F008.D Vial: 6
Acq On : 31 Oct 2008 2:26 pm Operator: KBAILEY
Sample : KWG0811326-3 | LCS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:41:11 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.38	152	68356m	1000.00	ng/ml	-0.02
22) Naphthalene-d8	7.52	136	245724	1000.00	ng/ml	-0.01
36) Acenaphthene-d10	9.17	164	151562	1000.00	ng/ml	-0.01
60) Phenanthrene-d10	10.58	188	245893	1000.00	ng/ml	-0.01
70) Chrysene-d12	13.52	240	306935	1000.00	ng/ml	-0.02
79) Perylene-d12	15.86	264	314528	1000.00	ng/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	5.14	112	114234m	1375.53	ng/ml	-0.17
Spiked Amount 3750.000	Range 25 - 121		Recovery =	36.68%		
7) Phenol-d6	6.07	99	193990	1730.23	ng/ml	-0.01
Spiked Amount 3750.000	Range 24 - 113		Recovery =	46.14%		
20) Nitrobenzene-d5	6.88	82	107091	1190.40	ng/ml	-0.01
Spiked Amount 2500.000	Range 23 - 120		Recovery =	47.62%		
40) 2-Fluorobiphenyl	8.53	172	275682	1187.08	ng/ml	-0.01
Spiked Amount 2500.000	Range 30 - 115		Recovery =	47.48%		
61) 2,4,6-Tribromophenol	9.92	330	100645	2046.73	ug/ml	-0.01
Spiked Amount 3750.000	Range 19 - 122		Recovery =	54.58%		
73) Terphenyl-d14	12.16	244	563792	2042.10	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 140		Recovery =	81.68%		
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.42	74	57119m	1151.96	ng/ml	
3) Pyridine	4.45	79	148603m	1544.06	ng/ml	
5) Aniline	6.11	93	141582	1038.31	ng/ml	97
6) Bis(2-chloroethyl) Ether	6.16	93	105719	1192.60	ng/ml	99
8) Phenol	6.08	94	133853	1180.90	ng/ml	97
9) 2-Chlorophenol	6.20	128	114190	1176.80	ng/ml	98
10) 1,3-Dichlorobenzene	6.33	146	141940	1273.89	ng/ml	98
11) 1,4-Dichlorobenzene	6.40	146	114233	995.93	ng/ml	98
12) 1,2-Dichlorobenzene	6.53	146	130788	1198.25	ng/ml	97
13) Benzyl Alcohol	6.51	108	71639	1221.12	ng/ml	93
14) Bis(2-chloroisopropyl) Eth	6.62	45	139611	1103.35	ng/ml	99
15) 2-Methylphenol	6.60	107	85447	1093.32	ng/ml	99
16) Hexachloroethane	6.83	117	45231	1180.29	ng/ml	98
17) Acetophenone	6.76	105	11144	85.54	ng/ml	94
18) N-Nitrosodi-n-propylamine	6.74	70	79488	1172.38	ng/ml	97
19) 4-Methylphenol	6.74	107	127725	1114.86	ng/ml	93
21) Nitrobenzene	6.89	77	116363	1212.72	ng/ml	97
23) Isophorone	7.11	82	207916	1255.77	ng/ml	98
24) 2-Nitrophenol	7.18	139	65896	1295.80	ng/ml	94
25) 2,4-Dimethylphenol	7.22	122	57878	709.32	ng/ml	99

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

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F008.D Vial: 6
Acq On : 31 Oct 2008 2:26 pm Operator: KBAILEY
Sample : KWG0811326-3 | LCS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:41:11 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	Bis(2-chloroethoxy)methane	7.31	93	123170	1257.91	ng/ml	97
27)	2,4-Dichlorophenol	7.40	162	102917	1290.88	ng/ml	97
28)	Benzoic Acid	7.28	105	25928	946.52	ng/ml	98
29)	1,2,4-Trichlorobenzene	7.47	180	118535	1290.10	ng/ml	98
30)	Naphthalene	7.54	128	352598	1298.56	ng/ml	99
31)	4-Chloroaniline	7.60	127	137845	1235.82	ng/ml	100
32)	Hexachlorobutadiene	7.65	225	75909	1326.87	ng/ml	97
33)	4-Chloro-3-methylphenol	8.05	107	98123	1301.30	ng/ml	98
34)	2-Methylnaphthalene	8.19	142	243036	1309.92	ng/ml	99
35)	1-Methylnaphthalene	8.28	142	232819	1330.15	ng/ml	95
37)	Hexachlorocyclopentadiene	8.33	237	53569	728.74	ng/ml	99
38)	2,4,6-Trichlorophenol	8.45	196	78647	1177.37	ng/ml	95
39)	2,4,5-Trichlorophenol	8.48	196	88472	1222.23	ng/ml	99
41)	2-Chloronaphthalene	8.64	162	238042	1214.55	ng/ml	98
42)	2-Nitroaniline	8.75	65	63890	1266.11	ng/ml	100
43)	Acenaphthylene	9.03	152	382737	1243.01	ng/ml	99
44)	Dimethyl Phthalate	8.92	163	305379	1385.42	ng/ml	98
45)	2,6-Dinitrotoluene	8.98	165	64993	1308.94	ng/ml	99
46)	Acenaphthene	9.20	154	226920	1244.11	ng/ml	99
47)	3-Nitroaniline	9.14	138	71936	1406.42	ng/ml	99
48)	2,4-Dinitrophenol	9.24	184	18921	560.81	ng/ml	97
49)	Dibenzofuran	9.36	168	357231	1240.05	ng/ml	99
50)	4-Nitrophenol	9.30	65	54822	1523.90	ng/ml	94
51)	2,4-Dinitrotoluene	9.36	165	100495	1506.76	ng/ml	100
52)	2,3,4,6-Tetrachlorophenol	9.48	232	77922	1191.53	ng/ml	97
53)	Fluorene	9.69	166	295780	1282.15	ng/ml	96
54)	4-Chlorophenyl Phenyl Ethe	9.69	204	154877	1272.67	ng/ml	98
55)	Diethyl Phthalate	9.59	149	312852	1503.69	ng/ml	99
56)	4-Nitroaniline	9.72	138	83594	1591.13	ng/ml	95
57)	2-Methyl-4,6-dinitrophenol	9.74	198	52569	1206.44	ng/ml	87
58)	N-Nitrosodiphenylamine	9.81	169	220957	1406.58	ng/ml	98
59)	Azobenzene	9.84	77	247397	1286.64	ng/ml	97
62)	4-Bromophenyl Phenyl Ether	10.16	248	104863	1378.13	ng/ml	96
63)	Hexachlorobenzene	10.20	284	132678	1435.29	ng/ml	98
64)	Pentachlorophenol	10.40	266	52678	959.21	ng/ml	96
65)	Phenanthrene	10.60	178	477806	1507.64	ng/ml	99
66)	Anthracene	10.65	178	495748	1523.07	ng/ml	99
67)	Carbazole	10.81	167	518150	1732.05	ng/ml	99
68)	Di-n-butyl Phthalate	11.15	149	648539	1871.17	ng/ml	99
69)	Fluoranthene	11.75	202	666523	1826.49	ng/ml	98
71)	Benzidine	11.89	184	39037	191.64	ng/ml	99

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

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F008.D Vial: 6
Acq On : 31 Oct 2008 2:26 pm Operator: KBAILEY
Sample : KWG0811326-3 | LCS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:41:11 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

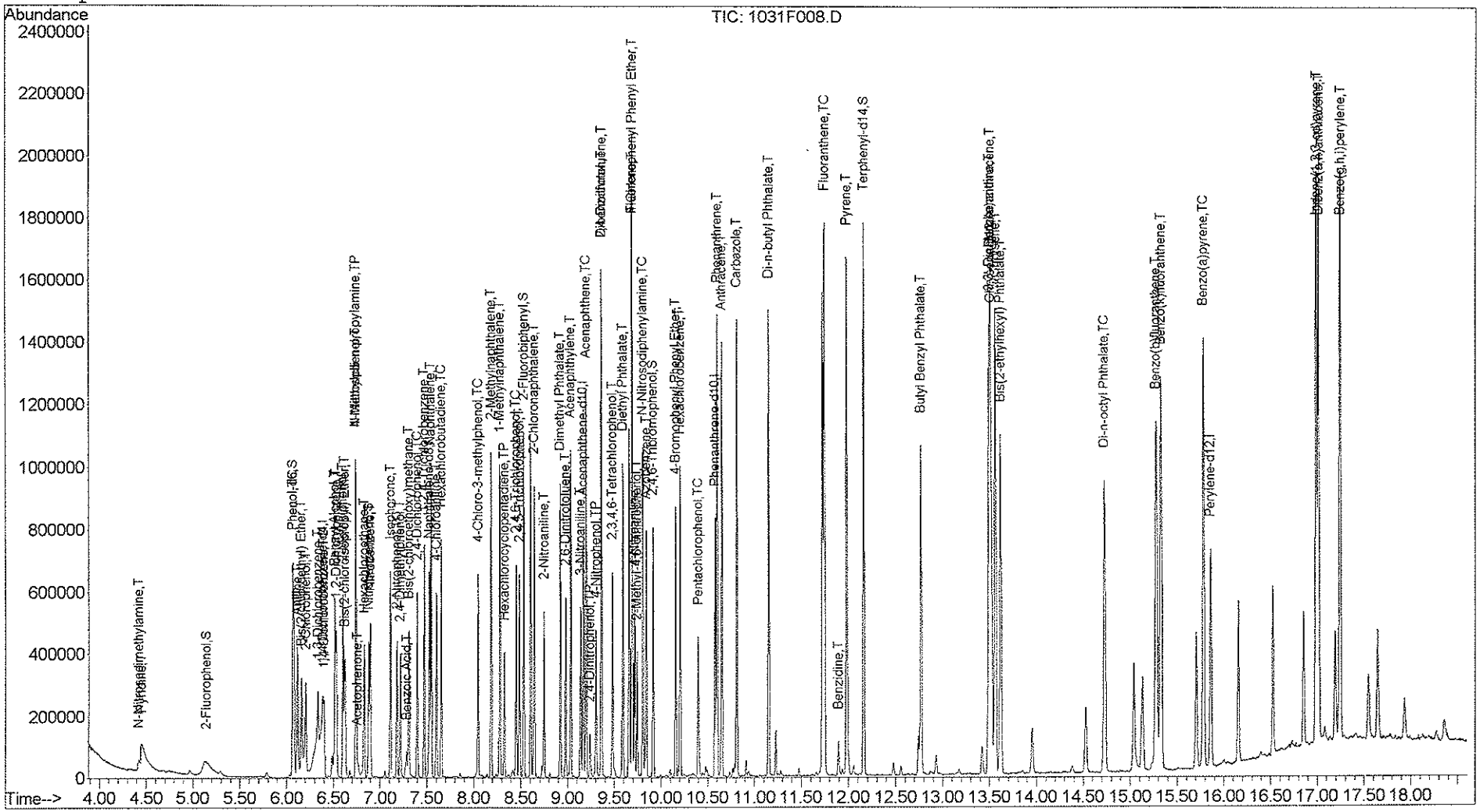
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
72)	Pyrene	11.98	202	675254	1824.30	ng/ml	98
74)	Butyl Benzyl Phthalate	12.77	149	274990	1924.45	ng/ml	99
75)	3,3'-Dichlorobenzidine	13.49	252	273178	1684.00	ng/ml	99
76)	Benz(a)anthracene	13.51	228	725599	1914.50	ng/ml	100
77)	Chrysene	13.56	228	680481	1918.21	ng/ml	99
78)	Bis(2-ethylhexyl) Phthalat	13.62	149	399756	1971.86	ng/ml	99
80)	Di-n-octyl Phthalate	14.73	149	654556	2176.55	ng/ml	99
81)	Benzo(b)fluoranthene	15.28	252	788679	2144.00	ng/ml	99
82)	Benzo(k)fluoranthene	15.33	252	795017	2141.97	ng/ml	99
83)	Benzo(a)pyrene	15.78	252	723943	2143.54	ng/ml	99
84)	Indeno(1,2,3-cd)pyrene	16.99	276	821190	2116.83	ng/ml	96
85)	Dibenz(a,h)anthracene	17.01	278	852055	2095.56	ng/ml	98
86)	Benzo(g,h,i)perylene	17.25	276	852433	2123.23	ng/ml	98

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

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F008.D Vial: 6
Acq On : 31 Oct 2008 2:26 pm Operator: KBAILEY
Sample : KWG0811326-3 | LCS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:45 2008 Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration



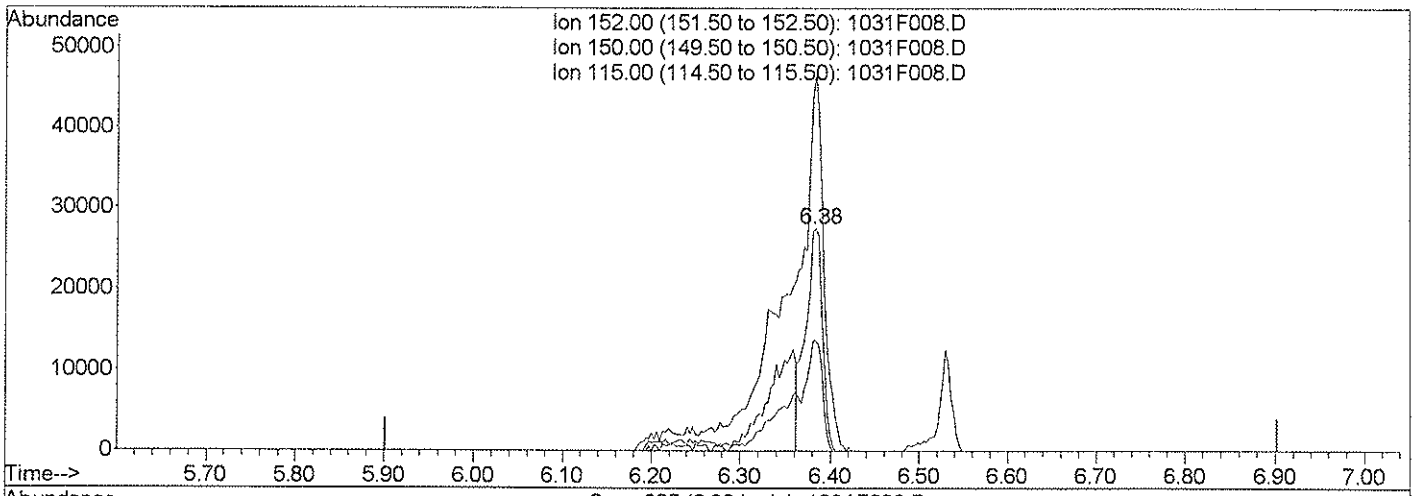
613

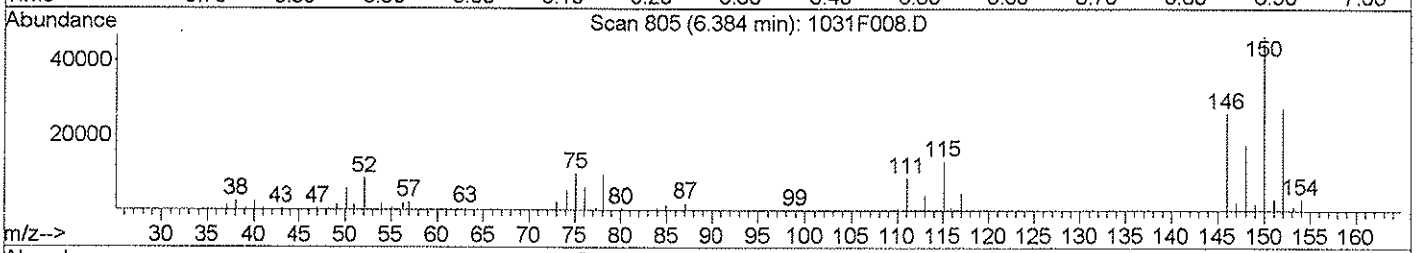
Quantitation Report (Qedit)

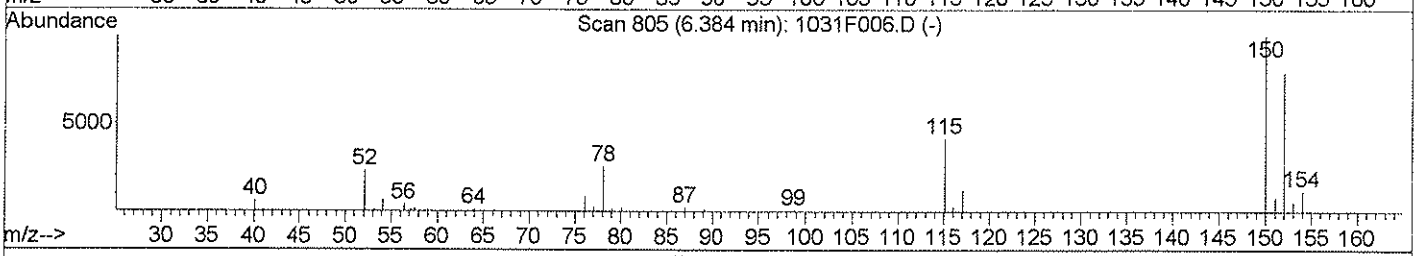
Data File : J:\MS17\DATA\103108\1031F008.D
Acq On : 31 Oct 2008 2:26 pm
Sample : KWG0811326-3 | LCS
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:41 2008

Vial: 6
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration







TIC: 1031F008.D

(1) 1,4-Dichlorobenzene-d4 (I)

6.38min 1000.00ng/ml

response 35234

Ion	Exp%	Act%
152.00	100	100
150.00	159.50	161.62
115.00	54.20	49.50
0.00	0.00	0.00

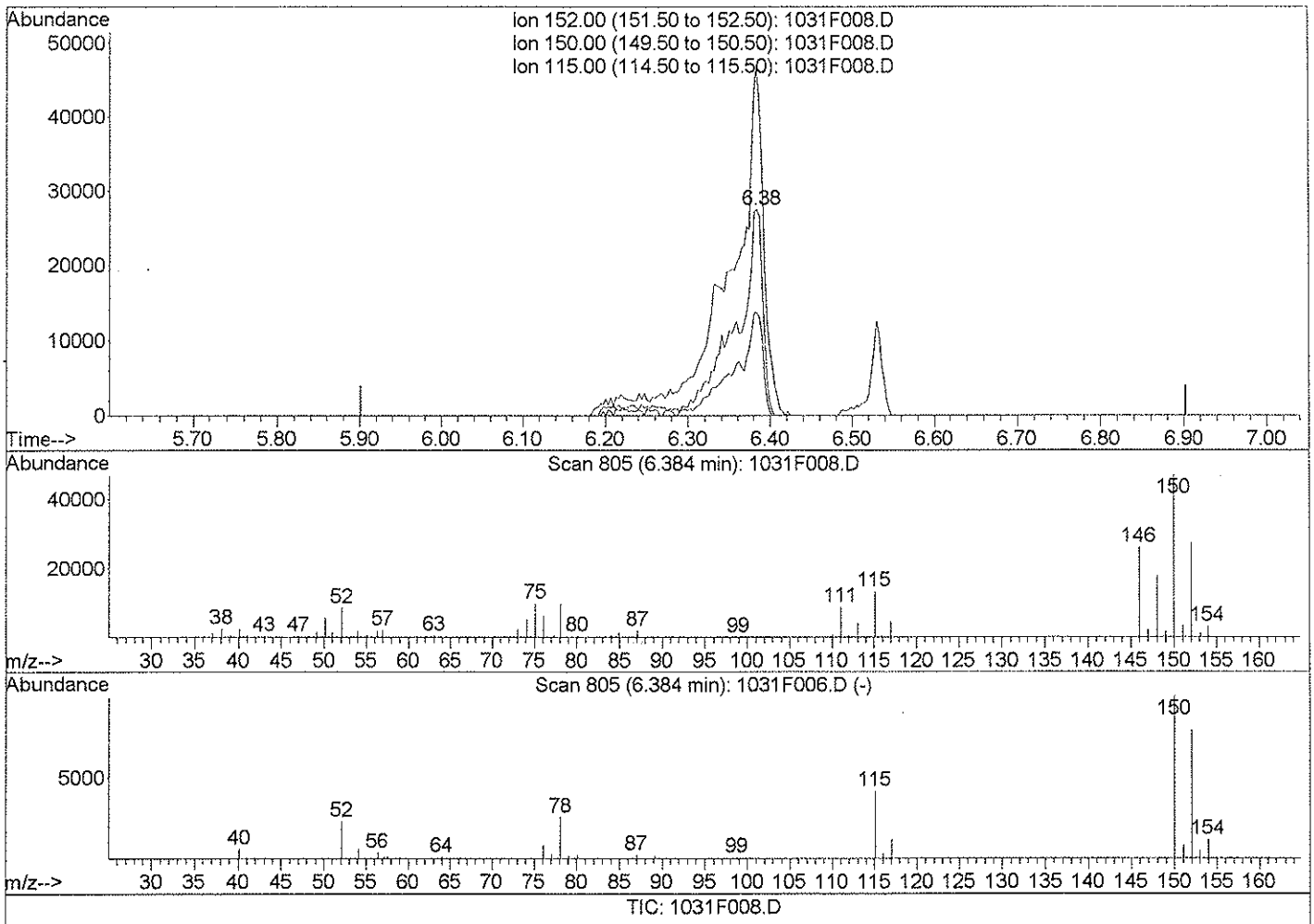
1031F008.D 102608SVOLL.M Mon Nov 03 11:44:07 2008

Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F008.D
Acq On : 31 Oct 2008 2:26 pm
Sample : KWG0811326-3 | LCS
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:44 2008

Vial: 6
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration



TIC: 1031F008.D

(1) 1,4-Dichlorobenzene-d4 (I)

6.38min 1000.00ng/ml m

response 68356

Ion	Exp%	Act%
152.00	100	100
150.00	159.50	170.69
115.00	54.20	49.50
0.00	0.00	0.00

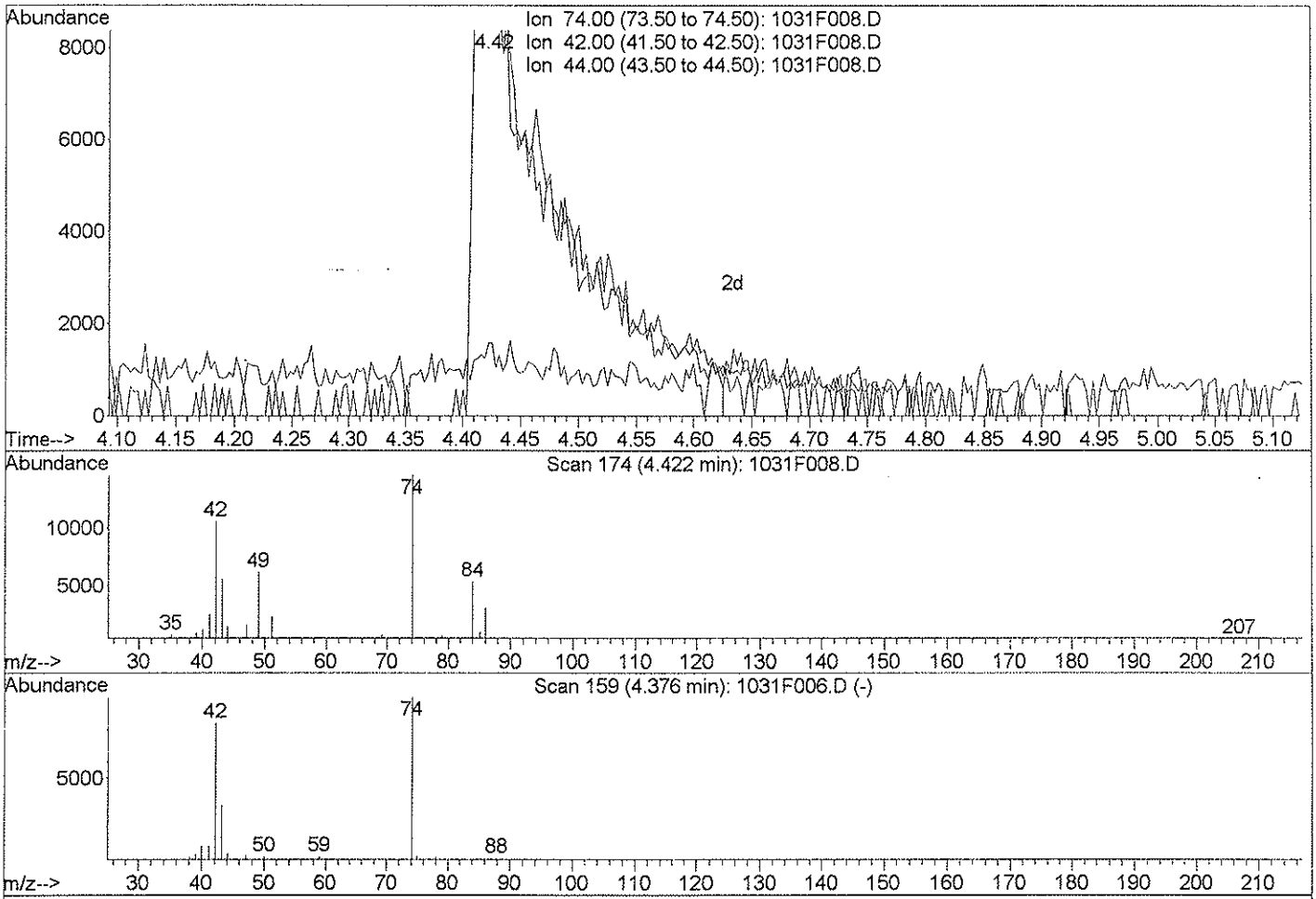
1c
LB 11/3/08
MM 11-4-08

1031F008.D 102608SVOLL.M Mon Nov 03 11:44:13 2008

Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F008.D Vial: 6
Acq On : 31 Oct 2008 2:26 pm Operator: KBAILEY
Sample : KWG0811326-3 | LCS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:44 2008 Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Single Level Calibration



TIC: 1031F008.D

(2) N-Nitrosodimethylamine (T)

4.42min 1092.22ng/ml

response 54157

Ion	Exp%	Act%
74.00	100	100
42.00	83.40	69.11
44.00	5.80	5.34
0.00	0.00	0.00

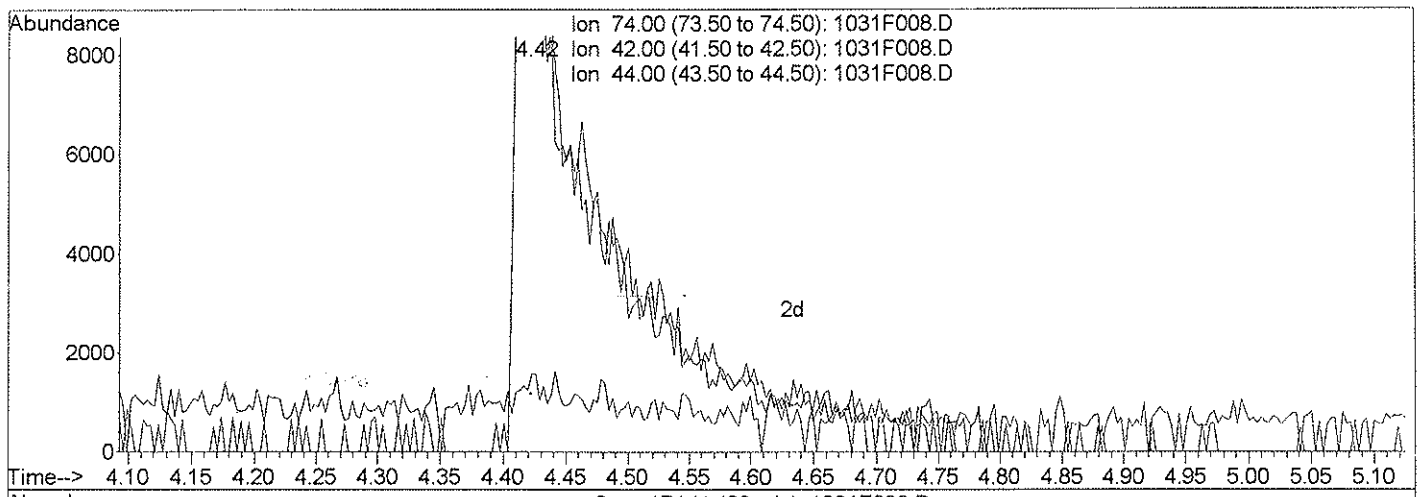
1031F008.D 102608SVOLL.M Mon Nov 03 11:44:28 2008

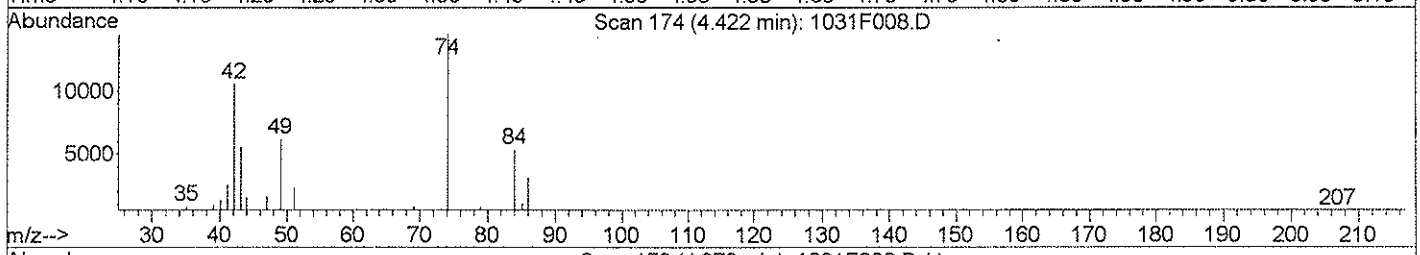
Quantitation Report (Qedit)

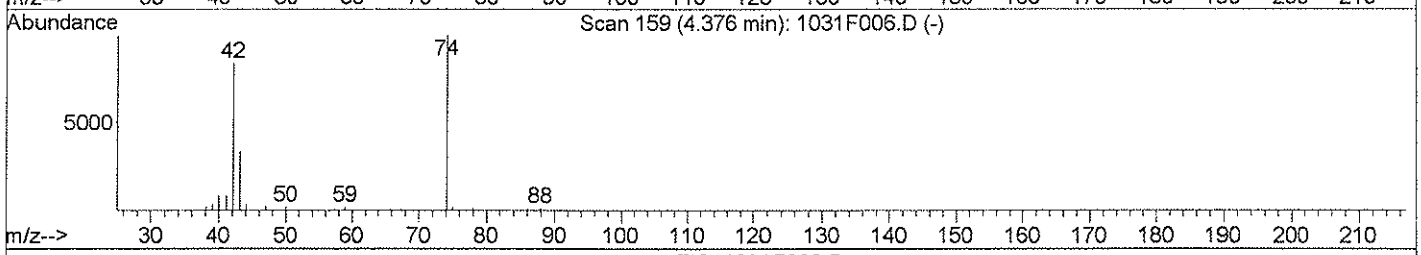
Data File : J:\MS17\DATA\103108\1031F008.D
Acq On : 31 Oct 2008 2:26 pm
Sample : KWG0811326-3 | LCS
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:44 2008

Vial: 6
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Single Level Calibration







TIC: 1031F008.D

(2) N-Nitrosodimethylamine (T)

4.42min 1151.96ng/ml m

response 57119

Ion	Exp%	Act%
74.00	100	100
42.00	83.40	73.03
44.00	5.80	10.86
0.00	0.00	0.00

1C
LB 111308

MM 11-3-08

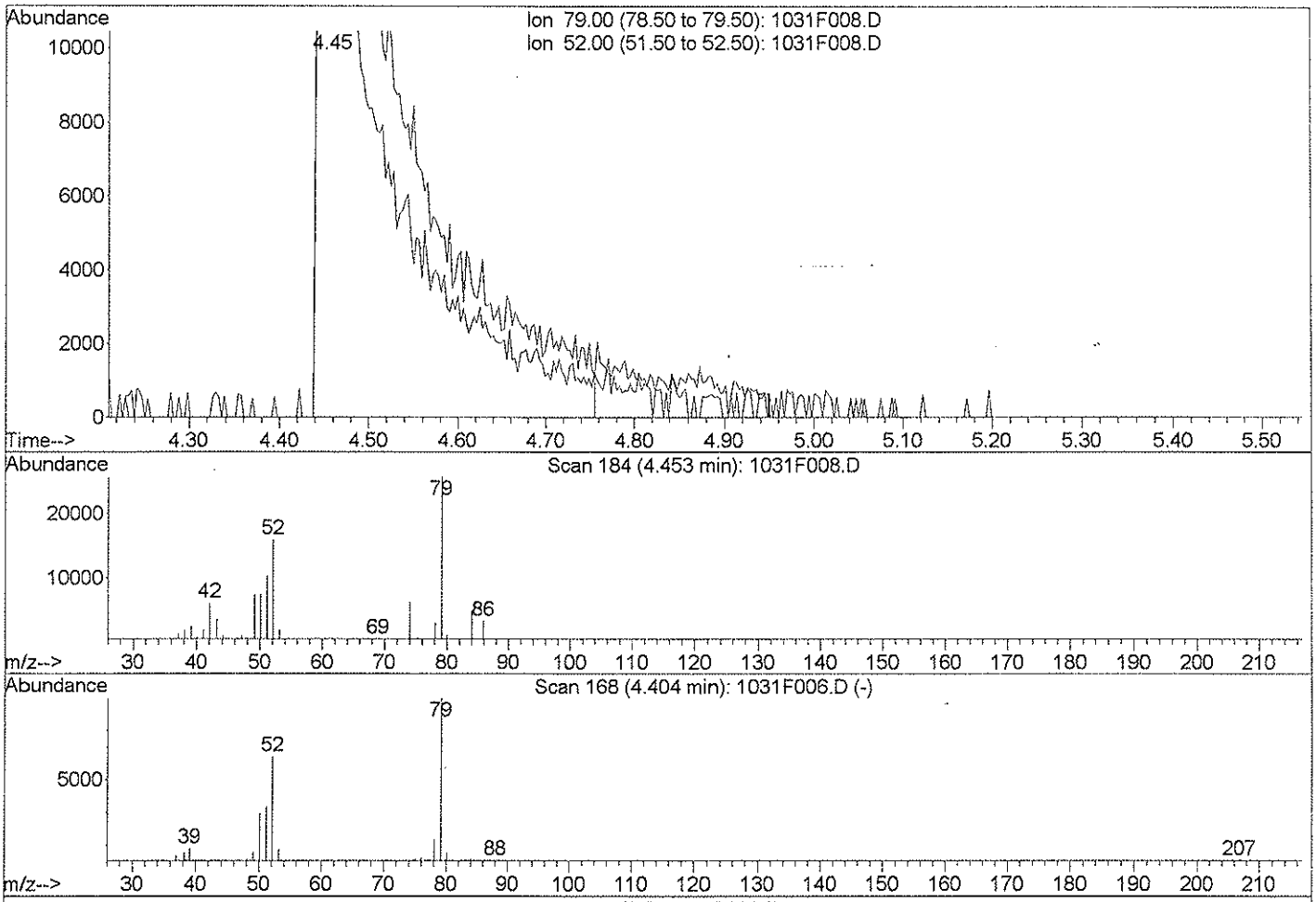
1031F008.D 102608SVOLL.M Mon Nov 03 11:44:33 2008

Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F008.D
Acq On : 31 Oct 2008 2:26 pm
Sample : KWG0811326-3 | LCS
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:44 2008

Vial: 6
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Single Level Calibration



TIC: 1031F008.D

(3) Pyridine (T)

4.45min 1445.98ng/ml

response 139164

Ion	Exp%	Act%
79.00	100	100
52.00	66.00	62.07
0.00	0.00	0.00
0.00	0.00	0.00

1031F008.D 102608SVOLL.M Mon Nov 03 11:44:38 2008

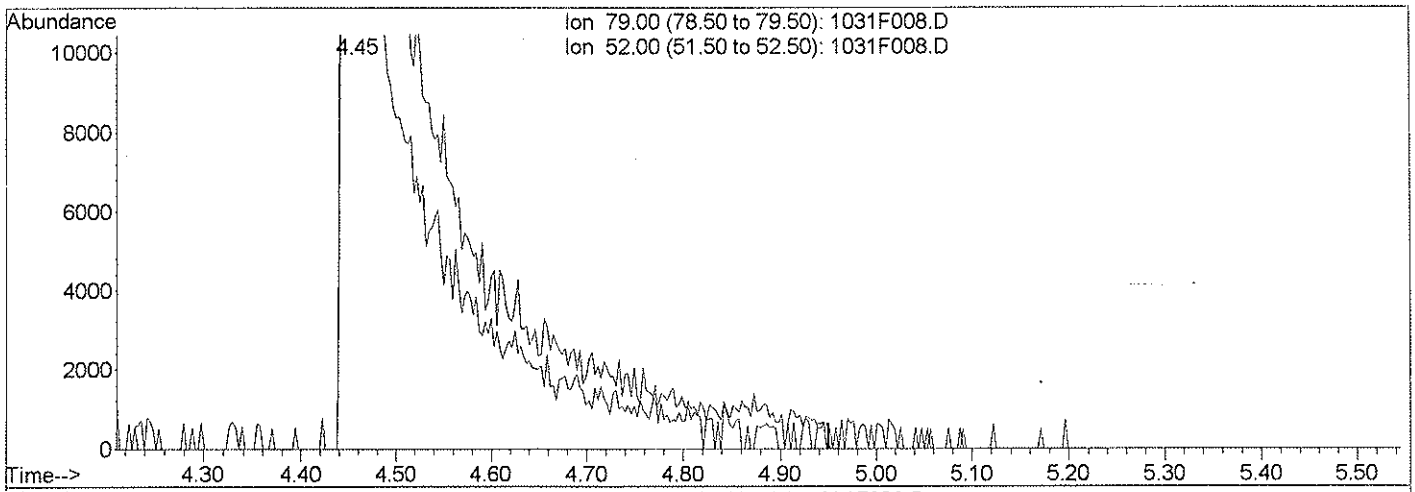
Quantitation Report (Qedit)

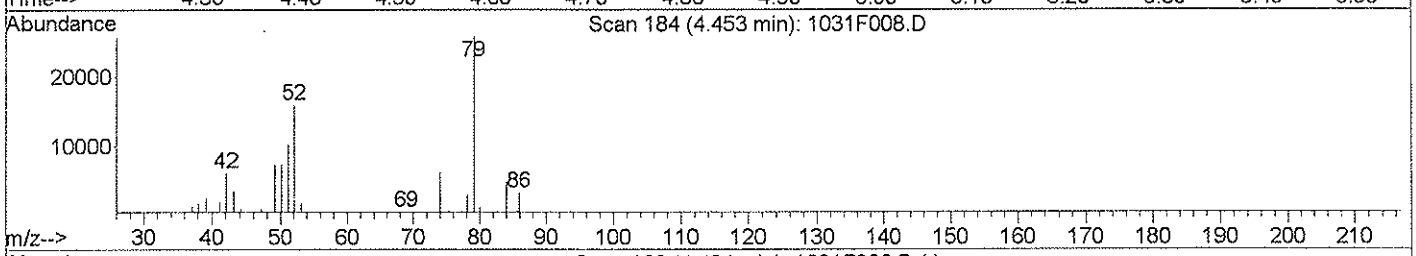
Data File : J:\MS17\DATA\103108\1031F008.D
Acq On : 31 Oct 2008 2:26 pm
Sample : KWG0811326-3 | LCS
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:44 2008

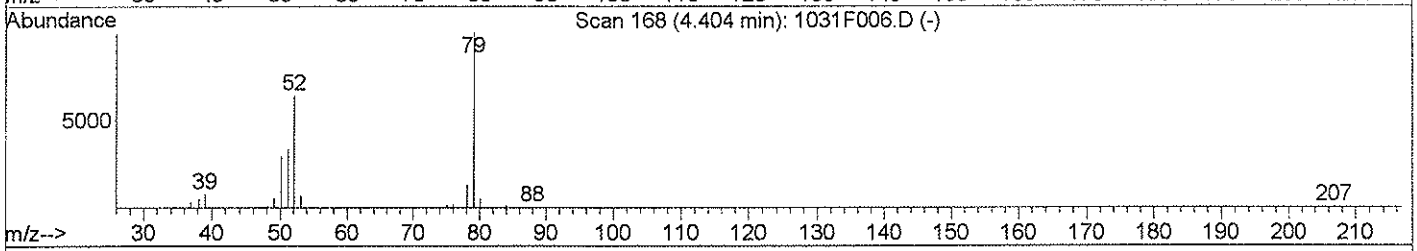
Vial: 6
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Single Level Calibration







TIC: 1031F008.D

(3) Pyridine (T)

4.45min 1544.06ng/ml m

response 148603

Ion	Exp%	Act%
79.00	100	100
52.00	66.00	62.07
0.00	0.00	0.00
0.00	0.00	0.00

1C
LB
11/3/08
MLB 11-3-08

1031F008.D 102608SVOLL.M Mon Nov 03 11:44:56 2008

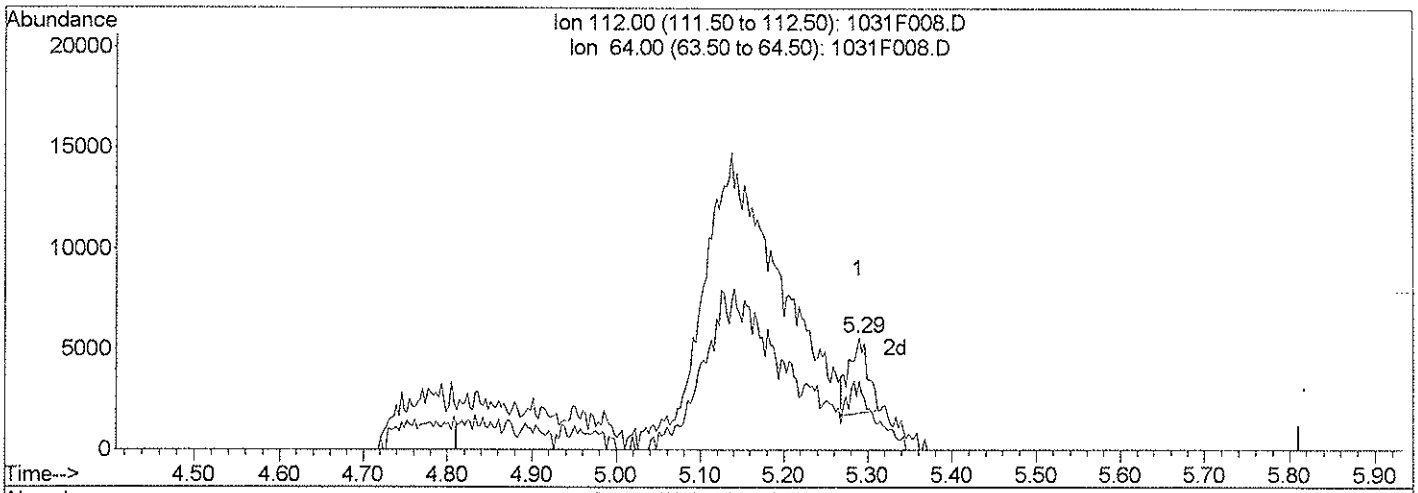
Quantitation Report (Qedit)

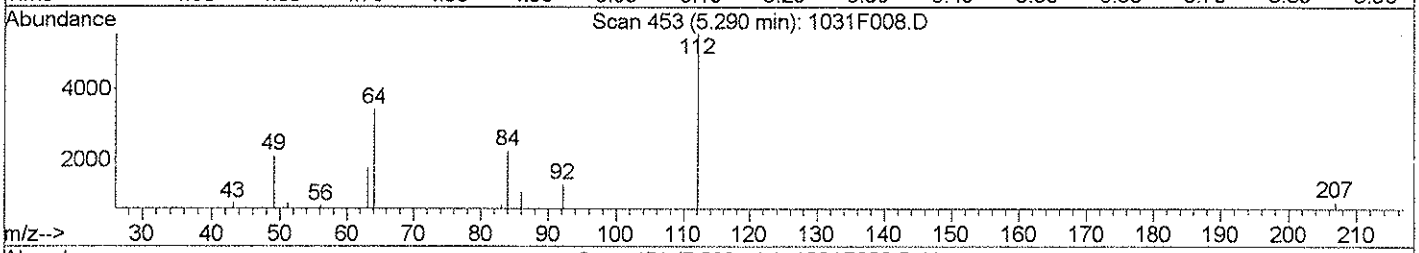
Data File : J:\MS17\DATA\103108\1031F008.D
Acq On : 31 Oct 2008 2:26 pm
Sample : KWG0811326-3 | LCS
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:44 2008

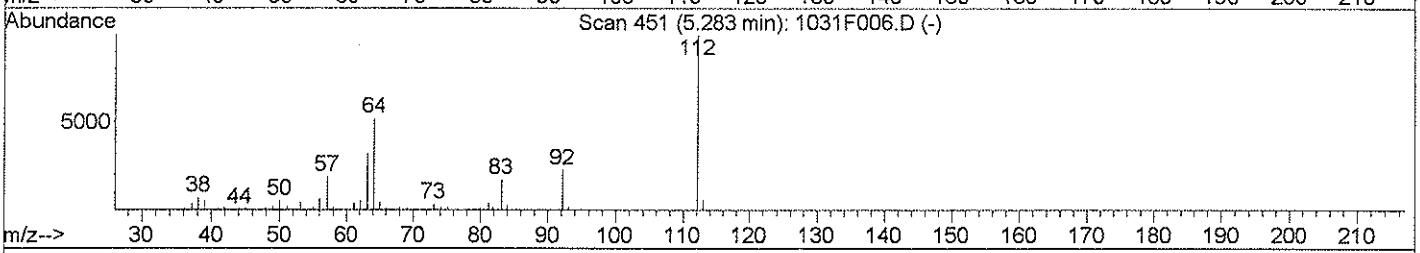
Vial: 6
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration







TIC: 1031F008.D

(4) 2-Fluorophenol (S)

5.29min 68.74ng/ml

response 5709

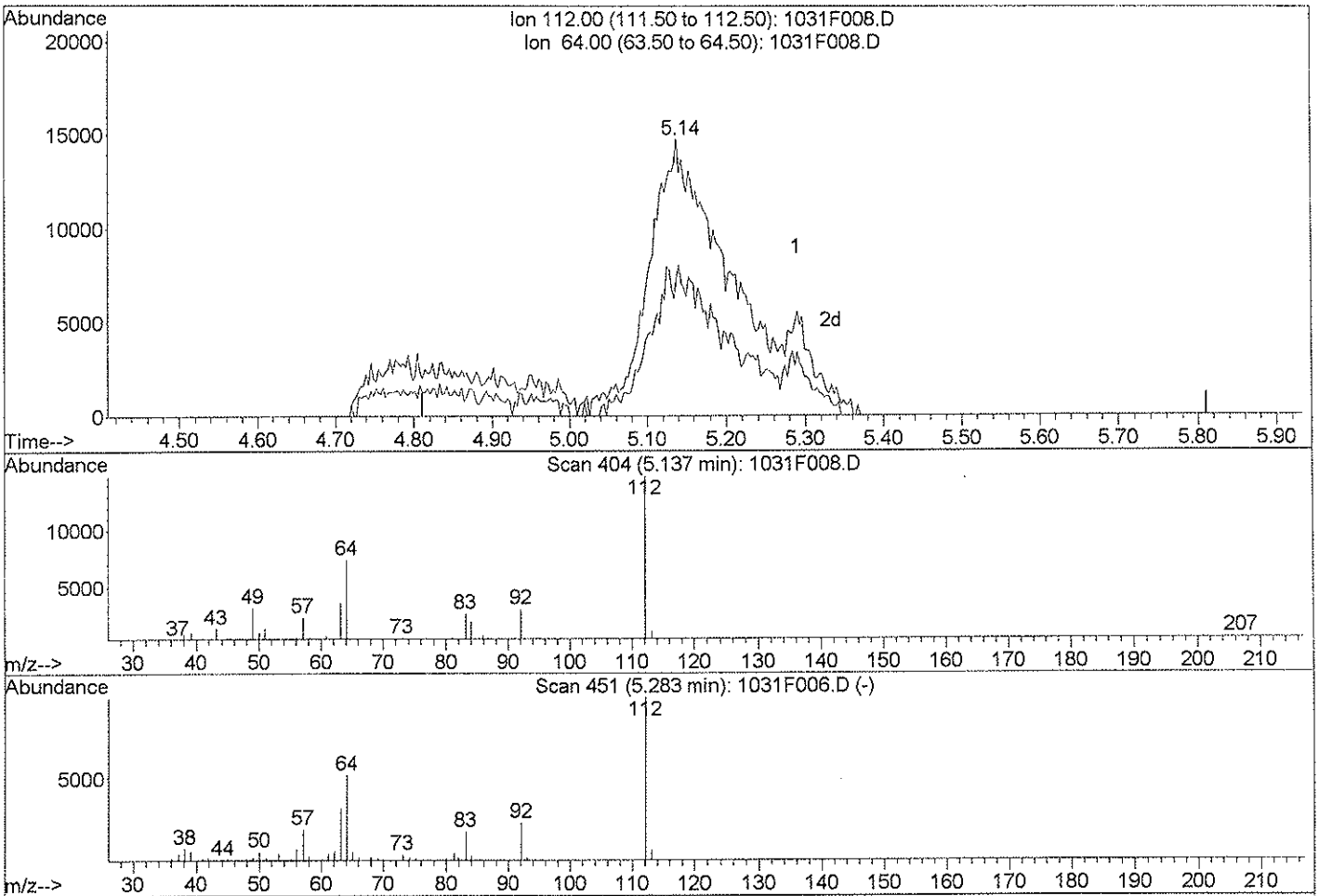
Ion	Exp%	Act%
112.00	100	100
64.00	55.10	58.44
0.00	0.00	0.00
0.00	0.00	0.00

1031F008.D 102608SVOLL.M Mon Nov 03 11:45:01 2008

Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F008.D Vial: 6
Acq On : 31 Oct 2008 2:26 pm Operator: KBAILEY
Sample : KWG0811326-3 | LCS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:45 2008 Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration



TIC: 1031F008.D

(4) 2-Fluorophenol (S)

5.14min 1375.53ng/ml m

response 114234

Ion	Exp%	Act%
112.00	100	100
64.00	55.10	50.11
0.00	0.00	0.00
0.00	0.00	0.00

1C
LB
1131128
MM 11-3-08

1031F008.D 102608SVOLL.M Mon Nov 03 11:45:06 2008

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Duplicate Lab Control Sample	**Units:**	ug/Kg
Lab Code:	KWG0811326-4	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Phenol	**109**		30	2.0	1	10/23/08	10/31/08	KWG0811326	
Benzyl Alcohol	**117**		20	2.1	1	10/23/08	10/31/08	KWG0811326	
1,2-Dichlorobenzene	**111**		10	2.9	1	10/23/08	10/31/08	KWG0811326	
2-Methylphenol	**98.8**		10	1.5	1	10/23/08	10/31/08	KWG0811326	
1,4-Dichlorobenzene	**101**		10	2.9	1	10/23/08	10/31/08	KWG0811326	
4-Methylphenol†	**102**		10	1.5	1	10/23/08	10/31/08	KWG0811326	
2,4-Dimethylphenol	**51.5**		50	5.5	1	10/23/08	10/31/08	KWG0811326	
Benzoic Acid	**95.2**	J	200	96	1	10/23/08	10/31/08	KWG0811326	
1,2,4-Trichlorobenzene	**113**		10	2.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobutadiene	**112**		10	2.5	1	10/23/08	10/31/08	KWG0811326	
Dimethyl Phthalate	**127**		10	1.0	1	10/23/08	10/31/08	KWG0811326	
Diethyl Phthalate	**134**		10	1.3	1	10/23/08	10/31/08	KWG0811326	
N-Nitrosodiphenylamine	**130**		10	1.6	1	10/23/08	10/31/08	KWG0811326	
Hexachlorobenzene	**128**		10	1.2	1	10/23/08	10/31/08	KWG0811326	
Pentachlorophenol	**85.9**	J	100	20	1	10/23/08	10/31/08	KWG0811326	
Di-n-butyl Phthalate	**163**		20	7.9	1	10/23/08	10/31/08	KWG0811326	
Butyl Benzyl Phthalate	**172**		10	3.2	1	10/23/08	10/31/08	KWG0811326	
Bis(2-ethylhexyl) Phthalate	**172**		100	7.0	1	10/23/08	10/31/08	KWG0811326	
Di-n-octyl Phthalate	**191**		10	1.7	1	10/23/08	10/31/08	KWG0811326	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Phenol-d6	51	15-103	10/31/08	Acceptable
Nitrobenzene-d5	54	10-108	10/31/08	Acceptable
2-Fluorobiphenyl	50	10-105	10/31/08	Acceptable
2,4,6-Tribromophenol	57	16-122	10/31/08	Acceptable
Terphenyl-d14	84	31-126	10/31/08	Acceptable

Comments:

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Duplicate Lab Control Sample	**Units:**	ug/Kg
Lab Code:	KWG0811326-4	**Basis:**	Dry

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.

Comments:

Exception Report

Data File: J:\MS17\DATA\103108\1031F009.D
Lab ID: KWG0811326-4
RunType: DLCS
Matrix: SOIL

Date Acquired: 10/31/2008 14:52
Date Quantitated: 11/03/2008 11:46
Batch ID: KWG0811769
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA		x
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

L9010 RX
L10000
L10032
L10048

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Std MRL Unsupported by ICAL	2,3,4,6-Tetrachlorophenol	50	10	NA	NT

Primary Review: LB 11/3/08
Secondary Review: MS 11-3-08

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8270C SVO_LL	**Collect Date:**		**Receive Date:**	10/30/2008

Analysis Lot:	KWG0811769	**Prep Lot:**	KWG0811326	**Report Group:**	
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	771019	**Prep Date:**	10/23/2008		

Quant Method:	J:\MS17\METHODS\FULL_SCAN\102608SVOLL.	**Calibration ID:**	CAL7891
Title:			
Tune Ref:	J:\MS17\DATA\103108\1031F005.D	**Method ID:**	MJ142
MB Ref:	J:\MS17\DATA\103108\1031F007.D	**Quant based on Method**	

Data File:	J:\MS17\DATA\103108\1031F009.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 14:52	**Quant Date:**	11/03/2008 11:46	**Vial:**	7
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG0811326-4			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	6.38	0.00	152	64331	1,000.00	OK
2	Naphthalene-d8	7.52	0.00	136	248535	1,000.00	OK
3	Acenaphthene-d10	9.17	0.00	164	149636	1,000.00	OK
4	Phenanthrene-d10	10.58	0.00	188	247158	1,000.00	OK
5	Chrysene-d12	13.52	-0.01	240	308718	1,000.00	OK
6	Perylene-d12	15.86	0.00	264	315408	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Fluorophenol	5.28	0.00	0.00	112	153476m	1,964	52	10-89	OK	
1	Phenol-d6	6.06	-0.01	0.00	99	201380	1,909	51	15-103	OK	
1	Nitrobenzene-d5	6.88	0.00	0.00	82	114872	1,357	54	10-108	OK	
3	2-Fluorobiphenyl	8.53	0.00	0.00	172	286971	1,252	50	10-105	OK	
4	2,4,6-Tribromophenol	9.91	-0.01	0.00	330	105812	2,141	57	16-122	OK	
5	Terphenyl-d14	12.16	0.00	0.00	244	585210	2,107	84	31-126	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	4.42	0.04	0.01	74	48363m	1,036	104		
1	Pyridine	4.45	0.05	0.01	79	141104m	1,558	156	JN	
1	Aniline	6.11		0.00	93	124387	969.28	96.9		
1	Bis(2-chloroethyl) Ether	6.16		0.00	93	94933	1,138	114		
1	Phenol	6.08		0.00	94	116598	1,093	109		
1	2-Chlorophenol	6.20		0.00	128	101117	1,107	111		
1	1,3-Dichlorobenzene	6.33		0.00	146	119453	1,139	114		
1	1,4-Dichlorobenzene	6.40		0.00	146	109018	1,010	101		
1	1,2-Dichlorobenzene	6.53		0.00	146	113909	1,109	111		
1	Benzyl Alcohol	6.51		0.00	108	64392	1,166	117		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS17\DATA\103108\1031F009.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 14:52	**Quant Date:**	11/03/2008 11:46	**Vial:**	7
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG0811326-4			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether	6.62		0.00	45	125172	1,051	105		
1	2-Methylphenol	6.60		0.00	107	72634	987.52	98.8		
1	Hexachloroethane	6.82	-0.01	0.00	117	39531	1,096	110		
1	Acetophenone	6.77	0.02	0.00	105	9966	81.28	8.13	J	
1	N-Nitrosodi-n-propylamine	6.74		0.00	70	69560	1,090	109		
1	4-Methylphenol	6.73	-0.01	0.00	107	109552	1,016	102		
1	Nitrobenzene	6.89	-0.01	0.00	77	102761	1,138	114		
2	Isophorone	7.11		0.00	82	184195	1,100	110		
2	2-Nitrophenol	7.18		0.00	139	57178	1,112	111		
2	2,4-Dimethylphenol	7.21	-0.01	0.00	122	42499	514.95	51.5		
2	Bis(2-chloroethoxy)methane	7.30	-0.01	0.00	93	110327	1,114	111		
2	2,4-Dichlorophenol	7.39	-0.01	0.00	162	91536	1,135	114		
2	Benzoic Acid	7.28	-0.04	-0.01	105	26593	952.42	95.2	J	
2	1,2,4-Trichlorobenzene	7.47		0.00	180	105046	1,130	113		
2	Naphthalene	7.54	-0.01	0.00	128	310853	1,132	113		
2	4-Chloroaniline	7.60		0.00	127	122886	1,089	109		
2	Hexachlorobutadiene	7.65		0.00	225	64571	1,116	112		
2	4-Chloro-3-methylphenol	8.05		0.00	107	86469	1,134	113		
2	2-Methylnaphthalene	8.19		0.00	142	210578	1,122	112		
2	1-Methylnaphthalene	8.28		0.00	142	201072	1,136	114		
3	Hexachlorocyclopentadiene	8.32	-0.01	0.00	237	47088	648.82	64.9		
3	2,4,6-Trichlorophenol	8.45		0.00	196	70161	1,064	106		
3	2,4,5-Trichlorophenol	8.48		0.00	196	79471	1,112	111		
3	2-Chloronaphthalene	8.64		0.00	162	209585	1,083	108		
3	2-Nitroaniline	8.75		0.00	65	57476	1,154	115		
3	Acenaphthylene	9.03		0.00	152	339852	1,118	112		
3	Dimethyl Phthalate	8.92		0.00	163	275965	1,268	127		
3	2,6-Dinitrotoluene	8.98		0.00	165	58795	1,199	120		
3	Acenaphthene	9.20		0.00	154	200335	1,113	111		
3	3-Nitroaniline	9.14		0.00	138	64754	1,282	128		
3	2,4-Dinitrophenol	9.24		0.00	184	14913	447.71	44.8	J	
3	Dibenzofuran	9.36		0.00	168	318835	1,121	112		
3	4-Nitrophenol	9.30	-0.01	0.00	65	49521	1,394	139		
3	2,4-Dinitrotoluene	9.36		0.00	165	86761	1,318	132		
3	2,3,4,6-Tetrachlorophenol	9.48		0.00	232	70634	1,094	109		
3	Fluorene	9.69		0.00	166	266909	1,172	117		
3	4-Chlorophenyl Phenyl Ether	9.69		0.00	204	140132	1,166	117		
3	Diethyl Phthalate	9.59		0.00	149	275777	1,343	134		
3	4-Nitroaniline	9.72		0.00	138	73048	1,408	141		
3	2-Methyl-4,6-dinitrophenol	9.74	-0.01	0.00	198	45363	1,080	108		
3	N-Nitrosodiphenylamine	9.81		0.00	169	201929	1,302	130		
3	Azobenzene	9.84		0.00	77	222087	1,170	117		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS17\DATA\103108\1031F009.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 14:52	**Quant Date:**	11/03/2008 11:46	**Vial:**	7
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG0811326-4			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	4-Bromophenyl Phenyl Ether	10.16		0.00	248	95935	1,254	125		
4	Hexachlorobenzene	10.20	-0.01	0.00	284	118840	1,279	128		
4	Pentachlorophenol	10.40		0.00	266	47436	859.33	85.9	J	
4	Phenanthrene	10.60		0.00	178	424057	1,331	133		
4	Anthracene	10.65		0.00	178	442087	1,351	135		
4	Carbazole	10.81		0.00	167	456616	1,519	152		
4	Di-n-butyl Phthalate	11.15		0.00	149	568208	1,631	163		
4	Fluoranthene	11.74	-0.01	0.00	202	582753	1,589	159		
5	Benzidine	11.89	-0.01	0.00	184	27932	136.33	13.6	JN	
5	Pyrene	11.98		0.00	202	595613	1,600	160		
5	Butyl Benzyl Phthalate	12.77		0.00	149	247001	1,719	172		
5	3,3'-Dichlorobenzidine	13.49		0.00	252	233247	1,430	143		
5	Benz(a)anthracene	13.51		0.00	228	636623	1,670	167		
5	Chrysene	13.56	-0.01	0.00	228	596641	1,672	167		
5	Bis(2-ethylhexyl) Phthalate	13.62		0.00	149	350811	1,720	172		
6	Di-n-octyl Phthalate	14.72	-0.01	0.00	149	577366	1,915	191		
6	Benzo(b)fluoranthene	15.27	-0.01	0.00	252	700229	1,898	190		
6	Benzo(k)fluoranthene	15.33		0.00	252	708951	1,905	190		
6	Benzo(a)pyrene	15.78	-0.01	0.00	252	636065	1,878	188		
6	Indeno(1,2,3-cd)pyrene	16.99		0.00	276	724208	1,862	186		
6	Dibenz(a,h)anthracene	17.01	-0.01	0.00	278	761629	1,868	187		
6	Benzo(g,h,i)perylene	17.24	-0.01	0.00	276	746548	1,854	185		
	Guaiacol				0	0		30	UJ	NR

Prep Amount: 20.00 g **Dilution:** 1.0
Prep Final Vol: 2 ml **Unit Factor:** 1
Solids: %

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F009.D Vial: 7
Acq On : 31 Oct 2008 2:52 pm Operator: KBAILEY
Sample : KWG0811326-4 | DLCS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:41:12 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.38	152	64331	1000.00	ng/ml	-0.02
22) Naphthalene-d8	7.52	136	248535	1000.00	ng/ml	-0.01
36) Acenaphthene-d10	9.17	164	149636	1000.00	ng/ml	-0.01
60) Phenanthrene-d10	10.58	188	247158	1000.00	ng/ml	-0.02
70) Chrysene-d12	13.52	240	308718	1000.00	ng/ml	-0.02
79) Perylene-d12	15.86	264	315408	1000.00	ng/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	5.28	112	153476m	1963.69	ng/ml	-0.03
Spiked Amount 3750.000	Range 25 - 121		Recovery = 52.37%			
7) Phenol-d6	6.06	99	201380	1908.52	ng/ml	-0.02
Spiked Amount 3750.000	Range 24 - 113		Recovery = 50.89%			
20) Nitrobenzene-d5	6.88	82	114872	1356.79	ng/ml	-0.01
Spiked Amount 2500.000	Range 23 - 120		Recovery = 54.27%			
40) 2-Fluorobiphenyl	8.53	172	286971	1251.59	ng/ml	-0.01
Spiked Amount 2500.000	Range 30 - 115		Recovery = 50.06%			
61) 2,4,6-Tribromophenol	9.91	330	105812	2140.79	ug/ml	-0.02
Spiked Amount 3750.000	Range 19 - 122		Recovery = 57.09%			
73) Terphenyl-d14	12.16	244	585210	2107.44	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 140		Recovery = 84.30%			

Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.42	74	48363m	1036.40	ng/ml	
3) Pyridine	4.45	79	141104m	1557.87	ng/ml	
5) Aniline	6.11	93	124387	969.28	ng/ml	100
6) Bis(2-chloroethyl) Ether	6.16	93	94933	1137.93	ng/ml	99
8) Phenol	6.08	94	116598	1093.03	ng/ml	93
9) 2-Chlorophenol	6.20	128	101117	1107.27	ng/ml	100
10) 1,3-Dichlorobenzene	6.33	146	119453	1139.15	ng/ml	97
11) 1,4-Dichlorobenzene	6.40	146	109018	1009.93	ng/ml	97
12) 1,2-Dichlorobenzene	6.53	146	113909	1108.90	ng/ml	98
13) Benzyl Alcohol	6.51	108	64392	1166.26	ng/ml	98
14) Bis(2-chloroisopropyl) Eth	6.62	45	125172	1051.13	ng/ml	96
15) 2-Methylphenol	6.60	107	72634	987.52	ng/ml	99
16) Hexachloroethane	6.82	117	39531	1096.09	ng/ml	96
17) Acetophenone	6.77	105	9966	81.28	ng/ml	97
18) N-Nitrosodi-n-propylamine	6.74	70	69560	1090.14	ng/ml	95
19) 4-Methylphenol	6.73	107	109552	1016.06	ng/ml	95
21) Nitrobenzene	6.89	77	102761	1137.97	ng/ml	100
23) Isophorone	7.11	82	184195	1099.91	ng/ml	96
24) 2-Nitrophenol	7.18	139	57178	1111.65	ng/ml	95
25) 2,4-Dimethylphenol	7.21	122	42499	514.95	ng/ml	94

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

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F009.D Vial: 7
Acq On : 31 Oct 2008 2:52 pm Operator: KBAILEY
Sample : KWG0811326-4 | DLCS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:41:12 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	Bis(2-chloroethoxy)methane	7.30	93	110327	1114.00	ng/ml	98
27)	2,4-Dichlorophenol	7.39	162	91536	1135.14	ng/ml	95
28)	Benzoic Acid	7.28	105	26593	952.42	ng/ml	87
29)	1,2,4-Trichlorobenzene	7.47	180	105046	1130.36	ng/ml	94
30)	Naphthalene	7.54	128	310853	1131.87	ng/ml	99
31)	4-Chloroaniline	7.60	127	122886	1089.25	ng/ml	99
32)	Hexachlorobutadiene	7.65	225	64571	1115.91	ng/ml	97
33)	4-Chloro-3-methylphenol	8.05	107	86469	1133.78	ng/ml	97
34)	2-Methylnaphthalene	8.19	142	210578	1122.14	ng/ml	100
35)	1-Methylnaphthalene	8.28	142	201072	1135.78	ng/ml	99
37)	Hexachlorocyclopentadiene	8.32	237	47088	648.82	ng/ml	96
38)	2,4,6-Trichlorophenol	8.45	196	70161	1063.85	ng/ml	97
39)	2,4,5-Trichlorophenol	8.48	196	79471	1112.01	ng/ml	98
41)	2-Chloronaphthalene	8.64	162	209585	1083.12	ng/ml	99
42)	2-Nitroaniline	8.75	65	57476	1153.67	ng/ml	94
43)	Acenaphthylene	9.03	152	339852	1117.94	ng/ml	98
44)	Dimethyl Phthalate	8.92	163	275965	1268.09	ng/ml	99
45)	2,6-Dinitrotoluene	8.98	165	58795	1199.35	ng/ml	93
46)	Acenaphthene	9.20	154	200335	1112.50	ng/ml	98
47)	3-Nitroaniline	9.14	138	64754	1282.30	ng/ml	94
48)	2,4-Dinitrophenol	9.24	184	14913	447.71	ng/ml	93
49)	Dibenzofuran	9.36	168	318835	1121.01	ng/ml	99
50)	4-Nitrophenol	9.30	65	49521	1394.26	ng/ml	94
51)	2,4-Dinitrotoluene	9.36	165	86761	1317.59	ng/ml	97
52)	2,3,4,6-Tetrachlorophenol	9.48	232	70634	1093.99	ng/ml	98
53)	Fluorene	9.69	166	266909	1171.89	ng/ml	99
54)	4-Chlorophenyl Phenyl Ethe	9.69	204	140132	1166.33	ng/ml	99
55)	Diethyl Phthalate	9.59	149	275777	1342.55	ng/ml	98
56)	4-Nitroaniline	9.72	138	73048	1408.30	ng/ml	91
57)	2-Methyl-4,6-dinitrophenol	9.74	198	45363	1080.30	ng/ml	86
58)	N-Nitrosodiphenylamine	9.81	169	201929	1301.99	ng/ml	99
59)	Azobenzene	9.84	77	222087	1169.88	ng/ml	98
62)	4-Bromophenyl Phenyl Ether	10.16	248	95935	1254.34	ng/ml	98
63)	Hexachlorobenzene	10.20	284	118840	1279.01	ng/ml	98
64)	Pentachlorophenol	10.40	266	47436	859.33	ng/ml	97
65)	Phenanthrene	10.60	178	424057	1331.20	ng/ml	99
66)	Anthracene	10.65	178	442087	1351.26	ng/ml	98
67)	Carbazole	10.81	167	456616	1518.54	ng/ml	99
68)	Di-n-butyl Phthalate	11.15	149	568208	1631.00	ng/ml	100
69)	Fluoranthene	11.74	202	582753	1588.76	ng/ml	99
71)	Benzidine	11.89	184	27932	136.33	ng/ml	97

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

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F009.D Vial: 7
Acq On : 31 Oct 2008 2:52 pm Operator: KBAILEY
Sample : KWG0811326-4 | DLCS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:41:12 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

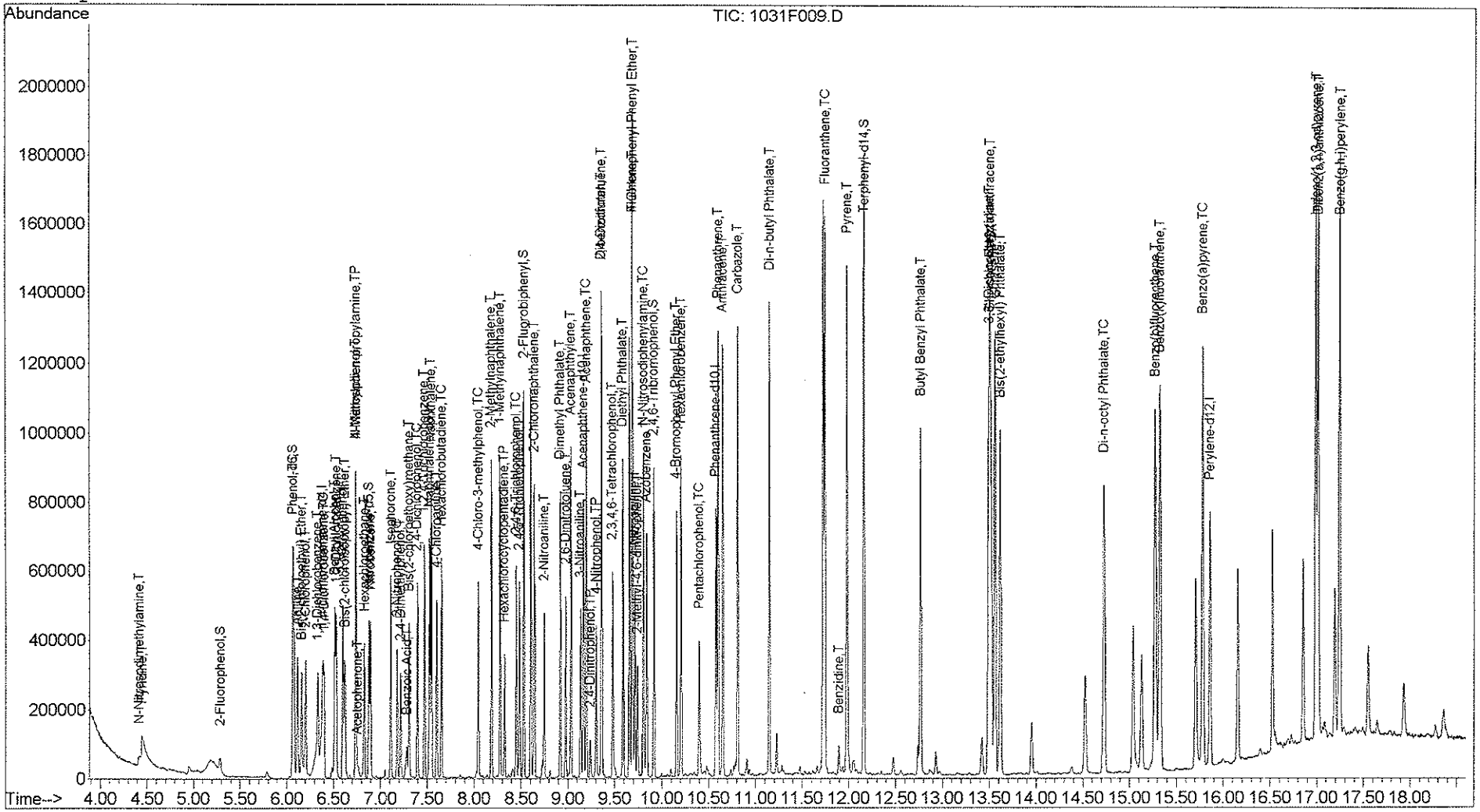
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
72)	Pyrene	11.98	202	595613	1599.84	ng/ml	99
74)	Butyl Benzyl Phthalate	12.77	149	247001	1718.59	ng/ml	97
75)	3,3'-Dichlorobenzidine	13.49	252	233247	1429.54	ng/ml	99
76)	Benz(a)anthracene	13.51	228	636623	1670.03	ng/ml	99
77)	Chrysene	13.56	228	596641	1672.16	ng/ml	97
78)	Bis(2-ethylhexyl) Phthalat	13.62	149	350811	1720.44	ng/ml	99
80)	Di-n-octyl Phthalate	14.72	149	577366	1914.52	ng/ml	100
81)	Benzo(b)fluoranthene	15.27	252	700229	1898.24	ng/ml	99
82)	Benzo(k)fluoranthene	15.33	252	708951	1904.76	ng/ml	99
83)	Benzo(a)pyrene	15.78	252	636065	1878.09	ng/ml	98
84)	Indeno(1,2,3-cd)pyrene	16.99	276	724208	1861.62	ng/ml	96
85)	Dibenz(a,h)anthracene	17.01	278	761629	1867.94	ng/ml	100
86)	Benzo(g,h,i)perylene	17.24	276	746548	1854.30	ng/ml	98

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

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F009.D Vial: 7
Acq On : 31 Oct 2008 2:52 pm Operator: KBAILEY
Sample : KWG0811326-4 | DLCS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:46 2008 Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Initial Calibration

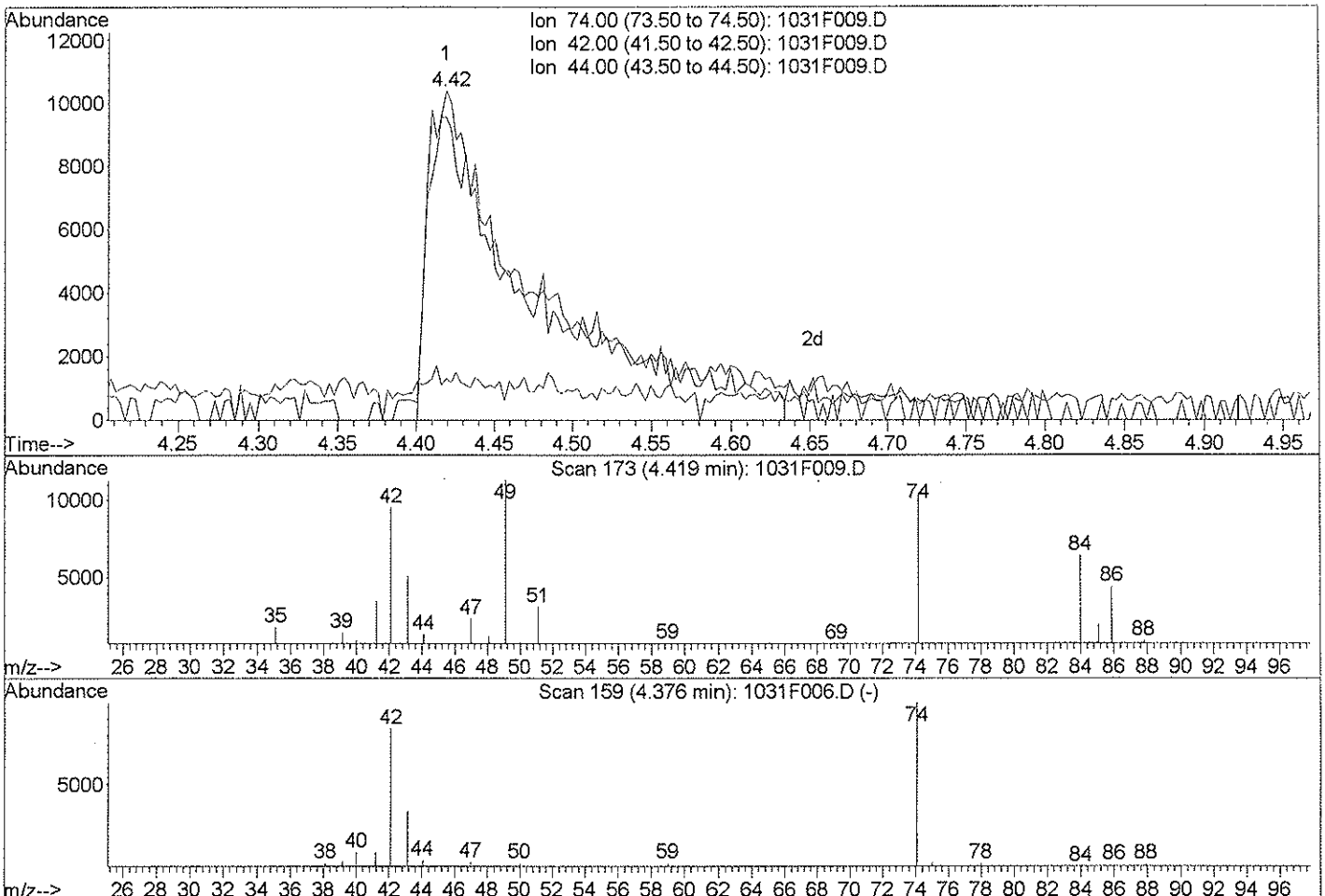


631

Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F009.D Vial: 7
Acq On : 31 Oct 2008 2:52 pm Operator: KBAILEY
Sample : KWG0811326-4 | DLCS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:41 2008 Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Single Level Calibration



TIC: 1031F009.D

(2) N-Nitrosodimethylamine (T)

4.42min 1024.87ng/ml

response 47825

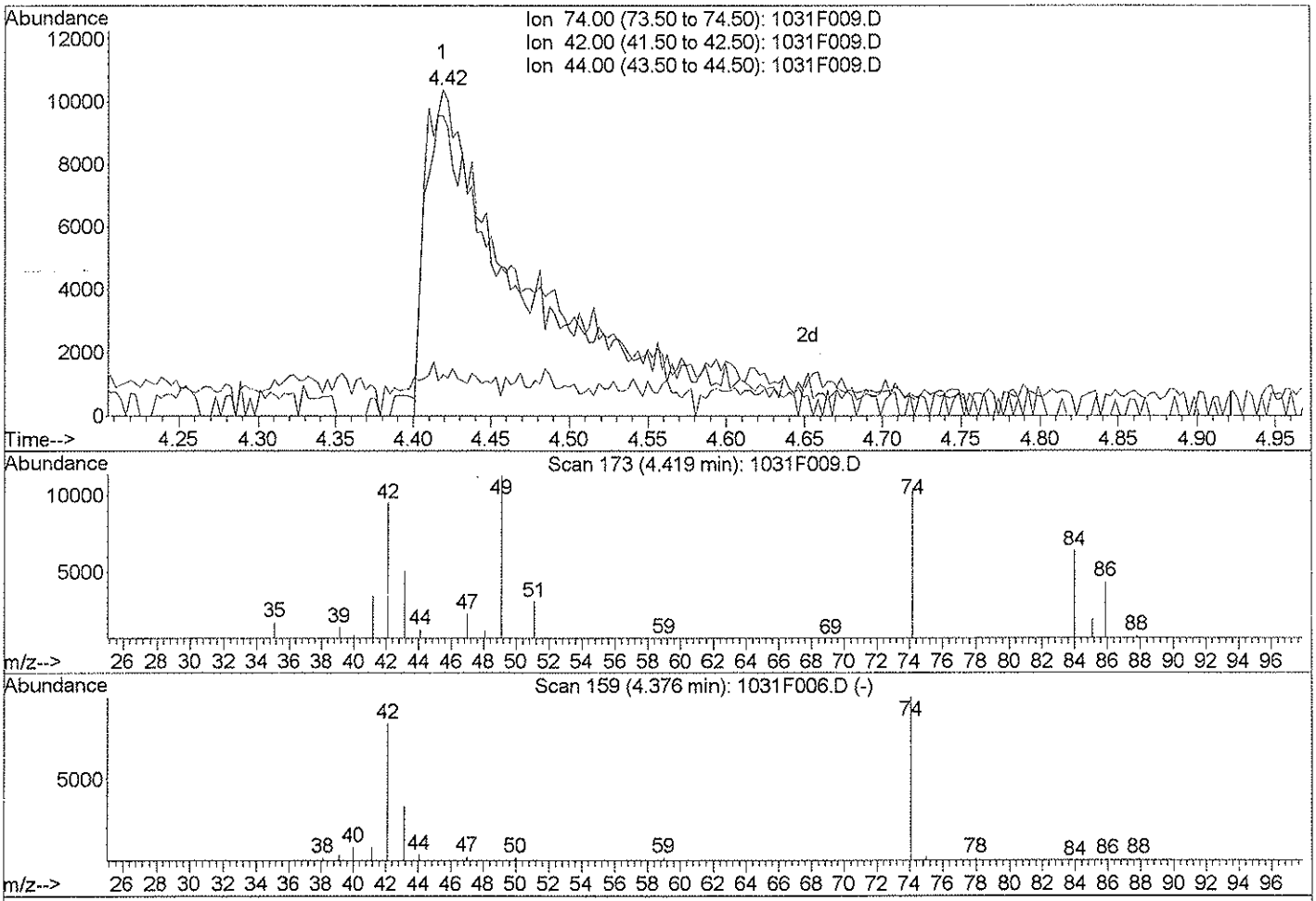
Ion	Exp%	Act%
74.00	100	100
42.00	83.40	85.95
44.00	5.80	6.11
0.00	0.00	0.00

1031F009.D 102608SVOLL.M Mon Nov 03 11:46:08 2008

Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F009.D Vial: 7
Acq On : 31 Oct 2008 2:52 pm Operator: KBAILEY
Sample : KWG0811326-4 | DLCS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:46 2008 Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Single Level Calibration



TIC: 1031F009.D

(2) N-Nitrosodimethylamine (T)

4.42min 1036.40ng/ml m

response 48363

Ion	Exp%	Act%
74.00	100	100
42.00	83.40	91.98
44.00	5.80	12.51
0.00	0.00	0.00

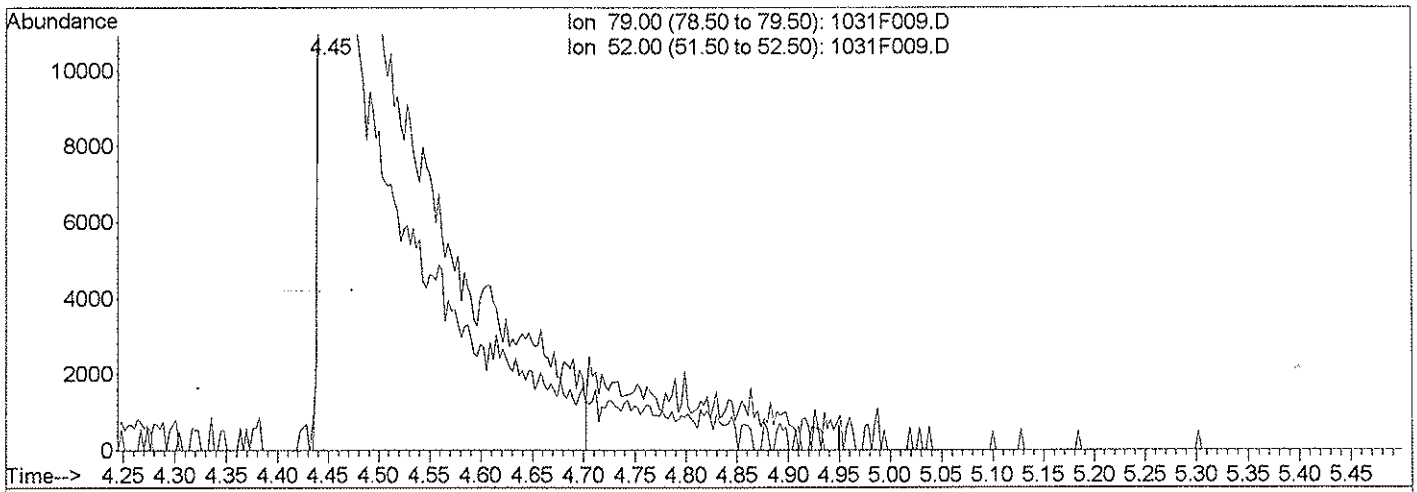
1c
LB 111308
MM 11/3/08

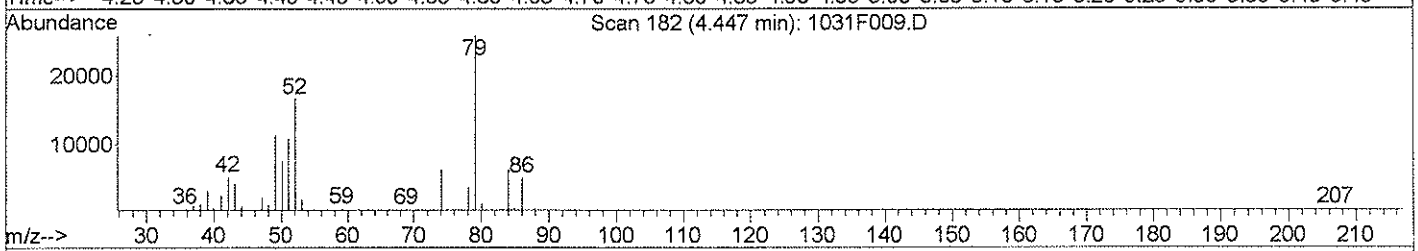
1031F009.D 102608SVOLL.M Mon Nov 03 11:46:13 2008

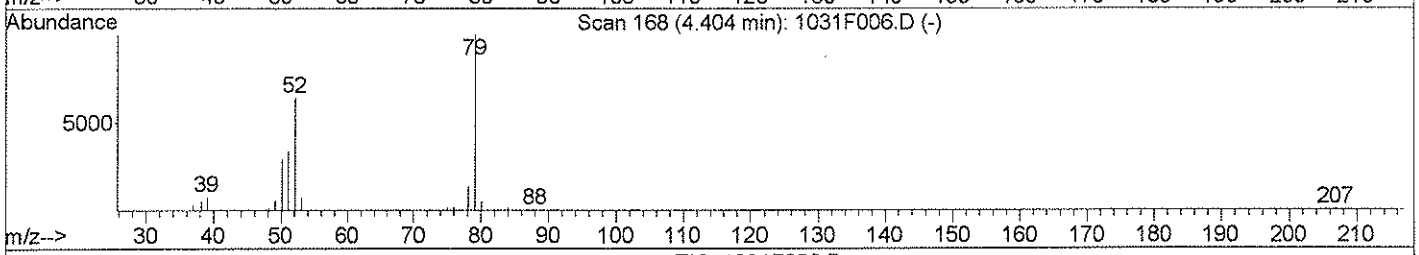
Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F009.D Vial: 7
Acq On : 31 Oct 2008 2:52 pm Operator: KBAILEY
Sample : KWG0811326-4 | DLCS Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:46 2008 Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Single Level Calibration







TIC: 1031F009.D

(3) Pyridine (T)

4.45min 1383.77ng/ml

response 125335

Ion	Exp%	Act%
79.00	100	100
52.00	66.00	64.31
0.00	0.00	0.00
0.00	0.00	0.00

1031F009.D 102608SVOLL.M Mon Nov 03 11:46:17 2008

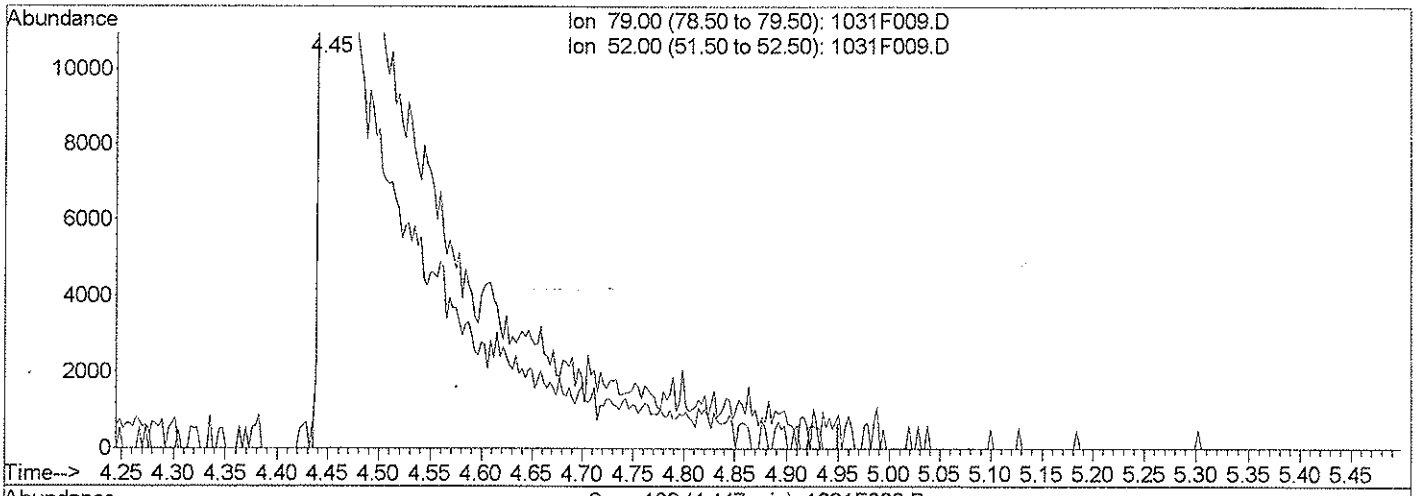
Quantitation Report (Qedit)

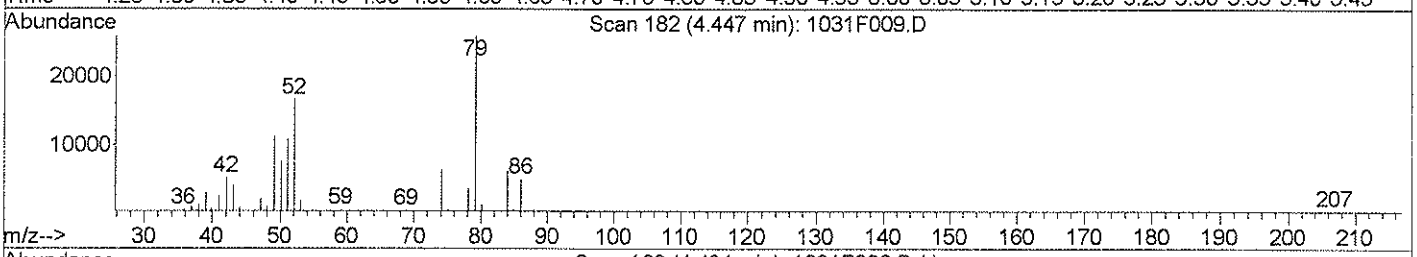
Data File : J:\MS17\DATA\103108\1031F009.D
Acq On : 31 Oct 2008 2:52 pm
Sample : KWG0811326-4 | DLCS
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:46 2008

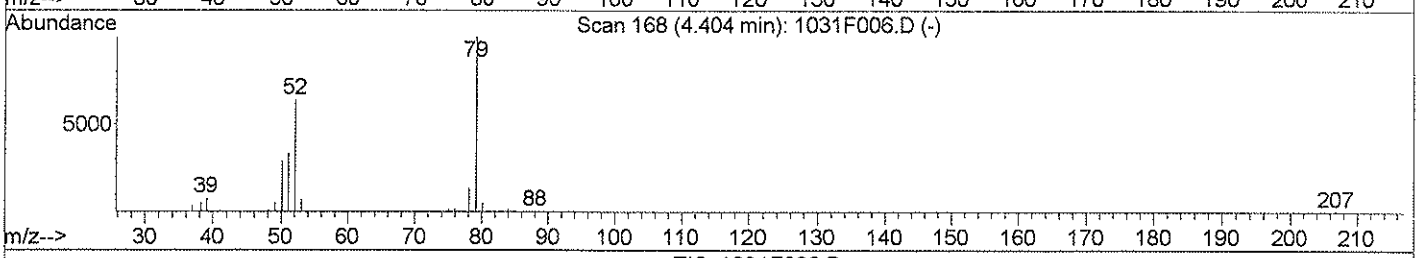
Vial: 7
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Single Level Calibration







TIC: 1031F009.D

(3) Pyridine (T)

4.45min 1557.87ng/ml m

response 141104

Ion	Exp%	Act%
79.00	100	100
52.00	66.00	64.31
0.00	0.00	0.00
0.00	0.00	0.00

1c
LB 113108
11-3-08

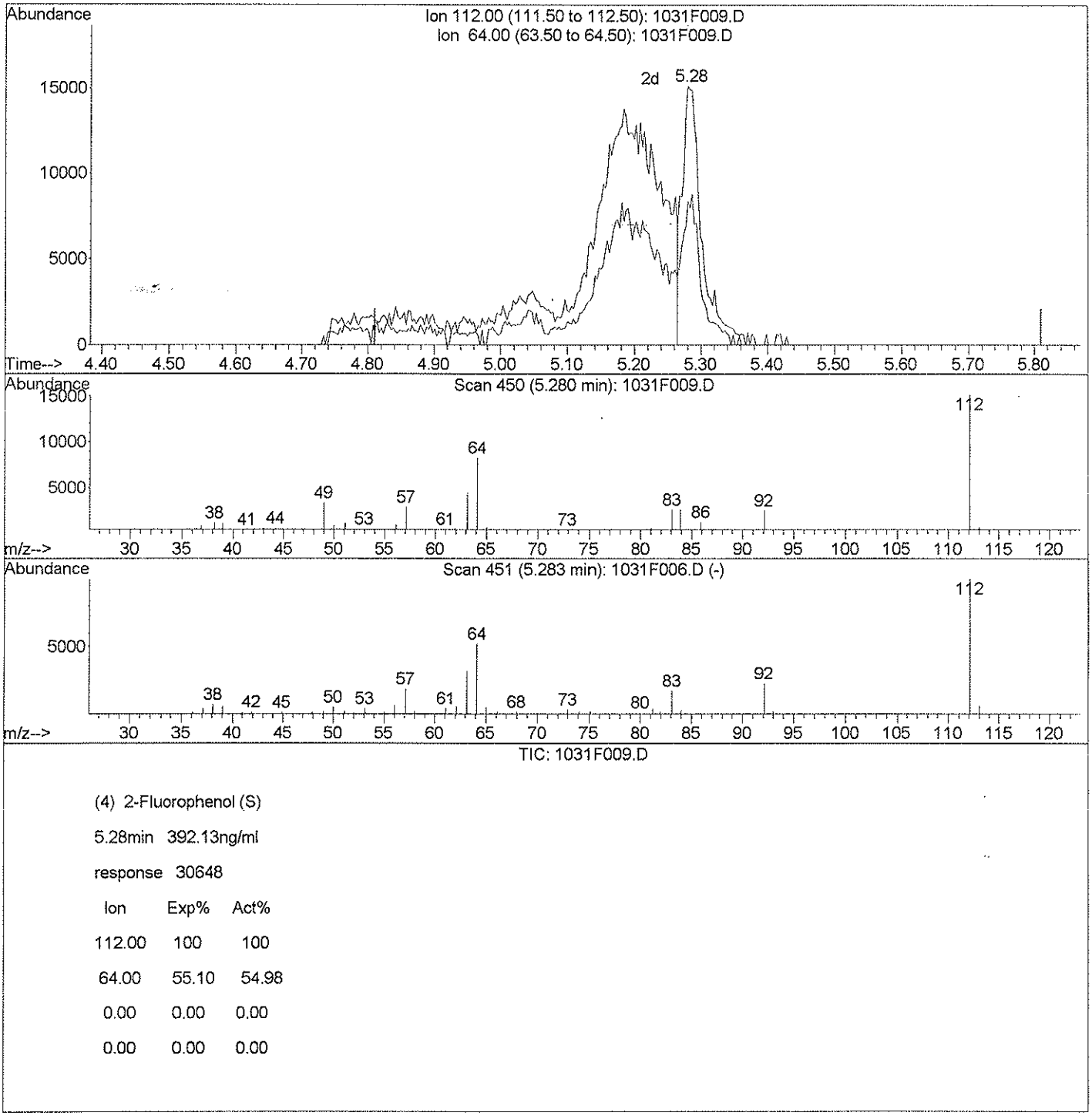
1031F009.D 102608SVOLL.M Mon Nov 03 11:46:22 2008

Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F009.D
Acq On : 31 Oct 2008 2:52 pm
Sample : KWG0811326-4 | DLCS
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:46 2008

Vial: 7
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration



TIC: 1031F009.D

(4) 2-Fluorophenol (S)

5.28min 392.13ng/ml

response 30648

Ion	Exp%	Act%
112.00	100	100
64.00	55.10	54.98
0.00	0.00	0.00
0.00	0.00	0.00

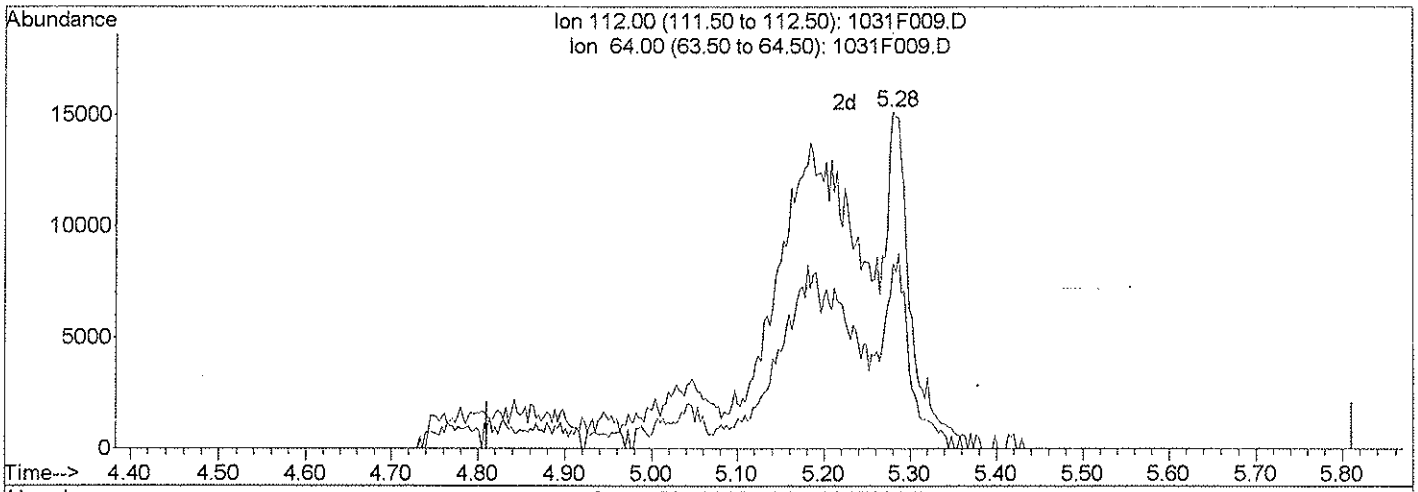
1031F009.D 102608SVOLL.M Mon Nov 03 11:46:27 2008

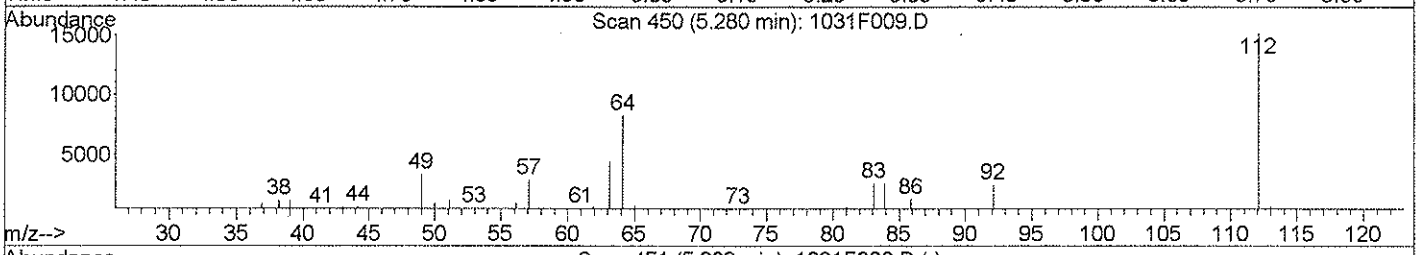
Quantitation Report (Qedit)

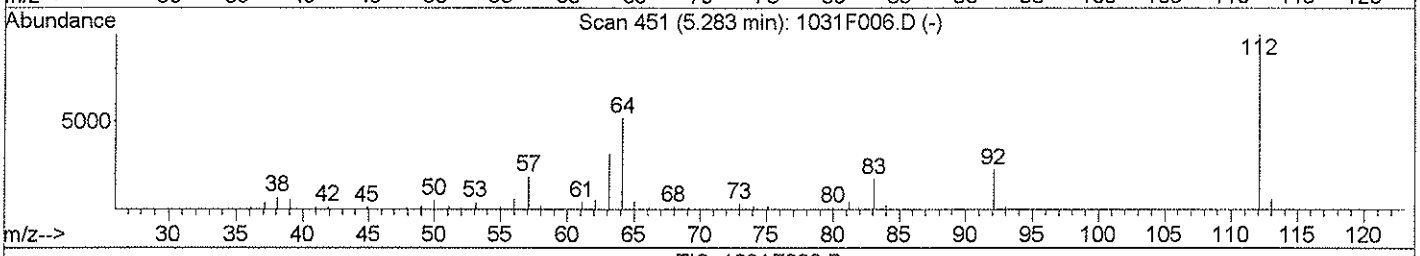
Data File : J:\MS17\DATA\103108\1031F009.D
Acq On : 31 Oct 2008 2:52 pm
Sample : KWG0811326-4 | DLCS
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:46 2008

Vial: 7
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:40:59 2008
Response via : Multiple Level Calibration







TIC: 1031F009.D

(4) 2-Fluorophenol (S)

5.28min 1963.69ng/ml m

response 153476

Ion	Exp%	Act%
112.00	100	100
64.00	55.10	54.98
0.00	0.00	0.00
0.00	0.00	0.00

1C

LB 111308

MM 11-3-08

1031F009.D 102608SVOLL.M Mon Nov 03 11:46:33 2008

Organic Analysis:
Semi-Volatile Organic Compounds by GC/MS

Validation Package

Standards Data

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/31/2008
Time Analyzed: 13:07

Tune Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS17\DATA\103108\1031F005.D
Instrument ID: MS17
Column:

Analysis Method: 8270C
Analysis Lot: KWG0811769

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	36.2	45714	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	37.5	47298	PASS
70	69	0	2	0.0	0	PASS
127	198	10	80	43.7	55178	PASS
197	198	0	2	0.5	693	PASS
198	442	30	100	65.8	126133	PASS
199	198	5	9	6.9	8754	PASS
275	198	10	60	35.0	44189	PASS
365	442	1	50	2.9	5573	PASS
441	443	0	100	87.1	31981	PASS
442	442	100	100	100.0	191597	PASS
443	442	15	24	19.2	36714	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0811769-2	J:\MS17\DATA\103108\1031F006.D	10/31/2008	13:34	
Method Blank	KWG0811326-5	J:\MS17\DATA\103108\1031F007.D	10/31/2008	14:00	
Lab Control Sample	KWG0811326-3	J:\MS17\DATA\103108\1031F008.D	10/31/2008	14:26	
Duplicate Lab Control Sample	KWG0811326-4	J:\MS17\DATA\103108\1031F009.D	10/31/2008	14:52	
Batch QCMS	KWG0811326-1	J:\MS17\DATA\103108\1031F010.D	10/31/2008	15:18	
Batch QCDMS	KWG0811326-2	J:\MS17\DATA\103108\1031F011.D	10/31/2008	15:44	
DCI 4-1	K0810000-001	J:\MS17\DATA\103108\1031F016.D	10/31/2008	17:54	
DCI 4-1a	K0810000-002	J:\MS17\DATA\103108\1031F017.D	10/31/2008	18:20	
Batch QC	K0810048-003	J:\MS17\DATA\103108\1031F022.D	10/31/2008	20:30	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File: J:\MS17\DATA\103108\1031F005.D
Lab ID: KWG0811769-1
RunType: TUNE
Matrix: WATER

Date Acquired: 10/31/2008 13:07
Date Quantitated:
Batch ID: KWG0811769
Analysis Method: 8270C
ListJoinID: LJ2563

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: LC 11/3/08

Secondary Review: MM 11-3-08

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270C SVO_LL	**Collect Date:**		**Receive Date:**	11/03/2008

Analysis Lot:	KWG0811769	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS17\METHODS\FULL_SCAN\102608SVOLL.	**Calibration ID:**	CAL7891
Title:		**Report List ID:**	LJ1965
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS17\DATA\103108\1031F005.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 13:07	**Quant Date:**		**Vial:**	3
Run Type:	TUNE			**Dilution:**	1.0
Lab ID:	KWG0811769-1			**Soln Conc. Units:**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	36.2	45714	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	37.5	47298	Pass
70	69	0	2	0.0	0	Pass
127	198	10	80	43.7	55178	Pass
197	198	0	2	0.5	693	Pass
198	442	30	100	65.8	126133	Pass
199	198	5	9	6.9	8754	Pass
275	198	10	60	35.0	44189	Pass
365	442	1	50	2.9	5573	Pass
441	443	0.01	100	87.1	31981	Pass
442	442	100	100	100.0	191597	Pass
443	442	15	24	19.2	36714	Pass

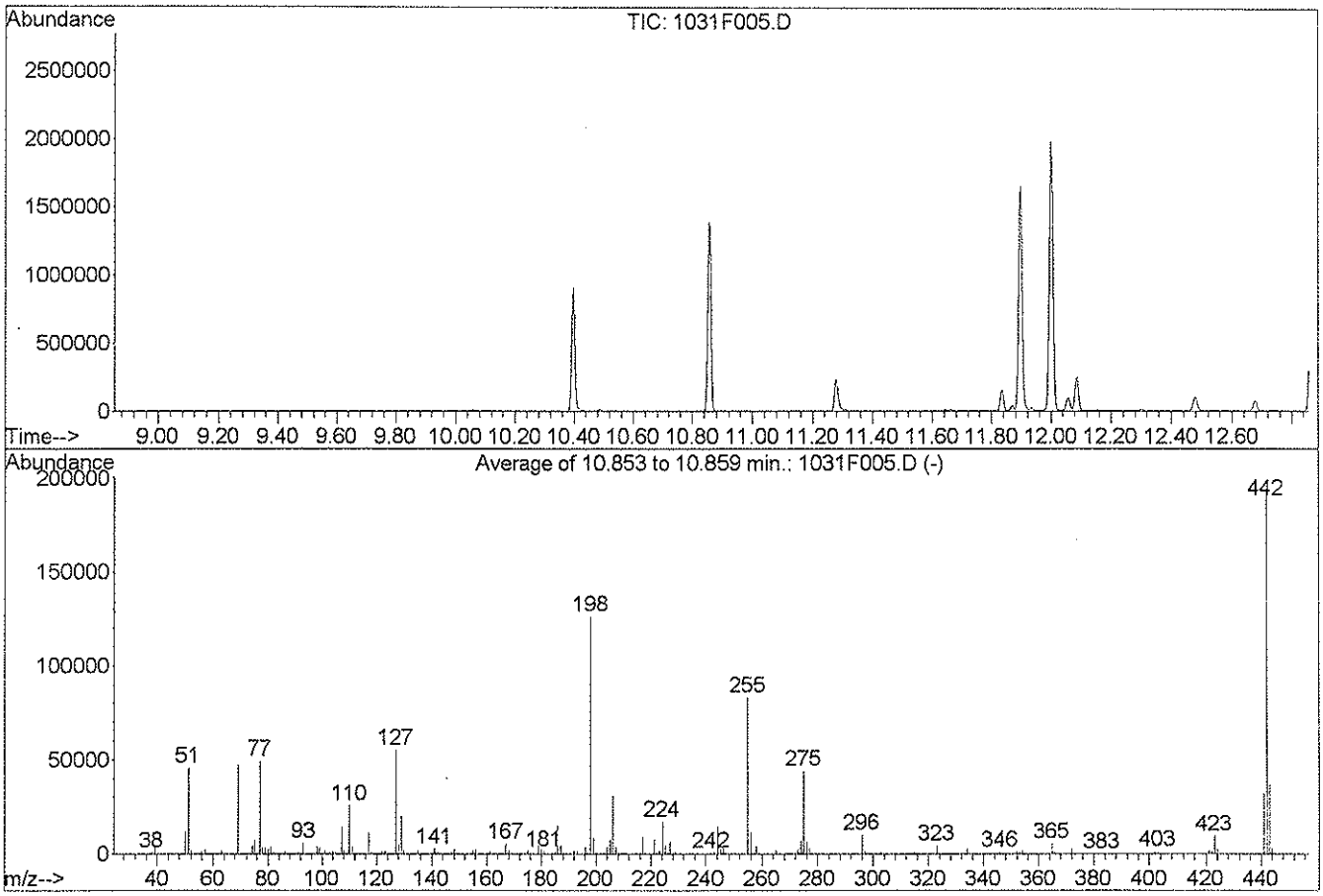
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File : J:\MS17\DATA\103108\1031F005.D
Acq On : 31 Oct 2008 1:07 pm
Sample : 2.5PPM TUNE STD | SVM27-36D
Misc :
MS Integration Params: LSCINT.P
Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL

Vial: 3
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00



AutoFind: Scans 2243, 2244, 2245; Background Corrected with Scan 2237

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	36.2	45714	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	37.5	47298	PASS
70	69	0.00	2	0.0	0	PASS
127	198	10	80	43.7	55178	PASS
197	198	0.00	2	0.5	693	PASS
198	442	30	100	65.8	126133	PASS
199	198	5	9	6.9	8754	PASS
275	198	10	60	35.0	44189	PASS
365	442	1	50	2.9	5573	PASS
441	443	0.01	100	87.1	31981	PASS
442	442	30	100	100.0	191597	PASS
443	442	15	24	19.2	36714	PASS

1031F005.D 102608SVOLL.M Mon Nov 03 11:39:07 2008

Average of 10.853 to 10.859 min.: 1031F005.D
2.5PPM TUNE STD | SVM27-36D
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
38.05	894	61.15	492	78.10	3781	86.05	1451
39.15	4152	61.80	236	79.05	3550	91.05	977
39.90	174	62.00	549	80.05	2678	91.95	1139
41.00	174	63.05	2023	81.05	4082	93.05	5983
44.00	64	65.05	745	81.95	592	98.05	4221
49.05	467	69.05	47298	82.20	293	99.05	3542
50.10	12011	73.20	462	82.80	290	101.00	1819
51.10	45714	74.10	4529	83.05	462	102.95	724
52.10	2407	75.05	7471	83.95	548	104.00	1434
56.00	1467	76.10	824	84.80	175	104.95	1145
57.05	2933	77.10	49397	85.15	526	105.90	354

Average of 10.853 to 10.859 min.: 1031F005.D
2.5PPM TUNE STD | SVM27-36D
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
106.10	207	125.00	587	141.00	2952	153.80	204
107.10	14369	127.05	55178	142.05	986	154.05	507
107.95	2049	128.10	5181	142.95	882	155.05	1788
110.05	25800	129.00	20083	146.05	462	155.95	2456
111.05	3689	130.00	2083	146.90	518	157.10	262
111.95	621	133.90	336	147.15	940	157.60	190
117.05	11358	134.15	478	148.00	2782	157.90	233
118.00	984	135.00	1624	149.10	828	158.05	426
122.00	1323	136.05	808	151.05	349	159.10	211
123.05	1676	136.90	544	152.75	558	159.95	602
124.05	663	137.10	306	153.00	300	161.10	1399

Average of 10.853 to 10.859 min.: 1031F005.D
2.5PPM TUNE STD | SVM27-36D
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
162.00	202	172.75	551	184.90	564	194.80	221
164.80	356	173.85	731	185.10	1530	196.05	4210
165.00	631	174.10	289	186.05	15289	196.80	693
165.85	601	175.05	2234	187.05	4643	198.00	126133
166.10	318	175.95	1049	188.10	595	199.00	8754
167.05	5492	176.90	788	188.90	401	200.00	827
167.90	760	177.10	451	189.05	869	201.35	410
168.05	2180	179.00	4500	190.90	669	201.70	228
169.00	456	179.95	3116	191.95	1594	203.05	897
171.80	172	181.05	1544	193.05	1762	204.00	4062
172.05	455	184.00	402	194.00	246	205.05	7903

Average of 10.853 to 10.859 min.: 1031F005.D
2.5PPM TUNE STD | SVM27-36D
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
206.05	31096	217.00	8975	228.90	1597	245.05	2271
207.05	3888	217.95	1024	230.80	207	245.95	3027
208.05	1243	221.05	7969	231.00	334	247.00	510
208.95	369	221.80	646	233.95	610	248.80	366
209.90	178	222.10	521	235.00	280	252.70	220
210.10	245	222.95	1937	236.80	228	253.40	226
210.70	366	224.05	17201	236.95	621	255.00	83032
211.00	1212	225.00	4697	241.95	961	256.00	11721
215.00	364	226.00	761	242.90	221	257.20	460
215.80	237	226.95	7110	243.05	1036	258.00	4515
216.05	833	227.95	1109	244.10	14860	259.00	580

Average of 10.853 to 10.859 min.: 1031F005.D
2.5PPM TUNE STD | SVM27-36D
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
265.00	1982	296.00	10218	326.90	272	353.95	1778
265.80	192	296.95	1585	327.05	512	364.95	5573
272.95	2547	302.00	186	327.90	233	365.95	1051
274.10	7304	302.90	1275	332.10	231	370.90	436
275.00	44189	314.00	600	332.80	413	372.05	2636
276.05	6313	314.80	359	334.05	3124	372.80	343
277.00	3291	314.95	1084	334.95	648	373.00	516
277.80	220	315.90	688	340.90	243	383.00	288
282.80	247	321.10	186	345.90	1023	389.90	192
284.95	626	323.05	4538	351.95	1536	401.80	175
292.95	884	323.95	941	352.95	663	402.00	983

Average of 10.853 to 10.859 min.: 1031F005.D
2.5PPM TUNE STD | SVM27-36D
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
402.95	1476	444.05	3054				
404.10	506						
421.00	1626						
421.90	477						
422.10	1396						
423.05	9695						
424.05	2748						
424.90	175						
441.10	31981						
442.10	191597						
443.10	36714						

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 10/26/2008

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL7891
Instrument ID: MS17

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS17\DATA\102608\1024F003.D	F	J:\MS17\DATA\102608\1024F008.D
B	J:\MS17\DATA\102608\1024F004.D	G	J:\MS17\DATA\102608\1024F009.D
C	J:\MS17\DATA\102608\1024F005.D	H	J:\MS17\DATA\102608\1024F010.D
D	J:\MS17\DATA\102608\1024F006.D	I	J:\MS17\DATA\102608\1024F011.D
E	J:\MS17\DATA\102608\1024F007.D	J	J:\MS17\DATA\102608\1024F012.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
‡ Phenol	A	50	1.58	B	100	1.64	C	200	1.60	D	500	1.62	E	1000	1.64
	F	2000	1.67	G	3000	1.66	H	5000	1.76	I	7000	1.69	J	10000	1.72
Benzyl Alcohol	A	50	0.745	B	100	0.764	C	200	0.826	D	500	0.804	E	1000	0.864
	F	2000	0.896	G	3000	0.891	H	5000	0.948	I	7000	0.914	J	10000	0.931
1,2-Dichlorobenzene	A	50	1.65	B	100	1.52	C	200	1.65	D	500	1.54	E	1000	1.58
	F	2000	1.60	G	3000	1.57	H	5000	1.66	I	7000	1.60	J	10000	1.60
2-Methylphenol	A	50	1.22	B	100	1.04	C	200	1.16	D	500	1.08	E	1000	1.12
	F	2000	1.17	G	3000	1.12	H	5000	1.21	I	7000	1.14	J	10000	1.16
‡ 1,4-Dichlorobenzene	A	50	1.69	B	100	1.67	C	200	1.64	D	500	1.60	E	1000	1.67
	F	2000	1.69	G	3000	1.67	H	5000	1.76	I	7000	1.70	J	10000	1.69
4-Methylphenol	A	50	1.63	B	100	1.59	C	200	1.60	D	500	1.60	E	1000	1.70
	F	2000	1.69	G	3000	1.68	H	5000	1.80	I	7000	1.73	J	10000	1.75
2,4-Dimethylphenol	A	50	0.347	B	100	0.324	C	200	0.336	D	500	0.315	E	1000	0.326
	F	2000	0.334	G	3000	0.337	H	5000	0.337	I	7000	0.332	J	10000	0.333
Benzoic Acid													E	1000	0.119
	F	2000	0.191	G	3000	0.212	H	5000	0.238	I	7000	0.260	J	10000	0.277
1,2,4-Trichlorobenzene	A	50	0.391	B	100	0.370	C	200	0.382	D	500	0.354	E	1000	0.363
	F	2000	0.373	G	3000	0.370	H	5000	0.387	I	7000	0.376	J	10000	0.374
‡ Hexachlorobutadiene	A	50	0.249	B	100	0.228	C	200	0.232	D	500	0.225	E	1000	0.216
	F	2000	0.233	G	3000	0.231	H	5000	0.242	I	7000	0.236	J	10000	0.235
Dimethyl Phthalate	A	50	1.51	B	100	1.42	C	200	1.48	D	500	1.41	E	1000	1.38
	F	2000	1.45	G	3000	1.44	H	5000	1.53	I	7000	1.46	J	10000	1.46
Diethyl Phthalate	A	50	1.44	B	100	1.32	C	200	1.40	D	500	1.27	E	1000	1.31
	F	2000	1.37	G	3000	1.37	H	5000	1.47	I	7000	1.38	J	10000	1.39
‡ N-Nitrosodiphenylamine	A	50	1.13	B	100	1.08	C	200	1.09	D	500	0.984	E	1000	0.965
	F	2000	1.00	G	3000	0.995	H	5000	1.07	I	7000	1.02	J	10000	1.04
Hexachlorobenzene	A	50	0.394	B	100	0.397	C	200	0.364	D	500	0.356	E	1000	0.357
	F	2000	0.376	G	3000	0.371	H	5000	0.384	I	7000	0.379	J	10000	0.382

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 10/26/2008

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL7891
Instrument ID: MS17

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
‡ Pentachlorophenol										D	500	0.195	E	1000	0.197
	F	2000	0.215	G	3000	0.226	H	5000	0.237	I	7000	0.243	J	10000	0.249
Di-n-butyl Phthalate	A	50	1.64	B	100	1.47	C	200	1.40	D	500	1.28	E	1000	1.33
	F	2000	1.39	G	3000	1.38	H	5000	1.43	I	7000	1.40	J	10000	1.39
Butyl Benzyl Phthalate	A	50	0.471	B	100	0.430	C	200	0.447	D	500	0.449	E	1000	0.456
	F	2000	0.474	G	3000	0.470	H	5000	0.497	I	7000	0.483	J	10000	0.478
Bis(2-ethylhexyl) Phthalate	A	50	0.665	B	100	0.600	C	200	0.650	D	500	0.617	E	1000	0.636
	F	2000	0.677	G	3000	0.666	H	5000	0.707	I	7000	0.699	J	10000	0.687
‡ Di-n-octyl Phthalate	A	50	0.912	B	100	0.835	C	200	0.878	D	500	0.904	E	1000	0.927
	F	2000	1.00	G	3000	0.985	H	5000	1.06	I	7000	1.04	J	10000	1.02
Phenol-d6	A	50	1.53	B	100	1.54	C	200	1.57	D	500	1.59	E	1000	1.67
	F	2000	1.69	G	3000	1.66	H	5000	1.76	I	7000	1.69	J	10000	1.71
Nitrobenzene-d5	A	50	1.25	B	100	1.27	C	200	1.24	D	500	1.26	E	1000	1.29
	F	2000	1.35	G	3000	1.34	H	5000	1.42	I	7000	1.37	J	10000	1.37
2-Fluorobiphenyl	A	50	1.72	B	100	1.50	C	200	1.56	D	500	1.47	E	1000	1.46
	F	2000	1.50	G	3000	1.49	H	5000	1.61	I	7000	1.51	J	10000	1.50
2,4,6-Tribromophenol	A	50	0.194	B	100	0.197	C	200	0.192	D	500	0.185	E	1000	0.189
	F	2000	0.199	G	3000	0.203	H	5000	0.212	I	7000	0.211	J	10000	0.218
Terphenyl-d14	A	50	1.06	B	100	0.897	C	200	0.908	D	500	0.858	E	1000	0.855
	F	2000	0.884	G	3000	0.868	H	5000	0.906	I	7000	0.884	J	10000	0.874
† 4-Nitrophenol				B	100	0.173	C	200	0.216	D	500	0.217	E	1000	0.228
	F	2000	0.248	G	3000	0.257	H	5000	0.273	I	7000	0.261	J	10000	0.264
‡ 2,4-Dichlorophenol	A	50	0.311	B	100	0.305	C	200	0.334	D	500	0.317	E	1000	0.310
	F	2000	0.328	G	3000	0.327	H	5000	0.344	I	7000	0.335	J	10000	0.333
‡ Fluoranthene	A	50	1.58	B	100	1.47	C	200	1.49	D	500	1.42	E	1000	1.45
	F	2000	1.49	G	3000	1.46	H	5000	1.52	I	7000	1.49	J	10000	1.47
‡ Benzo(a)pyrene	A	50	1.13	B	100	1.01	C	200	1.07	D	500	1.03	E	1000	1.04
	F	2000	1.08	G	3000	1.06	H	5000	1.12	I	7000	1.10	J	10000	1.08
† 2,4-Dinitrophenol															
	F	2000	0.182	G	3000	0.201	H	5000	0.237	I	7000	0.240	J	10000	0.252
‡ 4-Chloro-3-methylphenol	A	50	0.294	B	100	0.298	C	200	0.317	D	500	0.296	E	1000	0.289
	F	2000	0.310	G	3000	0.307	H	5000	0.326	I	7000	0.316	J	10000	0.315
† N-Nitrosodi-n-propylamine	A	50	1.03	B	100	0.967	C	200	0.934	D	500	0.965	E	1000	0.957
	F	2000	0.997	G	3000	0.988	H	5000	1.06	I	7000	1.01	J	10000	1.02

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 10/26/2008

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL7891
Instrument ID: MS17

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
† Hexachlorocyclopentadiene										D	500	0.427	E	1000	0.442
	F	2000	0.474	G	3000	0.486	H	5000	0.536	I	7000	0.510	J	10000	0.520
‡ Acenaphthene	A	50	1.28	B	100	1.17	C	200	1.24	D	500	1.14	E	1000	1.15
	F	2000	1.21	G	3000	1.19	H	5000	1.25	I	7000	1.21	J	10000	1.19
‡ 2,4,6-Trichlorophenol	A	50	0.488	B	100	0.385	C	200	0.425	D	500	0.420	E	1000	0.421
	F	2000	0.437	G	3000	0.436	H	5000	0.482	I	7000	0.458	J	10000	0.457
‡ 2-Nitrophenol	A	50	0.197	B	100	0.191	C	200	0.200	D	500	0.192	E	1000	0.196
	F	2000	0.212	G	3000	0.214	H	5000	0.226	I	7000	0.221	J	10000	0.219

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 10/26/2008

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL7891
Instrument ID: MS17

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
‡ Phenol	MS	AverageRF	% RSD	3.3		≤ 15	1.66		0.01
Benzyl Alcohol	TRG	AverageRF	% RSD	8.2		≤ 15	0.858		0.01
1,2-Dichlorobenzene	TRG	AverageRF	% RSD	3.0		≤ 15	1.60		0.01
2-Methylphenol	TRG	AverageRF	% RSD	4.8		≤ 15	1.14		0.01
‡ 1,4-Dichlorobenzene	MS	AverageRF	% RSD	2.5		≤ 15	1.68		0.01
4-Methylphenol	TRG	AverageRF	% RSD	4.2		≤ 15	1.68		0.01
2,4-Dimethylphenol	TRG	AverageRF	% RSD	2.6		≤ 15	0.332		0.01
Benzoic Acid	TRG	Quadratic	COD	1.000		≥ 0.990	0.216		0.01
1,2,4-Trichlorobenzene	MS	AverageRF	% RSD	3.0		≤ 15	0.374		0.01
‡ Hexachlorobutadiene	TRG	AverageRF	% RSD	3.9		≤ 15	0.233		0.01
Dimethyl Phthalate	TRG	AverageRF	% RSD	3.0		≤ 15	1.45		0.01
Diethyl Phthalate	TRG	AverageRF	% RSD	4.4		≤ 15	1.37		0.01
‡ N-Nitrosodiphenylamine	TRG	AverageRF	% RSD	5.2		≤ 15	1.04		0.01
Hexachlorobenzene	TRG	AverageRF	% RSD	3.7		≤ 15	0.376		0.01
‡ Pentachlorophenol	MS	AverageRF	% RSD	9.7		≤ 15	0.223		0.01
Di-n-butyl Phthalate	TRG	AverageRF	% RSD	6.8		≤ 15	1.41		0.01
Butyl Benzyl Phthalate	TRG	AverageRF	% RSD	4.2		≤ 15	0.466		0.01
Bis(2-ethylhexyl) Phthalate	TRG	AverageRF	% RSD	5.3		≤ 15	0.660		0.01
‡ Di-n-octyl Phthalate	TRG	AverageRF	% RSD	7.9		≤ 15	0.956		0.01
Phenol-d6	SURR	AverageRF	% RSD	4.7		≤ 15	1.64		0.01
Nitrobenzene-d5	SURR	AverageRF	% RSD	4.6		≤ 15	1.32		0.01
2-Fluorobiphenyl	SURR	AverageRF	% RSD	5.1		≤ 15	1.53		0.01
2,4,6-Tribromophenol	SURR	AverageRF	% RSD	5.5		≤ 15	0.200		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	6.6		≤ 15	0.899		0.01
† 4-Nitrophenol	MS	AverageRF	% RSD	13.5		≤ 15	0.237		0.05
‡ 2,4-Dichlorophenol	TRG	AverageRF	% RSD	4.0		≤ 15	0.324		0.01
‡ Fluoranthene	TRG	AverageRF	% RSD	3.0		≤ 15	1.48		0.01
‡ Benzo(a)pyrene	TRG	AverageRF	% RSD	3.6		≤ 15	1.07		0.01
† 2,4-Dinitrophenol	TRG	AverageRF	% RSD	13.2		≤ 15	0.223		0.05
‡ 4-Chloro-3-methylphenol	MS	AverageRF	% RSD	3.9		≤ 15	0.307		0.01
† N-Nitrosodi-n-propylamine	MS	AverageRF	% RSD	3.8		≤ 15	0.992		0.05
† Hexachlorocyclopentadiene	TRG	AverageRF	% RSD	8.3		≤ 15	0.485		0.05
‡ Acenaphthene	MS	AverageRF	% RSD	3.6		≤ 15	1.20		0.01
‡ 2,4,6-Trichlorophenol	TRG	AverageRF	% RSD	7.1		≤ 15	0.441		0.01
‡ 2-Nitrophenol	TRG	AverageRF	% RSD	6.3		≤ 15	0.207		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 10/26/2008
Date Analyzed: 10/26/2008

Second Source Calibration Verification
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270C

Calibration ID: CAL7891
Units: ng/ml

File ID: J:\MS17\DATA\102608\1024F013.D
J:\MS17\DATA\102608\1024F014.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3100	1.66	1.72	4	NA	± 20 %	AverageRF
Benzyl Alcohol	3000	3100	0.858	0.892	4	NA	± 30 %	AverageRF
1,2-Dichlorobenzene	3000	3000	1.60	1.60	0	NA	± 30 %	AverageRF
2-Methylphenol	3000	3000	1.14	1.15	1	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	3000	1.68	1.70	1	NA	± 20 %	AverageRF
4-Methylphenol	3000	3000	1.68	1.66	-1	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	2900	0.332	0.324	-2	NA	± 30 %	AverageRF
Benzoic Acid	3000	2900	0.216	0.206	NA	-3	± 30 %	Quadratic
1,2,4-Trichlorobenzene	3000	2900	0.374	0.367	-2	NA	± 30 %	AverageRF
‡ Hexachlorobutadiene	3000	2900	0.233	0.225	-3	NA	± 20 %	AverageRF
Dimethyl Phthalate	3000	3000	1.45	1.44	-1	NA	± 30 %	AverageRF
Diethyl Phthalate	3000	2900	1.37	1.33	-3	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3100	1.04	1.06	2	NA	± 20 %	AverageRF
Hexachlorobenzene	3000	3000	0.376	0.370	-2	NA	± 30 %	AverageRF
‡ Pentachlorophenol	3000	3400	0.223	0.254	14	NA	± 20 %	AverageRF
Di-n-butyl Phthalate	3000	2900	1.41	1.35	-5	NA	± 30 %	AverageRF
Butyl Benzyl Phthalate	3000	3000	0.466	0.466	0	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3000	0.660	0.662	0	NA	± 30 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3100	0.956	1.00	5	NA	± 20 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	3100	0.441	0.453	3	NA	± 20 %	AverageRF
‡ 2,4-Dichlorophenol	3000	3100	0.324	0.331	2	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	2800	0.223	0.207	-7	NA	± 30 %	AverageRF
‡ 2-Nitrophenol	3000	3100	0.207	0.211	2	NA	± 20 %	AverageRF
‡ 4-Chloro-3-methylphenol	3000	3100	0.307	0.312	2	NA	± 20 %	AverageRF
† 4-Nitrophenol	3000	3200	0.237	0.252	6	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	3000	1.20	1.19	-1	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	3100	1.07	1.11	4	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	3000	1.48	1.48	0	NA	± 30 %	AverageRF
† Hexachlorocyclopentadiene	3000	2600	0.485	0.415	-14	NA	± 30 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	2800	0.992	0.925	-7	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Injection Log

Directory: J:\MS17\DATA\102608

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1024F001.D	1.	2.5PPM TUNE STD | SVM27-31A		26 Oct 2008 12:4
2	2	1024F002.D	1.	IB		26 Oct 2008 13:1
3	3	1024F003.D	1.	0.05PPM ICAL SVO_LL | SVM27-33C		26 Oct 2008 13:3
4	4	1024F004.D	1.	0.10PPM ICAL SVO_LL | SVM27-33D		26 Oct 2008 14:0
5	5	1024F005.D	1.	0.20PPM ICAL SVO_LL | SVM27-33E		26 Oct 2008 14:3
6	6	1024F006.D	1.	0.50PPM ICAL SVO_LL | SVM27-33F		26 Oct 2008 14:5
7	7	1024F007.D	1.	1.0PPM ICAL SVO_LL | SVM27-33G		26 Oct 2008 15:2
8	8	1024F008.D	1.	2.0PPM ICAL SVO_LL | SVM27-33H		26 Oct 2008 15:4
9	9	1024F009.D	1.	3.0PPM ICAL SVO_LL | SVM27-33I		26 Oct 2008 16:1
10	10	1024F010.D	1.	5.0PPM ICAL SVO_LL | SVM27-33J		26 Oct 2008 16:4
11	11	1024F011.D	1.	7.0PPM ICAL SVO_LL | SVM27-33K		26 Oct 2008 17:0
12	12	1024F012.D	1.	10.0PPM ICAL SVO_LL | SVM27-33L		26 Oct 2008 17:3
13	13	1024F013.D	1.	3.0PPM ICV SVO_LL | SVM27-34B		26 Oct 2008 17:5
14	14	1024F014.D	1.	3.0PPM CLP ICV SVO_LL | SVM27-12C		26 Oct 2008 18:2
15	15	1024F015.D	1.	2.5PPM PCP ICV SVO_LL | SVM26-21A	NP Not needed	26 Oct 2008 18:4
~~16~~	~~16~~	~~1024F016.D~~	~~1.~~	~~2.5PPM TUNE STD | SVM27-31A~~		~~26 Oct 2008 19:1~~
17	17	1024F017.D	1.	3.0PPM CCV SVO_LL | SVM27-34C		26 Oct 2008 19:4
18	18	1024F018.D	1.	KWG0810863-5 | MB		26 Oct 2008 20:0
19	19	1024F019.D	1.	KWG0810863-3 | LCS		26 Oct 2008 20:3
20	20	1024F020.D	1.	KWG0810863-4 | DLCS		26 Oct 2008 20:5
21	21	1024F021.D	1.	K0809092-005RX		26 Oct 2008 21:2
22	22	1024F022.D	1.	K0809092-006RX		26 Oct 2008 21:5
23	23	1024F023.D	1.	K0809092-007RX		26 Oct 2008 22:1
24	24	1024F024.D	1.	K0809092-008RX		26 Oct 2008 22:4
25	25	1024F025.D	1.	K0809092-011RX		26 Oct 2008 23:0
26	26	1024F026.D	1.	K0809092-012RX		26 Oct 2008 23:3
27	27	1024F027.D	1.	K0809092-013RX		27 Oct 2008 00:0
28	28	1024F028.D	1.	K0809092-014RX		27 Oct 2008 00:2
29	29	1024F029.D	1.	K0809092-015RX		27 Oct 2008 00:5
30	30	1024F030.D	1.	K0809096-001RX		27 Oct 2008 01:1
31	31	1024F031.D	1.	K0809096-002RX		27 Oct 2008 01:4
32	32	1024F032.D	1.	K0809096-003RX		27 Oct 2008 02:1
33	33	1024F033.D	1.	K0809096-006RX		27 Oct 2008 02:3
34	34	1024F034.D	1.	K0809096-007RX		27 Oct 2008 03:0
35	35	1024F035.D	1.	K0809096-008RX		27 Oct 2008 03:2
36	36	1024F036.D	1.	K0810009-001MS		27 Oct 2008 03:5
37	37	1024F037.D	1.	K0810009-001DMS		27 Oct 2008 04:1
38	38	1024F038.D	1.	K0810009-001		27 Oct 2008 04:4
39	39	1024F039.D	1.	K0810009-002		27 Oct 2008 05:1
40	40	1024F040.D	1.	K0810009-003		27 Oct 2008 05:3
41	41	1024F041.D	1.	IB		27 Oct 2008 06:0
42	41	1024F042.D	1.	IB		27 Oct 2008 06:2
~~43~~	~~41~~	~~1024F043.D~~	~~1.~~	~~IB~~		~~27 Oct 2008 06:5~~

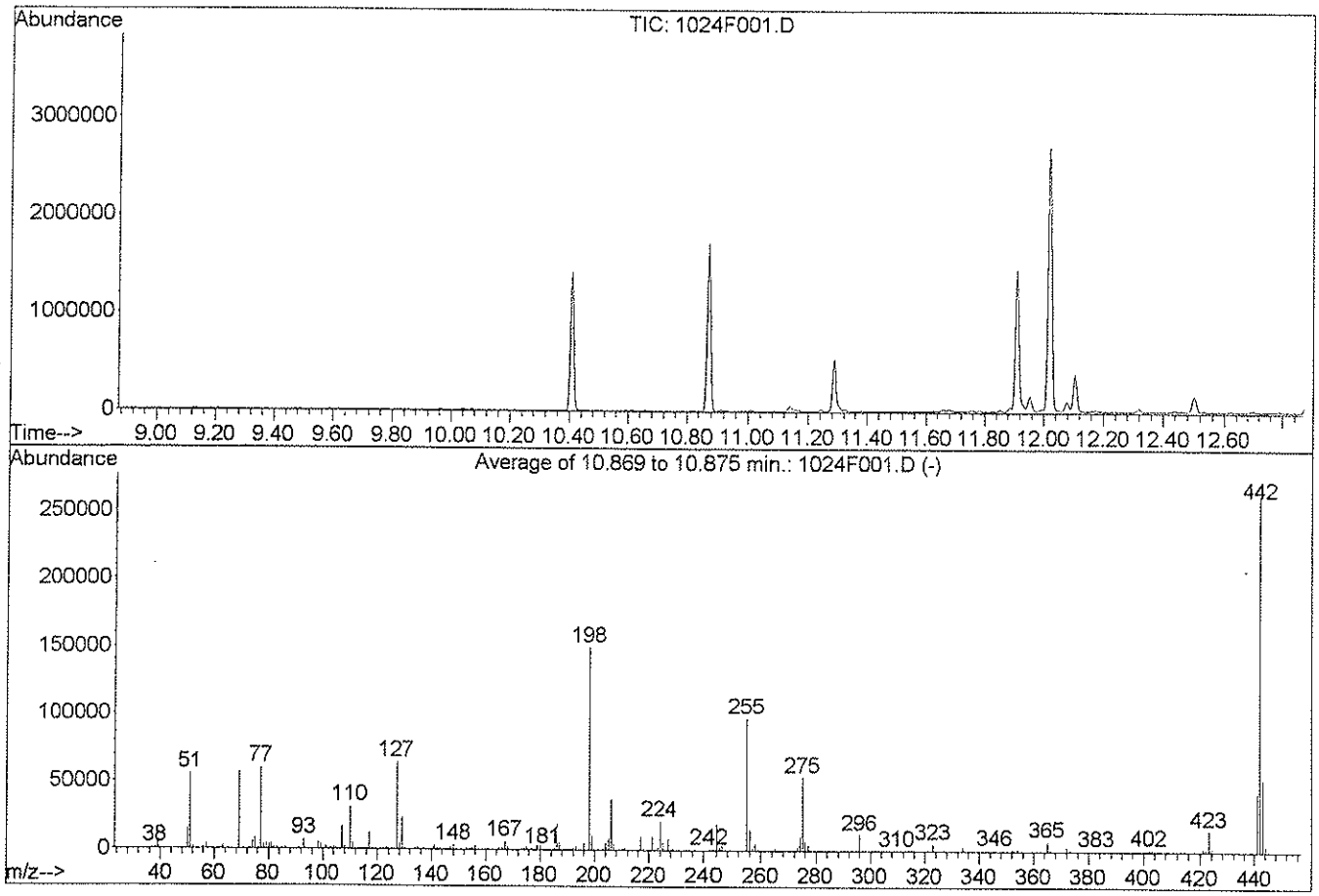
CAL7891 10.29.8

LB 10127108

DFTPP

Data File : J:\MS17\DATA\102608\1024F001.D
Acq On : 26 Oct 2008 12:47 pm
Sample : 2.5PPM TUNE STD | SVM27-31A
Misc :
MS Integration Params: LSCINT.P
Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL

Vial: 1
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00



AutoFind: Scans 2248, 2249, 2250; Background Corrected with Scan 2241

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	37.0	55461	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	37.6	56418	PASS
70	69	0.00	2	0.7	386	PASS
127	198	10	80	42.7	64024	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	56.7	149869	PASS
199	198	5	9	7.0	10419	PASS
275	198	10	60	36.1	54053	PASS
365	442	1	50	2.7	7097	PASS
441	443	0.01	100	81.2	43333	PASS
442	442	30	100	100.0	264234	PASS
443	442	15	24	20.2	53384	PASS

1024F001.D 102608SVOLL.M Mon Oct 27 08:40:07 2008

LB 10/27/08

Average of 10.869 to 10.875 min.: 1024F001.D
2.5PPM TUNE STD | SVM27-31A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.00	386	57.05	3837	76.10	993	86.05	1221
38.10	1049	60.95	481	77.10	59957	87.00	193
39.10	4729	62.00	548	78.15	4077	91.05	1228
39.90	167	63.05	2448	79.05	4194	91.95	1127
40.95	339	65.05	1016	80.05	3101	93.00	7188
43.90	429	69.00	56418	81.10	4402	93.95	663
50.10	14563	70.05	386	81.95	1242	95.00	208
51.10	55461	73.00	650	83.10	1298	96.10	405
52.10	2755	73.20	342	83.95	712	97.00	221
55.30	265	74.05	5691	84.90	310	97.20	194
56.00	1684	75.10	8483	85.10	572	98.00	5030

Average of 10.869 to 10.875 min.: 1024F001.D
2.5PPM TUNE STD | SVM27-31A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
99.05	3687	111.00	4685	128.05	4573	142.95	803
99.90	177	112.00	416	129.00	24000	145.95	508
100.30	180	115.95	823	130.00	2164	146.95	1983
101.05	2183	116.20	533	130.85	375	148.05	3594
103.00	1283	117.05	12712	133.95	849	148.90	842
104.00	1796	117.95	680	134.95	1946	151.00	219
104.95	1414	122.00	1198	135.85	418	151.30	281
106.10	296	123.05	1804	136.10	228	152.00	206
107.05	16739	123.95	1068	137.05	1163	152.95	1129
108.00	2611	125.00	665	141.00	3353	153.85	508
110.05	31490	127.05	64024	141.95	1355	154.95	1486

Average of 10.869 to 10.875 min.: 1024F001.D
2.5PPM TUNE STD | SVM27-31A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
156.00	2853	168.00	2739	179.00	4444	193.05	2478
157.05	637	169.00	210	180.05	3241	193.95	369
157.90	226	170.90	203	181.00	928	196.05	5360
159.00	279	171.95	685	185.05	1646	198.00	149869
159.75	625	173.05	986	186.05	18459	198.95	10419
160.30	369	174.05	1285	187.05	5352	199.90	818
161.00	1296	175.05	2633	188.10	253	201.30	256
161.70	175	175.80	375	188.30	233	201.55	734
164.85	1301	176.10	792	188.95	1043	203.00	1060
166.05	1322	176.90	1269	191.15	1065	204.00	5163
167.05	6326	178.10	177	192.00	1559	205.10	8617

Average of 10.869 to 10.875 min.: 1024F001.D
2.5PPM TUNE STD | SVM27-31A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
206.10	37741	221.05	10169	234.10	218	248.85	774
207.00	4817	223.05	2617	234.95	728	252.90	247
208.00	601	224.05	21293	236.95	750	253.30	231
209.05	469	225.05	5725	239.00	233	253.60	209
210.05	812	226.10	365	240.90	295	255.00	97400
210.30	437	227.00	8468	241.95	1259	256.05	14701
210.95	1746	228.05	1202	243.00	1112	257.05	1402
211.40	268	229.00	1747	244.05	19077	258.00	5065
215.90	477	230.90	533	245.05	2356	259.00	942
217.00	10056	231.10	183	246.00	3455	265.00	2130
217.90	1057	233.85	548	247.00	514	265.85	376

LB 10.29.08
10/27/08

Average of 10.869 to 10.875 min.: 1024F001.D
2.5PPM TUNE STD | SVM27-31A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
273.05	3032	296.00	11998	322.95	5491	341.00	470
274.00	9921	296.90	636	323.95	768	345.85	1145
275.00	54053	297.05	1213	326.95	987	351.90	588
276.00	7366	302.15	357	327.90	301	352.05	1057
276.95	4203	302.90	1710	328.10	204	352.95	1032
277.90	649	304.00	303	331.90	196	354.05	1966
281.10	168	309.80	170	332.10	185	365.00	7097
282.95	365	313.95	774	333.00	187	365.95	1292
284.95	433	314.95	1550	334.05	3441	370.90	187
285.20	260	316.05	1056	334.85	663	372.00	3322
292.90	780	320.90	396	335.10	411	373.05	1035

Average of 10.869 to 10.875 min.: 1024F001.D
2.5PPM TUNE STD | SVM27-31A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
382.85	849	439.25	351				
390.00	281	441.10	43333				
401.95	1702	442.10	264234				
402.90	680	443.10	53384				
403.05	1527	444.10	4604				
403.80	552						
404.00	336						
421.05	1790						
422.05	1378						
423.10	15550						
424.05	2903						

10.29.8

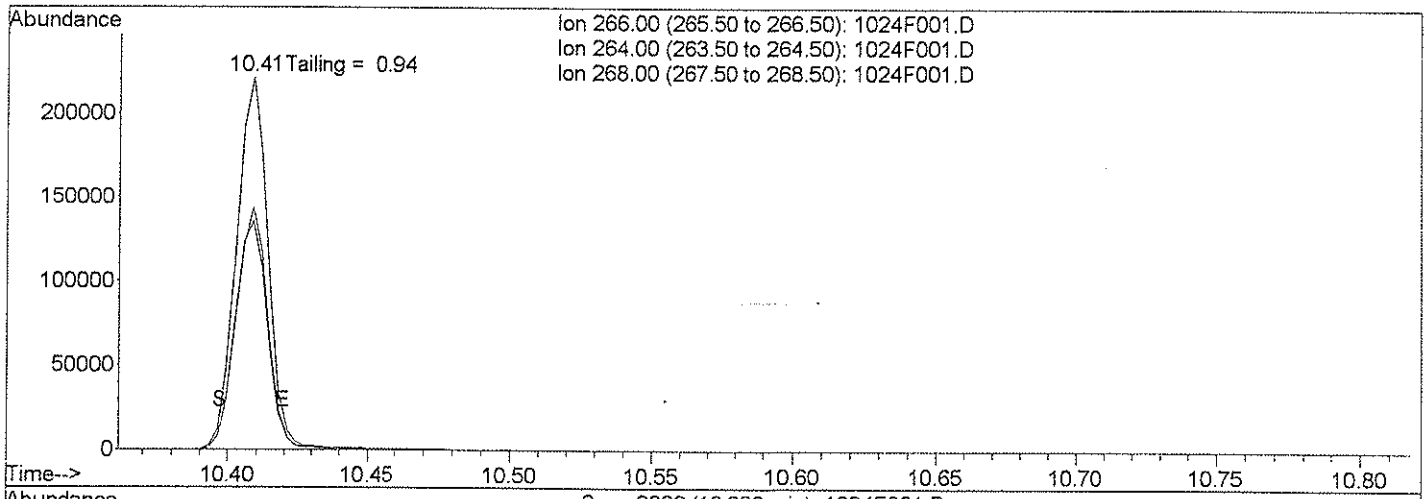
LB
10/27/08

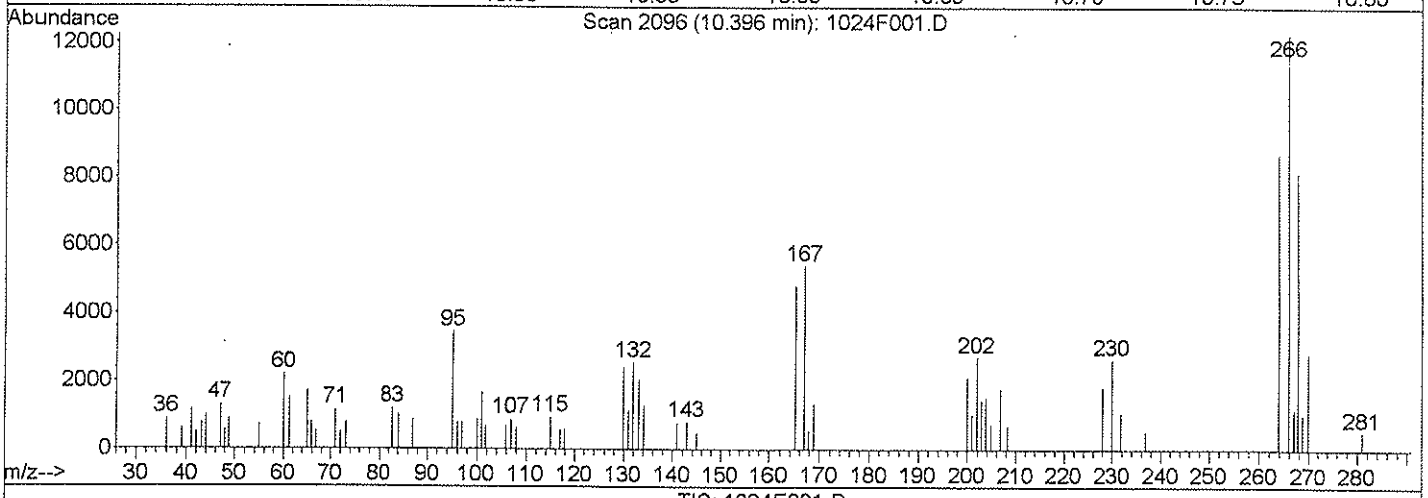
Quantitation Report

Data File : J:\MS17\DATA\102608\1024F001.D
Acq On : 26 Oct 2008 12:47 pm
Sample : 2.5PPM TUNE STD | SVM27-31A
Misc :
MS Integration Params: LSCINT.P

Vial: 1
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Sun Oct 26 16:53:18 2008
Response via : Initial Calibration





TIC: 1024F001.D

(64) Pentachlorophenol

Exp R.T. 10.40min

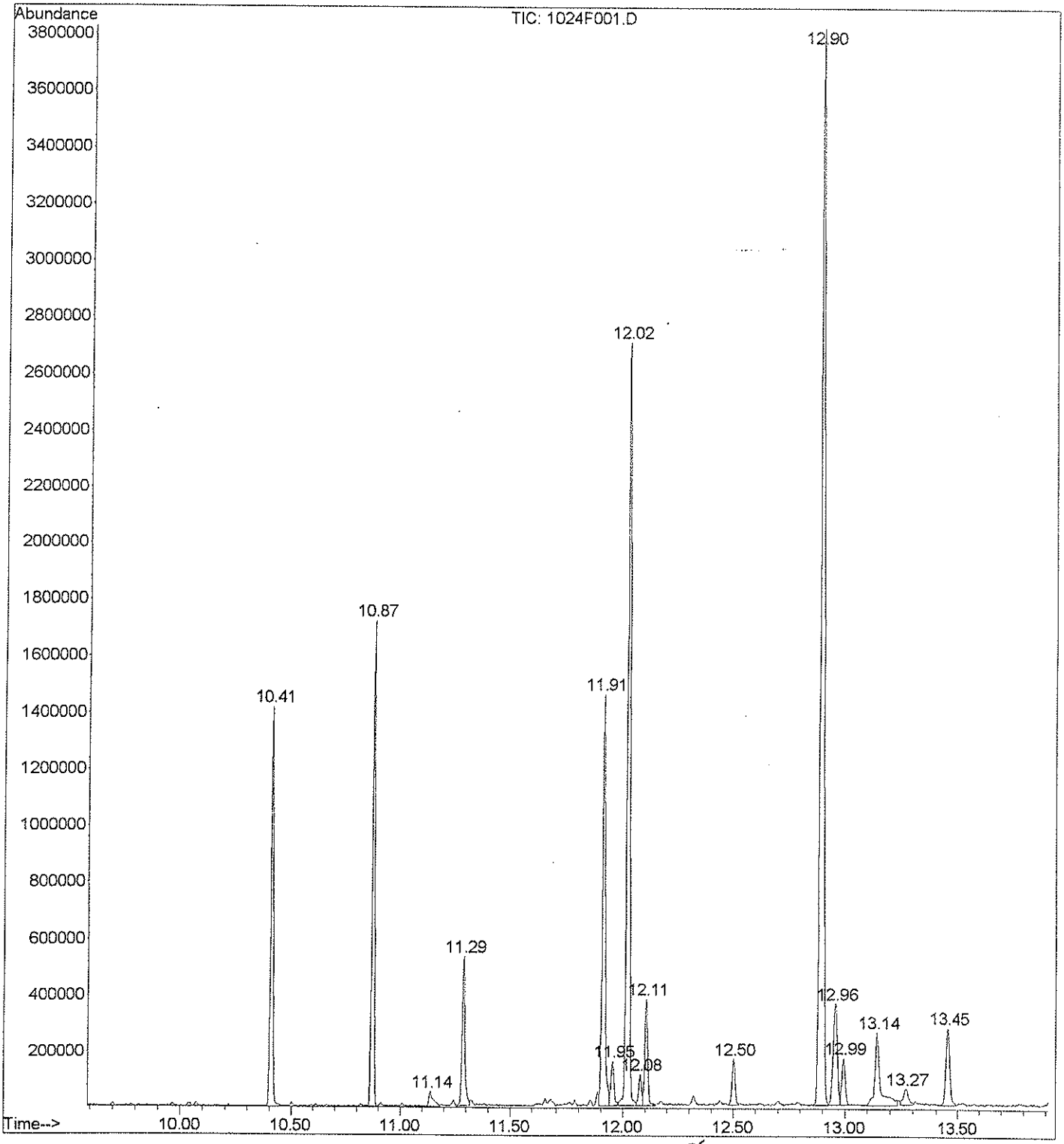
response 0

Ion	Exp%	Act%
266.00	100	100
264.00	59.50	71.15
268.00	66.30	66.63
0.00	0.00	0.00

KB
10/27/08
10.28.8

1024F001.D 102608SVOLL.M Mon Oct 27 08:40:32 2008

File : J:\MS17\DATA\102608\1024F001.D
Operator : KBAILEY
Acquired : 26 Oct 2008 12:47 pm using AcqMethod 8270LL
Instrument : MS17
Sample Name: 2.5PPM TUNE STD | SVM27-31A
Misc Info :
Vial Number: 1



10-29-8

LB
10127108

1	10.409	rBV	0.072		1113633	10.384	10.455
2	10.872	rVB	0.044		1258836	10.850	10.893
3	11.139	rBV	0.065		77846	11.117	11.182
4	11.288	rVV	0.059		464076	11.257	11.316
5	11.910	rVV	0.047		1308443	11.891	11.938
6	11.953	rVV	0.037		159725	11.938	11.975
7	12.022	rVV	0.078		2529922	11.981	12.059
8	12.078	rVV	0.031		108107	12.059	12.090
9	12.106	rVV	0.059		355048	12.090	12.149
10	12.500	rBV	0.050		163150	12.475	12.525
11	12.895	rBV	0.068	DDT	4143404	12.858	12.926
12	12.957	rVV	0.053		468919	12.926	12.979
13	12.994	rVB	0.044		174800	12.979	13.022
14	13.144	rBV	0.134		459787	13.100	13.234
15	13.268	rVV	0.056		89281	13.246	13.302
16	13.454	rVV	0.071		349588	13.423	13.495
17	13.989	rBV	0.068		382709	13.955	14.023
18	14.564	rBV	0.071		300871	14.530	14.601
19	15.173	rBV	0.078		332138	15.133	15.211
20	15.671	rVB	0.050		58248	15.649	15.699
21	15.742	rBV	0.062		238627	15.714	15.776
22	16.183	rVV	0.056		259421	16.162	16.218
23	16.550	rBV	0.050		208943	16.532	16.581
24	16.612	rVV	0.050		60269	16.597	16.647
25	16.811	rBV	0.065		98305	16.796	16.861
26	16.883	rBV	0.087		272077	16.861	16.948
27	17.178	rBV	0.044		129820	17.159	17.203
28	17.225	rBV	0.093		217962	17.206	17.299
29	17.405	rBV	0.065		1030694	17.374	17.439
30	17.461	rVB	0.093		378381	17.442	17.535

Breakdown ~ 20%

LB

10/27/08

10.298

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F002.D
Acq On : 26 Oct 2008 1:13 pm
Sample : IB
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 09:31:07 2008

Vial: 2
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:16:23 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.41	152	76447	1000.00	ng/ml	0.00
22) Naphthalene-d8	7.54	136	294114	1000.00	ng/ml	0.00
36) Acenaphthene-d10	9.18	164	176171	1000.00	ng/ml	0.00
60) Phenanthrene-d10	10.59	188	289264	1000.00	ng/ml	0.00
70) Chrysene-d12	13.54	240	359104	1000.00	ng/ml	0.00
79) Perylene-d12	15.88	264	365323	1000.00	ng/ml	0.00

System Monitoring Compounds						
4) 2-Fluorophenol	0.00	112	0	0.00	ng/ml	
Spiked Amount 3750.000	Range 25 - 121		Recovery = 0.00%#			
7) Phenol-d6	0.00	99	0	0.00	ng/ml	
Spiked Amount 3750.000	Range 24 - 113		Recovery = 0.00%#			
20) Nitrobenzene-d5	0.00	82	0	0.00	ng/ml	
Spiked Amount 2500.000	Range 23 - 120		Recovery = 0.00%#			
40) 2-Fluorobiphenyl	0.00	172	0	0.00	ng/ml	
Spiked Amount 2500.000	Range 30 - 115		Recovery = 0.00%#			
61) 2,4,6-Tribromophenol	0.00	330	0	0.00	ug/ml	
Spiked Amount 3750.000	Range 19 - 122		Recovery = 0.00%#			
73) Terphenyl-d14	12.17	244	4177	12.93	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 140		Recovery = 0.52%#			

Target Compounds						Qvalue
65) Phenanthrene	10.61	178	2235	5.99	ng/ml	80
66) Anthracene	10.66	178	2106	5.50	ng/ml	88
67) Carbazole	10.83	167	2389	6.79	ng/ml	60
68) Di-n-butyl Phthalate	11.16	149	2646	6.49	ng/ml	79
69) Fluoranthene	11.75	202	3846	8.96	ng/ml	94
72) Pyrene	11.99	202	4107	9.48	ng/ml	95
76) Benz(a)anthracene	13.53	228	3555	8.02	ng/ml	53
77) Chrysene	13.58	228	2888	6.96	ng/ml	95
81) Benzo(b)fluoranthene	15.30	252	2421	5.67	ng/ml	59
82) Benzo(k)fluoranthene	15.35	252	2523	5.85	ng/ml	60
83) Benzo(a)pyrene	15.80	252	2448	6.24	ng/ml#	53
84) Indeno(1,2,3-cd)pyrene	17.00	276	3138	6.96	ng/ml	86
85) Dibenz(a,h)anthracene	17.03	278	2938	6.22	ng/ml	94
86) Benzo(g,h,i)perylene	17.26	276	3563	7.64	ng/ml	80

10.27.8

LB 10/27/08

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

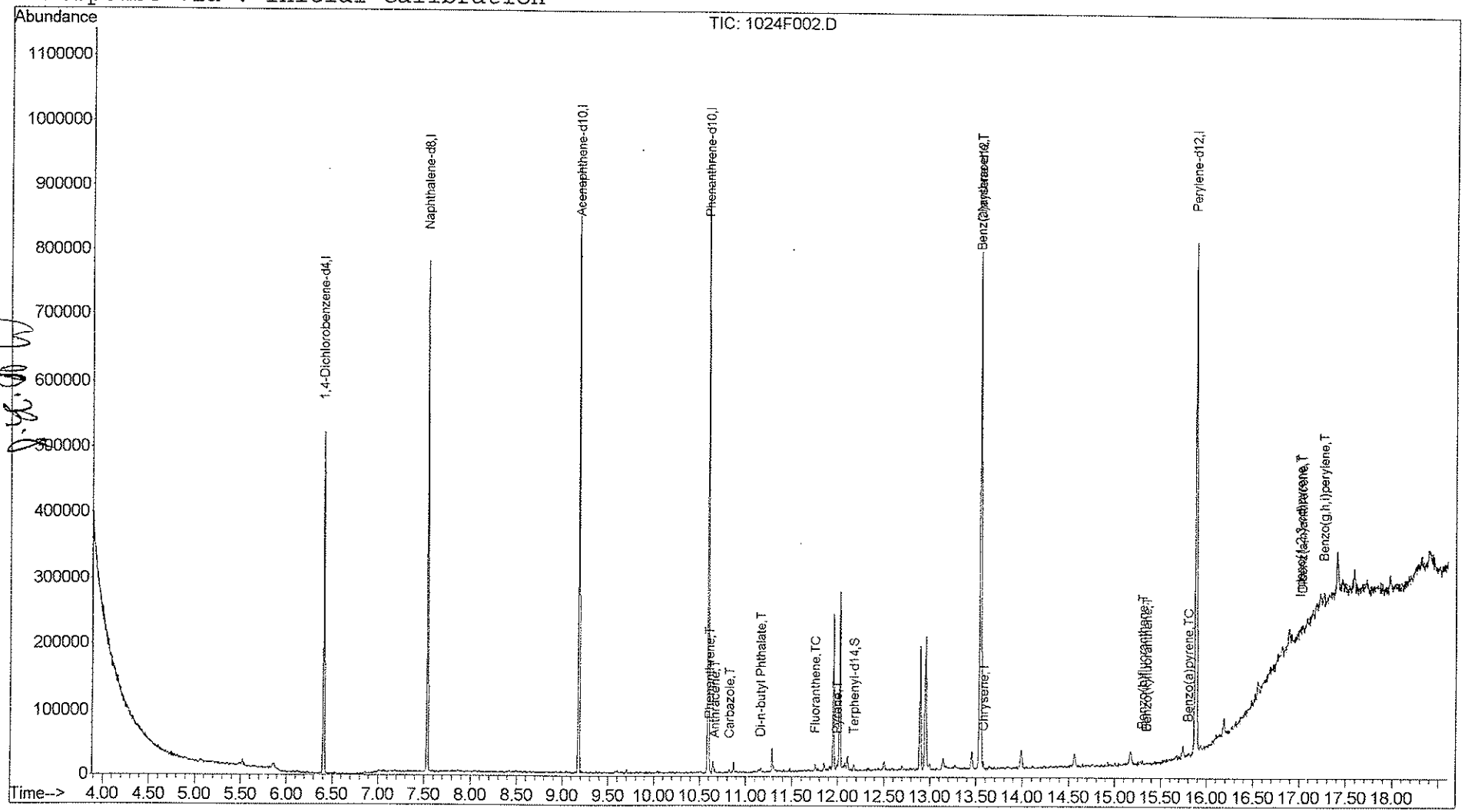
Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F002.D
Acq On : 26 Oct 2008 1:13 pm
Sample : IB
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 9:32 2008

Vial: 2
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:16:23 2008
Response via : Initial Calibration



658

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F003.D Vial: 3
Acq On : 26 Oct 2008 1:38 pm Operator: KBAILEY
Sample : 0.05PPM ICAL SVO_LL | SVM27-33C Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:48 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.41	152	74346	1000.00	ng/ml	0.00
22) Naphthalene-d8	7.54	136	281449	1000.00	ng/ml	0.00
36) Acenaphthene-d10	9.18	164	159867	1000.00	ng/ml	0.00
60) Phenanthrene-d10	10.59	188	273492	1000.00	ng/ml	0.00
70) Chrysene-d12	13.54	240	336911	1000.00	ng/ml	0.00
79) Perylene-d12	15.88	264	378516	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	5.35	112	4370	51.01	ng/ml	0.03
Spiked Amount 3750.000	Range 25 - 121		Recovery = 1.36%#			
7) Phenol-d6	6.09	99	5693	48.46	ng/ml	0.02
Spiked Amount 3750.000	Range 24 - 113		Recovery = 1.29%#			
20) Nitrobenzene-d5	6.89	82	4646	48.67	ng/ml	0.00
Spiked Amount 2500.000	Range 23 - 120		Recovery = 1.95%#			
40) 2-Fluorobiphenyl	8.54	172	13723	56.38	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 115		Recovery = 2.26%#			
61) 2,4,6-Tribromophenol	9.93	330	2650	51.34	ug/ml	0.00
Spiked Amount 3750.000	Range 19 - 122		Recovery = 1.37%#			
73) Terphenyl-d14	12.17	244	17857	60.30	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 140		Recovery = 2.41%#			
Target Compounds						Qvalue
5) Aniline	6.15	93	7060	48.97	ng/ml	87
6) Bis(2-chloroethyl) Ether	6.19	93	4898	50.20	ng/ml	95
8) Phenol	6.10	94	5877	49.22	ng/ml	96
9) 2-Chlorophenol	6.23	128	5395	52.31	ng/ml	98
10) 1,3-Dichlorobenzene	6.36	146	6014	48.51	ng/ml	97
11) 1,4-Dichlorobenzene	6.42	146	6296	50.62	ng/ml	91
12) 1,2-Dichlorobenzene	6.55	146	6151	51.56	ng/ml	95
13) Benzyl Alcohol	6.54	108	2770	46.90	ng/ml	98
14) Bis(2-chloroisopropyl) Eth	6.64	45	7059	49.75	ng/ml	86
15) 2-Methylphenol	6.62	107	4524	54.35	ng/ml	89
16) Hexachloroethane	6.84	117	2175	53.63	ng/ml	82
17) Acetophenone	6.76	105	7190	52.37	ng/ml	92
18) N-Nitrosodi-n-propylamine	6.76	70	3811	55.09	ng/ml	87
19) 4-Methylphenol	6.75	107	6053	50.39	ng/ml	93
21) Nitrobenzene	6.91	77	5157	50.54	ng/ml	96
23) Isophorone	7.13	82	10045	56.65	ng/ml	93
24) 2-Nitrophenol	7.19	139	2770	51.26	ng/ml	84
25) 2,4-Dimethylphenol	7.23	122	4886	54.07	ng/ml	98
26) Bis(2-chloroethoxy)methane	7.32	93	5650	51.15	ng/ml	90
27) 2,4-Dichlorophenol	7.40	162	4374	50.25	ng/ml	96

(#) = qualifier out of range (m) = manual integration
1024F003.D 102608SVOLL.M Mon Oct 27 09:07:39 2008 Page 1

10.29.8
10/27/08

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F003.D Vial: 3
Acq On : 26 Oct 2008 1:38 pm Operator: KBAILEY
Sample : 0.05PPM ICAL SVO_LL | SVM27-33C Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:48 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	1,2,4-Trichlorobenzene	7.48	180	5503	52.18	ng/ml	91
30)	Naphthalene	7.56	128	15921	50.77	ng/ml	96
31)	4-Chloroaniline	7.61	127	6174	49.41	ng/ml	92
32)	Hexachlorobutadiene	7.66	225	3506	53.54	ng/ml	92
33)	4-Chloro-3-methylphenol	8.05	107	4139	50.34	ng/ml	92
34)	2-Methylnaphthalene	8.20	142	11107	52.62	ng/ml	98
35)	1-Methylnaphthalene	8.29	142	10443	52.33	ng/ml	86
37)	Hexachlorocyclopentadiene	8.34	237	3068	40.67	ng/ml	74
38)	2,4,6-Trichlorophenol	8.46	196	3901	61.64	ng/ml	78
39)	2,4,5-Trichlorophenol	8.49	196	3873	53.74	ng/ml	87
41)	2-Chloronaphthalene	8.65	162	10645	51.59	ng/ml	96
42)	2-Nitroaniline	8.76	65	2362	99.30	ng/ml	97
43)	Acenaphthylene	9.04	152	16755	54.20	ng/ml	94
44)	Dimethyl Phthalate	8.93	163	12048	53.67	ng/ml	98
45)	2,6-Dinitrotoluene	8.99	165	2430	94.63	ng/ml	84
46)	Acenaphthene	9.21	154	10243	53.19	ng/ml	99
47)	3-Nitroaniline	9.14	138	1944	35.71	ng/ml	84
49)	Dibenzofuran	9.37	168	15822	51.77	ng/ml	92
50)	4-Nitrophenol	9.31	65	1320	34.20	ng/ml	87
51)	2,4-Dinitrotoluene	9.36	165	2928	84.27	ng/ml	95
52)	2,3,4,6-Tetrachlorophenol	9.49	232	3480	53.69	ng/ml	100
53)	Fluorene	9.70	166	12779	53.43	ng/ml	99
54)	4-Chlorophenyl Phenyl Ethe	9.70	204	6747	52.77	ng/ml	92
55)	Diethyl Phthalate	9.60	149	11539	54.58	ng/ml	95
56)	4-Nitroaniline	9.72	138	2066	37.60	ng/ml	78
58)	N-Nitrosodiphenylamine	9.81	169	9055	54.76	ng/ml	93
59)	Azobenzene	9.85	77	9518	46.99	ng/ml	91
62)	4-Bromophenyl Phenyl Ether	10.17	248	4609	55.26	ng/ml	93
63)	Hexachlorobenzene	10.21	284	5381	53.28	ng/ml	92
64)	Pentachlorophenol	10.41	266	2789	46.01	ng/ml	92
65)	Phenanthrene	10.61	178	18907	52.85	ng/ml	97
66)	Anthracene	10.66	178	18410	51.82	ng/ml	96
67)	Carbazole	10.82	167	17560	54.34	ng/ml	97
68)	Di-n-butyl Phthalate	11.16	149	22381	65.89	ng/ml	96
69)	Fluoranthene	11.76	202	21615	55.47	ng/ml	96
71)	Benzidine	11.91	184	5534	23.93	ng/ml	84
72)	Pyrene	11.99	202	22233	54.70	ng/ml	97
74)	Butyl Benzyl Phthalate	12.78	149	7942	110.27	ng/ml	97
75)	3,3'-Dichlorobenzidine	13.51	252	7027	43.21	ng/ml	98
76)	Benz(a)anthracene	13.53	228	23653	60.74	ng/ml	97
77)	Chrysene	13.58	228	21423	54.53	ng/ml	93

(#) = qualifier out of range (m) = manual integration
1024F003.D 102608SVOLL.M Mon Oct 27 09:07:39 2008 Page 2

LB 10.29.8
10/27/08

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F003.D Vial: 3
Acq On : 26 Oct 2008 1:38 pm Operator: KBAILEY
Sample : 0.05PPM ICAL SVO_LL | SVM27-33C Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:48 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
78)	Bis(2-ethylhexyl) Phthalat	13.64	149	11205	54.13	ng/ml	97
80)	Di-n-octyl Phthalate	14.76	149	17258	393.16	ng/ml	95
81)	Benzo(b)fluoranthene	15.29	252	23419	54.90	ng/ml	96
82)	Benzo(k)fluoranthene	15.35	252	23863	53.83	ng/ml	93
83)	Benzo(a)pyrene	15.80	252	21478	102.69	ng/ml	97
84)	Indeno(1,2,3-cd)pyrene	17.00	276	26206m	63.09	ng/ml	
85)	Dibenz(a,h)anthracene	17.03	278	27378	60.30	ng/ml	93
86)	Benzo(g,h,i)perylene	17.26	276	27100	58.88	ng/ml	97

10.28.8

(#) = qualifier out of range (m) = manual integration
1024F003.D 102608SVOLL.M Mon Oct 27 09:07:39 2008 Page 3

KB 10/27/08

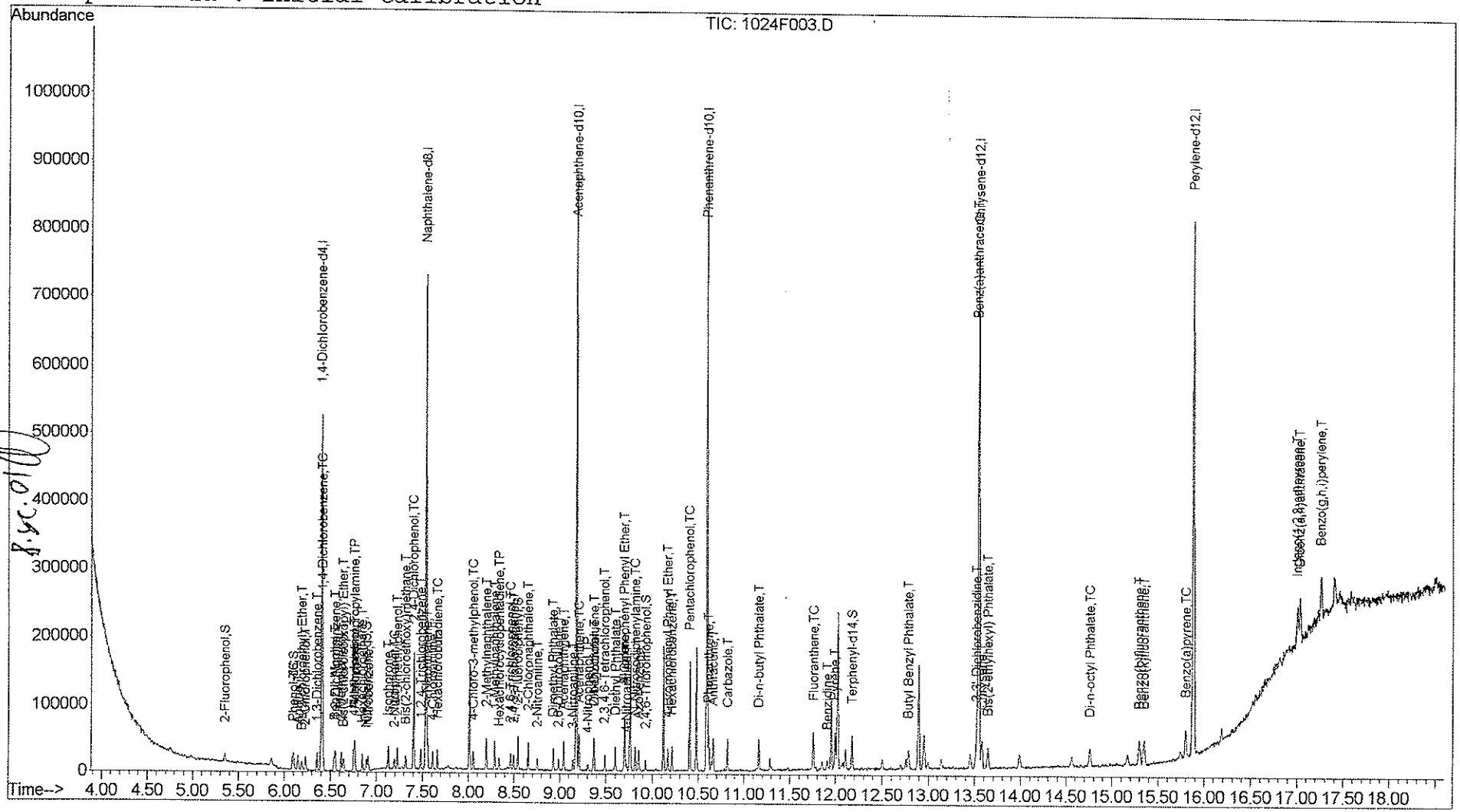
Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F003.D
Acq On : 26 Oct 2008 1:38 pm
Sample : 0.05PPM ICAL SVO_LL | SVM27-33C
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:42 2008

Vial: 3
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:00:27 2008
Response via : Initial Calibration



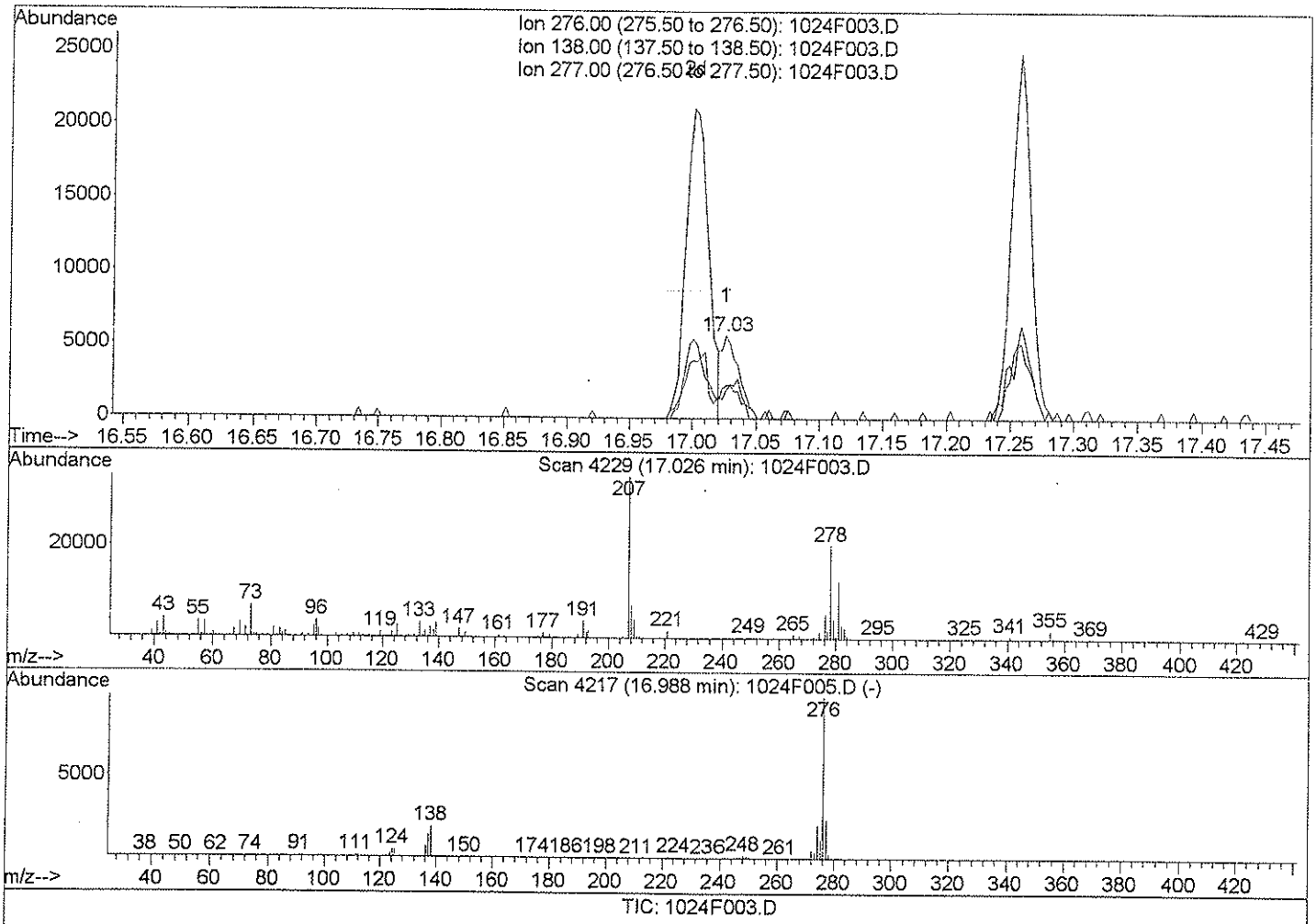
Quantitation Report (Qedit)

Data File : J:\MS17\DATA\102608\1024F003.D
Acq On : 26 Oct 2008 1:38 pm
Sample : 0.05PPM ICAL SVO_LL | SVM27-33C
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:41 2008

Vial: 3
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Multiple Level Calibration



TIC: 1024F003.D

(84) Indeno(1,2,3-cd)pyrene (T)

17.03min 12.93ng/ml

response 5370

Ion	Exp%	Act%
276.00	100	100
138.00	18.90	34.09
277.00	23.20	39.57
0.00	0.00	0.00

1024F003.D 102608SVOLL.M Mon Oct 27 08:42:06 2008

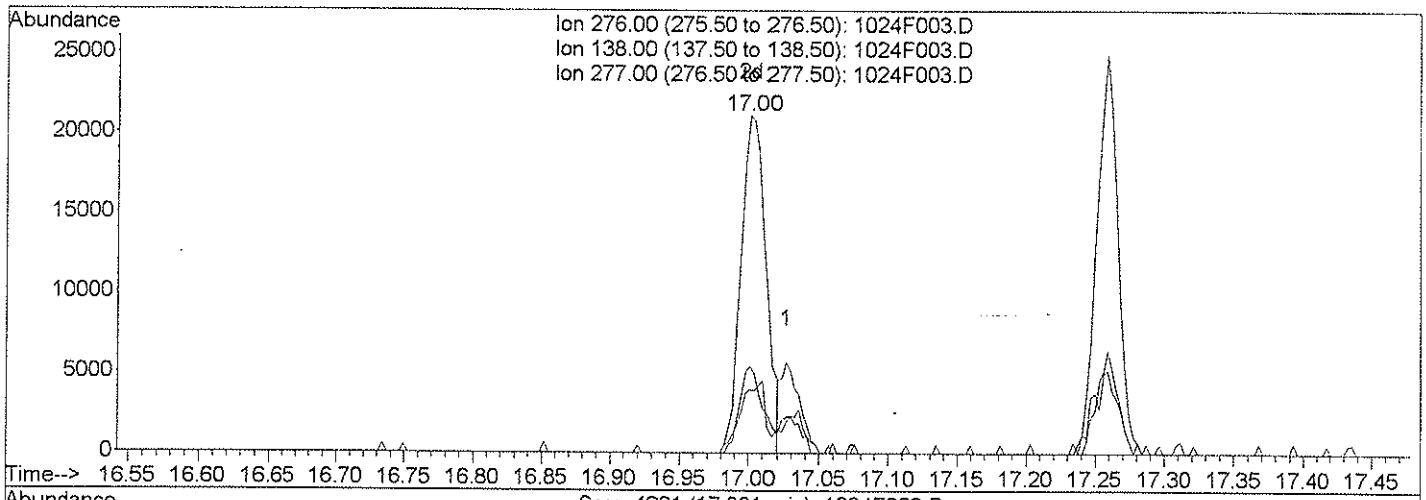
Quantitation Report (Qedit)

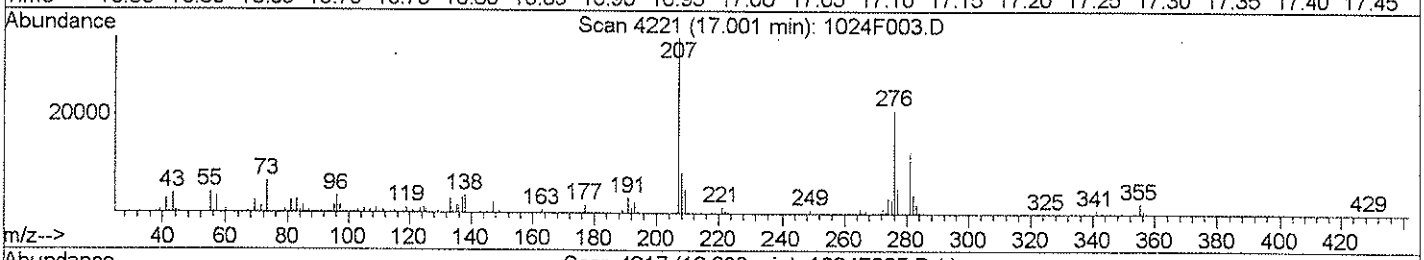
Data File : J:\MS17\DATA\102608\1024F003.D
Acq On : 26 Oct 2008 1:38 pm
Sample : 0.05PPM ICAL SVO_LL | SVM27-33C
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:42 2008

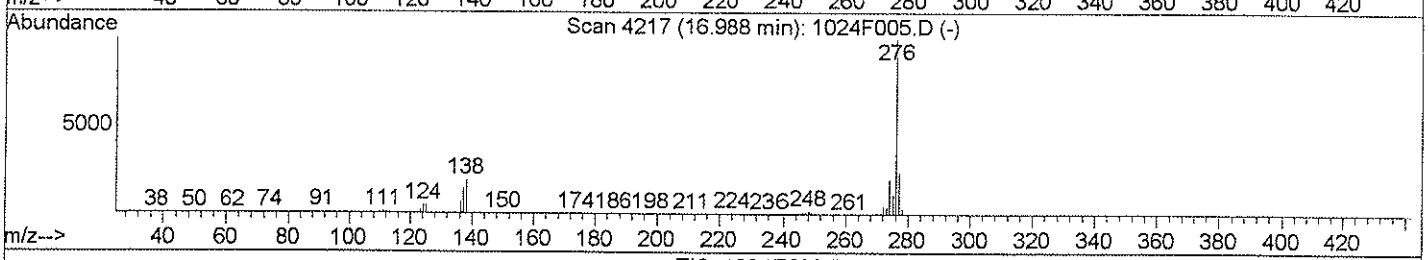
Vial: 3
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Multiple Level Calibration







TIC: 1024F003.D

(84) Indeno(1,2,3-cd)pyrene (T)

17.00min 63.09ng/ml m

response 26206

Ion	Exp%	Act%
276.00	100	100
138.00	18.90	18.76
277.00	23.20	25.63
0.00	0.00	0.00

WP 10.29.8

LB 10127108

1024F003.D 102608SVOLL.M Mon Oct 27 08:42:10 2008

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F004.D Vial: 4
Acq On : 26 Oct 2008 2:04 pm Operator: KBAILEY
Sample : 0.10PPM ICAL SVO_LL | SVM27-33D Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:49 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.41	152	75765	1000.00	ng/ml	0.00
22) Naphthalene-d8	7.54	136	284616	1000.00	ng/ml	0.00
36) Acenaphthene-d10	9.17	164	162485	1000.00	ng/ml	0.00
60) Phenanthrene-d10	10.59	188	278537	1000.00	ng/ml	0.00
70) Chrysene-d12	13.54	240	349924	1000.00	ng/ml	0.00
79) Perylene-d12	15.88	264	390404	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	5.35	112	8683	99.46	ng/ml	0.03
Spiked Amount 3750.000	Range 25 - 121		Recovery =	2.65%#		
7) Phenol-d6	6.09	99	11644	97.26	ng/ml	0.02
Spiked Amount 3750.000	Range 24 - 113		Recovery =	2.59%#		
20) Nitrobenzene-d5	6.89	82	9628	98.97	ng/ml	0.00
Spiked Amount 2500.000	Range 23 - 120		Recovery =	3.96%#		
40) 2-Fluorobiphenyl	8.54	172	24450	98.84	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 115		Recovery =	3.95%#		
61) 2,4,6-Tribromophenol	9.93	330	5474	104.14	ug/ml	0.00
Spiked Amount 3750.000	Range 19 - 122		Recovery =	2.78%#		
73) Terphenyl-d14	12.17	244	31377	102.01	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 140		Recovery =	4.08%#		
Target Compounds						Qvalue
5) Aniline	6.14	93	14598	99.35	ng/ml	98
6) Bis(2-chloroethyl) Ether	6.19	93	9556m	96.10	ng/ml	
8) Phenol	6.10	94	12452	102.34	ng/ml	97
9) 2-Chlorophenol	6.23	128	9792	93.17	ng/ml	91
10) 1,3-Dichlorobenzene	6.36	146	11941	94.51	ng/ml	91
11) 1,4-Dichlorobenzene	6.42	146	12644	99.75	ng/ml	92
12) 1,2-Dichlorobenzene	6.55	146	11516	94.71	ng/ml	94
13) Benzyl Alcohol	6.54	108	5791	96.22	ng/ml	94
14) Bis(2-chloroisopropyl) Eth	6.64	45	13486	93.26	ng/ml	96
15) 2-Methylphenol	6.61	107	7896	93.09	ng/ml	92
16) Hexachloroethane	6.84	117	3893	94.19	ng/ml	92
17) Acetophenone	6.76	105	14071	100.58	ng/ml	92
18) N-Nitrosodi-n-propylamine	6.76	70	7329	103.96	ng/ml	94
19) 4-Methylphenol	6.75	107	12081	98.68	ng/ml	93
21) Nitrobenzene	6.91	77	10202	98.10	ng/ml	98
23) Isophorone	7.12	82	18219	101.60	ng/ml	97
24) 2-Nitrophenol	7.19	139	5435	99.45	ng/ml	92
25) 2,4-Dimethylphenol	7.23	122	9222	100.91	ng/ml	95
26) Bis(2-chloroethoxy)methane	7.32	93	10733	96.09	ng/ml	98
27) 2,4-Dichlorophenol	7.41	162	8690	98.73	ng/ml	97

(#) = qualifier out of range (m) = manual integration
1024F004.D 102608SVOLL.M Mon Oct 27 09:07:41 2008 Page 1

KB 10/28/08
10/27/08

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F004.D Vial: 4
Acq On : 26 Oct 2008 2:04 pm Operator: KBAILEY
Sample : 0.10PPM ICAL SVO_LL | SVM27-33D Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:49 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
29)	1,2,4-Trichlorobenzene	7.48	180	10517	98.61	ng/ml	99
30)	Naphthalene	7.56	128	31057	97.93	ng/ml	98
31)	4-Chloroaniline	7.61	127	11978	94.80	ng/ml	98
32)	Hexachlorobutadiene	7.66	225	6501	98.17	ng/ml	93
33)	4-Chloro-3-methylphenol	8.06	107	8494	102.15	ng/ml	99
34)	2-Methylnaphthalene	8.20	142	21297	99.78	ng/ml	94
35)	1-Methylnaphthalene	8.29	142	19782	98.02	ng/ml	96
37)	Hexachlorocyclopentadiene	8.34	237	5820	75.90	ng/ml	88
38)	2,4,6-Trichlorophenol	8.46	196	6250	97.16	ng/ml	95
39)	2,4,5-Trichlorophenol	8.49	196	7276	99.33	ng/ml	88
41)	2-Chloronaphthalene	8.65	162	20770	99.03	ng/ml	95
42)	2-Nitroaniline	8.75	65	4820	145.16	ng/ml	84
43)	Acenaphthylene	9.04	152	31942	101.67	ng/ml	97
44)	Dimethyl Phthalate	8.93	163	23091	101.21	ng/ml	97
45)	2,6-Dinitrotoluene	8.99	165	4581	137.10	ng/ml	94
46)	Acenaphthene	9.21	154	18984	97.00	ng/ml	91
47)	3-Nitroaniline	9.14	138	4740	85.66	ng/ml	92
49)	Dibenzofuran	9.37	168	31436	101.21	ng/ml	97
50)	4-Nitrophenol	9.31	65	2811	71.66	ng/ml	80
51)	2,4-Dinitrotoluene	9.36	165	6178	131.38	ng/ml	94
52)	2,3,4,6-Tetrachlorophenol	9.49	232	6564	99.65	ng/ml#	92
53)	Fluorene	9.70	166	24162	99.40	ng/ml	93
54)	4-Chlorophenyl Phenyl Ethe	9.70	204	12324	94.84	ng/ml	94
55)	Diethyl Phthalate	9.60	149	21441	99.78	ng/ml	98
56)	4-Nitroaniline	9.72	138	3867	69.24	ng/ml	85
57)	2-Methyl-4,6-dinitrophenol	9.76	198	3816	Below Cal		68
58)	N-Nitrosodiphenylamine	9.81	169	17495	104.09	ng/ml	95
59)	Azobenzene	9.85	77	19286	93.69	ng/ml	95
62)	4-Bromophenyl Phenyl Ether	10.17	248	8331	98.07	ng/ml	88
63)	Hexachlorobenzene	10.21	284	11060	107.52	ng/ml	91
64)	Pentachlorophenol	10.41	266	3930	63.66	ng/ml	96
65)	Phenanthrene	10.61	178	36160	99.25	ng/ml	97
66)	Anthracene	10.66	178	35999	99.48	ng/ml	98
67)	Carbazole	10.82	167	34004	103.32	ng/ml	98
68)	Di-n-butyl Phthalate	11.16	149	41011	118.55	ng/ml	99
69)	Fluoranthene	11.75	202	40873	103.00	ng/ml	96
71)	Benzidine	11.90	184	14037	58.44	ng/ml	96
72)	Pyrene	11.99	202	42658	101.04	ng/ml	93
74)	Butyl Benzyl Phthalate	12.79	149	15052	153.31	ng/ml	95
75)	3,3'-Dichlorobenzidine	13.51	252	14697	87.01	ng/ml	94
76)	Benz(a)anthracene	13.53	228	42103	104.10	ng/ml	98

(#) = qualifier out of range (m) = manual integration
1024F004.D 102608SVOLL.M Mon Oct 27 09:07:41 2008 Page 2

LB 10/27/08 10/25/08

Data File : J:\MS17\DATA\102608\1024F004.D
Acq On : 26 Oct 2008 2:04 pm
Sample : 0.10PPM ICAL SVO_LL | SVM27-33D
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:49 2008

Vial: 4
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
77)	Chrysene	13.58	228	39515	96.84	ng/ml	97
78)	Bis(2-ethylhexyl) Phthalat	13.64	149	20990	97.64	ng/ml	95
80)	Di-n-octyl Phthalate	14.76	149	32585	428.07	ng/ml	95
81)	Benzo(b)fluoranthene	15.29	252	43745	99.42	ng/ml	98
82)	Benzo(k)fluoranthene	15.34	252	45288	99.04	ng/ml	100
83)	Benzo(a)pyrene	15.80	252	39575	145.84	ng/ml	92
84)	Indeno(1,2,3-cd)pyrene	17.00	276	48508	113.23	ng/ml	98
85)	Dibenz(a,h)anthracene	17.03	278	48667	103.92	ng/ml	96
86)	Benzo(g,h,i)perylene	17.26	276	48729	102.64	ng/ml	94

10.29.8

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

10/27/08

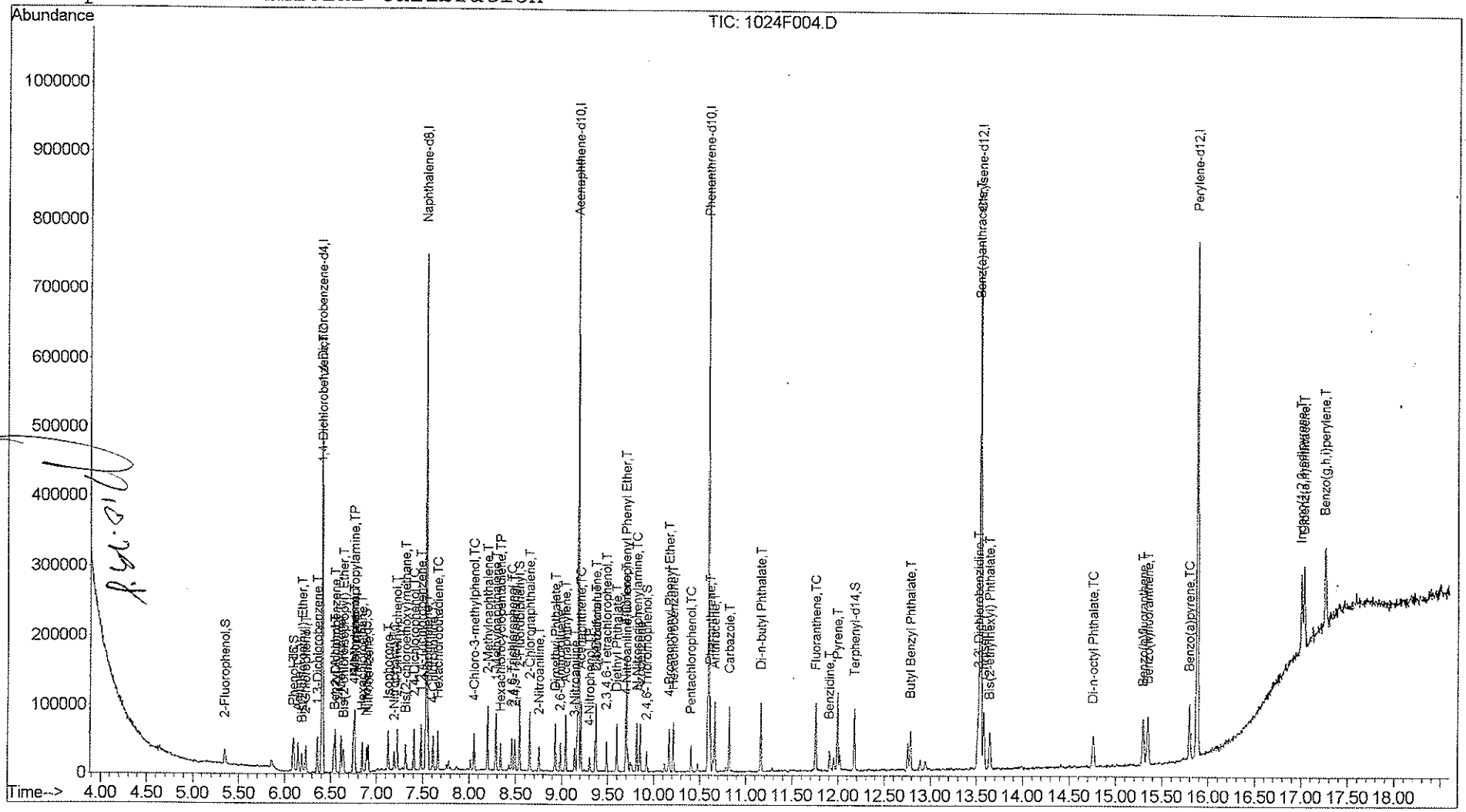
Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F004.D
Acq On : 26 Oct 2008 2:04 pm
Sample : 0.10PPM ICAL SVO_LL | SVM27-33D
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:42 2008

Vial: 4
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:00:27 2008
Response via : Initial Calibration



899

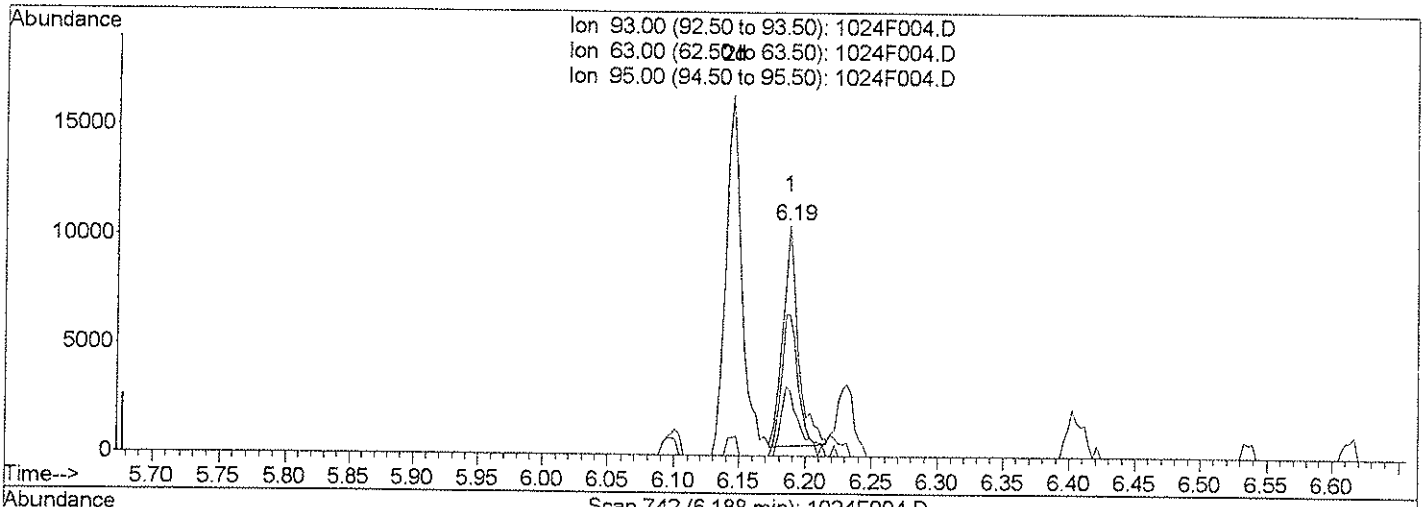
Quantitation Report (Qedit)

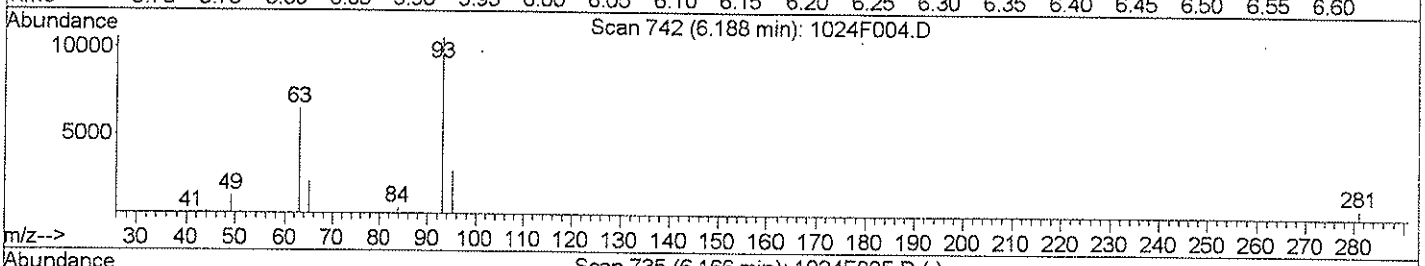
Data File : J:\MS17\DATA\102608\1024F004.D
Acq On : 26 Oct 2008 2:04 pm
Sample : 0.10PPM ICAL SVO_LL | SVM27-33D
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:42 2008

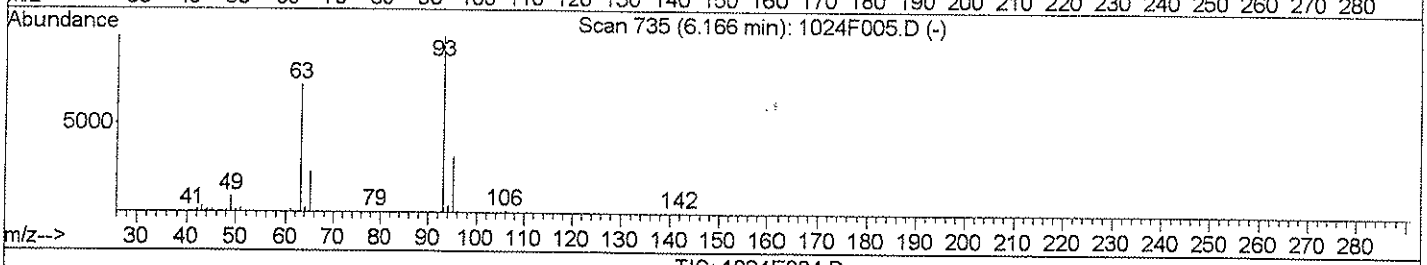
Vial: 4
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Multiple Level Calibration







TIC: 1024F004.D

(6) Bis(2-chloroethyl) Ether (T)

6.19min 85.23ng/ml

response 8475

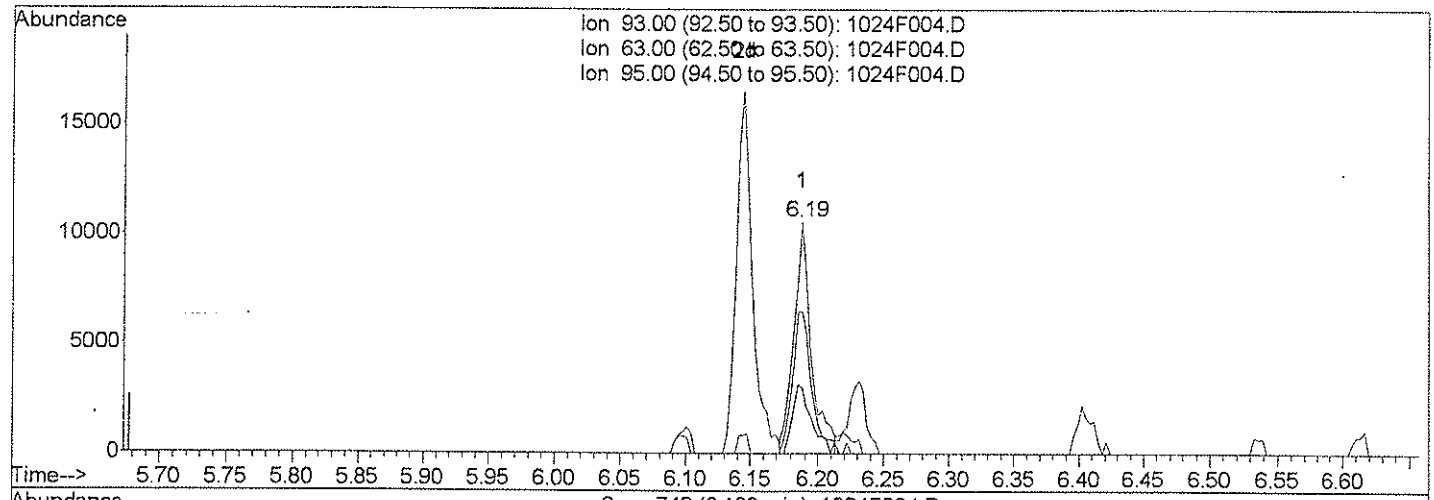
Ion	Exp%	Act%
93.00	100	100
63.00	70.40	64.50
95.00	32.00	29.81
0.00	0.00	0.00

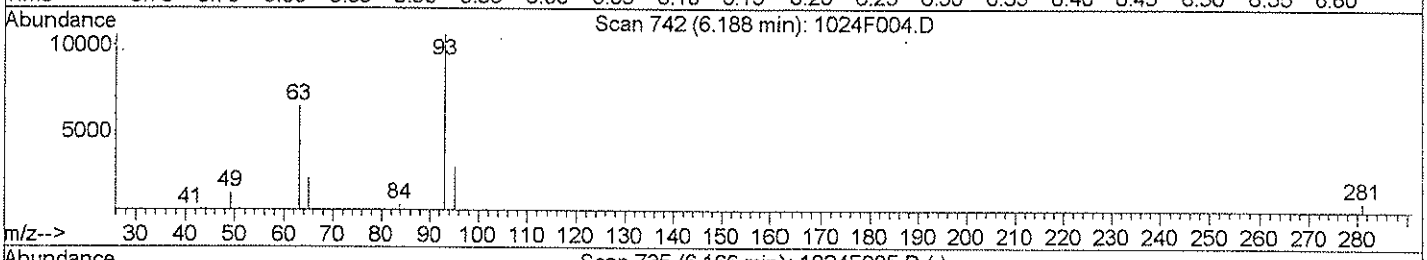
1024F004.D 102608SVOLL.M Mon Oct 27 08:42:28 2008

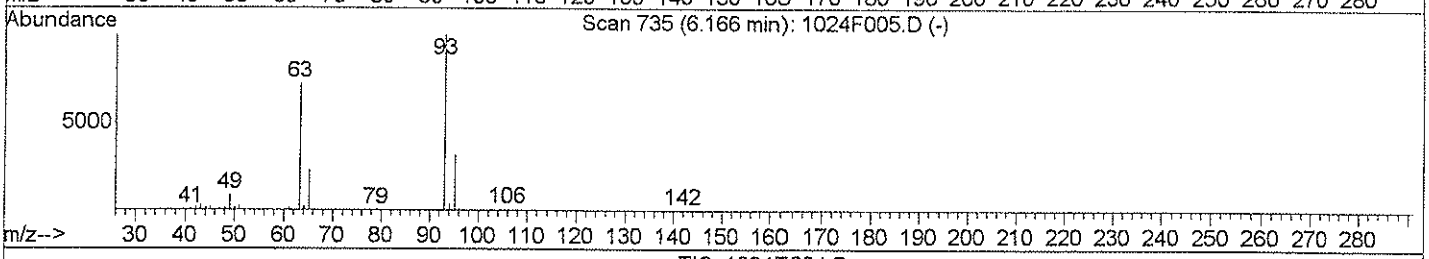
Quantitation Report (Qedit)

Data File : J:\MS17\DATA\102608\1024F004.D Vial: 4
Acq On : 26 Oct 2008 2:04 pm Operator: KBAILEY
Sample : 0.10PPM ICAL SVO_LL | SVM27-33D Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:42 2008 Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Multiple Level Calibration







TIC: 1024F004.D

(6) Bis(2-chloroethyl) Ether (T)

6.19min 96.10ng/ml m

response 9556

Ion	Exp%	Act%
93.00	100	100
63.00	70.40	61.27
95.00	32.00	28.32
0.00	0.00	0.00

BL 10.29.8

KB 10/27/08

1024F004.D 102608SVOLL.M Mon Oct 27 08:42:32 2008

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F005.D Vial: 5
Acq On : 26 Oct 2008 2:30 pm Operator: KBAILEY
Sample : 0.20PPM ICAL SVO_LL | SVM27-33E Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:50 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.41	152	76002	1000.00	ng/ml	0.00
22) Naphthalene-d8	7.54	136	282984	1000.00	ng/ml	0.00
36) Acenaphthene-d10	9.18	164	160202	1000.00	ng/ml	0.00
60) Phenanthrene-d10	10.59	188	277160	1000.00	ng/ml	0.00
70) Chrysene-d12	13.54	240	347585	1000.00	ng/ml	0.00
79) Perylene-d12	15.88	264	386742	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	5.34	112	17872	204.07	ng/ml	0.02
Spiked Amount 3750.000	Range 25 - 121		Recovery =	5.44%#		
7) Phenol-d6	6.09	99	23884	198.87	ng/ml	0.01
Spiked Amount 3750.000	Range 24 - 113		Recovery =	5.30%#		
20) Nitrobenzene-d5	6.89	82	18900	193.68	ng/ml	0.00
Spiked Amount 2500.000	Range 23 - 120		Recovery =	7.75%#		
40) 2-Fluorobiphenyl	8.54	172	50069	205.29	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 115		Recovery =	8.21%#		
61) 2,4,6-Tribromophenol	9.92	330	10649	203.59	ug/ml	0.00
Spiked Amount 3750.000	Range 19 - 122		Recovery =	5.43%#		
73) Terphenyl-d14	12.17	244	63110	206.56	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 140		Recovery =	8.26%#		
Target Compounds						Qvalue
3) Pyridine	4.60	79	19462	190.23	ng/ml	81
5) Aniline	6.14	93	29421	199.61	ng/ml	96
6) Bis(2-chloroethyl) Ether	6.18	93	18742m	187.89	ng/ml	
8) Phenol	6.10	94	24389	199.82	ng/ml	96
9) 2-Chlorophenol	6.23	128	20898	198.23	ng/ml	96
10) 1,3-Dichlorobenzene	6.36	146	24874	196.25	ng/ml	97
11) 1,4-Dichlorobenzene	6.42	146	24974	196.41	ng/ml	93
12) 1,2-Dichlorobenzene	6.55	146	25078	205.61	ng/ml	95
13) Benzyl Alcohol	6.53	108	12548	207.83	ng/ml	96
14) Bis(2-chloroisopropyl) Eth	6.64	45	28363	195.53	ng/ml	95
15) 2-Methylphenol	6.61	107	17650	207.43	ng/ml	97
16) Hexachloroethane	6.85	117	8405	202.72	ng/ml	94
17) Acetophenone	6.76	105	28228	201.14	ng/ml	88
18) N-Nitrosodi-n-propylamine	6.76	70	14198	200.77	ng/ml	97
19) 4-Methylphenol	6.75	107	24269	197.62	ng/ml	92
21) Nitrobenzene	6.91	77	20539	196.89	ng/ml	93
23) Isophorone	7.13	82	38711	217.12	ng/ml	99
24) 2-Nitrophenol	7.19	139	11336	208.63	ng/ml	96
25) 2,4-Dimethylphenol	7.23	122	19023	209.36	ng/ml	93
26) Bis(2-chloroethoxy)methane	7.32	93	22266	200.48	ng/ml	100

(#) = qualifier out of range (m) = manual integration
1024F005.D 102608SVOLL.M Mon Oct 27 09:07:43 2008 Page 1

LB 10/27/08

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F005.D Vial: 5
Acq On : 26 Oct 2008 2:30 pm Operator: KBAILEY
Sample : 0.20PPM ICAL SVO_LL | SVM27-33E Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:50 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
27)	2,4-Dichlorophenol	7.40	162	18920	216.20	ng/ml	94
28)	Benzoic Acid	7.27	105	5612	695.77	ng/ml	92
29)	1,2,4-Trichlorobenzene	7.48	180	21626	203.95	ng/ml	99
30)	Naphthalene	7.56	128	64436	204.36	ng/ml	99
31)	4-Chloroaniline	7.61	127	25391	202.11	ng/ml	98
32)	Hexachlorobutadiene	7.66	225	13150	199.71	ng/ml	95
33)	4-Chloro-3-methylphenol	8.05	107	17930	216.88	ng/ml	91
34)	2-Methylnaphthalene	8.20	142	42819	201.76	ng/ml	100
35)	1-Methylnaphthalene	8.29	142	40978	204.21	ng/ml	98
37)	Hexachlorocyclopentadiene	8.34	237	13213	174.78	ng/ml	95
38)	2,4,6-Trichlorophenol	8.46	196	13607	214.55	ng/ml	93
39)	2,4,5-Trichlorophenol	8.49	196	14362	198.87	ng/ml	98
41)	2-Chloronaphthalene	8.65	162	42610	206.06	ng/ml	98
42)	2-Nitroaniline	8.75	65	10392	253.14	ng/ml	95
43)	Acenaphthylene	9.04	152	65502	211.46	ng/ml	99
44)	Dimethyl Phthalate	8.93	163	47499	211.16	ng/ml	98
45)	2,6-Dinitrotoluene	8.98	165	9600	240.27	ng/ml	96
46)	Acenaphthene	9.21	154	39646	205.45	ng/ml	99
47)	3-Nitroaniline	9.14	138	9786	179.36	ng/ml	98
48)	2,4-Dinitrophenol	9.24	184	3244	92.36	ng/ml	83
49)	Dibenzofuran	9.37	168	63774	208.25	ng/ml	97
50)	4-Nitrophenol	9.30	65	6924	179.02	ng/ml	83
51)	2,4-Dinitrotoluene	9.36	165	13085	235.17	ng/ml	90
52)	2,3,4,6-Tetrachlorophenol	9.49	232	13953	214.83	ng/ml	92
53)	Fluorene	9.70	166	48321	201.62	ng/ml	99
54)	4-Chlorophenyl Phenyl Ethe	9.70	204	26370	205.82	ng/ml	99
55)	Diethyl Phthalate	9.60	149	44741	211.17	ng/ml	100
56)	4-Nitroaniline	9.72	138	10149	184.32	ng/ml	91
58)	N-Nitrosodiphenylamine	9.81	169	34897	210.58	ng/ml	97
59)	Azobenzene	9.85	77	41061	202.31	ng/ml	96
62)	4-Bromophenyl Phenyl Ether	10.17	248	16618	196.60	ng/ml	95
63)	Hexachlorobenzene	10.22	284	20194	197.30	ng/ml	98
64)	Pentachlorophenol	10.41	266	11137	181.29	ng/ml	94
65)	Phenanthrene	10.61	178	73481	202.68	ng/ml	99
66)	Anthracene	10.66	178	73184	203.25	ng/ml	99
67)	Carbazole	10.82	167	68611	209.51	ng/ml	98
68)	Di-n-butyl Phthalate	11.16	149	77360	224.74	ng/ml	100
69)	Fluoranthene	11.75	202	82601	209.18	ng/ml	95
71)	Benzidine	11.91	184	30096	126.14	ng/ml	95
72)	Pyrene	11.99	202	85276	203.35	ng/ml	98
74)	Butyl Benzyl Phthalate	12.79	149	31085	255.72	ng/ml	92

(#) = qualifier out of range (m) = manual integration
1024F005.D 102608SVOLL.M Mon Oct 27 09:07:43 2008 Page 2

LB 10/27/08

Data File : J:\MS17\DATA\102608\1024F005.D Vial: 5
Acq On : 26 Oct 2008 2:30 pm Operator: KBAILEY
Sample : 0.20PPM ICAL SVO_LL | SVM27-33E Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:50 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
75)	3,3'-Dichlorobenzidine	13.51	252	32642	194.54	ng/ml	99
76)	Benz(a)anthracene	13.53	228	86457	215.20	ng/ml	97
77)	Chrysene	13.58	228	81050	199.97	ng/ml	100
78)	Bis(2-ethylhexyl) Phthalat	13.64	149	45165	211.51	ng/ml	96
80)	Di-n-octyl Phthalate	14.76	149	67927	513.04	ng/ml	97
81)	Benzo(b)fluoranthene	15.30	252	90116	206.75	ng/ml	97
82)	Benzo(k)fluoranthene	15.34	252	91220	201.39	ng/ml	96
83)	Benzo(a)pyrene	15.80	252	82973	254.86	ng/ml	100
84)	Indeno(1,2,3-cd)pyrene	17.00	276	95910	226.00	ng/ml	98
85)	Dibenz(a,h)anthracene	17.03	278	102619	221.21	ng/ml	97
86)	Benzo(g,h,i)perylene	17.26	276	101336	215.48	ng/ml	96

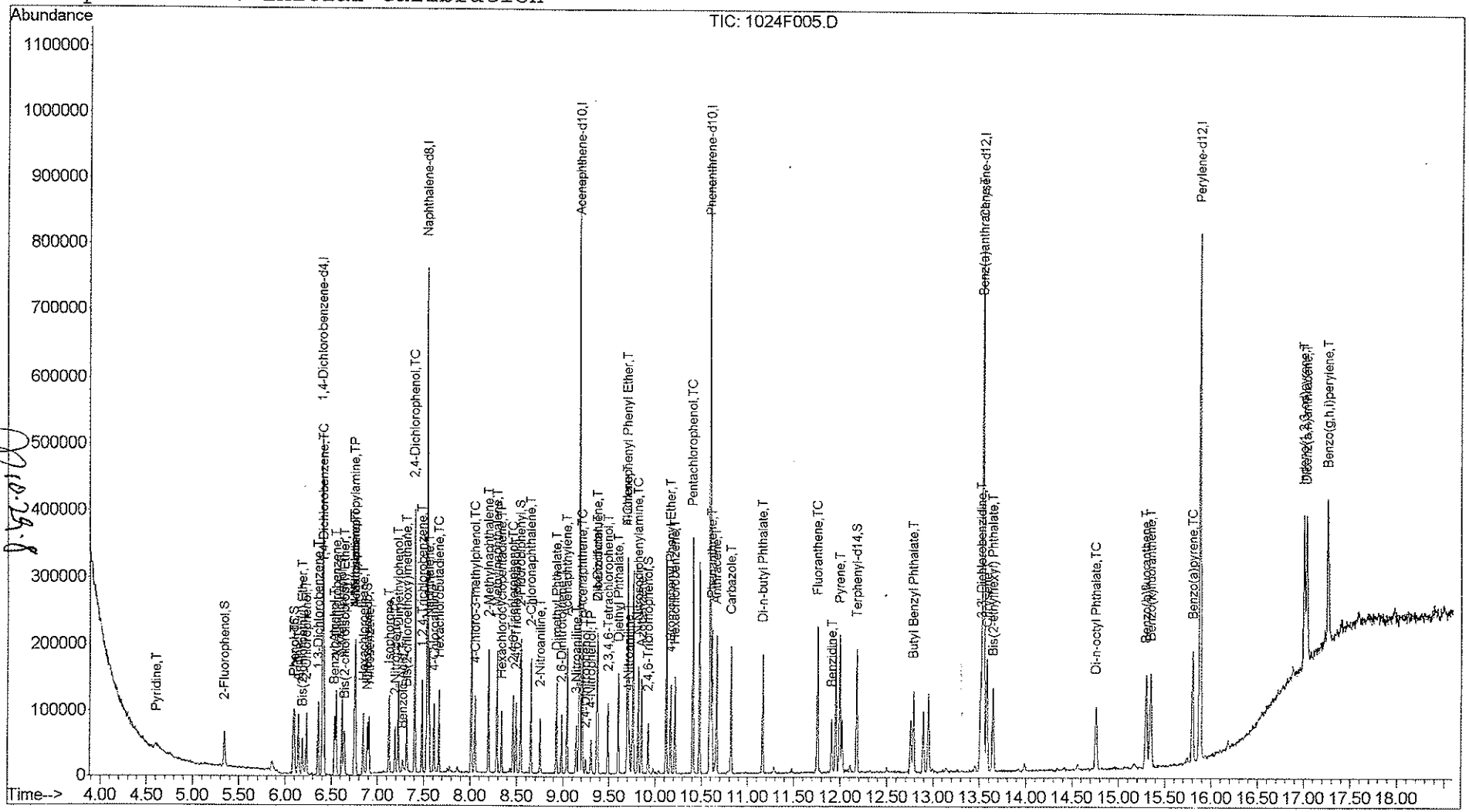
10-29-8

(#) = qualifier out of range (m) = manual integration LB 10/27/08

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F005.D Vial: 5
Acq On : 26 Oct 2008 2:30 pm Operator: KBAILEY
Sample : 0.20PPM ICAL SVO_LL | SVM27-33E Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:44 2008 Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:00:27 2008
Response via : Initial Calibration



674

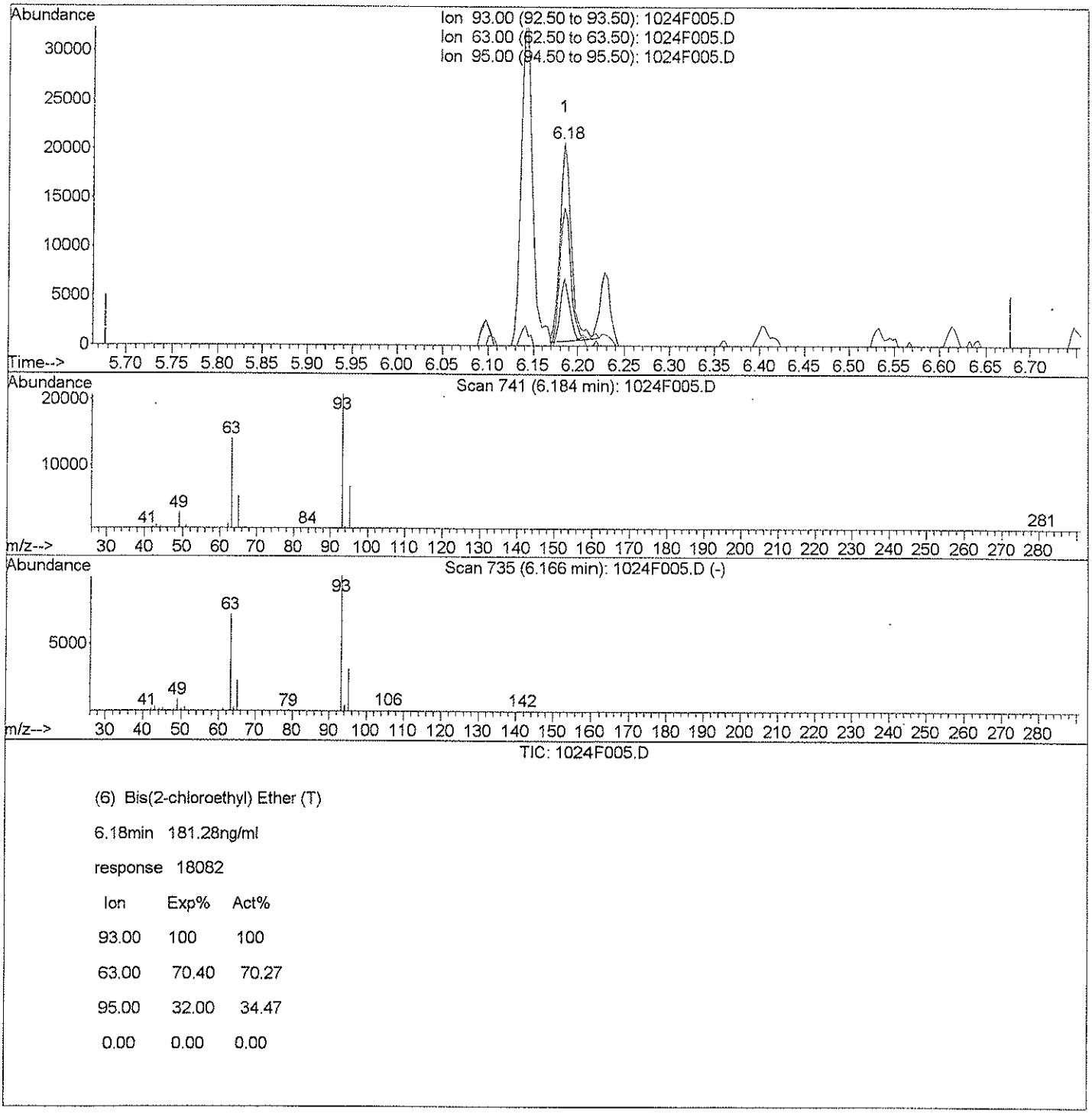
Quantitation Report (Qedit)

Data File : J:\MS17\DATA\102608\1024F005.D
Acq On : 26 Oct 2008 2:30 pm
Sample : 0.20PPM ICAL SVO_LL | SVM27-33E
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:43 2008

Vial: 5
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Multiple Level Calibration



TIC: 1024F005.D

(6) Bis(2-chloroethyl) Ether (T)

6.18min 181.28ng/ml

response 18082

Ion	Exp%	Act%
93.00	100	100
63.00	70.40	70.27
95.00	32.00	34.47
0.00	0.00	0.00

1024F005.D 102608SVOLL.M Mon Oct 27 08:43:22 2008

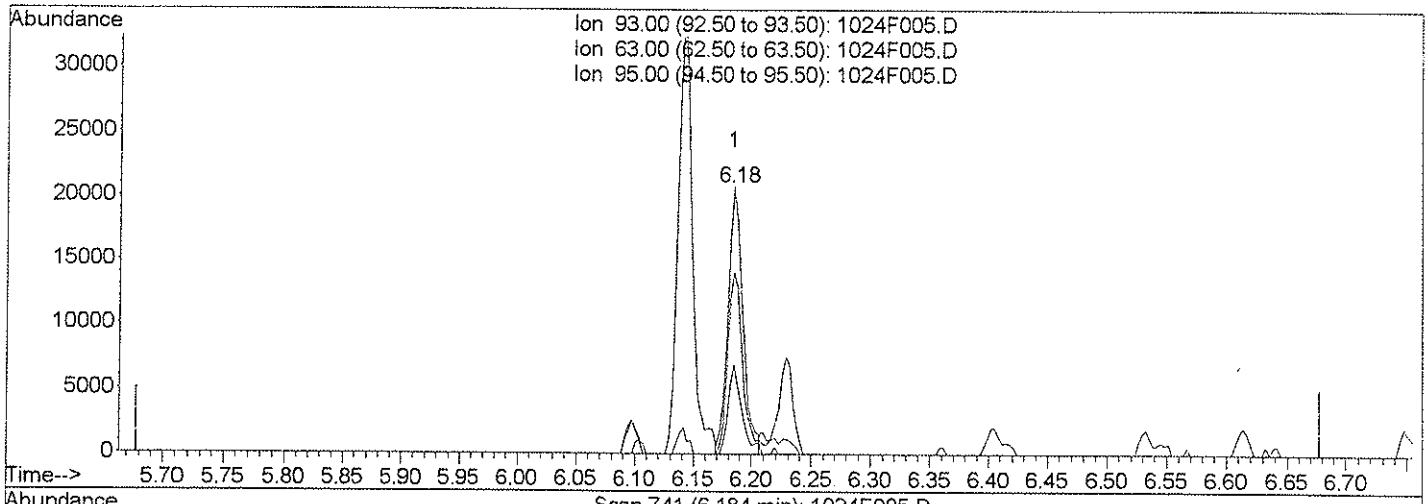
Quantitation Report (Qedit)

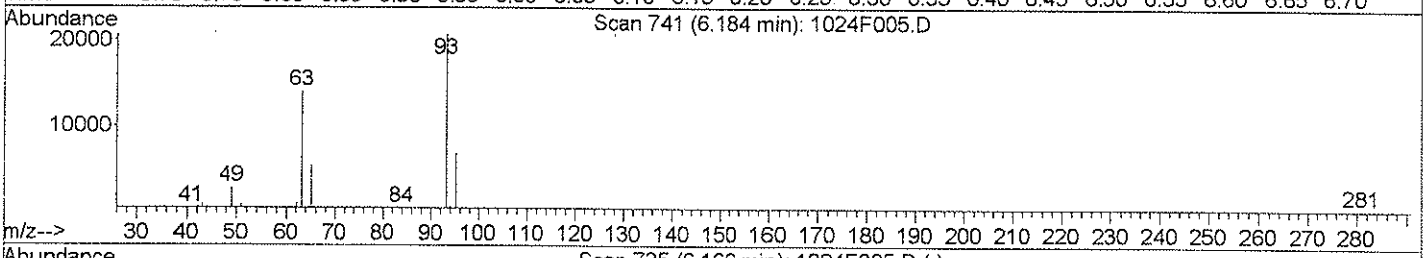
Data File : J:\MS17\DATA\102608\1024F005.D
Acq On : 26 Oct 2008 2:30 pm
Sample : 0.20PPM ICAL SVO_LL | SVM27-33E
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:43 2008

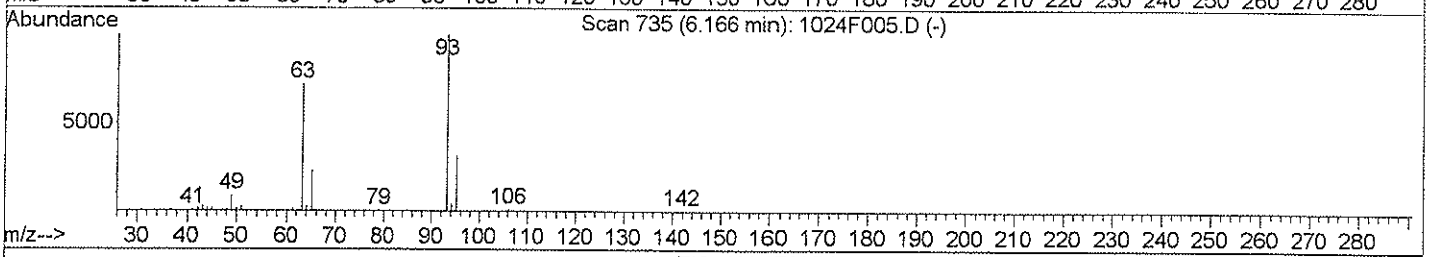
Vial: 5
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Multiple Level Calibration







TIC: 1024F005.D

(6) Bis(2-chloroethyl) Ether (T)

6.18min 187.89ng/ml m

response 18742

Ion	Exp%	Act%
93.00	100	100
63.00	70.40	67.75
95.00	32.00	33.24
0.00	0.00	0.00

BL 10.28.8
LB
10/27/08

1024F005.D 102608SVOLL.M Mon Oct 27 08:43:35 2008

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F006.D Vial: 6
Acq On : 26 Oct 2008 2:56 pm Operator: KBAILEY
Sample : 0.50PPM ICAL SVO_LL | SVM27-33F Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:51 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.40	152	76303	1000.00	ng/ml	0.00
22) Naphthalene-d8	7.54	136	288210	1000.00	ng/ml	0.00
36) Acenaphthene-d10	9.17	164	166359	1000.00	ng/ml	0.00
60) Phenanthrene-d10	10.59	188	282467	1000.00	ng/ml	0.00
70) Chrysene-d12	13.54	240	351738	1000.00	ng/ml	0.00
79) Perylene-d12	15.88	264	391414	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	5.33	112	44124	501.83	ng/ml	0.02
Spiked Amount 3750.000	Range 25 - 121		Recovery = 13.38%#			
7) Phenol-d6	6.08	99	60701	503.44	ng/ml	0.00
Spiked Amount 3750.000	Range 24 - 113		Recovery = 13.43%#			
20) Nitrobenzene-d5	6.89	82	47957	489.50	ng/ml	0.00
Spiked Amount 2500.000	Range 23 - 120		Recovery = 19.58%#			
40) 2-Fluorobiphenyl	8.54	172	121892	481.27	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 115		Recovery = 19.25%#			
61) 2,4,6-Tribromophenol	9.93	330	26177	491.07	ug/ml	0.00
Spiked Amount 3750.000	Range 19 - 122		Recovery = 13.10%#			
73) Terphenyl-d14	12.17	244	150900	488.06	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 140		Recovery = 19.52%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.52	74	22634m	619.50	ng/ml	
3) Pyridine	4.54	79	51468m	501.09	ng/ml	
5) Aniline	6.13	93	72256	488.30	ng/ml	96
6) Bis(2-chloroethyl) Ether	6.18	93	47354	472.86	ng/ml	99
8) Phenol	6.09	94	61668	503.26	ng/ml	95
9) 2-Chlorophenol	6.23	128	51879	490.15	ng/ml	96
10) 1,3-Dichlorobenzene	6.36	146	59015	463.78	ng/ml	99
11) 1,4-Dichlorobenzene	6.42	146	61090	478.56	ng/ml	97
12) 1,2-Dichlorobenzene	6.55	146	58570	478.32	ng/ml	99
13) Benzyl Alcohol	6.53	108	30673	506.03	ng/ml	90
14) Bis(2-chloroisopropyl) Eth	6.64	45	68750	472.07	ng/ml	97
15) 2-Methylphenol	6.61	107	41209	482.39	ng/ml	97
16) Hexachloroethane	6.84	117	20480	492.01	ng/ml	92
17) Acetophenone	6.76	105	68885	488.91	ng/ml	98
18) N-Nitrosodi-n-propylamine	6.75	70	36806	518.40	ng/ml	95
19) 4-Methylphenol	6.75	107	60863	493.64	ng/ml	97
21) Nitrobenzene	6.91	77	51591	492.60	ng/ml	95
23) Isophorone	7.12	82	93025	512.29	ng/ml	99
24) 2-Nitrophenol	7.19	139	27724	500.99	ng/ml	92
25) 2,4-Dimethylphenol	7.22	122	45450	491.13	ng/ml	93

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

10-24-08 LB 10/27/08

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F006.D Vial: 6
Acq On : 26 Oct 2008 2:56 pm Operator: KBAILEY
Sample : 0.50PPM ICAL SVO_LL | SVM27-33F Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:51 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26) Bis(2-chloroethoxy)methane	7.32	93	54949	485.79	ng/ml	94
27) 2,4-Dichlorophenol	7.40	162	45679	512.52	ng/ml	96
28) Benzoic Acid	7.28	105	18700	871.04	ng/ml	91
29) 1,2,4-Trichlorobenzene	7.48	180	50973	471.99	ng/ml	97
30) Naphthalene	7.56	128	156479	487.28	ng/ml	99
31) 4-Chloroaniline	7.61	127	62509	488.54	ng/ml	98
32) Hexachlorobutadiene	7.66	225	32422	483.47	ng/ml	96
33) 4-Chloro-3-methylphenol	8.05	107	42713	507.29	ng/ml	99
34) 2-Methylnaphthalene	8.20	142	105627	488.69	ng/ml	94
35) 1-Methylnaphthalene	8.29	142	99711	487.89	ng/ml	95
37) Hexachlorocyclopentadiene	8.34	237	35496	452.16	ng/ml	99
38) 2,4,6-Trichlorophenol	8.46	196	34927	530.34	ng/ml	99
39) 2,4,5-Trichlorophenol	8.49	196	37749	503.36	ng/ml	97
41) 2-Chloronaphthalene	8.65	162	104132	484.94	ng/ml	95
42) 2-Nitroaniline	8.75	65	26381	537.53	ng/ml	88
43) Acenaphthylene	9.04	152	162736	505.91	ng/ml	97
44) Dimethyl Phthalate	8.93	163	117217	501.80	ng/ml	99
45) 2,6-Dinitrotoluene	8.99	165	25773	544.64	ng/ml	96
46) Acenaphthene	9.21	154	95084	474.51	ng/ml	95
47) 3-Nitroaniline	9.14	138	26478	467.35	ng/ml	98
48) 2,4-Dinitrophenol	9.24	184	10216	280.08	ng/ml	89
49) Dibenzofuran	9.37	168	151750	477.19	ng/ml	100
50) 4-Nitrophenol	9.30	65	18010	448.43	ng/ml	95
51) 2,4-Dinitrotoluene	9.36	165	33562	516.73	ng/ml	97
52) 2,3,4,6-Tetrachlorophenol	9.49	232	33438	495.79	ng/ml	98
53) Fluorene	9.70	166	120999	486.18	ng/ml	99
54) 4-Chlorophenyl Phenyl Ethe	9.70	204	62446	469.36	ng/ml	96
55) Diethyl Phthalate	9.60	149	105993	481.75	ng/ml	98
56) 4-Nitroaniline	9.72	138	26634	465.81	ng/ml	97
58) N-Nitrosodiphenylamine	9.81	169	81825	475.50	ng/ml	99
59) Azobenzene	9.85	77	101666	482.37	ng/ml	98
62) 4-Bromophenyl Phenyl Ether	10.17	248	40784	473.42	ng/ml	96
63) Hexachlorobenzene	10.21	284	50332	482.51	ng/ml	98
64) Pentachlorophenol	10.41	266	27584	440.58	ng/ml	95
65) Phenanthrene	10.61	178	172820	467.72	ng/ml	99
66) Anthracene	10.66	178	180860	492.86	ng/ml	98
67) Carbazole	10.82	167	161766	484.69	ng/ml	100
68) Di-n-butyl Phthalate	11.16	149	180234	513.76	ng/ml	100
69) Fluoranthene	11.75	202	200356	497.86	ng/ml	97
71) Benzidine	11.90	184	93663	387.93	ng/ml	99
72) Pyrene	11.99	202	206044	485.52	ng/ml	99

(#) = qualifier out of range (m) = manual integration
1024F006.D 102608SVOLL.M Mon Oct 27 09:07:44 2008 Page 2

10/27/08

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F006.D
Acq On : 26 Oct 2008 2:56 pm
Sample : 0.50PPM ICAL SVO_LL | SVM27-33F
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:51 2008

Vial: 6
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

	Compound	R.T.	QIon	Response	Conc Unit	Qvalue
74)	Butyl Benzyl Phthalate	12.79	149	79032	551.51 ng/ml	97
75)	3,3'-Dichlorobenzidine	13.51	252	85430	503.14 ng/ml	96
76)	Benz(a)anthracene	13.53	228	210344	517.39 ng/ml	98
77)	Chrysene	13.58	228	199969	487.55 ng/ml	100
78)	Bis(2-ethylhexyl) Phthalat	13.64	149	108564	502.40 ng/ml	97
80)	Di-n-octyl Phthalate	14.76	149	176929	767.81 ng/ml	97
81)	Benzo(b)fluoranthene	15.30	252	219943	498.58 ng/ml	96
82)	Benzo(k)fluoranthene	15.35	252	220310m	480.57 ng/ml	
83)	Benzo(a)pyrene	15.80	252	202277	543.14 ng/ml	99
84)	Indeno(1,2,3-cd)pyrene	17.00	276	228146	531.17 ng/ml	98
85)	Dibenz(a,h)anthracene	17.03	278	242661	516.84 ng/ml	99
86)	Benzo(g,h,i)perylene	17.26	276	244982	514.71 ng/ml	97

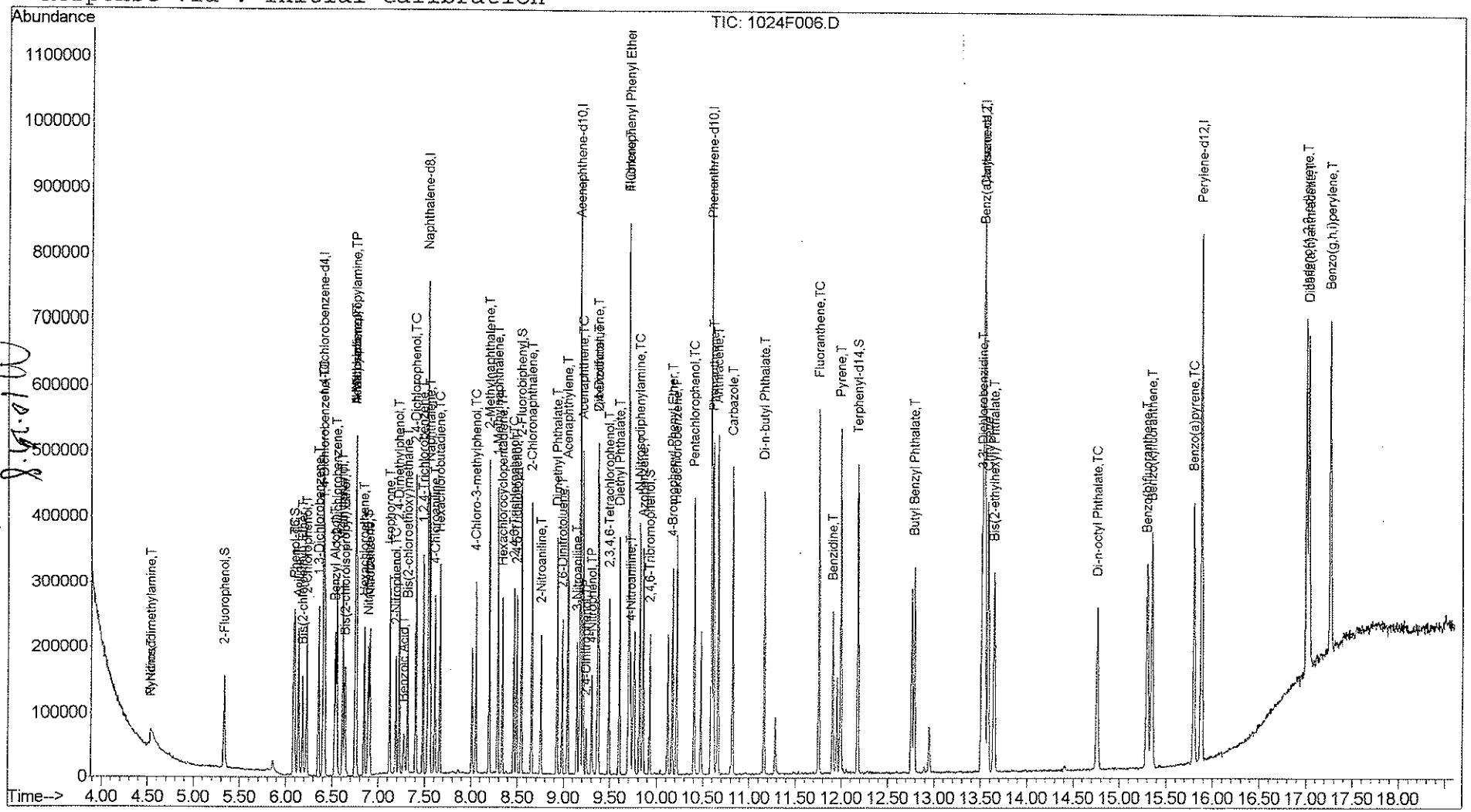
10.29.8

(#) = qualifier out of range (m) = manual integration
1024F006.D 102608SVOLL.M Mon Oct 27 09:07:44 2008 KB 10/27/08 Page 3

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F006.D Vial: 6
Acq On : 26 Oct 2008 2:56 pm Operator: KBAILEY
Sample : 0.50PPM ICAL SVO_LL | SVM27-33F Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:45 2008 Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:00:27 2008
Response via : Initial Calibration



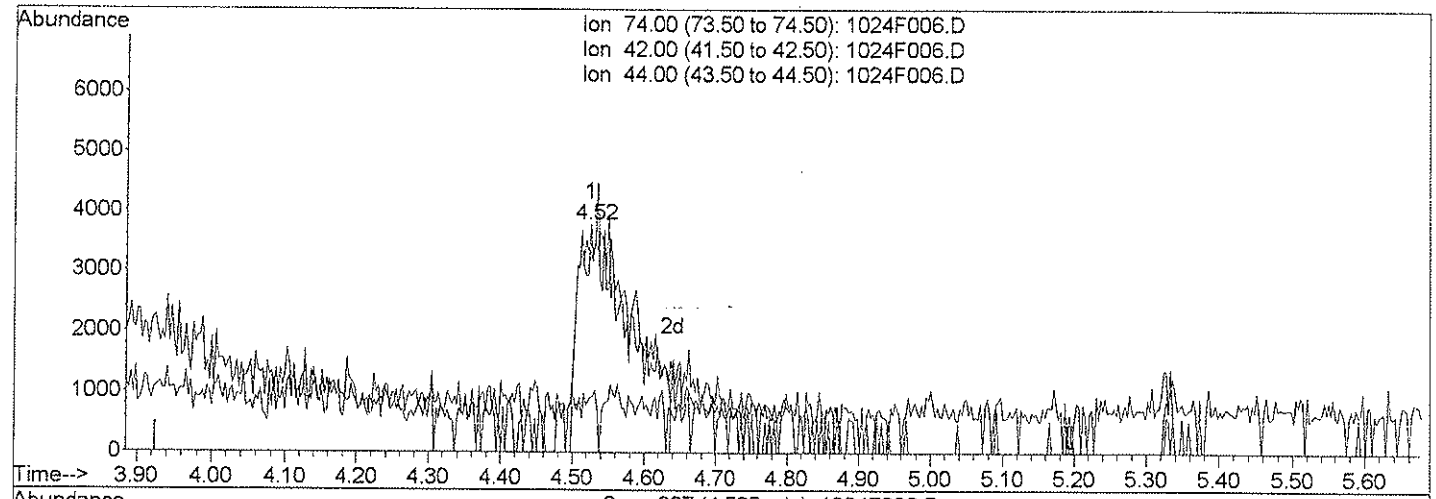
Quantitation Report (Qedit)

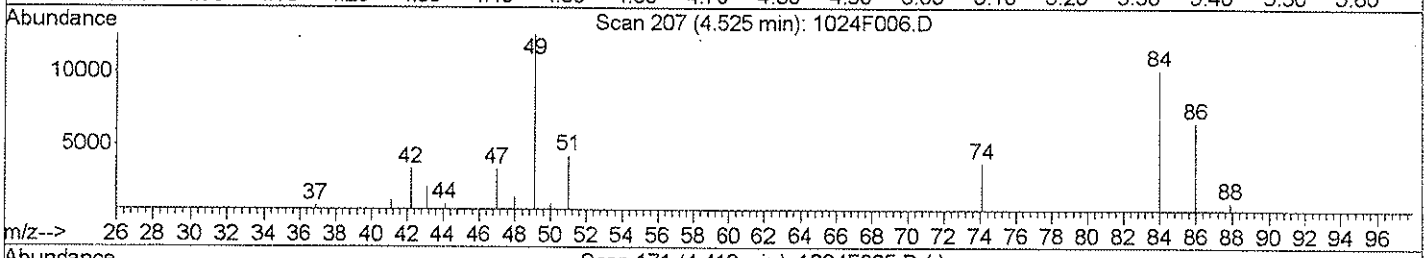
Data File : J:\MS17\DATA\102608\1024F006.D
Acq On : 26 Oct 2008 2:56 pm
Sample : 0.50PPM ICAL SVO_LL | SVM27-33F
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45 2008

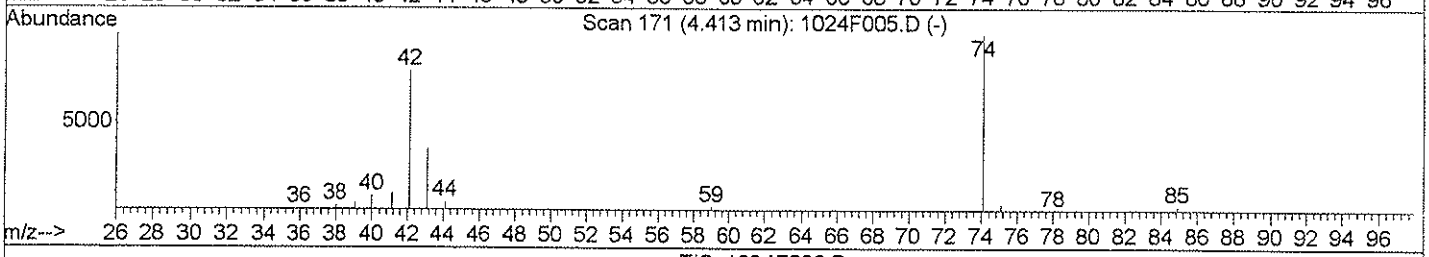
Vial: 6
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration







TIC: 1024F006.D

(2) N-Nitrosodimethylamine (T)

4.52min 564.83ng/ml

response 19341

Ion	Exp%	Act%
74.00	100	100
42.00	89.40	68.55
44.00	7.30	5.03
0.00	0.00	0.00

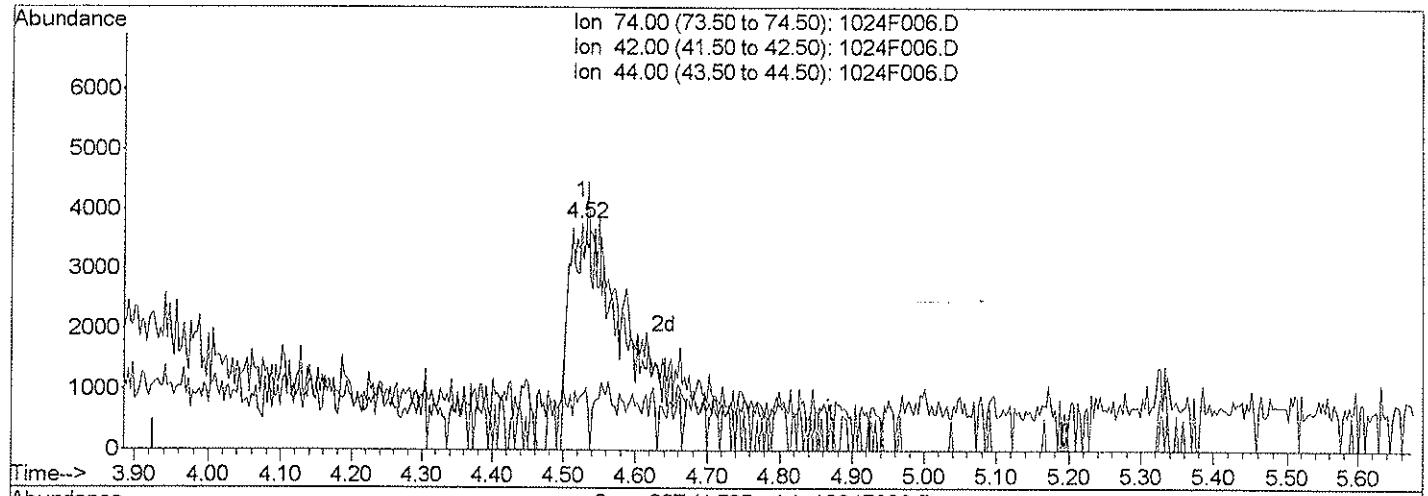
1024F006.D 102608SVOLL.M Mon Oct 27 08:44:24 2008

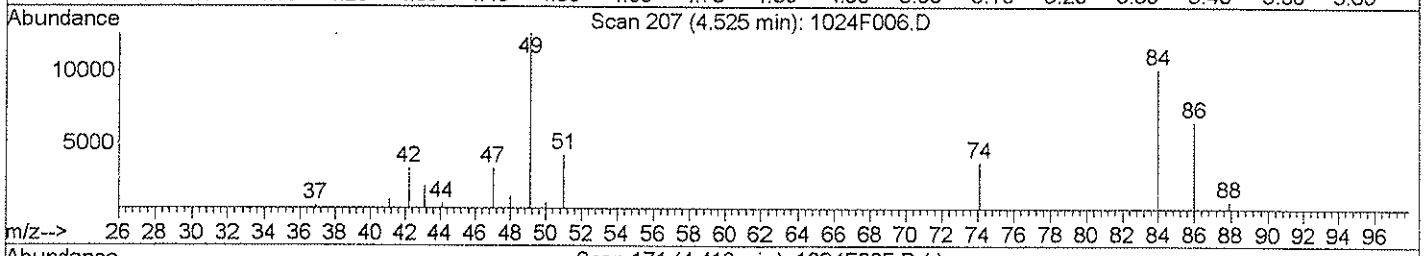
Quantitation Report (Qedit)

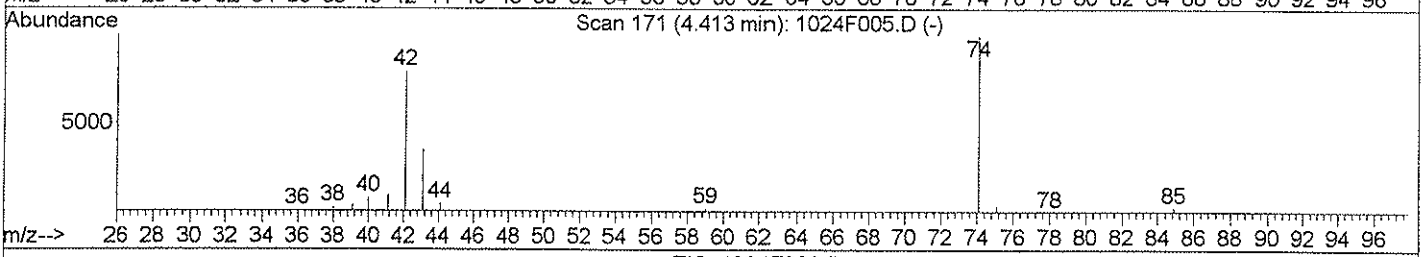
Data File : J:\MS17\DATA\102608\1024F006.D
Acq On : 26 Oct 2008 2:56 pm
Sample : 0.50PPM ICAL SVO_LL | SVM27-33F
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:44 2008

Vial: 6
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration







TIC: 1024F006.D

(2) N-Nitrosodimethylamine (T)

4.52min 619.50ng/ml m

response 22634

Ion	Exp%	Act%
74.00	100	100
42.00	89.40	88.26
44.00	7.30	24.17
0.00	0.00	0.00

10.29.08
LB 10127108

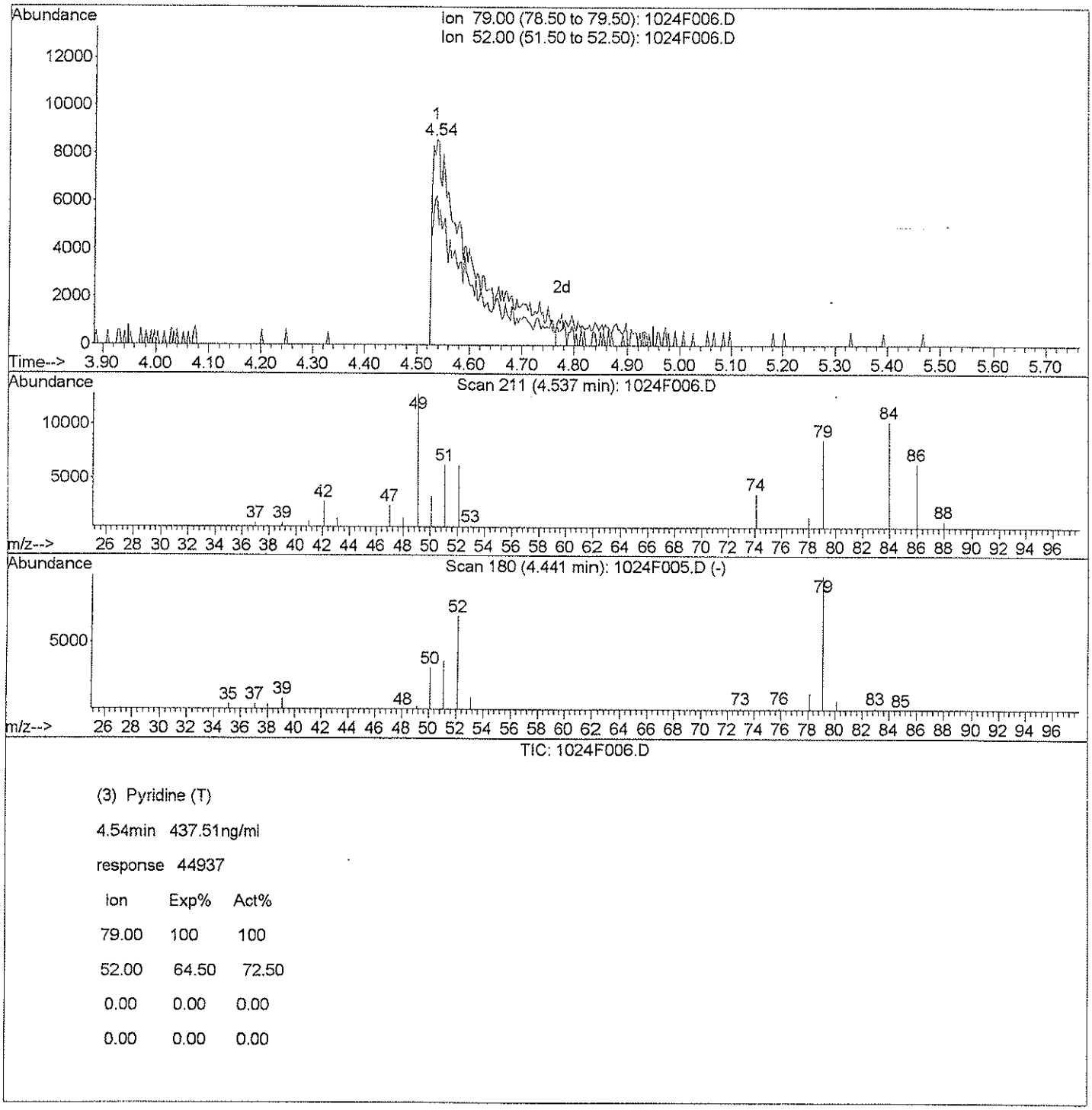
1024F006.D 102608SVOLL.M Mon Oct 27 08:44:31 2008

Quantitation Report (Qedit)

Data File : J:\MS17\DATA\102608\1024F006.D
Acq On : 26 Oct 2008 2:56 pm
Sample : 0.50PPM ICAL SVO_LL | SVM27-33F
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:44 2008

Vial: 6
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration



TIC: 1024F006.D

(3) Pyridine (T)

4.54min 437.51ng/ml

response 44937

Ion	Exp%	Act%
79.00	100	100
52.00	64.50	72.50
0.00	0.00	0.00
0.00	0.00	0.00

1024F006.D 102608SVOLL.M Mon Oct 27 08:44:34 2008

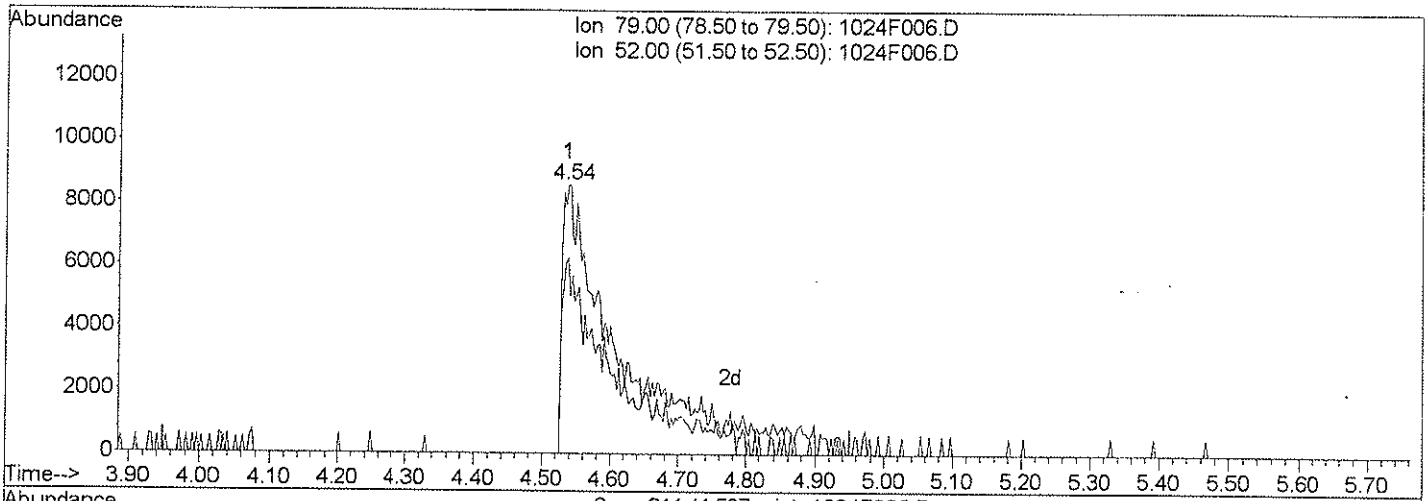
Quantitation Report (Qedit)

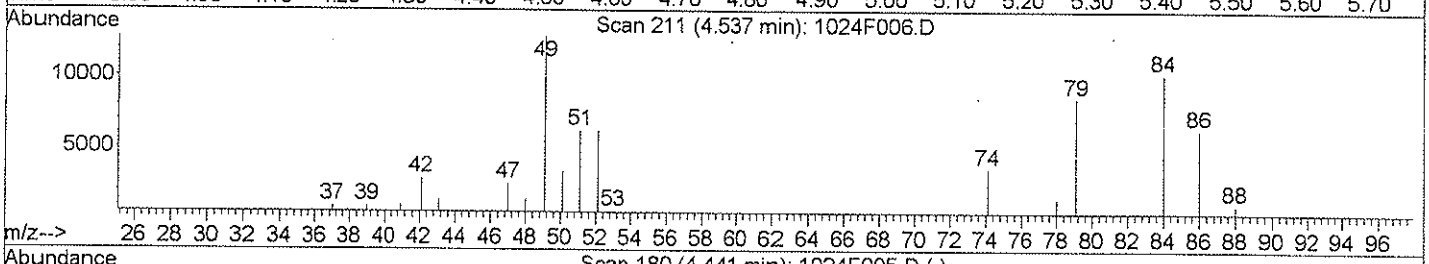
Data File : J:\MS17\DATA\102608\1024F006.D
Acq On : 26 Oct 2008 2:56 pm
Sample : 0.50PPM ICAL SVO_LL | SVM27-33F
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:44 2008

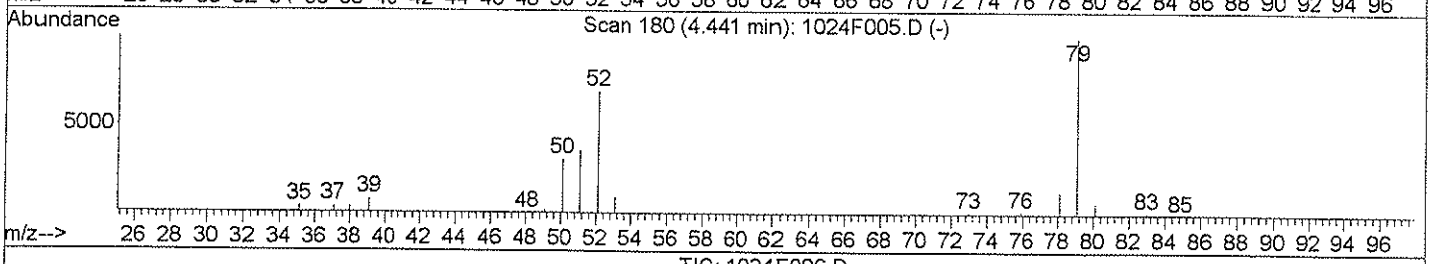
Vial: 6
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration







TIC: 1024F006.D

(3) Pyridine (T)

4.54min 501.09ng/ml m

response 51468

Ion	Exp%	Act%
79.00	100	100
52.00	64.50	72.50
0.00	0.00	0.00
0.00	0.00	0.00

1c 10.29.8
LB 10127108

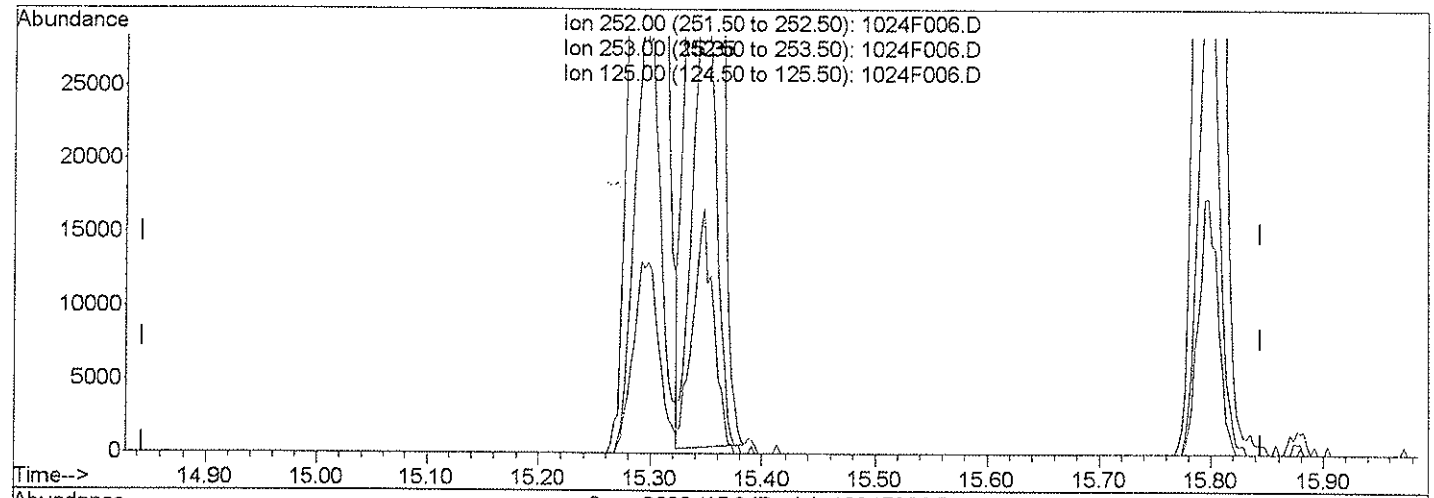
1024F006.D 102608SVOLL.M Mon Oct 27 08:44:39 2008

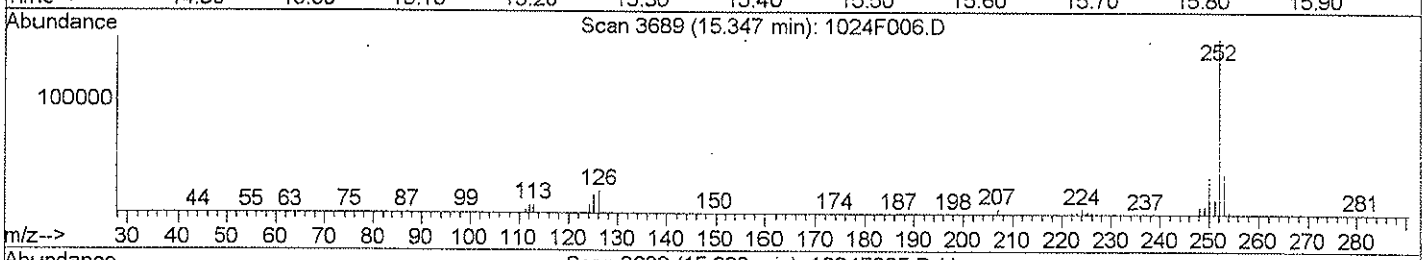
Quantitation Report (Qedit)

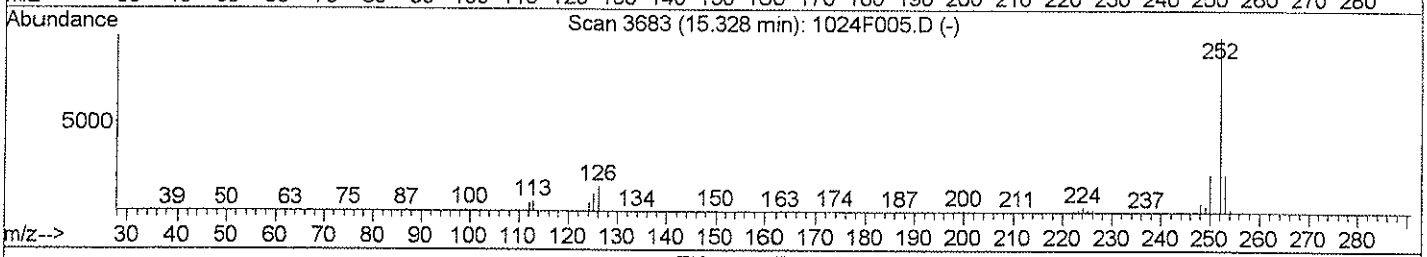
Data File : J:\MS17\DATA\102608\1024F006.D
Acq On : 26 Oct 2008 2:56 pm
Sample : 0.50PPM ICAL SVO_LL | SVM27-33F
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:45 2008

Vial: 6
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Multiple Level Calibration







TIC: 1024F006.D

(82) Benzo(k)fluoranthene (T)

15.35min 475.67ng/ml

response 218061

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	23.54
125.00	10.00	10.73
0.00	0.00	0.00

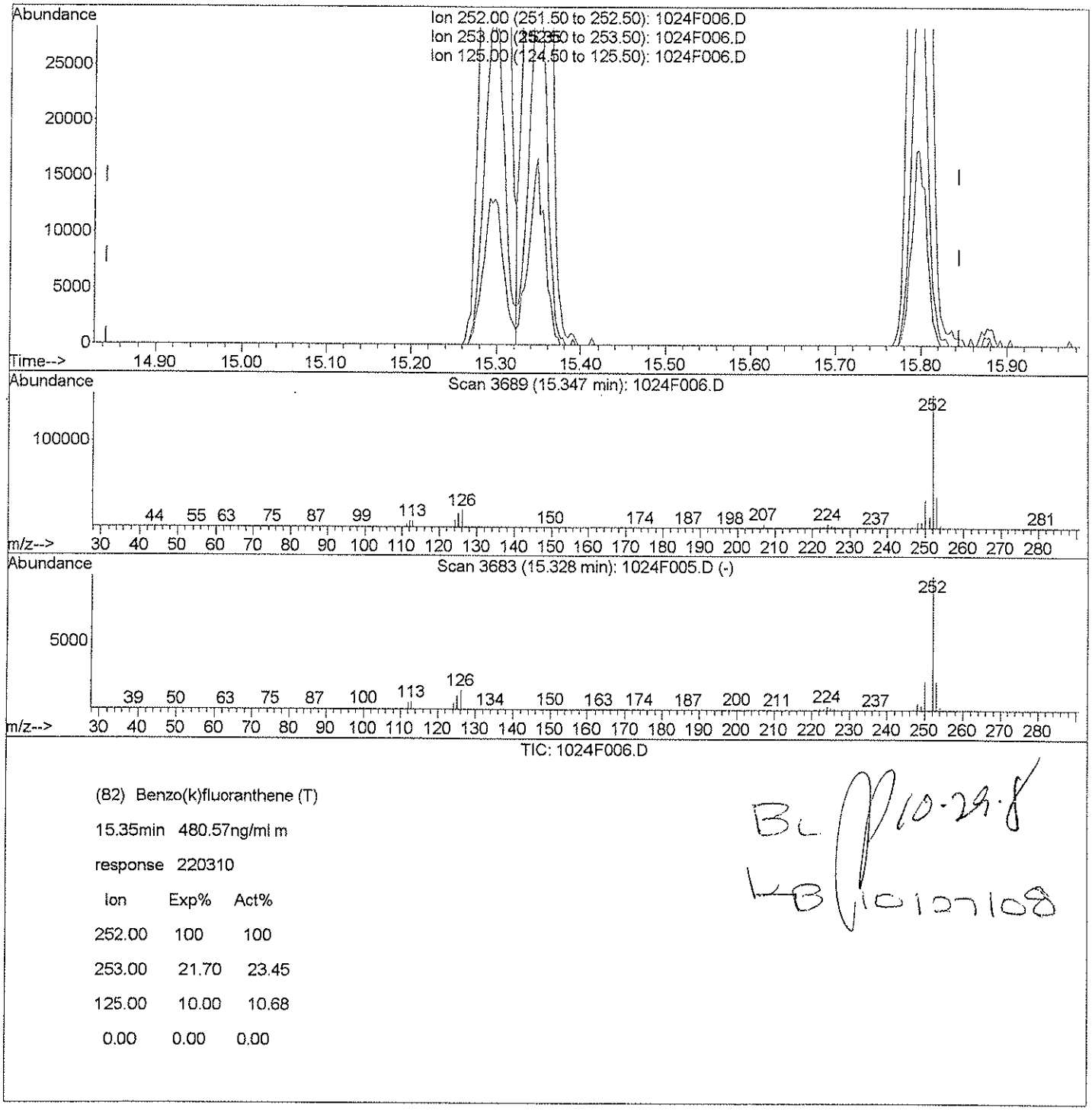
1024F006.D 102608SVOLL.M Mon Oct 27 08:45:45 2008

Quantitation Report (Qedit)

Data File : J:\MS17\DATA\102608\1024F006.D
Acq On : 26 Oct 2008 2:56 pm
Sample : 0.50PPM ICAL SVO_LL | SVM27-33F
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:45 2008

Vial: 6
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Multiple Level Calibration



TIC: 1024F006.D

(82) Benzo(k)fluoranthene (T)

15.35min 480.57ng/ml m

response 220310

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	23.45
125.00	10.00	10.68
0.00	0.00	0.00

BL 10-29-8
LB 10107108

1024F006.D 102608SVOLL.M Mon Oct 27 08:45:50 2008

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F007.D
Acq On : 26 Oct 2008 3:22 pm
Sample : 1.0PPM ICAL SVO_LL | SVM27-33G
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:51 2008

Vial: 7
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.40	152	73372	1000.00	ng/ml	0.00
22) Naphthalene-d8	7.53	136	288038	1000.00	ng/ml	0.00
36) Acenaphthene-d10	9.17	164	165672	1000.00	ng/ml	0.00
60) Phenanthrene-d10	10.59	188	276942	1000.00	ng/ml	0.00
70) Chrysene-d12	13.54	240	350361	1000.00	ng/ml	0.00
79) Perylene-d12	15.88	264	394069	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	5.32	112	89513	1058.72	ng/ml	0.00
Spiked Amount 3750.000	Range 25 - 121		Recovery = 28.23%			
7) Phenol-d6	6.08	99	122229	1054.23	ng/ml	0.00
Spiked Amount 3750.000	Range 24 - 113		Recovery = 28.11%			
20) Nitrobenzene-d5	6.89	82	94952	1007.89	ng/ml	0.00
Spiked Amount 2500.000	Range 23 - 120		Recovery = 40.32%			
40) 2-Fluorobiphenyl	8.54	172	241698	958.27	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 115		Recovery = 38.33%			
61) 2,4,6-Tribromophenol	9.93	330	52330	1001.27	ug/ml	0.00
Spiked Amount 3750.000	Range 19 - 122		Recovery = 26.70%			
73) Terphenyl-d14	12.17	244	299595	972.79	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 140		Recovery = 38.91%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.48	74	49092	1091.33	ng/ml	85
3) Pyridine	4.50	79	104010m	1053.09	ng/ml	
5) Aniline	6.13	93	145876	1025.21	ng/ml	98
6) Bis(2-chloroethyl) Ether	6.18	93	96448	1001.57	ng/ml	98
8) Phenol	6.09	94	120176	1019.91	ng/ml	98
9) 2-Chlorophenol	6.22	128	104474	1026.50	ng/ml	95
10) 1,3-Dichlorobenzene	6.35	146	119168	973.92	ng/ml	99
11) 1,4-Dichlorobenzene	6.42	146	122544	998.32	ng/ml	99
12) 1,2-Dichlorobenzene	6.55	146	115637	982.09	ng/ml	99
13) Benzyl Alcohol	6.53	108	63380	1087.39	ng/ml	97
14) Bis(2-chloroisopropyl) Eth	6.64	45	134941	963.59	ng/ml	99
15) 2-Methylphenol	6.61	107	82453	1003.74	ng/ml	98
16) Hexachloroethane	6.84	117	40874	1021.17	ng/ml	99
17) Acetophenone	6.76	105	136137	1004.83	ng/ml	97
18) N-Nitrosodi-n-propylamine	6.75	70	70233	1028.73	ng/ml	97
19) 4-Methylphenol	6.74	107	124770	1052.40	ng/ml	97
21) Nitrobenzene	6.91	77	101171	1004.59	ng/ml	96
23) Isophorone	7.12	82	184407	1016.13	ng/ml	99
24) 2-Nitrophenol	7.19	139	56513	1021.84	ng/ml	99
25) 2,4-Dimethylphenol	7.22	122	93958	1015.91	ng/ml	99

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

10/27/08

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F007.D Vial: 7
Acq On : 26 Oct 2008 3:22 pm Operator: KBAILEY
Sample : 1.0PPM ICAL SVO_LL | SVM27-33G Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:51 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	Bis(2-chloroethoxy)methane	7.32	93	109223	966.20	ng/ml	98
27)	2,4-Dichlorophenol	7.40	162	89226	1001.71	ng/ml	99
28)	Benzoic Acid	7.28	105	34417	1082.05	ng/ml	93
29)	1,2,4-Trichlorobenzene	7.48	180	104533	968.51	ng/ml	98
30)	Naphthalene	7.56	128	304290	948.14	ng/ml	99
31)	4-Chloroaniline	7.61	127	126462	988.95	ng/ml	98
32)	Hexachlorobutadiene	7.66	225	62229	928.50	ng/ml	97
33)	4-Chloro-3-methylphenol	8.05	107	83261	989.45	ng/ml	98
34)	2-Methylnaphthalene	8.20	142	207514	960.65	ng/ml	98
35)	1-Methylnaphthalene	8.29	142	195068	955.04	ng/ml	99
37)	Hexachlorocyclopentadiene	8.34	237	73294	937.52	ng/ml	95
38)	2,4,6-Trichlorophenol	8.46	196	69720	1063.04	ng/ml	100
39)	2,4,5-Trichlorophenol	8.49	196	76807	1028.41	ng/ml	96
41)	2-Chloronaphthalene	8.65	162	205229	959.71	ng/ml	98
42)	2-Nitroaniline	8.75	65	53849	1032.25	ng/ml	97
43)	Acenaphthylene	9.04	152	323341	1009.37	ng/ml	99
44)	Dimethyl Phthalate	8.93	163	229050	984.62	ng/ml	98
45)	2,6-Dinitrotoluene	8.98	165	52019	1040.11	ng/ml	97
46)	Acenaphthene	9.21	154	191257	958.41	ng/ml	97
47)	3-Nitroaniline	9.14	138	55352	981.03	ng/ml	95
48)	2,4-Dinitrophenol	9.24	184	21683	596.92	ng/ml	99
49)	Dibenzofuran	9.37	168	298977	944.06	ng/ml	99
50)	4-Nitrophenol	9.30	65	37703	942.65	ng/ml	98
51)	2,4-Dinitrotoluene	9.36	165	71637	1042.59	ng/ml	94
52)	2,3,4,6-Tetrachlorophenol	9.49	232	67261	1001.42	ng/ml	96
53)	Fluorene	9.70	166	241048	972.55	ng/ml	99
54)	4-Chlorophenyl Phenyl Ethe	9.70	204	127210	960.11	ng/ml	98
55)	Diethyl Phthalate	9.60	149	216614	988.62	ng/ml	98
56)	4-Nitroaniline	9.72	138	55036	966.54	ng/ml	97
57)	2-Methyl-4,6-dinitrophenol	9.75	198	43139	809.99	ng/ml	99
58)	N-Nitrosodiphenylamine	9.81	169	159929	933.22	ng/ml	96
59)	Azobenzene	9.85	77	206115	982.00	ng/ml	99
62)	4-Bromophenyl Phenyl Ether	10.17	248	82833	980.71	ng/ml	98
63)	Hexachlorobenzene	10.21	284	98896	966.99	ng/ml	99
64)	Pentachlorophenol	10.41	266	54581	889.18	ng/ml	96
65)	Phenanthrene	10.61	178	343342	947.77	ng/ml	99
66)	Anthracene	10.66	178	355516	988.14	ng/ml	99
67)	Carbazole	10.82	167	322980	987.04	ng/ml	98
68)	Di-n-butyl Phthalate	11.16	149	368780	1072.19	ng/ml	99
69)	Fluoranthene	11.76	202	401570	1017.75	ng/ml	99
71)	Benzidine	11.91	184	219504	912.72	ng/ml	98

(#) = qualifier out of range (m) = manual integration
1024F007.D 102608SVOLL.M Mon Oct 27 09:07:46 2008 Page 2

LB 10.29.8
10/27/08

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F007.D
Acq On : 26 Oct 2008 3:22 pm
Sample : 1.0PPM ICAL SVO_LL | SVM27-33G
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:51 2008

Vial: 7
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
72)	Pyrene	11.99	202	404581	957.10	ng/ml	98
74)	Butyl Benzyl Phthalate	12.79	149	159622	1047.73	ng/ml	98
75)	3,3'-Dichlorobenzidine	13.51	252	174665	1032.73	ng/ml	99
76)	Benz(a)anthracene	13.53	228	413567	1021.26	ng/ml	97
77)	Chrysene	13.58	228	388869	951.85	ng/ml	99
78)	Bis(2-ethylhexyl) Phthalat	13.64	149	222881	1035.47	ng/ml	100
80)	Di-n-octyl Phthalate	14.76	149	365182	1205.37	ng/ml	98
81)	Benzo(b)fluoranthene	15.30	252	439642	989.90	ng/ml	98
82)	Benzo(k)fluoranthene	15.35	252	448416	971.56	ng/ml	99
83)	Benzo(a)pyrene	15.80	252	409951	1033.05	ng/ml	99
84)	Indeno(1,2,3-cd)pyrene	17.00	276	448872	1038.03	ng/ml	100
85)	Dibenz(a,h)anthracene	17.03	278	480662	1016.85	ng/ml	97
86)	Benzo(g,h,i)perylene	17.26	276	476657	994.71	ng/ml	99

10-29-8

(#) = qualifier out of range (m) = manual integration
1024F007.D 102608SVOLL.M Mon Oct 27 09:07:46 2008 LB 10/27/08

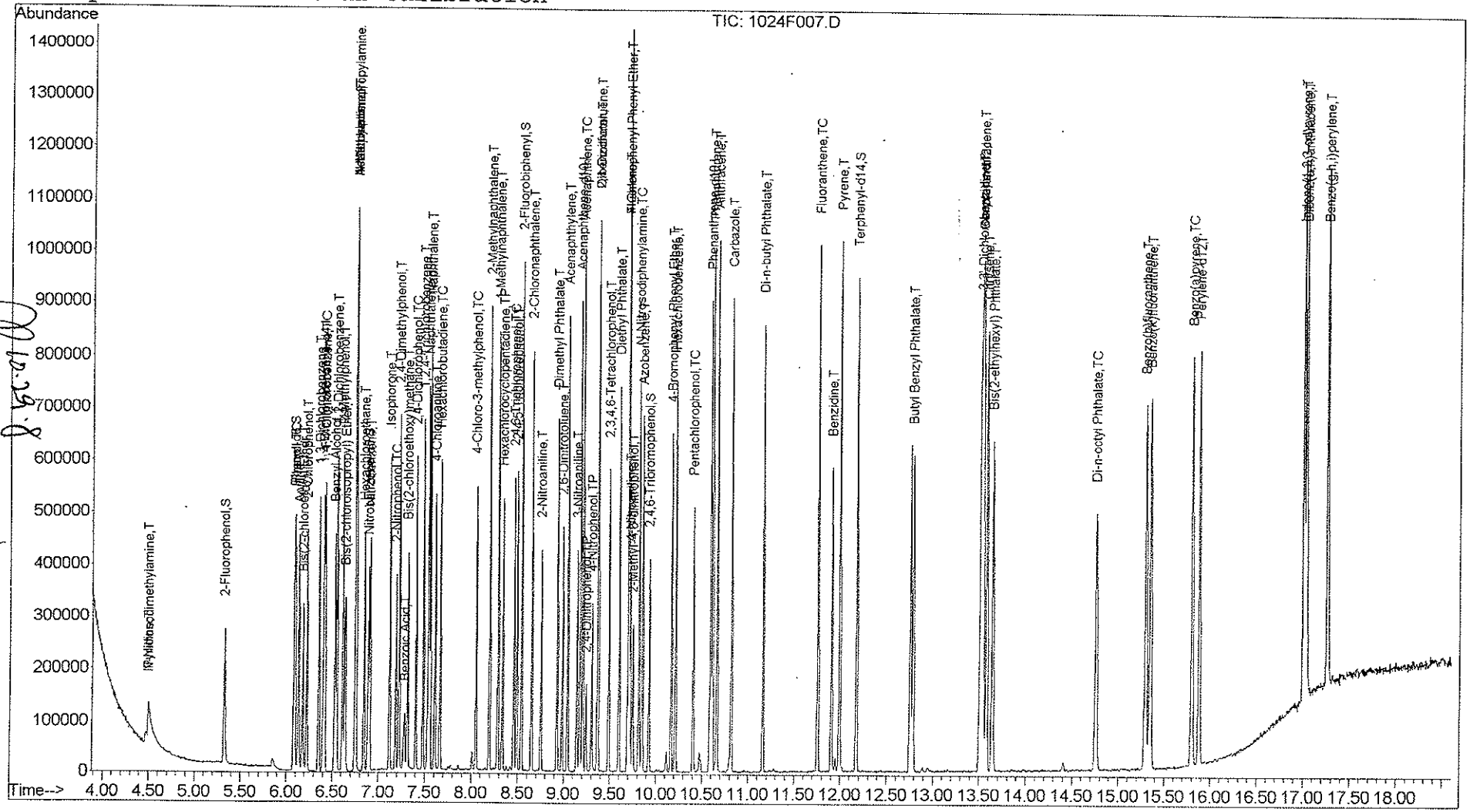
Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F007.D
Acq On : 26 Oct 2008 3:22 pm
Sample : 1.0PPM ICAL SVO_LL | SVM27-33G
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:46 2008

Vial: 7
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:00:27 2008
Response via : Initial Calibration



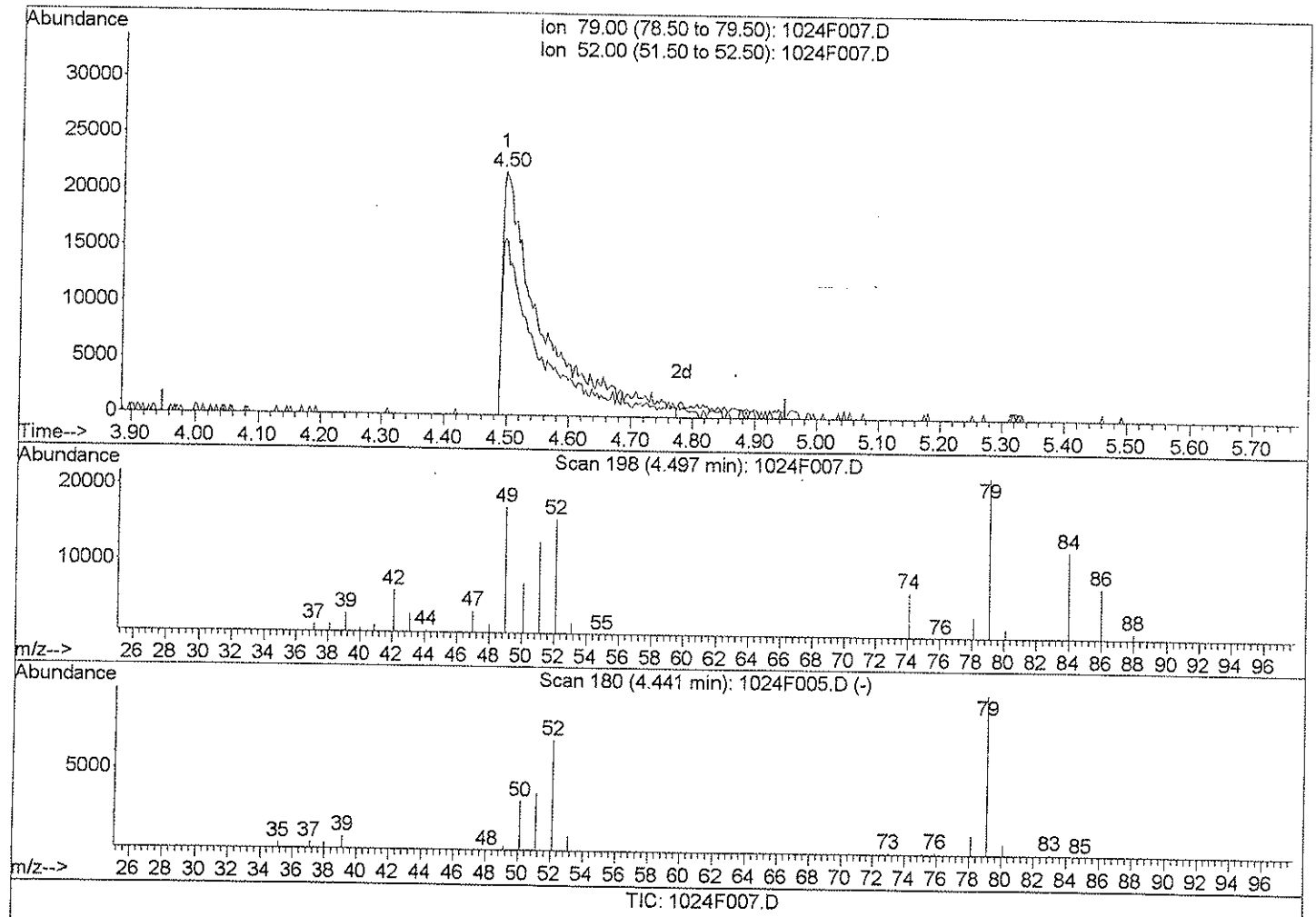
1024F007.D 102608SVOLL.M Mon Oct 27 09:07:47 2008 Page 4

Data File : J:\MS17\DATA\102608\1024F007.D
Acq On : 26 Oct 2008 3:22 pm
Sample : 1.0PPM ICAL SVO_LL | SVM27-33G
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45 2008

Vial: 7
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration



TIC: 1024F007.D

(3) Pyridine (T)

4.50min 983.44ng/ml

response 97131

Ion	Exp%	Act%
79.00	100	100
52.00	64.50	72.71
0.00	0.00	0.00
0.00	0.00	0.00

1024F007.D 102608SVOLL.M Mon Oct 27 08:46:00 2008

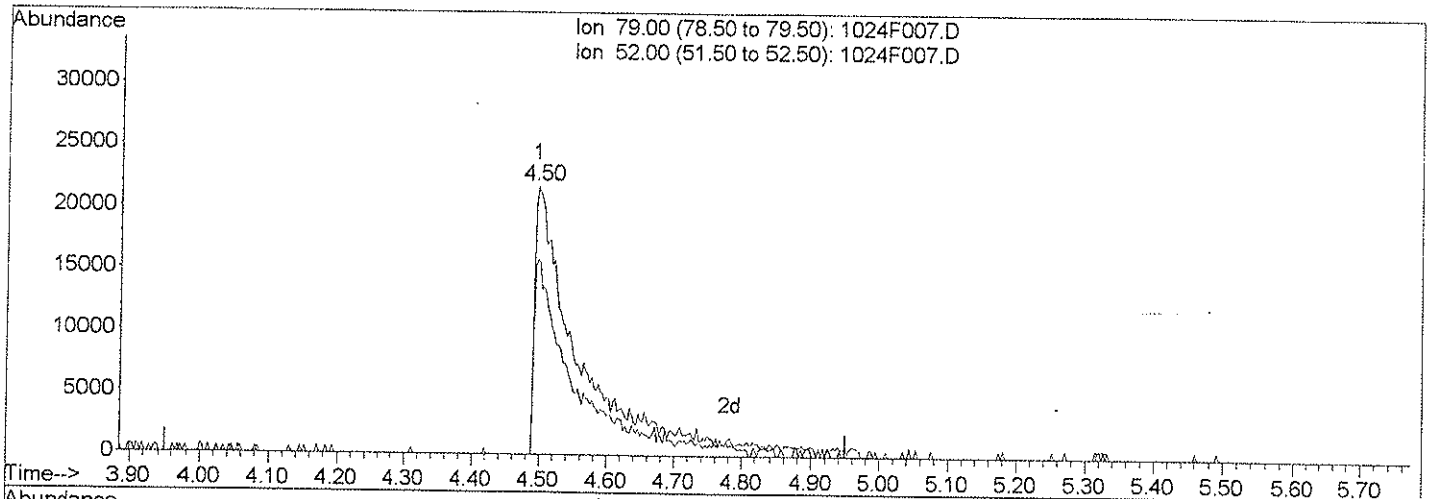
Quantitation Report (Qedit)

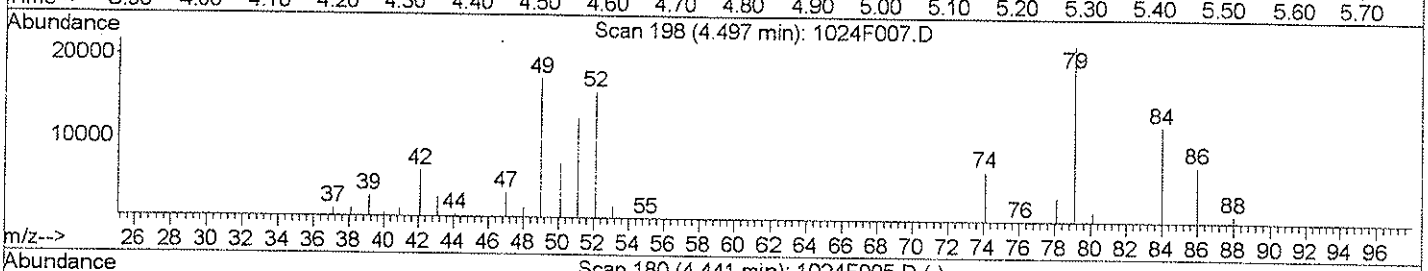
Data File : J:\MS17\DATA\102608\1024F007.D
Acq On : 26 Oct 2008 3:22 pm
Sample : 1.0PPM ICAL SVO_LL | SVM27-33G
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:46 2008

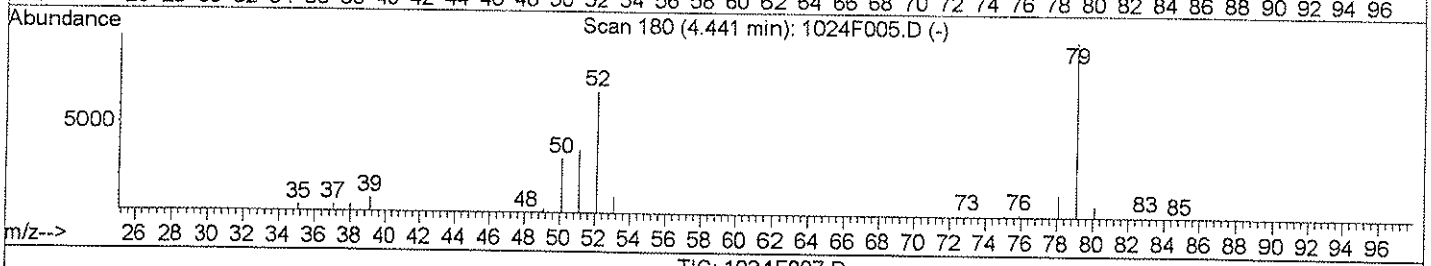
Vial: 7
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration







TIC: 1024F007.D

(3) Pyridine (T)

4.50min 1053.09ng/ml m

response 104010

Ion	Exp%	Act%
79.00	100	100
52.00	64.50	72.71
0.00	0.00	0.00
0.00	0.00	0.00

LC LB 10.29.8 10107108

1024F007.D 102608SVOLL.M Mon Oct 27 08:46:08 2008

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F008.D
Acq On : 26 Oct 2008 3:48 pm
Sample : 2.0PPM ICAL SVO_LL | SVM27-33H
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:52 2008

Vial: 8
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.40	152	72728	1000.00	ng/ml	0.00
22) Naphthalene-d8	7.53	136	277092	1000.00	ng/ml	0.00
36) Acenaphthene-d10	9.17	164	160721	1000.00	ng/ml	0.00
60) Phenanthrene-d10	10.59	188	270888	1000.00	ng/ml	0.00
70) Chrysene-d12	13.54	240	344106	1000.00	ng/ml	0.00
79) Perylene-d12	15.88	264	384202	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	5.32	112	180789	2157.24	ng/ml	0.00
Spiked Amount 3750.000	Range 25 - 121		Recovery = 57.53%			
7) Phenol-d6	6.08	99	246127	2141.65	ng/ml	0.00
Spiked Amount 3750.000	Range 24 - 113		Recovery = 57.11%			
20) Nitrobenzene-d5	6.89	82	196275	2101.85	ng/ml	0.00
Spiked Amount 2500.000	Range 23 - 120		Recovery = 84.07%			
40) 2-Fluorobiphenyl	8.54	172	482566	1972.19	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 115		Recovery = 78.89%			
61) 2,4,6-Tribromophenol	9.93	330	107621	2105.21	ug/ml	0.00
Spiked Amount 3750.000	Range 19 - 122		Recovery = 56.14%			
73) Terphenyl-d14	12.18	244	608434	2011.51	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 140		Recovery = 80.46%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.44	74	105904m	2088.43	ng/ml	
3) Pyridine	4.47	79	209430m	2139.23	ng/ml	
5) Aniline	6.13	93	298001	2112.88	ng/ml	99
6) Bis(2-chloroethyl) Ether	6.18	93	189087	1980.97	ng/ml	97
8) Phenol	6.09	94	243044	2080.93	ng/ml	99
9) 2-Chlorophenol	6.22	128	211212	2093.62	ng/ml	98
10) 1,3-Dichlorobenzene	6.35	146	238556	1966.90	ng/ml	99
11) 1,4-Dichlorobenzene	6.42	146	245519	2017.87	ng/ml	99
12) 1,2-Dichlorobenzene	6.55	146	233335	1999.22	ng/ml	99
13) Benzyl Alcohol	6.53	108	130282	2255.00	ng/ml	98
14) Bis(2-chloroisopropyl) Eth	6.64	45	270790	1950.79	ng/ml	99
15) 2-Methylphenol	6.61	107	169902	2086.61	ng/ml	95
16) Hexachloroethane	6.84	117	82692	2084.23	ng/ml	99
17) Acetophenone	6.76	105	279581	2081.86	ng/ml	98
18) N-Nitrosodi-n-propylamine	6.75	70	144985	2142.45	ng/ml	98
19) 4-Methylphenol	6.75	107	245741	2091.11	ng/ml	94
21) Nitrobenzene	6.91	77	209403	2097.71	ng/ml	98
23) Isophorone	7.12	82	372530	2133.83	ng/ml	99
24) 2-Nitrophenol	7.19	139	117514	2208.77	ng/ml	94
25) 2,4-Dimethylphenol	7.22	122	184890	2078.07	ng/ml	99

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

10/27/08

Data File : J:\MS17\DATA\102608\1024F008.D
Acq On : 26 Oct 2008 3:48 pm
Sample : 2.0PPM ICAL SVO_LL | SVM27-33H
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:52 2008

Vial: 8
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	Bis(2-chloroethoxy)methane	7.31	93	224581	2065.15	ng/ml	98
27)	2,4-Dichlorophenol	7.40	162	181837	2122.06	ng/ml	100
28)	Benzoic Acid	7.30	105	105885	2076.13	ng/ml	98
29)	1,2,4-Trichlorobenzene	7.48	180	206793	1991.64	ng/ml	99
30)	Naphthalene	7.56	128	608037	1969.42	ng/ml	99
31)	4-Chloroaniline	7.61	127	255976	2080.85	ng/ml	98
32)	Hexachlorobutadiene	7.66	225	129294	2005.36	ng/ml	97
33)	4-Chloro-3-methylphenol	8.05	107	171824	2122.58	ng/ml	99
34)	2-Methylnaphthalene	8.20	142	414811	1996.16	ng/ml	99
35)	1-Methylnaphthalene	8.29	142	393915	2004.77	ng/ml	99
37)	Hexachlorocyclopentadiene	8.34	237	152344	2008.69	ng/ml	95
38)	2,4,6-Trichlorophenol	8.46	196	140478	2207.89	ng/ml	100
39)	2,4,5-Trichlorophenol	8.49	196	152905	2110.40	ng/ml	96
41)	2-Chloronaphthalene	8.65	162	408431	1968.77	ng/ml	99
42)	2-Nitroaniline	8.75	65	109760	2054.81	ng/ml	99
43)	Acenaphthylene	9.04	152	653079	2101.52	ng/ml	99
44)	Dimethyl Phthalate	8.93	163	466677	2067.92	ng/ml	99
45)	2,6-Dinitrotoluene	8.99	165	109439	2123.60	ng/ml	93
46)	Acenaphthene	9.21	154	387707	2002.69	ng/ml	100
47)	3-Nitroaniline	9.14	138	115839	2116.32	ng/ml	98
48)	2,4-Dinitrophenol	9.24	184	58627	1663.69	ng/ml	96
49)	Dibenzofuran	9.37	168	599391	1950.96	ng/ml	99
50)	4-Nitrophenol	9.31	65	79735	2054.95	ng/ml	99
51)	2,4-Dinitrotoluene	9.37	165	148875	2110.00	ng/ml	97
52)	2,3,4,6-Tetrachlorophenol	9.49	232	137365	2108.17	ng/ml	98
53)	Fluorene	9.70	166	487313	2026.72	ng/ml	98
54)	4-Chlorophenyl Phenyl Ethe	9.70	204	255393	1986.95	ng/ml	98
55)	Diethyl Phthalate	9.60	149	439254	2066.50	ng/ml	97
56)	4-Nitroaniline	9.72	138	118373	2142.91	ng/ml	96
57)	2-Methyl-4,6-dinitrophenol	9.75	198	93702	1880.28	ng/ml	93
58)	N-Nitrosodiphenylamine	9.81	169	321609	1934.47	ng/ml	99
59)	Azobenzene	9.85	77	414795	2037.11	ng/ml	98
62)	4-Bromophenyl Phenyl Ether	10.17	248	168510	2039.68	ng/ml	98
63)	Hexachlorobenzene	10.22	284	203576	2035.03	ng/ml	96
64)	Pentachlorophenol	10.41	266	116590	1941.82	ng/ml	98
65)	Phenanthrene	10.61	178	700503	1976.89	ng/ml	99
66)	Anthracene	10.66	178	726134	2063.36	ng/ml	99
67)	Carbazole	10.82	167	665420	2078.99	ng/ml	99
68)	Di-n-butyl Phthalate	11.16	149	750425	2230.55	ng/ml	99
69)	Fluoranthene	11.76	202	809920	2098.57	ng/ml	99
71)	Benzidine	11.91	184	458164	1939.72	ng/ml	98

(#) = qualifier out of range (m) = manual integration
1024F008.D 102608SVOLL.M Mon Oct 27 09:07:48 2008 Page 2

LB 10-29-08
10/27/08

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F008.D
Acq On : 26 Oct 2008 3:48 pm
Sample : 2.0PPM ICAL SVO_LL | SVM27-33H
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:52 2008

Vial: 8
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
72) Pyrene	11.99	202	823342	1983.15	ng/ml	99
74) Butyl Benzyl Phthalate	12.79	149	326082	2071.16	ng/ml	99
75) 3,3'-Dichlorobenzidine	13.51	252	363270	2186.94	ng/ml	98
76) Benz(a)anthracene	13.53	228	832648	2093.52	ng/ml	99
77) Chrysene	13.58	228	785358	1957.29	ng/ml	100
78) Bis(2-ethylhexyl) Phthalat	13.64	149	466159	2205.07	ng/ml	98
80) Di-n-octyl Phthalate	14.76	149	768828	2195.76	ng/ml	98
81) Benzo(b)fluoranthene	15.31	252	902971	2085.34	ng/ml	99
82) Benzo(k)fluoranthene	15.36	252	918958	2042.19	ng/ml	98
83) Benzo(a)pyrene	15.80	252	826285	2035.77	ng/ml	99
84) Indeno(1,2,3-cd)pyrene	17.01	276	918135	2177.74	ng/ml	99
85) Dibenz(a,h)anthracene	17.03	278	988301	2144.47	ng/ml	99
86) Benzo(g,h,i)perylene	17.26	276	976261	2089.62	ng/ml	99

(#) = qualifier out of range (m) = manual integration
1024F008.D 102608SVOLL.M Mon Oct 27 09:07:48 2008 Page 3

10.29.8
LB
10/29/08

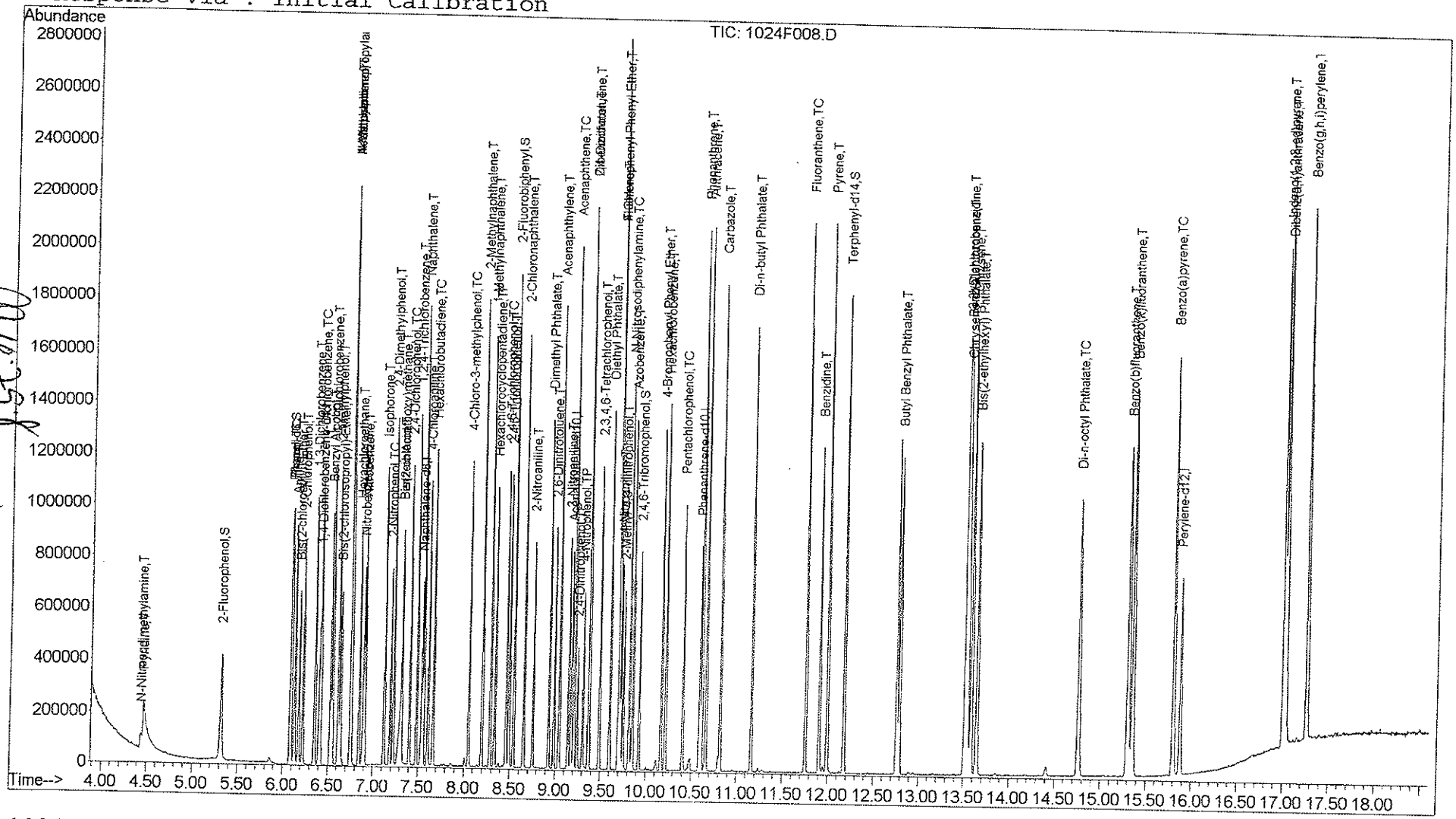
Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F008.D
Acq On : 26 Oct 2008 3:48 pm
Sample : 2.0PPM ICAL SVO_LL | SVM27-33H
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:47 2008

Vial: 8
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:00:27 2008
Response via : Initial Calibration



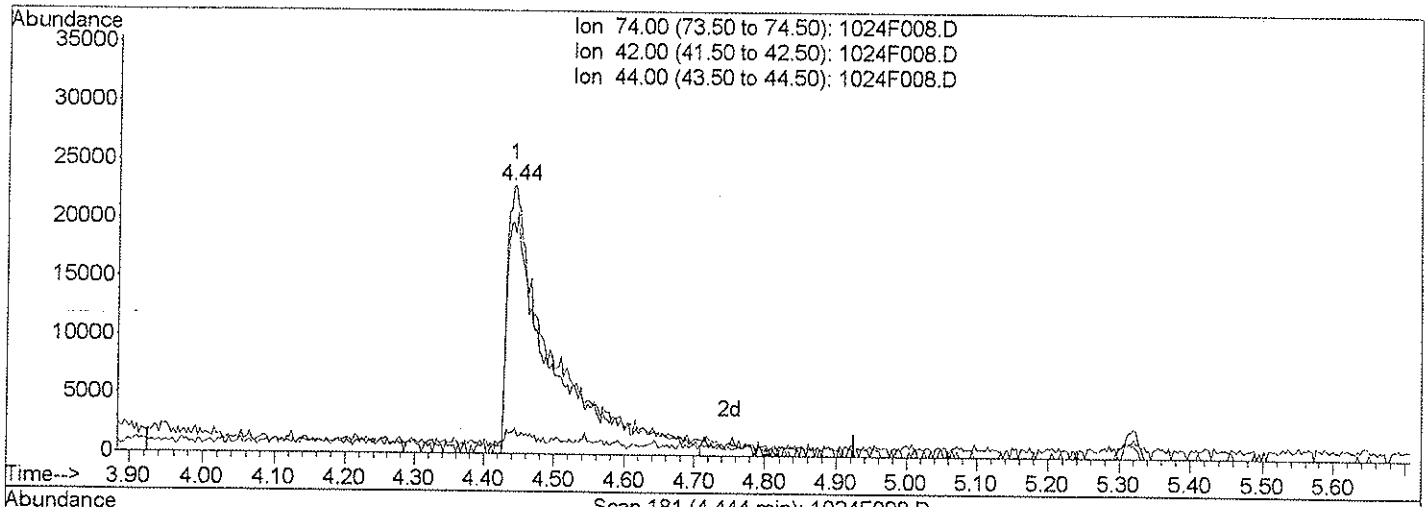
969

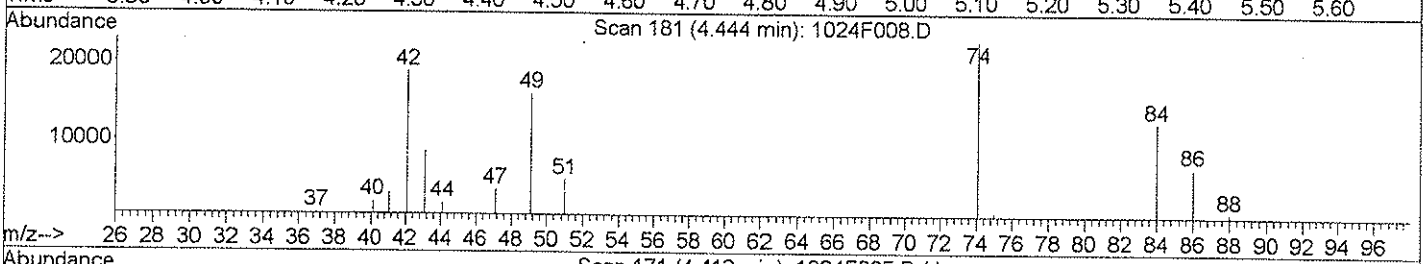
1024F008.D 102608SVOLL.M Mon Oct 27 09:07:49 2008

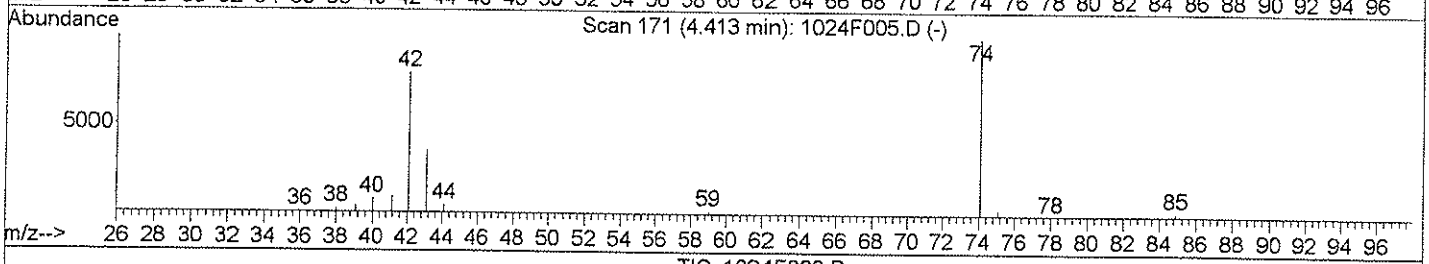
Data File : J:\MS17\DATA\102608\1024F008.D
Acq On : 26 Oct 2008 3:48 pm
Sample : 2.0PPM ICAL SVO_LL | SVM27-33H
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45 2008

Vial: 8
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration







TIC: 1024F008.D

(2) N-Nitrosodimethylamine (T)

4.44min 2021.66ng/ml

response 102071

Ion	Exp%	Act%
74.00	100	100
42.00	89.40	79.33
44.00	7.30	5.84
0.00	0.00	0.00

1024F008.D 102608SVOLL.M Mon Oct 27 08:46:55 2008

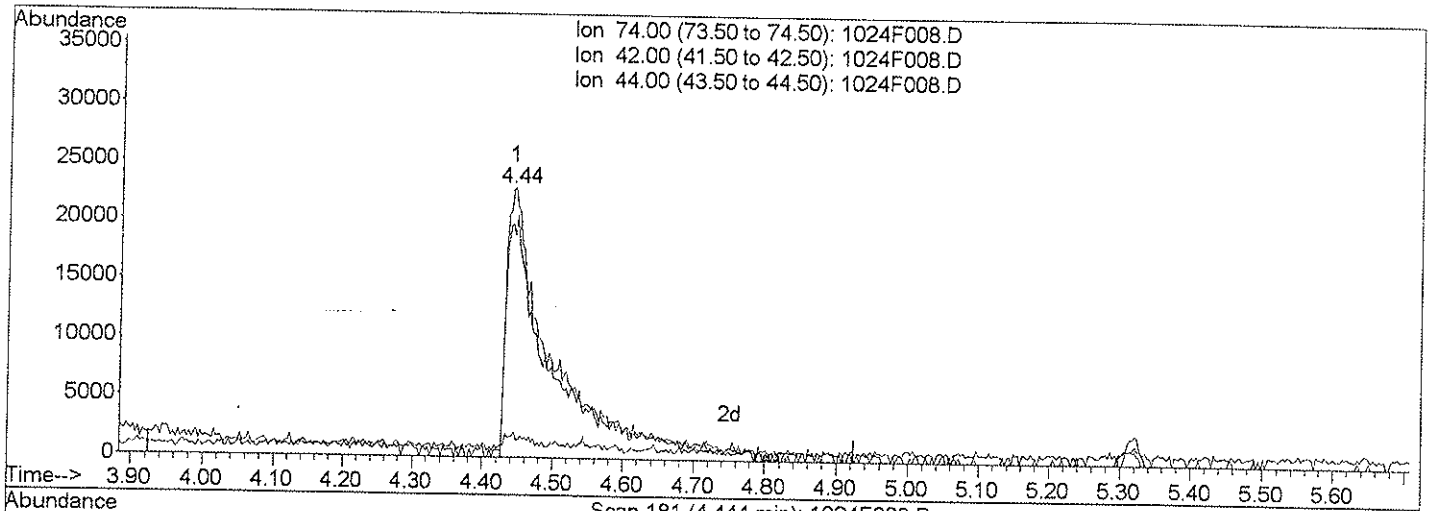
Quantitation Report (Qedit)

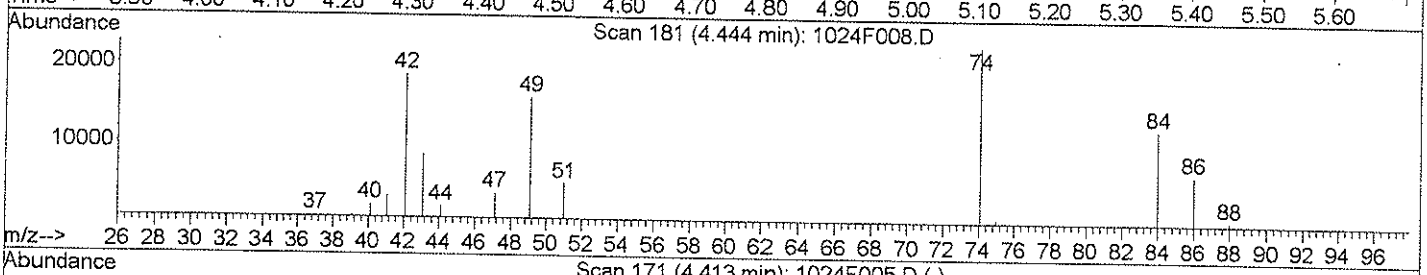
Data File : J:\MS17\DATA\102608\1024F008.D
Acq On : 26 Oct 2008 3:48 pm
Sample : 2.0PPM ICAL SVO_LL | SVM27-33H
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:47 2008

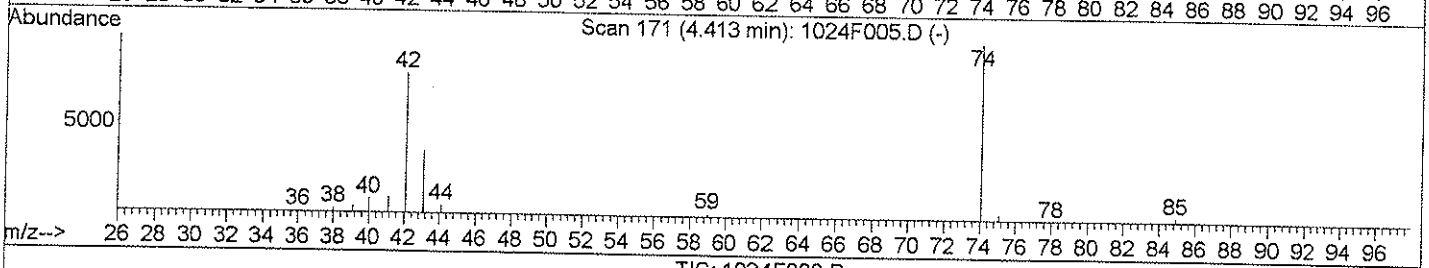
Vial: 8
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration







TIC: 1024F008.D

(2) N-Nitrosodimethylamine (T)

4.44min 2088.43ng/ml m

response 105904

Ion	Exp%	Act%
74.00	100	100
42.00	89.40	82.23
44.00	7.30	9.42
0.00	0.00	0.00

IC 10-29-8

LB 10127108

1024F008.D 102608SVOLL.M Mon Oct 27 08:47:03 2008

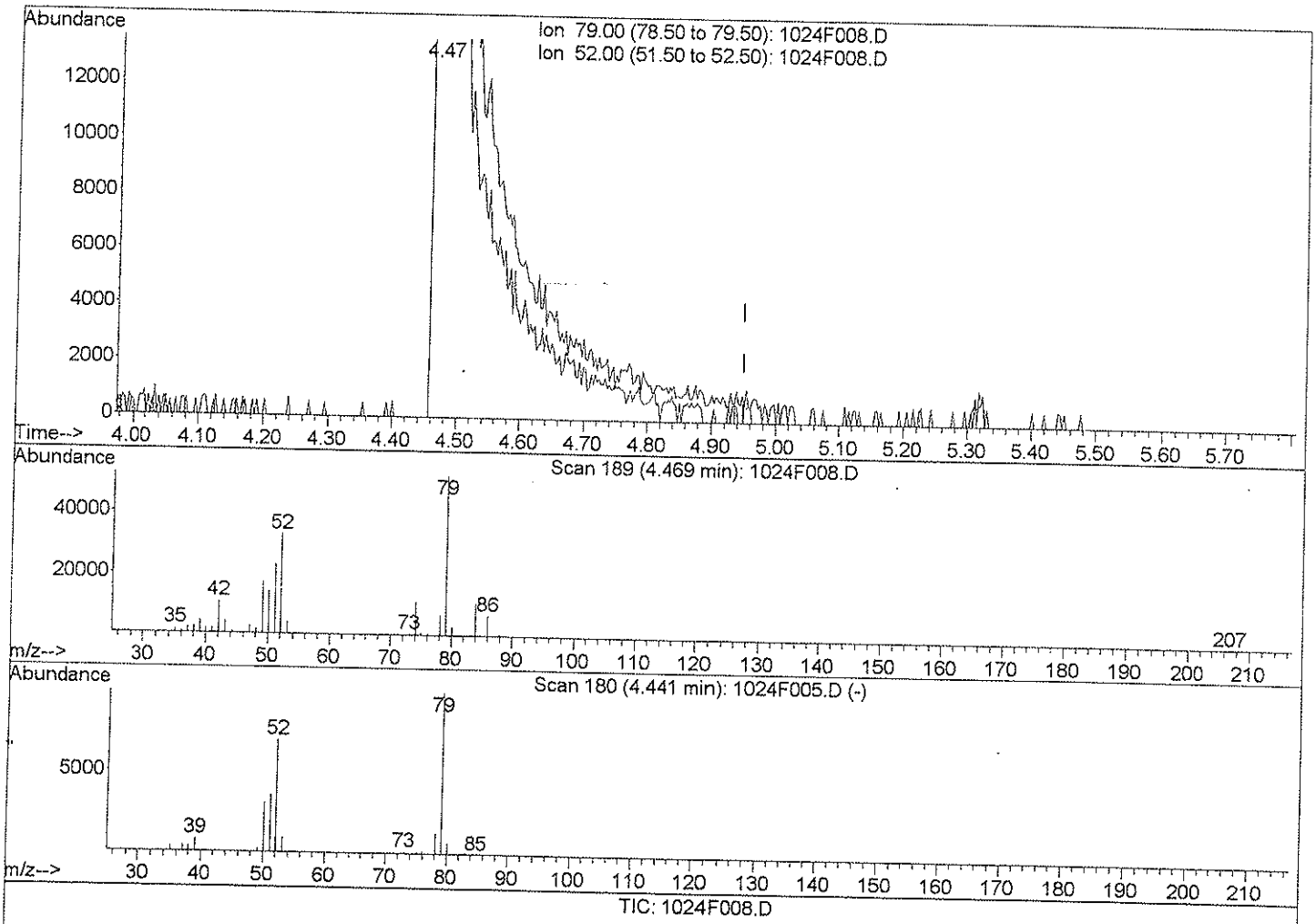
Quantitation Report (Qedit)

Data File : J:\MS17\DATA\102608\1024F008.D
Acq On : 26 Oct 2008 3:48 pm
Sample : 2.0PPM ICAL SVO_LL | SVM27-33H
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:47 2008

Vial: 8
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration



TIC: 1024F008.D

(3) Pyridine (T)

4.47min 2119.94ng/ml

response 207541

Ion	Exp%	Act%
79.00	100	100
52.00	64.50	62.86
0.00	0.00	0.00
0.00	0.00	0.00

1024F008.D 102608SVOLL.M Mon Oct 27 08:47:08 2008

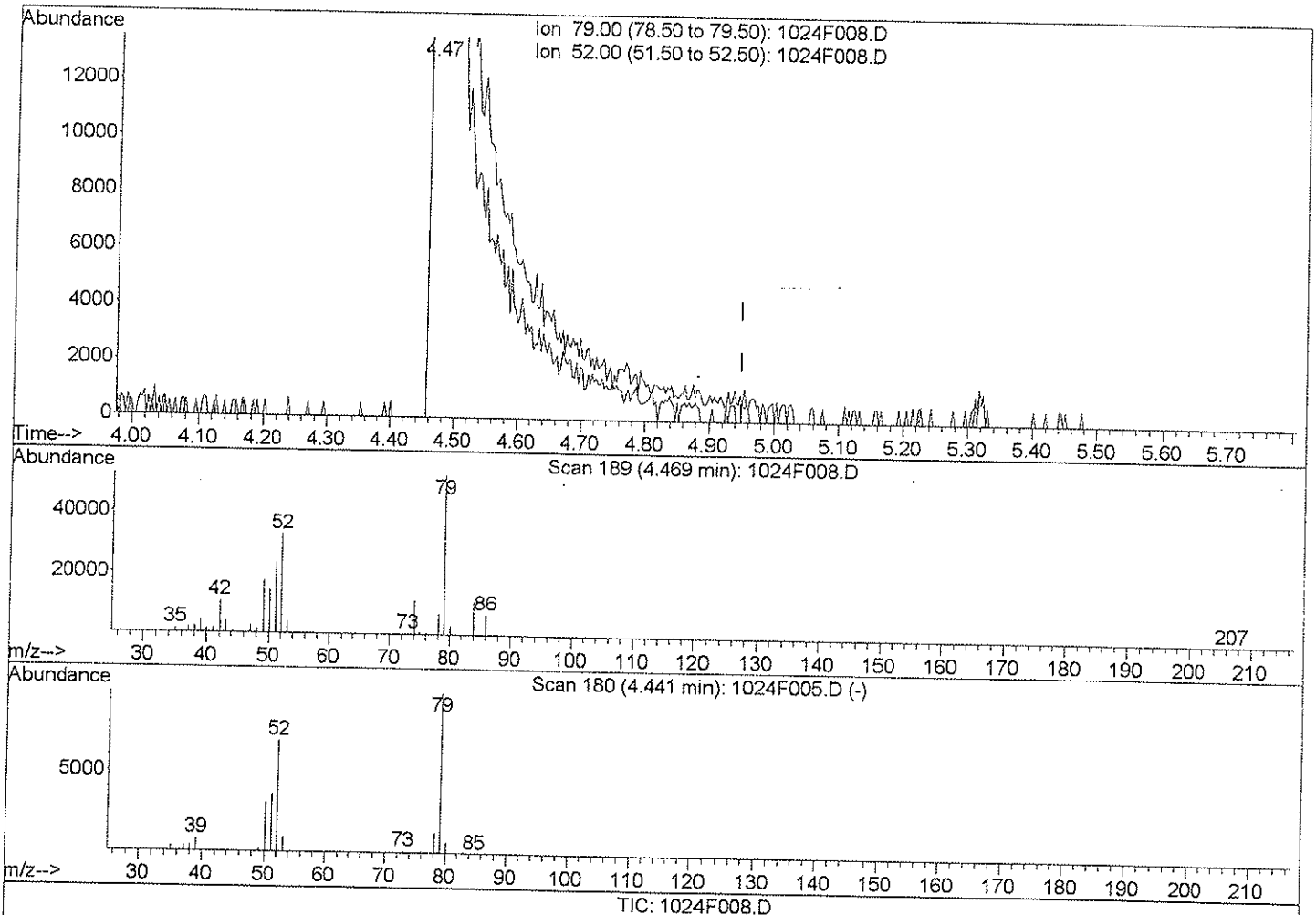
Quantitation Report (Qedit)

Data File : J:\MS17\DATA\102608\1024F008.D
Acq On : 26 Oct 2008 3:48 pm
Sample : 2.0PPM ICAL SVO_LL | SVM27-33H
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:47 2008

Vial: 8
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration



(3) Pyridine (T)

4.47min 2139.23ng/ml m

response 209430

Ion	Exp%	Act%
79.00	100	100
52.00	64.50	62.86
0.00	0.00	0.00
0.00	0.00	0.00

1C 10-29-8
LB 10127108

1024F008.D 102608SVOLL.M Mon Oct 27 08:47:15 2008

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F009.D
Acq On : 26 Oct 2008 4:14 pm
Sample : 3.0PPM ICAL SVO_LL | SVM27-33I
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:53 2008

Vial: 9
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.40	152	74249	1000.00	ng/ml	0.00
22) Naphthalene-d8	7.54	136	280404	1000.00	ng/ml	0.00
36) Acenaphthene-d10	9.18	164	162106	1000.00	ng/ml	0.00
60) Phenanthrene-d10	10.59	188	277239	1000.00	ng/ml	0.00
70) Chrysene-d12	13.54	240	352815	1000.00	ng/ml	0.00
79) Perylene-d12	15.88	264	397899	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	5.31	112	274677	3210.40	ng/ml	0.00
Spiked Amount 3750.000	Range 25 - 121		Recovery = 85.61%			
7) Phenol-d6	6.08	99	369104	3145.93	ng/ml	0.00
Spiked Amount 3750.000	Range 24 - 113		Recovery = 83.89%			
20) Nitrobenzene-d5	6.89	82	297911	3124.89	ng/ml	0.00
Spiked Amount 2500.000	Range 23 - 120		Recovery = 125.00%#			
40) 2-Fluorobiphenyl	8.54	172	726683	2944.49	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 115		Recovery = 117.78%#			
61) 2,4,6-Tribromophenol	9.93	330	168507	3220.71	ug/ml	0.00
Spiked Amount 3750.000	Range 19 - 122		Recovery = 85.89%			
73) Terphenyl-d14	12.18	244	919054	2963.44	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 140		Recovery = 118.54%			

Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.42	74	163459m	3032.63	ng/ml	
3) Pyridine	4.45	79	314600m	3147.67	ng/ml	
5) Aniline	6.13	93	448597	3115.47	ng/ml	97
6) Bis(2-chloroethyl) Ether	6.18	93	289308	2968.85	ng/ml	99
8) Phenol	6.09	94	369725	3100.72	ng/ml	100
9) 2-Chlorophenol	6.22	128	316317	3071.23	ng/ml	98
10) 1,3-Dichlorobenzene	6.35	146	360831	2914.11	ng/ml	98
11) 1,4-Dichlorobenzene	6.42	146	370974	2986.50	ng/ml	97
12) 1,2-Dichlorobenzene	6.55	146	348888	2928.05	ng/ml	99
13) Benzyl Alcohol	6.53	108	198540	3366.05	ng/ml	96
14) Bis(2-chloroisopropyl) Eth	6.64	45	406129	2865.85	ng/ml	99
15) 2-Methylphenol	6.61	107	249810	3005.13	ng/ml	98
16) Hexachloroethane	6.84	117	124033	3062.17	ng/ml	97
17) Acetophenone	6.76	105	422989	3085.20	ng/ml	99
18) N-Nitrosodi-n-propylamine	6.76	70	220040	3184.93	ng/ml	97
19) 4-Methylphenol	6.75	107	375154	3126.94	ng/ml	96
21) Nitrobenzene	6.91	77	315287	3093.71	ng/ml	98
23) Isophorone	7.12	82	568328	3216.90	ng/ml	99
24) 2-Nitrophenol	7.19	139	180219	3347.36	ng/ml	99
25) 2,4-Dimethylphenol	7.23	122	283375	3147.37	ng/ml	98

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

LB 10/29/08 10/27/08

Data File : J:\MS17\DATA\102608\1024F009.D
Acq On : 26 Oct 2008 4:14 pm
Sample : 3.0PPM ICAL SVO_LL | SVM27-33I
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:53 2008

Vial: 9
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	Bis(2-chloroethoxy)methane	7.32	93	338365	3074.70	ng/ml	98
27)	2,4-Dichlorophenol	7.41	162	274960	3170.92	ng/ml	99
28)	Benzoic Acid	7.32	105	178222	3005.01	ng/ml	95
29)	1,2,4-Trichlorobenzene	7.48	180	311018	2960.06	ng/ml	98
30)	Naphthalene	7.56	128	920789	2947.20	ng/ml	100
31)	4-Chloroaniline	7.61	127	389463	3128.59	ng/ml	99
32)	Hexachlorobutadiene	7.66	225	194197	2976.43	ng/ml	96
33)	4-Chloro-3-methylphenol	8.05	107	258574	3156.49	ng/ml	97
34)	2-Methylnaphthalene	8.20	142	635373	3021.44	ng/ml	96
35)	1-Methylnaphthalene	8.29	142	594624	2990.50	ng/ml	99
37)	Hexachlorocyclopentadiene	8.34	237	236219	3087.99	ng/ml	95
38)	2,4,6-Trichlorophenol	8.46	196	212189	3306.48	ng/ml	96
39)	2,4,5-Trichlorophenol	8.49	196	231726	3170.96	ng/ml	97
41)	2-Chloronaphthalene	8.66	162	615529	2941.71	ng/ml	99
42)	2-Nitroaniline	8.75	65	168387	3022.41	ng/ml	99
43)	Acenaphthylene	9.04	152	974732	3109.76	ng/ml	100
44)	Dimethyl Phthalate	8.93	163	699700	3073.99	ng/ml	99
45)	2,6-Dinitrotoluene	8.99	165	165299	3061.44	ng/ml	95
46)	Acenaphthene	9.21	154	578447	2962.43	ng/ml	98
47)	3-Nitroaniline	9.15	138	176948	3205.13	ng/ml	98
48)	2,4-Dinitrophenol	9.25	184	97785	2751.19	ng/ml	93
49)	Dibenzofuran	9.37	168	904812	2919.92	ng/ml	100
50)	4-Nitrophenol	9.31	65	124821	3189.43	ng/ml	96
51)	2,4-Dinitrotoluene	9.37	165	225487	3052.47	ng/ml	98
52)	2,3,4,6-Tetrachlorophenol	9.49	232	210067	3196.39	ng/ml	96
53)	Fluorene	9.70	166	734038	3026.75	ng/ml	100
54)	4-Chlorophenyl Phenyl Ethe	9.70	204	391513	3019.93	ng/ml	98
55)	Diethyl Phthalate	9.60	149	667667	3114.25	ng/ml	99
56)	4-Nitroaniline	9.73	138	179545	3222.53	ng/ml	96
57)	2-Methyl-4,6-dinitrophenol	9.76	198	169250	3341.53	ng/ml	95
58)	N-Nitrosodiphenylamine	9.82	169	483842	2885.44	ng/ml	99
59)	Azobenzene	9.86	77	626263	3049.37	ng/ml	99
62)	4-Bromophenyl Phenyl Ether	10.17	248	252341	2984.41	ng/ml	99
63)	Hexachlorobenzene	10.22	284	308526	3013.50	ng/ml	97
64)	Pentachlorophenol	10.41	266	188323	3064.69	ng/ml	96
65)	Phenanthrene	10.61	178	1055101	2909.40	ng/ml	99
66)	Anthracene	10.67	178	1102768	3061.81	ng/ml	99
67)	Carbazole	10.82	167	1002011	3058.90	ng/ml	99
68)	Di-n-butyl Phthalate	11.16	149	1150631	3341.77	ng/ml	100
69)	Fluoranthene	11.76	202	1215278	3076.75	ng/ml	99
71)	Benzidine	11.91	184	728756	3009.15	ng/ml	98

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

LB 10/27/08 10/29/08

Quantification Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F009.D
Acq On : 26 Oct 2008 4:14 pm
Sample : 3.0PPM ICAL SVO_LL | SVM27-33I
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45:53 2008

Vial: 9
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Fri Oct 24 14:54:50 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
72) Pyrene	11.99	202	1242213	2918.22	ng/ml	99
74) Butyl Benzyl Phthalate	12.79	149	497862	2997.07	ng/ml	99
75) 3,3'-Dichlorobenzidine	13.51	252	559988	3287.99	ng/ml	98
76) Benz(a)anthracene	13.53	228	1270027	3114.39	ng/ml	99
77) Chrysene	13.58	228	1188185	2888.12	ng/ml	99
78) Bis(2-ethylhexyl) Phthalat	13.65	149	704938	3252.25	ng/ml	98
80) Di-n-octyl Phthalate	14.76	149	1175296	3073.92	ng/ml	98
81) Benzo(b)fluoranthene	15.31	252	1371332	3057.96	ng/ml	98
82) Benzo(k)fluoranthene	15.36	252	1377589	2956.02	ng/ml	100
83) Benzo(a)pyrene	15.81	252	1261303	2917.30	ng/ml	99
84) Indeno(1,2,3-cd)pyrene	17.01	276	1391219	3186.26	ng/ml	99
85) Dibenz(a,h)anthracene	17.04	278	1483057	3107.24	ng/ml	99
86) Benzo(g,h,i)perylene	17.27	276	1461382	3020.32	ng/ml	99

(#) = qualifier out of range (m) = manual integration
1024F009.D 102608SVOLL.M Mon Oct 27 09:07:50 2008 Page 3

10.29.08
LB
10/27/08

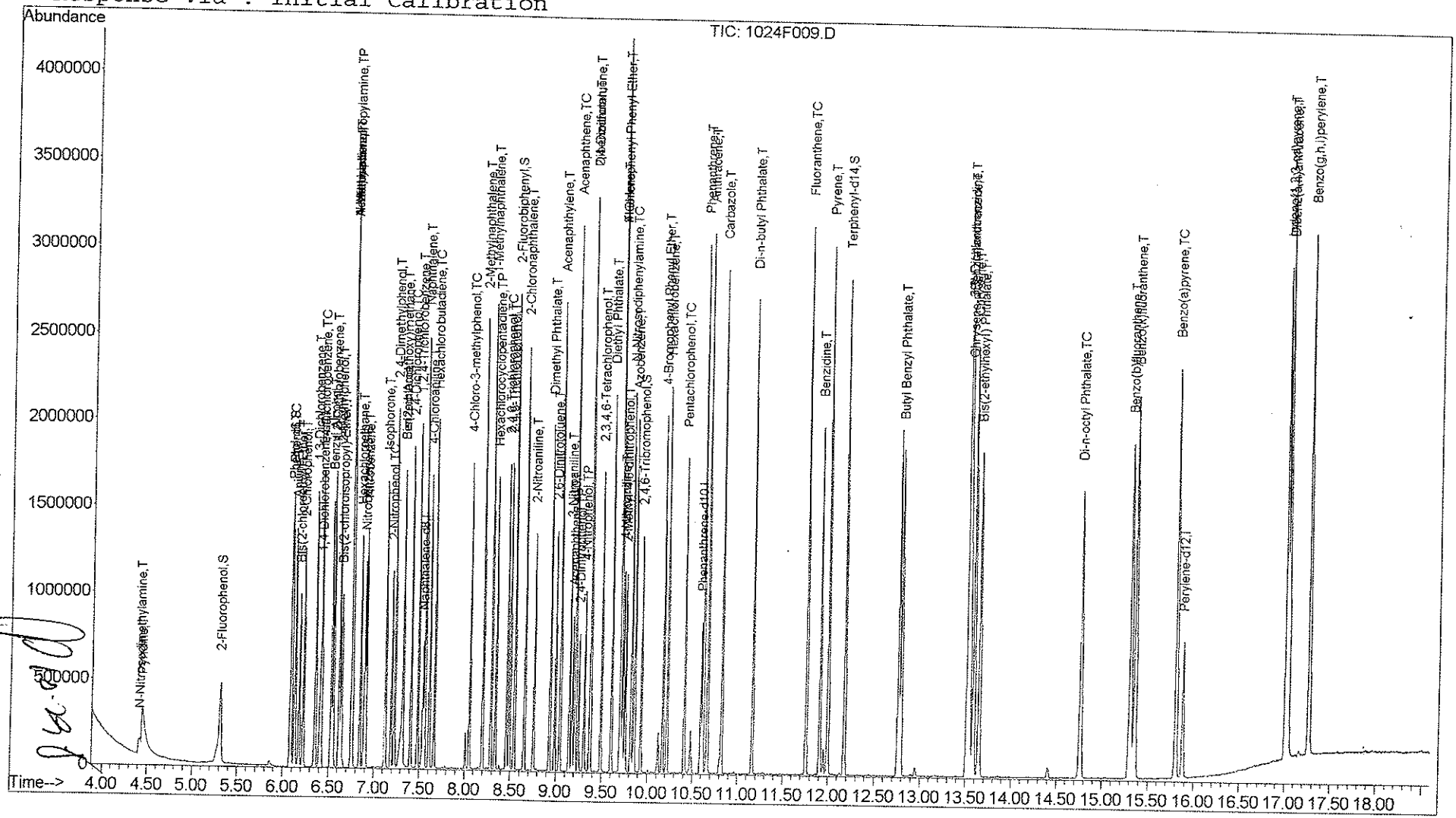
Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F009.D
Acq On : 26 Oct 2008 4:14 pm
Sample : 3.0PPM ICAL SVO_LL | SVM27-33I
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:48 2008

Vial: 9
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:00:27 2008
Response via : Initial Calibration



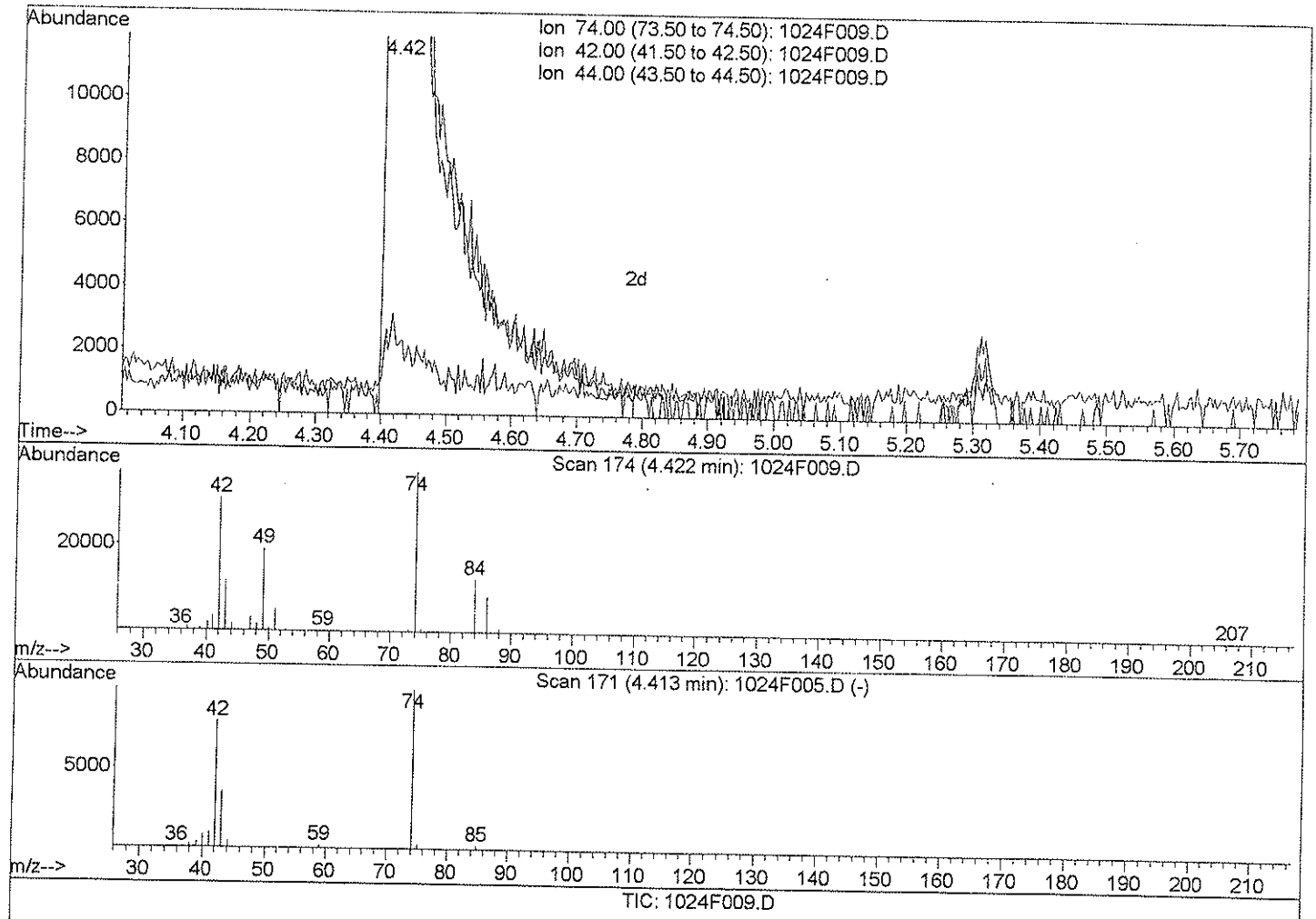
704

Data File : J:\MS17\DATA\102608\1024F009.D
Acq On : 26 Oct 2008 4:14 pm
Sample : 3.0PPM ICAL SVO_LL | SVM27-33I
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 26 16:45 2008

Vial: 9
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration



TIC: 1024F009.D

(2) N-Nitrosodimethylamine (T)

4.42min 3015.20ng/ml

response 162437

Ion	Exp%	Act%
74.00	100	100
42.00	89.40	81.76
44.00	7.30	4.34
0.00	0.00	0.00

1024F009.D 102608SVOLL.M Mon Oct 27 08:47:58 2008

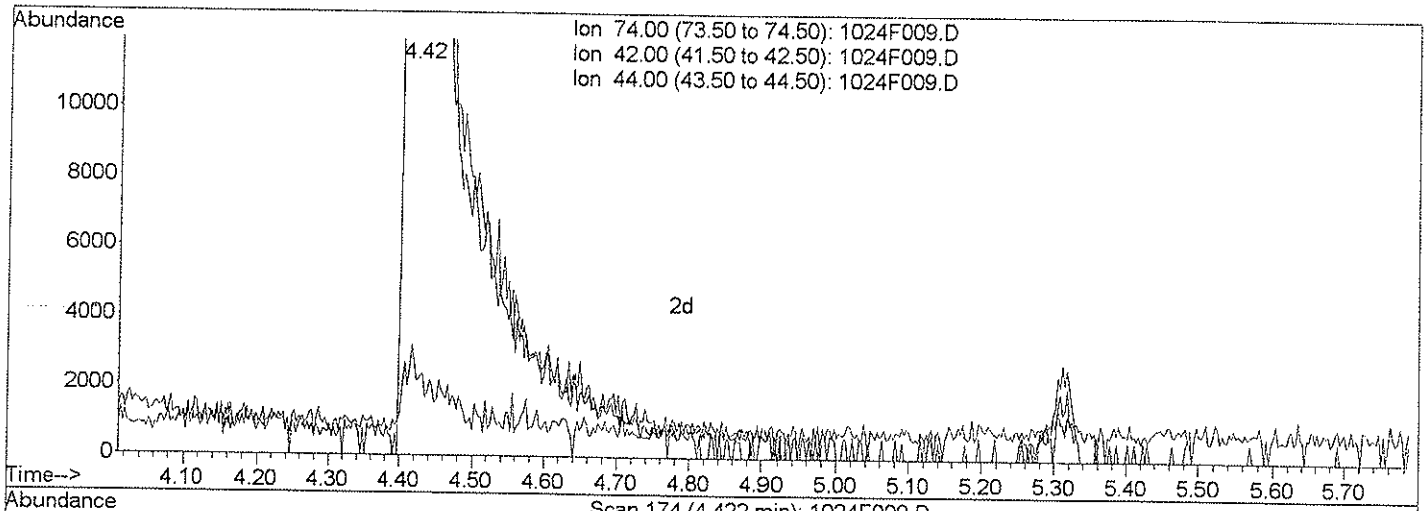
Quantitation Report (Qedit)

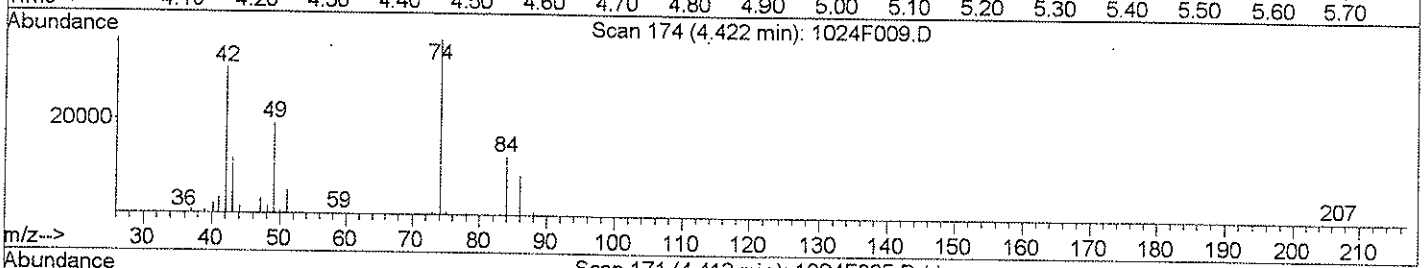
Data File : J:\MS17\DATA\102608\1024F009.D
Acq On : 26 Oct 2008 4:14 pm
Sample : 3.0PPM ICAL SVO_LL | SVM27-33I
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:48 2008

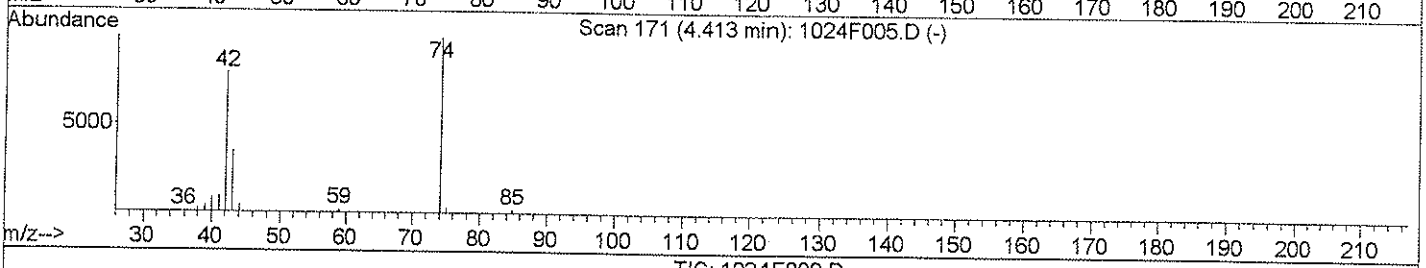
Vial: 9
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration







TIC: 1024F009.D

(2) N-Nitrosodimethylamine (T)

4.42min 3032.63ng/ml m

response 163459

Ion	Exp%	Act%
74.00	100	100
42.00	89.40	83.42
44.00	7.30	5.81
0.00	0.00	0.00

IC 10-29-8

LB 10107108

1024F009.D 102608SVOLL.M Mon Oct 27 08:48:02 2008

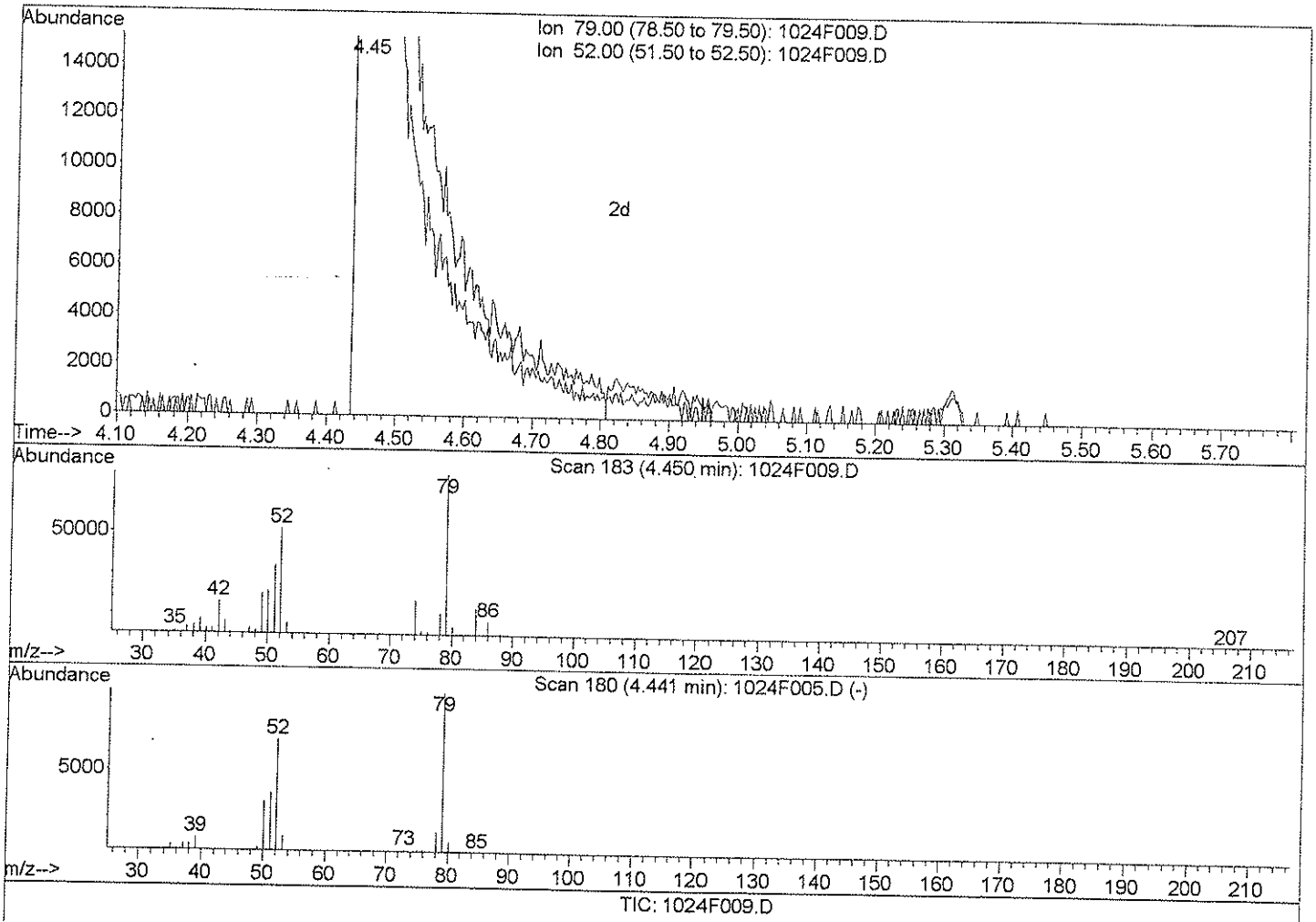
Quantitation Report (Qedit)

Data File : J:\MS17\DATA\102608\1024F009.D
Acq On : 26 Oct 2008 4:14 pm
Sample : 3.0PPM ICAL SVO_LL | SVM27-33I
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:48 2008

Vial: 9
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration



(3) Pyridine (T)

4.45min 3067.06ng/ml

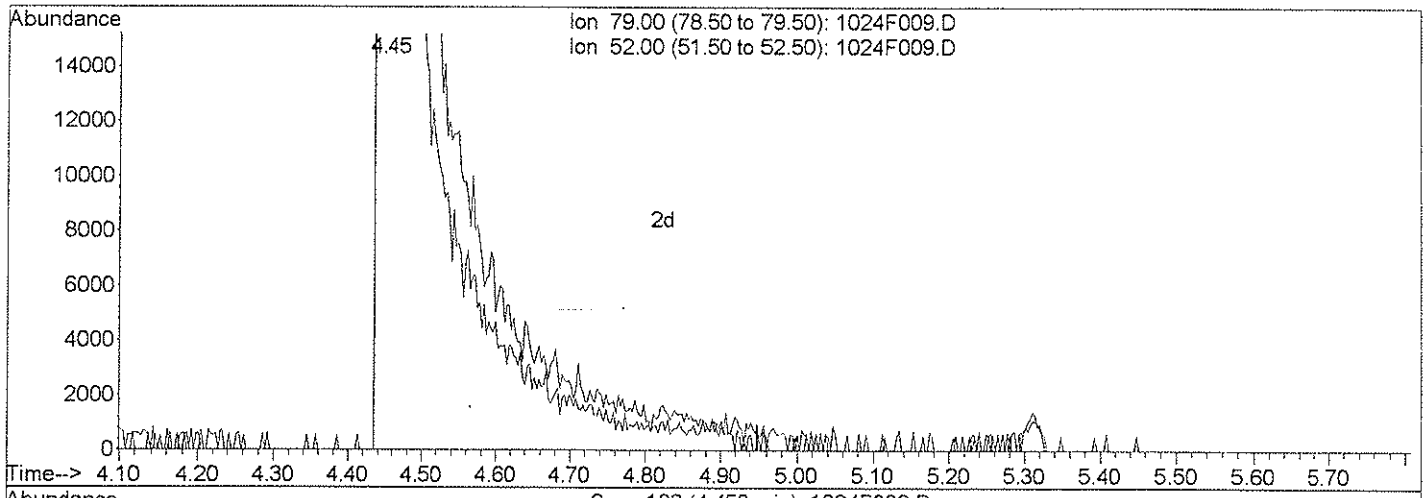
response 306543

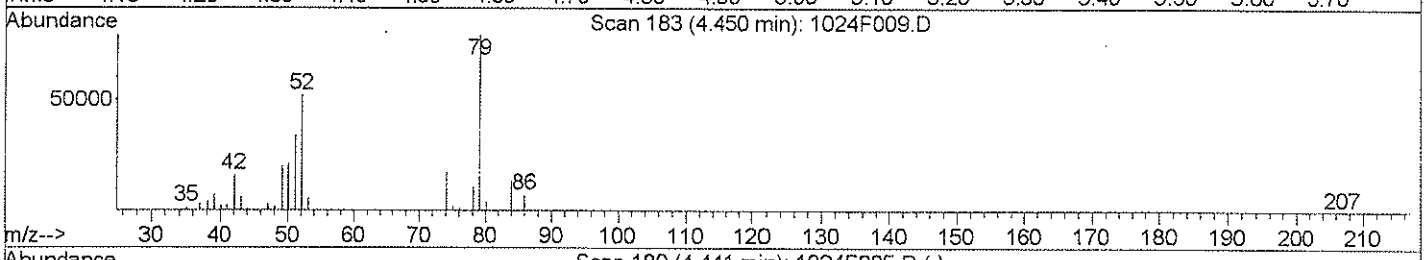
Ion	Exp%	Act%
79.00	100	100
52.00	64.50	65.96
0.00	0.00	0.00
0.00	0.00	0.00

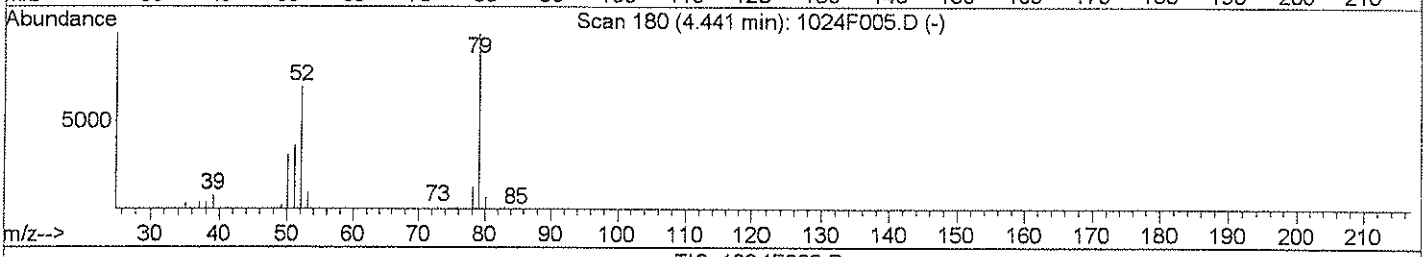
1024F009.D 102608SVOLL.M Mon Oct 27 08:48:08 2008

Data File : J:\MS17\DATA\102608\1024F009.D Vial: 9
Acq On : 26 Oct 2008 4:14 pm Operator: KBAILEY
Sample : 3.0PPM ICAL SVO_LL | SVM27-33I Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:48 2008 Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration







TIC: 1024F009.D

(3) Pyridine (T)

4.45min 3147.67ng/ml m

response 314600

Ion	Exp%	Act%
79.00	100	100
52.00	64.50	65.96
0.00	0.00	0.00
0.00	0.00	0.00

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LB
10/27/08

1024F009.D 102608SVOLL.M Mon Oct 27 08:48:13 2008

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F010.D
Acq On : 26 Oct 2008 4:40 pm
Sample : 5.0PPM ICAL SVO_LL | SVM27-33J
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 08:18:23 2008

Vial: 10
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Sun Oct 26 16:53:18 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.40	152	71378	1000.00 ng/ml	0.00
22) Naphthalene-d8	7.54	136	274625	1000.00 ng/ml	0.00
36) Acenaphthene-d10	9.18	164	154940	1000.00 ng/ml	0.00
60) Phenanthrene-d10	10.59	188	272598	1000.00 ng/ml	0.00
70) Chrysene-d12	13.55	240	344737	1000.00 ng/ml	0.02
79) Perylene-d12	15.88	264	385839	1000.00 ng/ml	0.00
System Monitoring Compounds					
4) 2-Fluorophenol	5.31	112	465224	5464.00 ng/ml	0.00
Spiked Amount 3750.000	Range 25 - 121		Recovery = 145.71%#		
7) Phenol-d6	6.09	99	628119	5477.58 ng/ml	0.01
Spiked Amount 3750.000	Range 24 - 113		Recovery = 146.07%#		
20) Nitrobenzene-d5	6.89	82	506348	5516.28 ng/ml	0.00
Spiked Amount 2500.000	Range 23 - 120		Recovery = 220.65%#		
40) 2-Fluorobiphenyl	8.55	172	1243859	5249.98 ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 115		Recovery = 210.00%#		
61) 2,4,6-Tribromophenol	9.93	330	289603	5489.45 ug/ml	0.00
Spiked Amount 3750.000	Range 19 - 122		Recovery = 146.39%#		
73) Terphenyl-d14	12.18	244	1561932	5010.30 ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 140		Recovery = 200.41%#		
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.41	74	284291m	5342.93 ng/ml	
3) Pyridine	4.44	79	536081m	5663.25 ng/ml	
5) Aniline	6.13	93	763195	5460.72 ng/ml	99
6) Bis(2-chloroethyl) Ether	6.18	93	490854	5482.49 ng/ml	99
8) Phenol	6.09	94	628638	5401.26 ng/ml	99
9) 2-Chlorophenol	6.23	128	541130	5429.30 ng/ml	99
10) 1,3-Dichlorobenzene	6.36	146	615636	5361.29 ng/ml	99
11) 1,4-Dichlorobenzene	6.42	146	629659	5309.42 ng/ml	99
12) 1,2-Dichlorobenzene	6.55	146	592078	5228.15 ng/ml	99
13) Benzyl Alcohol	6.53	108	338377	5537.73 ng/ml	99
14) Bis(2-chloroisopropyl) Eth	6.64	45	691896	5271.85 ng/ml	99
15) 2-Methylphenol	6.62	107	432529	5359.98 ng/ml	97
16) Hexachloroethane	6.85	117	212334	5379.22 ng/ml	97
17) Acetophenone	6.76	105	726350	5424.98 ng/ml	100
18) N-Nitrosodi-n-propylamine	6.76	70	378208	5428.04 ng/ml	99
19) 4-Methylphenol	6.75	107	642165	5481.51 ng/ml	87
21) Nitrobenzene	6.91	77	533047	5405.25 ng/ml	99
23) Isophorone	7.13	82	963417	5256.75 ng/ml	99
24) 2-Nitrophenol	7.19	139	310667	5627.47 ng/ml	97
25) 2,4-Dimethylphenol	7.23	122	462182	5079.16 ng/ml	99

(#) = qualifier out of range (m) = manual integration
1024F010.D 102608SVOLL.M Mon Oct 27 09:07:52 2008 Page 1

LB 10/27/08 10-29-08

Data File : J:\MS17\DATA\102608\1024F010.D
Acq On : 26 Oct 2008 4:40 pm
Sample : 5.0PPM ICAL SVO_LL | SVM27-33J
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 08:18:23 2008

Vial: 10
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Sun Oct 26 16:53:18 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26)	Bis(2-chloroethoxy)methane	7.32	93	579461	5390.53	ng/ml	98
27)	2,4-Dichlorophenol	7.41	162	472751	5398.37	ng/ml	99
28)	Benzoic Acid	7.34	105	326887	5328.98	ng/ml	94
29)	1,2,4-Trichlorobenzene	7.48	180	531041	5201.74	ng/ml	100
30)	Naphthalene	7.56	128	1570472	5202.03	ng/ml	100
31)	4-Chloroaniline	7.61	127	670149	5499.73	ng/ml	97
32)	Hexachlorobutadiene	7.66	225	332852	5253.06	ng/ml	98
33)	4-Chloro-3-methylphenol	8.06	107	447006	5394.17	ng/ml	99
34)	2-Methylnaphthalene	8.20	142	1082473	5254.17	ng/ml	98
35)	1-Methylnaphthalene	8.29	142	1021542	5262.41	ng/ml	99
37)	Hexachlorocyclopentadiene	8.34	237	415395	5863.93	ng/ml	95
38)	2,4,6-Trichlorophenol	8.46	196	373117	5597.65	ng/ml	97
39)	2,4,5-Trichlorophenol	8.49	196	408084	5713.99	ng/ml	96
41)	2-Chloronaphthalene	8.66	162	1065147	5366.65	ng/ml	99
42)	2-Nitroaniline	8.76	65	289808	5149.35	ng/ml	98
43)	Acenaphthylene	9.05	152	1680139	5402.42	ng/ml	99
44)	Dimethyl Phthalate	8.94	163	1182469	5292.93	ng/ml	99
45)	2,6-Dinitrotoluene	8.99	165	287307	5239.37	ng/ml	91
46)	Acenaphthene	9.21	154	968362	5220.50	ng/ml	98
47)	3-Nitroaniline	9.15	138	304161	5835.30	ng/ml	99
48)	2,4-Dinitrophenol	9.25	184	183860	6189.19	ng/ml	96
49)	Dibenzofuran	9.38	168	1534420	5228.49	ng/ml	100
50)	4-Nitrophenol	9.31	65	211565	5756.50	ng/ml	97
51)	2,4-Dinitrotoluene	9.37	165	393095	5250.06	ng/ml	96
52)	2,3,4,6-Tetrachlorophenol	9.49	232	361181	5542.95	ng/ml	99
53)	Fluorene	9.70	166	1260503	5408.73	ng/ml	99
54)	4-Chlorophenyl Phenyl Ethe	9.71	204	668824	5450.60	ng/ml	98
55)	Diethyl Phthalate	9.61	149	1141856	5441.33	ng/ml	99
56)	4-Nitroaniline	9.74	138	313948	5936.52	ng/ml	97
57)	2-Methyl-4,6-dinitrophenol	9.76	198	259247	3889.38	ng/ml	94
58)	N-Nitrosodiphenylamine	9.82	169	827509	5161.53	ng/ml	100
59)	Azobenzene	9.86	77	1070359	5555.93	ng/ml	99
62)	4-Bromophenyl Phenyl Ether	10.17	248	439552	5278.74	ng/ml	97
63)	Hexachlorobenzene	10.22	284	523612	5141.66	ng/ml	98
64)	Pentachlorophenol	10.41	266	323163	5685.69	ng/ml	96
65)	Phenanthrene	10.62	178	1792680	5097.09	ng/ml	100
66)	Anthracene	10.67	178	1879246	5251.34	ng/ml	100
67)	Carbazole	10.83	167	1700115	5143.81	ng/ml	100
68)	Di-n-butyl Phthalate	11.16	149	1944046	5052.23	ng/ml	100
69)	Fluoranthene	11.76	202	2074393	5140.24	ng/ml	100
71)	Benzidine	11.91	184	1258115	5808.22	ng/ml	98

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

LB 10/27/08

Data File : J:\MS17\DATA\102608\1024F010.D
Acq On : 26 Oct 2008 4:40 pm
Sample : 5.0PPM ICAL SVO_LL | SVM27-33J
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 08:18:23 2008

Vial: 10
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Sun Oct 26 16:53:18 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
72) Pyrene	12.00	202	2128128	5106.71	ng/ml	99
74) Butyl Benzyl Phthalate	12.79	149	856707	5229.22	ng/ml	99
75) 3,3'-Dichlorobenzidine	13.52	252	967921	5502.07	ng/ml	99
76) Benz(a)anthracene	13.54	228	2188747	5145.56	ng/ml	99
77) Chrysene	13.59	228	2046349	5144.11	ng/ml	99
78) Bis(2-ethylhexyl) Phthalat	13.65	149	1218582	5444.86	ng/ml	99
80) Di-n-octyl Phthalate	14.77	149	2035459	5280.72	ng/ml	97
81) Benzo(b)fluoranthene	15.31	252	2315597	5195.17	ng/ml	99
82) Benzo(k)fluoranthene	15.37	252	2380544	5265.38	ng/ml	99
83) Benzo(a)pyrene	15.81	252	2164457	5351.72	ng/ml	99
84) Indeno(1,2,3-cd)pyrene	17.02	276	2428551	5928.84	ng/ml	99
85) Dibenz(a,h)anthracene	17.04	278	2549382	5134.43	ng/ml	100
86) Benzo(g,h,i)perylene	17.27	276	2487240	5043.89	ng/ml	98

(#) = qualifier out of range (m) = manual integration
1024F010.D 102608SVOLL.M Mon Oct 27 09:07:52 2008 Page 3

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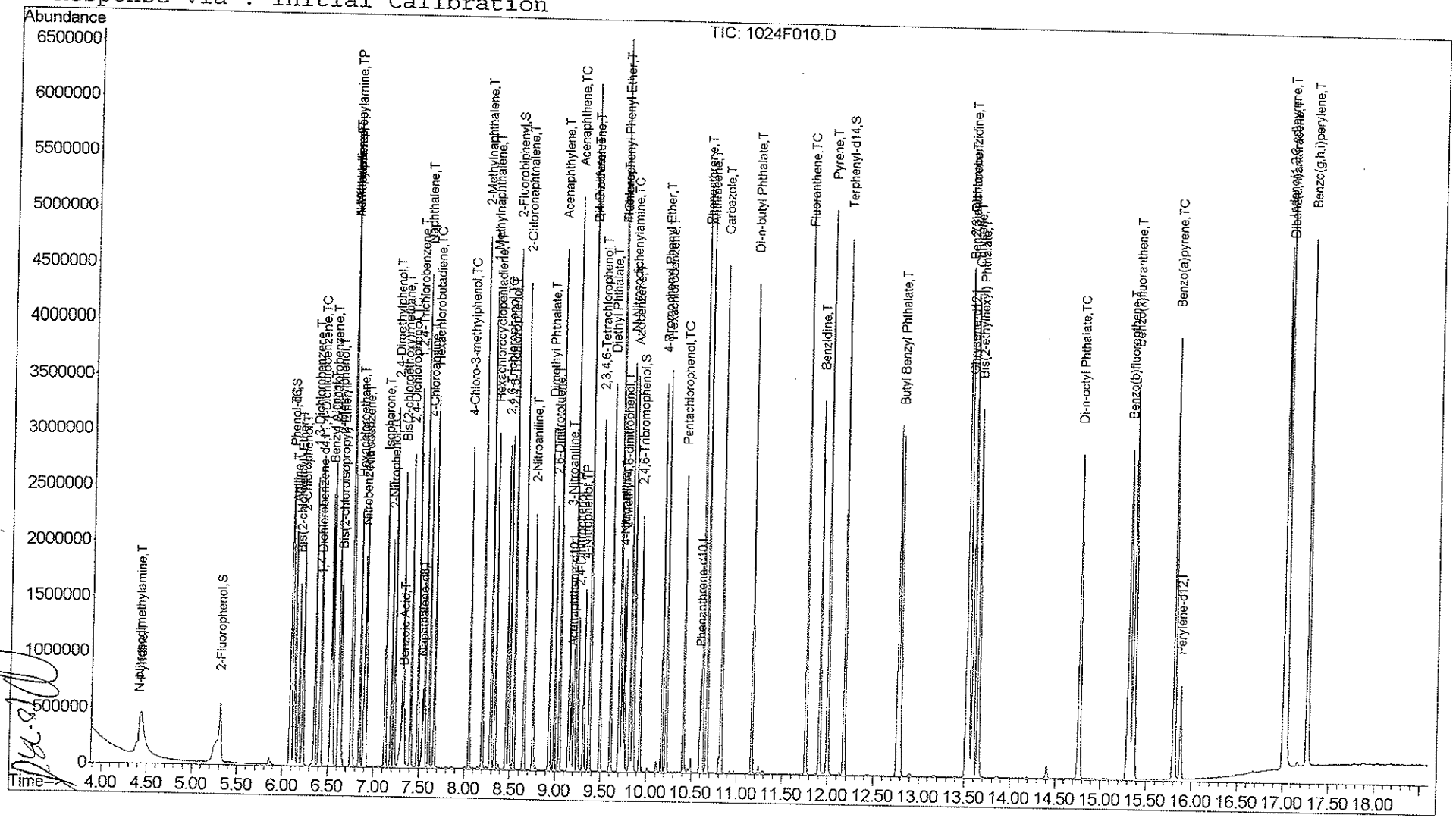
Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F010.D
Acq On : 26 Oct 2008 4:40 pm
Sample : 5.0PPM ICAL SVO_LL | SVM27-33J
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:49 2008

Vial: 10
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:00:27 2008
Response via : Initial Calibration



712

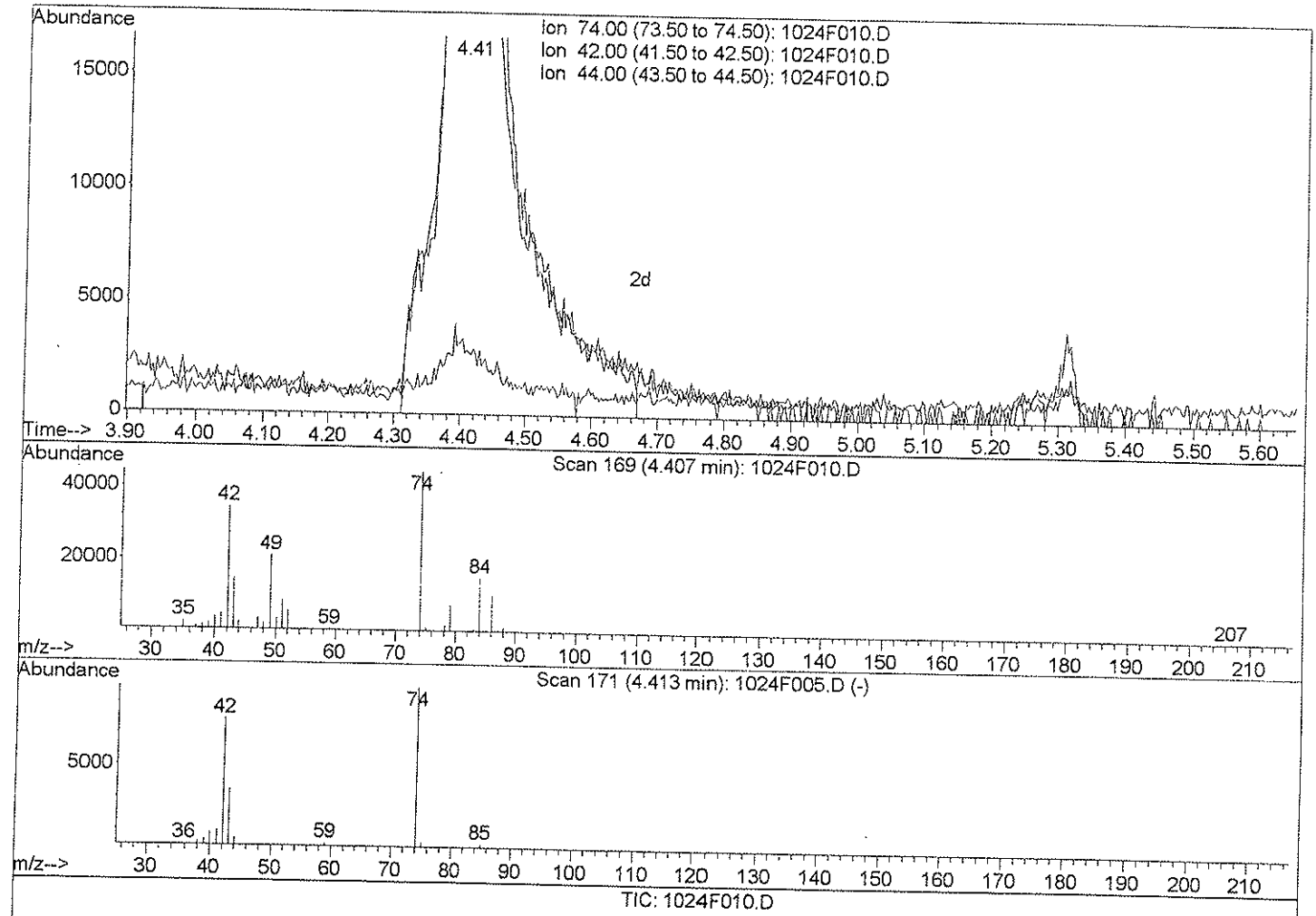
1024F010.D 102608SVOLL.M Mon Oct 27 09:07:52 2008

Data File : J:\MS17\DATA\102608\1024F010.D
Acq On : 26 Oct 2008 4:40 pm
Sample : 5.0PPM ICAL SVO_LL | SVM27-33J
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:18 2008

Vial: 10
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration



(2) N-Nitrosodimethylamine (T)

4.41min 5134.14ng/ml

response 272849

Ion	Exp%	Act%
74.00	100	100
42.00	89.40	75.28
44.00	7.30	4.62
0.00	0.00	0.00

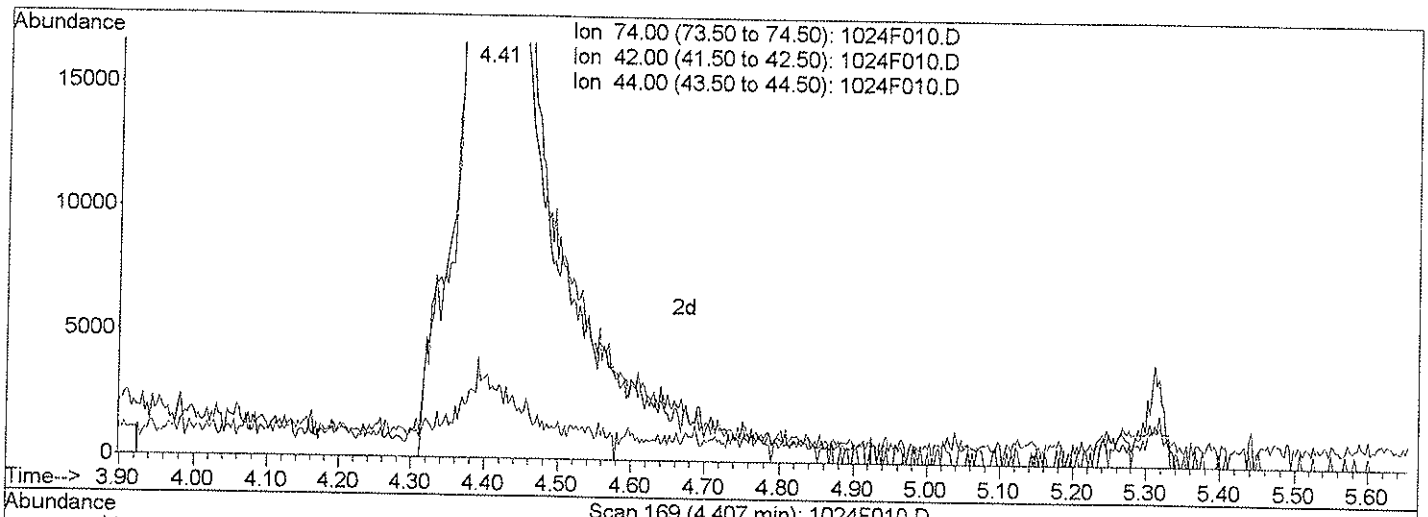
1024F010.D 102608SVOLL.M Mon Oct 27 08:48:58 2008

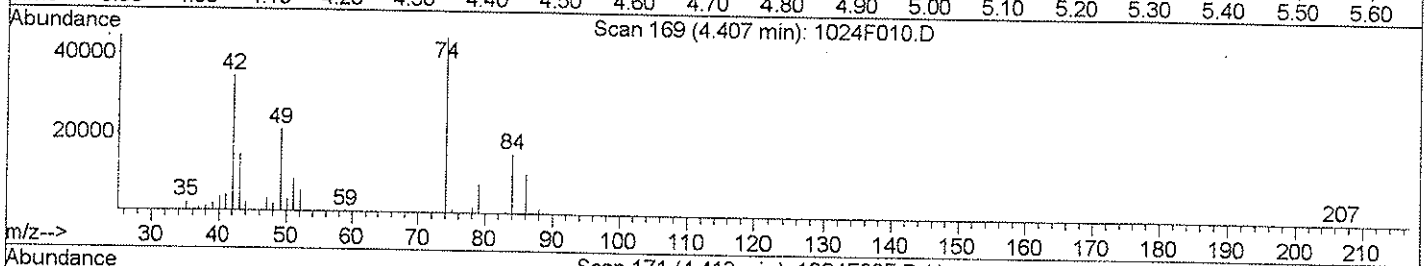
Data File : J:\MS17\DATA\102608\1024F010.D
Acq On : 26 Oct 2008 4:40 pm
Sample : 5.0PPM ICAL SVO_LL | SVM27-33J
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:49 2008

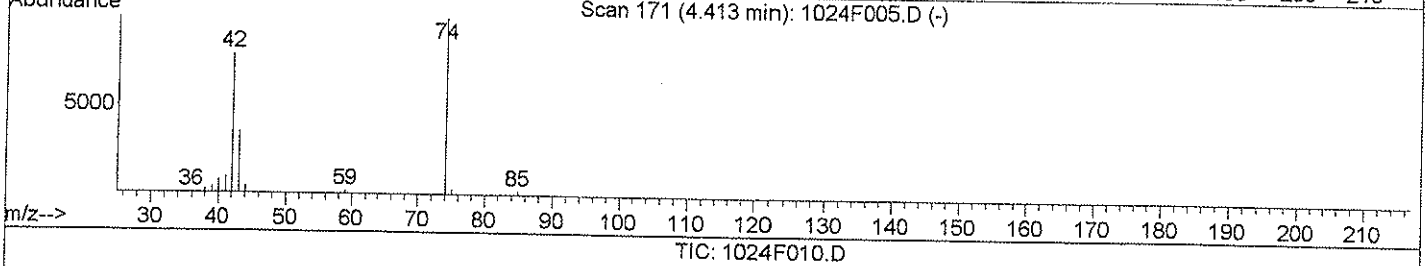
Vial: 10
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration







TIC: 1024F010.D

(2) N-Nitrosodimethylamine (T)

4.41min 5342.93ng/ml m

response 284291

Ion	Exp%	Act%
74.00	100	100
42.00	89.40	77.67
44.00	7.30	6.06
0.00	0.00	0.00

1c
KB 10/27/08

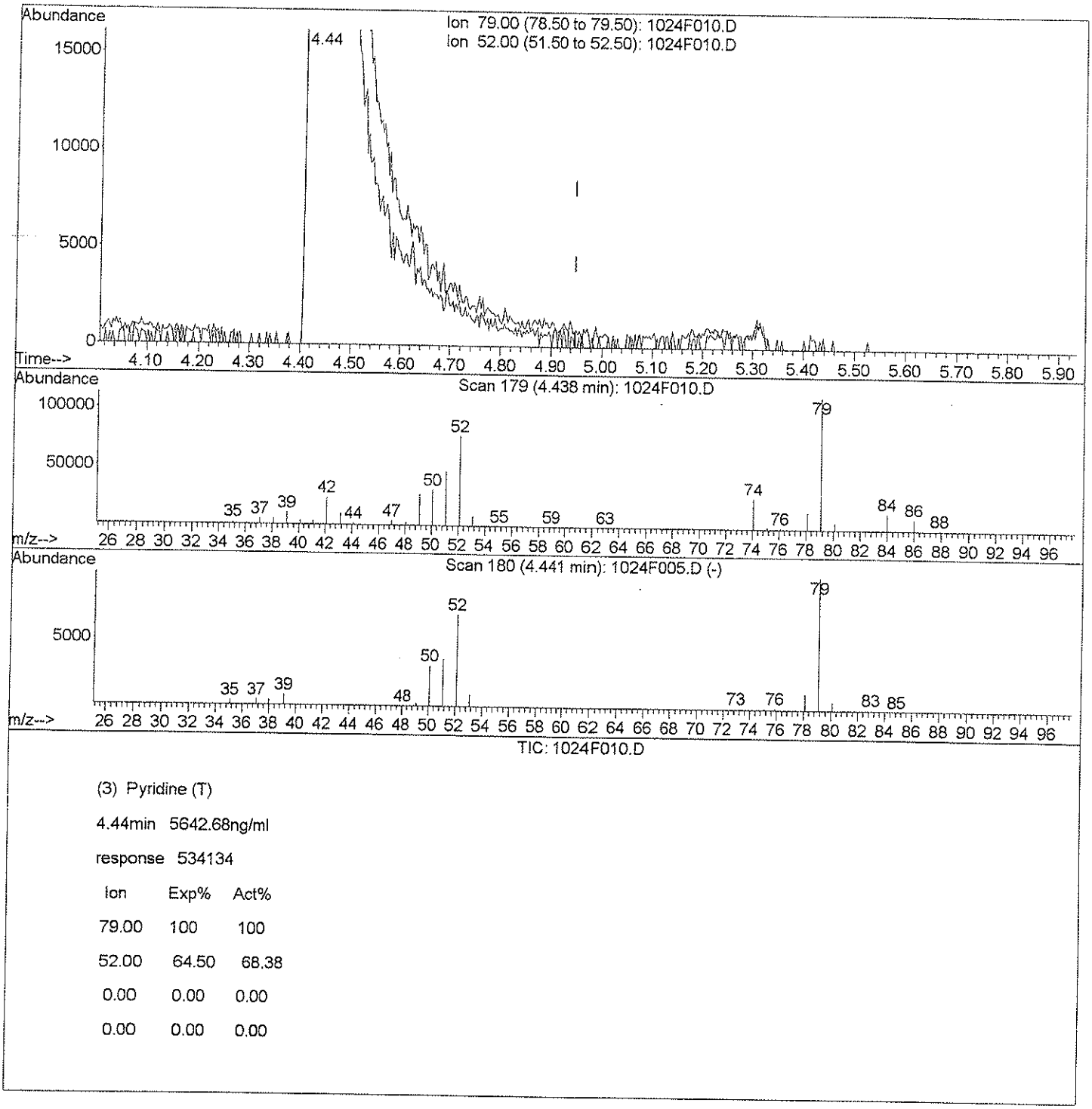
1024F010.D 102608SVOLL.M Mon Oct 27 08:49:05 2008

Data File : J:\MS17\DATA\102608\1024F010.D
Acq On : 26 Oct 2008 4:40 pm
Sample : 5.0PPM ICAL SVO_LL | SVM27-33J
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:49 2008

Vial: 10
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration



TIC: 1024F010.D

(3) Pyridine (T)

4.44min 5642.68ng/ml

response 534134

Ion	Exp%	Act%
79.00	100	100
52.00	64.50	68.38
0.00	0.00	0.00
0.00	0.00	0.00

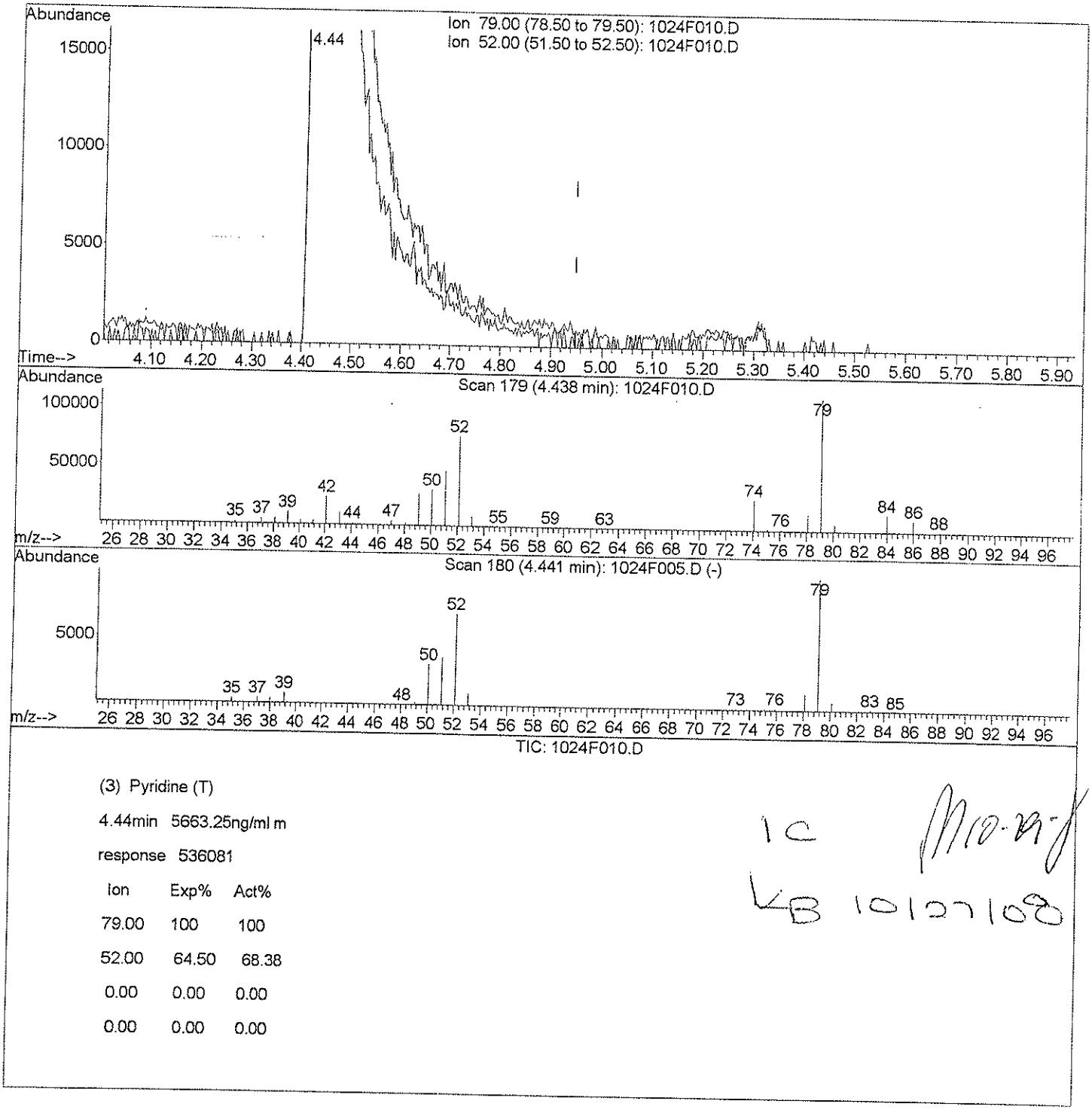
1024F010.D 102608SVOLL.M Mon Oct 27 08:49:11 2008

Data File : J:\MS17\DATA\102608\1024F010.D
Acq On : 26 Oct 2008 4:40 pm
Sample : 5.0PPM ICAL SVO_LL | SVM27-33J
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:49 2008

Vial: 10
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration



TIC: 1024F010.D

(3) Pyridine (T)

4.44min 5663.25ng/ml m

response 536081

Ion	Exp%	Act%
79.00	100	100
52.00	64.50	68.38
0.00	0.00	0.00
0.00	0.00	0.00

1C MD-M

KB 10/27/08

1024F010.D 102608SVOLL.M Mon Oct 27 08:49:16 2008

(QA Reviewed)

Data File : J:\MS17\DATA\102608\1024F011.D
Acq On : 26 Oct 2008 5:06 pm
Sample : 7.0PPM ICAL SVO_LL | SVM27-33K
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 08:18:24 2008

Vial: 11
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Sun Oct 26 16:53:18 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.41	152	74283	1000.00 ng/ml	0.00
22) Naphthalene-d8	7.54	136	281042	1000.00 ng/ml	0.00
36) Acenaphthene-d10	9.18	164	163239	1000.00 ng/ml	0.00
60) Phenanthrene-d10	10.59	188	278220	1000.00 ng/ml	0.00
70) Chrysene-d12	13.55	240	353012	1000.00 ng/ml	0.02
79) Perylene-d12	15.88	264	394634	1000.00 ng/ml	0.01
System Monitoring Compounds					
4) 2-Fluorophenol	5.32	112	644404m	7272.47 ng/ml	0.00
Spiked Amount 3750.000	Range 25 - 121		Recovery = 193.93%#		
7) Phenol-d6	6.09	99	877745	7355.12 ng/ml	0.02
Spiked Amount 3750.000	Range 24 - 113		Recovery = 196.14%#		
20) Nitrobenzene-d5	6.90	82	711259	7445.61 ng/ml	0.00
Spiked Amount 2500.000	Range 23 - 120		Recovery = 297.82%#		
40) 2-Fluorobiphenyl	8.55	172	1730016	6930.68 ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 115		Recovery = 277.23%#		
61) 2,4,6-Tribromophenol	9.93	330	410762	7628.69 ug/ml	0.01
Spiked Amount 3750.000	Range 19 - 122		Recovery = 203.43%#		
73) Terphenyl-d14	12.18	244	2185480	6846.16 ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 140		Recovery = 273.85%#		
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.40	74	401606m	7197.09 ng/ml	
3) Pyridine	4.43	79	739655m	7508.26 ng/ml	
5) Aniline	6.13	93	1061959	7301.24 ng/ml	98
6) Bis(2-chloroethyl) Ether	6.18	93	680432	7302.72 ng/ml	98
8) Phenol	6.10	94	877677	7246.09 ng/ml	99
9) 2-Chlorophenol	6.22	128	756075	7289.24 ng/ml	97
10) 1,3-Dichlorobenzene	6.36	146	859916	7195.75 ng/ml	99
11) 1,4-Dichlorobenzene	6.42	146	882460	7150.09 ng/ml	99
12) 1,2-Dichlorobenzene	6.55	146	833955	7075.98 ng/ml	99
13) Benzyl Alcohol	6.53	108	475266	7473.82 ng/ml	99
14) Bis(2-chloroisopropyl) Eth	6.64	45	960239	7030.34 ng/ml	100
15) 2-Methylphenol	6.62	107	594182	7075.27 ng/ml	98
16) Hexachloroethane	6.85	117	296093	7207.80 ng/ml	99
17) Acetophenone	6.76	105	1005299	7214.76 ng/ml	99
18) N-Nitrosodi-n-propylamine	6.76	70	525131	7241.94 ng/ml	99
19) 4-Methylphenol	6.76	107	897497	7361.41 ng/ml#	84
21) Nitrobenzene	6.91	77	745812	7266.99 ng/ml	98
23) Isophorone	7.13	82	1345958	7176.35 ng/ml	99
24) 2-Nitrophenol	7.19	139	434731	7694.99 ng/ml	98
25) 2,4-Dimethylphenol	7.23	122	652384	7005.69 ng/ml	99

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

LB 10/27/08 10-29-08

(QA Reviewed)

Data File : J:\MS17\DATA\102608\1024F011.D
Acq On : 26 Oct 2008 5:06 pm
Sample : 7.0PPM ICAL SVO_LL | SVM27-33K
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 08:18:24 2008

Vial: 11
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Sun Oct 26 16:53:18 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26) Bis(2-chloroethoxy)methane	7.32	93	814860	7407.28	ng/ml	99
27) 2,4-Dichlorophenol	7.41	162	659699	7361.14	ng/ml	99
28) Benzoic Acid	7.36	105	511029	8263.48	ng/ml	98
29) 1,2,4-Trichlorobenzene	7.48	180	740001	7083.08	ng/ml	97
30) Naphthalene	7.56	128	2191973	7094.90	ng/ml	100
31) 4-Chloroaniline	7.61	127	928416	7445.29	ng/ml	98
32) Hexachlorobutadiene	7.66	225	464291	7160.12	ng/ml	96
33) 4-Chloro-3-methylphenol	8.06	107	620938	7321.98	ng/ml	99
34) 2-Methylnaphthalene	8.20	142	1489902	7066.65	ng/ml	97
35) 1-Methylnaphthalene	8.29	142	1410219	7098.79	ng/ml	98
37) Hexachlorocyclopentadiene	8.34	237	582268	7801.71	ng/ml	94
38) 2,4,6-Trichlorophenol	8.46	196	523063	7448.25	ng/ml	99
39) 2,4,5-Trichlorophenol	8.49	196	566513	7529.04	ng/ml	98
41) 2-Chloronaphthalene	8.66	162	1474267	7050.33	ng/ml	99
42) 2-Nitroaniline	8.76	65	406149	6644.44	ng/ml	97
43) Acenaphthylene	9.05	152	2358334	7197.61	ng/ml	100
44) Dimethyl Phthalate	8.94	163	1670687	7098.08	ng/ml	99
45) 2,6-Dinitrotoluene	9.00	165	407144	6875.93	ng/ml	92
46) Acenaphthene	9.21	154	1384782	7085.91	ng/ml	99
47) 3-Nitroaniline	9.16	138	434708	7915.83	ng/ml	99
48) 2,4-Dinitrophenol	9.25	184	274644	8775.19	ng/ml	96
49) Dibenzofuran	9.38	168	2154684	6968.75	ng/ml	100
50) 4-Nitrophenol	9.32	65	298262	7702.87	ng/ml	96
51) 2,4-Dinitrotoluene	9.38	165	554858	6862.32	ng/ml	96
52) 2,3,4,6-Tetrachlorophenol	9.49	232	511483	7450.53	ng/ml	97
53) Fluorene	9.70	166	1748257	7120.27	ng/ml	100
54) 4-Chlorophenyl Phenyl Ethe	9.71	204	924803	7153.55	ng/ml	100
55) Diethyl Phthalate	9.61	149	1576694	7131.50	ng/ml	97
56) 4-Nitroaniline	9.74	138	436497	7834.20	ng/ml	96
57) 2-Methyl-4,6-dinitrophenol	9.77	198	371760	4579.41	ng/ml	97
58) N-Nitrosodiphenylamine	9.82	169	1161073	6873.93	ng/ml	99
59) Azobenzene	9.86	77	1479744	7290.44	ng/ml	99
62) 4-Bromophenyl Phenyl Ether	10.17	248	617966	7271.41	ng/ml	97
63) Hexachlorobenzene	10.22	284	737308	7093.76	ng/ml	98
64) Pentachlorophenol	10.41	266	474222	8174.81	ng/ml	97
65) Phenanthrene	10.62	178	2484893	6922.47	ng/ml	99
66) Anthracene	10.67	178	2610037	7146.07	ng/ml	100
67) Carbazole	10.83	167	2381562	7059.98	ng/ml	100
68) Di-n-butyl Phthalate	11.17	149	2725037	6938.78	ng/ml	100
69) Fluoranthene	11.76	202	2896822	7033.12	ng/ml	99
71) Benzidine	11.91	184	1767145	7966.98	ng/ml	99

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

LB 10/27/08 10-28-08

Data File : J:\MS17\DATA\102608\1024F011.D
Acq On : 26 Oct 2008 5:06 pm
Sample : 7.0PPM ICAL SVO_LL | SVM27-33K
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 08:18:24 2008

Vial: 11
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Sun Oct 26 16:53:18 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
72) Pyrene	12.00	202	2961268	6939.37	ng/ml	98
74) Butyl Benzyl Phthalate	12.79	149	1192902	7071.30	ng/ml	98
75) 3,3'-Dichlorobenzidine	13.53	252	1367902	7593.46	ng/ml	98
76) Benz(a)anthracene	13.54	228	3048636	6999.09	ng/ml	99
77) Chrysene	13.60	228	2860239	7021.52	ng/ml	99
78) Bis(2-ethylhexyl) Phthalat	13.65	149	1728086	7540.43	ng/ml	99
80) Di-n-octyl Phthalate	14.77	149	2877050	7275.92	ng/ml	98
81) Benzo(b)fluoranthene	15.32	252	3297079	7232.32	ng/ml	99
82) Benzo(k)fluoranthene	15.38	252	3342550	7228.41	ng/ml	100
83) Benzo(a)pyrene	15.82	252	3050641	7452.37	ng/ml	99
84) Indeno(1,2,3-cd)pyrene	17.02	276	3493775	8339.29	ng/ml	98
85) Dibenz(a,h)anthracene	17.05	278	3611146	7110.73	ng/ml	99
86) Benzo(g,h,i)perylene	17.28	276	3517511	6974.21	ng/ml	99

10.29.8

(#) = qualifier out of range (m) = manual integration
1024F011.D 102608SVOLL.M Mon Oct 27 09:07:54 2008 LB

Page 3

10/27/08

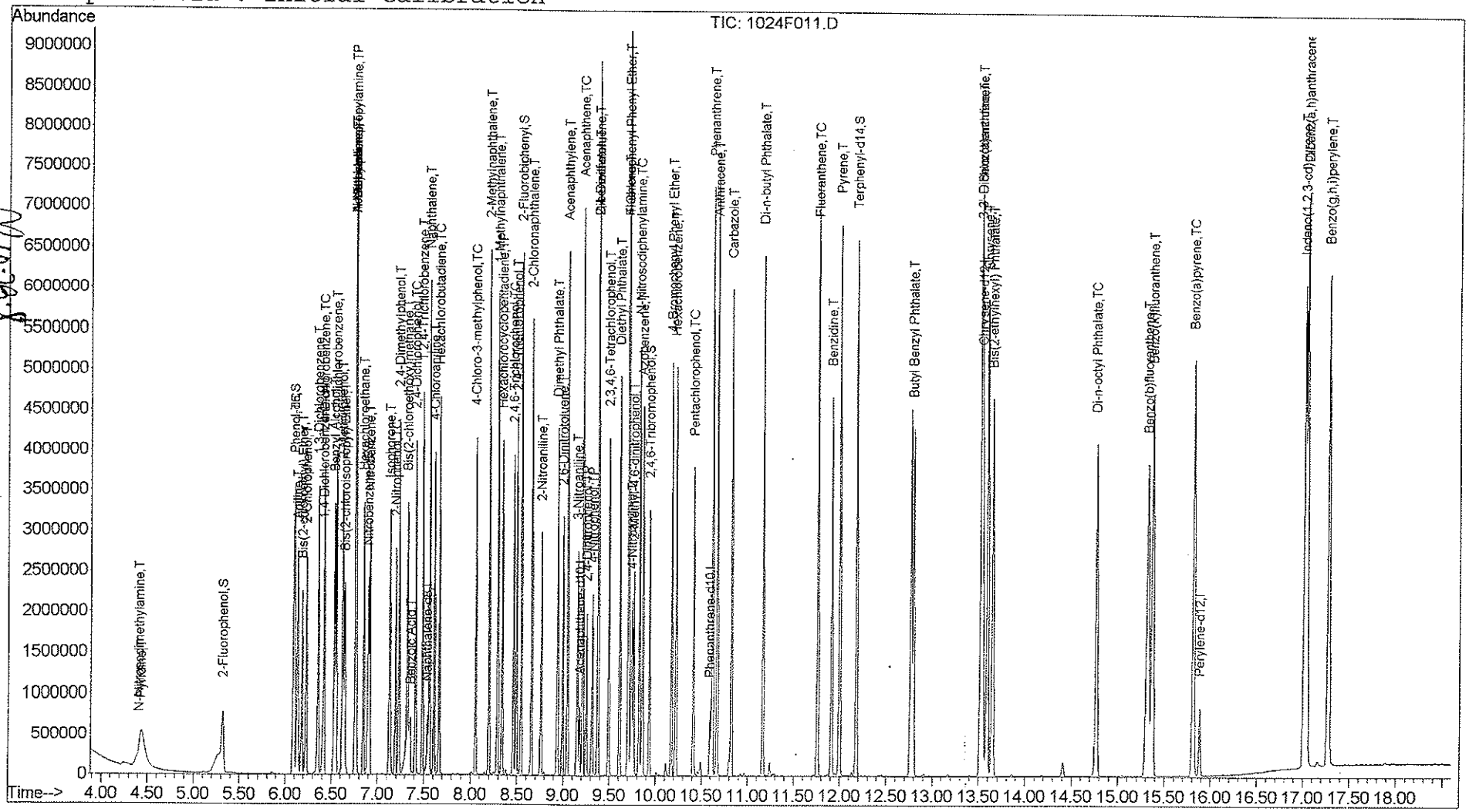
Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F011.D
Acq On : 26 Oct 2008 5:06 pm
Sample : 7.0PPM ICAL SVO_LL | SVM27-33K
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:50 2008

Vial: 11
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:00:27 2008
Response via : Initial Calibration



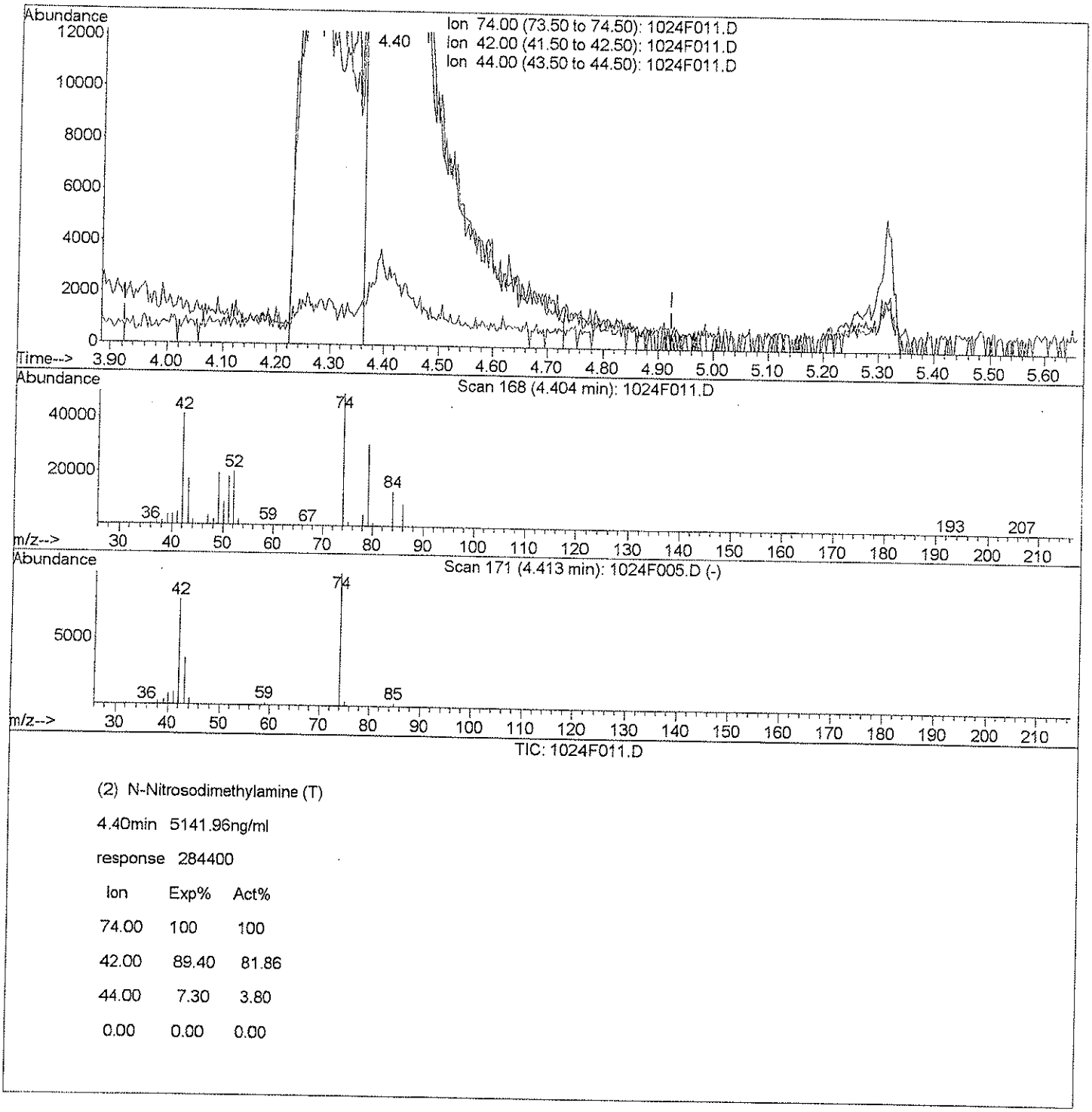
720

Data File : J:\MS17\DATA\102608\1024F011.D
Acq On : 26 Oct 2008 5:06 pm
Sample : 7.0PPM ICAL SVO_LL | SVM27-33K
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:18 2008

Vial: 11
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration



(2) N-Nitrosodimethylamine (T)

4.40min 5141.96ng/ml

response 284400

Ion	Exp%	Act%
74.00	100	100
42.00	89.40	81.86
44.00	7.30	3.80
0.00	0.00	0.00

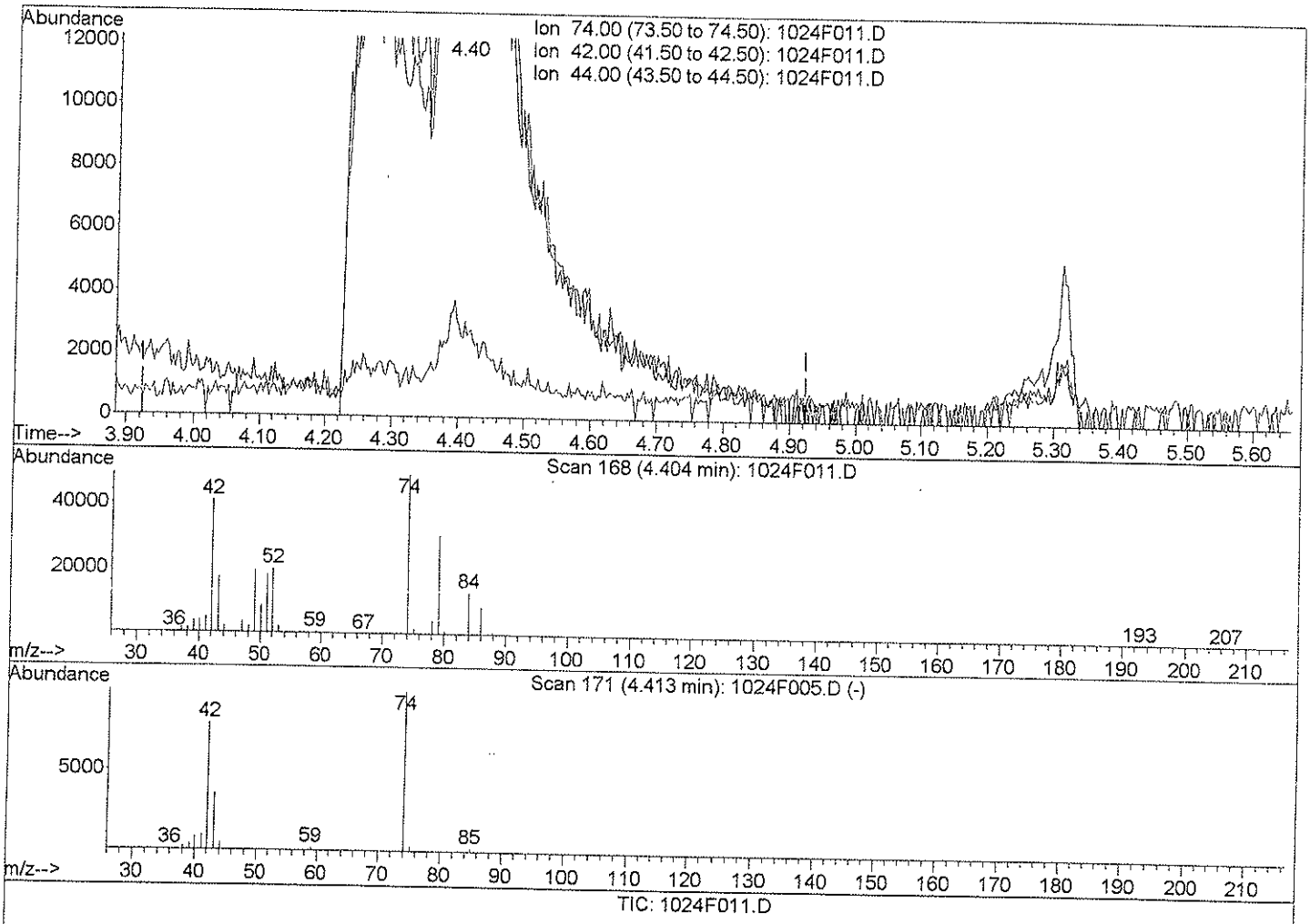
1024F011.D 102608SVOLL.M Mon Oct 27 08:50:05 2008

Data File : J:\MS17\DATA\102608\1024F011.D
Acq On : 26 Oct 2008 5:06 pm
Sample : 7.0PPM ICAL SVO_LL | SVM27-33K
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:50 2008

Vial: 11
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration



TIC: 1024F011.D

(2) N-Nitrosodimethylamine (T)

4.40min 7197.09ng/ml m

response 401606

Ion	Exp%	Act%
74.00	100	100
42.00	89.40	83.46
44.00	7.30	5.25
0.00	0.00	0.00

1C 10-29-8
LB 10/27/08

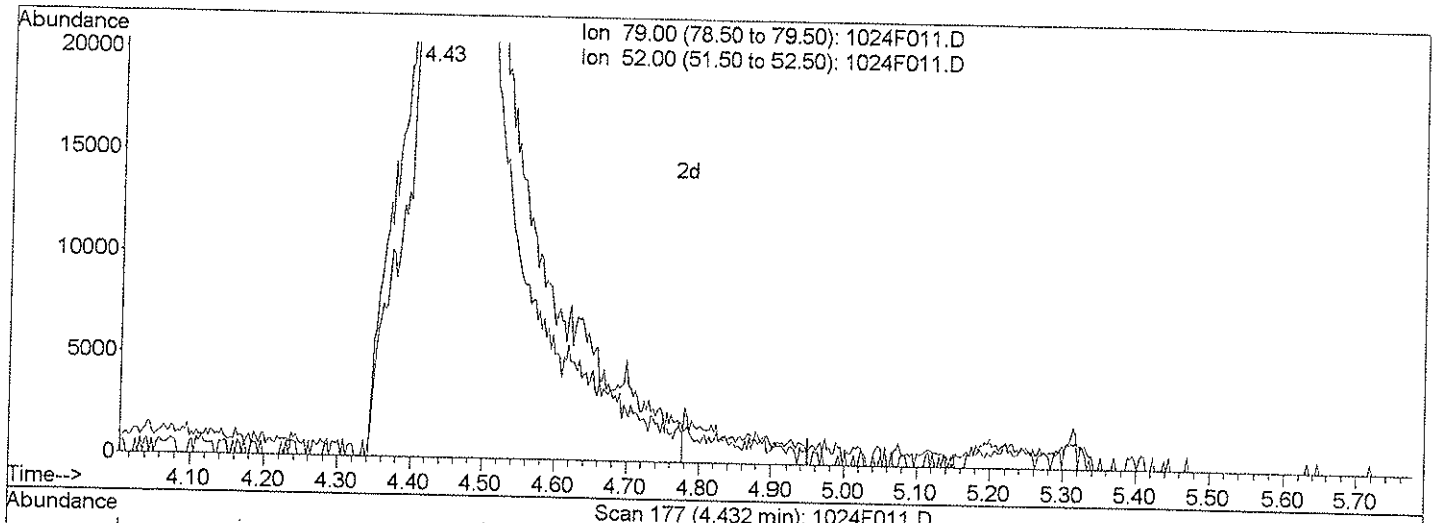
1024F011.D 102608SVOLL.M Mon Oct 27 08:50:10 2008

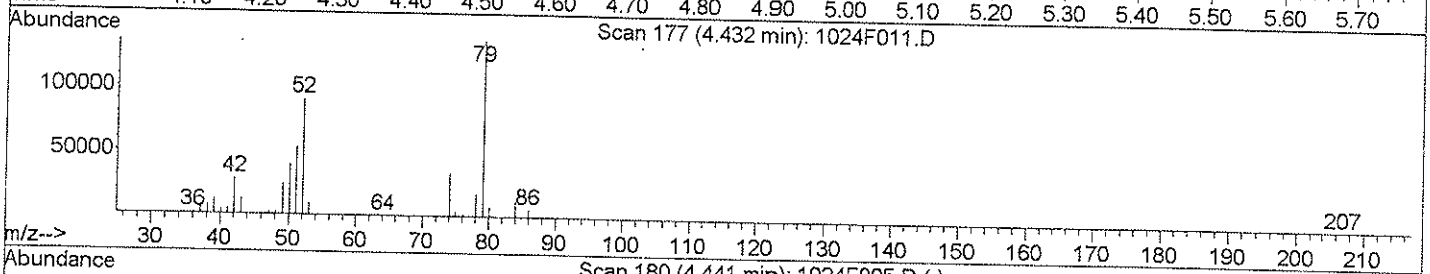
Data File : J:\MS17\DATA\102608\1024F011.D
Acq On : 26 Oct 2008 5:06 pm
Sample : 7.0PPM ICAL SVO_LL | SVM27-33K
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:50 2008

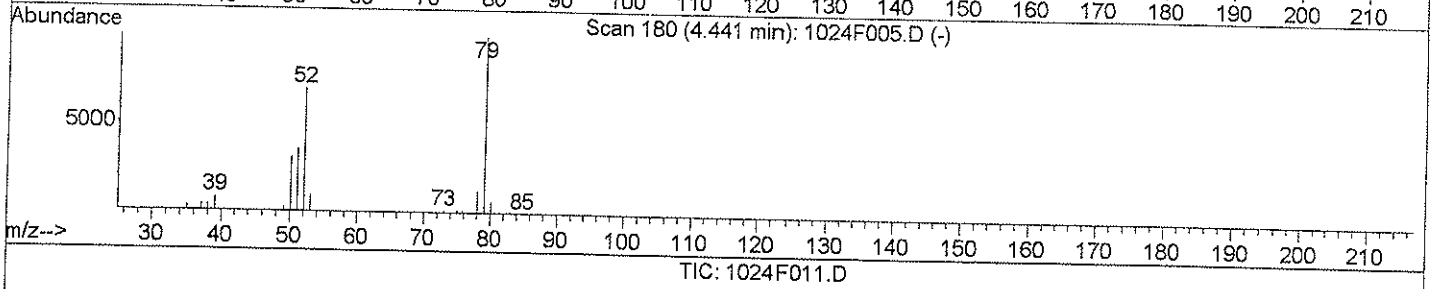
Vial: 11
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration







TIC: 1024F011.D

(3) Pyridine (T)

4.43min 7345.00ng/ml

response 723572

Ion	Exp%	Act%
79.00	100	100
52.00	64.50	66.11
0.00	0.00	0.00
0.00	0.00	0.00

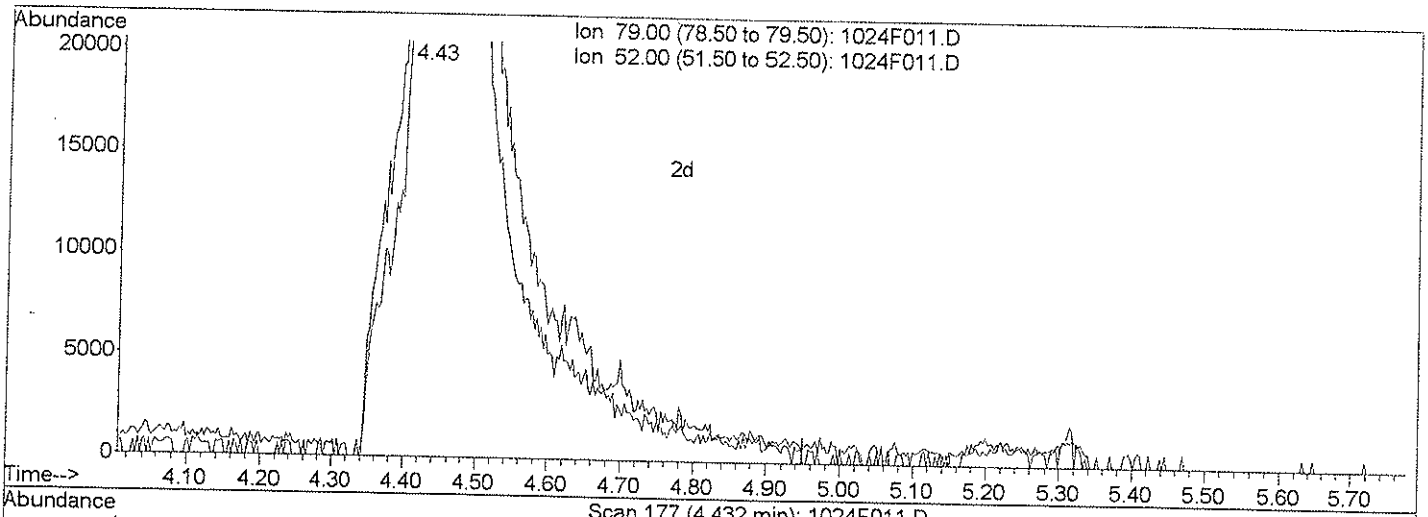
1024F011.D 102608SVOLL.M Mon Oct 27 08:50:15 2008

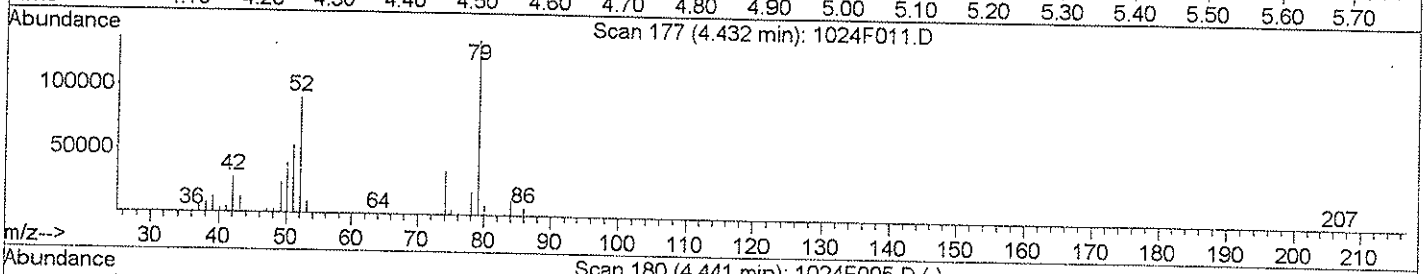
Data File : J:\MS17\DATA\102608\1024F011.D
Acq On : 26 Oct 2008 5:06 pm
Sample : 7.0PPM ICAL SVO_LL | SVM27-33K
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:50 2008

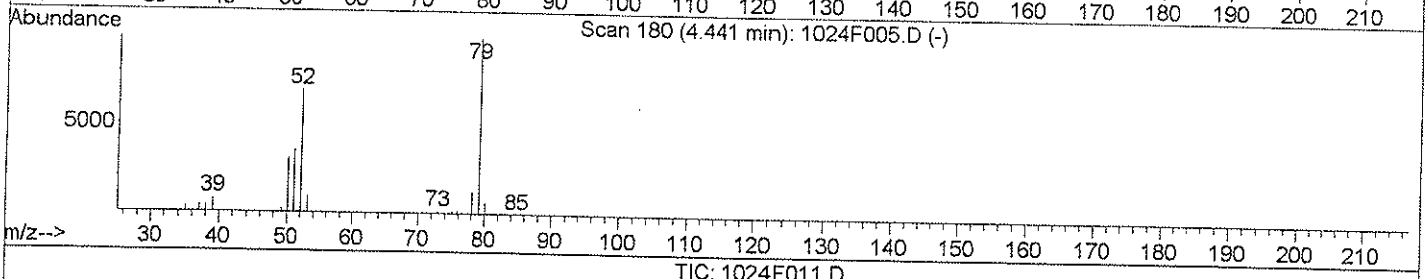
Vial: 11
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration







TIC: 1024F011.D

(3) Pyridine (T)

4.43min 7508.26ng/ml m

response 739655

Ion	Exp%	Act%
79.00	100	100
52.00	64.50	66.11
0.00	0.00	0.00
0.00	0.00	0.00

IC 10-29-8
LB 10127108

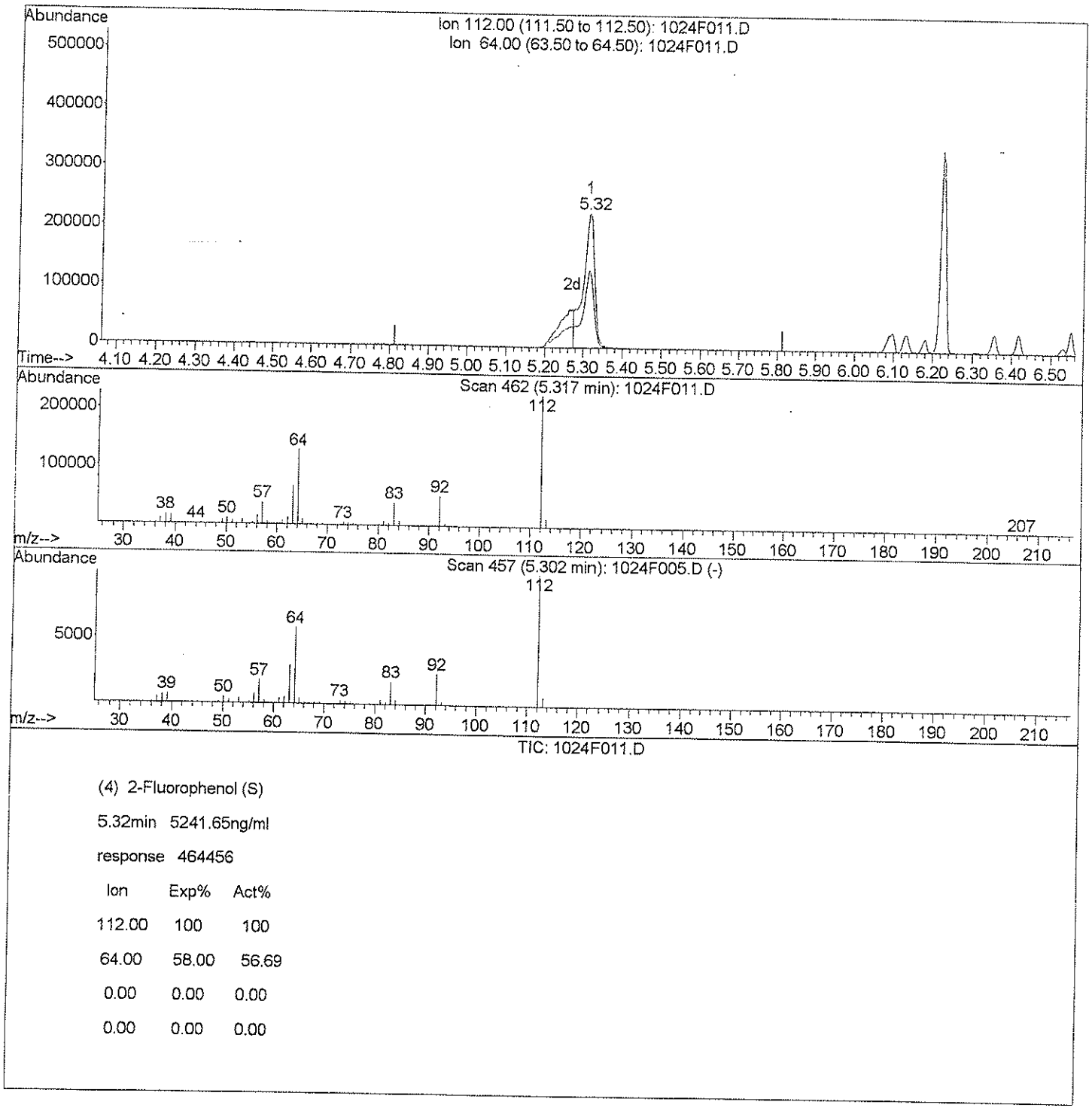
1024F011.D 102608SVOLL.M Mon Oct 27 08:50:21 2008

Data File : J:\MS17\DATA\102608\1024F011.D
Acq On : 26 Oct 2008 5:06 pm
Sample : 7.0PPM ICAL SVO_LL | SVM27-33K
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:50 2008

Vial: 11
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Multiple Level Calibration



TIC: 1024F011.D

(4) 2-Fluorophenol (S)

5.32min 5241.65ng/ml

response 464456

Ion	Exp%	Act%
112.00	100	100
64.00	58.00	56.69
0.00	0.00	0.00
0.00	0.00	0.00

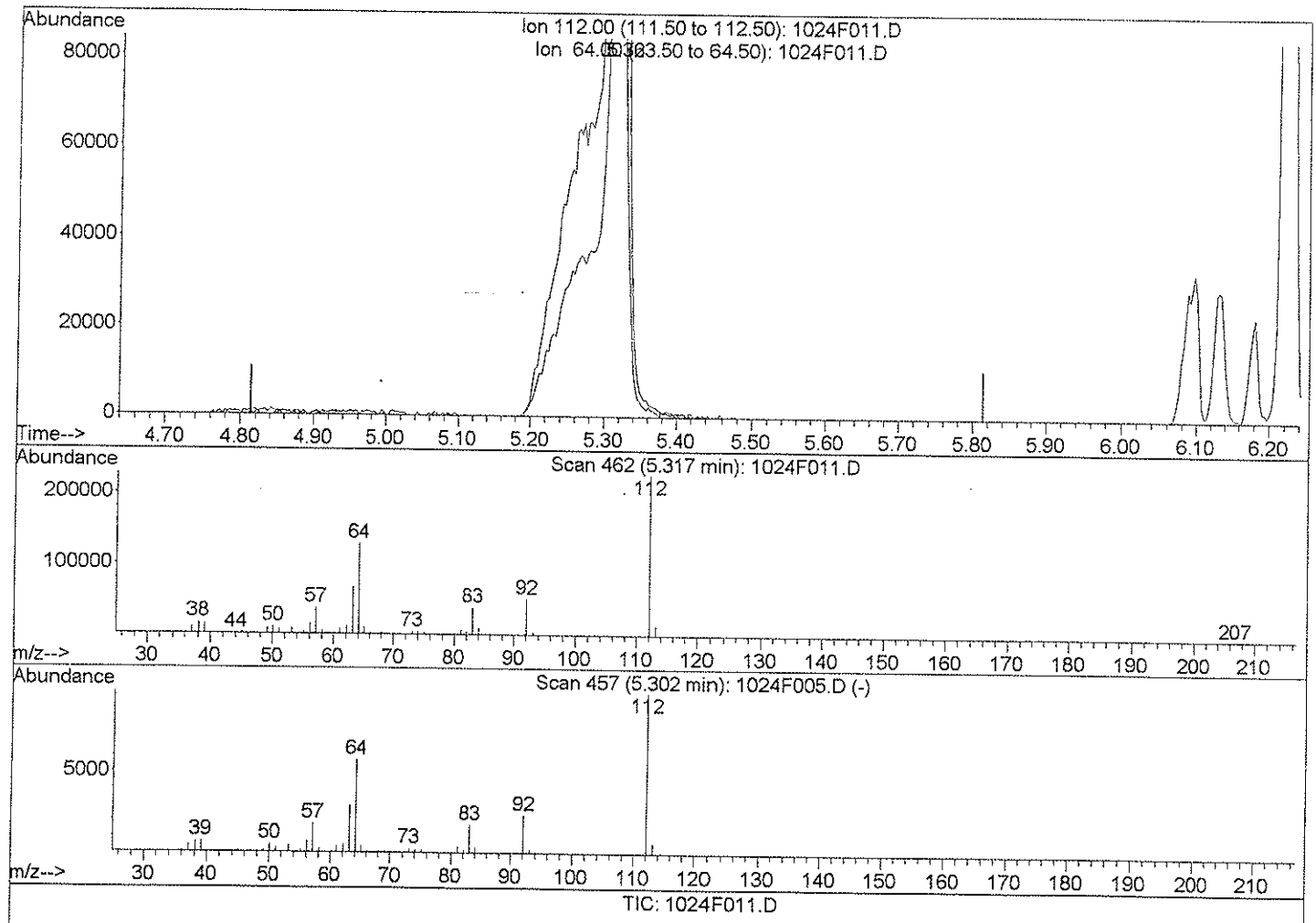
1024F011.D 102608SVOLL.M Mon Oct 27 08:50:24 2008

Data File : J:\MS17\DATA\102608\1024F011.D
Acq On : 26 Oct 2008 5:06 pm
Sample : 7.0PPM ICAL SVO_LL | SVM27-33K
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:50 2008

Vial: 11
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Multiple Level Calibration



(4) 2-Fluorophenol (S)

5.32min 7272.47ng/ml m

response 644404

Ion	Exp%	Act%
112.00	100	100
64.00	58.00	56.77
0.00	0.00	0.00
0.00	0.00	0.00

IC 10-29-8
LB 10/27/08

1024F011.D 102608SVOLL.M Mon Oct 27 08:50:31 2008

Data File : J:\MS17\DATA\102608\1024F012.D Vial: 12
Acq On : 26 Oct 2008 5:32 pm Operator: KBAILEY
Sample : 10.0PPM ICAL SVO_LL | SVM27-33L Inst : MS17
Misc : Multiplr: 1.00
MS Integration Params: LSCINT.P
Quant Time: Oct 27 08:18:25 2008 Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Sun Oct 26 16:53:18 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.41	152	75115	1000.00	ng/ml	0.00
22) Naphthalene-d8	7.54	136	289676	1000.00	ng/ml	0.00
36) Acenaphthene-d10	9.18	164	166354	1000.00	ng/ml	0.00
60) Phenanthrene-d10	10.60	188	286197	1000.00	ng/ml	0.00
70) Chrysene-d12	13.56	240	368640	1000.00	ng/ml	0.02
79) Perylene-d12	15.89	264	413779	1000.00	ng/ml	0.02
System Monitoring Compounds						
4) 2-Fluorophenol	5.32	112	943753	10532.83	ng/ml	0.00
Spiked Amount 3750.000	Range 25 - 121		Recovery = 280.88%#			
7) Phenol-d6	6.09	99	1283226	10633.78	ng/ml	0.02
Spiked Amount 3750.000	Range 24 - 113		Recovery = 283.57%#			
20) Nitrobenzene-d5	6.90	82	1030756	10670.65	ng/ml	0.01
Spiked Amount 2500.000	Range 23 - 120		Recovery = 426.83%#			
40) 2-Fluorobiphenyl	8.55	172	2493955	9804.04	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 115		Recovery = 392.16%#			
61) 2,4,6-Tribromophenol	9.94	330	625154	11286.79	ug/ml	0.02
Spiked Amount 3750.000	Range 19 - 122		Recovery = 300.98%#			
73) Terphenyl-d14	12.18	244	3222710	9667.37	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 140		Recovery = 386.69%#			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.39	74	589259m	10373.01	ng/ml	
3) Pyridine	4.43	79	1081589m	10857.63	ng/ml	
5) Aniline	6.13	93	1548234	10526.61	ng/ml	98
6) Bis(2-chloroethyl) Ether	6.18	93	990007	10507.54	ng/ml	99
8) Phenol	6.10	94	1290991	10540.36	ng/ml	99
9) 2-Chlorophenol	6.23	128	1089720	10389.51	ng/ml	97
10) 1,3-Dichlorobenzene	6.36	146	1247114	10320.23	ng/ml	99
11) 1,4-Dichlorobenzene	6.42	146	1267961	10159.80	ng/ml	98
12) 1,2-Dichlorobenzene	6.55	146	1200929	10076.84	ng/ml	100
13) Benzyl Alcohol	6.53	108	699025	10870.79	ng/ml	98
14) Bis(2-chloroisopropyl) Eth	6.64	45	1393167	10087.03	ng/ml	99
15) 2-Methylphenol	6.62	107	874987	10303.57	ng/ml	97
16) Hexachloroethane	6.85	117	428727	10320.92	ng/ml	98
17) Acetophenone	6.77	105	1472052	10447.51	ng/ml	97
18) N-Nitrosodi-n-propylamine	6.77	70	763144	10407.75	ng/ml	98
19) 4-Methylphenol	6.76	107	1311470	10637.74	ng/ml#	82
21) Nitrobenzene	6.92	77	1080115	10407.78	ng/ml	97
23) Isophorone	7.13	82	1971935	10200.54	ng/ml	99
24) 2-Nitrophenol	7.19	139	635409	10911.87	ng/ml	96
25) 2,4-Dimethylphenol	7.24	122	964771	10051.49	ng/ml	99

(#) = qualifier out of range (m) = manual integration
1024F012.D 102608SVOLL.M Mon Oct 27 09:07:56 2008 Page 1

LB 10-28-08
10/27/08

(QA Reviewed)

Data File : J:\MS17\DATA\102608\1024F012.D
Acq On : 26 Oct 2008 5:32 pm
Sample : 10.0PPM ICAL SVO_LL | SVM27-33L
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 08:18:25 2008

Vial: 12
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Sun Oct 26 16:53:18 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
26) Bis(2-chloroethoxy)methane	7.32	93	1183635	10438.84 ng/ml	99
27) 2,4-Dichlorophenol	7.41	162	963906	10435.00 ng/ml	99
28) Benzoic Acid	7.38	105	802515	13683.11 ng/ml	96
29) 1,2,4-Trichlorobenzene	7.49	180	1083655	10063.27 ng/ml	99
30) Naphthalene	7.56	128	3178177	9980.40 ng/ml	99
31) 4-Chloroaniline	7.61	127	1371384	10669.81 ng/ml	97
32) Hexachlorobutadiene	7.67	225	679850	10171.90 ng/ml	96
33) 4-Chloro-3-methylphenol	8.06	107	913089	10446.05 ng/ml	99
34) 2-Methylnaphthalene	8.20	142	2182886	10044.91 ng/ml	99
35) 1-Methylnaphthalene	8.29	142	2069232	10105.68 ng/ml	97
37) Hexachlorocyclopentadiene	8.34	237	865867	11384.36 ng/ml	96
38) 2,4,6-Trichlorophenol	8.46	196	759482	10612.28 ng/ml	99
39) 2,4,5-Trichlorophenol	8.50	196	837218	10918.40 ng/ml	98
41) 2-Chloronaphthalene	8.66	162	2161690	10144.20 ng/ml	99
42) 2-Nitroaniline	8.76	65	588095	9015.22 ng/ml	97
43) Acenaphthylene	9.05	152	3381598	10127.34 ng/ml	99
44) Dimethyl Phthalate	8.94	163	2431870	10138.57 ng/ml	100
45) 2,6-Dinitrotoluene	9.00	165	597495	9532.67 ng/ml	93
46) Acenaphthene	9.22	154	1983215	9958.05 ng/ml	98
47) 3-Nitroaniline	9.16	138	639959	11435.15 ng/ml	97
48) 2,4-Dinitrophenol	9.26	184	419016	13137.35 ng/ml	94
49) Dibenzofuran	9.38	168	3131220	9937.47 ng/ml	100
50) 4-Nitrophenol	9.32	65	439528	11138.63 ng/ml	96
51) 2,4-Dinitrotoluene	9.38	165	815065	9518.00 ng/ml	97
52) 2,3,4,6-Tetrachlorophenol	9.50	232	763376	10911.52 ng/ml	96
53) Fluorene	9.71	166	2553447	10204.89 ng/ml	100
54) 4-Chlorophenyl Phenyl Ethe	9.71	204	1352400	10265.21 ng/ml	98
55) Diethyl Phthalate	9.62	149	2317309	10285.09 ng/ml	98
56) 4-Nitroaniline	9.75	138	645308m	11365.05 ng/ml	
57) 2-Methyl-4,6-dinitrophenol	9.77	198	562909	5615.76 ng/ml	96
58) N-Nitrosodiphenylamine	9.83	169	1725442	10023.90 ng/ml	100
59) Azobenzene	9.86	77	2172973	10505.38 ng/ml	97
62) 4-Bromophenyl Phenyl Ether	10.18	248	905647	10359.44 ng/ml	97
63) Hexachlorobenzene	10.22	284	1091997	10213.45 ng/ml	98
64) Pentachlorophenol	10.41	266	712008	11931.74 ng/ml	96
65) Phenanthrene	10.62	178	3623384	9812.76 ng/ml	99
66) Anthracene	10.67	178	3802920	10121.87 ng/ml	99
67) Carbazole	10.83	167	3458921	9967.94 ng/ml	100
68) Di-n-butyl Phthalate	11.17	149	3975043	9839.56 ng/ml	99
69) Fluoranthene	11.77	202	4202266	9918.21 ng/ml	98
71) Benzidine	11.92	184	2533652	10938.44 ng/ml	99

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

LB 10-29-8
10/27/08

Data File : J:\MS17\DATA\102608\1024F012.D
Acq On : 26 Oct 2008 5:32 pm
Sample : 10.0PPM ICAL SVO_LL | SVM27-33L
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 08:18:25 2008

Vial: 12
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Sun Oct 26 16:53:18 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Compound	R.T.	QIon	Response	Conc Unit	Qvalue
72) Pyrene	12.01	202	4292804	9633.19 ng/ml	99
74) Butyl Benzyl Phthalate	12.80	149	1761323	9918.79 ng/ml	99
75) 3,3'-Dichlorobenzidine	13.53	252	2002841	10646.78 ng/ml	99
76) Benz(a)anthracene	13.54	228	4450377	9784.07 ng/ml	99
77) Chrysene	13.60	228	4185884	9840.18 ng/ml	99
78) Bis(2-ethylhexyl) Phthalat	13.65	149	2533247	10585.11 ng/ml	99
80) Di-n-octyl Phthalate	14.78	149	4237801	10198.18 ng/ml	97
81) Benzo(b)fluoranthene	15.33	252	5028273	10519.45 ng/ml	99
82) Benzo(k)fluoranthene	15.39	252	4728506m	9752.48 ng/ml	
83) Benzo(a)pyrene	15.83	252	4486883	10627.65 ng/ml	99
84) Indeno(1,2,3-cd)pyrene	17.03	276	5287910m	12037.73 ng/ml	
85) Dibenz(a,h)anthracene	17.05	278	5339736	10028.01 ng/ml	99
86) Benzo(g,h,i)perylene	17.29	276	5195445	9824.45 ng/ml	99

(#) = qualifier out of range (m) = manual integration
1024F012.D 102608SVOLL.M Mon Oct 27 09:07:56 2008 Page 3

10-28-08
10/27/08

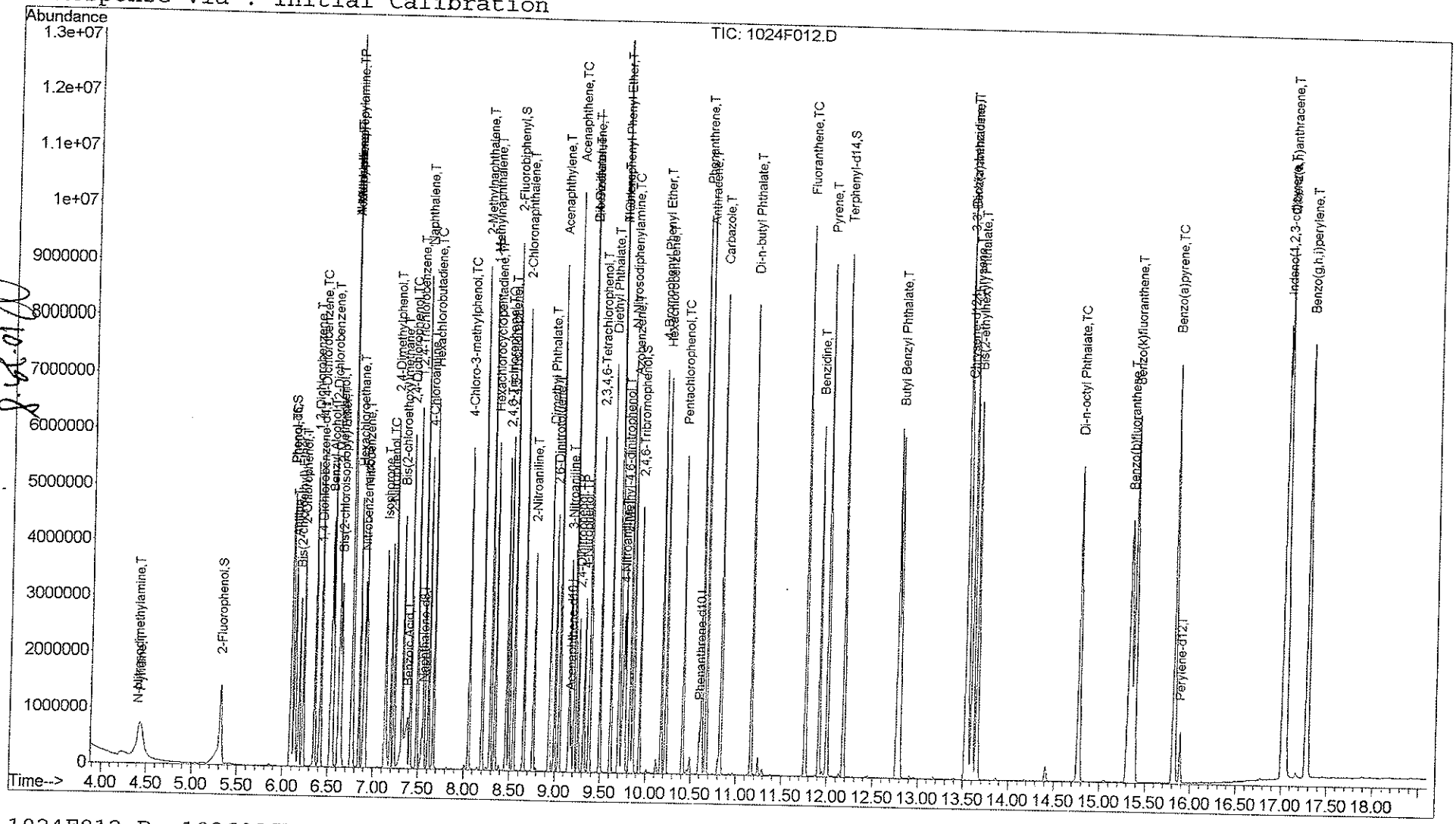
Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F012.D
Acq On : 26 Oct 2008 5:32 pm
Sample : 10.0PPM ICAL SVO_LL | SVM27-33L
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:52 2008

Vial: 12
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:00:27 2008
Response via : Initial Calibration



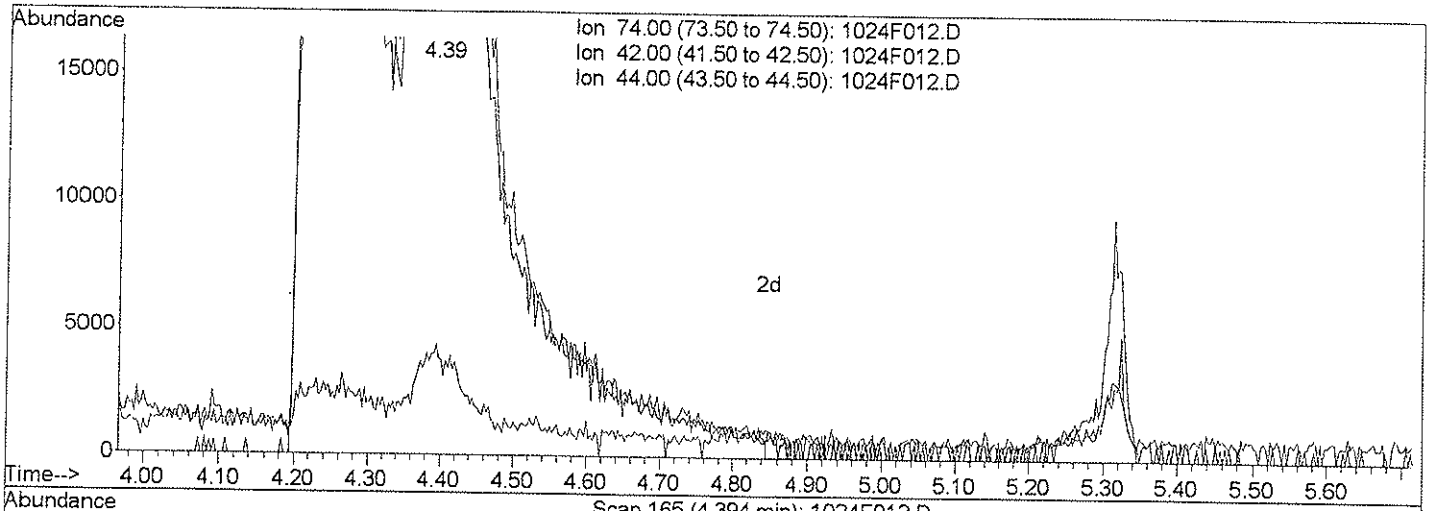
1024F012.D 102608SVOLL.M Mon Oct 27 09:07:57 2008

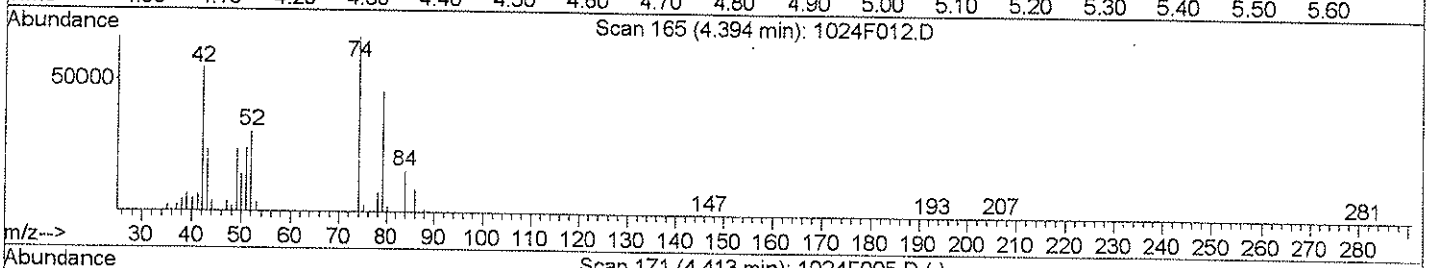
Data File : J:\MS17\DATA\102608\1024F012.D
Acq On : 26 Oct 2008 5:32 pm
Sample : 10.0PPM ICAL SVO_LL | SVM27-33L
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:18 2008

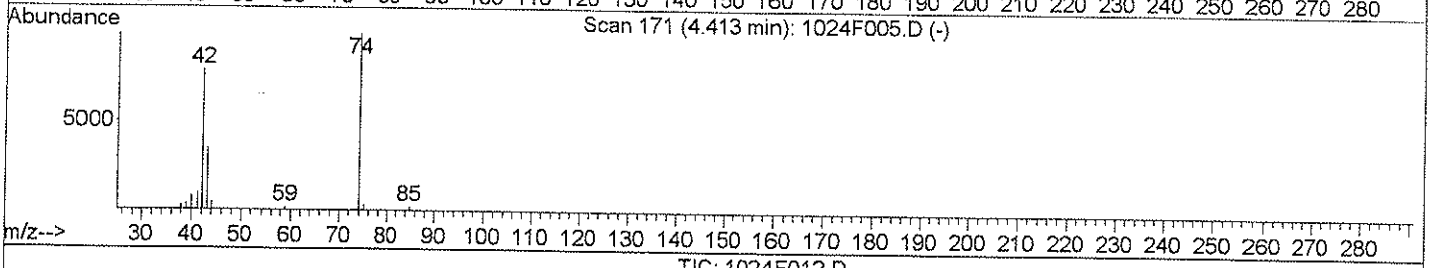
Vial: 12
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration







TIC: 1024F012.D

(2) N-Nitrosodimethylamine (T)

4.39min 10344.15ng/ml

response 587595

Ion	Exp%	Act%
74.00	100	100
42.00	89.40	80.20
44.00	7.30	5.47
0.00	0.00	0.00

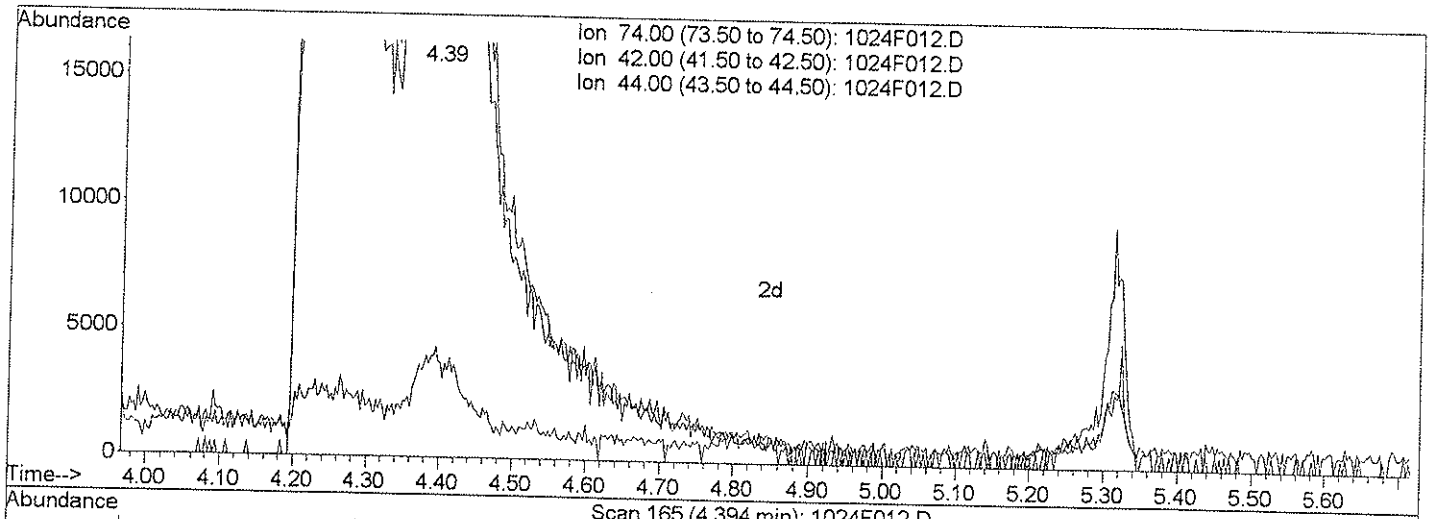
1024F012.D 102608SVOLL.M Mon Oct 27 08:51:15 2008

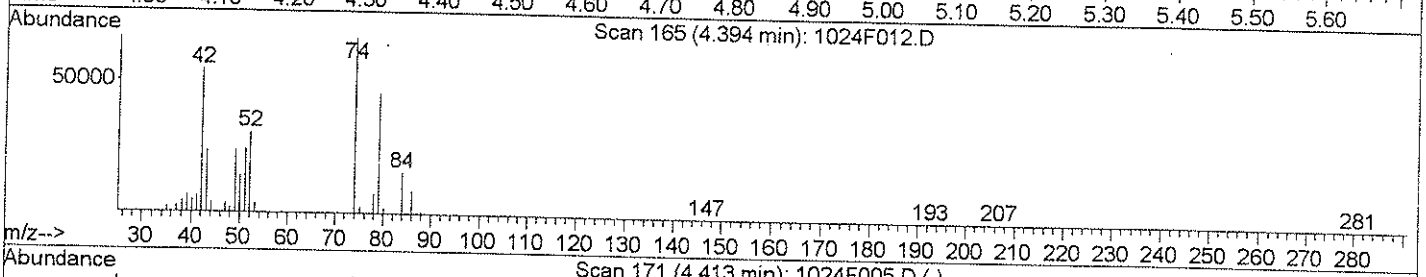
Data File : J:\MS17\DATA\102608\1024F012.D
Acq On : 26 Oct 2008 5:32 pm
Sample : 10.0PPM ICAL SVO_LL | SVM27-33L
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:51 2008

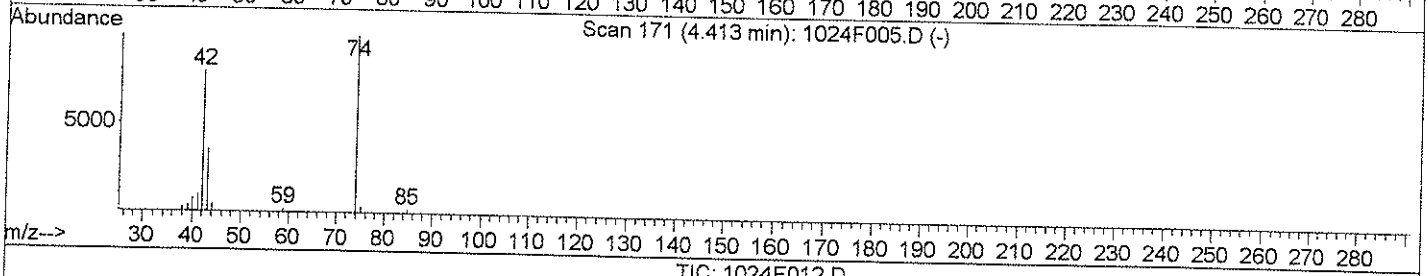
Vial: 12
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration







TIC: 1024F012.D

(2) N-Nitrosodimethylamine (T)

4.39min 10373.01ng/ml m

response 589259

Ion	Exp%	Act%
74.00	100	100
42.00	89.40	81.89
44.00	7.30	6.54
0.00	0.00	0.00

1C 10.29.8
KB 10/27/08

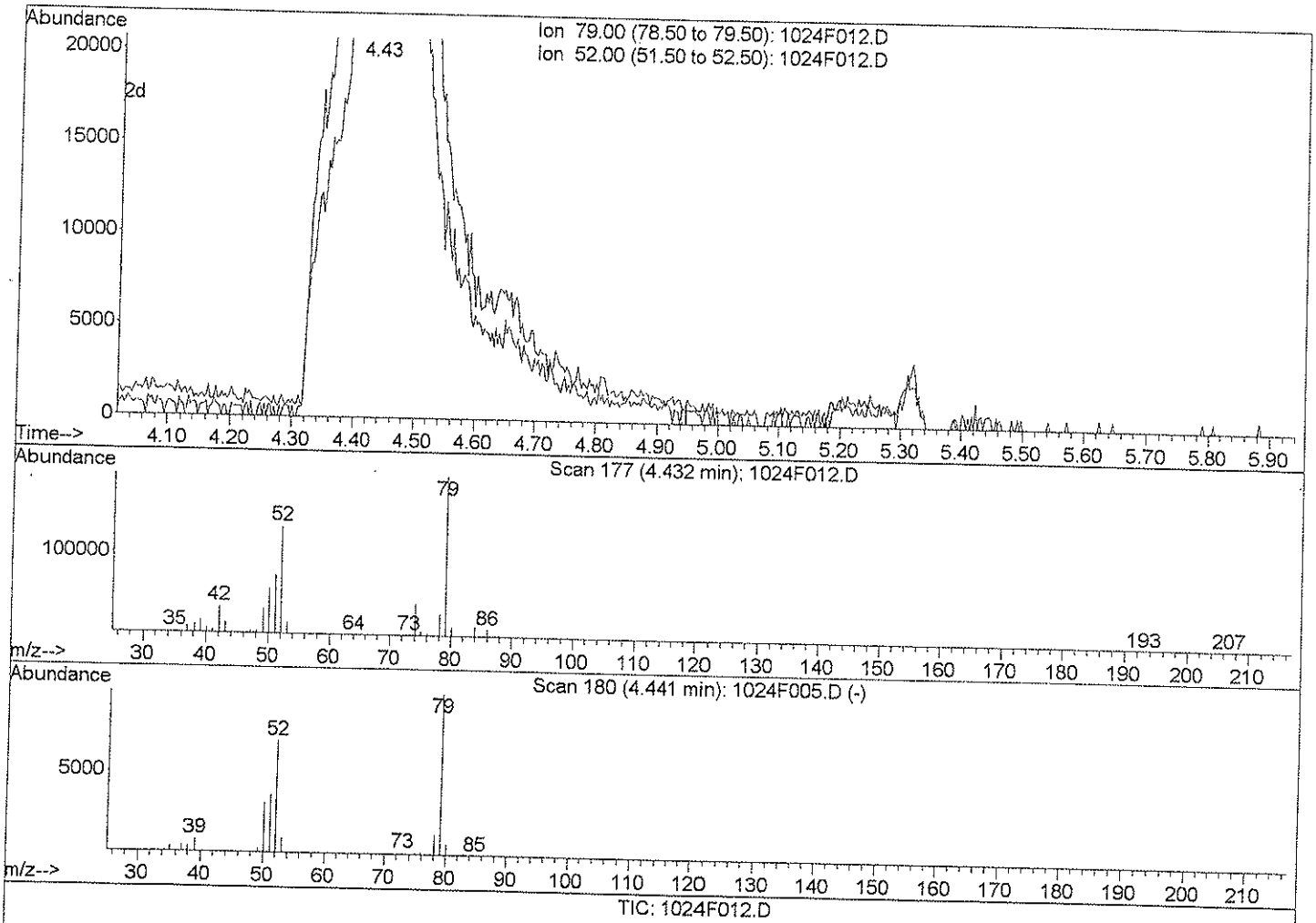
1024F012.D 102608SVOLL.M Mon Oct 27 08:51:25 2008

Data File : J:\MS17\DATA\102608\1024F012.D
Acq On : 26 Oct 2008 5:32 pm
Sample : 10.0PPM ICAL SVO_LL | SVM27-33L
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:51 2008

Vial: 12
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration



TIC: 1024F012.D

(3) Pyridine (T)

4.43min 10819.40ng/ml

response 1077781

Ion	Exp%	Act%
79.00	100	100
52.00	64.50	67.56
0.00	0.00	0.00
0.00	0.00	0.00

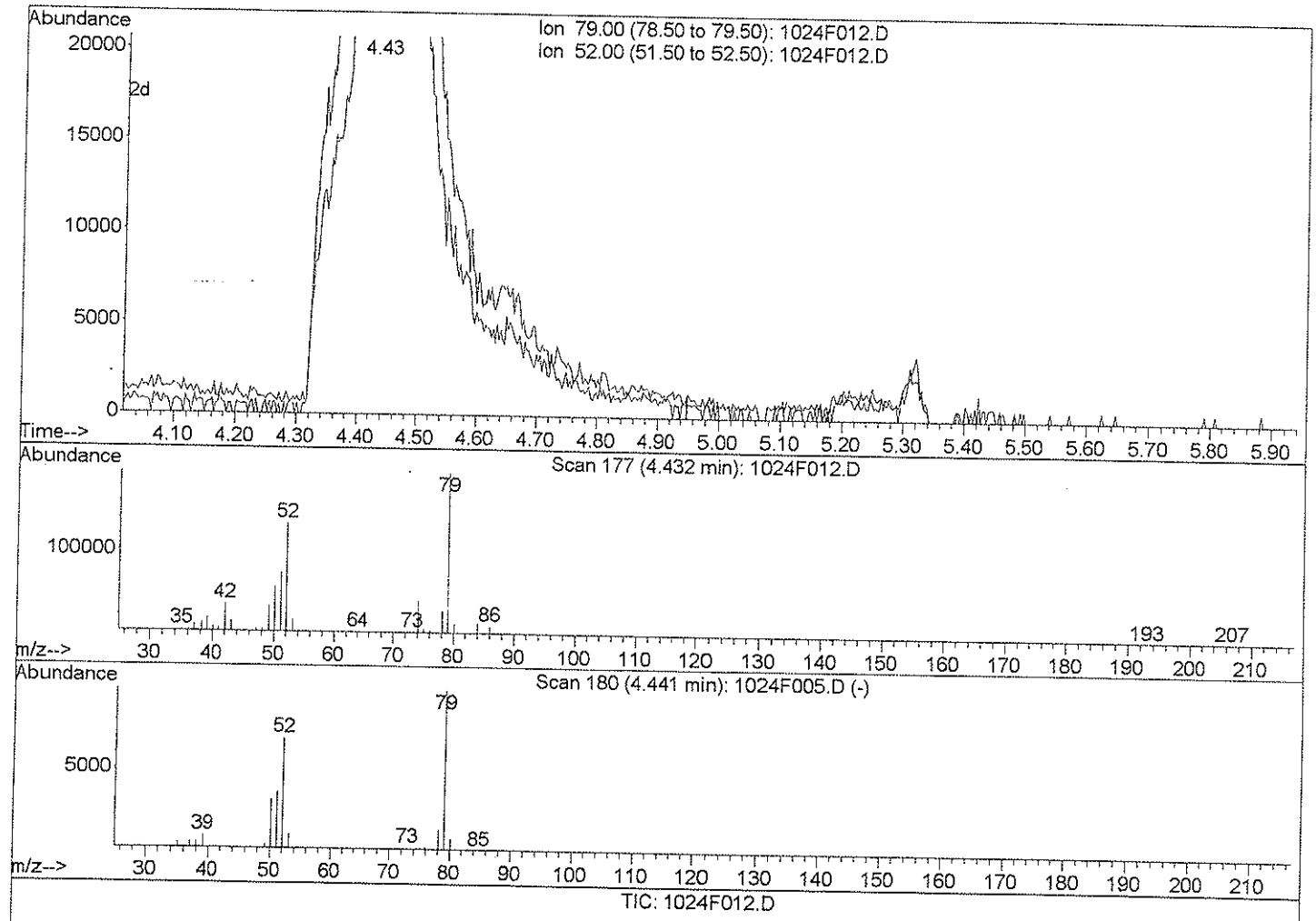
1024F012.D 102608SVOLL.M Mon Oct 27 08:51:30 2008

Data File : J:\MS17\DATA\102608\1024F012.D
Acq On : 26 Oct 2008 5:32 pm
Sample : 10.0PPM ICAL SVO_LL | SVM27-33L
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:51 2008

Vial: 12
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration



TIC: 1024F012.D

(3) Pyridine (T)

4.43min 10857.63ng/ml m

response 1081589

Ion	Exp%	Act%
79.00	100	100
52.00	64.50	67.90
0.00	0.00	0.00
0.00	0.00	0.00

1C 10-29-8
KB 10127108

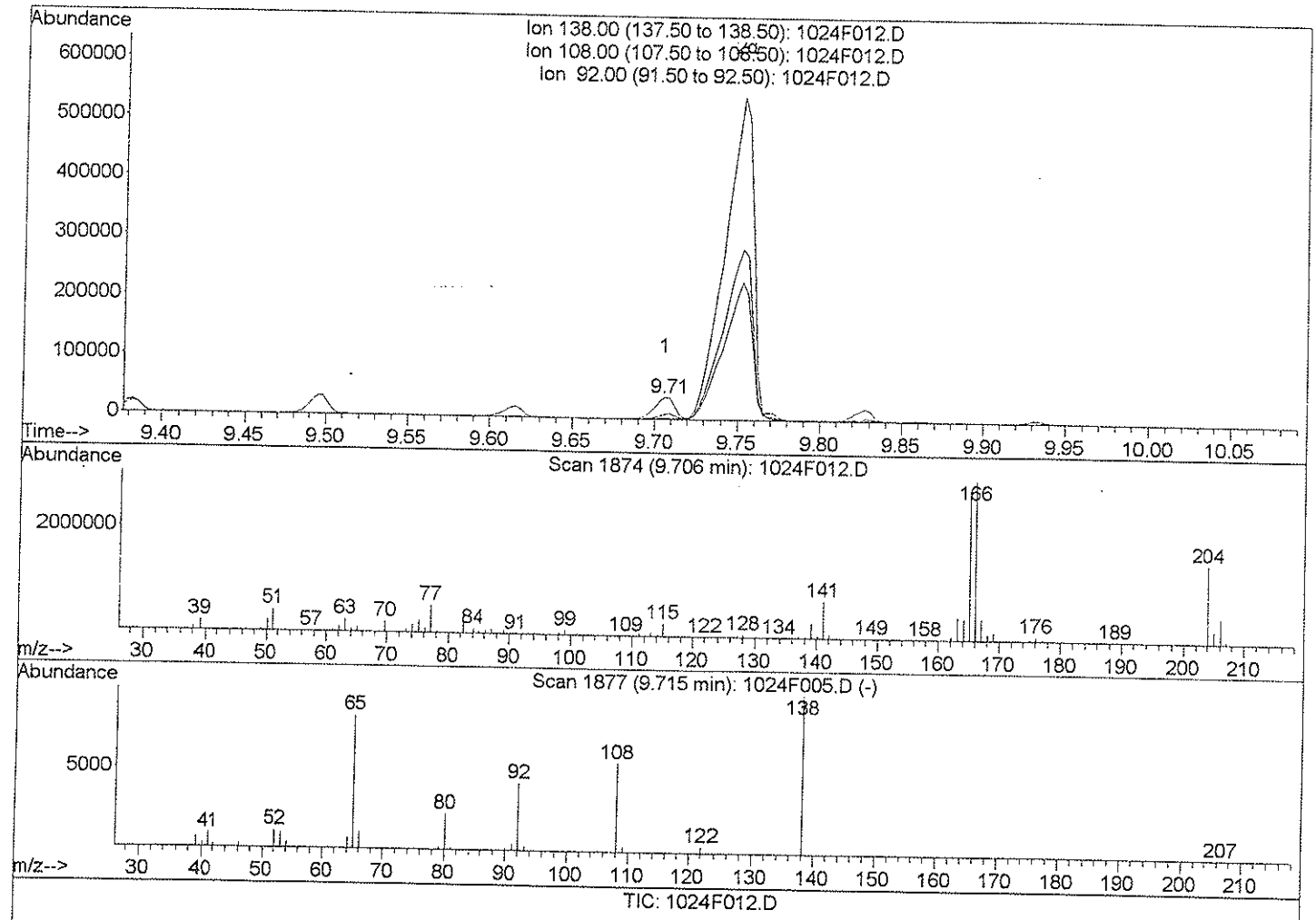
1024F012.D 102608SVOLL.M Mon Oct 27 08:51:37 2008

Data File : J:\MS17\DATA\102608\1024F012.D
Acq On : 26 Oct 2008 5:32 pm
Sample : 10.0PPM ICAL SVO_LL | SVM27-33L
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:51 2008

Vial: 12
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration



TIC: 1024F012.D

(56) 4-Nitroaniline (T)

9.71min 565.45ng/ml

response 32106

Ion	Exp%	Act%
138.00	100	100
108.00	57.30	4.71#
92.00	43.90	22.64
0.00	0.00	0.00

1024F012.D 102608SVOLL.M Mon Oct 27 08:52:02 2008

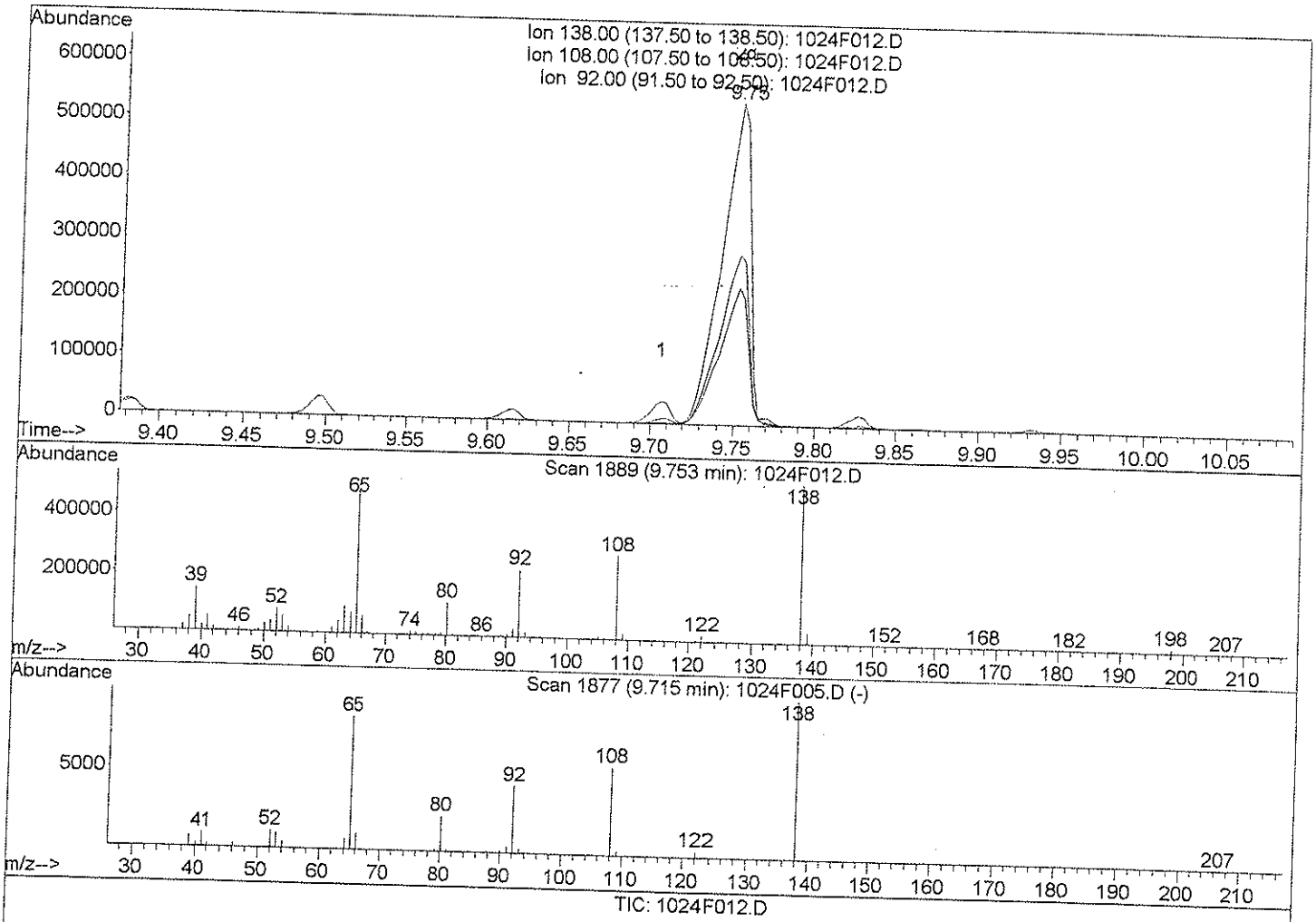
Integration Report (Qedit)

Data File : J:\MS17\DATA\102608\1024F012.D
Acq On : 26 Oct 2008 5:32 pm
Sample : 10.0PPM ICAL SVO_LL | SVM27-33L
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:52 2008

Vial: 12
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Single Level Calibration



TIC: 1024F012.D

(56) 4-Nitroaniline (T)

9.75min 11365.05ng/ml m

response 645308

Ion	Exp%	Act%
138.00	100	100
108.00	57.30	52.91
92.00	43.90	42.80
0.00	0.00	0.00

WP 10-28-08
KB 10127108

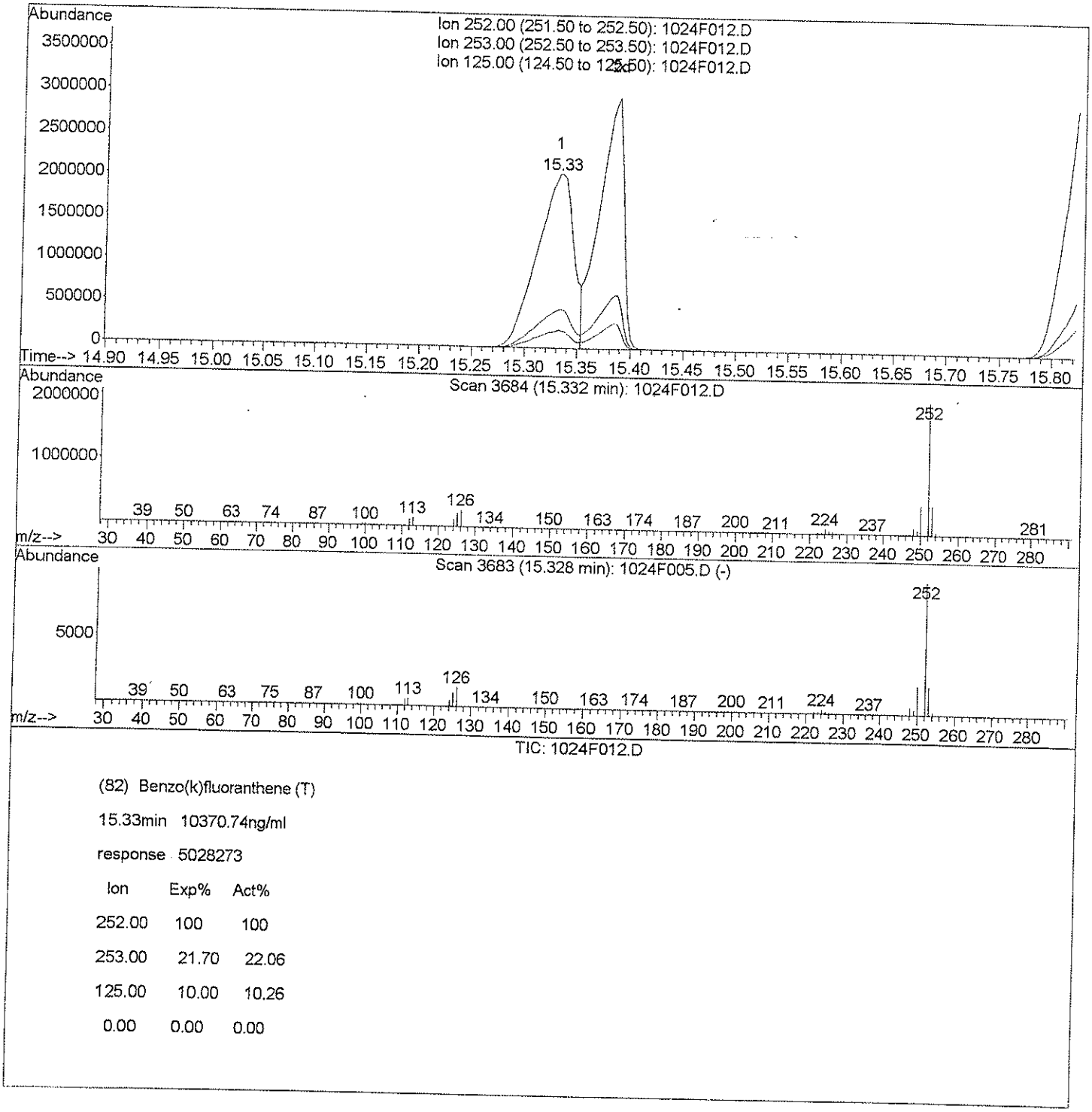
1024F012.D 102608SVOLL.M Mon Oct 27 08:52:07 2008

Data File : J:\MS17\DATA\102608\1024F012.D
Acq On : 26 Oct 2008 5:32 pm
Sample : 10.0PPM ICAL SVO_LL | SVM27-33L
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:52 2008

Vial: 12
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Multiple Level Calibration



(82) Benzo(k)fluoranthene (T)

15.33min 10370.74ng/ml

response 5028273

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	22.06
125.00	10.00	10.26
0.00	0.00	0.00

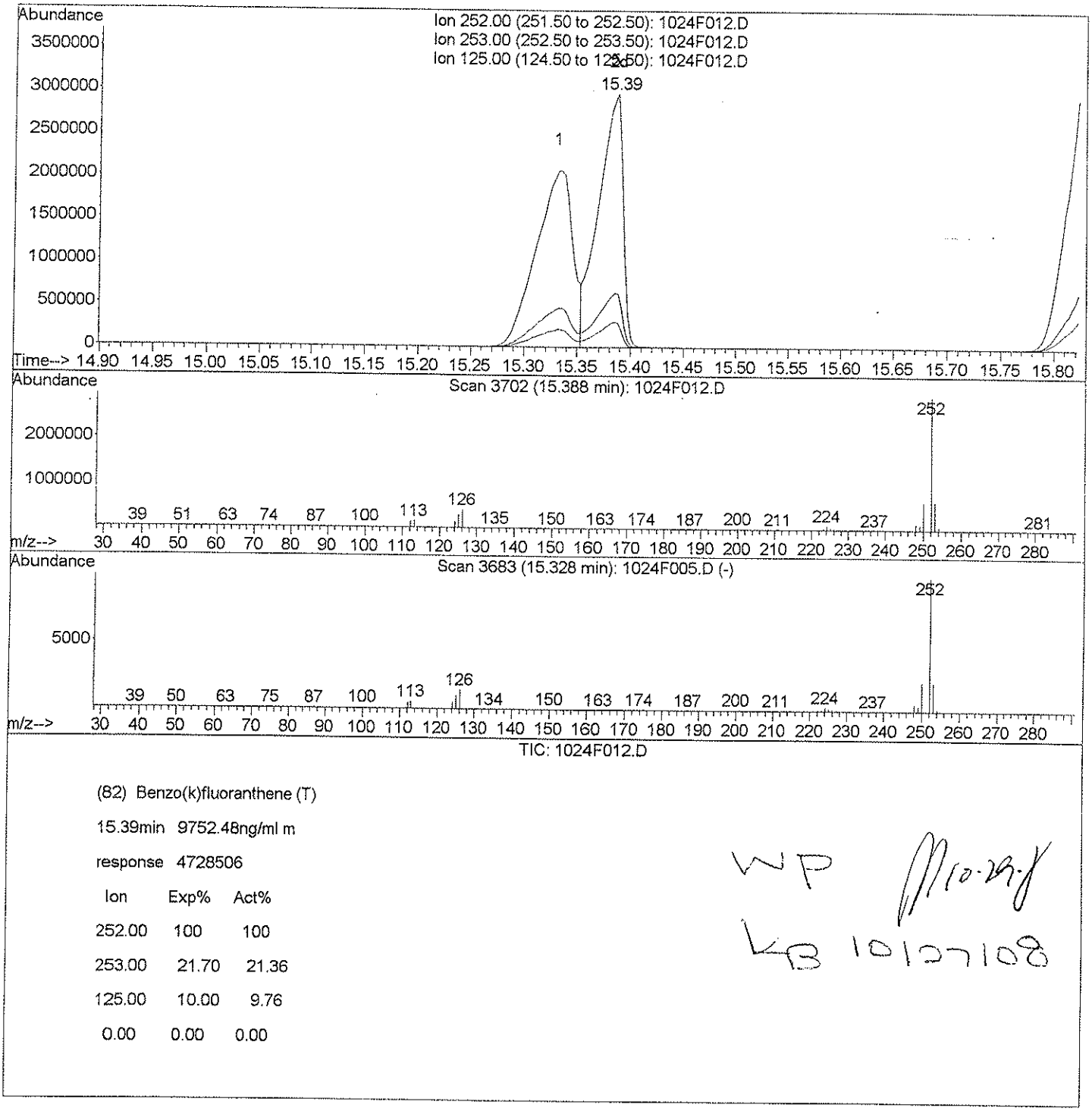
1024F012.D 102608SVOLL.M Mon Oct 27 08:52:21 2008

Data File : J:\MS17\DATA\102608\1024F012.D
Acq On : 26 Oct 2008 5:32 pm
Sample : 10.0PPM ICAL SVO_LL | SVM27-33L
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:52 2008

Vial: 12
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Multiple Level Calibration



(82) Benzo(k)fluoranthene (T)

15.39min 9752.48ng/ml m

response 4728506

Ion	Exp%	Act%
252.00	100	100
253.00	21.70	21.36
125.00	10.00	9.76
0.00	0.00	0.00

WP 10-29-08
KB 10/27/08

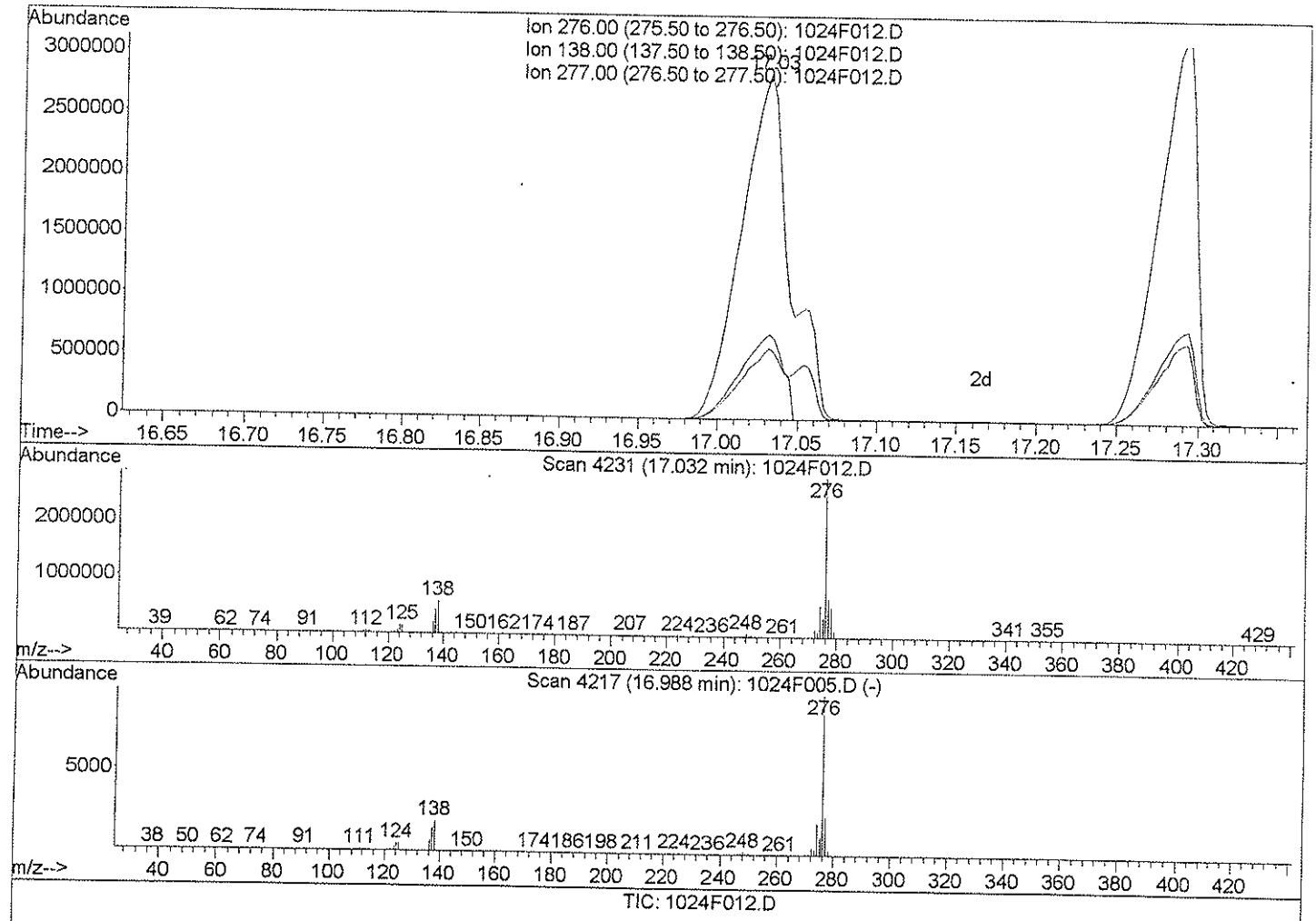
1024F012.D 102608SVOLL.M Mon Oct 27 08:52:26 2008

Data File : J:\MS17\DATA\102608\1024F012.D
Acq On : 26 Oct 2008 5:32 pm
Sample : 10.0PPM ICAL SVO_LL | SVM27-33L
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:52 2008

Vial: 12
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Multiple Level Calibration



TIC: 1024F012.D

(84) Indeno(1,2,3-cd)pyrene (T)

17.03min 13749.75ng/ml

response 6039965

Ion	Exp%	Act%
276.00	100	100
138.00	18.90	20.51
277.00	23.20	24.43
0.00	0.00	0.00

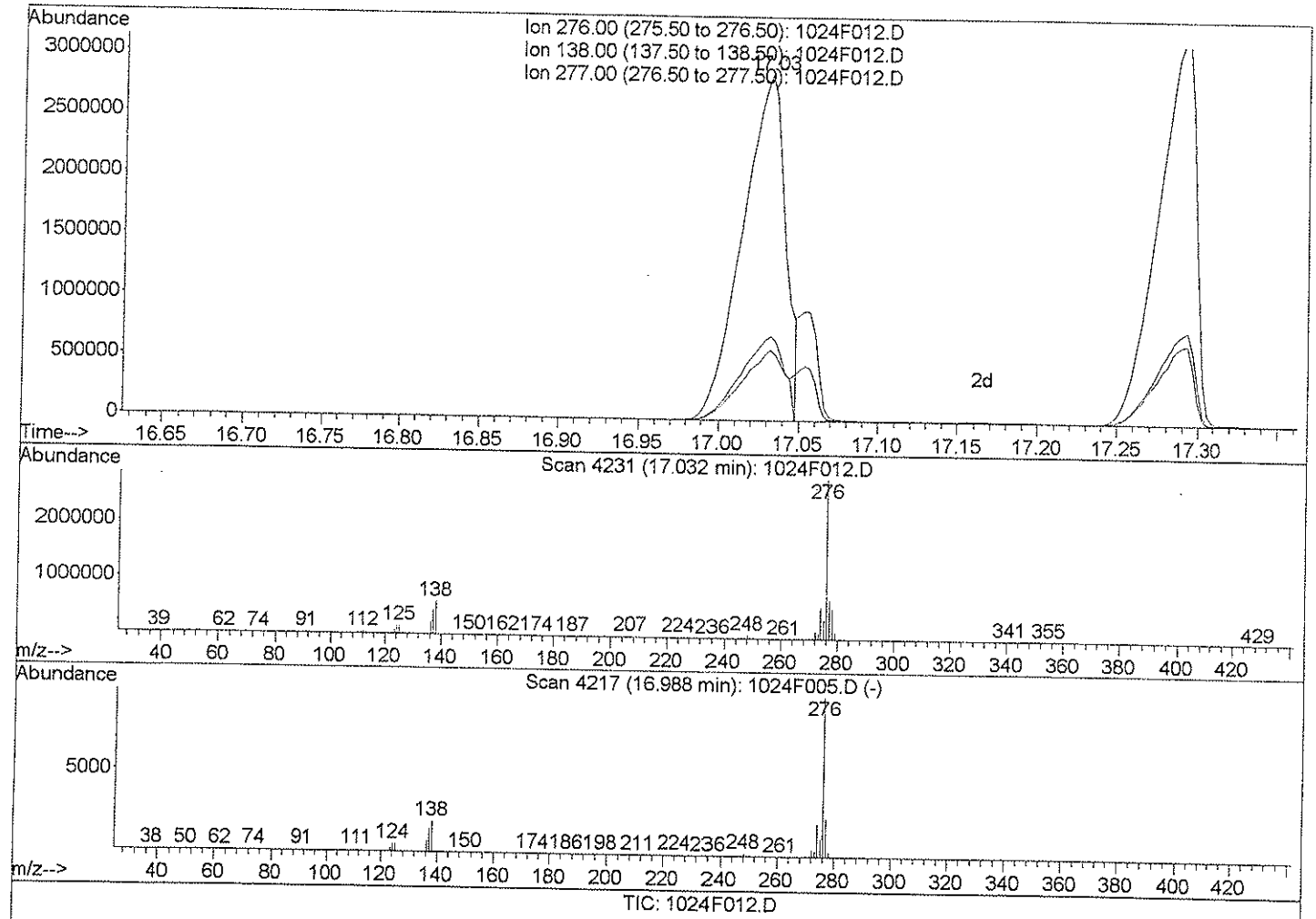
1024F012.D 102608SVOLL.M Mon Oct 27 08:52:32 2008

Data File : J:\MS17\DATA\102608\1024F012.D
Acq On : 26 Oct 2008 5:32 pm
Sample : 10.0PPM ICAL SVO_LL | SVM27-33L
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 8:52 2008

Vial: 12
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 08:40:35 2008
Response via : Multiple Level Calibration



TIC: 1024F012.D

(84) Indeno(1,2,3-cd)pyrene (T)

17.03min 12037.73ng/ml m

response 5287910

Ion	Exp%	Act%
276.00	100	100
138.00	18.90	20.51
277.00	23.20	24.43
0.00	0.00	0.00

D1
KB 10127108
10.29.8

1024F012.D 102608SVOLL.M Mon Oct 27 08:52:36 2008

Data File : J:\MS17\DATA\102608\1024F013.D
Acq On : 26 Oct 2008 5:57 pm
Sample : 3.0PPM ICV SVO_LL | SVM27-34B
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 09:16:45 2008

Vial: 13
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:16:23 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.40	152	69076	1000.00	ng/ml	0.00
22) Naphthalene-d8	7.54	136	268246	1000.00	ng/ml	0.00
36) Acenaphthene-d10	9.17	164	155369	1000.00	ng/ml	0.00
60) Phenanthrene-d10	10.59	188	264145	1000.00	ng/ml	0.00
70) Chrysene-d12	13.54	240	336293	1000.00	ng/ml	0.00
79) Perylene-d12	15.88	264	374577	1000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol	5.31	112	262981	3133.64	ng/ml	0.00
Spiked Amount 3750.000	Range 25 - 121		Recovery = 83.56%			
7) Phenol-d6	6.08	99	360354	3180.56	ng/ml	0.00
Spiked Amount 3750.000	Range 24 - 113		Recovery = 84.81%			
20) Nitrobenzene-d5	6.89	82	286160	3147.74	ng/ml	0.00
Spiked Amount 2500.000	Range 23 - 120		Recovery = 125.91%#			
40) 2-Fluorobiphenyl	8.54	172	712080	2991.06	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 115		Recovery = 119.64%#			
61) 2,4,6-Tribromophenol	9.93	330	167426	3169.53	ug/ml	0.00
Spiked Amount 3750.000	Range 19 - 122		Recovery = 84.52%			
73) Terphenyl-d14	12.18	244	899205	2972.67	ng/ml	0.00
Spiked Amount 2500.000	Range 30 - 140		Recovery = 118.91%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.41	74	159459	3182.41	ng/ml	96
3) Pyridine	4.44	79	299256m	3077.00	ng/ml	
5) Aniline	6.13	93	436824	3170.12	ng/ml	97
6) Bis(2-chloroethyl) Ether	6.18	93	260040	2902.88	ng/ml	97
8) Phenol	6.09	94	357417	3120.39	ng/ml	99
9) 2-Chlorophenol	6.22	128	304930	3109.74	ng/ml	99
10) 1,3-Dichlorobenzene	6.35	146	339827	3018.11	ng/ml	98
11) 1,4-Dichlorobenzene	6.42	146	351492	3032.51	ng/ml	98
12) 1,2-Dichlorobenzene	6.55	146	331668	3006.99	ng/ml	99
13) Benzyl Alcohol	6.53	108	184767	3116.60	ng/ml	96
14) Bis(2-chloroisopropyl) Eth	6.64	45	386552	3023.08	ng/ml	100
15) 2-Methylphenol	6.61	107	239261	3029.51	ng/ml	99
16) Hexachloroethane	6.84	117	118226	3052.91	ng/ml	96
18) N-Nitrosodi-n-propylamine	6.75	70	191710	2798.08	ng/ml	99
19) 4-Methylphenol	6.75	107	343534	2967.30	ng/ml	96
21) Nitrobenzene	6.91	77	296697	3059.91	ng/ml	97
23) Isophorone	7.12	82	473505	2619.75	ng/ml	99
24) 2-Nitrophenol	7.19	139	169929	3060.97	ng/ml	99
25) 2,4-Dimethylphenol	7.23	122	260726	2927.01	ng/ml	99
26) Bis(2-chloroethoxy)methane	7.32	93	325903	3048.93	ng/ml	99

(#) = qualifier out of range (m) = manual integration
1024F013.D 102608SVOLL.M Mon Oct 27 09:17:53 2008

10-29-08
LB
10/29/08

(QA Reviewed)

Data File : J:\MS17\DATA\102608\1024F013.D
Acq On : 26 Oct 2008 5:57 pm
Sample : 3.0PPM ICV SVO_LL | SVM27-34B
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 09:16:45 2008

Vial: 13
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:16:23 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
27) 2,4-Dichlorophenol	7.40	162	266298	3059.71	ng/ml	98
28) Benzoic Acid	7.32	105	165926	2914.75	ng/ml	92
29) 1,2,4-Trichlorobenzene	7.48	180	295428	2945.40	ng/ml	97
30) Naphthalene	7.56	128	883864	2981.82	ng/ml	100
31) 4-Chloroaniline	7.61	127	382317	3139.80	ng/ml	98
32) Hexachlorobutadiene	7.66	225	180921	2896.92	ng/ml	99
33) 4-Chloro-3-methylphenol	8.05	107	251325	3053.21	ng/ml	98
34) 2-Methylnaphthalene	8.20	142	610686	3015.12	ng/ml	96
35) 1-Methylnaphthalene	8.29	142	574350	3005.90	ng/ml	98
37) Hexachlorocyclopentadiene	8.34	237	193534	2568.27	ng/ml	98
38) 2,4,6-Trichlorophenol	8.46	196	211154	3083.59	ng/ml	98
39) 2,4,5-Trichlorophenol	8.49	196	227101	3060.49	ng/ml	98
41) 2-Chloronaphthalene	8.65	162	586730	2920.30	ng/ml	99
42) 2-Nitroaniline	8.75	65	155746	3010.81	ng/ml	100
43) Acenaphthylene	9.04	152	857216	2715.75	ng/ml	99
44) Dimethyl Phthalate	8.93	163	673318	2979.80	ng/ml	98
45) 2,6-Dinitrotoluene	8.99	165	158194	3107.91	ng/ml	98
46) Acenaphthene	9.21	154	554075	2963.34	ng/ml	99
47) 3-Nitroaniline	9.15	138	168101	3206.01	ng/ml	96
48) 2,4-Dinitrophenol	9.24	184	96466	2789.17	ng/ml	95
49) Dibenzofuran	9.37	168	851477	2883.28	ng/ml	100
50) 4-Nitrophenol	9.31	65	117351	3182.10	ng/ml	97
51) 2,4-Dinitrotoluene	9.37	165	211517	3093.66	ng/ml	98
52) 2,3,4,6-Tetrachlorophenol	9.49	232	183279	2733.91	ng/ml	98
53) Fluorene	9.70	166	698765	2954.79	ng/ml	100
54) 4-Chlorophenyl Phenyl Ethe	9.70	204	367777	2948.08	ng/ml	98
55) Diethyl Phthalate	9.60	149	619790	2905.96	ng/ml	99
56) 4-Nitroaniline	9.73	138	171607	3186.34	ng/ml	96
57) 2-Methyl-4,6-dinitrophenol	9.75	198	142954	2864.66	ng/ml	90
58) N-Nitrosodiphenylamine	9.82	169	494430	3070.34	ng/ml	99
59) Azobenzene	9.86	77	601605	3052.11	ng/ml	99
62) 4-Bromophenyl Phenyl Ether	10.17	248	255952	3131.33	ng/ml	98
63) Hexachlorobenzene	10.22	284	293116	2951.77	ng/ml	99
64) Pentachlorophenol	10.41	266	201115	3409.03	ng/ml	98
65) Phenanthrene	10.61	178	1039934	3054.61	ng/ml	99
66) Anthracene	10.66	178	1067422	3052.80	ng/ml	99
67) Carbazole	10.82	167	938212	2919.50	ng/ml	100
68) Di-n-butyl Phthalate	11.16	149	1066050	2863.24	ng/ml	100
69) Fluoranthene	11.76	202	1171179	2987.64	ng/ml	100
71) Benzidine	11.91	184	654738	2933.60	ng/ml	99
72) Pyrene	11.99	202	1192302	2939.97	ng/ml	99

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

LB 10.28.08
10/27/08

Data File : J:\MS17\DATA\102608\1024F013.D
Acq On : 26 Oct 2008 5:57 pm
Sample : 3.0PPM ICV SVO_LL | SVM27-34B
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 09:16:45 2008

Vial: 13
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:16:23 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
74) Butyl Benzyl Phthalate	12.79	149	469645	2999.77	ng/ml	99
75) 3,3'-Dichlorobenzidine	13.51	252	506023	2847.05	ng/ml	100
76) Benz(a)anthracene	13.53	228	1234903	2973.85	ng/ml	98
77) Chrysene	13.58	228	1149040	2956.28	ng/ml	99
78) Bis(2-ethylhexyl) Phthalat	13.64	149	667911	3006.97	ng/ml	100
80) Di-n-octyl Phthalate	14.76	149	1125039	3141.29	ng/ml	99
81) Benzo(b)fluoranthene	15.30	252	1238855	2827.89	ng/ml	98
82) Benzo(k)fluoranthene	15.36	252	1298359	2937.32	ng/ml	98
83) Benzo(a)pyrene	15.81	252	1250067	3107.99	ng/ml	99
84) Indeno(1,2,3-cd)pyrene	17.01	276	1379985	2987.00	ng/ml	98
85) Dibenz(a,h)anthracene	17.03	278	1445276	2984.70	ng/ml	98
86) Benzo(g,h,i)perylene	17.27	276	1393722	2914.95	ng/ml	100

10-28-8

(#) = qualifier out of range (m) = manual integration
1024F013.D 102608SVOLL.M Mon Oct 27 09:17:54 2008 Page 3

LB 10/27/08

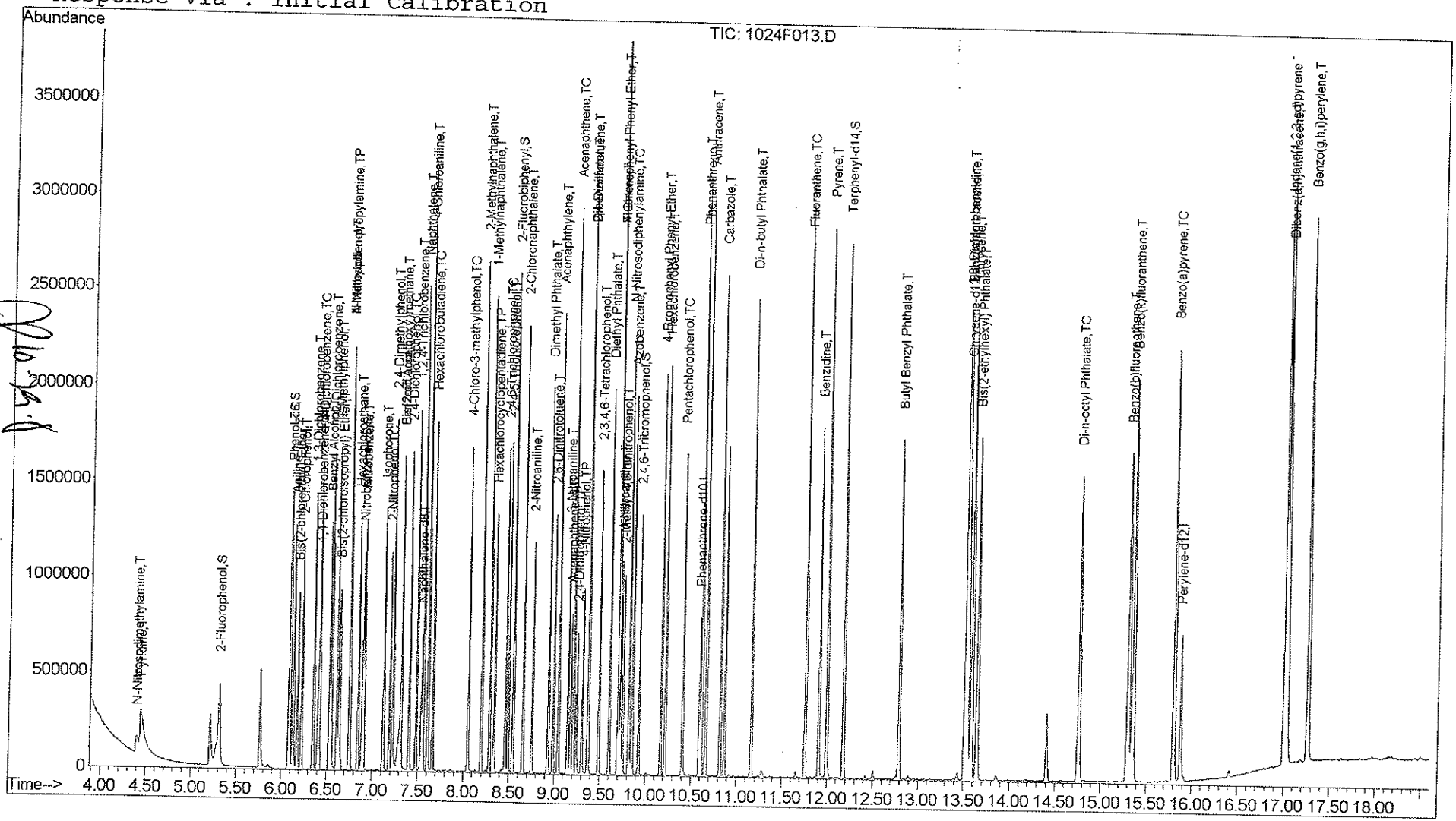
Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F013.D
Acq On : 26 Oct 2008 5:57 pm
Sample : 3.0PPM ICV SVO_LL | SVM27-34B
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 9:17 2008

Vial: 13
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:16:23 2008
Response via : Initial Calibration



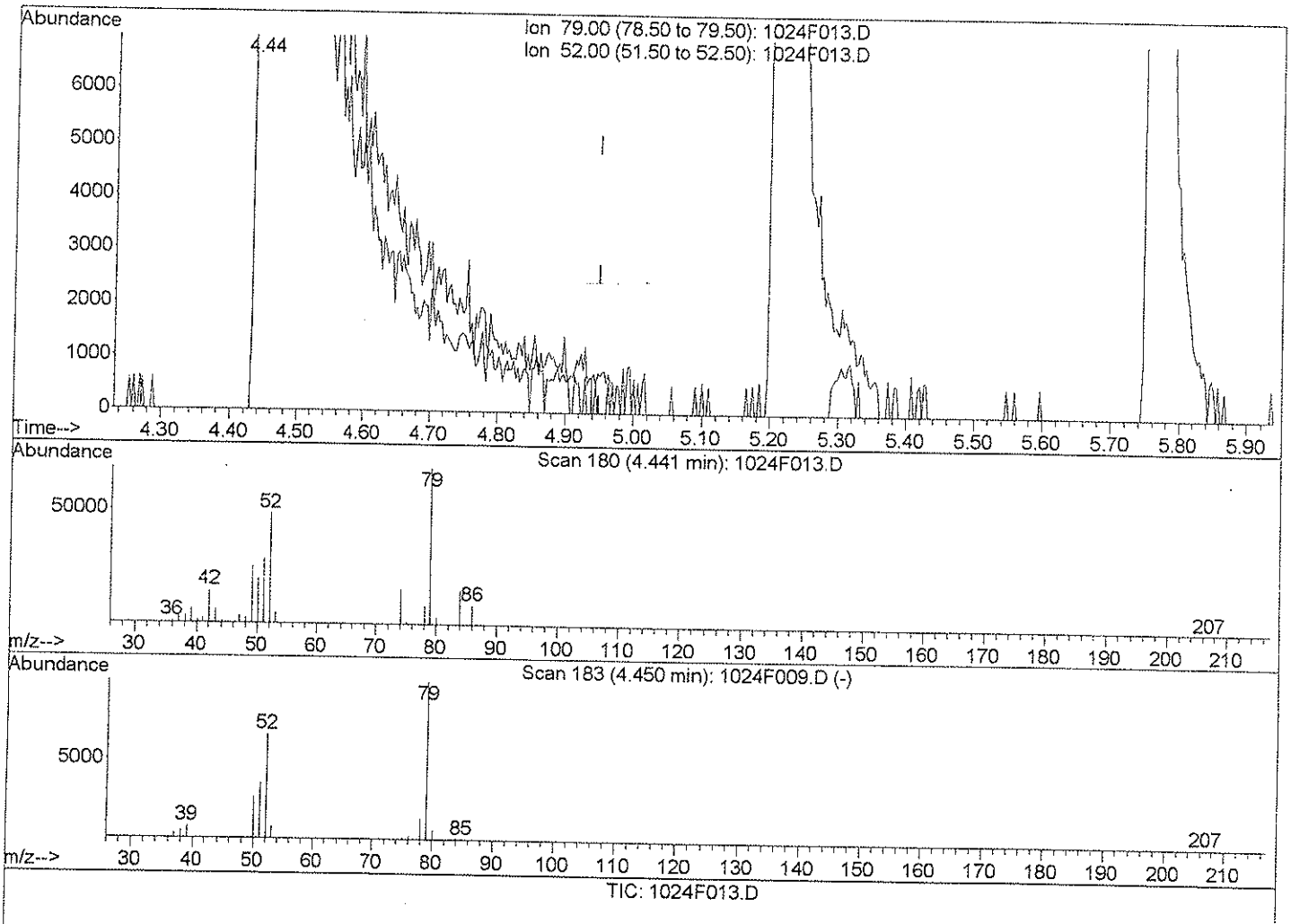
1024F013.D 102608SVOLL.M Mon Oct 27 09:17:54 2008

Data File : J:\MS17\DATA\102608\1024F013.D
Acq On : 26 Oct 2008 5:57 pm
Sample : 3.0PPM ICV SVO_LL | SVM27-34B
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 9:16 2008

Vial: 13
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:16:23 2008
Response via : Single Level Calibration



TIC: 1024F013.D

(3) Pyridine (T)

4.44min 3064.23ng/ml

response 298014

Ion	Exp%	Act%
79.00	100	100
52.00	66.00	70.53
0.00	0.00	0.00
0.00	0.00	0.00

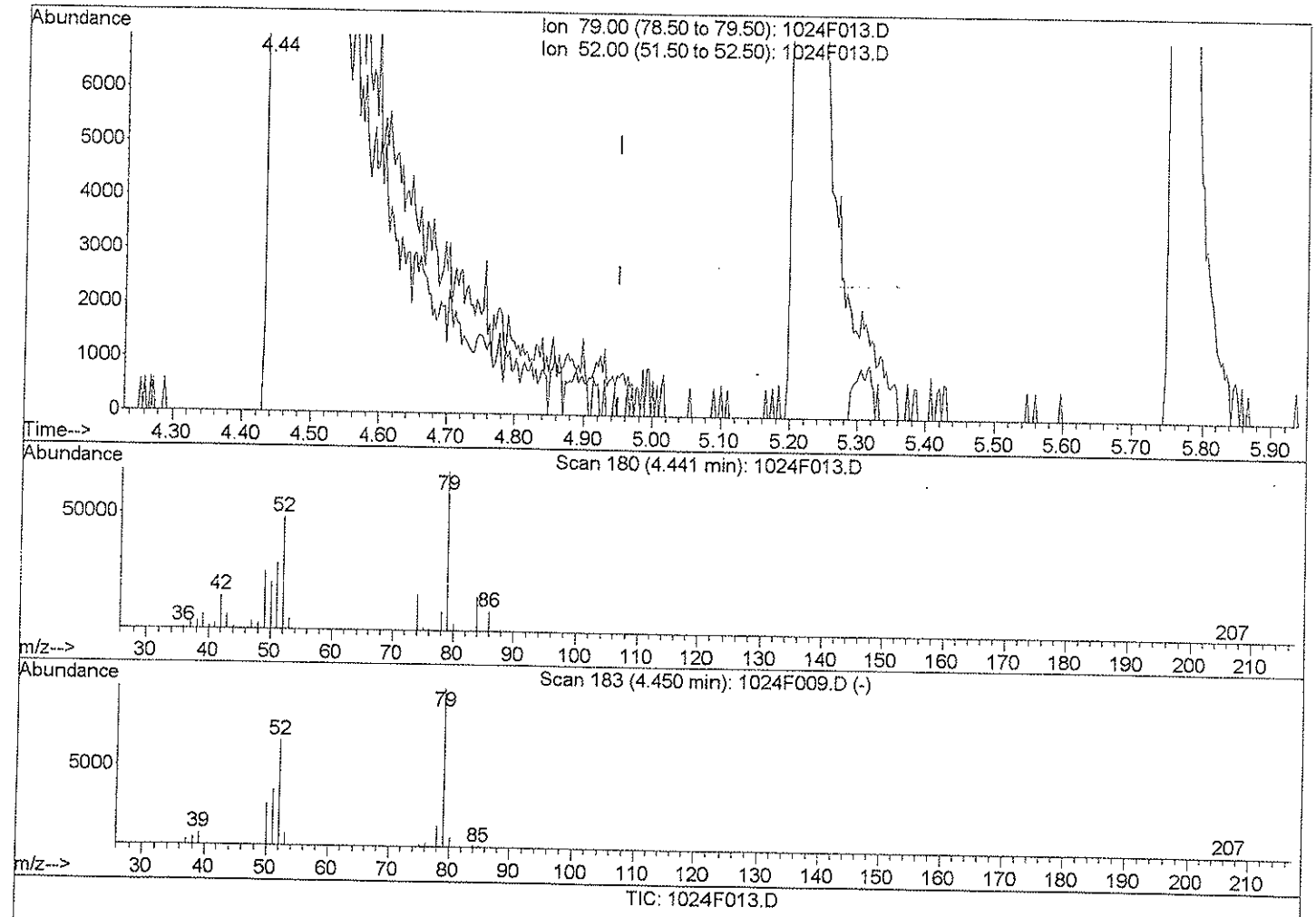
1024F013.D 102608SVOLL.M Mon Oct 27 09:16:58 2008

Data File : J:\MS17\DATA\102608\1024F013.D
Acq On : 26 Oct 2008 5:57 pm
Sample : 3.0PPM ICV SVO_LL | SVM27-34B
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 9:17 2008

Vial: 13
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:16:23 2008
Response via : Single Level Calibration



TIC: 1024F013.D

(3) Pyridine (T)

4.44min 3077.00ng/ml m

response 299256

Ion	Exp%	Act%
79.00	100	100
52.00	66.00	70.53
0.00	0.00	0.00
0.00	0.00	0.00

1C 10-29-8
LB 10127108

1024F013.D 102608SVOLL.M Mon Oct 27 09:17:06 2008

(QA Reviewed)

Data File : J:\MS17\DATA\102608\1024F014.D
Acq On : 26 Oct 2008 6:23 pm
Sample : 3.0PPM CLP ICV SVO_LL | SVM27-12C
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 09:05:42 2008

Vial: 14
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:00:27 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.40	152	86558	1000.00	ng/ml	0.00
22) Naphthalene-d8	7.53	136	332597	1000.00	ng/ml	0.00
36) Acenaphthene-d10	9.17	164	202810	1000.00	ng/ml	0.00
60) Phenanthrene-d10	10.59	188	339185	1000.00	ng/ml	0.00
70) Chrysene-d12	13.54	240	418116	1000.00	ng/ml	0.00
79) Perylene-d12	15.88	264	427344	1000.00	ng/ml	0.00

System Monitoring Compounds					
4) 2-Fluorophenol	0.00	112	0	0.00	ng/ml
Spiked Amount 3750.000	Range 25 - 121		Recovery =	0.00%#	
7) Phenol-d6	0.00	99	0d	0.00	ng/ml
Spiked Amount 3750.000	Range 24 - 113		Recovery =	0.00%#	
20) Nitrobenzene-d5	0.00	82	0d	0.00	ng/ml
Spiked Amount 2500.000	Range 23 - 120		Recovery =	0.00%#	
40) 2-Fluorobiphenyl	0.00	172	0d	0.00	ng/ml
Spiked Amount 2500.000	Range 30 - 115		Recovery =	0.00%#	
61) 2,4,6-Tribromophenol	0.00	330	0d	0.00	ug/ml
Spiked Amount 3750.000	Range 19 - 122		Recovery =	0.00%#	
73) Terphenyl-d14	0.00	244	0d	0.00	ng/ml
Spiked Amount 2500.000	Range 30 - 140		Recovery =	0.00%#	

Target Compounds						Qvalue
17) Acetophenone	6.76	105	444982	2697.36	ng/ml	98

10-28-08 LB 10/27/08

(#) = qualifier out of range (m) = manual integration
1024F014.D 102608SVOLL.M Mon Oct 27 09:08:00 2008 Page 1

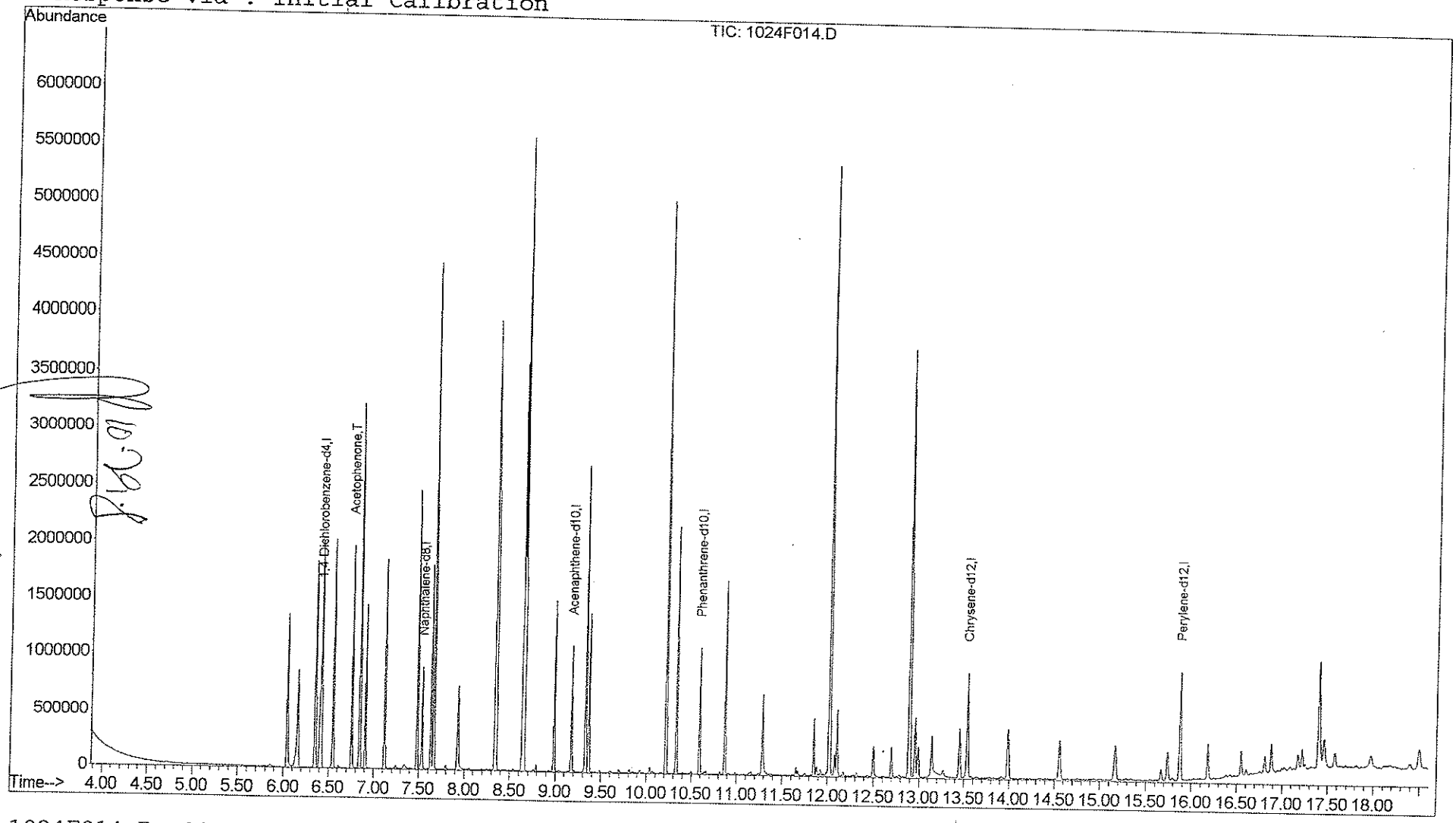
Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\102608\1024F014.D
Acq On : 26 Oct 2008 6:23 pm
Sample : 3.0PPM CLP ICV SVO_LL | SVM27-12C
Misc :
MS Integration Params: LSCINT.P
Quant Time: Oct 27 9:07 2008

Vial: 14
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Oct 27 09:00:27 2008
Response via : Initial Calibration



748

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/31/2008

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270C

Calibration Date: 10/26/2008
Calibration ID: CAL7891
Analysis Lot: KWG0811769
Units: ng/ml

File ID: J:\MS17\DATA\103108\1031F006.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
‡ Phenol	3000	3000	0.01	1.66	1.65	-1	NA	± 20 %	AverageRF
Benzyl Alcohol	3000	3100	0.01	0.858	0.878	2	NA	± 30 %	AverageRF
1,2-Dichlorobenzene	3000	3000	0.01	1.60	1.62	2	NA	± 30 %	AverageRF
2-Methylphenol	3000	2900	0.01	1.14	1.12	-2	NA	± 30 %	AverageRF
‡ 1,4-Dichlorobenzene	3000	3000	0.01	1.68	1.68	0	NA	± 20 %	AverageRF
4-Methylphenol	3000	3000	0.01	1.68	1.70	1	NA	± 30 %	AverageRF
2,4-Dimethylphenol	3000	2900	0.01	0.332	0.323	-3	NA	± 30 %	AverageRF
Benzoic Acid	3000	2700	0.01	0.216	0.187	NA	-10	± 30 %	Quadratic
1,2,4-Trichlorobenzene	3000	3100	0.01	0.374	0.392	5	NA	± 30 %	AverageRF
‡ Hexachlorobutadiene	3000	3200	0.01	0.233	0.245	5	NA	± 20 %	AverageRF
Dimethyl Phthalate	3000	3100	0.01	1.45	1.50	3	NA	± 30 %	AverageRF
Diethyl Phthalate	3000	3100	0.01	1.37	1.42	3	NA	± 30 %	AverageRF
‡ N-Nitrosodiphenylamine	3000	3100	0.01	1.04	1.06	2	NA	± 20 %	AverageRF
Hexachlorobenzene	3000	3000	0.01	0.376	0.379	1	NA	± 30 %	AverageRF
‡ Pentachlorophenol	3000	2600	0.01	0.223	0.190	-15	NA	± 20 %	AverageRF
Di-n-butyl Phthalate	3000	3000	0.01	1.41	1.42	0	NA	± 30 %	AverageRF
Butyl Benzyl Phthalate	3000	3100	0.01	0.466	0.485	4	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	3000	3100	0.01	0.660	0.684	4	NA	± 30 %	AverageRF
‡ Di-n-octyl Phthalate	3000	3200	0.01	0.956	1.01	6	NA	± 20 %	AverageRF
Phenol-d6	3000	3000	0.01	1.64	1.65	1	NA	± 30 %	AverageRF
Nitrobenzene-d5	3000	3100	0.01	1.32	1.36	3	NA	± 30 %	AverageRF
2-Fluorobiphenyl	3000	3000	0.01	1.53	1.54	0	NA	± 30 %	AverageRF
2,4,6-Tribromophenol	3000	3000	0.01	0.200	0.200	0	NA	± 30 %	AverageRF
Terphenyl-d14	3000	3000	0.01	0.899	0.897	0	NA	± 30 %	AverageRF
‡ Acenaphthene	3000	3000	0.01	1.20	1.22	1	NA	± 30 %	AverageRF
‡ 2,4,6-Trichlorophenol	3000	3100	0.01	0.441	0.454	3	NA	± 20 %	AverageRF
† 4-Nitrophenol	3000	3000	0.05	0.237	0.239	1	NA	± 30 %	AverageRF
‡ 2,4-Dichlorophenol	3000	3200	0.01	0.324	0.342	5	NA	± 20 %	AverageRF
‡ Fluoranthene	3000	3100	0.01	1.48	1.52	3	NA	± 20 %	AverageRF
‡ Benzo(a)pyrene	3000	3100	0.01	1.07	1.11	4	NA	± 20 %	AverageRF
† 2,4-Dinitrophenol	3000	2500	0.05	0.223	0.188	-15	NA	± 30 %	AverageRF
‡ 4-Chloro-3-methylphenol	3000	3200	0.01	0.307	0.323	5	NA	± 20 %	AverageRF
† N-Nitrosodi-n-propylamine	3000	3000	0.05	0.992	0.984	-1	NA	± 30 %	AverageRF
† Hexachlorocyclopentadiene	3000	2700	0.05	0.485	0.441	-9	NA	± 30 %	AverageRF
‡ 2-Nitrophenol	3000	3200	0.01	0.207	0.218	5	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Exception Report

Data File: J:\MS17\DATA\103108\1031F006.D
Lab ID: KWG0811769-2
RunType: CCV
Matrix: WATER

Date Acquired: 10/31/2008 13:34
Date Quantitated: 11/03/2008 11:40
Batch ID: KWG0811769
Analysis Method: 8270C
MethodJoinID: MJ142

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 11/3/08

Secondary Review: MM 11-3-08

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270C SVO_LL	**Collect Date:**		**Receive Date:**	11/03/2008

Analysis Lot:	KWG0811769	**Prep Lot:**	KWG0811326	**Report Group:**	
Analysis Method:	8270C	**Prep Method:**	EPA 3541		
Prep Ref:	771020	**Prep Date:**	10/23/2008		

Quant Method:	J:\MS17\METHODS\FULL_SCAN\102608SVOLL.	**Calibration ID:**	CAL7891
Title:			
Tune Ref:	J:\MS17\DATA\103108\1031F005.D	**Method ID:**	MJ142
MB Ref:		**Quant based on Method**	

Data File:	J:\MS17\DATA\103108\1031F006.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 13:34	**Quant Date:**	11/03/2008 11:40	**Vial:**	4
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0811769-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	1,4-Dichlorobenzene-d4	6.38	-0.02	152	72636	1,000.00	OK
2	Naphthalene-d8	7.52	-0.02	136	268098	1,000.00	OK
3	Acenaphthene-d10	9.17	-0.01	164	158771	1,000.00	OK
4	Phenanthrene-d10	10.58	-0.01	188	268489	1,000.00	OK
5	Chrysene-d12	13.53	-0.01	240	339697	1,000.00	OK
6	Perylene-d12	15.86	-0.02	264	378513	1,000.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	2-Fluorophenol	5.28			112	259044m	2,935		10-89	NA
1	Phenol-d6	6.07			99	359780	3,020		15-103	NA
1	Nitrobenzene-d5	6.88			82	295409	3,090		10-108	NA
3	2-Fluorobiphenyl	8.53			172	733394	3,015		10-105	NA
4	2,4,6-Tribromophenol	9.92			330	160868	2,996		16-122	NA
5	Terphenyl-d14	12.16			244	914265	2,992		31-126	NA

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	N-Nitrosodimethylamine	4.38			74	161819	3,071			
1	Pyridine	4.40			79	298952	2,923		N	
1	Aniline	6.11			93	426379	2,943			
1	Bis(2-chloroethyl) Ether	6.16			93	278401	2,956			
1	Phenol	6.08			94	359375	2,984			
1	2-Chlorophenol	6.20			128	312130	3,027			
1	1,3-Dichlorobenzene	6.33			146	360152	3,042			
1	1,4-Dichlorobenzene	6.40			146	365677	3,000			
1	1,2-Dichlorobenzene	6.53			146	353420	3,047			
1	Benzyl Alcohol	6.51			108	191253	3,068			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS17\DATA\103108\1031F006.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 13:34	**Quant Date:**	11/03/2008 11:40	**Vial:**	4
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0811769-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Bis(2-chloroisopropyl) Ether	6.62			45	371025	2,759			
1	2-Methylphenol	6.60			107	243126	2,928			
1	Hexachloroethane	6.83			117	124492	3,057			
1	Acetophenone	6.75			105	416279	3,007			
1	N-Nitrosodi-n-propylamine	6.74			70	214318	2,975			
1	4-Methylphenol	6.74			107	370283	3,042			
1	Nitrobenzene	6.90			77	306865	3,010			
2	Isophorone	7.11			82	543607	3,009			
2	2-Nitrophenol	7.18			139	174950	3,153			
2	2,4-Dimethylphenol	7.22			122	260111	2,922			
2	Bis(2-chloroethoxy)methane	7.31			93	328584	3,076			
2	2,4-Dichlorophenol	7.40			162	274862	3,160			
2	Benzoic Acid	7.32			105	150747	2,706			
2	1,2,4-Trichlorobenzene	7.47			180	315310	3,145			
2	Naphthalene	7.55			128	920685	3,108			
2	4-Chloroaniline	7.60			127	383748	3,153			
2	Hexachlorobutadiene	7.65			225	196885	3,154			
2	4-Chloro-3-methylphenol	8.05			107	259641	3,156			
2	2-Methylnaphthalene	8.19			142	625437	3,090			
2	1-Methylnaphthalene	8.28			142	602078	3,153			
3	Hexachlorocyclopentadiene	8.33			237	209835	2,725			
3	2,4,6-Trichlorophenol	8.45			196	216322	3,091			
3	2,4,5-Trichlorophenol	8.48			196	231585	3,054			
3	2-Chloronaphthalene	8.64			162	625875	3,048			
3	2-Nitroaniline	8.75			65	161618	3,057			
3	Acenaphthylene	9.03			152	930095	2,884			
3	Dimethyl Phthalate	8.92			163	712926	3,087			
3	2,6-Dinitrotoluene	8.98			165	167713	3,224			
3	Acenaphthene	9.20			154	580706	3,039			
3	3-Nitroaniline	9.14			138	173565	3,239			
3	2,4-Dinitrophenol	9.24			184	89695	2,538			
3	Dibenzofuran	9.36			168	914526	3,030			
3	4-Nitrophenol	9.31			65	113874	3,022			
3	2,4-Dinitrotoluene	9.36			165	228711	3,273			
3	2,3,4,6-Tetrachlorophenol	9.48			232	204082	2,979			
3	Fluorene	9.69			166	744500	3,081			
3	4-Chlorophenyl Phenyl Ether	9.69			204	391312	3,070			
3	Diethyl Phthalate	9.59			149	674721	3,096			
3	4-Nitroaniline	9.72			138	174913	3,178			
3	2-Methyl-4,6-dinitrophenol	9.75			198	136116	2,683			
3	N-Nitrosodiphenylamine	9.81			169	505667	3,073			
3	Azobenzene	9.84			77	616772	3,062			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS17\DATA\103108\1031F006.D			**Instrument:**	MS17
Acqu Date:	10/31/2008 13:34	**Quant Date:**	11/03/2008 11:40	**Vial:**	4
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0811769-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
4	4-Bromophenyl Phenyl Ether	10.16			248	256709	3,090			
4	Hexachlorobenzene	10.21			284	305061	3,022			
4	Pentachlorophenol	10.40			266	153252	2,556			
4	Phenanthrene	10.60			178	1066411	3,082			
4	Anthracene	10.65			178	1119281	3,149			
4	Carbazole	10.81			167	1007301	3,084			
4	Di-n-butyl Phthalate	11.15			149	1139988	3,012			
4	Fluoranthene	11.75			202	1227669	3,081			
5	Benzidine	11.90			184	524967	2,329		N	
5	Pyrene	11.98			202	1248769	3,048			
5	Butyl Benzyl Phthalate	12.77			149	494131	3,125			
5	3,3'-Dichlorobenzidine	13.49			252	524933	2,924			
5	Benz(a)anthracene	13.51			228	1268804	3,025			
5	Chrysene	13.57			228	1193985	3,041			
5	Bis(2-ethylhexyl) Phthalate	13.62			149	696779	3,106			
6	Di-n-octyl Phthalate	14.73			149	1147710	3,171			
6	Benzo(b)fluoranthene	15.28			252	1360454	3,073			
6	Benzo(k)fluoranthene	15.33			252	1400809	3,136			
6	Benzo(a)pyrene	15.79			252	1262447	3,106			
6	Indeno(1,2,3-cd)pyrene	16.99			276	1408363	3,017			
6	Dibenz(a,h)anthracene	17.02			278	1482773	3,030			
6	Benzo(g,h,i)perylene	17.25			276	1450045	3,001			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F006.D
Acq On : 31 Oct 2008 1:34 pm
Sample : 3.0PPM CCV SVO_LL | SVM27-38F
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:39:48 2008

Vial: 4
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:39:24 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) 1,4-Dichlorobenzene-d4	6.38	152	72636	1000.00	ng/ml	-0.02
22) Naphthalene-d8	7.52	136	268098	1000.00	ng/ml	-0.01
36) Acenaphthene-d10	9.17	164	158771	1000.00	ng/ml	-0.01
60) Phenanthrene-d10	10.58	188	268489	1000.00	ng/ml	-0.01
70) Chrysene-d12	13.53	240	339697	1000.00	ng/ml	-0.02
79) Perylene-d12	15.86	264	378513	1000.00	ng/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol	5.28	112	259044m	2935.44	ng/ml	-0.03
Spiked Amount 3750.000	Range 25 - 121		Recovery = 78.28%			
7) Phenol-d6	6.07	99	359780	3019.86	ng/ml	-0.01
Spiked Amount 3750.000	Range 24 - 113		Recovery = 80.53%			
20) Nitrobenzene-d5	6.88	82	295409	3090.22	ng/ml	0.00
Spiked Amount 2500.000	Range 23 - 120		Recovery = 123.61%#			
40) 2-Fluorobiphenyl	8.53	172	733394	3014.58	ng/ml	-0.01
Spiked Amount 2500.000	Range 30 - 115		Recovery = 120.58%#			
61) 2,4,6-Tribromophenol	9.92	330	160868	2996.10	ug/ml	-0.01
Spiked Amount 3750.000	Range 19 - 122		Recovery = 79.90%			
73) Terphenyl-d14	12.16	244	914265	2992.17	ng/ml	-0.02
Spiked Amount 2500.000	Range 30 - 140		Recovery = 119.69%			
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.38	74	161819	3071.22	ng/ml	99
3) Pyridine	4.40	79	298952	2923.22	ng/ml	98
5) Aniline	6.11	93	426379	2942.66	ng/ml	96
6) Bis(2-chloroethyl) Ether	6.16	93	278401	2955.53	ng/ml	98
8) Phenol	6.08	94	359375	2983.72	ng/ml	97
9) 2-Chlorophenol	6.20	128	312130	3027.16	ng/ml	99
10) 1,3-Dichlorobenzene	6.33	146	360152	3041.85	ng/ml	100
11) 1,4-Dichlorobenzene	6.40	146	365677	3000.27	ng/ml	98
12) 1,2-Dichlorobenzene	6.53	146	353420	3047.16	ng/ml	99
13) Benzyl Alcohol	6.51	108	191253	3067.89	ng/ml	95
14) Bis(2-chloroisopropyl) Eth	6.62	45	371025	2759.44	ng/ml	96
15) 2-Methylphenol	6.60	107	243126	2927.57	ng/ml	99
16) Hexachloroethane	6.83	117	124492	3057.16	ng/ml	97
17) Acetophenone	6.75	105	416279	3007.02	ng/ml	99
18) N-Nitrosodi-n-propylamine	6.74	70	214318	2974.74	ng/ml	99
19) 4-Methylphenol	6.74	107	370283	3041.59	ng/ml	93
21) Nitrobenzene	6.90	77	306865	3009.66	ng/ml	97
23) Isophorone	7.11	82	543607	3009.26	ng/ml	99
24) 2-Nitrophenol	7.18	139	174950	3153.16	ng/ml	97
25) 2,4-Dimethylphenol	7.22	122	260111	2921.72	ng/ml	97

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

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F006.D
Acq On : 31 Oct 2008 1:34 pm
Sample : 3.0PPM CCV SVO_LL | SVM27-38F
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:39:48 2008

Vial: 4
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:39:24 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
26) Bis(2-chloroethoxy)methane	7.31	93	328584	3075.71	ng/ml	99
27) 2,4-Dichlorophenol	7.40	162	274862	3159.85	ng/ml	99
28) Benzoic Acid	7.32	105	150747	2705.65	ng/ml	97
29) 1,2,4-Trichlorobenzene	7.47	180	315310	3145.36	ng/ml	97
30) Naphthalene	7.55	128	920685	3107.76	ng/ml	100
31) 4-Chloroaniline	7.60	127	383748	3153.29	ng/ml	99
32) Hexachlorobutadiene	7.65	225	196885	3154.28	ng/ml	99
33) 4-Chloro-3-methylphenol	8.05	107	259641	3155.98	ng/ml	98
34) 2-Methylnaphthalene	8.19	142	625437	3089.66	ng/ml	97
35) 1-Methylnaphthalene	8.28	142	602078	3152.75	ng/ml	98
37) Hexachlorocyclopentadiene	8.33	237	209835	2724.93	ng/ml	98
38) 2,4,6-Trichlorophenol	8.45	196	216322	3091.37	ng/ml	97
39) 2,4,5-Trichlorophenol	8.48	196	231585	3054.04	ng/ml	98
41) 2-Chloronaphthalene	8.64	162	625875	3048.39	ng/ml	99
42) 2-Nitroaniline	8.75	65	161618	3057.38	ng/ml	97
43) Acenaphthylene	9.03	152	930095	2883.50	ng/ml	100
44) Dimethyl Phthalate	8.92	163	712926	3087.48	ng/ml	99
45) 2,6-Dinitrotoluene	8.98	165	167713	3224.32	ng/ml	98
46) Acenaphthene	9.20	154	580706	3039.23	ng/ml	98
47) 3-Nitroaniline	9.14	138	173565	3239.29	ng/ml	97
48) 2,4-Dinitrophenol	9.24	184	89695	2537.83	ng/ml	98
49) Dibenzofuran	9.36	168	914526	3030.43	ng/ml	100
50) 4-Nitrophenol	9.31	65	113874	3021.66	ng/ml	97
51) 2,4-Dinitrotoluene	9.36	165	228711	3273.46	ng/ml	94
52) 2,3,4,6-Tetrachlorophenol	9.48	232	204082	2979.00	ng/ml	97
53) Fluorene	9.69	166	744500	3080.72	ng/ml	99
54) 4-Chlorophenyl Phenyl Ethe	9.69	204	391312	3069.52	ng/ml	97
55) Diethyl Phthalate	9.59	149	674721	3095.73	ng/ml	99
56) 4-Nitroaniline	9.72	138	174913	3178.14	ng/ml	96
57) 2-Methyl-4,6-dinitrophenol	9.75	198	136116	2682.75	ng/ml	86
58) N-Nitrosodiphenylamine	9.81	169	505667	3072.83	ng/ml	98
59) Azobenzene	9.84	77	616772	3062.01	ng/ml	98
62) 4-Bromophenyl Phenyl Ether	10.16	248	256709	3089.78	ng/ml	97
63) Hexachlorobenzene	10.21	284	305061	3022.36	ng/ml	99
64) Pentachlorophenol	10.40	266	153252	2555.69	ng/ml	96
65) Phenanthrene	10.60	178	1066411	3081.71	ng/ml	100
66) Anthracene	10.65	178	1119281	3149.33	ng/ml	99
67) Carbazole	10.81	167	1007301	3083.78	ng/ml	100
68) Di-n-butyl Phthalate	11.15	149	1139988	3012.29	ng/ml	100
69) Fluoranthene	11.75	202	1227669	3081.08	ng/ml	99
71) Benzidine	11.90	184	524967	2328.58	ng/ml	100

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

Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F006.D
Acq On : 31 Oct 2008 1:34 pm
Sample : 3.0PPM CCV SVO_LL | SVM27-38F
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 03 11:39:48 2008

Vial: 4
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Quant Method : J:\MS17\M...\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:39:24 2008
Response via : Initial Calibration
DataAcq Meth : 8270LL

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
72) Pyrene	11.98	202	1248769	3048.35	ng/ml	99
74) Butyl Benzyl Phthalate	12.77	149	494131	3124.54	ng/ml	100
75) 3,3'-Dichlorobenzidine	13.49	252	524933	2923.84	ng/ml	100
76) Benz(a)anthracene	13.51	228	1268804	3024.87	ng/ml	99
77) Chrysene	13.57	228	1193985	3041.13	ng/ml	100
78) Bis(2-ethylhexyl) Phthalat	13.62	149	696779	3105.50	ng/ml	98
80) Di-n-octyl Phthalate	14.73	149	1147710	3171.26	ng/ml	100
81) Benzo(b)fluoranthene	15.28	252	1360454	3073.17	ng/ml	99
82) Benzo(k)fluoranthene	15.33	252	1400809	3136.14	ng/ml	99
83) Benzo(a)pyrene	15.79	252	1262447	3106.13	ng/ml	99
84) Indeno(1,2,3-cd)pyrene	16.99	276	1408363	3016.72	ng/ml	98
85) Dibenz(a,h)anthracene	17.02	278	1482773	3030.30	ng/ml	98
86) Benzo(g,h,i)perylene	17.25	276	1450045	3001.21	ng/ml	100

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

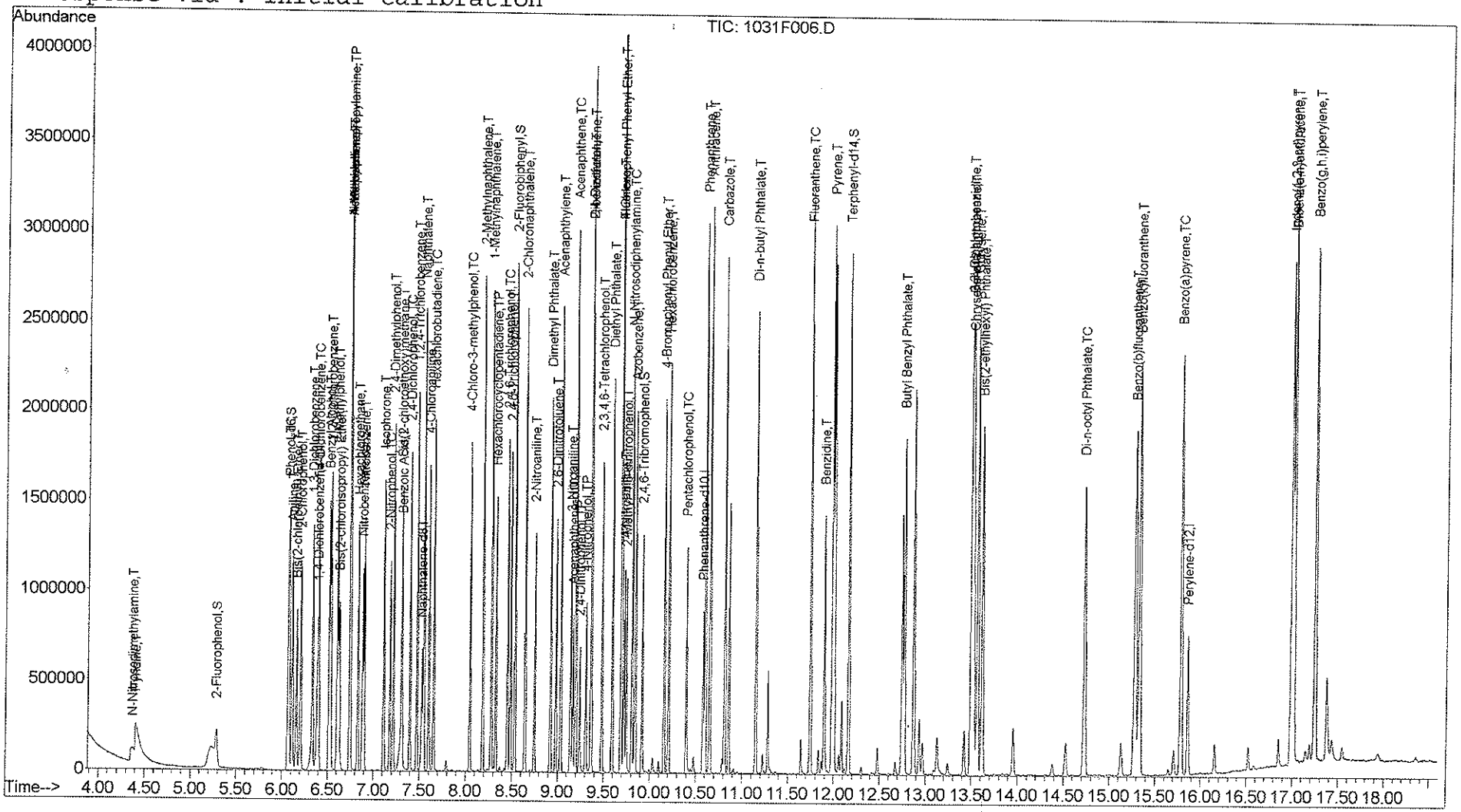
Quantitation Report (QT Reviewed)

Data File : J:\MS17\DATA\103108\1031F006.D
Acq On : 31 Oct 2008 1:34 pm
Sample : 3.0PPM CCV SVO_LL | SVM27-38F
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:40 2008

Vial: 4
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: 102608SVOLL.RES

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:39:24 2008
Response via : Initial Calibration



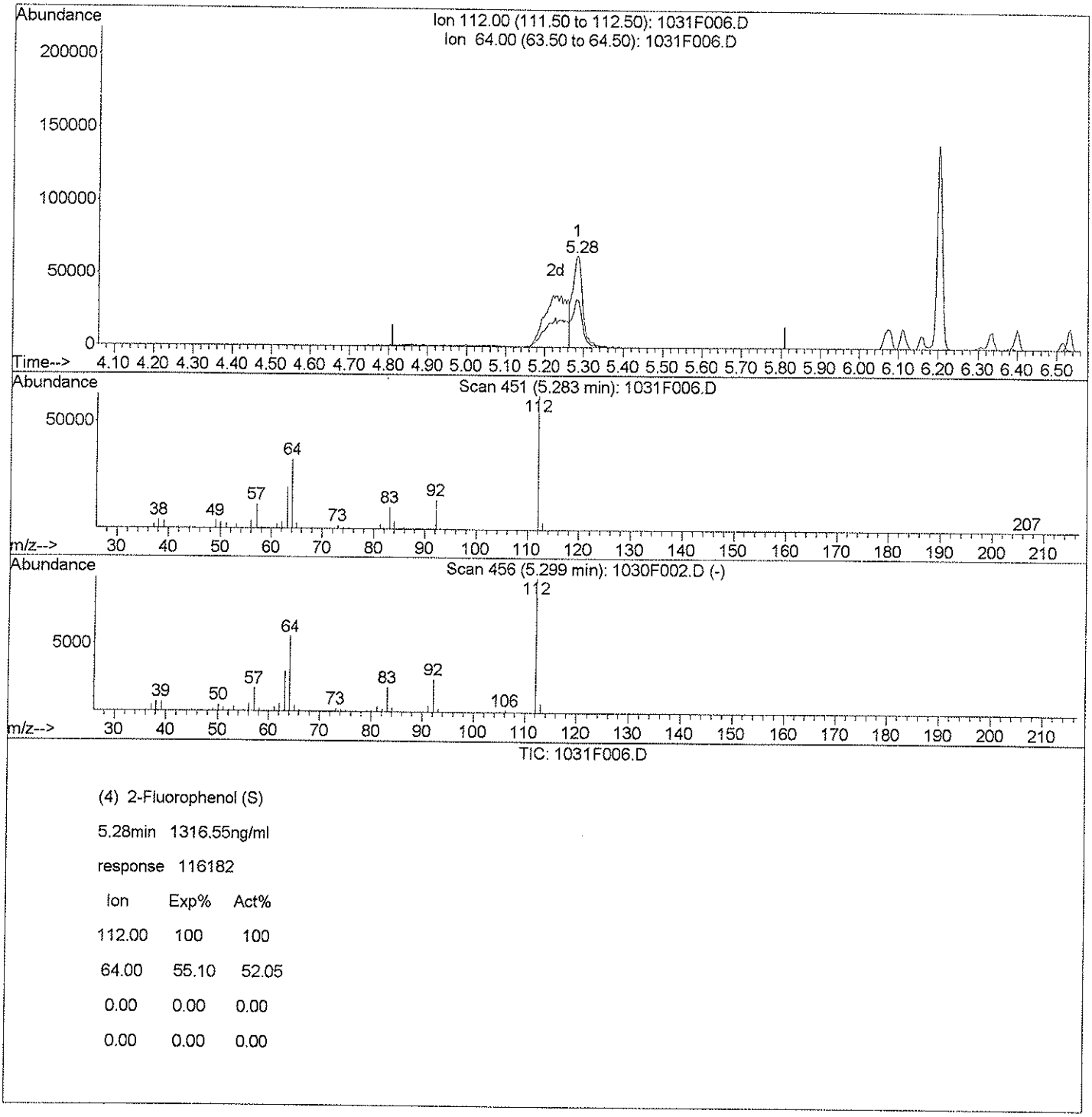
Quantitation Report (Qedit)

Data File : J:\MS17\DATA\103108\1031F006.D
Acq On : 31 Oct 2008 1:34 pm
Sample : 3.0PPM CCV SVO_LL | SVM27-38F
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:39 2008

Vial: 4
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:39:24 2008
Response via : Multiple Level Calibration



(4) 2-Fluorophenol (S)

5.28min 1316.55ng/ml

response 116182

Ion	Exp%	Act%
112.00	100	100
64.00	55.10	52.05
0.00	0.00	0.00
0.00	0.00	0.00

1031F006.D 102608SVOLL.M Mon Nov 03 11:40:02 2008

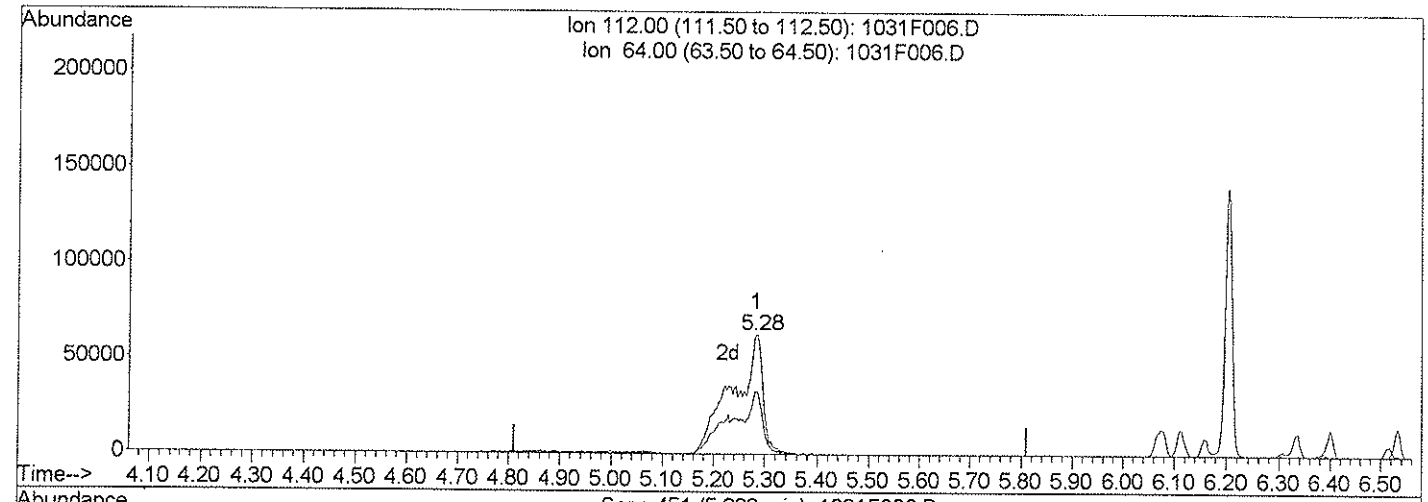
Quantitation Report (Qedit)

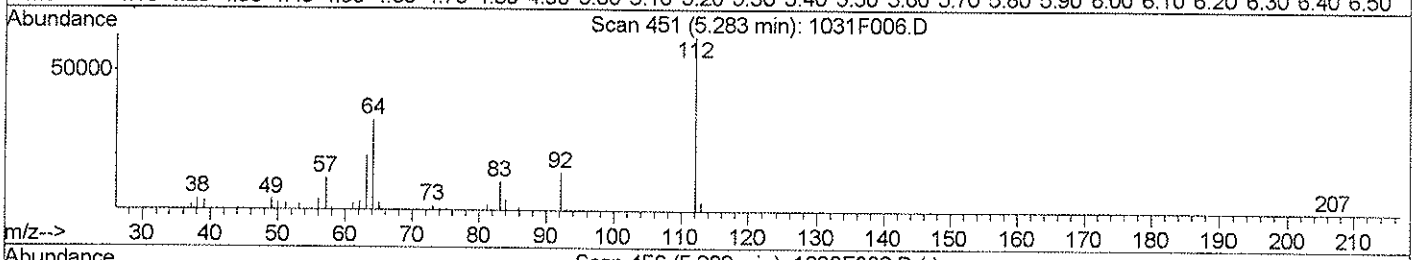
Data File : J:\MS17\DATA\103108\1031F006.D
Acq On : 31 Oct 2008 1:34 pm
Sample : 3.0PPM CCV SVO_LL | SVM27-38F
Misc :
MS Integration Params: LSCINT.P
Quant Time: Nov 3 11:40 2008

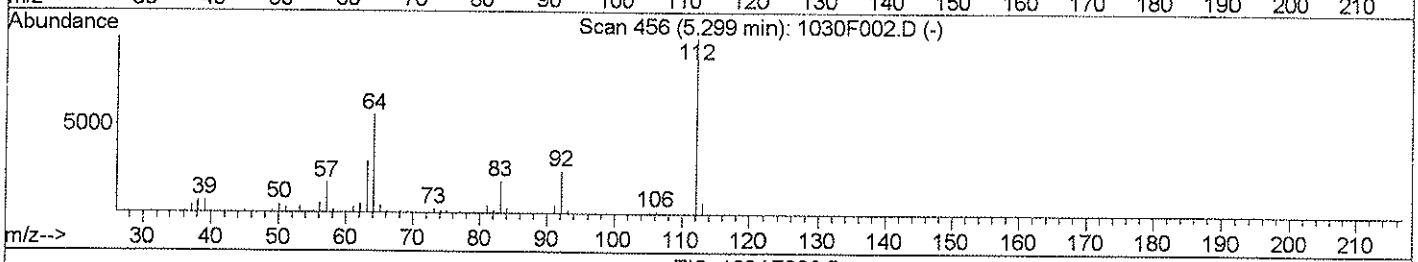
Vial: 4
Operator: KBAILEY
Inst : MS17
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS17\METHODS\FULL_SCAN\102608SVOLL.M (RTE Integrator)
Title : 8270-LL
Last Update : Mon Nov 03 11:39:24 2008
Response via : Multiple Level Calibration







TIC: 1031F006.D

(4) 2-Fluorophenol (S)

5.28min 2935.44ng/ml m

response 259044

Ion	Exp%	Act%
112.00	100	100
64.00	55.10	52.05
0.00	0.00	0.00
0.00	0.00	0.00

1C
LB
111308
11.3.08

1031F006.D 102608SVOLL.M Mon Nov 03 11:40:06 2008

Organic Analysis:
Semi-Volatile Organic Compounds by GC/MS

Validation Package

Sample Prep and Screen Data

Preparation Information

Group ID:	KWG0811326	**Prep Method:**	EPA 3541	**Prep Date:**	10/23/08 00:00
Department:	Semivoa GCMS				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K0809010-007	08-FW-A-EXBLD22-07-1	8270C SVO_LL	SOIL	23.35g	2ml	
K0809010-009	08-FW-A-EXBLD22-09-2	8270C SVO_LL	SOIL	23.21g	2ml	
K0809010-010	08-FW-A-EXBLD22-10-2	8270C SVO_LL	SOIL	23.61g	2ml	
K0809010-011	08-FW-A-EXBLD22-11-3	8270C SVO_LL	SOIL	22.91g	2ml	
K0810000-001	DCI 4-1	8270C SVO_LL	SOIL	23.21g	2ml	
K0810000-002	DCI 4-1a	8270C SVO_LL	SOIL	23.42g	2ml	
K0810032-005	Sediment-1	8270C SVO_LL	SEDIMENT	40.06g	2ml	
K0810032-006	Dry Comp	8270C SVO_LL	SEDIMENT	22.39g	2ml	
K0810048-001	08-FW-E-SS72-0-2	8270C SVO_LL	SOIL	23.96g	2ml	
K0810048-002	08-FW-E-SS74-0-2	8270C SVO_LL	SOIL	24.76g	2ml	
K0810048-003	08-FW-E-SS79-0-2	8270C SVO_LL	SOIL	23.68g	2ml	
K0810048-004	08-FW-E-SS78-0-2	8270C SVO_LL	SOIL	23.65g	2ml	
K0810048-005	08-FW-E-SS77-0-2	8270C SVO_LL	SOIL	23.59g	2ml	
K0810048-006	08-FW-E-SS77-0-2B	8270C SVO_LL	SOIL	23.49g	2ml	
K0810048-007	08-FW-E-SS76-0-2	8270C SVO_LL	SOIL	23.73g	2ml	
K0810048-008	08-FW-E-SS75-0-2	8270C SVO_LL	SOIL	23.52g	2ml	
K0810048-009	08-FW-A-SS10-0-2	8270C SVO_LL	SOIL	21.79g	2ml	
K0810048-010	08-FW-A-SS13-0-2	8270C SVO_LL	SOIL	22.97g	2ml	
KWG0811326-1	Matrix Spike	8270C SVO_LL	SOIL	23.46g	2ml	
KWG0811326-2	Duplicate Matrix Spike	8270C SVO_LL	SOIL	23.83g	2ml	
KWG0811326-3	Lab Control Sample	8270C SVO_LL	SOIL	20.00g	2ml	
KWG0811326-4	Duplicate Lab Control Sampl	8270C SVO_LL	SOIL	20.00g	2ml	
KWG0811326-5	Method Blank	8270C SVO_LL	SOIL	40.06g	2ml	

Lab Code	Parent Lab Code	Comments
KWG0811326-1	K0810048-003	
KWG0811326-2	K0810048-003	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K0809010-007	771718	SVM26-67D	50uL			LBerg
K0809010-009	771719	SVM26-67D	50uL			LBerg
K0809010-010	771720	SVM26-67D	50uL			LBerg
K0809010-011	771717	SVM26-67D	50uL			LBerg
K0810000-001	771015	SVM26-67D	50uL			LBerg
K0810000-002	771002	SVM26-67D	50uL			LBerg

Comments:

IS SVM26-78D.

Started By: DWood Assisted By: Training

Completed By: JZarosin Assisted By: Yes No

Reviewed By: AB Date: 10-30-08 Storage: 5D,5C Yes No

Chain of Custody

Relinquished By: JZ Date: 10-30-08

Received By: LB Date: 10/30/08 Extracts Examined: Yes No

Group ID:	KWG0811326	**Prep Method:**	EPA 3541	**Prep Date:**	10/23/08 00:00
Department:	Semivoa GCMS				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K0810032-005	771003	SVM26-67D	50uL			LBerg
K0810032-006	771004	SVM26-67D	50uL			LBerg
K0810048-001	771005	SVM26-67D	50uL			LBerg
K0810048-002	771006	SVM26-67D	50uL			LBerg
K0810048-003	771007	SVM26-67D	50uL			LBerg
K0810048-004	771008	SVM26-67D	50uL			LBerg
K0810048-005	771009	SVM26-67D	50uL			LBerg
K0810048-006	771010	SVM26-67D	50uL			LBerg
K0810048-007	771011	SVM26-67D	50uL			LBerg
K0810048-008	771012	SVM26-67D	50uL			LBerg
K0810048-009	771013	SVM26-67D	50uL			LBerg
K0810048-010	771014	SVM26-67D	50uL			LBerg
KWG0811326-1	771016	SVM26-67D	50uL	SVM27-22A/7A	50uL	LBerg
KWG0811326-2	771017	SVM26-67D	50uL	SVM27-22A/7A	50uL	LBerg
KWG0811326-3	771018	SVM26-67D	50uL	SVM27-22A/7A	50uL	LBerg
KWG0811326-4	771019	SVM26-67D	50uL	SVM27-22A/7A	50uL	LBerg
KWG0811326-5	771020	SVM26-67D	50uL			LBerg

Comments:

IS: SVM26-78D.

Started By: DWood Assisted By:

Completed By: JZarosin Assisted By:

Training: Yes / No (No)

Training: Yes / No (No)

Reviewed By: AB Date: 10-30-08 Storage: 5D, 5C

Chain of Custody

Relinquished By: Date: 10-30-08

Received By: LB Date: 10/30/08

Extracts Examined: (Yes) / No

Preparation Information

Group ID: KWG0811326 **Prep Method:** EPA 3541 **Prep Date:** 10/23/08
Department: Semivoa GCMS

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext.	pH	Int. Vol.	Final Vol.	Surr. Added	Spike Added
1	K0810000-001	DCI 4-1	NA	✓	8270C SVO_LL	SOIL	23.21	NA	10 mL	2 ml	50 ul	NA
2	K0810000-002	DCI 4-1a		✓	8270C SVO_LL	SOIL	23.42					
3	K0810032-005	Sediment-1		✓	8270C SVO_LL	SEDIMENT	40.06		20 mL			
4	K0810032-006	Dry Comp		✓	8270C SVO_LL	SEDIMENT	22.39		10 mL			
5	K0810048-001	08-FW-E-SS72-0-2		✓	8270C SVO_LL	SOIL	23.96					
6	K0810048-002	08-FW-E-SS74-0-2		✓	8270C SVO_LL	SOIL	24.76					
7	K0810048-003	08-FW-E-SS79-0-2		✓	8270C SVO_LL	SOIL	23.68					
8	K0810048-004	08-FW-E-SS78-0-2		✓	8270C SVO_LL	SOIL	23.65					
9	K0810048-005	08-FW-E-SS77-0-2		✓	8270C SVO_LL	SOIL	23.59					
10	K0810048-006	08-FW-E-SS77-0-2B		✓	8270C SVO_LL	SOIL	23.49					
11	K0810048-007	08-FW-E-SS76-0-2		✓	8270C SVO_LL	SOIL	23.73					
12	K0810048-008	08-FW-E-SS75-0-2		✓	8270C SVO_LL	SOIL	23.52					
13	K0810048-009	08-FW-A-SS10-0-2		✓	8270C SVO_LL	SOIL	21.79					
14	K0810048-010	08-FW-A-SS13-0-2		✓	8270C SVO_LL	SOIL	22.97					✓
15	KWG0811326-1	Matrix Spike 10048-3		✓	8270C SVO_LL	SOIL	23.46					50/50 ul
16	KWG0811326-2	Duplicate Matrix Spike 10048-3		✓	8270C SVO_LL	SOIL	23.83					
17	KWG0811326-3	Lab Control Sample	✓	—	8270C SVO_LL	SOIL	20.00	✓	✓	✓	✓	✓

765569

Comments: Sample 10032-5 was 20ml IV and then Recombined to be 2ml TFV.

Surrogate ID: SVM26-67D 100ISOppm 50ul exp 1-23-09

Spike ID: SVM27-22A 100ppm 50ul exp 1-13-09 / SVM27-7A 200ppm 50ul exp 12-19-08

Witness: [signature] 10/23/08

Started By: DWood Assisted By:

Completed By: [signature] Assisted By:

Printed: 10/22/2008 15:17:29 Preparation Information Page 1 of 2

u:\Stealth\Crystal.rpt\prep2.rpt

Group ID: KWG0811326 **Prep Method:** EPA 3541 **Prep Date:**
Department: Semivoa GCMS

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext.	pH	Int. Vol.	Final Vol.	Surr. Added	Spike Added
18	KWG0811326-4	Duplicate Lab Control Sample	NA		8270C SVO_LL	SOIL	20.0		10mL	2ml	50uL	50/50uL
19	KWG0811326-5	Method Blank			8270C SVO_LL	SOIL	40.06					NA
	K0808901010-7			✓			23.35					
	9			✓			23.21					
	10			✓			23.61					
	11			✓			22.91					

Comments:

Surrogate ID: See pg1

Spike ID:

Witness: 10/23/08

Started By: DWood Assisted By:

Completed By: Assisted By:

Printed: 10/22/2008 15:17:29 Preparation Information Page 2 of 2

u:\Stealth\Crystal.rpt\prep2.rpt

ABC GPC BENCHSHEET

Analyst: JZ Matrix: Tissue / Reg. Soil / Low Level Soil / Water / Oil

Date: 10-28-08 Work Order: 11326-

A. GPC Calibrated on this date: 10-22-08

B. (1) Intermediate Volume before GPC: 10 (ml)

(2) Aliquot taken from intermediate volume: 10 (ml)

(3) Aliquot diluted up to..... 10 (ml)

(4) Volume injected onto column: 5 (ml)

(5) GPC'd Extract brought to the Final Volume of 1 (ml)

(6) Calculate the True Final Volume 2 (ml) $\frac{(1) \times (3)}{(2) \times (4)} \times (5) = (6)$

C. Does a split for PCB's or PAH's need to be done? YES NO

2ml PAH's

Checklist for the GPC Run:

1. Is the column reservoir full?
2. Is the rinse reservoir full?
3. Is the waste bottle empty?
4. Did you check the flow rate?
5. Is there a collection vessel for each extract tube?
6. Do the extract tube labels correspond to the collection vessel labels?
7. Are the extracts diluted properly, if needed?
8. Are all extracts filtered? (They MUST be)
9. Did you record where you put the remaining extract?
10. Is the correct method/collection window programmed?
11. Is the By-pass valve set to In-line?
12. Is the run log filled out?
13. Is sample load time set correctly for extract with lowest volume? (VERY IMPORTANT)
14. Is the nitrogen tank valve open?
15. Is there enough nitrogen (at least 500lb/23 extracts)?
16. Did you double check your GPC setup?

Operator date and initial JZ

Additional Prep Information For EPA 3541

Service Request KQ810000/10032/10048/90% **Workgroup** KQ608113260/11327

DCM Lot CX9665 Hexane Lot —

Start (Time/Date/Initial): 1600/10-23-08/DW LB

Stop (Time/Date/Initial): 1000/10-24-08/DW LB

Sulfate Lot # 48029825

S-Evap Temp: 74°C N-evap Temp: 35°C Silica gel Lot #: —

Solvent Exchange: —

Clean-up #1: GPC Initial/Date: 10-28

Clean-up #2: — Initial/Date: —

Extract Storage: —

Date Completed: 10-30-08

Comments/Observations:

Bench Sheet Review Check List

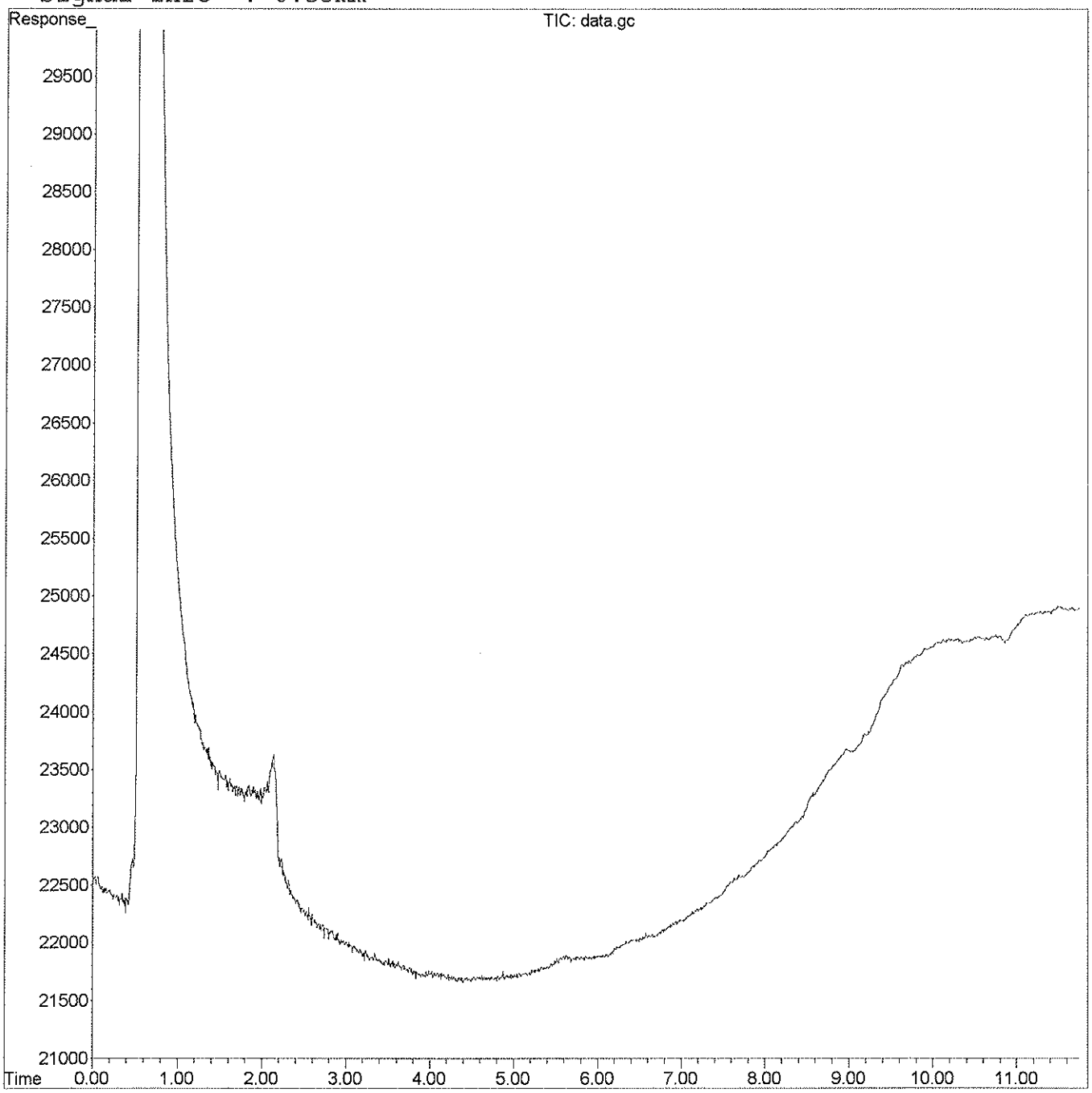
- ☑ Hold Times Met (if no, Reason: Re-extracts (9010) past hold time)
- ☑ Prep date, dept, method, product code correct in stealth
- ☑ Spike Information correct
- ☑ Weights/Volumes and units correct on raw and final bench sheets
- ☑ Sample IDs have been checked—Bottle numbers appended if required
- ☑ Names present for: Started by, Completed by, relinquished by, and witnessed by.
- ☑ Training has been circled
- ☑ Extract Storage recorded
- ☑ Additional Prep Sheet completely filled out (NA or line out Blanks)
- ☑ All clean-ups have been noted on additional prep sheet
- ☑ Signed service request with Form V, if applicable, has been attached

Quantitation Report (Not Reviewed)

Data File : J:\GC05\DATA\103008\1030F003.D Vial: 2
Acq On : 30 Oct 2008 02:22 pm Operator:
Sample : K0810000-001S Inst : GC05
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Oct 31 9:07 2008 Quant Results File: SCREEN.RES

Quant Method : J:\GC05\METHODS\SCREEN.M (RTE Integrator)
Title : pah scrn
Last Update : Fri Mar 23 08:09:50 2001
Response via : Single Level Calibration
DataAcq Meth : BNASCRN.MTH

Volume Inj. : 1 ul
Signal Phase : Rtx-5
Signal Info : 0.53mm

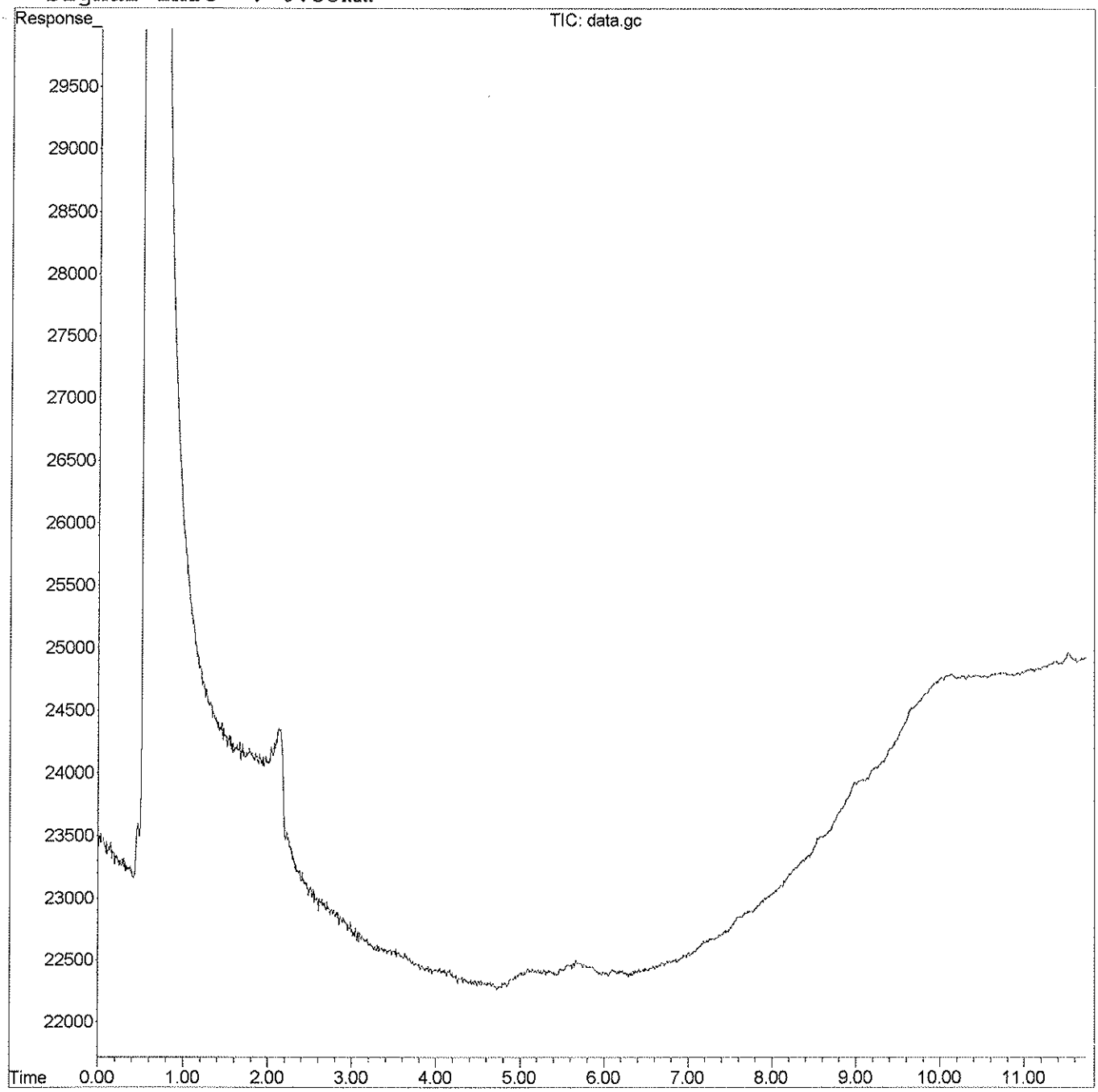


Quantitation Report (Not Reviewed)

Data File : J:\GC05\DATA\103008\1030F004.D Vial: 3
Acq On : 30 Oct 2008 02:39 pm Operator:
Sample : K0810000-002S Inst : GC05
Misc : Multiplr: 1.00
IntFile : rteint.p
Quant Time: Oct 31 9:07 2008 Quant Results File: SCREEN.RES

Quant Method : J:\GC05\METHODS\SCREEN.M (RTE Integrator)
Title : pah scrn
Last Update : Fri Mar 23 08:09:50 2001
Response via : Single Level Calibration
DataAcq Meth : BNASCRN.MTH

Volume Inj. : 1 ul
Signal Phase : Rtx-5
Signal Info : 0.53mm



Injection Log

Directory: J:\MS17\DATA\103108

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1031F001.D	1.	Primer		31 Oct 2008 11:2
2	2	1031F002.D	1.	GPC CHK #4 10/31/08		31 Oct 2008 11:4
3	3	1031F003.D	1.	2.5PPM TUNE STD | SVM27-36D		31 Oct 2008 12:1
4	4	1031F004.D	1.	3.0PPM CCV SVO_LL | SVM27-38F		31 Oct 2008 12:4
5	3	1031F005.D	1.	2.5PPM TUNE STD | SVM27-36D		31 Oct 2008 13:0
6	4	1031F006.D	1.	3.0PPM CCV SVO_LL | SVM27-38F		31 Oct 2008 13:3
7	5	1031F007.D	1.	KWG0811326-5 | MB		31 Oct 2008 14:0
8	6	1031F008.D	1.	KWG0811326-3 | LCS		31 Oct 2008 14:2
9	7	1031F009.D	1.	KWG0811326-4 | DLCS		31 Oct 2008 14:5
10	8	1031F010.D	1.	K0810048-003MS		31 Oct 2008 15:1
11	9	1031F011.D	1.	K0810048-003DMS		31 Oct 2008 15:4
12	10	1031F012.D	1.	K0809010-007RX		31 Oct 2008 16:1
13	11	1031F013.D	1.	K0809010-009RX		31 Oct 2008 16:3
14	12	1031F014.D	1.	K0809010-010RX		31 Oct 2008 17:0
15	13	1031F015.D	1.	K0809010-011RX		31 Oct 2008 17:2
16	14	1031F016.D	1.	K0810000-001		31 Oct 2008 17:5
17	15	1031F017.D	1.	K0810000-002		31 Oct 2008 18:2
18	16	1031F018.D	20.	K0810032-005DIL 20X		31 Oct 2008 18:4
19	17	1031F019.D	20.	K0810032-006DIL 20X		31 Oct 2008 19:1
20	18	1031F020.D	1.	K0810048-001		31 Oct 2008 19:3
21	19	1031F021.D	1.	K0810048-002		31 Oct 2008 20:0
22	20	1031F022.D	1.	K0810048-003		31 Oct 2008 20:3
23	21	1031F023.D	1.	K0810048-004		31 Oct 2008 20:5
24	22	1031F024.D	1.	K0810048-005		31 Oct 2008 21:2
25	23	1031F025.D	1.	K0810048-006		31 Oct 2008 21:4
26	24	1031F026.D	1.	K0810048-007		31 Oct 2008 22:1
27	25	1031F027.D	1.	K0810048-008		31 Oct 2008 22:4
28	26	1031F028.D	1.	K0810048-009		31 Oct 2008 23:0
29	27	1031F029.D	1.	K0810048-010		31 Oct 2008 23:3
30	28	1031F030.D	1.	K0810355-001		31 Oct 2008 23:5
31	29	1031F031.D	1.	K0810355-002		1 Nov 2008 00:2
32	30	1031F032.D	1.	K0810355-003		1 Nov 2008 00:5
33	31	1031F033.D	1.	IB	LB 111308	1 Nov 2008 01:1
34	31	1031F034.D	1.	IB		1 Nov 2008 01:4
35	31	1031F035.D	1.	IB		1 Nov 2008 02:0
36	31	1031F036.D	1.	IB		1 Nov 2008 02:3

Run # 132452

CAL 7891

LB 111308

MM

11-3-08

Polynuclear Aromatic Hydrocarbons
EPA Method 8270C

Sediment Quality Chemical Criteria

The Sediment Management Standards currently contain two sets of numeric chemical criteria that apply to Puget Sound marine sediments:

1. The "no effects" level -- the Sediment Quality Standards, WAC 172-204-320 -- used as a sediment quality goal for Washington State sediments (shown below), and

2. The "minor adverse effects" level -- The Sediment Impact Zone Maximum Level, WAC 173-204-420; and the Sediment Cleanup Screening Level/Minimum Cleanup Level, WAC 173-204-520 -- used as an upper regulatory level for source control and cleanup decision making (shown below).

To understand the context in which the criteria are used, see the Sediment Management Standards regulation.

	Sediment Quality Standards WAC 173-204-320 (a)	Sediment Impact Zone Maximum Level, WAC 173-204-420 (a); and Sediment Cleanup Screening Level/Minimum Cleanup Level, WAC 173-204-520 (a)
CHEMICAL PARAMETER	MG/KG DRY WEIGHT (PARTS PER MILLION (PPM) DRY)	MG/KG DRY WEIGHT (PARTS PER MILLION (PPM) DRY)
ARSENIC	57	93
CADMIUM	5.1	6.7
CHROMIUM	260	270
COPPER	390	390
LEAD	450	530
MERCURY	0.41	0.59
SILVER	6.1	6.1
ZINC	410	960
	MG/KG ORGANIC CARBON (c) (PPM CARBON)	MG/KG ORGANIC CARBON (c) (PPM CARBON)
LPAH (b,d)	370	780
NAPHTHALENE	99	170
ACENAPHTHYLENE	66	66
ACENAPHTHENE	16	57

FLUORENE	23	79
PHENANTHRENE	100	480
ANTHRACENE	220	1200
2-METHYLNAPHTHALENE	38	64
HPAH (b,e)	960	5300
FLUORANTHENE	160	1200
PYRENE	1,000	1400
BENZ(A)ANTHRACENE	110	270
CHRYSENE	110	460
TOTAL BENZOFLUORANTHENES (b,f)	230	450
BENZO(A)PYRENE	99	210
INDENO (1,2,3,-C,D) PYRENE	34	88
DIBENZO (A,H) ANTHRACENE	12	33
BENZO(G,H,I)PERYLENE	31	78
1,2-DICHLOROBENZENE	2.3	2.3
1,4-DICHLOROBENZENE	3.1	9
1,2,4-TRICHLOROBENZENE	0.81	1.8
HEXACHLOROBENZENE	0.38	2.3
DIMETHYL PHTHALATE	53	53
DIETHYL PHTHALATE	61	110
DI-N-BUTYL PHTHALATE	220	1700
BUTYL BENZYL PHTHALATE	4.9	64
BIS (2-ETHYLHEXYL) PHTHALATE	47	78
DI-N-OCTYL PHTHALATE	58	4500
DIBENZOFURAN	15	58
HEXACHLOROBUTADIENE	3.9	6.2
N-NITROSODIPHENYLAMINE	11	11
TOTAL PCBs (b)	12	65
	UG/KG DRY WEIGHT (PARTS PER BILLION (PPB) DRY)	UG/KG DRY WEIGHT (PARTS PER BILLION (PPB) DRY)
PHENOL	420	1200
2-METHYLPHENOL	63	63

4-METHYLPHENOL	670	670
2,4-DIMETHYL PHENOL	29	29
PENTACHLOROPHENOL	360	690
BENZYL ALCOHOL	57	73
BENZOIC ACID	650	650

(a) Where laboratory analysis indicates a chemical is not detected in a sediment sample, the detection limit shall be reported and shall be at or below the Marine Sediment Quality Standards chemical criteria value set in this table.

(b) Where chemical criteria in this table represent the sum of individual compounds or isomers, the following methods shall be applied:

(i) Where chemical analyses identify an undetected value for every individual compound/isomer then the single highest detection limit shall represent the sum of the respective compounds/isomers; and

(ii) Where chemical analyses detect one or more individual compound/isomers, only the detected concentrations will be added to represent the group sum.

(c) The listed chemical parameter criteria represent concentrations in parts per million, "normalized," or expressed, on a total organic carbon basis. To normalize to total organic carbon, the dry weight concentration for each parameter is divided by the decimal fraction representing the percent total organic carbon content of the sediment.

(d) The LPAH criterion represents the sum of the following "low molecular weight polynuclear aromatic hydrocarbon" compounds: Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, and Anthracene. The LPAH criterion is not the sum of the criteria values for the individual LPAH compounds as listed.

(e) The HPAH criterion represents the sum of the following "high molecular weight polynuclear aromatic hydrocarbon" compounds: Fluoranthene, Pyrene, Benz(a)anthracene, Chrysene, Total Benzofluoranthenes, Benzo(a)pyrene, Indeno(1,2,3,-c,d)pyrene, Dibenzo (a,h)anthracene, and Benzo(g,h,i)perylene. The HPAH criterion is not the sum of the criteria values for the individual HPAH compounds as listed.

(f) The TOTAL BENZOFLUORANTHENES criterion represents the sum of the concentrations of the "B," "J," and "K" isomers.

If you have questions or comments please contact Peter Adolphson at pado461@ecy.wa.gov

Last updated: May 19, 2007

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Summary Package

Sample and QC Results

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Service Request: K0810000

Cover Page - Organic Analysis Data Package
Polynuclear Aromatic Hydrocarbons

Sample Name	Lab Code	Date Collected	Date Received
DCI 4-1	K0810000-001	10/09/2008	10/10/2008
DCI 4-1a	K0810000-002	10/09/2008	10/10/2008

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Julie Gish
Name: Julie Gish
Date: 11/3/08
Title: Scientist IV

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	10/09/2008
Sample Matrix:	Soil	**Date Received:**	10/10/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	DCI 4-1	**Units:**	ug/Kg
Lab Code:	K0810000-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.91**	J	2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
2-Methylnaphthalene	**0.50**	J	2.5	0.39	1	10/23/08	10/30/08	KWG0811327	
Acenaphthylene	ND	U	2.5	0.24	1	10/23/08	10/30/08	KWG0811327	
Acenaphthene	ND	U	2.5	0.23	1	10/23/08	10/30/08	KWG0811327	
Fluorene	ND	U	2.5	0.50	1	10/23/08	10/30/08	KWG0811327	
Dibenzofuran	ND	U	2.5	0.59	1	10/23/08	10/30/08	KWG0811327	
Phenanthrene	**0.81**	J	2.5	0.75	1	10/23/08	10/30/08	KWG0811327	
Anthracene	ND	U	2.5	0.47	1	10/23/08	10/30/08	KWG0811327	
Fluoranthene	**0.63**	J	2.5	0.61	1	10/23/08	10/30/08	KWG0811327	
Pyrene	**0.72**	J	2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
Benzo(b)fluoranthene	ND	U	2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(k)fluoranthene	ND	U	2.5	0.15	1	10/23/08	10/30/08	KWG0811327	
Benz(a)anthracene	ND	U	2.5	0.48	1	10/23/08	10/30/08	KWG0811327	
Chrysene	**0.47**	J	2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(a)pyrene	ND	U	2.5	0.14	1	10/23/08	10/30/08	KWG0811327	
Indeno(1,2,3-cd)pyrene	ND	U	2.5	0.16	1	10/23/08	10/30/08	KWG0811327	
Dibenz(a,h)anthracene	ND	U	2.5	0.28	1	10/23/08	10/30/08	KWG0811327	
Benzo(g,h,i)perylene	ND	U	2.5	0.64	1	10/23/08	10/30/08	KWG0811327	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	81	10-128	10/30/08	Acceptable
Fluoranthene-d10	81	29-121	10/30/08	Acceptable
Terphenyl-d14	96	24-141	10/30/08	Acceptable

Comments:

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	10/09/2008
Sample Matrix:	Soil	**Date Received:**	10/10/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	DCI 4-1a	**Units:**	ug/Kg
Lab Code:	K0810000-002	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.82**	J	2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
2-Methylnaphthalene	**0.42**	J	2.5	0.39	1	10/23/08	10/30/08	KWG0811327	
Acenaphthylene	ND	U	2.5	0.24	1	10/23/08	10/30/08	KWG0811327	
Acenaphthene	ND	U	2.5	0.23	1	10/23/08	10/30/08	KWG0811327	
Fluorene	ND	U	2.5	0.50	1	10/23/08	10/30/08	KWG0811327	
Dibenzofuran	ND	U	2.5	0.59	1	10/23/08	10/30/08	KWG0811327	
Phenanthrene	**0.90**	J	2.5	0.75	1	10/23/08	10/30/08	KWG0811327	
Anthracene	ND	U	2.5	0.47	1	10/23/08	10/30/08	KWG0811327	
Fluoranthene	**0.61**	J	2.5	0.61	1	10/23/08	10/30/08	KWG0811327	
Pyrene	**0.65**	J	2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
Benzo(b)fluoranthene	ND	U	2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(k)fluoranthene	ND	U	2.5	0.15	1	10/23/08	10/30/08	KWG0811327	
Benz(a)anthracene	ND	U	2.5	0.48	1	10/23/08	10/30/08	KWG0811327	
Chrysene	ND	U	2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(a)pyrene	ND	U	2.5	0.14	1	10/23/08	10/30/08	KWG0811327	
Indeno(1,2,3-cd)pyrene	ND	U	2.5	0.16	1	10/23/08	10/30/08	KWG0811327	
Dibenz(a,h)anthracene	ND	U	2.5	0.28	1	10/23/08	10/30/08	KWG0811327	
Benzo(g,h,i)perylene	ND	U	2.5	0.64	1	10/23/08	10/30/08	KWG0811327	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	73	10-128	10/30/08	Acceptable
Fluoranthene-d10	75	29-121	10/30/08	Acceptable
Terphenyl-d14	89	24-141	10/30/08	Acceptable

Comments:

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Method Blank
Lab Code: KWG0811327-5

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	1.3	0.37	1	10/23/08	10/30/08	KWG0811327	
2-Methylnaphthalene	ND	U	1.3	0.39	1	10/23/08	10/30/08	KWG0811327	
Acenaphthylene	ND	U	1.3	0.24	1	10/23/08	10/30/08	KWG0811327	
Acenaphthene	ND	U	1.3	0.23	1	10/23/08	10/30/08	KWG0811327	
Fluorene	ND	U	1.3	0.50	1	10/23/08	10/30/08	KWG0811327	
Dibenzofuran	ND	U	1.3	0.59	1	10/23/08	10/30/08	KWG0811327	
Phenanthrene	ND	U	1.3	0.75	1	10/23/08	10/30/08	KWG0811327	
Anthracene	ND	U	1.3	0.47	1	10/23/08	10/30/08	KWG0811327	
Fluoranthene	ND	U	1.3	0.61	1	10/23/08	10/30/08	KWG0811327	
Pyrene	ND	U	1.3	0.37	1	10/23/08	10/30/08	KWG0811327	
Benzo(b)fluoranthene	ND	U	1.3	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(k)fluoranthene	ND	U	1.3	0.15	1	10/23/08	10/30/08	KWG0811327	
Benz(a)anthracene	ND	U	1.3	0.48	1	10/23/08	10/30/08	KWG0811327	
Chrysene	ND	U	1.3	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(a)pyrene	ND	U	1.3	0.14	1	10/23/08	10/30/08	KWG0811327	
Indeno(1,2,3-cd)pyrene	ND	U	1.3	0.16	1	10/23/08	10/30/08	KWG0811327	
Dibenz(a,h)anthracene	ND	U	1.3	0.28	1	10/23/08	10/30/08	KWG0811327	
Benzo(g,h,i)perylene	ND	U	1.3	0.64	1	10/23/08	10/30/08	KWG0811327	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	72	10-128	10/30/08	Acceptable
Fluoranthene-d10	75	29-121	10/30/08	Acceptable
Terphenyl-d14	87	24-141	10/30/08	Acceptable

Comments:

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541 **Units:** PERCENT
Analysis Method: 8270C SIM **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
DCI 4-1	K0810000-001	81	81	96
DCI 4-1a	K0810000-002	73	75	89
Method Blank	KWG0811327-5	72	75	87
Batch QC	K0810048-003	62	67	75
Batch QCMS	KWG0811327-1	75	75	82
Batch QCDMS	KWG0811327-2	65	66	73
Lab Control Sample	KWG0811327-3	75	74	82
Duplicate Lab Control Sample	KWG0811327-4	86	84	91

Surrogate Recovery Control Limits (%)

Sur1 = Fluorene-d10	10-128
Sur2 = Fluoranthene-d10	29-121
Sur3 = Terphenyl-d14	24-141

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/30/2008
Time Analyzed: 15:00

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\103008\1030F003.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0811762-2
Analysis Lot: KWG0811762

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	205,758	4.77	123,358	6.19	220,161	7.42
	Upper Limit ==>	411,516	5.27	246,716	6.69	440,322	7.92
	Lower Limit ==>	102,879	4.27	61,679	5.69	110,081	6.92
	ICAL Result ==>	203,209	4.91	114,838	6.32	192,338	7.55
Associated Analyses							
Method Blank	KWG0811327-5	181,602	4.76	102,540	6.19	186,493	7.43
Lab Control Sample	KWG0811327-3	176,882	4.77	102,452	6.19	193,851	7.42
Duplicate Lab Control Sample	KWG0811327-4	159,531	4.77	92,589	6.19	177,046	7.42
Batch QCMS	KWG0811327-1	149,300	4.77	84,822	6.19	158,775	7.42
Batch QCDMS	KWG0811327-2	138,042	4.77	79,493	6.19	147,063	7.42
Batch QC	K0810048-003	150,538	4.77	83,945	6.19	145,178	7.43
DCI 4-1	K0810000-001	142,843	4.77	81,528	6.19	154,366	7.43
DCI 4-1a	K0810000-002	145,882	4.77	81,479	6.19	150,390	7.43

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/30/2008
Time Analyzed: 15:00

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\103008\1030F003.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0811762-2
Analysis Lot: KWG0811762

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	259,101	10.05	284,532	13.45
	Upper Limit ==>	518,202	10.55	569,064	13.95
	Lower Limit ==>	129,551	9.55	142,266	12.95
	ICAL Result ==>	231,286	10.27	236,042	13.87
Associated Analyses					
Method Blank	KWG0811327-5	203,954	10.06	210,771	13.47
Lab Control Sample	KWG0811327-3	214,990	10.05	228,858	13.46
Duplicate Lab Control Sample	KWG0811327-4	201,045	10.05	207,964	13.45
Batch QCMS	KWG0811327-1	177,293	10.05	188,896	13.45
Batch QCDMS	KWG0811327-2	165,781	10.05	174,997	13.45
Batch QC	K0810048-003	157,573	10.06	160,415	13.46
DCI 4-1	K0810000-001	162,630	10.06	156,895	13.48
DCI 4-1a	K0810000-002	156,153	10.06	145,530	13.48

Results flagged with an asterisk (*) indicate values outside control criteria.

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Extracted:**	10/23/2008
Sample Matrix:	Soil	**Date Analyzed:**	10/30/2008

Matrix Spike/Duplicate Matrix Spike Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Batch QC	**Units:**	ug/Kg
Lab Code:	K0810048-003	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM	**Extraction Lot:**	KWG0811327

Analyte Name	Sample Result	Batch QCMS KWG0811327-1 Matrix Spike			Batch QCDMS KWG0811327-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Naphthalene	0.88	155	246	62	152	248	61	10-129	2	40
2-Methylnaphthalene	0.52	175	246	71	173	248	70	10-133	1	40
Acenaphthylene	ND	162	246	66	160	248	64	37-100	2	40
Acenaphthene	ND	164	246	67	161	248	65	28-111	2	40
Fluorene	ND	182	246	74	178	248	72	24-122	3	40
Dibenzofuran	ND	182	246	74	178	248	72	37-103	2	40
Phenanthrene	1.0	163	246	66	163	248	65	23-124	0	40
Anthracene	ND	172	246	70	168	248	68	30-114	3	40
Fluoranthene	2.3	182	246	73	184	248	73	21-145	1	40
Pyrene	2.0	191	246	77	191	248	76	10-155	0	40
Benzo(b)fluoranthene	2.0	176	246	71	172	248	68	18-130	3	40
Benzo(k)fluoranthene	1.3	191	246	77	196	248	79	30-122	3	40
Benz(a)anthracene	1.2	170	246	69	170	248	68	25-127	0	40
Chrysene	1.8	202	246	81	204	248	82	28-126	1	40
Benzo(a)pyrene	1.4	181	246	73	181	248	73	20-132	0	40
Indeno(1,2,3-cd)pyrene	2.3	174	246	70	164	248	65	20-132	6	40
Dibenz(a,h)anthracene	1.4	197	246	80	201	248	81	28-124	2	40
Benzo(g,h,i)perylene	2.5	187	246	75	187	248	74	24-124	0	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Extracted:**	10/23/2008
Sample Matrix:	Soil	**Date Analyzed:**	10/30/2008

Lab Control Spike/Duplicate Lab Control Spike Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method:	EPA 3541	**Units:**	ug/Kg
Analysis Method:	8270C SIM	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG0811327

	Lab Control Sample KWG0811327-3 Lab Control Spike			Duplicate Lab Control Sample KWG0811327-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Naphthalene	166	250	66	173	250	69	35-104	4	40
2-Methylnaphthalene	192	250	77	197	250	79	34-110	3	40
Acenaphthylene	173	250	69	177	250	71	46-105	2	40
Acenaphthene	174	250	70	182	250	73	47-104	4	40
Fluorene	188	250	75	199	250	80	52-106	6	40
Dibenzofuran	193	250	77	201	250	81	50-106	4	40
Phenanthrene	165	250	66	175	250	70	48-108	6	40
Anthracene	174	250	70	189	250	76	51-110	8	40
Fluoranthene	181	250	72	195	250	78	54-121	7	40
Pyrene	191	250	76	199	250	80	53-110	4	40
Benzo(b)fluoranthene	180	250	72	191	250	76	51-116	6	40
Benzo(k)fluoranthene	206	250	83	211	250	84	57-114	2	40
Benz(a)anthracene	179	250	72	184	250	74	51-113	3	40
Chrysene	212	250	85	214	250	86	56-112	1	40
Benzo(a)pyrene	197	250	79	200	250	80	53-112	1	40
Indeno(1,2,3-cd)pyrene	193	250	77	188	250	75	42-124	2	40
Dibenz(a,h)anthracene	228	250	91	218	250	87	44-125	4	40
Benzo(g,h,i)perylene	202	250	81	196	250	78	50-115	3	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Extracted:**	10/23/2008
Sample Matrix:	Soil	**Date Analyzed:**	10/30/2008
		Time Analyzed:	15:54

Method Blank Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**File ID:**	J:\MS11\DATA\103008\1030F005.D
Lab Code:	KWG0811327-5	**Instrument ID:**	MS11
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM	**Extraction Lot:**	KWG0811327

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0811327-3	J:\MS11\DATA\103008\1030F006.D	10/30/08	16:20
Duplicate Lab Control Sample	KWG0811327-4	J:\MS11\DATA\103008\1030F007.D	10/30/08	16:47
Batch QCMS	KWG0811327-1	J:\MS11\DATA\103008\1030F010.D	10/30/08	18:06
Batch QCDMS	KWG0811327-2	J:\MS11\DATA\103008\1030F011.D	10/30/08	18:32
Batch QC	K0810048-003	J:\MS11\DATA\103008\1030F012.D	10/30/08	18:59
DCI 4-1	K0810000-001	J:\MS11\DATA\103008\1030F013.D	10/30/08	19:25
DCI 4-1a	K0810000-002	J:\MS11\DATA\103008\1030F014.D	10/30/08	19:52

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Lab Control Sample/Duplicate Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Lab Control Sample	**Sample Name:**	Duplicate Lab Control Sample
Lab Code:	KWG0811327-3	**Lab Code:**	KWG0811327-4
File ID:	J:\MS11\DATA\103008\1030F006.D	**File ID:**	J:\MS11\DATA\103008\1030F007.D
Instrument ID:	MS11	**Instrument ID:**	MS11
Date Extracted:	10/23/2008	**Date Extracted:**	10/23/2008
Date Analyzed:	10/30/2008	**Date Analyzed:**	10/30/2008
Time Analyzed:	16:20	**Time Analyzed:**	16:47

Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM	**Extraction Lot:**	KWG0811327

These Lab Control Samples apply to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0811327-5	J:\MS11\DATA\103008\1030F005.D	10/30/08	15:54
Batch QCMS	KWG0811327-1	J:\MS11\DATA\103008\1030F010.D	10/30/08	18:06
Batch QCDMS	KWG0811327-2	J:\MS11\DATA\103008\1030F011.D	10/30/08	18:32
Batch QC	K0810048-003	J:\MS11\DATA\103008\1030F012.D	10/30/08	18:59
DCI 4-1	K0810000-001	J:\MS11\DATA\103008\1030F013.D	10/30/08	19:25
DCI 4-1a	K0810000-002	J:\MS11\DATA\103008\1030F014.D	10/30/08	19:52

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/30/2008
Time Analyzed: 14:07

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\103008\1030F001.D
Instrument ID: MS11
Column:

Analysis Method: 8270C SIM
Analysis Lot: KWG0811762

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	52.8	419456	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	43.2	343488	PASS
70	69	0	2	0.6	2118	PASS
127	198	10	80	54.2	430528	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	57.0	794304	PASS
199	198	5	9	7.2	56840	PASS
275	198	10	60	35.9	284864	PASS
365	442	1	50	6.2	86952	PASS
441	443	0	100	73.1	203776	PASS
442	442	100	100	100.0	1392640	PASS
443	442	15	24	20.0	278592	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0811762-2	J:\MS11\DATA\103008\1030F003.D	10/30/2008	15:00	
Method Blank	KWG0811327-5	J:\MS11\DATA\103008\1030F005.D	10/30/2008	15:54	
Lab Control Sample	KWG0811327-3	J:\MS11\DATA\103008\1030F006.D	10/30/2008	16:20	
Duplicate Lab Control Sample	KWG0811327-4	J:\MS11\DATA\103008\1030F007.D	10/30/2008	16:47	
Batch QCMS	KWG0811327-1	J:\MS11\DATA\103008\1030F010.D	10/30/2008	18:06	
Batch QCDMS	KWG0811327-2	J:\MS11\DATA\103008\1030F011.D	10/30/2008	18:32	
Batch QC	K0810048-003	J:\MS11\DATA\103008\1030F012.D	10/30/2008	18:59	
DCI 4-1	K0810000-001	J:\MS11\DATA\103008\1030F013.D	10/30/2008	19:25	
DCI 4-1a	K0810000-002	J:\MS11\DATA\103008\1030F014.D	10/30/2008	19:52	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04 **Calibration Date:** 10/01/2008

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL7814 **Column:** MS
Instrument ID: MS11

Level ID	File ID	Level ID	File ID
A	J:\MS11\DATA\100108\1001F020.D	F	J:\MS11\DATA\100108\1001F025.D
B	J:\MS11\DATA\100108\1001F021.D	G	J:\MS11\DATA\100108\1001F026.D
C	J:\MS11\DATA\100108\1001F022.D	H	J:\MS11\DATA\100108\1001F027.D
D	J:\MS11\DATA\100108\1001F023.D	I	J:\MS11\DATA\100108\1001F028.D
E	J:\MS11\DATA\100108\1001F024.D		

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Naphthalene	A	2.0	1.34	B	4.0	1.11	C	8.0	1.12	D	100	1.06	E	200	1.09
	F	400	1.10	G	1000	1.08	H	1600	1.10	I	2000	1.13			
2-Methylnaphthalene	A	2.0	0.763	B	4.0	0.714	C	8.0	0.708	D	100	0.746	E	200	0.758
	F	400	0.780	G	1000	0.790	H	1600	0.815	I	2000	0.866			
Acenaphthylene	A	2.0	1.89	B	4.0	1.86	C	8.0	1.83	D	100	1.91	E	200	2.01
	F	400	2.08	G	1000	2.15	H	1600	2.18	I	2000	2.30			
Acenaphthene	A	2.0	1.19	B	4.0	1.18	C	8.0	1.17	D	100	1.15	E	200	1.20
	F	400	1.22	G	1000	1.28	H	1600	1.34	I	2000	1.45			
Fluorene	A	2.0	1.42	B	4.0	1.25	C	8.0	1.35	D	100	1.41	E	200	1.47
	F	400	1.51	G	1000	1.59	H	1600	1.63	I	2000	1.75			
Dibenzofuran	A	2.0	1.63	B	4.0	1.59	C	8.0	1.59	D	100	1.70	E	200	1.77
	F	400	1.83	G	1000	1.87	H	1600	1.90	I	2000	2.02			
Phenanthrene	A	2.0	1.30	B	4.0	1.22	C	8.0	1.16	D	100	1.25	E	200	1.24
	F	400	1.31	G	1000	1.33	H	1600	1.35	I	2000	1.43			
Anthracene	A	2.0	1.26	B	4.0	1.19	C	8.0	1.10	D	100	1.23	E	200	1.23
	F	400	1.30	G	1000	1.36	H	1600	1.38	I	2000	1.44			
Fluoranthene	A	2.0	1.42	B	4.0	1.31	C	8.0	1.30	D	100	1.45	E	200	1.45
	F	400	1.50	G	1000	1.51	H	1600	1.62	I	2000	1.68			
Pyrene	A	2.0	1.44	B	4.0	1.30	C	8.0	1.31	D	100	1.24	E	200	1.28
	F	400	1.30	G	1000	1.27	H	1600	1.30	I	2000	1.34			
Benzo(b)fluoranthene	A	2.0	1.25	B	4.0	1.12	C	8.0	1.13	D	100	1.18	E	200	1.28
	F	400	1.34	G	1000	1.40	H	1600	1.42	I	2000	1.47			
Benzo(k)fluoranthene	A	2.0	1.17	B	4.0	1.20	C	8.0	1.17	D	100	1.16	E	200	1.23
	F	400	1.28	G	1000	1.29	H	1600	1.31	I	2000	1.34			
Benz(a)anthracene	A	2.0	1.50	B	4.0	1.27	C	8.0	1.22	D	100	1.09	E	200	1.17
	F	400	1.19	G	1000	1.20	H	1600	1.23	I	2000	1.27			
Chrysene	A	2.0	1.30	B	4.0	1.22	C	8.0	1.22	D	100	1.16	E	200	1.17
	F	400	1.19	G	1000	1.17	H	1600	1.16	I	2000	1.20			

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 10/01/2008

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL7814
Instrument ID: MS11

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzo(a)pyrene	A	2.0	1.00	B	4.0	0.933	C	8.0	0.885	D	100	0.983	E	200	1.06
	F	400	1.12	G	1000	1.15	H	1600	1.17	I	2000	1.21			
Indeno(1,2,3-cd)pyrene	A	2.0	1.14	B	4.0	0.661	C	8.0	0.652	D	100	0.781	E	200	0.850
	F	400	0.955	G	1000	1.06	H	1600	1.10	I	2000	1.15			
Dibenz(a,h)anthracene	A	2.0	0.972	B	4.0	0.788	C	8.0	0.732	D	100	0.833	E	200	0.918
	F	400	1.01	G	1000	1.09	H	1600	1.14	I	2000	1.20			
Benzo(g,h,i)perylene	A	2.0	1.14	B	4.0	0.948	C	8.0	0.902	D	100	0.982	E	200	1.04
	F	400	1.10	G	1000	1.13	H	1600	1.15	I	2000	1.19			
Fluorene-d10	A	2.0	1.32	B	4.0	1.23	C	8.0	1.26	D	100	1.31	E	200	1.37
	F	400	1.44	G	1000	1.51	H	1600	1.58	I	2000	1.71			
Fluoranthene-d10	A	2.0	1.29	B	4.0	1.27	C	8.0	1.24	D	100	1.37	E	200	1.35
	F	400	1.46	G	1000	1.52	H	1600	1.63	I	2000	1.67			
Terphenyl-d14	A	2.0	1.13	B	4.0	0.975	C	8.0	1.03	D	100	0.977	E	200	1.00
	F	400	1.02	G	1000	1.03	H	1600	1.05	I	2000	1.13			

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04 **Calibration Date:** 10/01/2008

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL7814 **Column:** MS
Instrument ID: MS11

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Naphthalene	MS	AverageRF	% RSD	7.2		≤ 15	1.12		0.01
2-Methylnaphthalene	MS	AverageRF	% RSD	6.4		≤ 15	0.771		0.01
Acenaphthylene	MS	AverageRF	% RSD	8.1		≤ 15	2.02		0.01
Acenaphthene	MS	AverageRF	% RSD	8.0		≤ 15	1.24		0.01
Fluorene	MS	AverageRF	% RSD	10.2		≤ 15	1.49		0.01
Dibenzofuran	MS	AverageRF	% RSD	8.5		≤ 15	1.77		0.01
Phenanthrene	MS	AverageRF	% RSD	6.3		≤ 15	1.29		0.01
Anthracene	MS	AverageRF	% RSD	8.3		≤ 15	1.28		0.01
Fluoranthene	MS	AverageRF	% RSD	8.5		≤ 15	1.47		0.01
Pyrene	MS	AverageRF	% RSD	4.4		≤ 15	1.31		0.01
Benzo(b)fluoranthene	MS	AverageRF	% RSD	10.1		≤ 15	1.29		0.01
Benzo(k)fluoranthene	MS	AverageRF	% RSD	5.6		≤ 15	1.24		0.01
Benz(a)anthracene	MS	AverageRF	% RSD	9.1		≤ 15	1.24		0.01
Chrysene	MS	AverageRF	% RSD	3.9		≤ 15	1.20		0.01
Benzo(a)pyrene	MS	AverageRF	% RSD	10.6		≤ 15	1.06		0.01
Indeno(1,2,3-cd)pyrene	MS	AverageRF	% RSD	21.4	*	≤ 15	0.927		0.01
Dibenz(a,h)anthracene	MS	AverageRF	% RSD	16.8	*	≤ 15	0.965		0.01
Benzo(g,h,i)perylene	MS	AverageRF	% RSD	9.5		≤ 15	1.06		0.01
Fluorene-d10	SURR	AverageRF	% RSD	11.3		≤ 15	1.41		0.01
Fluoranthene-d10	SURR	AverageRF	% RSD	11.1		≤ 15	1.42		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	5.6		≤ 15	1.04		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 10/01/2008
Date Analyzed: 10/02/2008

Second Source Calibration Verification
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration ID: CAL7814
Units: ng/ml

File ID: J:\MS11\DATA\100108\1001F030.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	400	1.12	1.12	0	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	420	0.771	0.801	4	NA	± 20 %	AverageRF
Acenaphthylene	400	440	2.02	2.20	9	NA	± 20 %	AverageRF
Acenaphthene	400	420	1.24	1.30	4	NA	± 20 %	AverageRF
Fluorene	400	430	1.49	1.59	7	NA	± 20 %	AverageRF
Dibenzofuran	400	440	1.77	1.96	11	NA	± 20 %	AverageRF
Phenanthrene	400	430	1.29	1.40	9	NA	± 20 %	AverageRF
Anthracene	400	420	1.28	1.34	5	NA	± 20 %	AverageRF
Fluoranthene	400	440	1.47	1.61	10	NA	± 20 %	AverageRF
Pyrene	400	400	1.31	1.31	0	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	410	1.29	1.33	3	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	440	1.24	1.35	9	NA	± 20 %	AverageRF
Benz(a)anthracene	400	400	1.24	1.25	1	NA	± 20 %	AverageRF
Chrysene	400	410	1.20	1.22	2	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	440	1.06	1.17	11	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	410	0.927	0.960	4	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	430	0.965	1.05	9	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	430	1.06	1.14	7	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Results

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/30/2008

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 10/01/2008
Calibration ID: CAL7814
Analysis Lot: KWG0811762
Units: ng/ml

File ID: J:\MS11\DATA\103008\1030F003.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	380	0.01	1.12	1.07	-5	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	410	0.01	0.771	0.795	3	NA	± 20 %	AverageRF
Acenaphthylene	400	390	0.01	2.02	1.99	-2	NA	± 20 %	AverageRF
Acenaphthene	400	390	0.01	1.24	1.21	-3	NA	± 20 %	AverageRF
Fluorene	400	410	0.01	1.49	1.53	3	NA	± 20 %	AverageRF
Dibenzofuran	400	410	0.01	1.77	1.79	2	NA	± 20 %	AverageRF
Phenanthrene	400	390	0.01	1.29	1.27	-1	NA	± 20 %	AverageRF
Anthracene	400	390	0.01	1.28	1.25	-2	NA	± 20 %	AverageRF
Fluoranthene	400	400	0.01	1.47	1.47	0	NA	± 20 %	AverageRF
Pyrene	400	390	0.01	1.31	1.28	-2	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	360	0.01	1.29	1.16	-10	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	380	0.01	1.24	1.18	-4	NA	± 20 %	AverageRF
Benz(a)anthracene	400	380	0.01	1.24	1.19	-4	NA	± 20 %	AverageRF
Chrysene	400	410	0.01	1.20	1.22	2	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	400	0.01	1.06	1.05	-1	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	410	0.01	0.927	0.960	4	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	460	0.01	0.965	1.11	15	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	410	0.01	1.06	1.10	3	NA	± 20 %	AverageRF
Fluorene-d10	400	400	0.01	1.41	1.42	1	NA	± 20 %	AverageRF
Fluoranthene-d10	400	400	0.01	1.42	1.42	0	NA	± 20 %	AverageRF
Terphenyl-d14	400	390	0.01	1.04	1.01	-3	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270C SIM

Analysis Lot: KWG0811762
Instrument ID: MS11

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1030F001.D	GC/MS Tuning - Decafluorotripheny	KWG0811762-1	10/30/2008	14:07		10/30/2008	14:26
1030F003.D	Continuing Calibration Verification	KWG0811762-2	10/30/2008	15:00		10/30/2008	15:20
1030F005.D	Method Blank	KWG0811327-5	10/30/2008	15:54		10/30/2008	16:14
1030F006.D	Lab Control Sample	KWG0811327-3	10/30/2008	16:20		10/30/2008	16:40
1030F007.D	Duplicate Lab Control Sample	KWG0811327-4	10/30/2008	16:47		10/30/2008	17:07
1030F010.D	Batch QCMS	KWG0811327-1	10/30/2008	18:06		10/30/2008	18:25
1030F011.D	Batch QCDMS	KWG0811327-2	10/30/2008	18:32		10/30/2008	18:51
1030F012.D	Batch QC	K0810048-003	10/30/2008	18:59		10/30/2008	19:19
1030F013.D	DCI 4-1	K0810000-001	10/30/2008	19:25		10/30/2008	19:45
1030F014.D	DCI 4-1a	K0810000-002	10/30/2008	19:52		10/30/2008	20:11

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000
Date Extracted: 10/23/2008

Extraction Prep Log
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Extraction Lot: KWG0811327
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
DCI 4-1	K0810000-001	10/09/08	10/10/08	23.31g	10ml	86.7	
DCI 4-1a	K0810000-002	10/09/08	10/10/08	23.42g	10ml	85.7	
Method Blank	KWG0811327-5	NA	NA	40.06g	10ml	NA	
Batch QC	K0810048-003	NA	NA	23.68g	10ml	85.4	
Batch QCMS	KWG0811327-1	NA	NA	23.77g	10ml	85.4	
Batch QCDMS	KWG0811327-2	NA	NA	23.64g	10ml	85.4	
Lab Control Sample	KWG0811327-3	NA	NA	20.00g	10ml	NA	
Duplicate Lab Control Sample	KWG0811327-4	NA	NA	20.00g	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

QC Reports

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000

Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: PERCENT
Level: Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
DCI 4-1	K0810000-001	81	81	96
DCI 4-1a	K0810000-002	73	75	89
Method Blank	KWG0811327-5	72	75	87
Batch QC	K0810048-003	62	67	75
Batch QCMS	KWG0811327-1	75	75	82
Batch QCDMS	KWG0811327-2	65	66	73
Lab Control Sample	KWG0811327-3	75	74	82
Duplicate Lab Control Sample	KWG0811327-4	86	84	91

Surrogate Recovery Control Limits (%)

Sur1 =	Fluorene-d10	10-128
Sur2 =	Fluoranthene-d10	29-121
Sur3 =	Terphenyl-d14	24-141

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/30/2008
Time Analyzed: 15:00

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\103008\1030F003.D
Instrument ID: MS11
Analysis Method: 8270C SIM

Lab Code: KWG0811762-2
Analysis Lot: KWG0811762

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	205,758	4.77	123,358	6.19	220,161	7.42
	Upper Limit ==>	411,516	5.27	246,716	6.69	440,322	7.92
	Lower Limit ==>	102,879	4.27	61,679	5.69	110,081	6.92
	ICAL Result ==>	203,209	4.91	114,838	6.32	192,338	7.55
Associated Analyses							
Method Blank	KWG0811327-5	181,602	4.76	102,540	6.19	186,493	7.43
Lab Control Sample	KWG0811327-3	176,882	4.77	102,452	6.19	193,851	7.42
Duplicate Lab Control Sample	KWG0811327-4	159,531	4.77	92,589	6.19	177,046	7.42
Batch QCMS	KWG0811327-1	149,300	4.77	84,822	6.19	158,775	7.42
Batch QCDMS	KWG0811327-2	138,042	4.77	79,493	6.19	147,063	7.42
Batch QC	K0810048-003	150,538	4.77	83,945	6.19	145,178	7.43
DCI 4-1	K0810000-001	142,843	4.77	81,528	6.19	154,366	7.43
DCI 4-1a	K0810000-002	145,882	4.77	81,479	6.19	150,390	7.43

Results flagged with an asterisk (*) indicate values outside control criteria.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Analyzed:**	10/30/2008
		Time Analyzed:	15:00

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID:	J:\MS11\DATA\103008\1030F003.D	**Lab Code:**	KWG0811762-2
Instrument ID:	MS11	**Analysis Lot:**	KWG0811762
Analysis Method:	8270C SIM		

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	259,101	10.05	284,532	13.45
	Upper Limit ==>	518,202	10.55	569,064	13.95
	Lower Limit ==>	129,551	9.55	142,266	12.95
	ICAL Result ==>	231,286	10.27	236,042	13.87
Associated Analyses					
Method Blank	KWG0811327-5	203,954	10.06	210,771	13.47
Lab Control Sample	KWG0811327-3	214,990	10.05	228,858	13.46
Duplicate Lab Control Sample	KWG0811327-4	201,045	10.05	207,964	13.45
Batch QCMS	KWG0811327-1	177,293	10.05	188,896	13.45
Batch QCDMS	KWG0811327-2	165,781	10.05	174,997	13.45
Batch QC	K0810048-003	157,573	10.06	160,415	13.46
DCI 4-1	K0810000-001	162,630	10.06	156,895	13.48
DCI 4-1a	K0810000-002	156,153	10.06	145,530	13.48

Results flagged with an asterisk (*) indicate values outside control criteria.

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Extracted:**	10/23/2008
Sample Matrix:	Soil	**Date Analyzed:**	10/30/2008

Matrix Spike/Duplicate Matrix Spike Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Batch QC	**Units:**	ug/Kg
Lab Code:	K0810048-003	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM	**Extraction Lot:**	KWG0811327

Analyte Name	Sample Result	Batch QCMS KWG0811327-1 Matrix Spike			Batch QCDMS KWG0811327-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Expected	%Rec	Result	Expected	%Rec			
Naphthalene	0.88	155	246	62	152	248	61	10-129	2	40
2-Methylnaphthalene	0.52	175	246	71	173	248	70	10-133	1	40
Acenaphthylene	ND	162	246	66	160	248	64	37-100	2	40
Acenaphthene	ND	164	246	67	161	248	65	28-111	2	40
Fluorene	ND	182	246	74	178	248	72	24-122	3	40
Dibenzofuran	ND	182	246	74	178	248	72	37-103	2	40
Phenanthrene	1.0	163	246	66	163	248	65	23-124	0	40
Anthracene	ND	172	246	70	168	248	68	30-114	3	40
Fluoranthene	2.3	182	246	73	184	248	73	21-145	1	40
Pyrene	2.0	191	246	77	191	248	76	10-155	0	40
Benzo(b)fluoranthene	2.0	176	246	71	172	248	68	18-130	3	40
Benzo(k)fluoranthene	1.3	191	246	77	196	248	79	30-122	3	40
Benz(a)anthracene	1.2	170	246	69	170	248	68	25-127	0	40
Chrysene	1.8	202	246	81	204	248	82	28-126	1	40
Benzo(a)pyrene	1.4	181	246	73	181	248	73	20-132	0	40
Indeno(1,2,3-cd)pyrene	2.3	174	246	70	164	248	65	20-132	6	40
Dibenz(a,h)anthracene	1.4	197	246	80	201	248	81	28-124	2	40
Benzo(g,h,i)perylene	2.5	187	246	75	187	248	74	24-124	0	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Extracted:**	10/23/2008
Sample Matrix:	Soil	**Date Analyzed:**	10/30/2008

Lab Control Spike/Duplicate Lab Control Spike Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method:	EPA 3541	**Units:**	ug/Kg
Analysis Method:	8270C SIM	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG0811327

	Lab Control Sample KWG0811327-3 Lab Control Spike			Duplicate Lab Control Sample KWG0811327-4 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Expected**	**%Rec**	**Result**	**Expected**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Naphthalene	166	250	66	173	250	69	35-104	4	40
2-Methylnaphthalene	192	250	77	197	250	79	34-110	3	40
Acenaphthylene	173	250	69	177	250	71	46-105	2	40
Acenaphthene	174	250	70	182	250	73	47-104	4	40
Fluorene	188	250	75	199	250	80	52-106	6	40
Dibenzofuran	193	250	77	201	250	81	50-106	4	40
Phenanthrene	165	250	66	175	250	70	48-108	6	40
Anthracene	174	250	70	189	250	76	51-110	8	40
Fluoranthene	181	250	72	195	250	78	54-121	7	40
Pyrene	191	250	76	199	250	80	53-110	4	40
Benzo(b)fluoranthene	180	250	72	191	250	76	51-116	6	40
Benzo(k)fluoranthene	206	250	83	211	250	84	57-114	2	40
Benz(a)anthracene	179	250	72	184	250	74	51-113	3	40
Chrysene	212	250	85	214	250	86	56-112	1	40
Benzo(a)pyrene	197	250	79	200	250	80	53-112	1	40
Indeno(1,2,3-cd)pyrene	193	250	77	188	250	75	42-124	2	40
Dibenz(a,h)anthracene	228	250	91	218	250	87	44-125	4	40
Benzo(g,h,i)perylene	202	250	81	196	250	78	50-115	3	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Extracted:**	10/23/2008
Sample Matrix:	Soil	**Date Analyzed:**	10/30/2008
		Time Analyzed:	15:54

Method Blank Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**File ID:**	J:\MS11\DATA\103008\1030F005.D
Lab Code:	KWG0811327-5	**Instrument ID:**	MS11
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM	**Extraction Lot:**	KWG0811327

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG0811327-3	J:\MS11\DATA\103008\1030F006.D	10/30/08	16:20
Duplicate Lab Control Sample	KWG0811327-4	J:\MS11\DATA\103008\1030F007.D	10/30/08	16:47
Batch QCMS	KWG0811327-1	J:\MS11\DATA\103008\1030F010.D	10/30/08	18:06
Batch QCDMS	KWG0811327-2	J:\MS11\DATA\103008\1030F011.D	10/30/08	18:32
Batch QC	K0810048-003	J:\MS11\DATA\103008\1030F012.D	10/30/08	18:59
DCI 4-1	K0810000-001	J:\MS11\DATA\103008\1030F013.D	10/30/08	19:25
DCI 4-1a	K0810000-002	J:\MS11\DATA\103008\1030F014.D	10/30/08	19:52

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Lab Control Sample/Duplicate Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Lab Control Sample	**Sample Name:**	Duplicate Lab Control Sample
Lab Code:	KWG0811327-3	**Lab Code:**	KWG0811327-4
File ID:	J:\MS11\DATA\103008\1030F006.D	**File ID:**	J:\MS11\DATA\103008\1030F007.D
Instrument ID:	MS11	**Instrument ID:**	MS11
Date Extracted:	10/23/2008	**Date Extracted:**	10/23/2008
Date Analyzed:	10/30/2008	**Date Analyzed:**	10/30/2008
Time Analyzed:	16:20	**Time Analyzed:**	16:47

Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM	**Extraction Lot:**	KWG0811327

These Lab Control Samples apply to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG0811327-5	J:\MS11\DATA\103008\1030F005.D	10/30/08	15:54
Batch QCMS	KWG0811327-1	J:\MS11\DATA\103008\1030F010.D	10/30/08	18:06
Batch QCDMS	KWG0811327-2	J:\MS11\DATA\103008\1030F011.D	10/30/08	18:32
Batch QC	K0810048-003	J:\MS11\DATA\103008\1030F012.D	10/30/08	18:59
DCI 4-1	K0810000-001	J:\MS11\DATA\103008\1030F013.D	10/30/08	19:25
DCI 4-1a	K0810000-002	J:\MS11\DATA\103008\1030F014.D	10/30/08	19:52

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

Raw Data

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	10/09/2008
Sample Matrix:	Soil	**Date Received:**	10/10/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	DCI 4-1	**Units:**	ug/Kg
Lab Code:	K0810000-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.91**	J	2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
2-Methylnaphthalene	**0.50**	J	2.5	0.39	1	10/23/08	10/30/08	KWG0811327	
Acenaphthylene	ND	U	2.5	0.24	1	10/23/08	10/30/08	KWG0811327	
Acenaphthene	ND	U	2.5	0.23	1	10/23/08	10/30/08	KWG0811327	
Fluorene	ND	U	2.5	0.50	1	10/23/08	10/30/08	KWG0811327	
Dibenzofuran	ND	U	2.5	0.59	1	10/23/08	10/30/08	KWG0811327	
Phenanthrene	**0.81**	J	2.5	0.75	1	10/23/08	10/30/08	KWG0811327	
Anthracene	ND	U	2.5	0.47	1	10/23/08	10/30/08	KWG0811327	
Fluoranthene	**0.63**	J	2.5	0.61	1	10/23/08	10/30/08	KWG0811327	
Pyrene	**0.72**	J	2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
Benzo(b)fluoranthene	ND	U	2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(k)fluoranthene	ND	U	2.5	0.15	1	10/23/08	10/30/08	KWG0811327	
Benz(a)anthracene	ND	U	2.5	0.48	1	10/23/08	10/30/08	KWG0811327	
Chrysene	**0.47**	J	2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(a)pyrene	ND	U	2.5	0.14	1	10/23/08	10/30/08	KWG0811327	
Indeno(1,2,3-cd)pyrene	ND	U	2.5	0.16	1	10/23/08	10/30/08	KWG0811327	
Dibenz(a,h)anthracene	ND	U	2.5	0.28	1	10/23/08	10/30/08	KWG0811327	
Benzo(g,h,i)perylene	ND	U	2.5	0.64	1	10/23/08	10/30/08	KWG0811327	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	81	10-128	10/30/08	Acceptable
Fluoranthene-d10	81	29-121	10/30/08	Acceptable
Terphenyl-d14	96	24-141	10/30/08	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\103008\1030F013.D
Lab ID: K0810000-001
RunType: SMPL
Matrix: SOIL

Date Acquired: 10/30/2008 19:25
Date Quantitated: 11/03/2008 10:59
Batch ID: KWG0811762
Analysis Method: 8270C SIM
ListJoinID: LJ5442

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/3/8

Secondary Review: 11-3-8

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8270C SIM PAH_S	**Collect Date:**	10/09/2008	**Receive Date:**	10/10/2008

Analysis Lot:	KWG0811762	**Prep Lot:**	KWG0811327	**Report Group:**	K0810000
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	771032	**Prep Date:**	10/23/2008		

Quant Method:	J:\MS11\METHODS\SIM\1001ALK.M	**Calibration ID:**	CAL7814
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5442
Tune Ref:	J:\MS11\DATA\103008\1030F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\103008\1030F005.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\103008\1030F013.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 19:25	**Quant Date:**	11/03/2008 10:59	**Vial:**	10
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810000-001			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.77	0.00	136	142843	200.00	OK
2	Acenaphthene-d10	6.19	0.00	164	81528	200.00	OK
3	Phenanthrene-d10	7.43	0.01	188	154366	200.00	OK
4	Chrysene-d12	10.06	0.01	240	162630	200.00	OK
5	Perylene-d12	13.48	0.03	264	156895	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.62	0.00	0.00	176	232647	403.96	81	10-128	OK	
3	Fluoranthene-d10	8.40	0.00	0.00	212	444339	404.99	81	29-121	OK	
4	Terphenyl-d14	8.76	0.00	0.00	244	407153	481.67	96	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.78		0.00	128	1478	1.84	0.91	J	
1	2-Methylnaphthalene	5.37	0.03	0.01	142	557	1.01	0.50	J	
2	Acenaphthylene				152	0d		0.24	U	
2	Acenaphthene				154	0d		0.23	U	
2	Dibenzofuran				168	0d		0.59	U	
2	Fluorene				166	0d		0.50	U	
3	Phenanthrene	7.45	0.01	0.00	178	1633m	1.64	0.81	J	
3	Anthracene				178	0d		0.47	U	
3	Fluoranthene	8.42		0.00	202	1459	1.28	0.63	J	
4	Pyrene	8.63	0.01	0.00	202	1541	1.45	0.72	J	
4	Benz(a)anthracene	10.06	0.03	0.00	228	737	0.7300	0.48	U	
4	Chrysene	10.11	0.02	0.00	228	916	0.9400	0.47	J	
5	Benzo(b)fluoranthene				252	0d		0.25	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\103008\1030F013.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 19:25	**Quant Date:**	11/03/2008 10:59	**Vial:**	10
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810000-001			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene				252	0**d**		0.15	U	
5	Benzo(a)pyrene				252	0**d**		0.14	U	
5	Indeno(1,2,3-cd)pyrene				276	0**d**		0.16	U	
5	Dibenz(a,h)anthracene				278	0**d**		0.28	U	
5	Benzo(g,h,i)perylene				276	0**d**		0.64	U	

Prep Amount:	23.31 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	86.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F013.D Vial: 10
Acq On : 30 Oct 2008 7:25 pm Operator: LWeiskopf
Sample : K0810000-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 03 10:52:26 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.77	136	142843	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.19	164	81528	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.43	188	154366	200.00	ng/ml	0.01
37) Chrysene-d12	10.06	240	162630	200.00	ng/ml	0.02
49) Perylene-d12	13.48	264	156895	200.00	ng/ml	0.03
System Monitoring Compounds						
15) Fluorene-d10	6.62	176	232647	403.96	ng/ml	0.00
Spiked Amount 200.000			Recovery =	201.98%		
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery =	0.00%		
36) Fluoranthene-d10	8.40	212	444339	404.99	ng/ml	0.00
Spiked Amount 200.000			Recovery =	202.50%		
42) Terphenyl-d14	8.76	244	407153	481.67	ng/ml	0.00
Spiked Amount 200.000			Recovery =	240.84%		
Target Compounds						Qvalue
2) Naphthalene	4.78	128	1478	1.84	ng/ml	99
3) 2-Methylnaphthalene	5.37	142	557	1.01	ng/ml	78
4) 1-Methylnaphthalene	5.44	142	361m	0.74	ng/ml	
5) Biphenyl	5.72	154	890	1.34	ng/ml	70
27) Phenanthrene	7.45	178	1633m	1.64	ng/ml	
35) Fluoranthene	8.42	202	1459	1.28	ng/ml	30
38) Pyrene	8.63	202	1541	1.45	ng/ml	85
43) Benz(a)anthracene	10.06	228	737	0.73	ng/ml	58
44) Chrysene	10.11	228	916	0.94	ng/ml	96

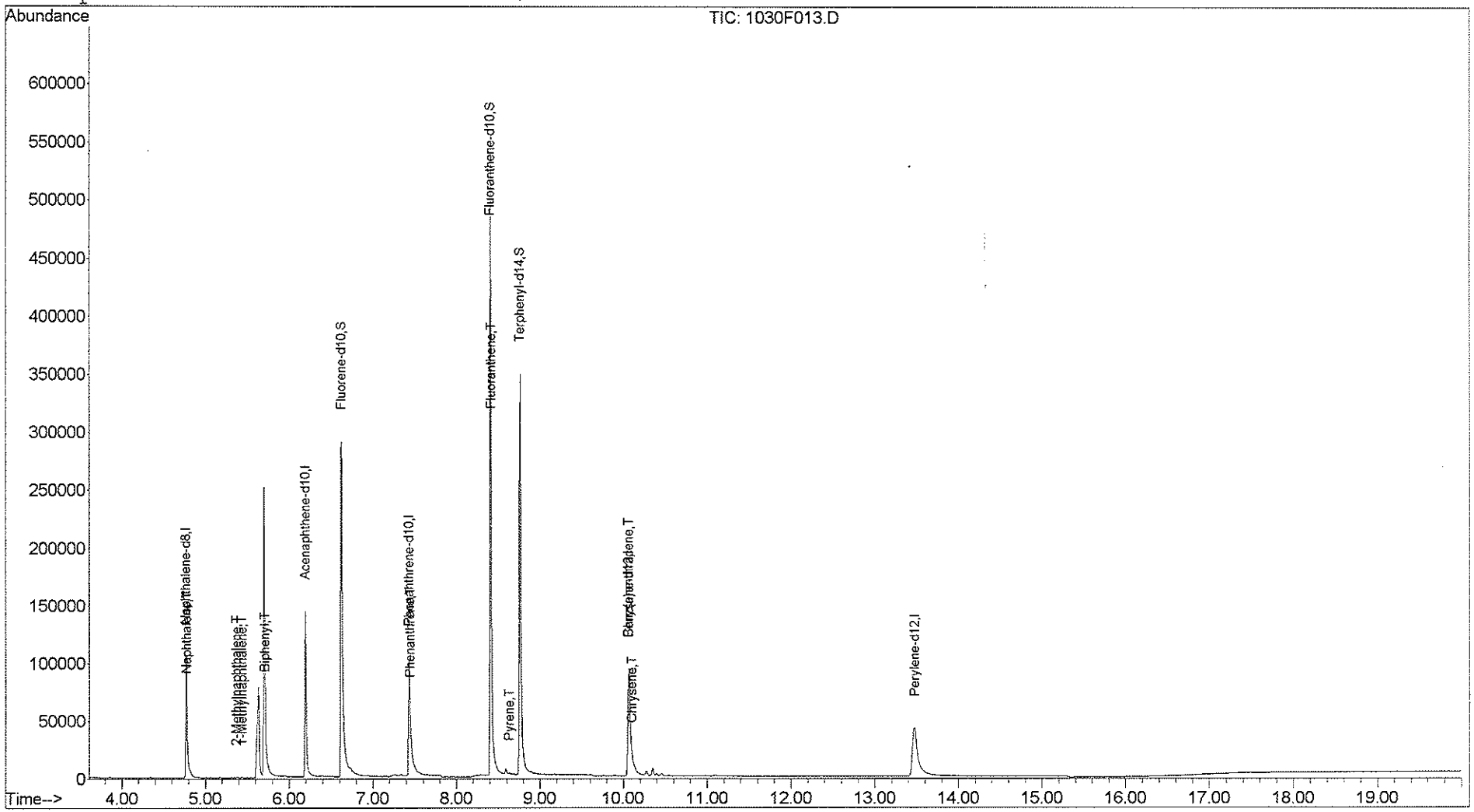
(#) = qualifier out of range (m) = manual integration
1030F013.D 1001ALK.M Mon Nov 03 11:01:01 2008 Page 1

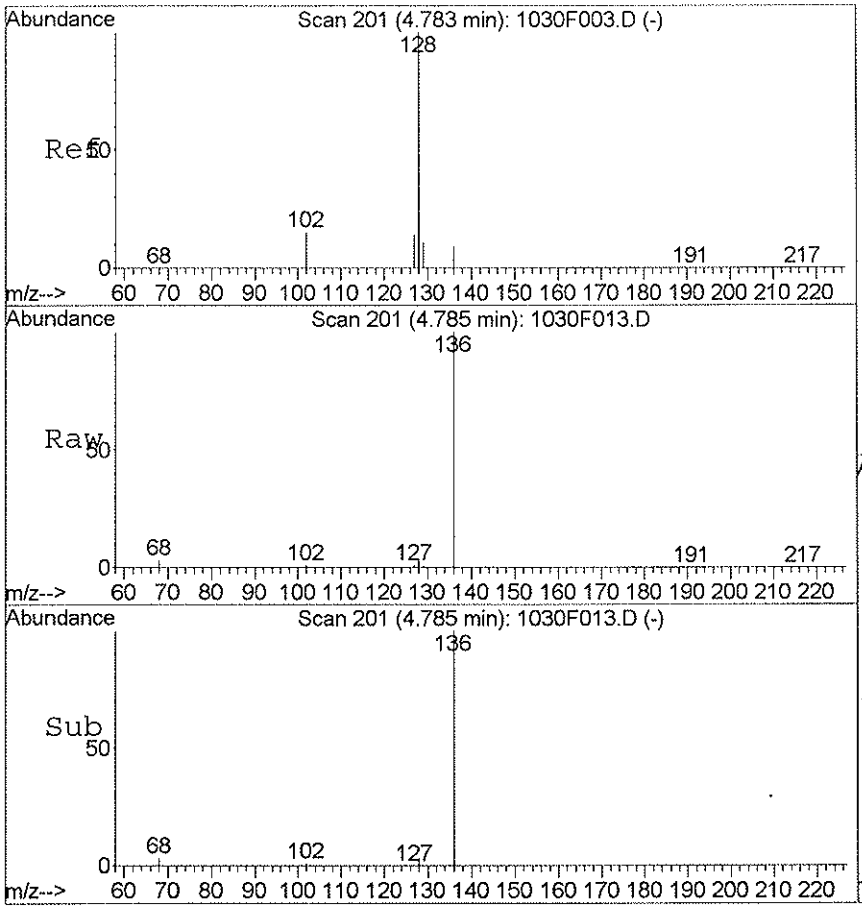
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F013.D Vial: 10
Acq On : 30 Oct 2008 7:25 pm Operator: LWeiskopf
Sample : K0810000-001 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:59 2008 Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration

608

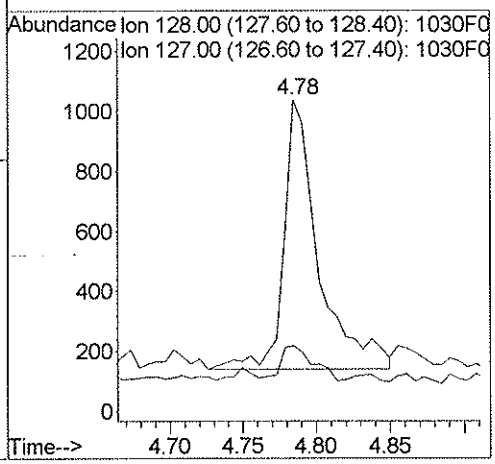


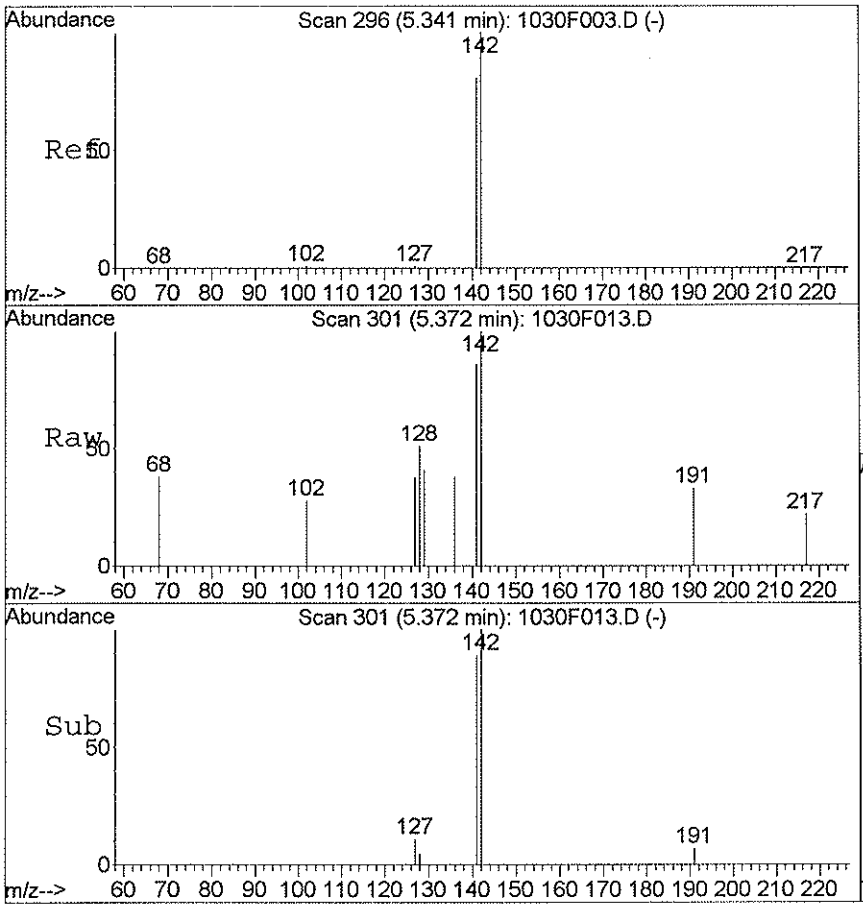


#2
Naphthalene
Concen: 1.84 ng/ml
RT: 4.78 min Scan# 201
Delta R.T. -0.01 min
Lab File: 1030F013.D
Acq: 30 Oct 2008 7:25 pm

Tgt Ion:128 Resp: 1478

Ion	Ratio	Lower	Upper
128	100		
127	13.4	0.0	43.8

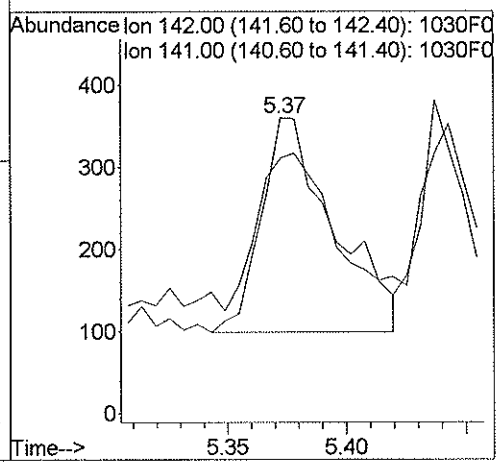


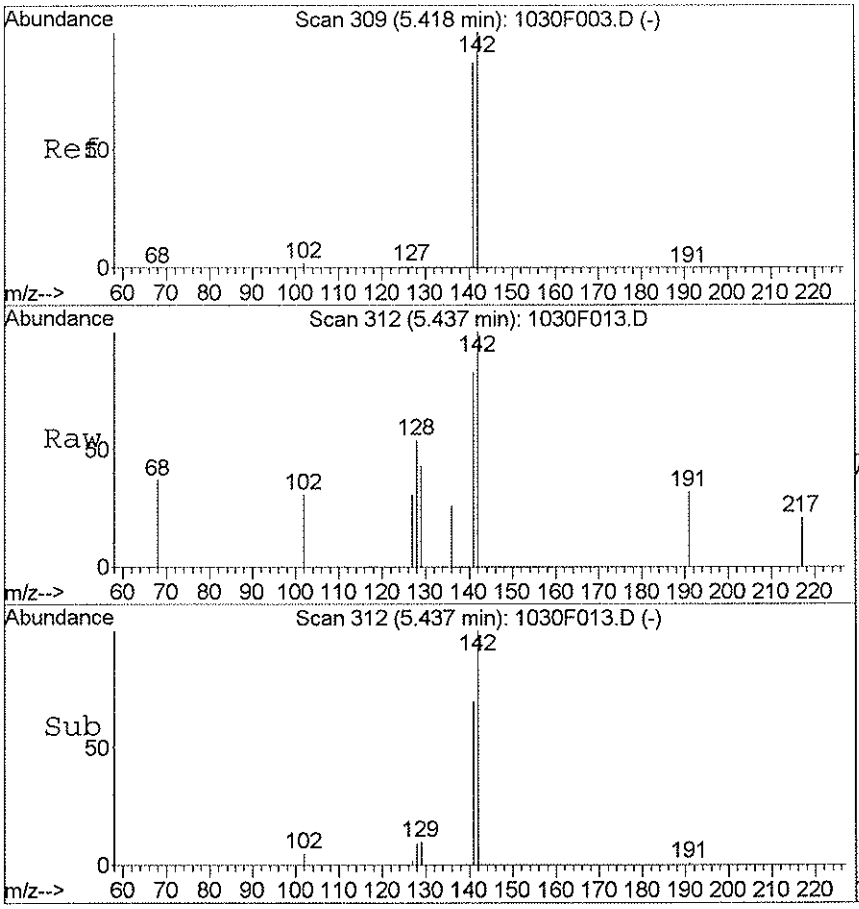


#3
2-Methylnaphthalene
Concen: 1.01 ng/ml
RT: 5.37 min Scan# 301
Delta R.T. 0.02 min
Lab File: 1030F013.D
Acq: 30 Oct 2008 7:25 pm

Tgt Ion:142 Resp: 557

Ion	Ratio	Lower	Upper
142	100		
141	62.5	52.4	112.4

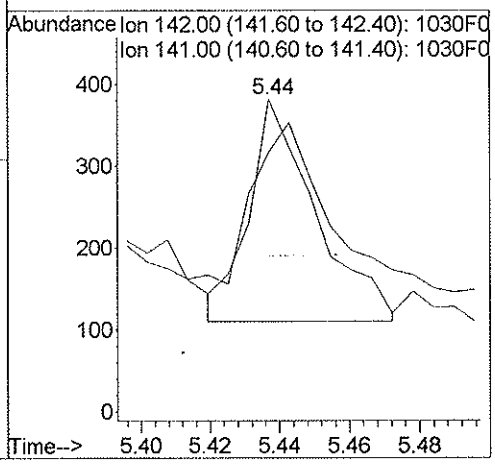


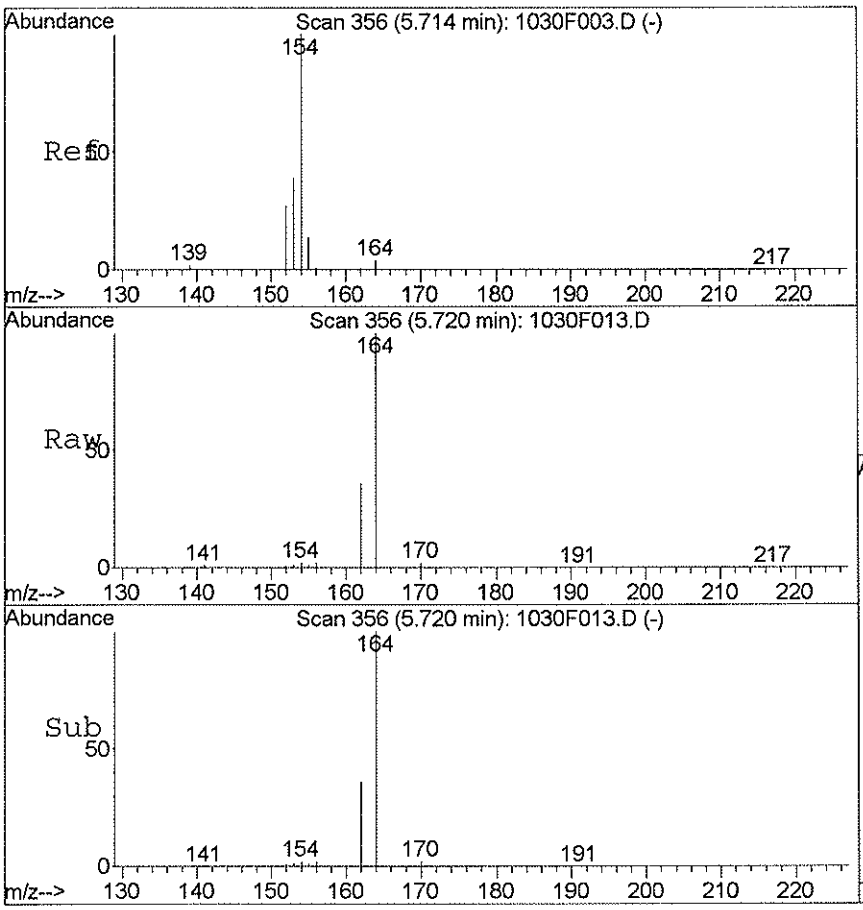


#4
1-Methylnaphthalene
Concen: 0.74 ng/ml m
RT: 5.44 min Scan# 312
Delta R.T. 0.01 min
Lab File: 1030F013.D
Acq: 30 Oct 2008 7:25 pm

Tgt Ion:142 Resp: 361

Ion	Ratio	Lower	Upper
142	100		
141	83.0	63.0	123.0

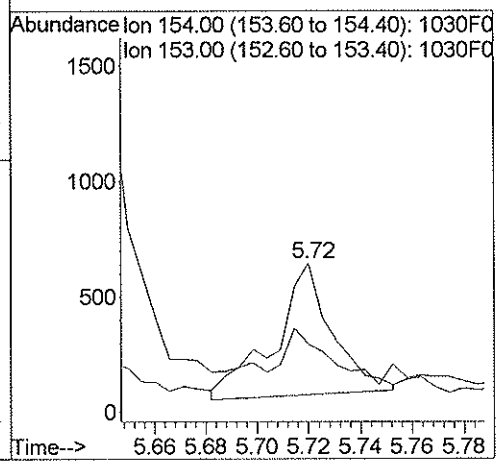


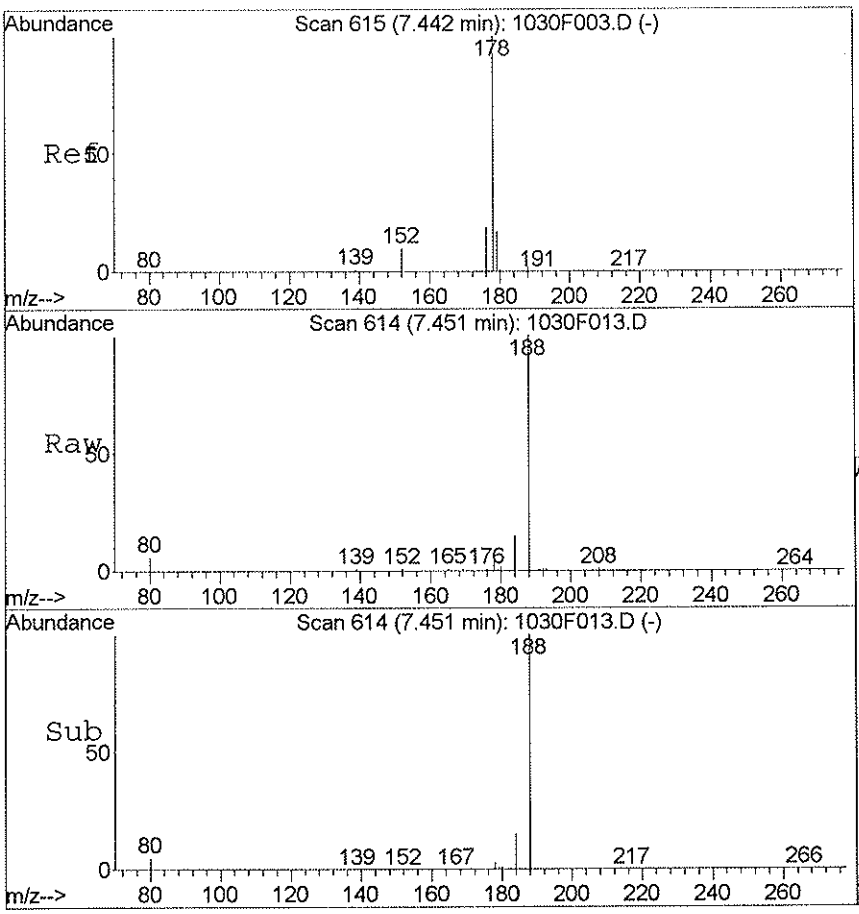


#5
Biphenyl
Concen: 1.34 ng/ml
RT: 5.72 min Scan# 356
Delta R.T. -0.00 min
Lab File: 1030F013.D
Acq: 30 Oct 2008 7:25 pm

Tgt Ion:154 Resp: 890

Ion	Ratio	Lower	Upper
154	100		
153	21.7	10.4	70.4

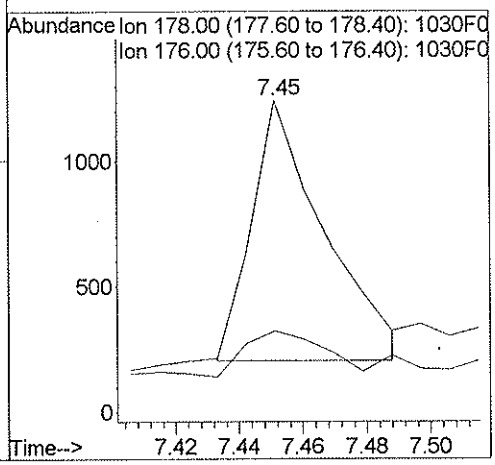


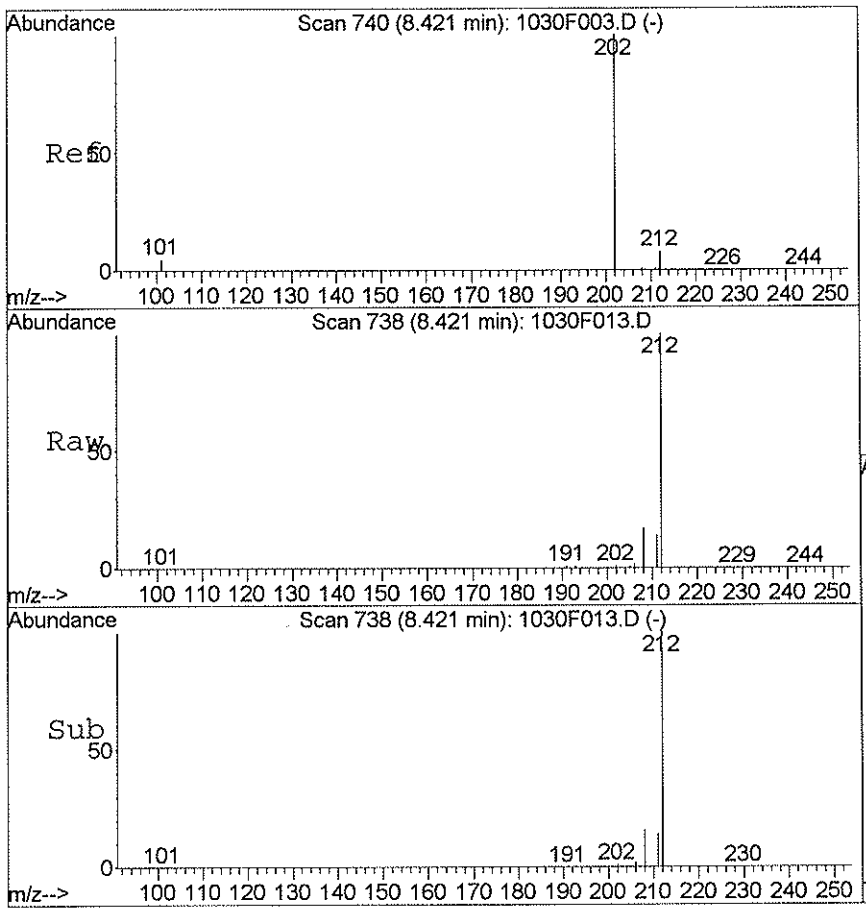


#27
Phenanthrene
Concen: 1.64 ng/ml m
RT: 7.45 min Scan# 614
Delta R.T. 0.01 min
Lab File: 1030F013.D
Acq: 30 Oct 2008 7:25 pm

Tgt Ion:178 Resp: 1633

Ion	Ratio	Lower	Upper
178	100		
176	26.0	0.0	51.0

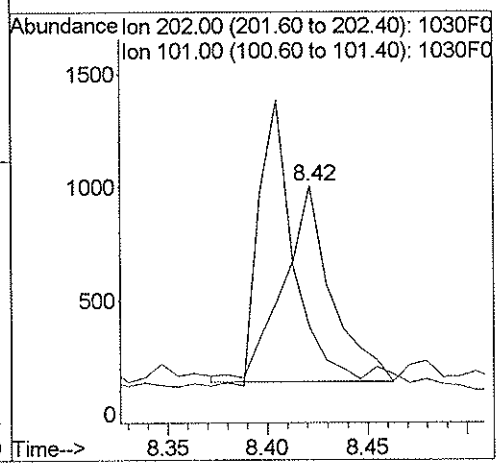


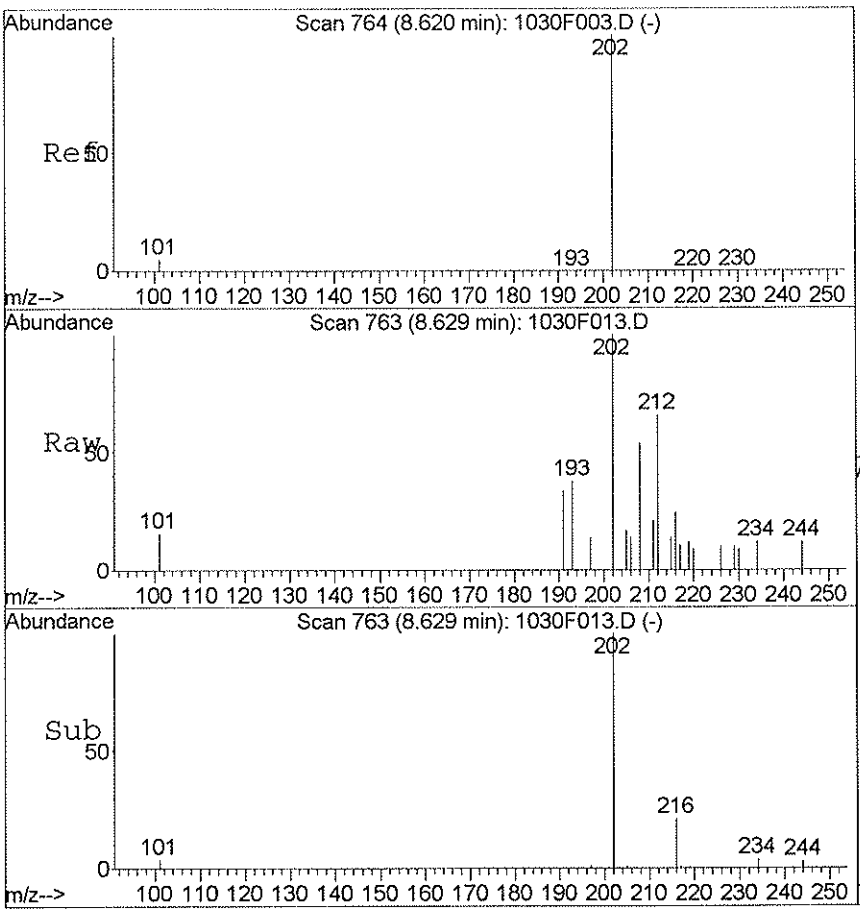


#35
Fluoranthene
Concen: 1.28 ng/ml
RT: 8.42 min Scan# 738
Delta R.T. 0.00 min
Lab File: 1030F013.D
Acq: 30 Oct 2008 7:25 pm

Tgt Ion:202 Resp: 1459

Ion	Ratio	Lower	Upper
202	100		
101	29.3	0.0	35.8

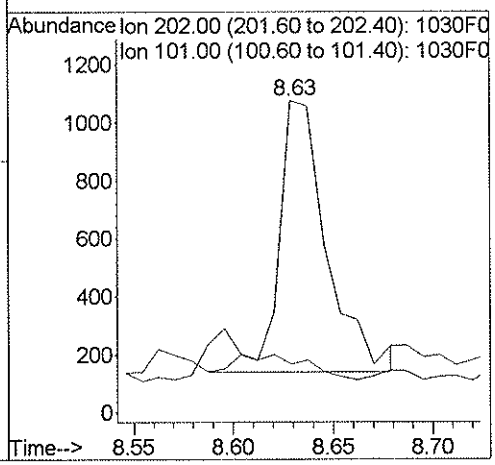


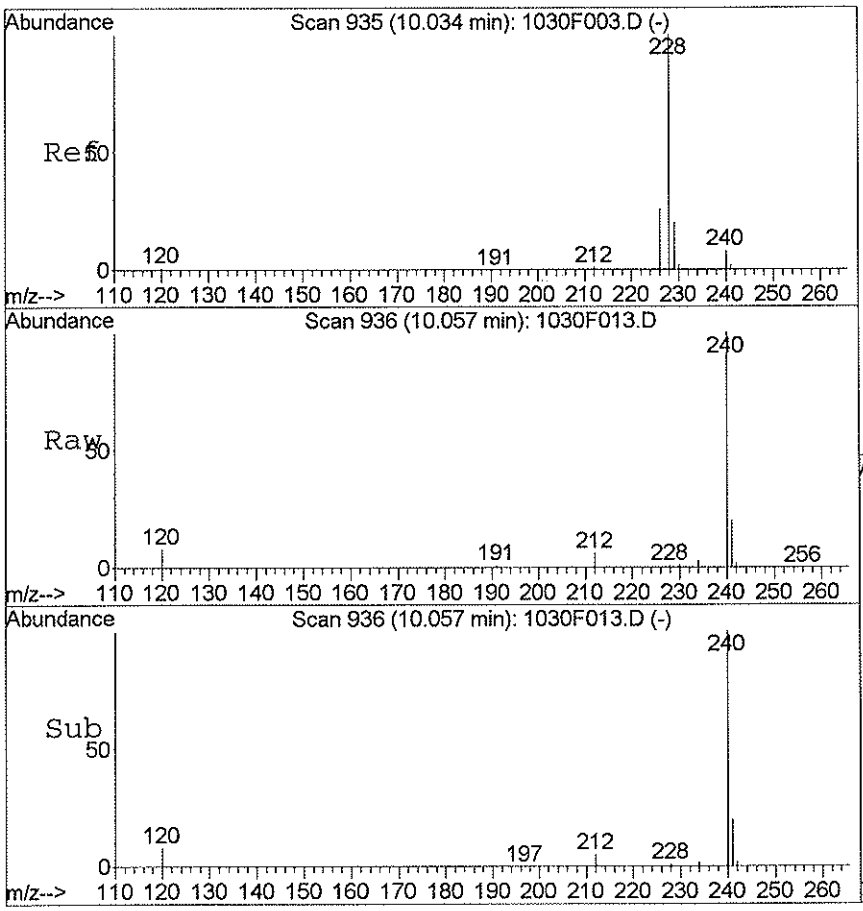


#38
Pyrene
Concen: 1.45 ng/ml
RT: 8.63 min Scan# 763
Delta R.T. 0.01 min
Lab File: 1030F013.D
Acq: 30 Oct 2008 7:25 pm

Tgt Ion:202 Resp: 1541

Ion	Ratio	Lower	Upper
202	100		
101	2.4	0.0	37.6

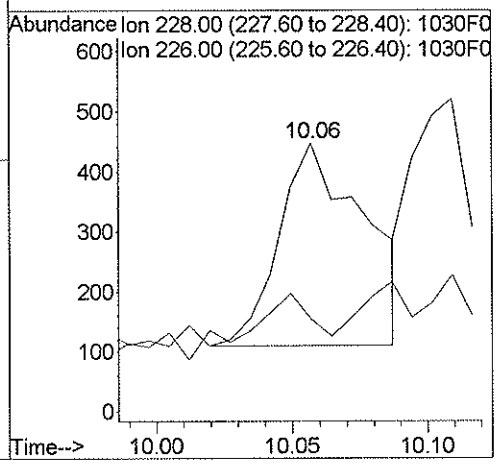


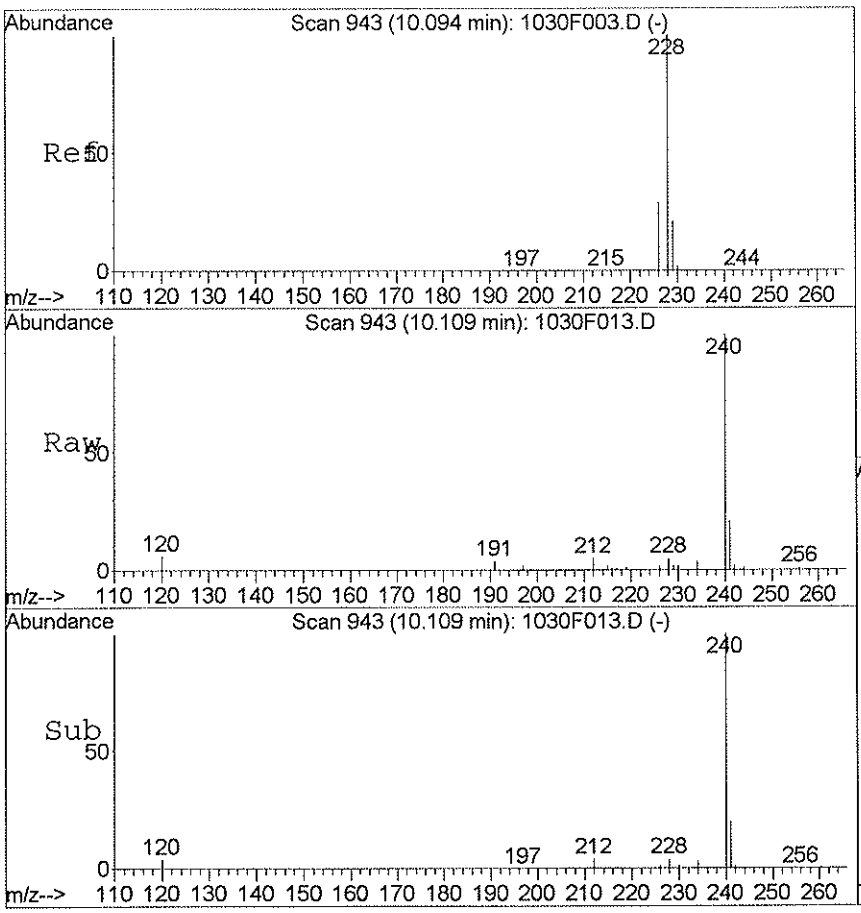


#43
Benz(a)anthracene
Concen: 0.73 ng/ml
RT: 10.06 min Scan# 936
Delta R.T. 0.02 min
Lab File: 1030F013.D
Acq: 30 Oct 2008 7:25 pm

Tgt Ion:228 Resp: 737

Ion	Ratio	Lower	Upper
228	100		
226	5.3	0.0	57.0

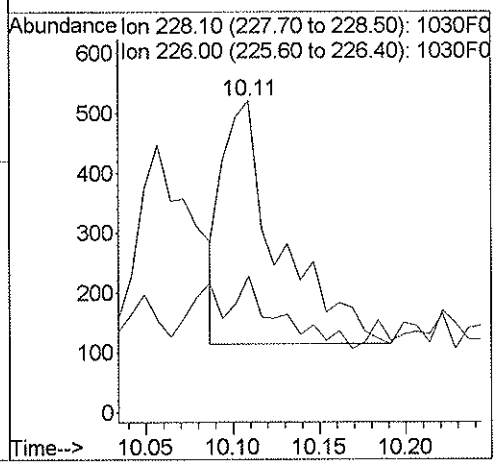




#44
Chrysene
Concen: 0.94 ng/ml
RT: 10.11 min Scan# 943
Delta R.T. 0.02 min
Lab File: 1030F013.D
Acq: 30 Oct 2008 7:25 pm

Tgt Ion:228 Resp: 916

Ion	Ratio	Lower	Upper
228	100		
226	26.5	0.0	58.9



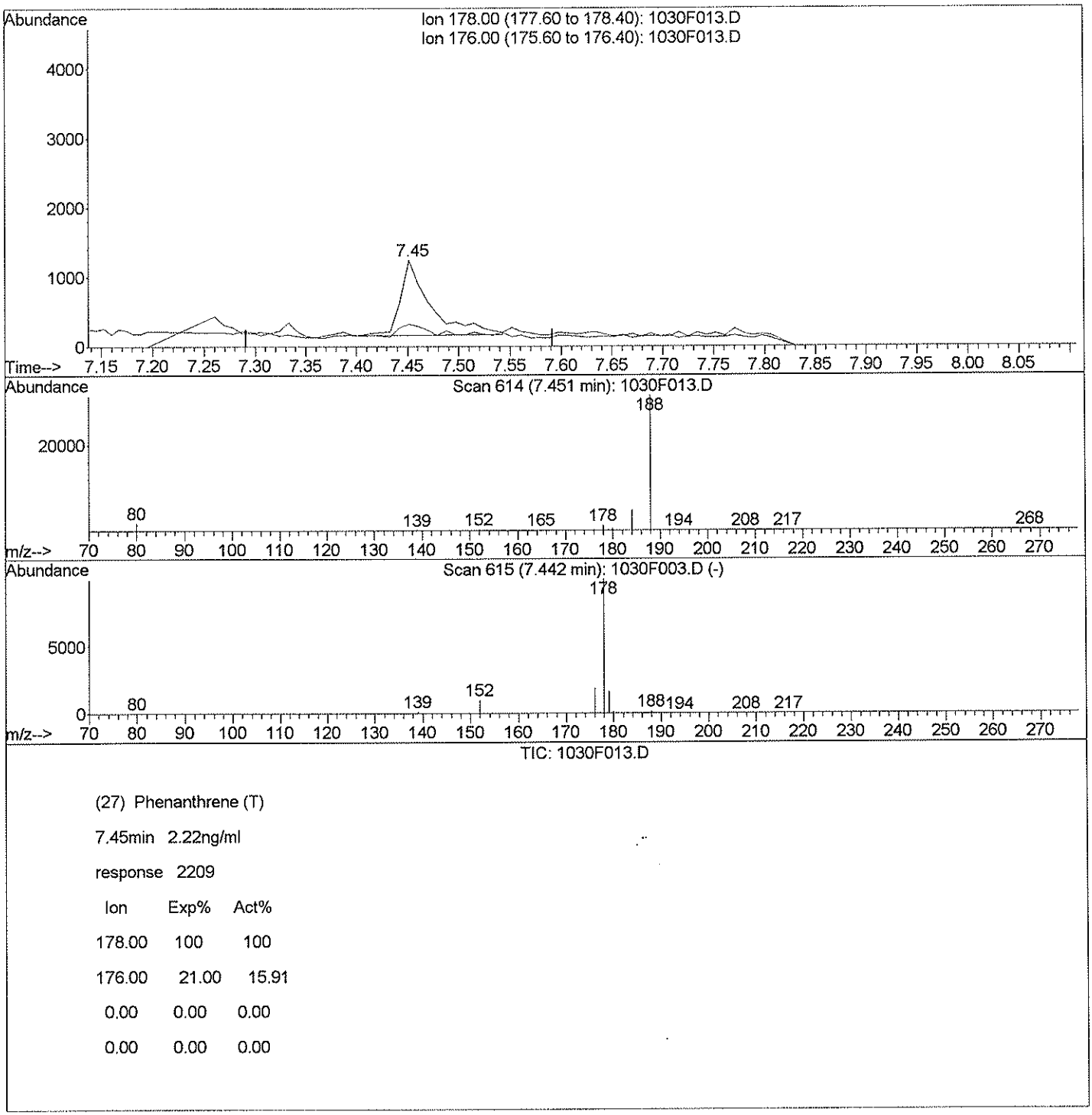
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\103008\1030F013.D
Acq On : 30 Oct 2008 7:25 pm
Sample : K0810000-001
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:58 2008

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Multiple Level Calibration



(27) Phenanthrene (T)

7.45min 2.22ng/ml

response 2209

Ion	Exp%	Act%
178.00	100	100
176.00	21.00	15.91
0.00	0.00	0.00
0.00	0.00	0.00

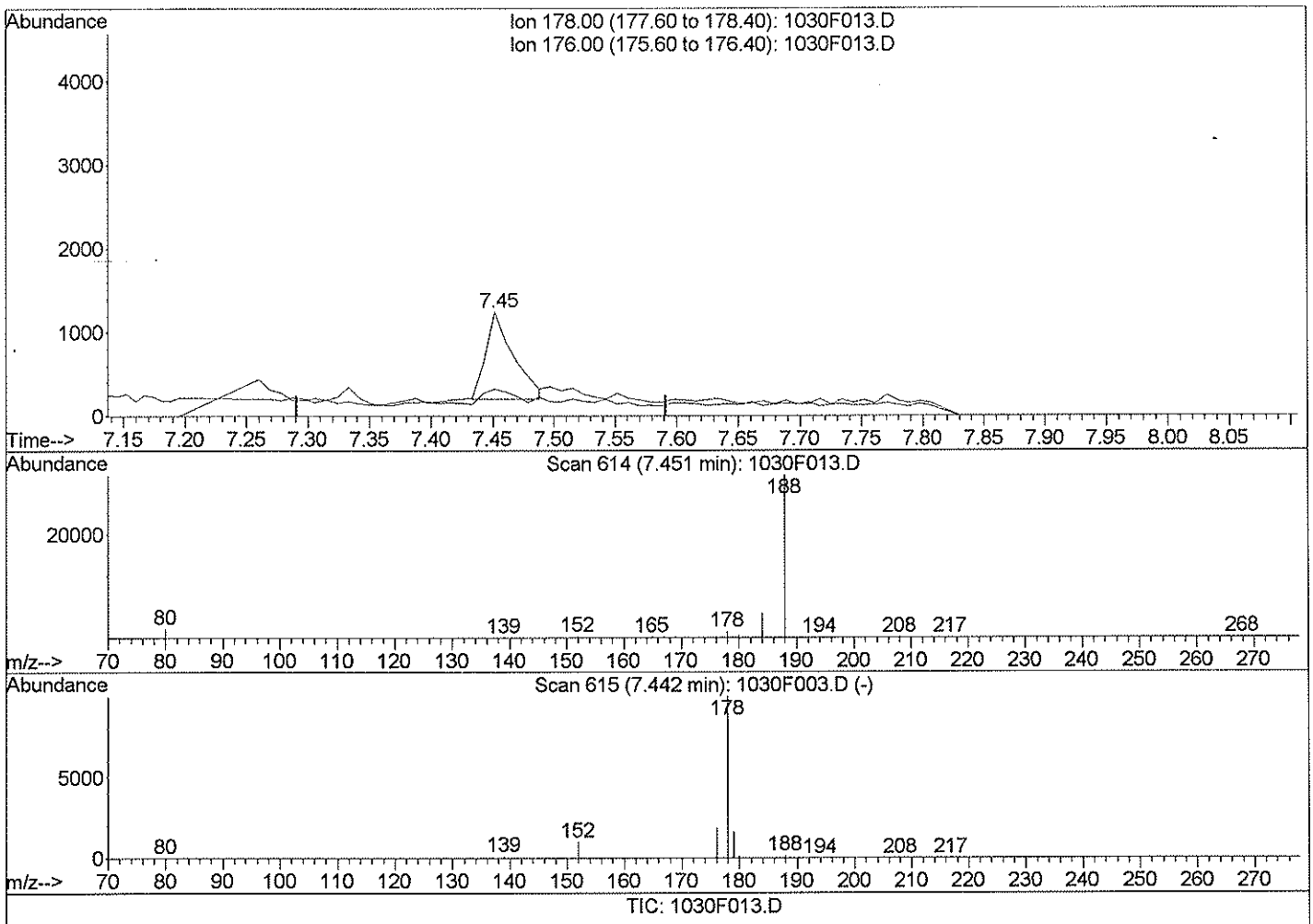
1030F013.D 1001ALK.M Mon Nov 03 10:58:45 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\103008\1030F013.D
Acq On : 30 Oct 2008 7:25 pm
Sample : K0810000-001
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:58 2008

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Multiple Level Calibration



TIC: 1030F013.D

(27) Phenanthrene (T)

7.45min 1.64ng/ml m

response 1633

Ion	Exp%	Act%
178.00	100	100
176.00	21.00	26.05
0.00	0.00	0.00
0.00	0.00	0.00

DT 11/3/08

1030F013.D 1001ALK.M Mon Nov 03 10:58:49 2008

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	10/09/2008
Sample Matrix:	Soil	**Date Received:**	10/10/2008

Polynuclear Aromatic Hydrocarbons

Sample Name:	DCI 4-1a	**Units:**	ug/Kg
Lab Code:	K0810000-002	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.82**	J	2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
2-Methylnaphthalene	**0.42**	J	2.5	0.39	1	10/23/08	10/30/08	KWG0811327	
Acenaphthylene	ND	U	2.5	0.24	1	10/23/08	10/30/08	KWG0811327	
Acenaphthene	ND	U	2.5	0.23	1	10/23/08	10/30/08	KWG0811327	
Fluorene	ND	U	2.5	0.50	1	10/23/08	10/30/08	KWG0811327	
Dibenzofuran	ND	U	2.5	0.59	1	10/23/08	10/30/08	KWG0811327	
Phenanthrene	**0.90**	J	2.5	0.75	1	10/23/08	10/30/08	KWG0811327	
Anthracene	ND	U	2.5	0.47	1	10/23/08	10/30/08	KWG0811327	
Fluoranthene	**0.61**	J	2.5	0.61	1	10/23/08	10/30/08	KWG0811327	
Pyrene	**0.65**	J	2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
Benzo(b)fluoranthene	ND	U	2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(k)fluoranthene	ND	U	2.5	0.15	1	10/23/08	10/30/08	KWG0811327	
Benz(a)anthracene	ND	U	2.5	0.48	1	10/23/08	10/30/08	KWG0811327	
Chrysene	ND	U	2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(a)pyrene	ND	U	2.5	0.14	1	10/23/08	10/30/08	KWG0811327	
Indeno(1,2,3-cd)pyrene	ND	U	2.5	0.16	1	10/23/08	10/30/08	KWG0811327	
Dibenz(a,h)anthracene	ND	U	2.5	0.28	1	10/23/08	10/30/08	KWG0811327	
Benzo(g,h,i)perylene	ND	U	2.5	0.64	1	10/23/08	10/30/08	KWG0811327	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	73	10-128	10/30/08	Acceptable
Fluoranthene-d10	75	29-121	10/30/08	Acceptable
Terphenyl-d14	89	24-141	10/30/08	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\103008\1030F014.D
Lab ID: K0810000-002
RunType: SMPL
Matrix: SOIL

Date Acquired: 10/30/2008 19:52
Date Quantitated: 11/03/2008 10:59
Batch ID: KWG0811762
Analysis Method: 8270C SIM
ListJoinID: LJ5442

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: 11/3/8

Secondary Review: 11.3.8

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8270C SIM PAH_S	**Collect Date:**	10/09/2008	**Receive Date:**	10/10/2008

Analysis Lot:	KWG0811762	**Prep Lot:**	KWG0811327	**Report Group:**	K0810000
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	771033	**Prep Date:**	10/23/2008		

Quant Method:	J:\MS11\METHODS\SIM\1001ALK.M	**Calibration ID:**	CAL7814
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5442
Tune Ref:	J:\MS11\DATA\103008\1030F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\103008\1030F005.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\103008\1030F014.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 19:52	**Quant Date:**	11/03/2008 10:59	**Vial:**	11
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810000-002			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.77	0.00	136	145882	200.00	OK
2	Acenaphthene-d10	6.19	0.00	164	81479	200.00	OK
3	Phenanthrene-d10	7.43	0.01	188	150390	200.00	OK
4	Chrysene-d12	10.06	0.01	240	156153	200.00	OK
5	Perylene-d12	13.48	0.03	264	145530	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.62	0.00	0.00	176	209432	363.87	73	10-128	OK	
3	Fluoranthene-d10	8.40	0.00	0.00	212	400745	374.91	75	29-121	OK	
4	Terphenyl-d14	8.76	0.00	0.00	244	362689	446.87	89	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.79	0.01	0.00	128	1352	1.65	0.82	J	
1	2-Methylnaphthalene	5.37	0.03	0.01	142	478	0.8500	0.42	J	
2	Acenaphthylene				152	0d		0.24	U	
2	Acenaphthene				154	0d		0.23	U	
2	Dibenzofuran				168	0d		0.59	U	
2	Fluorene				166	0d		0.50	U	
3	Phenanthrene	7.46	0.02	0.00	178	1756	1.81	0.90	J	
3	Anthracene				178	0d		0.47	U	
3	Fluoranthene	8.42		0.00	202	1359	1.23	0.61	J	
4	Pyrene	8.64	0.02	0.00	202	1325	1.30	0.65	J	
4	Benz(a)anthracene				228	0d		0.48	U	
4	Chrysene				228	0d		0.25	U	
5	Benzo(b)fluoranthene				252	0d		0.25	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\103008\1030F014.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 19:52	**Quant Date:**	11/03/2008 10:59	**Vial:**	11
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810000-002			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene				252	0d		0.15	U	
5	Benzo(a)pyrene				252	0d		0.14	U	
5	Indeno(1,2,3-cd)pyrene				276	0d		0.16	U	
5	Dibenz(a,h)anthracene				278	0d		0.28	U	
5	Benzo(g,h,i)perylene				276	0d		0.64	U	

Prep Amount:	23.42 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	85.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F014.D Vial: 11
Acq On : 30 Oct 2008 7:52 pm Operator: LWeiskopf
Sample : K0810000-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 03 10:52:28 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

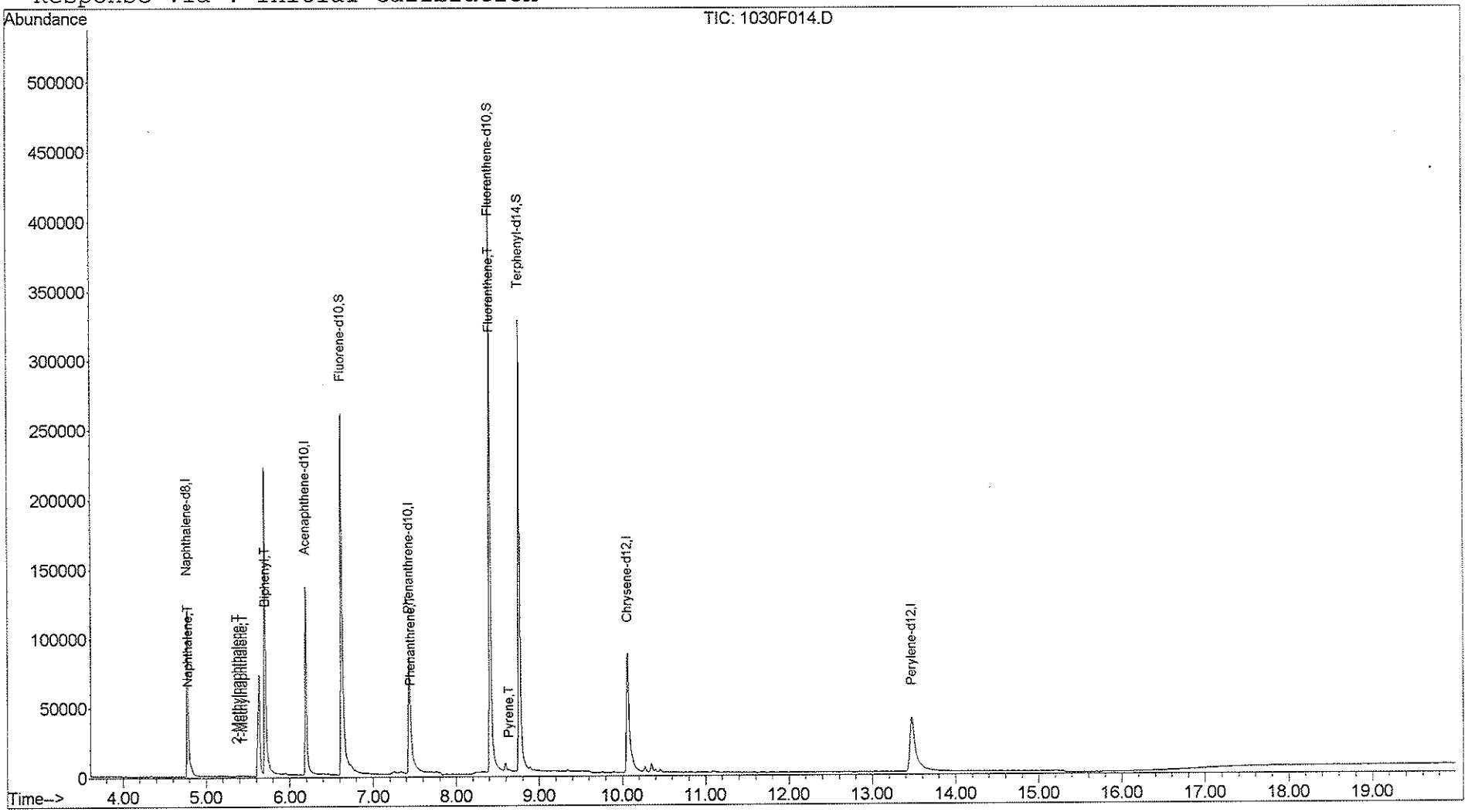
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.77	136	145882	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.19	164	81479	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.43	188	150390	200.00	ng/ml	0.01
37) Chrysene-d12	10.06	240	156153	200.00	ng/ml	0.02
49) Perylene-d12	13.48	264	145530	200.00	ng/ml	0.03
System Monitoring Compounds						
15) Fluorene-d10	6.62	176	209432	363.87	ng/ml	0.00
Spiked Amount 200.000			Recovery =	181.94%		
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery =	0.00%		
36) Fluoranthene-d10	8.40	212	400745	374.91	ng/ml	0.00
Spiked Amount 200.000			Recovery =	187.46%		
42) Terphenyl-d14	8.76	244	362689	446.87	ng/ml	0.00
Spiked Amount 200.000			Recovery =	223.44%		
Target Compounds						Qvalue
2) Naphthalene	4.79	128	1352	1.65	ng/ml	93
3) 2-Methylnaphthalene	5.37	142	478	0.85	ng/ml	96
4) 1-Methylnaphthalene	5.44	142	432	0.87	ng/ml	83
5) Biphenyl	5.72	154	952	1.41	ng/ml	82
27) Phenanthrene	7.46	178	1756	1.81	ng/ml	92
35) Fluoranthene	8.42	202	1359	1.23	ng/ml	45
38) Pyrene	8.64	202	1325	1.30	ng/ml	97

(#) = qualifier out of range (m) = manual integration
1030F014.D 1001ALK.M Mon Nov 03 11:01:05 2008 Page 1

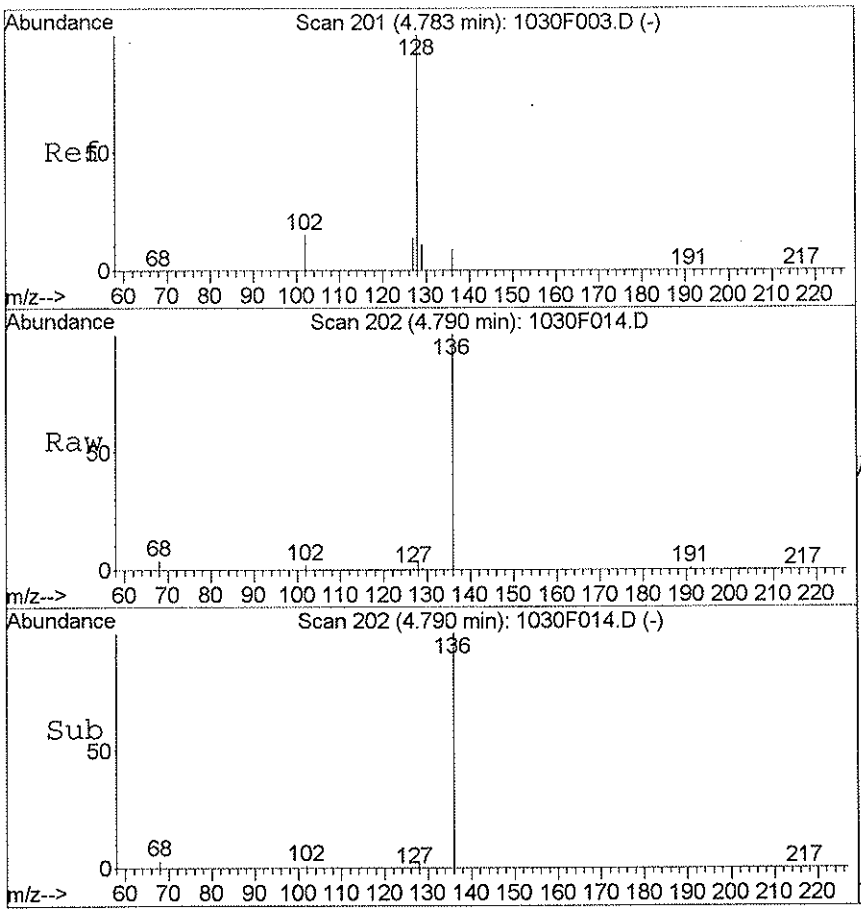
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F014.D Vial: 11
Acq On : 30 Oct 2008 7:52 pm Operator: LWeiskopf
Sample : K0810000-002 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:59 2008 Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration



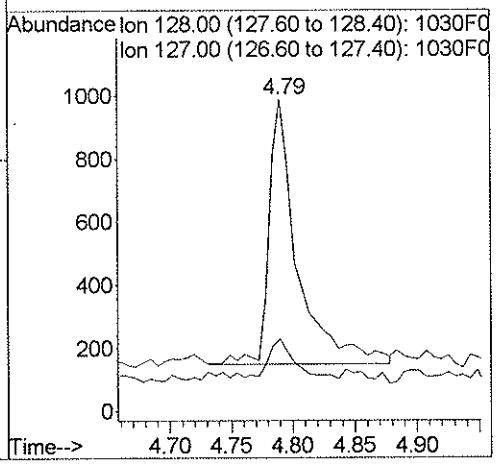
822

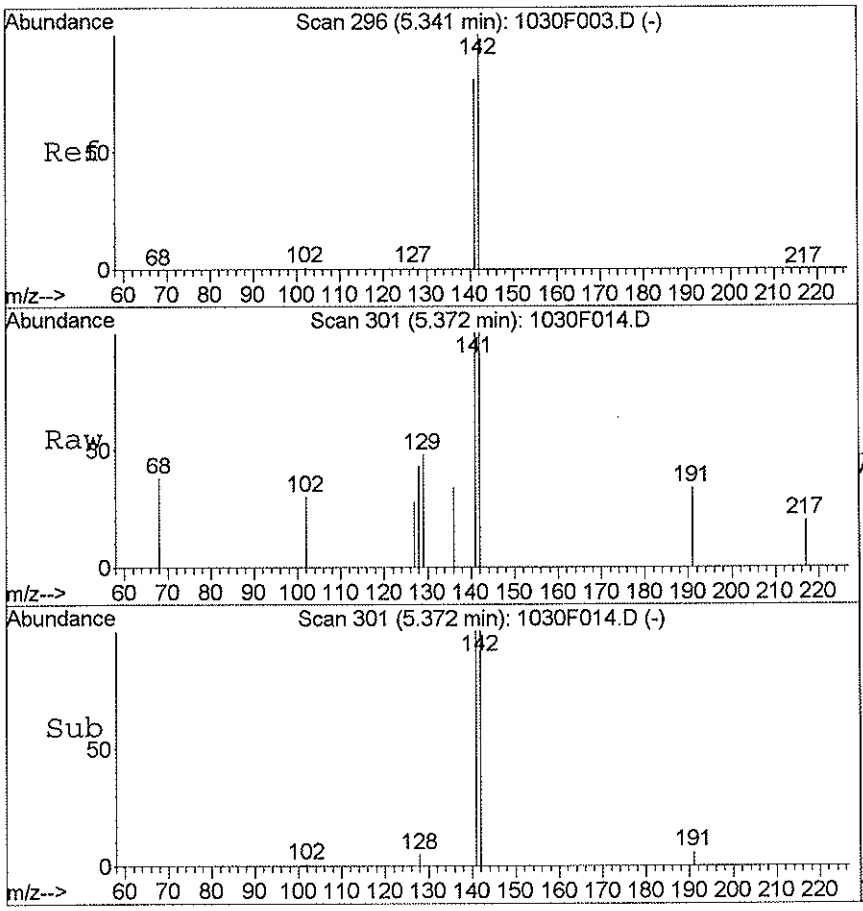


#2
Naphthalene
Concen: 1.65 ng/ml
RT: 4.79 min Scan# 202
Delta R.T. -0.01 min
Lab File: 1030F014.D
Acq: 30 Oct 2008 7:52 pm

Tgt Ion:128 Resp: 1352

Ion	Ratio	Lower	Upper
128	100		
127	16.8	0.0	43.8

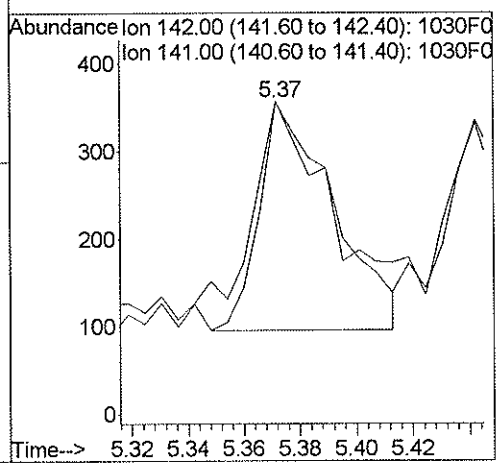


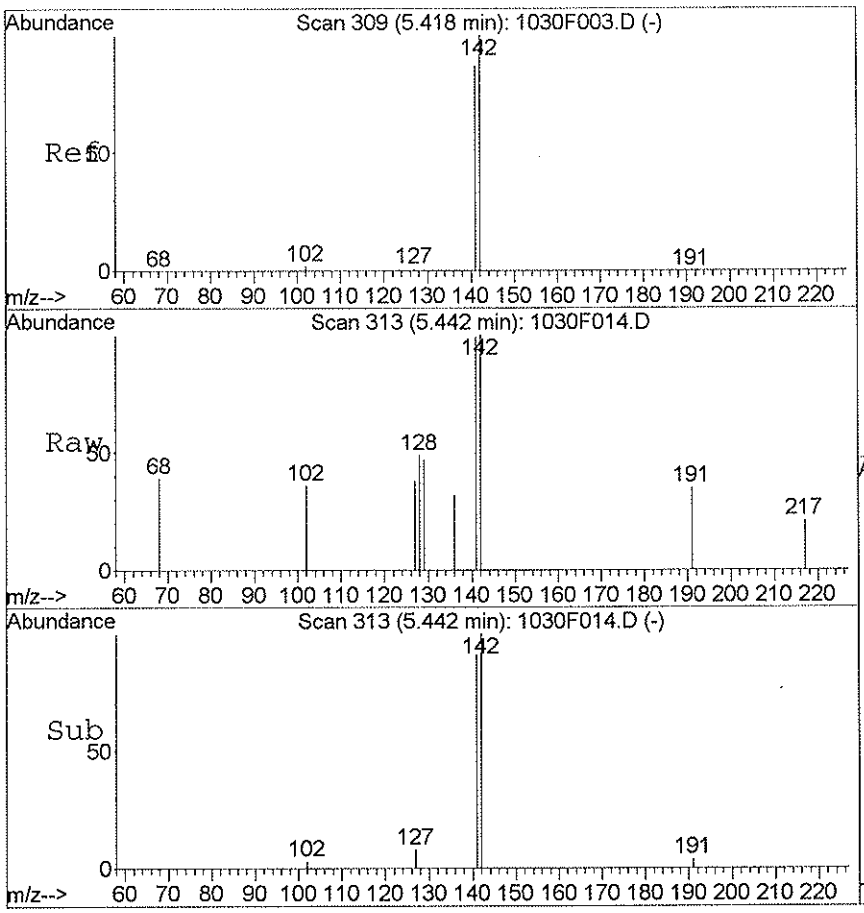


#3
2-Methylnaphthalene
Concen: 0.85 ng/ml
RT: 5.37 min Scan# 301
Delta R.T. 0.02 min
Lab File: 1030F014.D
Acq: 30 Oct 2008 7:52 pm

Tgt Ion:142 Resp: 478

Ion	Ratio	Lower	Upper
142	100		
141	78.8	52.4	112.4

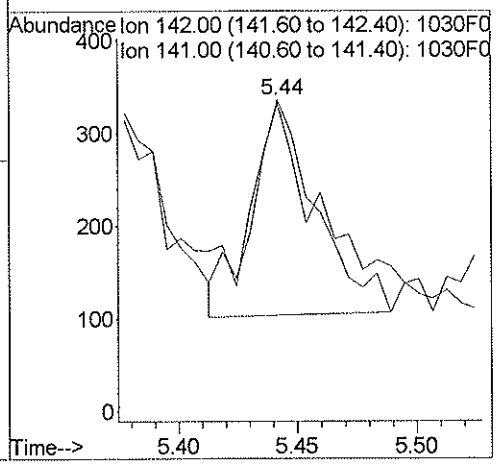


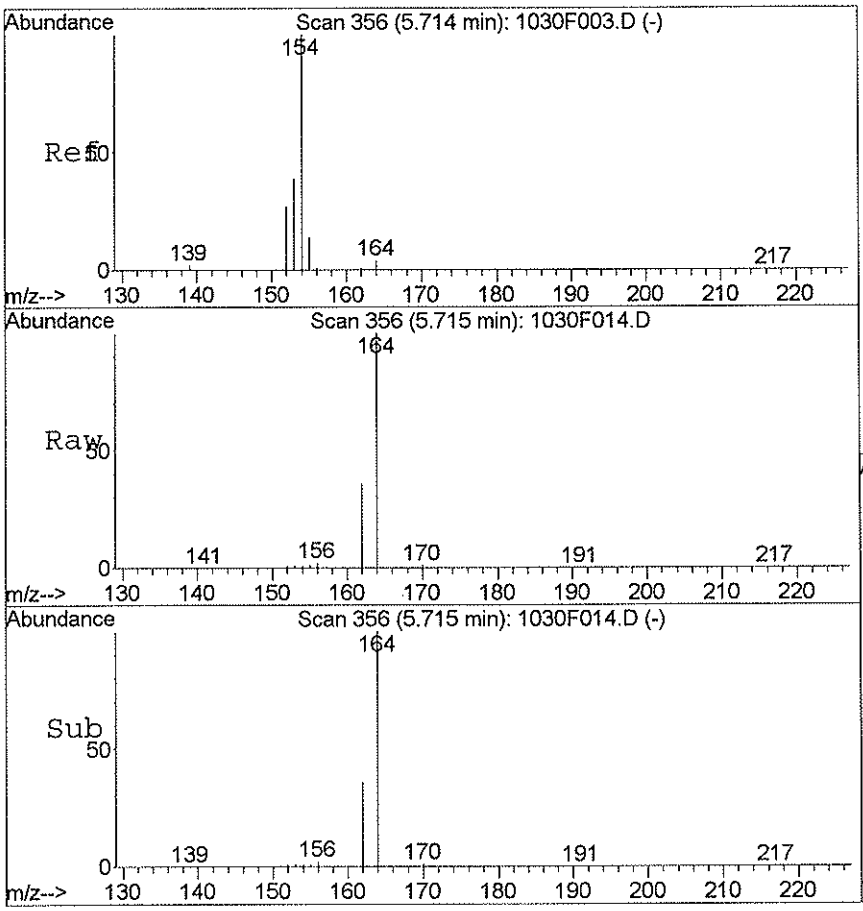


#4
1-Methylnaphthalene
Concen: 0.87 ng/ml
RT: 5.44 min Scan# 313
Delta R.T. 0.02 min
Lab File: 1030F014.D
Acq: 30 Oct 2008 7:52 pm

Tgt Ion:142 Resp: 432

Ion	Ratio	Lower	Upper
142	100		
141	76.4	63.0	123.0

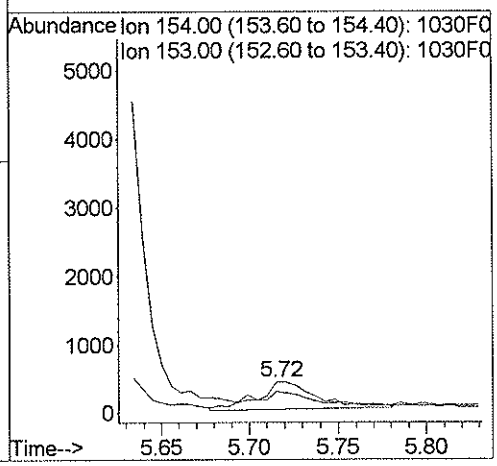


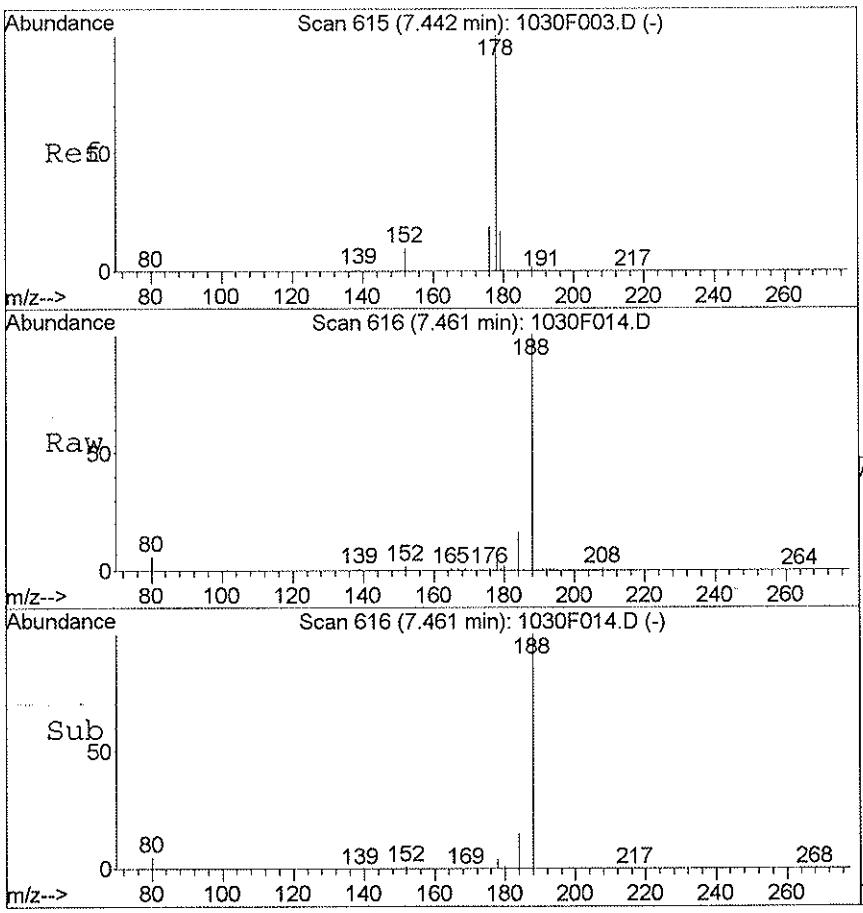


#5
Biphenyl
Concen: 1.41 ng/ml
RT: 5.72 min Scan# 356
Delta R.T. -0.01 min
Lab File: 1030F014.D
Acq: 30 Oct 2008 7:52 pm

Tgt Ion:154 Resp: 952

Ion	Ratio	Lower	Upper
154	100		
153	51.9	10.4	70.4

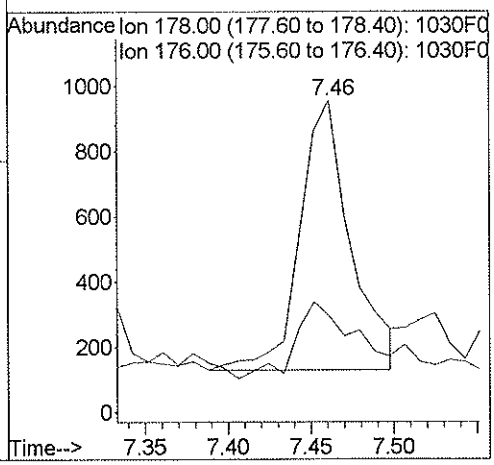


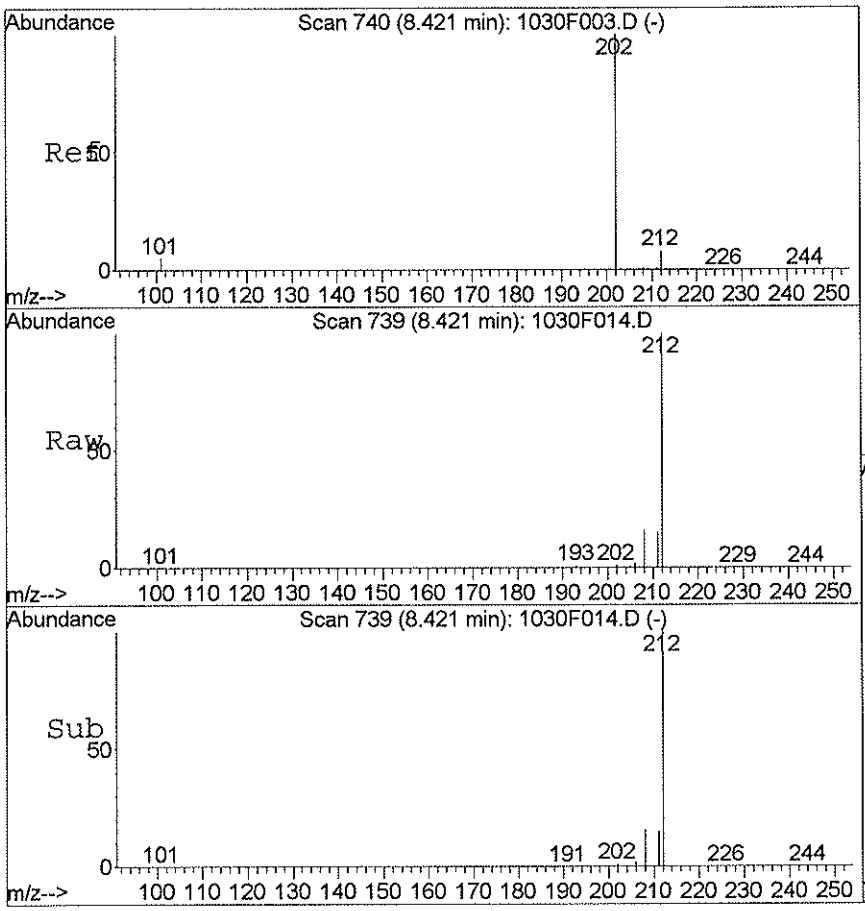


#27
Phenanthrene
Concen: 1.81 ng/ml
RT: 7.46 min Scan# 616
Delta R.T. 0.02 min
Lab File: 1030F014.D
Acq: 30 Oct 2008 7:52 pm

Tgt Ion:178 Resp: 1756

Ion	Ratio	Lower	Upper
178	100		
176	17.4	0.0	51.0

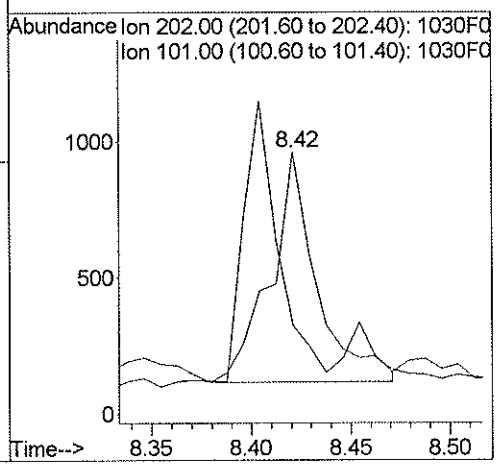


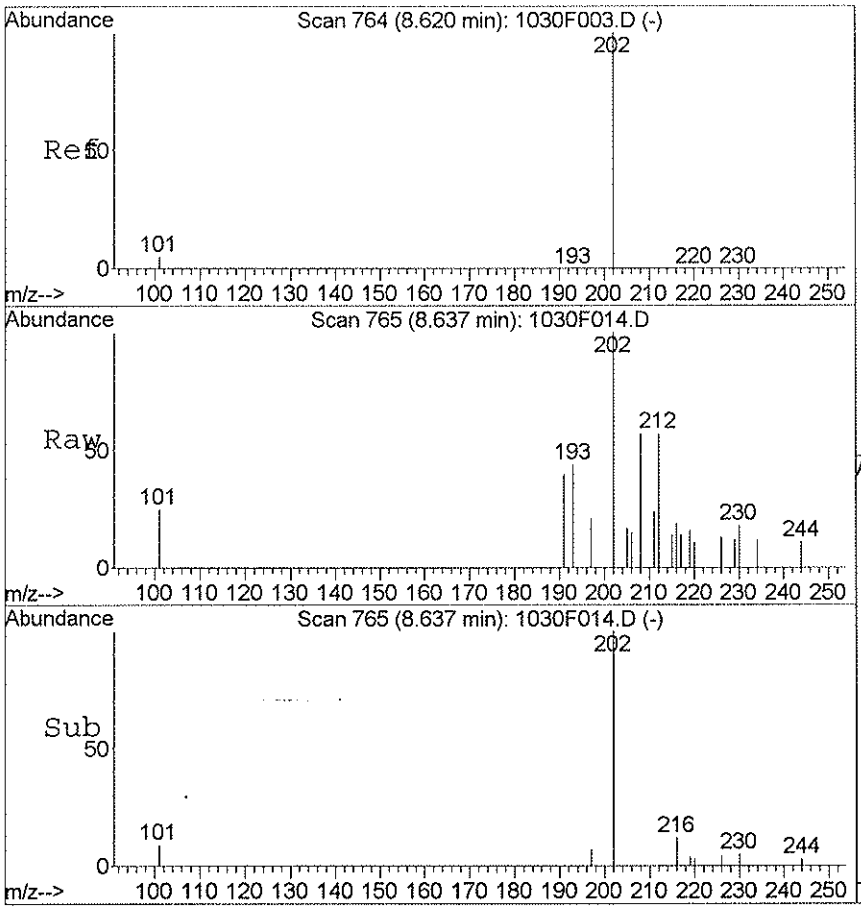


#35
Fluoranthene
Concen: 1.23 ng/ml
RT: 8.42 min Scan# 739
Delta R.T. 0.00 min
Lab File: 1030F014.D
Acq: 30 Oct 2008 7:52 pm

Tgt Ion:202 Resp: 1359

Ion	Ratio	Lower	Upper
202	100		
101	24.2	0.0	35.8

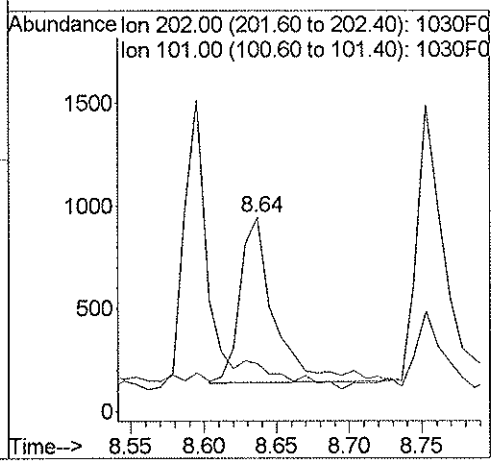




#38
Pyrene
Concen: 1.30 ng/ml
RT: 8.64 min Scan# 765
Delta R.T. 0.02 min
Lab File: 1030F014.D
Acq: 30 Oct 2008 7:52 pm

Tgt Ion:202 Resp: 1325

Ion	Ratio	Lower	Upper
202	100		
101	8.7	0.0	37.6



Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Method Blank
Lab Code: KWG0811327-5

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	1.3	0.37	1	10/23/08	10/30/08	KWG0811327	
2-Methylnaphthalene	ND	U	1.3	0.39	1	10/23/08	10/30/08	KWG0811327	
Acenaphthylene	ND	U	1.3	0.24	1	10/23/08	10/30/08	KWG0811327	
Acenaphthene	ND	U	1.3	0.23	1	10/23/08	10/30/08	KWG0811327	
Fluorene	ND	U	1.3	0.50	1	10/23/08	10/30/08	KWG0811327	
Dibenzofuran	ND	U	1.3	0.59	1	10/23/08	10/30/08	KWG0811327	
Phenanthrene	ND	U	1.3	0.75	1	10/23/08	10/30/08	KWG0811327	
Anthracene	ND	U	1.3	0.47	1	10/23/08	10/30/08	KWG0811327	
Fluoranthene	ND	U	1.3	0.61	1	10/23/08	10/30/08	KWG0811327	
Pyrene	ND	U	1.3	0.37	1	10/23/08	10/30/08	KWG0811327	
Benzo(b)fluoranthene	ND	U	1.3	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(k)fluoranthene	ND	U	1.3	0.15	1	10/23/08	10/30/08	KWG0811327	
Benz(a)anthracene	ND	U	1.3	0.48	1	10/23/08	10/30/08	KWG0811327	
Chrysene	ND	U	1.3	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(a)pyrene	ND	U	1.3	0.14	1	10/23/08	10/30/08	KWG0811327	
Indeno(1,2,3-cd)pyrene	ND	U	1.3	0.16	1	10/23/08	10/30/08	KWG0811327	
Dibenz(a,h)anthracene	ND	U	1.3	0.28	1	10/23/08	10/30/08	KWG0811327	
Benzo(g,h,i)perylene	ND	U	1.3	0.64	1	10/23/08	10/30/08	KWG0811327	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	72	10-128	10/30/08	Acceptable
Fluoranthene-d10	75	29-121	10/30/08	Acceptable
Terphenyl-d14	87	24-141	10/30/08	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\103008\1030F005.D
Lab ID: KWG0811327-5
RunType: MB
Matrix: SOIL

Date Acquired: 10/30/2008 15:54
Date Quantitated: 11/03/2008 10:54
Batch ID: KWG0811762
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

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Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Pentachlorophenol	-31.6	NA	20	MT
Surrogates	2,4,6-Tribromophenol	0	12	152	I
	Terphenyl-d14	216	24	141	OK
	Fluorene-d10	179	10	128	
	Fluoranthene-d10	188	29	121	I

Primary Review: 11/13/08

Secondary Review: 11.3.8

Printed: 11/03/2008 11:40:10
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8270C SIM PAH_S	**Collect Date:**		**Receive Date:**	10/29/2008

Analysis Lot:	KWG0811762	**Prep Lot:**	KWG0811327	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	771039	**Prep Date:**	10/23/2008		

Quant Method:	J:\MS11\METHODS\SIM\1001ALK.M	**Calibration ID:**	CAL7814
Title:			
Tune Ref:	J:\MS11\DATA\103008\1030F001.D	**Method ID:**	MJ139
MB Ref:		**Quant based on Method**	

Data File:	J:\MS11\DATA\103008\1030F005.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 15:54	**Quant Date:**	11/03/2008 10:54	**Vial:**	2
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG0811327-5			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.76	-0.01	136	181602	200.00	OK
2	Acenaphthene-d10	6.19	0.00	164	102540	200.00	OK
3	Phenanthrene-d10	7.43	0.01	188	186493	200.00	OK
4	Chrysene-d12	10.06	0.01	240	203954	200.00	OK
5	Perylene-d12	13.47	0.02	264	210771	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.62	0.00	0.00	176	259207	357.85	179 72	10-128	*	
2	2,4,6-Tribromophenol			0.00	330	0d		0	12-152	*	
3	Fluoranthene-d10	8.41	0.01	0.00	212	498229	375.87	188 75	29-121	*	
4	Terphenyl-d14	8.76	0.00	0.00	244	458691	432.69	216 87	24-141	*	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.78		0.00	128	1018	1.00	0.37	U	
1	2-Methylnaphthalene				142	0d		0.39	U	
1	1-Methylnaphthalene				142	0d		0.31	U	
1	Biphenyl				154	0d		0.40	U	
1	2,6-Dimethylnaphthalene				156	0d		0.36	U	
1	C2-Naphthalenes				156	0		5.0	U	
1	C3-Naphthalenes				170	0		5.0	U	
1	C4-Naphthalenes				184	0		5.0	U	
2	Acenaphthylene				152	0d		0.24	U	
2	Acenaphthene				154	0d		0.23	U	
2	Dibenzofuran				168	0d		0.59	U	
2	2,3,5-Trimethylnaphthalene				170	0d		0.21	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\103008\1030F005.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 15:54	**Quant Date:**	11/03/2008 10:54	**Vial:**	2
Run Type:	MB			**Dilution:**	1.0
Lab ID:	KWG0811327-5			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene				166	0d		0.50	U	
2	C1-Fluorenes				180	0		5.0	U	
2	C2-Fluorenes				194	0		5.0	U	
2	C3-Fluorenes				208	0		5.0	U	
2	Pentachlorophenol				266	0d		2.9	U	
3	Dibenzothiophene				184	0d		0.21	U	
3	C1-Dibenzothiophenes				198	0		5.0	U	
3	C2-Dibenzothiophenes				212	0		5.0	U	
3	C3-Dibenzothiophenes				226	0		5.0	U	
3	Phenanthrene				178	0d		0.75	U	
3	Anthracene				178	0d		0.47	U	
3	Carbazole				167	0d		2.3	U	
3	1-Methylphenanthrene				192	0d		0.28	U	
3	C1-Phenanthrenes/Anthracenes				192	0		5.0	U	
3	C2-Phenanthrenes/Anthracenes				206	0		5.0	U	
3	C3-Phenanthrenes/Anthracenes				220	0		5.0	U	
3	C4-Phenanthrenes/Anthracenes				234	0		5.0	U	
3	Fluoranthene				202	0d		0.61	U	
4	Pyrene				202	0d		0.37	U	
4	C1-Fluoranthenes/Pyrenes				216	0		5.0	U	
4	C2-Fluoranthenes/Pyrenes				230	0		5.0	U	
4	C3-Fluoranthenes/Pyrenes				244	0		5.0	U	
4	Benz(a)anthracene				228	0d		0.48	U	
4	Chrysene				228	0d		0.25	U	
4	C1-Chrysenes				242	0		5.0	U	
4	C2-Chrysenes				256	0		5.0	U	
4	C3-Chrysenes				270	0		5.0	U	
4	C4-Chrysenes				284	0		5.0	U	
5	Benzo(b)fluoranthene				252	0d		0.25	U	
5	Benzo(k)fluoranthene				252	0d		0.15	U	
5	Benzo(e)pyrene				252	0d		0.18	U	
5	Benzo(a)pyrene				252	0d		0.14	U	
5	Perylene				252	0d		0.32	U	
5	Indeno(1,2,3-cd)pyrene				276	0d		0.16	U	
5	Dibenz(a,h)anthracene				278	0d		0.28	U	
5	Benzo(g,h,i)perylene				276	0d		0.64	U	

Prep Amount:	40.06 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F005.D Vial: 2
Acq On : 30 Oct 2008 3:54 pm Operator: LWeiskopf
Sample : KWG0811327-5 MB Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 03 10:52:13 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

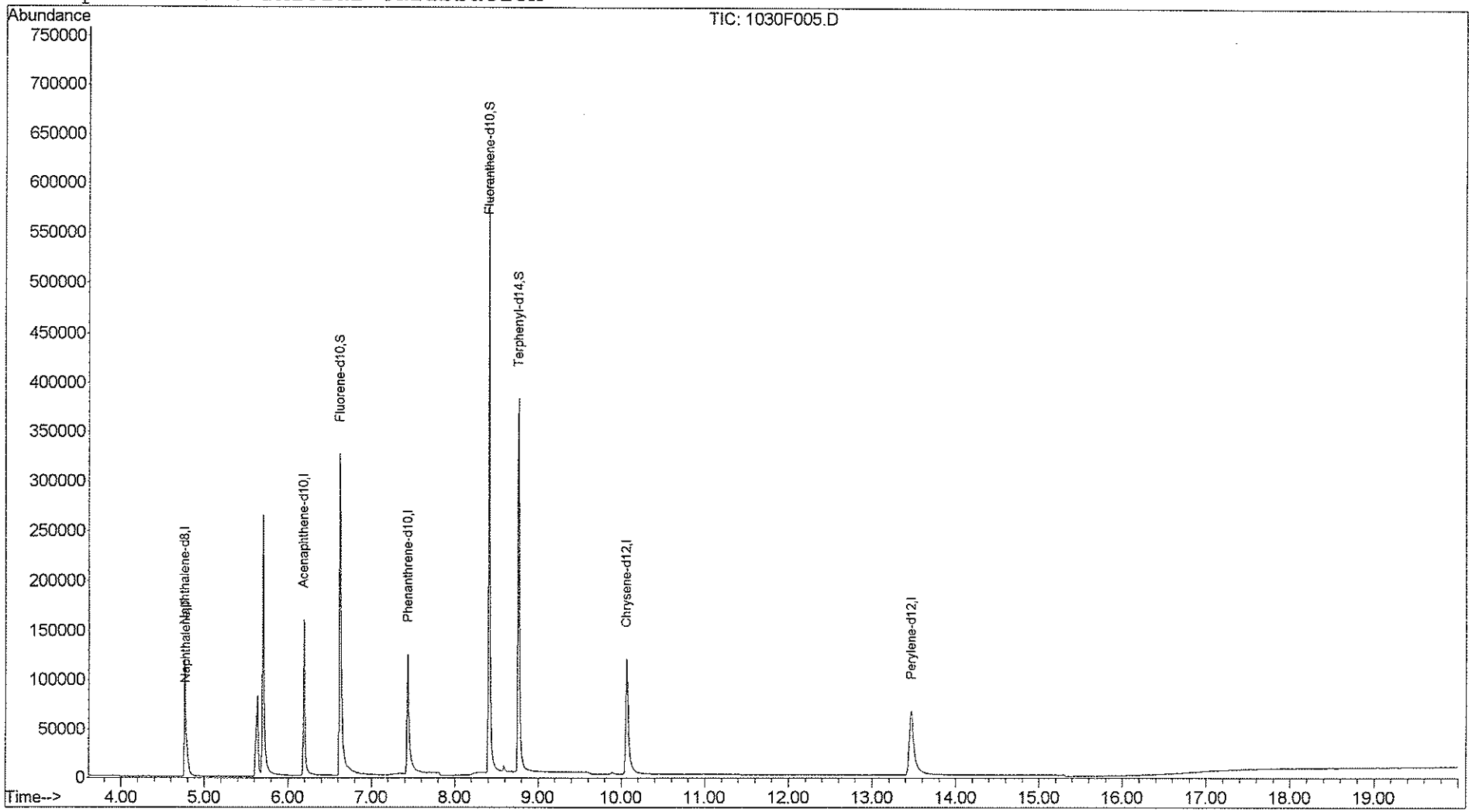
Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.76	136	181602	200.00	ng/ml	-0.02
10) Acenaphthene-d10	6.19	164	102540	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.43	188	186493	200.00	ng/ml	0.00
37) Chrysene-d12	10.06	240	203954	200.00	ng/ml	0.00
49) Perylene-d12	13.47	264	210771	200.00	ng/ml	0.02
System Monitoring Compounds						
15) Fluorene-d10	6.62	176	259207	357.85	ng/ml	0.00
Spiked Amount 200.000			Recovery =	178.93%		
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery =	0.00%		
36) Fluoranthene-d10	8.41	212	498229	375.87	ng/ml	0.00
Spiked Amount 200.000			Recovery =	187.94%		
42) Terphenyl-d14	8.76	244	458691	432.69	ng/ml	0.00
Spiked Amount 200.000			Recovery =	216.35%		
Target Compounds						Qvalue
2) Naphthalene	4.78	128	1018	1.00	ng/ml	99

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

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F005.D Vial: 2
Acq On : 30 Oct 2008 3:54 pm Operator: LWeiskopf
Sample : KWG0811327-5 MB Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:54 2008 Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration



832

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Batch QC
Lab Code: K0810048-003

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.88**	J	2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
2-Methylnaphthalene	**0.52**	J	2.5	0.39	1	10/23/08	10/30/08	KWG0811327	
Acenaphthylene	ND	U	2.5	0.24	1	10/23/08	10/30/08	KWG0811327	
Acenaphthene	ND	U	2.5	0.23	1	10/23/08	10/30/08	KWG0811327	
Fluorene	ND	U	2.5	0.50	1	10/23/08	10/30/08	KWG0811327	
Dibenzofuran	ND	U	2.5	0.59	1	10/23/08	10/30/08	KWG0811327	
Phenanthrene	**1.0**	J	2.5	0.75	1	10/23/08	10/30/08	KWG0811327	
Anthracene	ND	U	2.5	0.47	1	10/23/08	10/30/08	KWG0811327	
Fluoranthene	**2.3**	J	2.5	0.61	1	10/23/08	10/30/08	KWG0811327	
Pyrene	**2.0**	J	2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
Benzo(b)fluoranthene	**2.0**	J	2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(k)fluoranthene	**1.3**	J	2.5	0.15	1	10/23/08	10/30/08	KWG0811327	
Benz(a)anthracene	**1.2**	J	2.5	0.48	1	10/23/08	10/30/08	KWG0811327	
Chrysene	**1.8**	J	2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(a)pyrene	**1.4**	J	2.5	0.14	1	10/23/08	10/30/08	KWG0811327	
Indeno(1,2,3-cd)pyrene	**2.3**	J	2.5	0.16	1	10/23/08	10/30/08	KWG0811327	
Dibenz(a,h)anthracene	**1.4**	J	2.5	0.28	1	10/23/08	10/30/08	KWG0811327	
Benzo(g,h,i)perylene	**2.5**		2.5	0.64	1	10/23/08	10/30/08	KWG0811327	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	62	10-128	10/30/08	Acceptable
Fluoranthene-d10	67	29-121	10/30/08	Acceptable
Terphenyl-d14	75	24-141	10/30/08	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\103008\1030F012.D
Lab ID: K0810048-003
RunType: SMPL
Matrix: SOIL

Date Acquired: 10/30/2008 18:59
Date Quantitated: 11/03/2008 10:58
Batch ID: KWG0811762
Analysis Method: 8270C SIM
ListJoinID: LJ5442

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

for Batch QC only

K10000

Primary Review: 11/3/8

Secondary Review: 11/3/8

Printed: 11/03/2008 11:40:30
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**	V	**Matrix:**	SOIL
Prod Code:	8270C SIM PAH_S	**Collect Date:**	10/11/2008	**Receive Date:**	10/14/2008

Analysis Lot:	KWG0811762	**Prep Lot:**	KWG0811327	**Report Group:**	K0810048
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	771024	**Prep Date:**	10/23/2008		

Quant Method:	J:\MS11\METHODS\SIM\1001ALK.M	**Calibration ID:**	CAL7814
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ5442
Tune Ref:	J:\MS11\DATA\103008\1030F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\103008\1030F005.D	**Quant based on Report List**	

Data File:	J:\MS11\DATA\103008\1030F012.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 18:59	**Quant Date:**	11/03/2008 10:58	**Vial:**	9
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810048-003			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.77	0.00	136	150538	200.00	OK
2	Acenaphthene-d10	6.19	0.00	164	83945	200.00	OK
3	Phenanthrene-d10	7.43	0.01	188	145178	200.00	OK
4	Chrysene-d12	10.06	0.01	240	157573	200.00	OK
5	Perylene-d12	13.46	0.01	264	160415	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.62	0.00	0.00	176	183136	308.84	62	10-128	OK	
3	Fluoranthene-d10	8.41	0.01	0.00	212	343939	333.32	67	29-121	OK	
4	Terphenyl-d14	8.76	0.00	0.00	244	307984	376.04	75	24-141	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.78		0.00	128	1504	1.78	0.88	J	
1	2-Methylnaphthalene	5.37	0.03	0.01	142	611	1.05	0.52	J	
2	Acenaphthylene				152	0d		0.24	U	
2	Acenaphthene				154	0d		0.23	U	
2	Dibenzofuran				168	0d		0.59	U	
2	Fluorene				166	0d		0.50	U	
3	Phenanthrene	7.45	0.01	0.00	178	1987	2.12	1.0	J	
3	Anthracene				178	0d		0.47	U	
3	Fluoranthene	8.42		0.00	202	5011	4.69	2.3	J	
4	Pyrene	8.63	0.01	0.00	202	4222	4.10	2.0	J	
4	Benz(a)anthracene	10.05	0.02	0.00	228	2348	2.40	1.2	J	
4	Chrysene	10.10	0.01	0.00	228	3468	3.67	1.8	J	
5	Benzo(b)fluoranthene	12.35	0.04	0.00	252	4280	4.14	2.0	J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\103008\1030F012.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 18:59	**Quant Date:**	11/03/2008 10:58	**Vial:**	9
Run Type:	SMPL			**Dilution:**	1.0
Lab ID:	K0810048-003			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(k)fluoranthene	12.41	0.03	0.00	252	2615m	2.63	1.3	J	
5	Benzo(a)pyrene	13.31	0.04	0.00	252	2440	2.88	1.4	J	
5	Indeno(1,2,3-cd)pyrene	16.90	0.06	0.00	276	3411m	4.59	2.3	J	
5	Dibenz(a,h)anthracene	16.94	0.05	0.00	278	2182m	2.82	1.4	J	
5	Benzo(g,h,i)perylene	17.32	0.06	0.00	276	4318	5.06	2.5		

Prep Amount:	23.68 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	85.4 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F012.D Vial: 9
Acq On : 30 Oct 2008 6:59 pm Operator: LWeiskopf
Sample : K0810048-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 03 10:52:24 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.77	136	150538	200.00	ng/ml	-0.01
10) Acenaphthene-d10	6.19	164	83945	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.43	188	145178	200.00	ng/ml	0.00
37) Chrysene-d12	10.06	240	157573	200.00	ng/ml	0.00
49) Perylene-d12	13.46	264	160415	200.00	ng/ml	0.00
System Monitoring Compounds						
15) Fluorene-d10	6.62	176	183136	308.84	ng/ml	0.00
Spiked Amount 200.000			Recovery =	154.42%		
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery =	0.00%		
36) Fluoranthene-d10	8.41	212	343939	333.32	ng/ml	0.00
Spiked Amount 200.000			Recovery =	166.66%		
42) Terphenyl-d14	8.76	244	307984	376.04	ng/ml	0.00
Spiked Amount 200.000			Recovery =	188.02%		
Target Compounds						Qvalue
2) Naphthalene	4.78	128	1504	1.78	ng/ml	99
3) 2-Methylnaphthalene	5.37	142	611	1.05	ng/ml	71
4) 1-Methylnaphthalene	5.44	142	337	0.66	ng/ml	75
5) Biphenyl	5.72	154	1070	1.53	ng/ml	88
27) Phenanthrene	7.45	178	1987	2.12	ng/ml	96
35) Fluoranthene	8.42	202	5011	4.69	ng/ml	86
38) Pyrene	8.63	202	4222	4.10	ng/ml	90
43) Benz(a)anthracene	10.05	228	2348	2.40	ng/ml	100
44) Chrysene	10.10	228	3468	3.67	ng/ml	94
50) Benzo(b)fluoranthene	12.35	252	4280	4.14	ng/ml	96
51) Benzo(k)fluoranthene	12.41	252	2615m	2.63	ng/ml	
52) Benzo(e)pyrene	13.12	252	3377	3.61	ng/ml	90
53) Benzo(a)pyrene	13.31	252	2440	2.88	ng/ml	88
54) Perylene	13.56	252	1359	1.59	ng/ml	87
55) Indeno(1,2,3-cd)pyrene	16.90	276	3411m	4.59	ng/ml	
56) Dibenz(a,h)anthracene	16.94	278	2182m	2.82	ng/ml	
57) Benzo(g,h,i)perylene	17.32	276	4318	5.06	ng/ml	99

(#) = qualifier out of range (m) = manual integration
1030F012.D 1001ALK.M Mon Nov 03 11:00:54 2008 Page 1

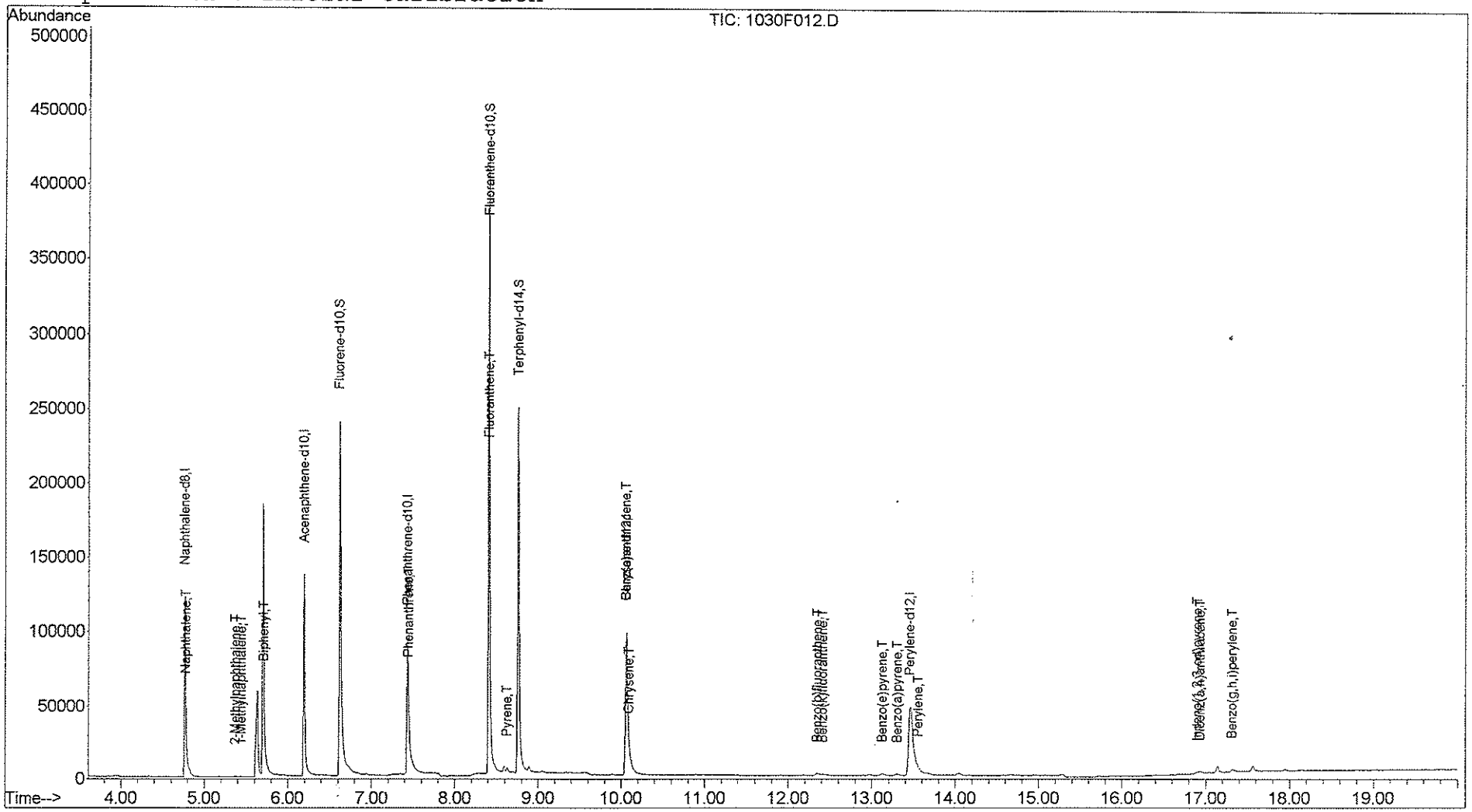
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F012.D
Acq On : 30 Oct 2008 6:59 pm
Sample : K0810048-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:58 2008

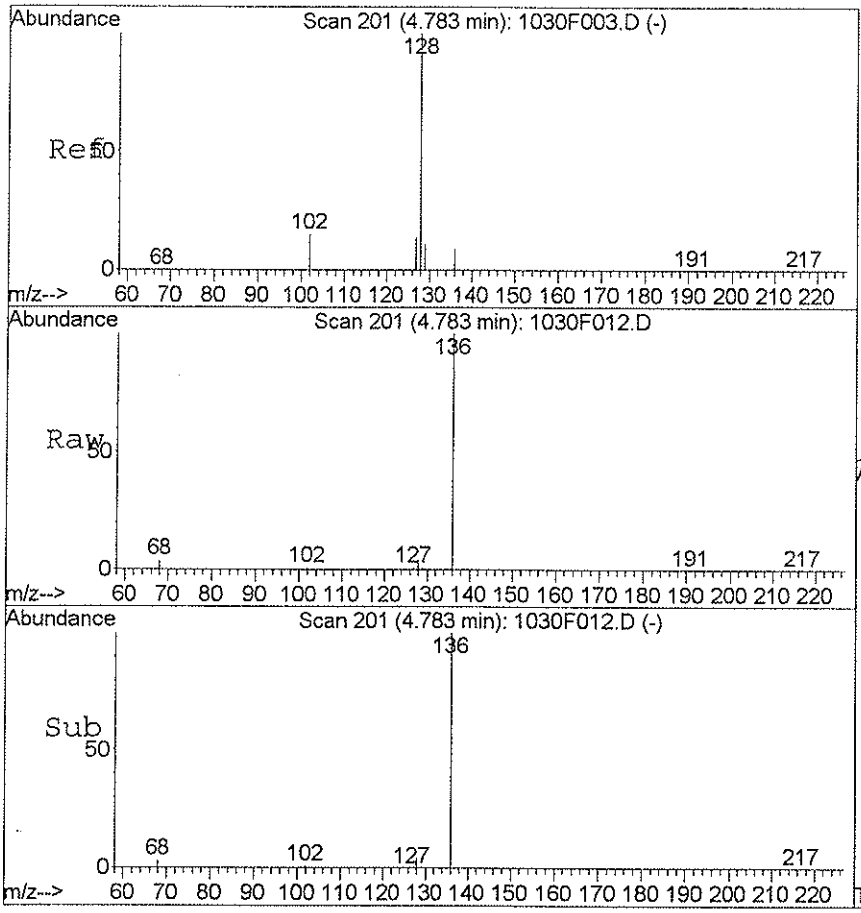
Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration



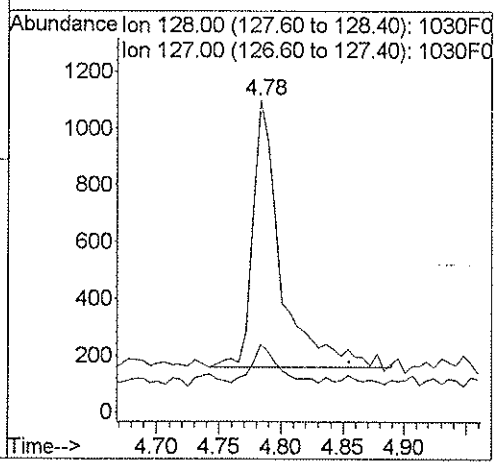
838

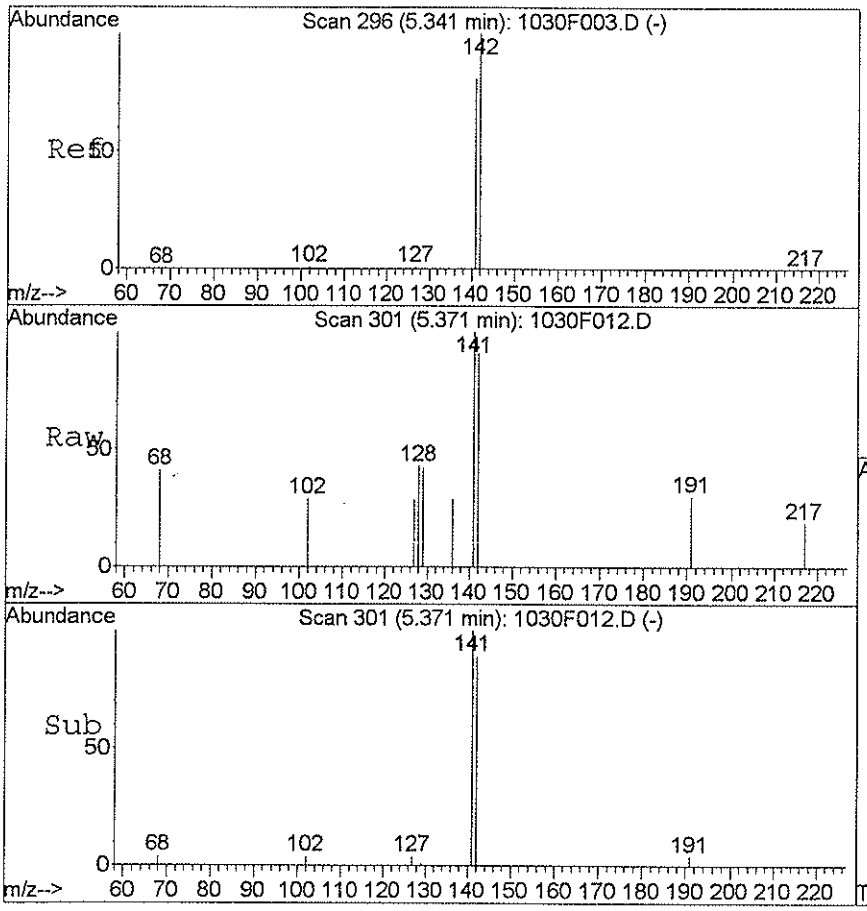


#2
Naphthalene
Concen: 1.78 ng/ml
RT: 4.78 min Scan# 201
Delta R.T. -0.01 min
Lab File: 1030F012.D
Acq: 30 Oct 2008 6:59 pm

Tgt Ion:128 Resp: 1504

Ion	Ratio	Lower	Upper
128	100		
127	13.4	0.0	43.8

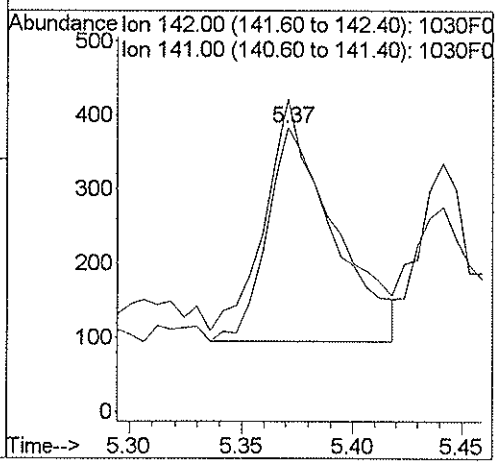


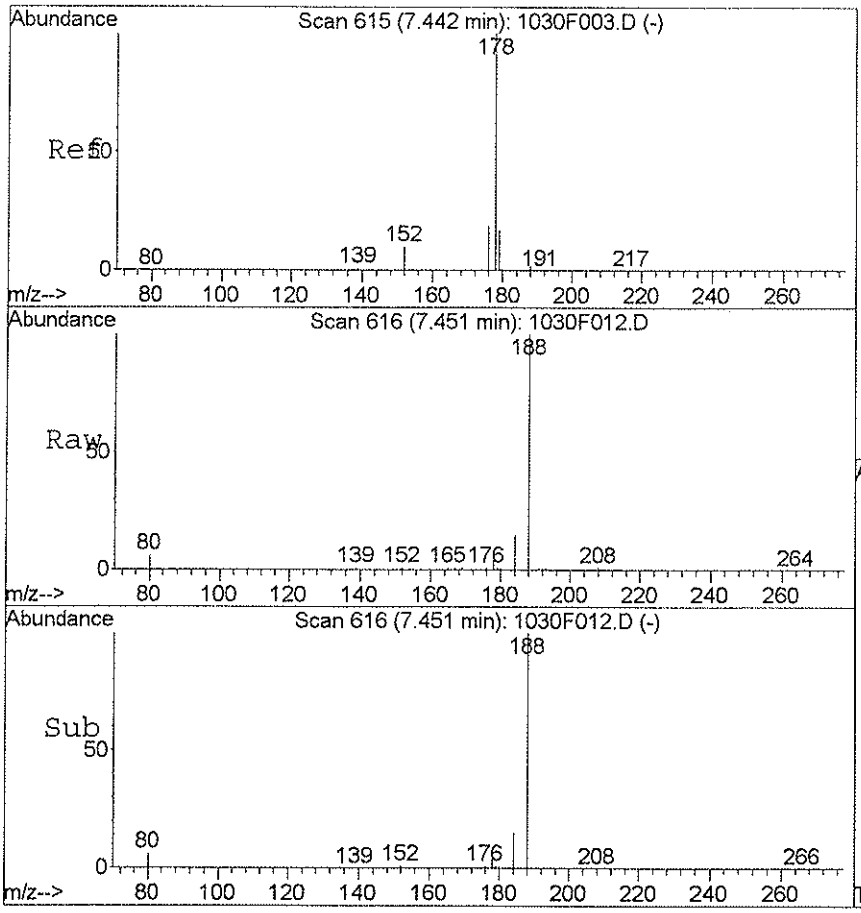


#3
2-Methylnaphthalene
Concen: 1.05 ng/ml
RT: 5.37 min Scan# 301
Delta R.T. 0.02 min
Lab File: 1030F012.D
Acq: 30 Oct 2008 6:59 pm

Tgt Ion:142 Resp: 611

Ion	Ratio	Lower	Upper
142	100		
141	108.3	52.4	112.4

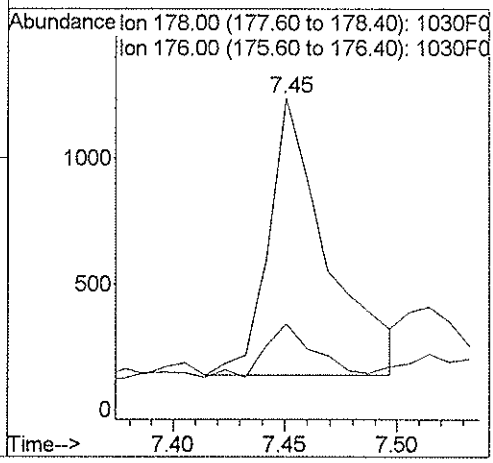


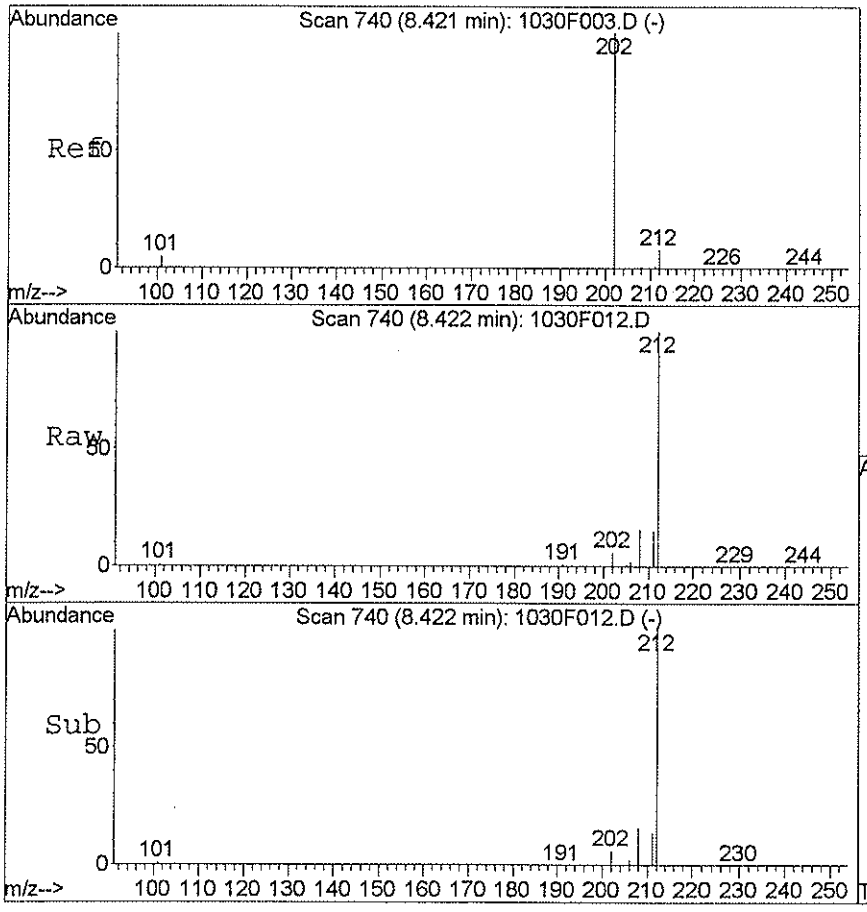


#27
Phenanthrene
Concen: 2.12 ng/ml
RT: 7.45 min Scan# 616
Delta R.T. 0.01 min
Lab File: 1030F012.D
Acq: 30 Oct 2008 6:59 pm

Tgt Ion:178 Resp: 1987

Ion	Ratio	Lower	Upper
178	100		
176	19.3	0.0	51.0

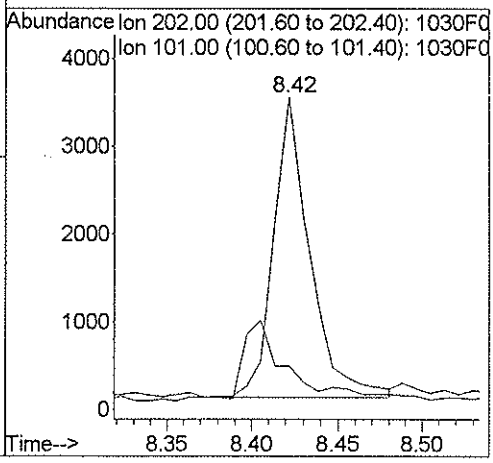


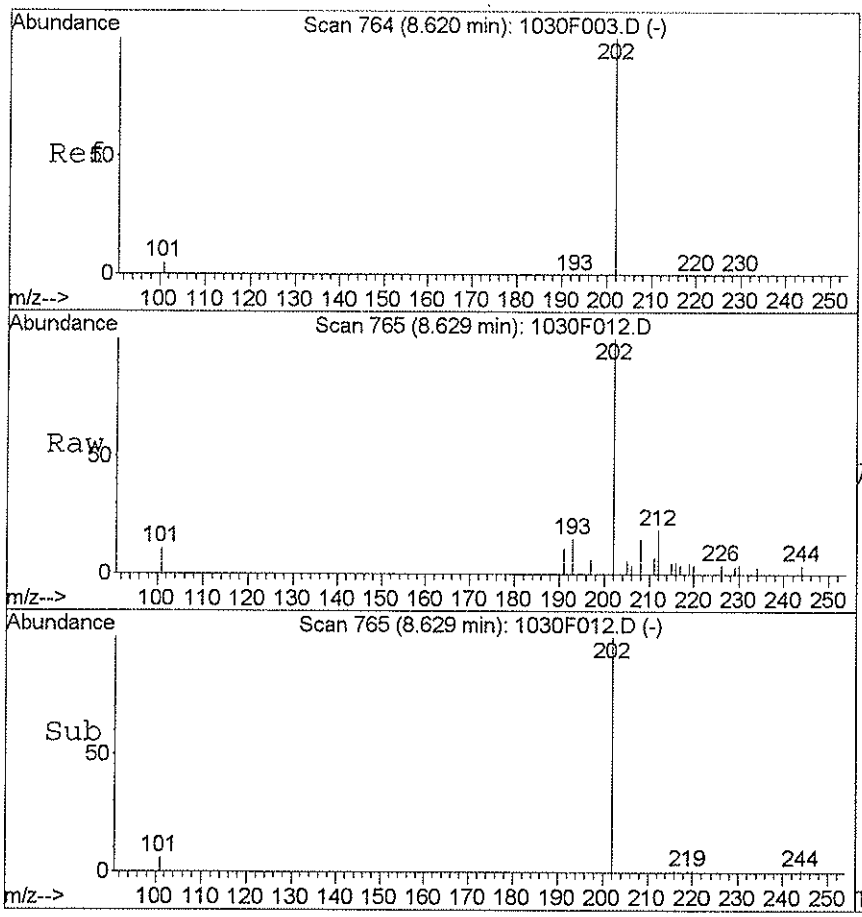


#35
Fluoranthene
Concen: 4.69 ng/ml
RT: 8.42 min Scan# 740
Delta R.T. 0.00 min
Lab File: 1030F012.D
Acq: 30 Oct 2008 6:59 pm

Tgt Ion:202 Resp: 5011

Ion	Ratio	Lower	Upper
202	100		
101	10.5	0.0	35.8

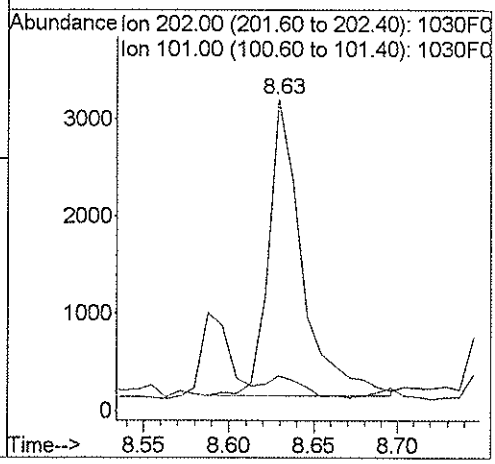


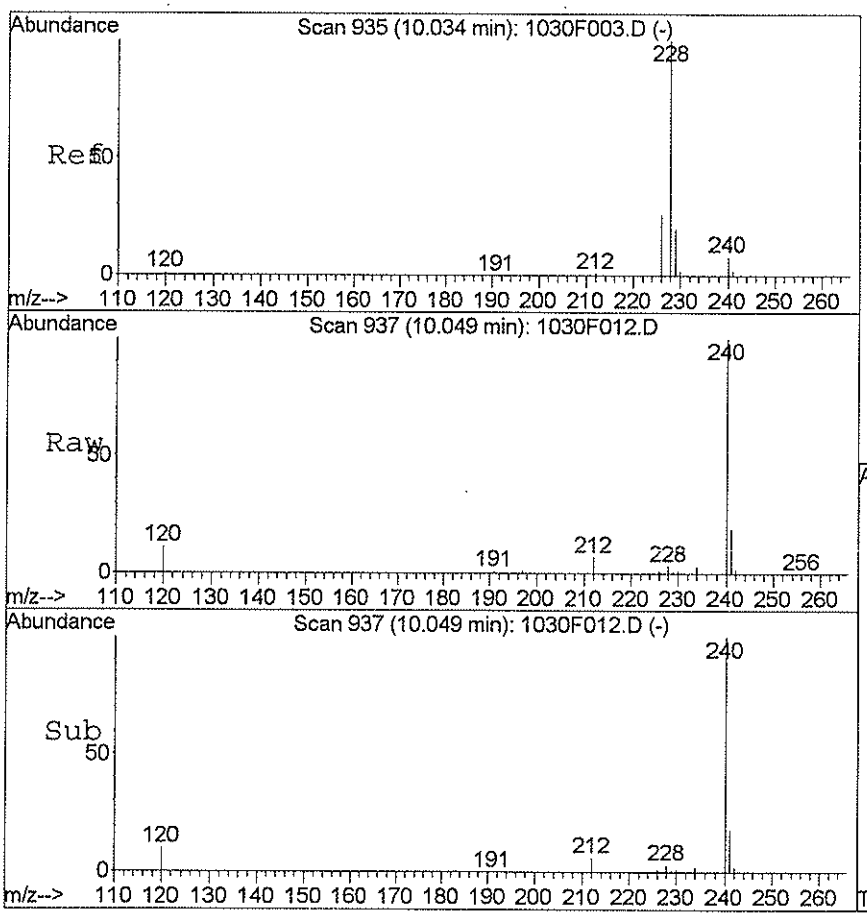


#38
Pyrene
Concen: 4.10 ng/ml
RT: 8.63 min Scan# 765
Delta R.T. 0.01 min
Lab File: 1030F012.D
Acq: 30 Oct 2008 6:59 pm

Tgt Ion:202 Resp: 4222

Ion	Ratio	Lower	Upper
202	100		
101	4.1	0.0	37.6

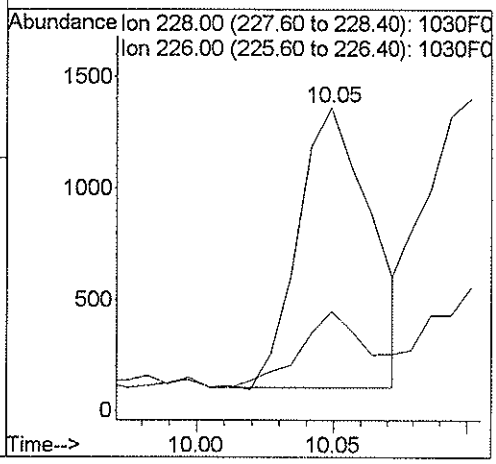


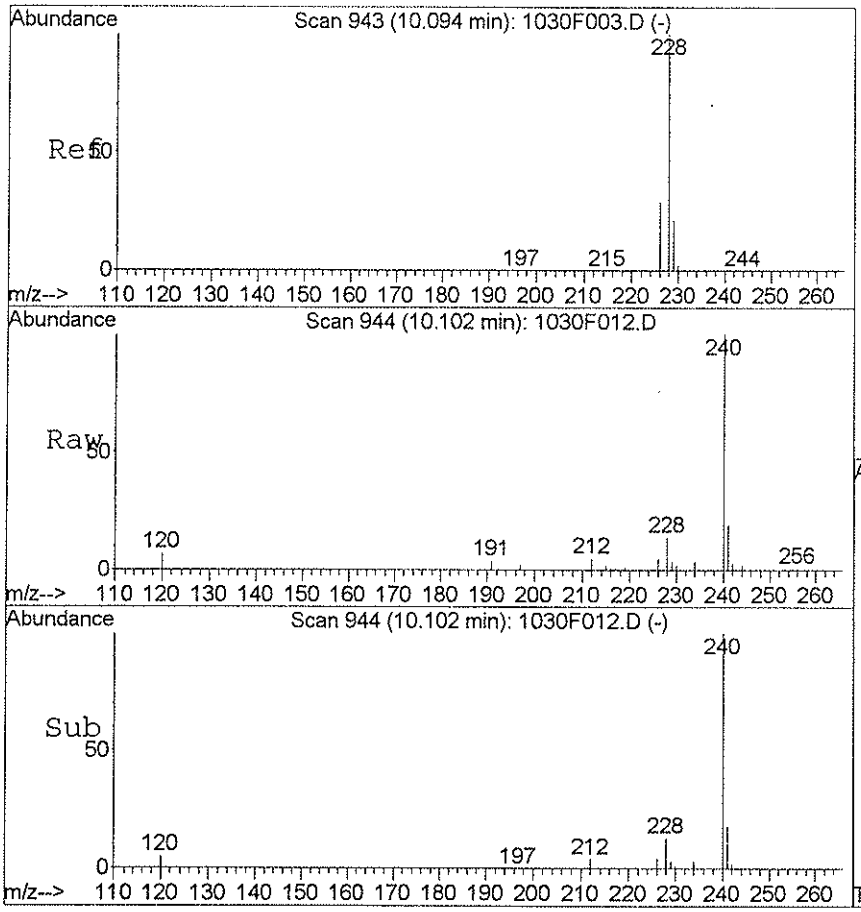


#43
Benz(a)anthracene
Concen: 2.40 ng/ml
RT: 10.05 min Scan# 937
Delta R.T. 0.02 min
Lab File: 1030F012.D
Acq: 30 Oct 2008 6:59 pm

Tgt Ion:228 Resp: 2348

Ion	Ratio	Lower	Upper
228	100		
226	27.0	0.0	57.0

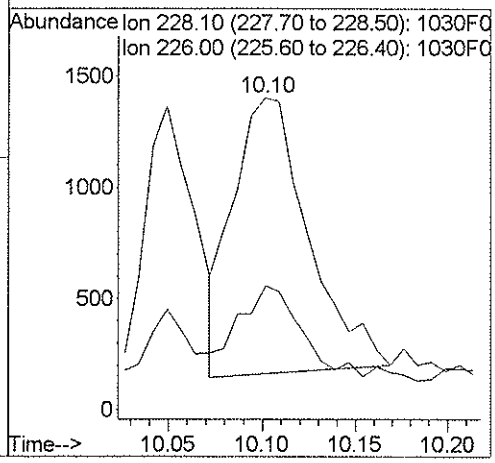


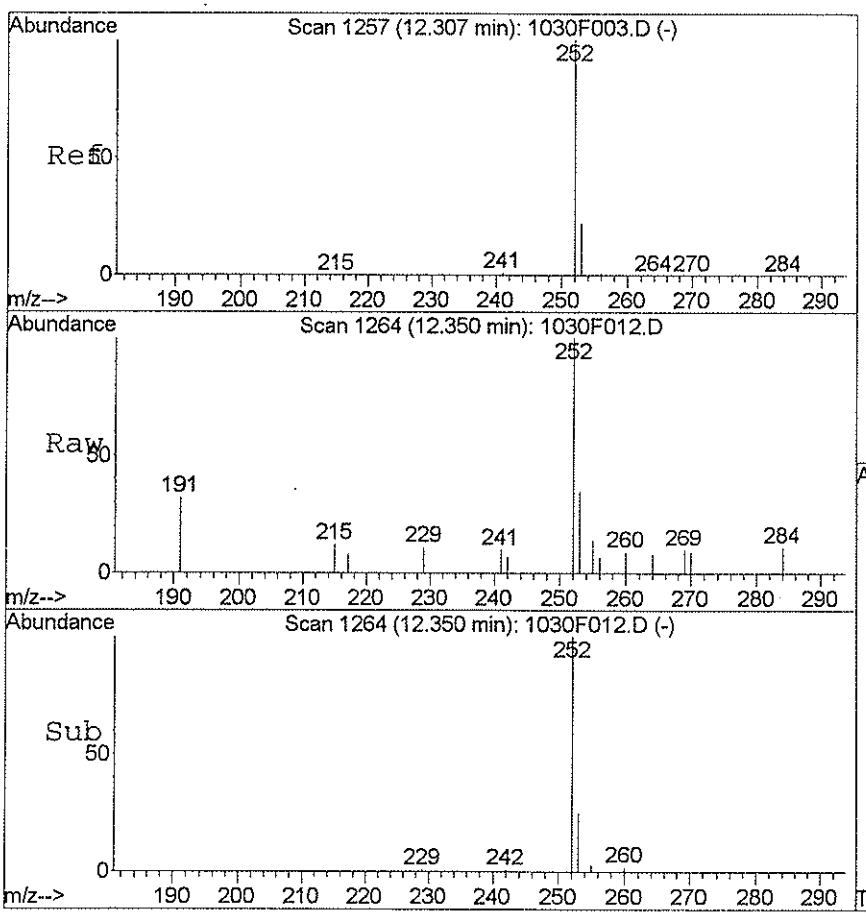


#44
Chrysene
Concen: 3.67 ng/ml
RT: 10.10 min Scan# 944
Delta R.T. 0.01 min
Lab File: 1030F012.D
Acq: 30 Oct 2008 6:59 pm

Tgt Ion:228 Resp: 3468

Ion	Ratio	Lower	Upper
228	100		
226	32.2	0.0	58.9

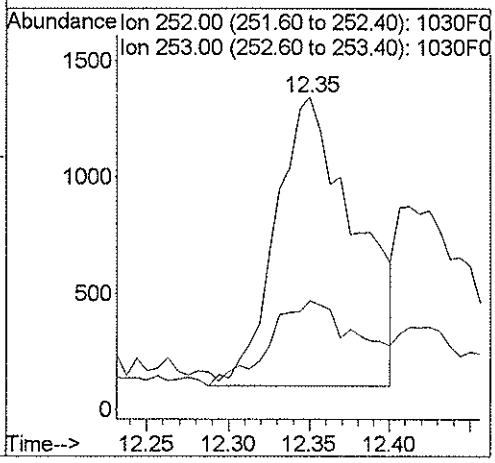


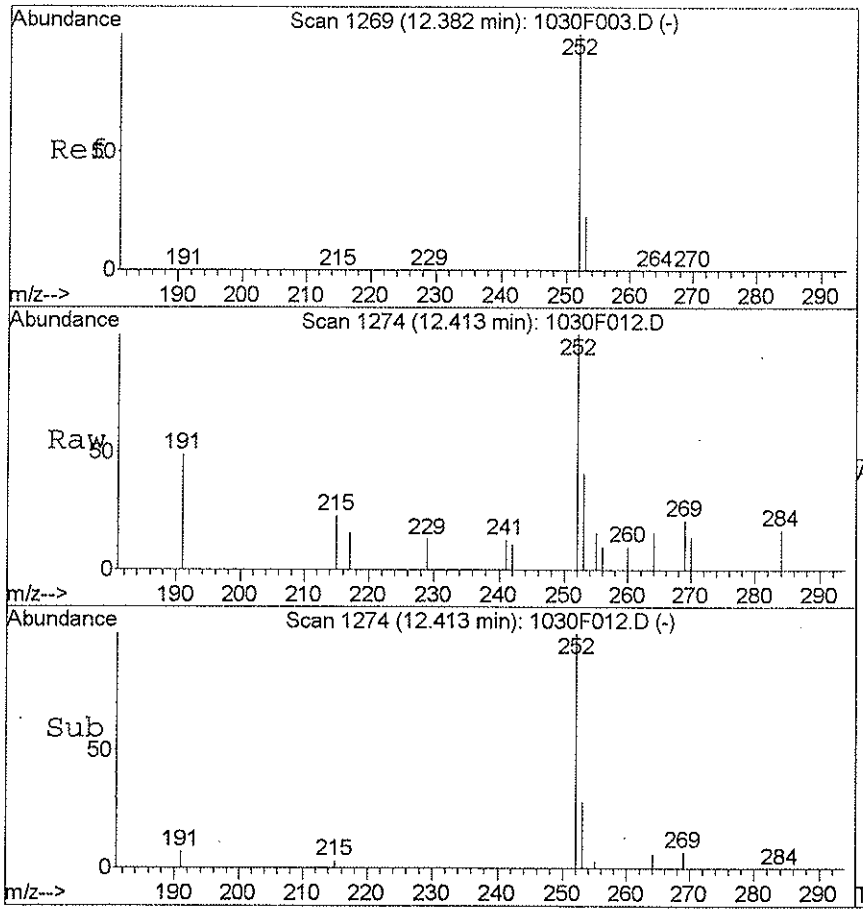


#50
Benzo(b)fluoranthene
Concen: 4.14 ng/ml
RT: 12.35 min Scan# 1264
Delta R.T. 0.05 min
Lab File: 1030F012.D
Acq: 30 Oct 2008 6:59 pm

Tgt Ion:252 Resp: 4280

Ion	Ratio	Lower	Upper
252	100		
253	24.6	0.0	52.6

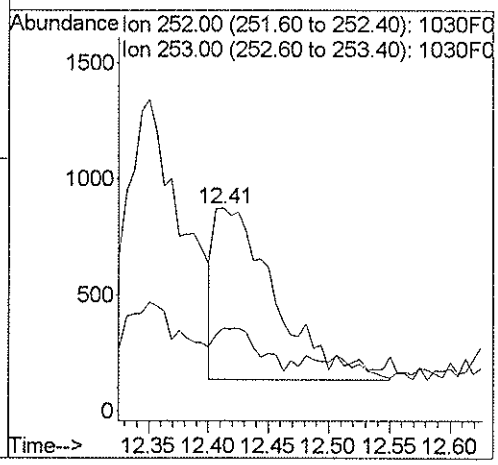


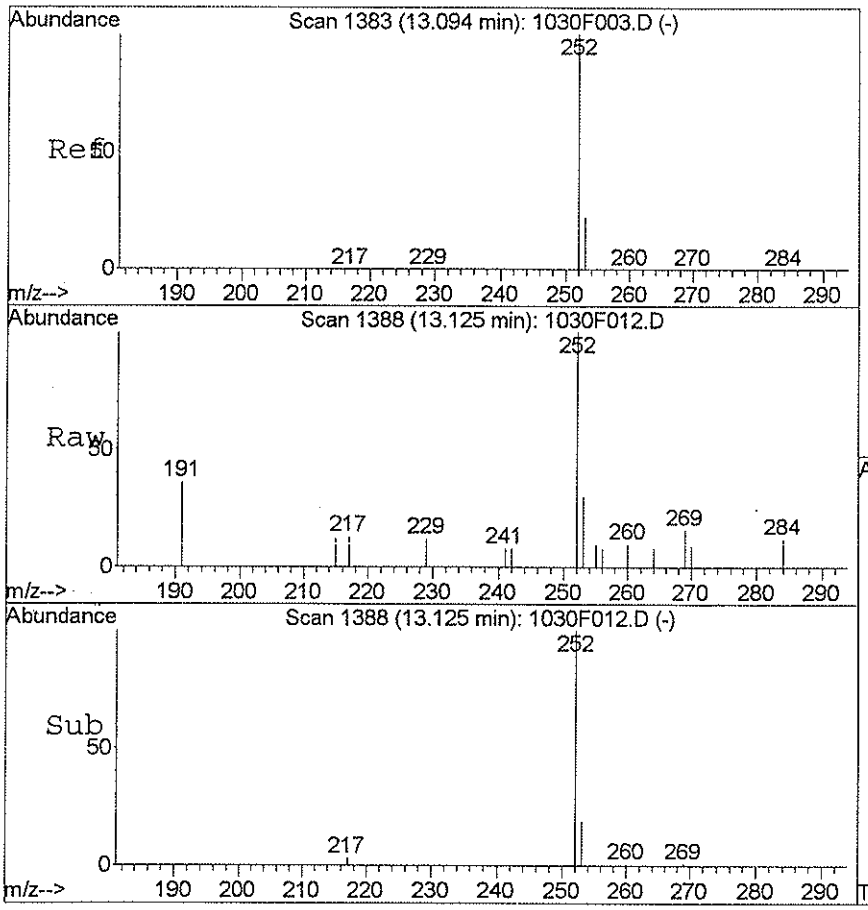


#51
Benzo(k)fluoranthene
Concen: 2.63 ng/ml m
RT: 12.41 min Scan# 1274
Delta R.T. 0.04 min
Lab File: 1030F012.D
Acq: 30 Oct 2008 6:59 pm

Tgt Ion:252 Resp: 2615

Ion	Ratio	Lower	Upper
252	100		
253	40.8	0.0	52.0

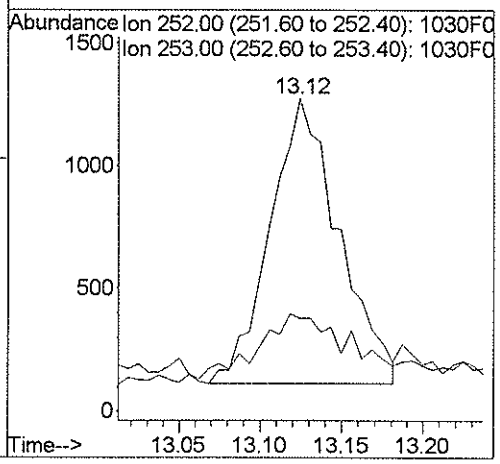


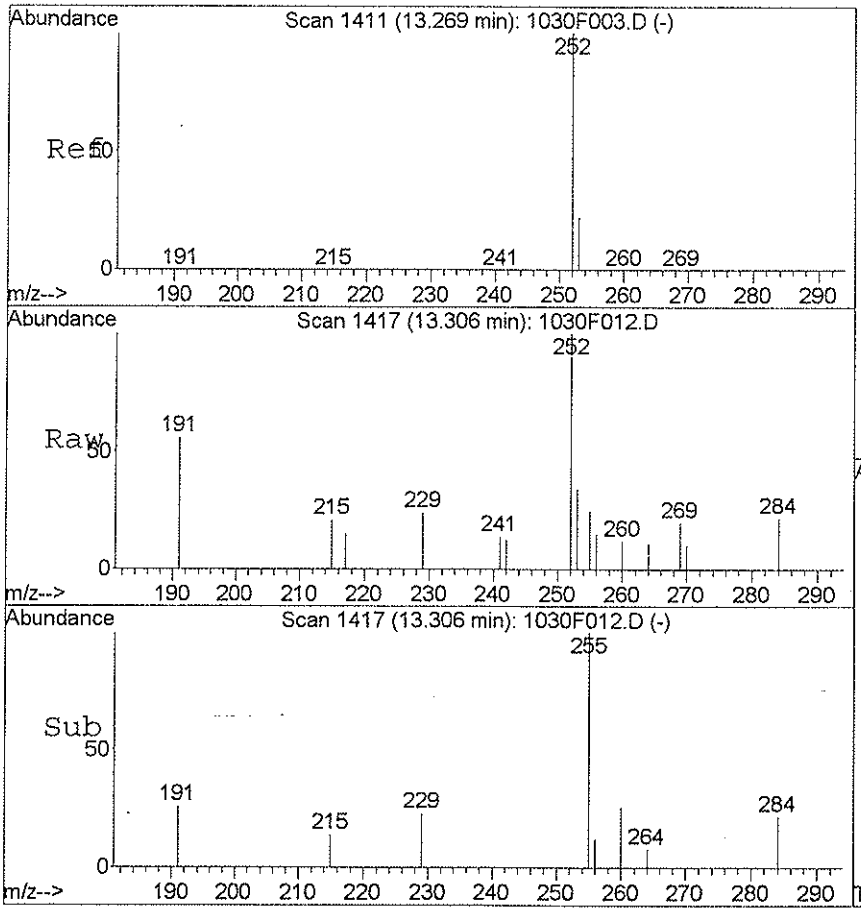


#52
Benzo(e)pyrene
Concen: 3.61 ng/ml
RT: 13.12 min Scan# 1388
Delta R.T. 0.04 min
Lab File: 1030F012.D
Acq: 30 Oct 2008 6:59 pm

Tgt Ion:252 Resp: 3377

Ion	Ratio	Lower	Upper
252	100		
253	17.6	0.0	52.2

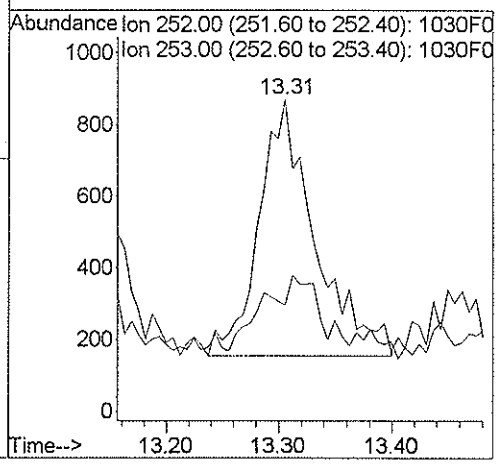


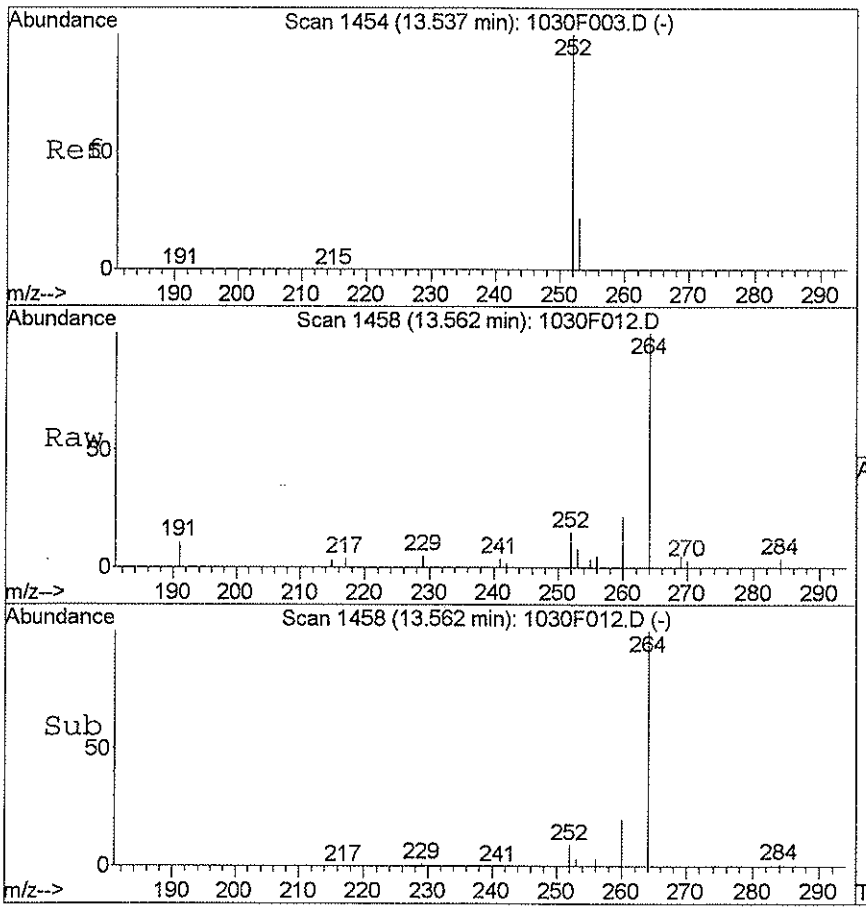


#53
Benzo(a)pyrene
Concen: 2.88 ng/ml
RT: 13.31 min Scan# 1417
Delta R.T. 0.04 min
Lab File: 1030F012.D
Acq: 30 Oct 2008 6:59 pm

Tgt Ion:252 Resp: 2440

Ion	Ratio	Lower	Upper
252	100		
253	16.5	0.0	52.2

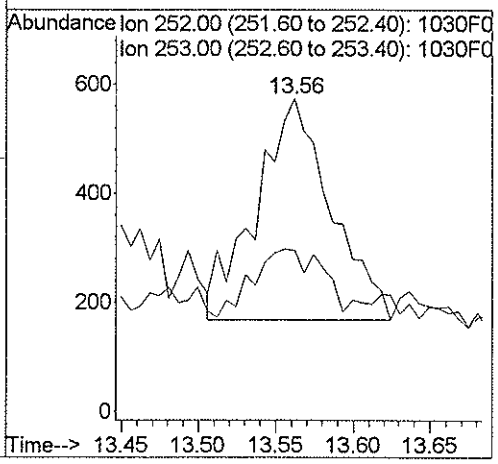


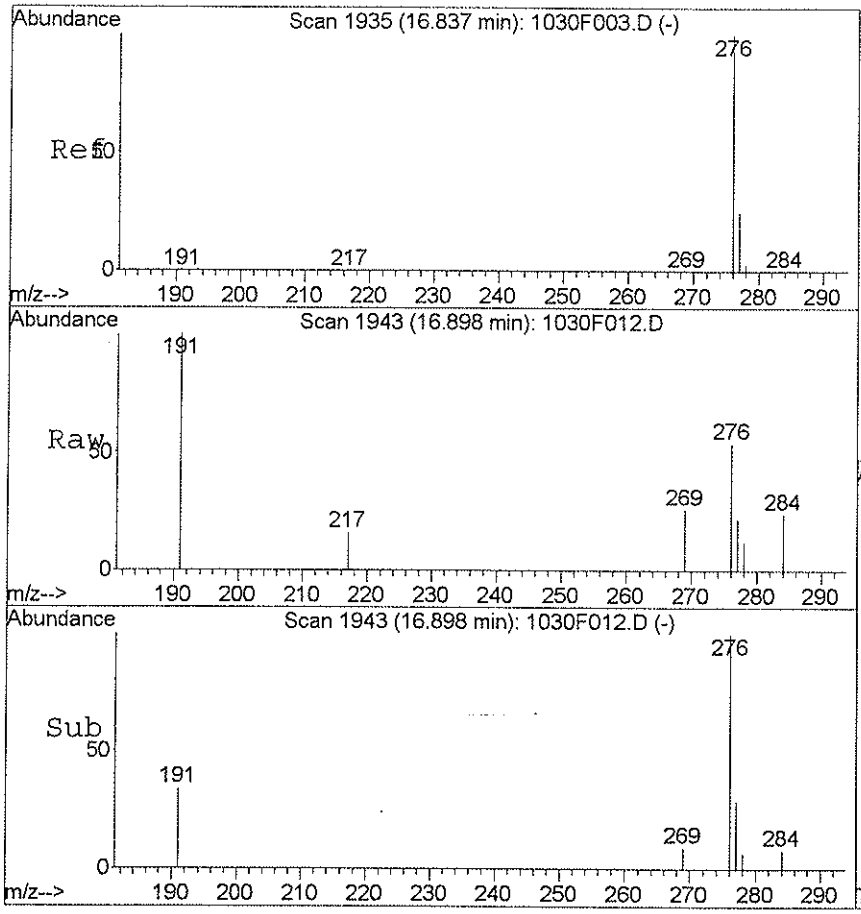


#54
Perylene
Concen: 1.59 ng/ml
RT: 13.56 min Scan# 1458
Delta R.T. 0.03 min
Lab File: 1030F012.D
Acq: 30 Oct 2008 6:59 pm

Tgt Ion:252 Resp: 1359

Ion	Ratio	Lower	Upper
252	100		
253	27.4	0.0	51.5

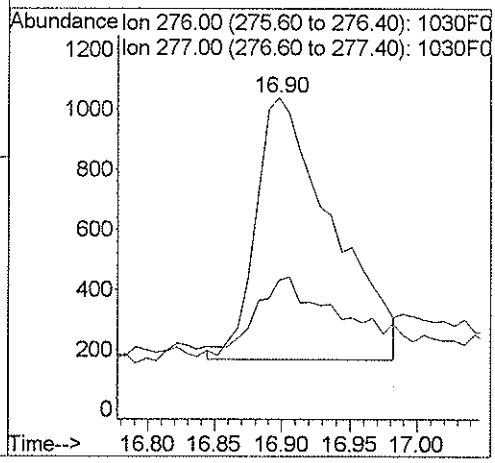


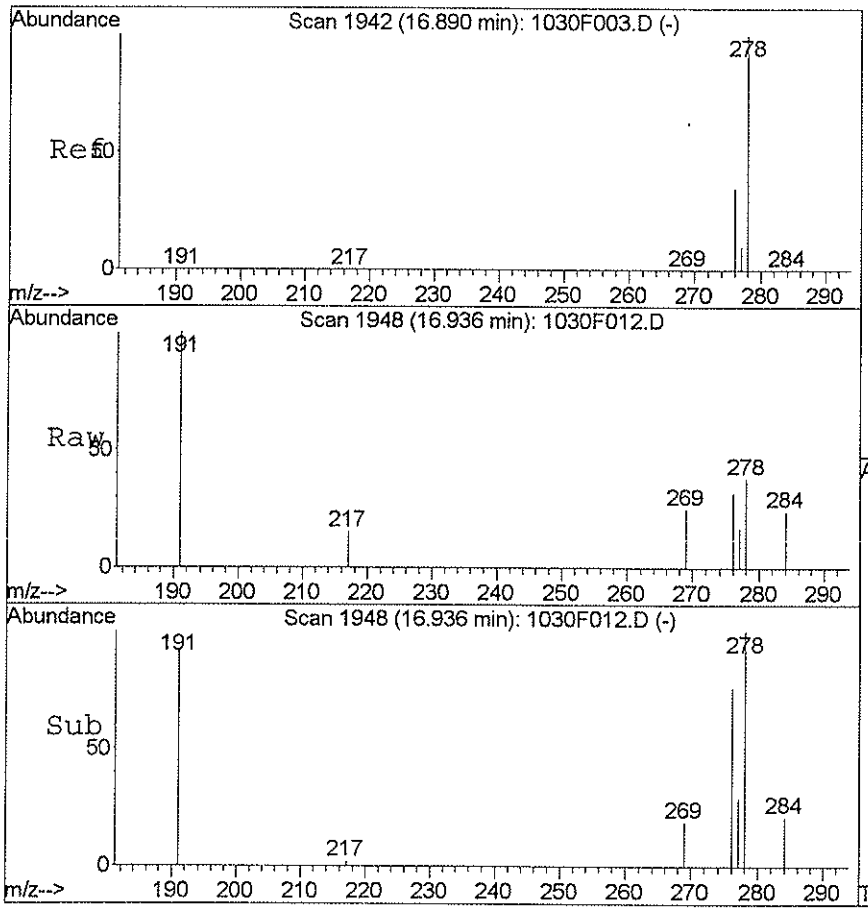


#55
Indeno(1,2,3-cd)pyrene
Concen: 4.59 ng/ml m
RT: 16.90 min Scan# 1943
Delta R.T. 0.06 min
Lab File: 1030F012.D
Acq: 30 Oct 2008 6:59 pm

Tgt Ion:276 Resp: 3411

Ion	Ratio	Lower	Upper
276	100		
277	41.4	0.0	54.7

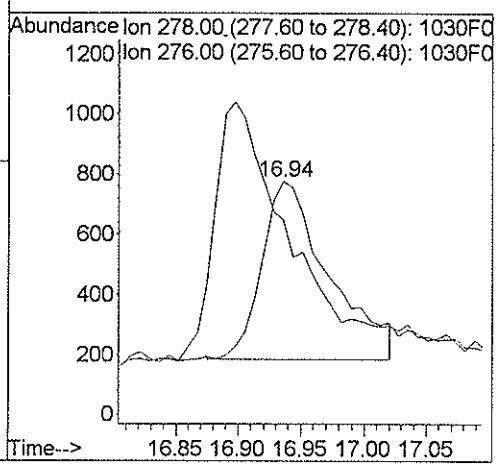


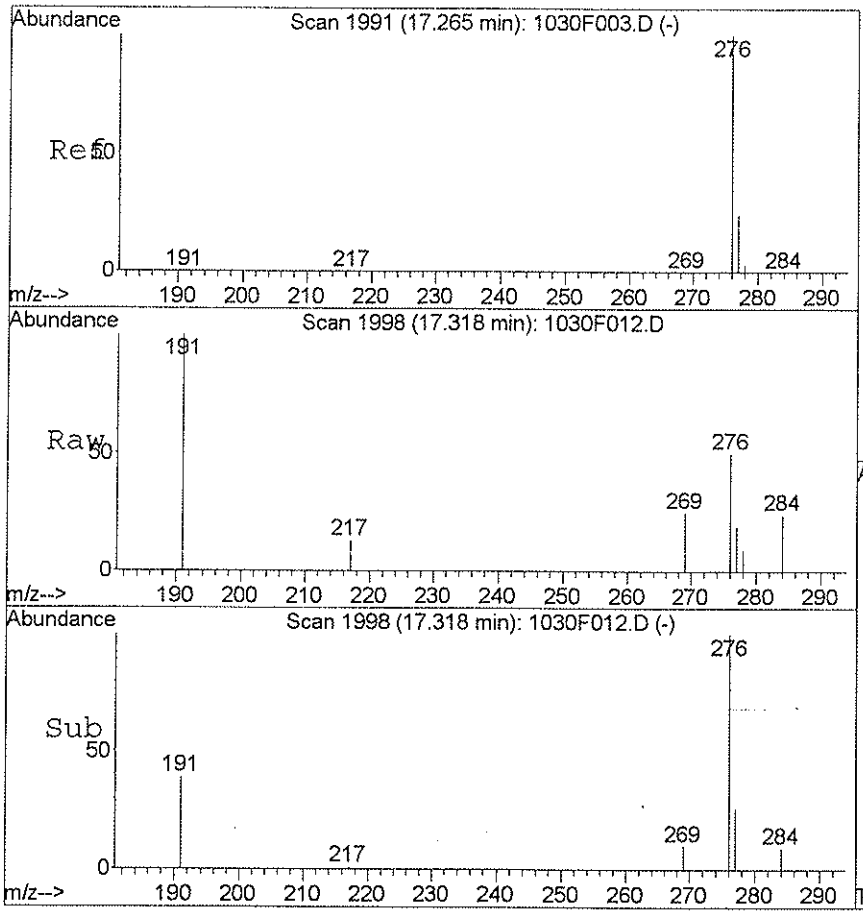


#56
Dibenz(a,h)anthracene
Concen: 2.82 ng/ml m
RT: 16.94 min Scan# 1948
Delta R.T. 0.05 min
Lab File: 1030F012.D
Acq: 30 Oct 2008 6:59 pm

Tgt Ion:278 Resp: 2182

Ion	Ratio	Lower	Upper
278	100		
276	83.5	0.0	59.7#

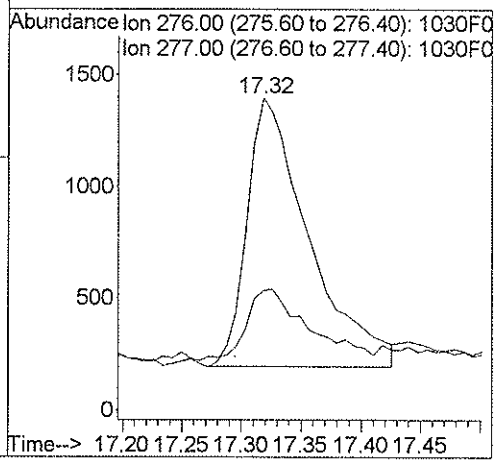




#57
Benzo(g,h,i)perylene
Concen: 5.06 ng/ml
RT: 17.32 min Scan# 1998
Delta R.T. 0.05 min
Lab File: 1030F012.D
Acq: 30 Oct 2008 6:59 pm

Tgt Ion:276 Resp: 4318

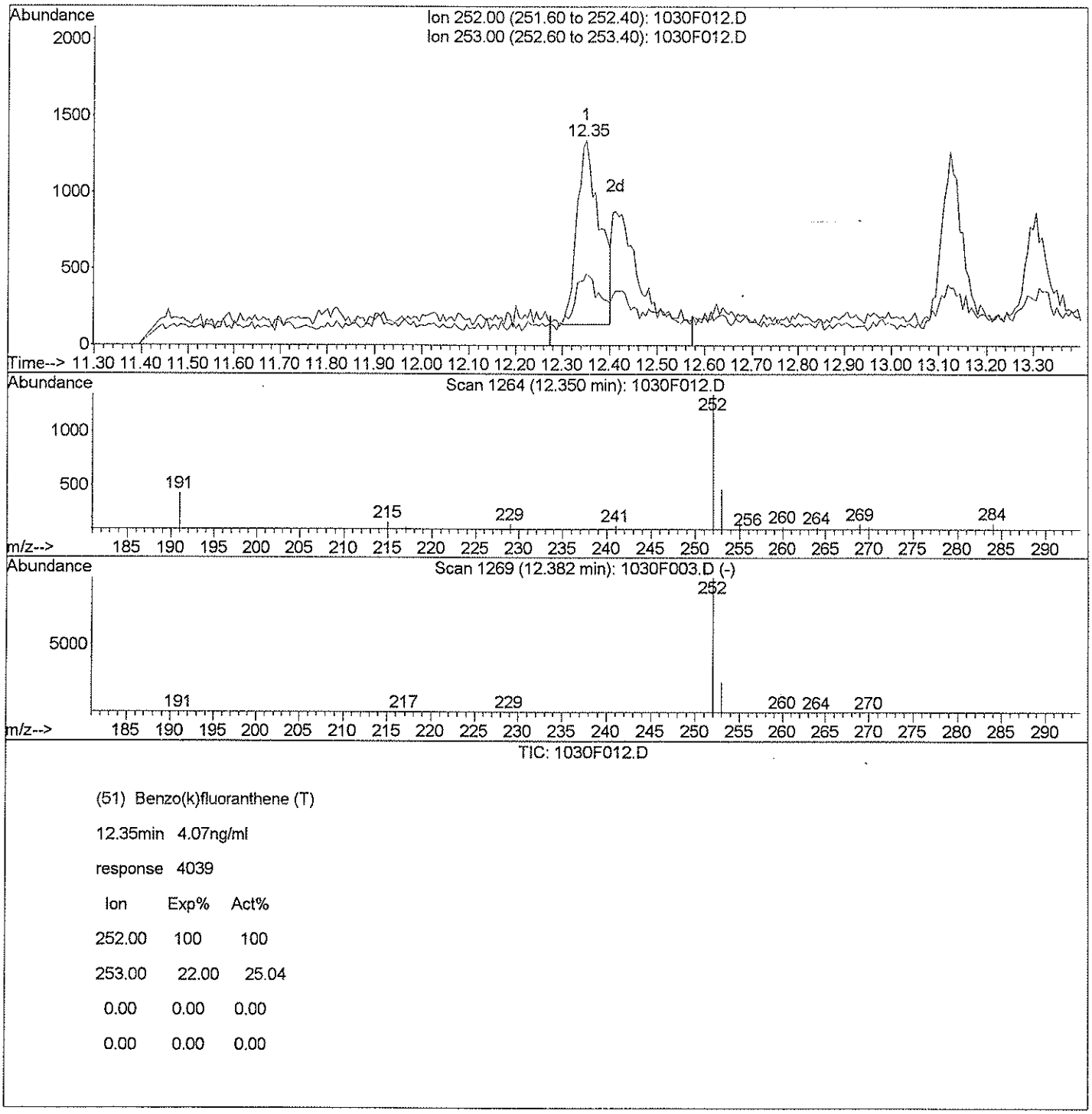
Ion	Ratio	Lower	Upper
276	100		
277	24.6	0.0	54.2



Quantitation Report (Qedit)

Data File : J:\MS11\DATA\103008\1030F012.D Vial: 9
Acq On : 30 Oct 2008 6:59 pm Operator: LWeiskopf
Sample : K0810048-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:57 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Multiple Level Calibration



(51) Benzo(k)fluoranthene (T)

12.35min 4.07ng/ml

response 4039

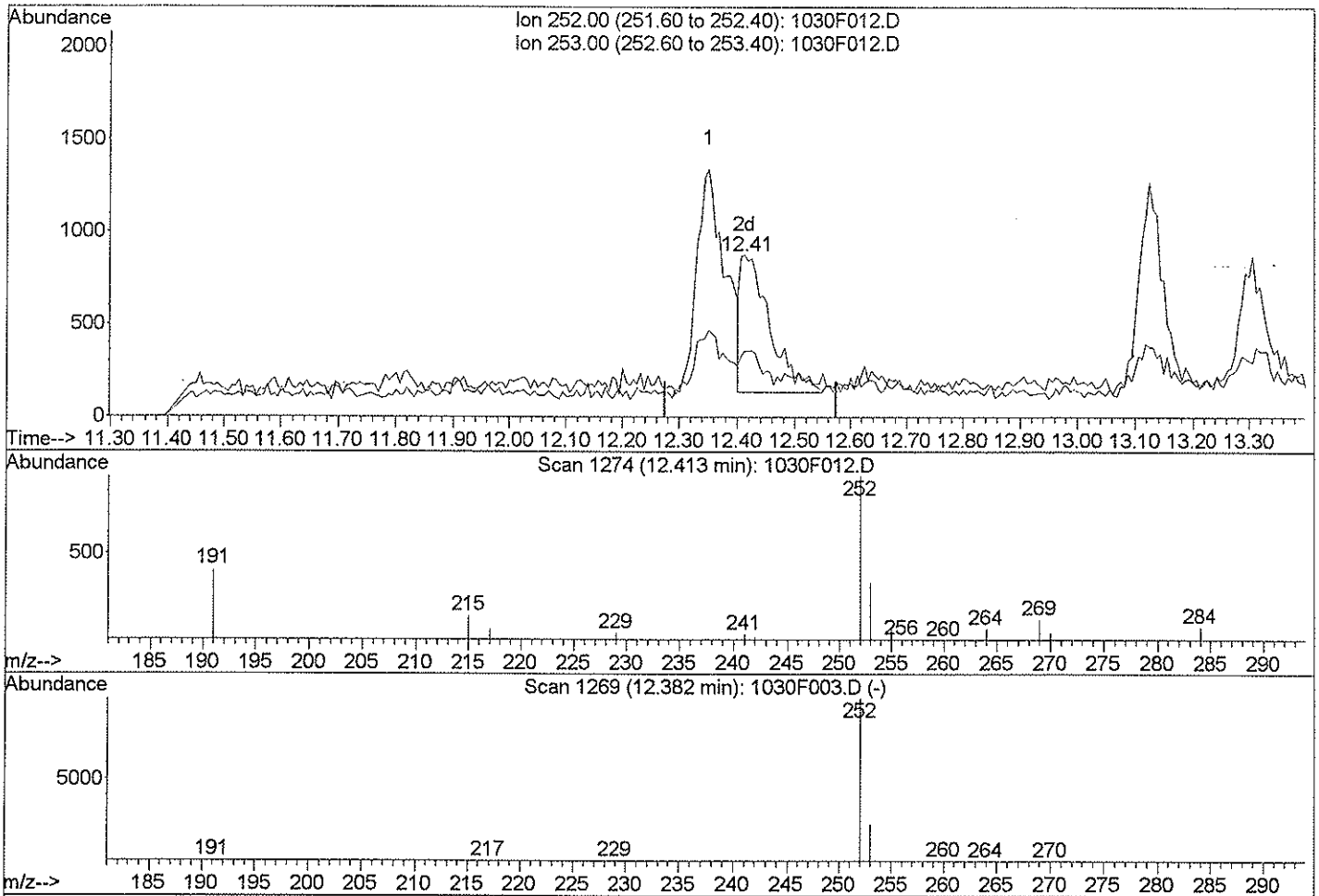
Ion	Exp%	Act%
252.00	100	100
253.00	22.00	25.04
0.00	0.00	0.00
0.00	0.00	0.00

1030F012.D 1001ALK.M Mon Nov 03 10:57:58 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\103008\1030F012.D Vial: 9
Acq On : 30 Oct 2008 6:59 pm Operator: LWeiskopf
Sample : K0810048-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:58 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Multiple Level Calibration



TIC: 1030F012.D

(51) Benzo(k)fluoranthene (T)

12.41min 2.63ng/ml m

response 2615

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	40.85
0.00	0.00	0.00
0.00	0.00	0.00

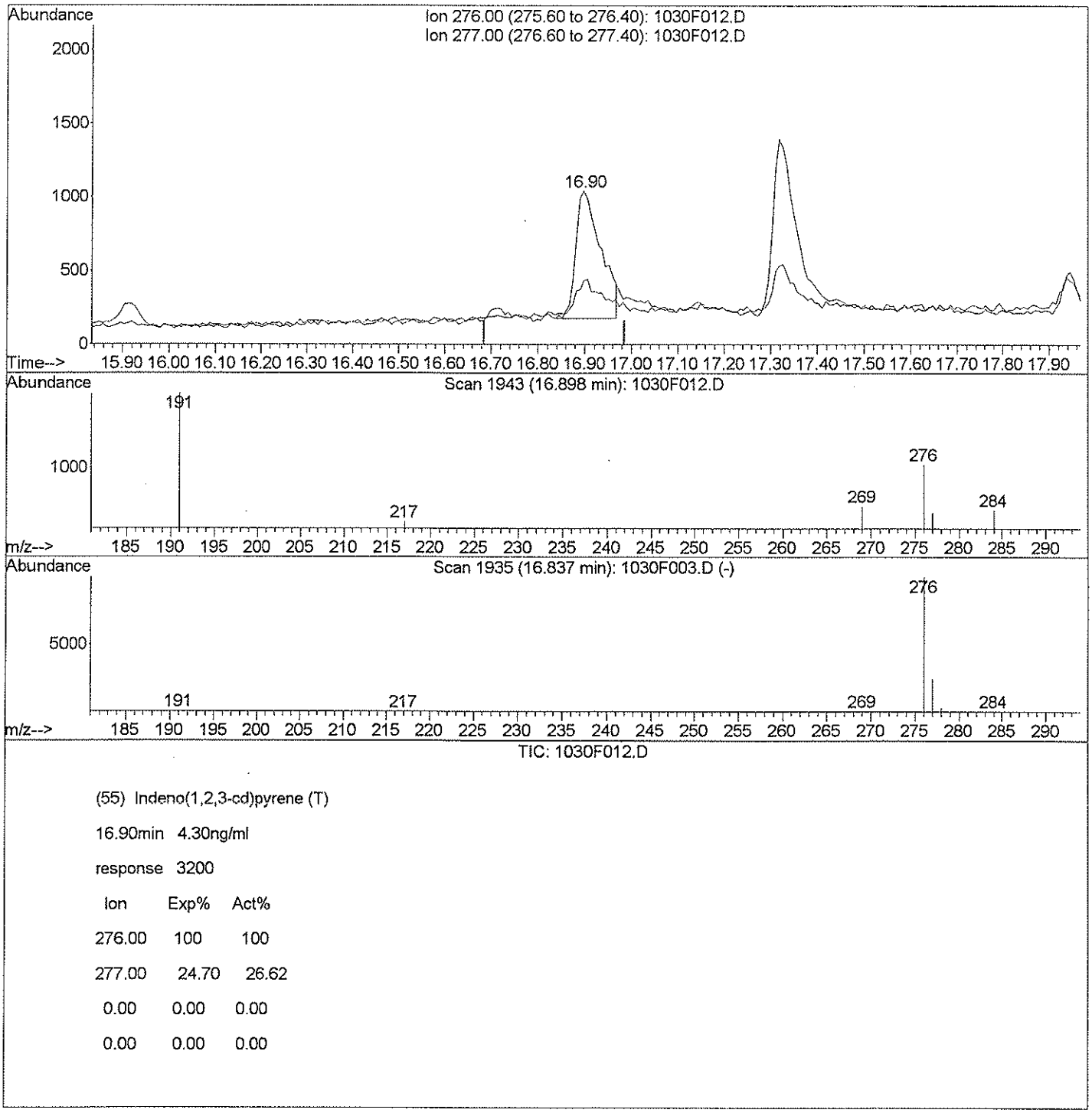
WF 11/5/08

1030F012.D 1001ALK.M Mon Nov 03 10:58:05 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\103008\1030F012.D Vial: 9
Acq On : 30 Oct 2008 6:59 pm Operator: LWeiskopf
Sample : K0810048-003 Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:58 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Multiple Level Calibration



TIC: 1030F012.D

(55) Indeno(1,2,3-cd)pyrene (T)

16.90min 4.30ng/ml

response 3200

Ion	Exp%	Act%
276.00	100	100
277.00	24.70	26.62
0.00	0.00	0.00
0.00	0.00	0.00

1030F012.D 1001ALK.M Mon Nov 03 10:58:09 2008

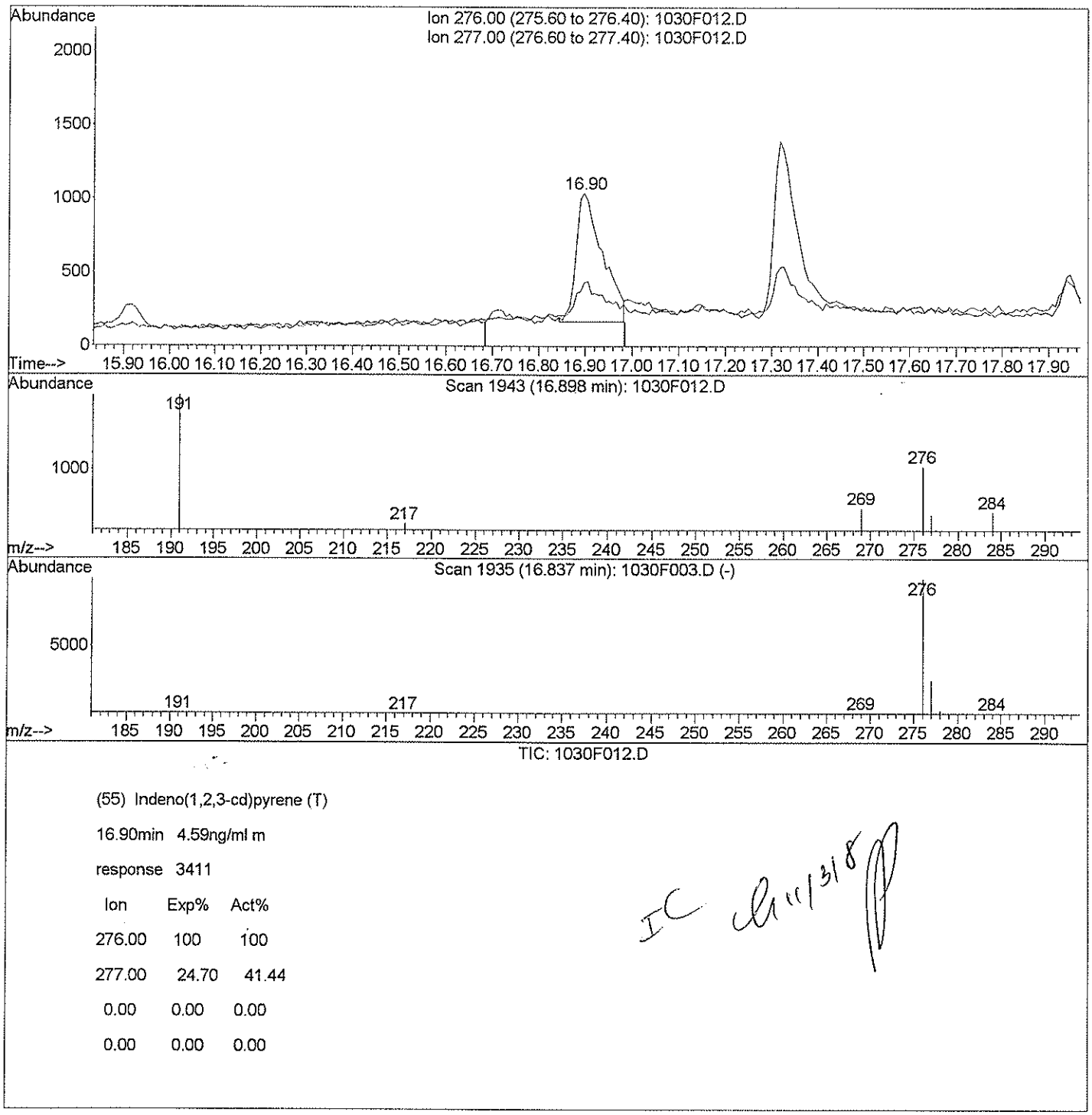
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\103008\1030F012.D
Acq On : 30 Oct 2008 6:59 pm
Sample : K0810048-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:58 2008

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Multiple Level Calibration



TIC: 1030F012.D

(55) Indeno(1,2,3-cd)pyrene (T)

16.90min 4.59ng/ml m

response 3411

Ion	Exp%	Act%
276.00	100	100
277.00	24.70	41.44
0.00	0.00	0.00
0.00	0.00	0.00

IC 11/3/08

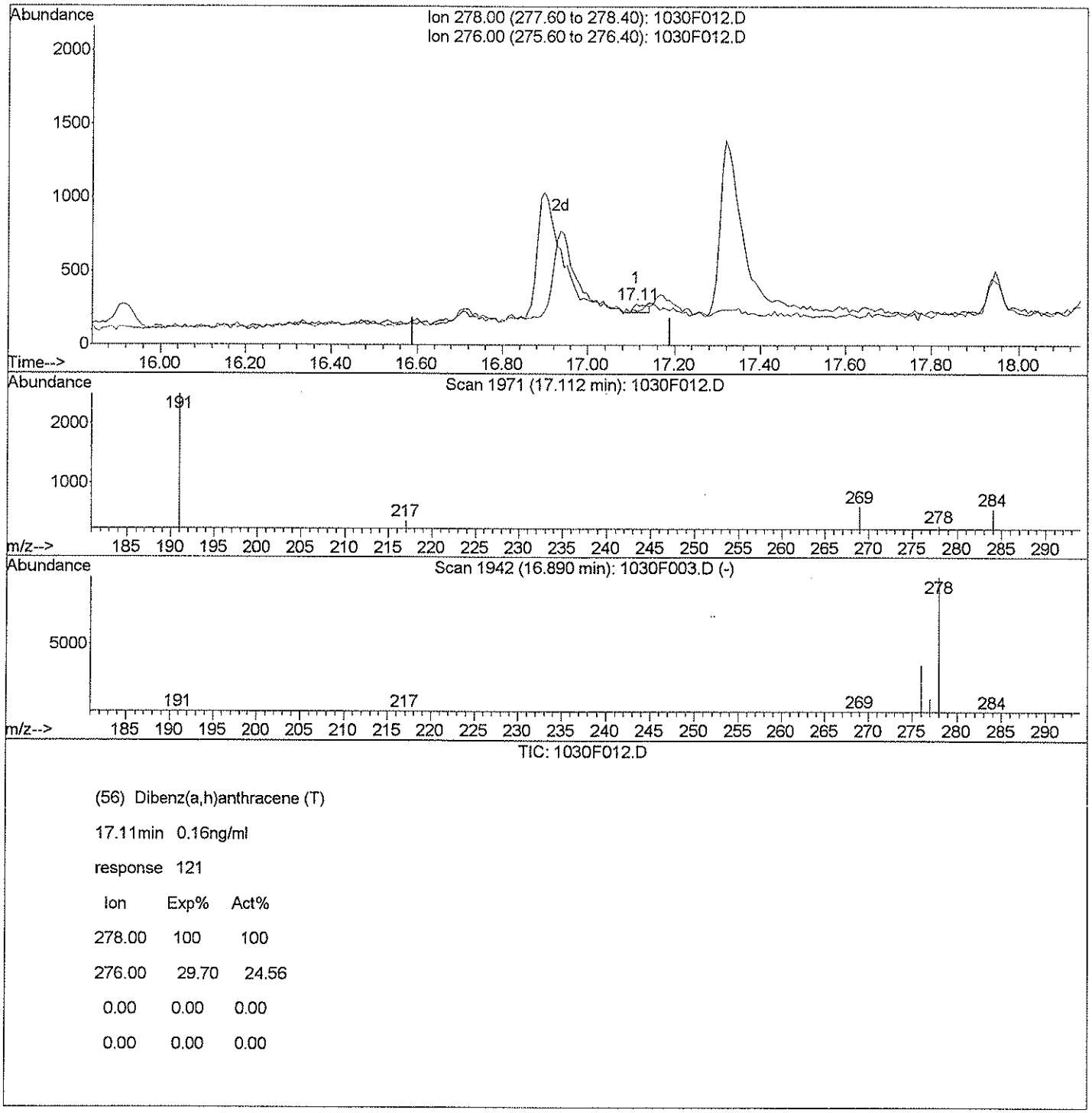
1030F012.D 1001ALK.M Mon Nov 03 10:58:14 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\103008\1030F012.D
Acq On : 30 Oct 2008 6:59 pm
Sample : K0810048-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:58 2008

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Multiple Level Calibration



TIC: 1030F012.D

(56) Dibenz(a,h)anthracene (T)

17.11min 0.16ng/ml

response 121

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	24.56
0.00	0.00	0.00
0.00	0.00	0.00

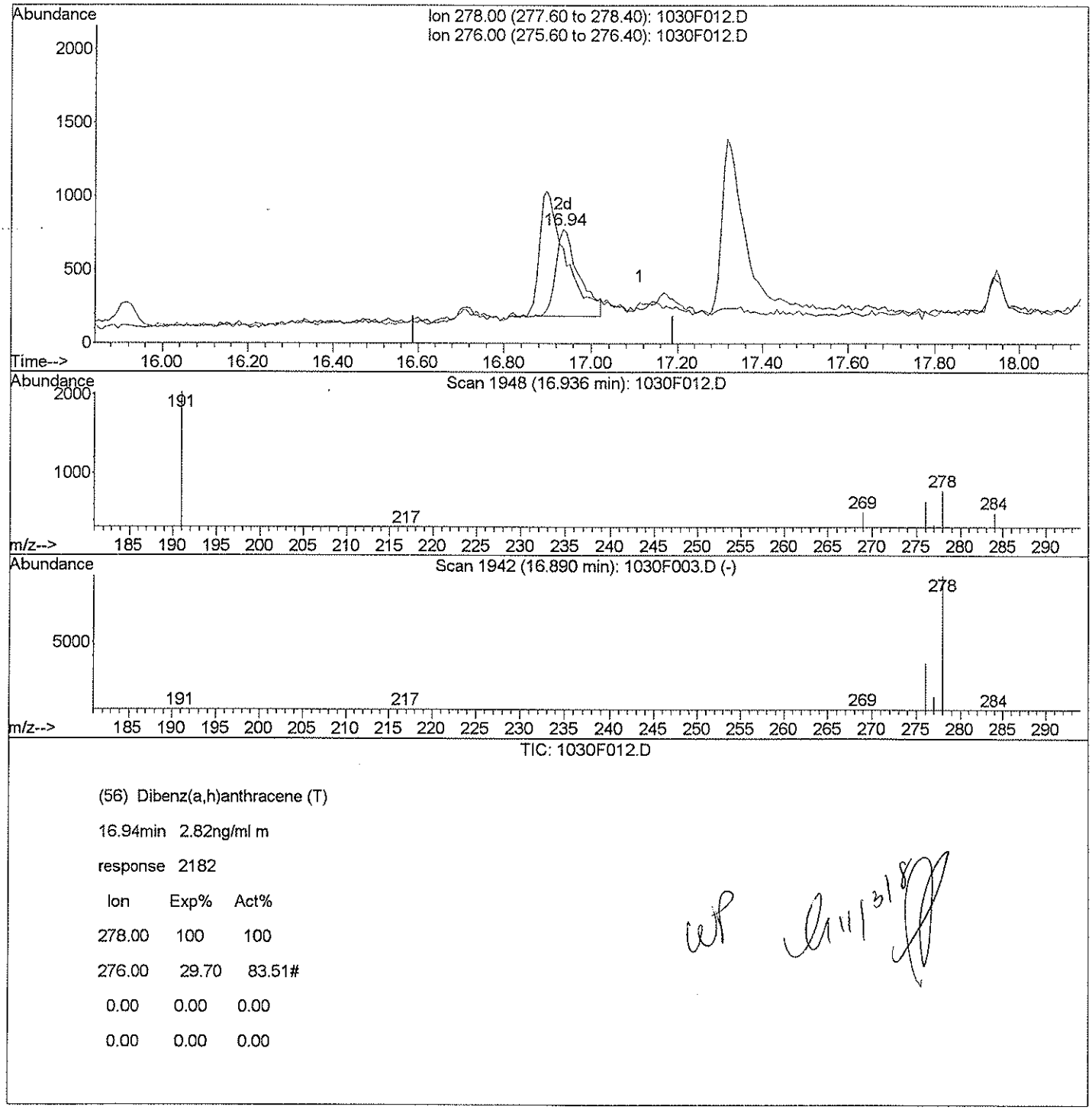
1030F012.D 1001ALK.M Mon Nov 03 10:58:16 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\103008\1030F012.D
Acq On : 30 Oct 2008 6:59 pm
Sample : K0810048-003
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:58 2008

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Multiple Level Calibration



TIC: 1030F012.D

(56) Dibenz(a,h)anthracene (T)

16.94min 2.82ng/ml m

response 2182

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	83.51#
0.00	0.00	0.00
0.00	0.00	0.00

1030F012.D 1001ALK.M Mon Nov 03 10:58:21 2008

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Batch QCMS
Lab Code: KWG0811327-1

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Units: ug/Kg
Basis: Dry

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**155**		2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
2-Methylnaphthalene	**175**		2.5	0.39	1	10/23/08	10/30/08	KWG0811327	
Acenaphthylene	**162**		2.5	0.24	1	10/23/08	10/30/08	KWG0811327	
Acenaphthene	**164**		2.5	0.23	1	10/23/08	10/30/08	KWG0811327	
Fluorene	**182**		2.5	0.50	1	10/23/08	10/30/08	KWG0811327	
Dibenzofuran	**182**		2.5	0.59	1	10/23/08	10/30/08	KWG0811327	
Phenanthrene	**163**		2.5	0.75	1	10/23/08	10/30/08	KWG0811327	
Anthracene	**172**		2.5	0.47	1	10/23/08	10/30/08	KWG0811327	
Fluoranthene	**182**		2.5	0.61	1	10/23/08	10/30/08	KWG0811327	
Pyrene	**191**		2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
Benzo(b)fluoranthene	**176**		2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(k)fluoranthene	**191**		2.5	0.15	1	10/23/08	10/30/08	KWG0811327	
Benz(a)anthracene	**170**		2.5	0.48	1	10/23/08	10/30/08	KWG0811327	
Chrysene	**202**		2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(a)pyrene	**181**		2.5	0.14	1	10/23/08	10/30/08	KWG0811327	
Indeno(1,2,3-cd)pyrene	**174**		2.5	0.16	1	10/23/08	10/30/08	KWG0811327	
Dibenz(a,h)anthracene	**197**		2.5	0.28	1	10/23/08	10/30/08	KWG0811327	
Benzo(g,h,i)perylene	**187**		2.5	0.64	1	10/23/08	10/30/08	KWG0811327	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	75	10-128	10/30/08	Acceptable
Fluoranthene-d10	75	29-121	10/30/08	Acceptable
Terphenyl-d14	82	24-141	10/30/08	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\103008\1030F010.D
Lab ID: KWG0811327-1 -- K0810048-003MS
RunType: MS
Matrix: SOIL

Date Acquired: 10/30/2008 18:06
Date Quantitated: 11/03/2008 10:56
Batch ID: KWG0811762
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

for Batch QC only

K10000

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Pentachlorophenol	-31.6	NA	20	
Surrogates	2,4,6-Tribromophenol	0	12	152	
	Terphenyl-d14	205	24	141	
	Fluorene-d10	188	10	128	
	Fluoranthene-d10	186	29	121	

Primary Review: 11/13/18

Secondary Review: 11.3.8

Printed: 11/03/2008 11:40:22
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8270C SIM PAH_S	**Collect Date:**		**Receive Date:**	10/29/2008

Analysis Lot:	KWG0811762	**Prep Lot:**	KWG0811327	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	771035	**Prep Date:**	10/23/2008		

Quant Method:	J:\MS11\METHODS\SIM\1001ALK.M	**Calibration ID:**	CAL7814
Title:			
Tune Ref:	J:\MS11\DATA\103008\1030F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\103008\1030F005.D	**Quant based on Method**	

Data File:	J:\MS11\DATA\103008\1030F010.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 18:06	**Quant Date:**	11/03/2008 10:56	**Vial:**	7
Run Type:	MS			**Dilution:**	1.0
Lab ID:	KWG0811327-1 -- K0810048-003MS			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.77	0.00	136	149300	200.00	OK
2	Acenaphthene-d10	6.19	0.00	164	84822	200.00	OK
3	Phenanthrene-d10	7.42	0.00	188	158775	200.00	OK
4	Chrysene-d12	10.05	0.00	240	177293	200.00	OK
5	Perylene-d12	13.45	0.00	264	188896	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.62	0.00	0.00	176	224994	375.50	188 75	10-128	*	
2	2,4,6-Tribromophenol			0.00	330	0d		0	12-152	*	
3	Fluoranthene-d10	8.40	0.00	0.00	212	420646	372.74	186 75	29-121	*	
4	Terphenyl-d14	8.76	0.00	0.00	244	377692	409.86	205 82	24-141	*	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.78		0.00	128	263437	313.72	155		
1	2-Methylnaphthalene	5.34		0.00	142	204468	355.18	175		
1	1-Methylnaphthalene	5.42		0.00	142	187847	368.56	182		
1	Biphenyl	5.71		0.00	154	230732	333.00	164		
1	2,6-Dimethylnaphthalene	5.84		0.00	156	174156	340.63	168		
1	C2-Naphthalenes				156	0		5.0	U	
1	C3-Naphthalenes				170	0		5.0	U	
1	C4-Naphthalenes				184	0		5.0	U	
2	Acenaphthylene	6.07		0.00	152	282810	329.62	162		
2	Acenaphthene	6.21		0.00	154	175805	333.91	164		
2	Dibenzofuran	6.36		0.00	168	276036	368.73	182		
2	2,3,5-Trimethylnaphthalene	6.52		0.00	170	227423	453.75	224		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\103008\1030F010.D		**Instrument:** MS11
Acqu Date:	10/30/2008 18:06	**Quant Date:** 11/03/2008 10:56	**Vial:** 7
Run Type:	MS		**Dilution:** 1.0
Lab ID:	KWG0811327-1 -- K0810048-003MS		**Soln Conc. Units:** ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	6.64		0.00	166	233221	370.11	182		
2	C1-Fluorenes				180	0		5.0	U	
2	C2-Fluorenes				194	0		5.0	U	
2	C3-Fluorenes				208	0		5.0	U	
2	Pentachlorophenol				266	0d		2.9	U	
3	Dibenzothiophene	7.33		0.00	184	236172	249.35	123		
3	C1-Dibenzothiophenes				198	0		5.0	U	
3	C2-Dibenzothiophenes				212	0		5.0	U	
3	C3-Dibenzothiophenes				226	0		5.0	U	
3	Phenanthrene	7.44		0.00	178	338510	330.99	163		
3	Anthracene	7.49		0.00	178	354813	350.07	172		
3	Carbazole	7.65	0.02	0.00	167	17369	21.00	10.3		
3	1-Methylphenanthrene	7.94		0.00	192	293129	383.10	189		
3	C1-Phenanthrenes/Anthracenes				192	0		5.0	U	
3	C2-Phenanthrenes/Anthracenes				206	0		5.0	U	
3	C3-Phenanthrenes/Anthracenes				220	0		5.0	U	
3	C4-Phenanthrenes/Anthracenes				234	0		5.0	U	
3	Fluoranthene	8.42		0.00	202	431003	368.82	182		
4	Pyrene	8.62		0.00	202	448690	386.83	191		
4	C1-Fluoranthenes/Pyrenes				216	0		5.0	U	
4	C2-Fluoranthenes/Pyrenes				230	0		5.0	U	
4	C3-Fluoranthenes/Pyrenes				244	0		5.0	U	
4	Benz(a)anthracene	10.03		0.00	228	379297	345.27	170		
4	Chrysene	10.09		0.00	228	436175	410.43	202		
4	C1-Chrysenes				242	0		5.0	U	
4	C2-Chrysenes				256	0		5.0	U	
4	C3-Chrysenes				270	0		5.0	U	
4	C4-Chrysenes				284	0		5.0	U	
5	Benzo(b)fluoranthene	12.30	-0.01	0.00	252	435098	357.70	176		
5	Benzo(k)fluoranthene	12.38		0.00	252	452575	387.00	191		
5	Benzo(e)pyrene	13.09		0.00	252	434434	394.55	194		
5	Benzo(a)pyrene	13.26	-0.01	0.00	252	367066	367.99	181		
5	Perylene	13.54		0.00	252	364364	362.45	179		
5	Indeno(1,2,3-cd)pyrene	16.84		0.00	276	309540	353.45	174		
5	Dibenz(a,h)anthracene	16.89		0.00	278	365361	400.83	197		
5	Benzo(g,h,i)perylene	17.27	0.01	0.00	276	380969	379.01	187		

Prep Amount:	23.77 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	85.4 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F010.D
Acq On : 30 Oct 2008 6:06 pm
Sample : K0810048-003MS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 03 10:52:21 2008

Vial: 7
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.77	136	149300	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.19	164	84822	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.42	188	158775	200.00	ng/ml	0.00
37) Chrysene-d12	10.05	240	177293	200.00	ng/ml	0.00
49) Perylene-d12	13.45	264	188896	200.00	ng/ml	0.00
System Monitoring Compounds						
15) Fluorene-d10	6.62	176	224994	375.50	ng/ml	0.00
Spiked Amount 200.000			Recovery =	187.75%		
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery =	0.00%		
36) Fluoranthene-d10	8.40	212	420646	372.74	ng/ml	0.00
Spiked Amount 200.000			Recovery =	186.37%		
42) Terphenyl-d14	8.76	244	377692	409.86	ng/ml	0.00
Spiked Amount 200.000			Recovery =	204.93%		
Target Compounds						Qvalue
2) Naphthalene	4.78	128	263437	313.72	ng/ml	99
3) 2-Methylnaphthalene	5.34	142	204468	355.18	ng/ml	97
4) 1-Methylnaphthalene	5.42	142	187847	368.56	ng/ml	97
5) Biphenyl	5.71	154	230732	333.00	ng/ml	98
6) 2,6-Dimethylnaphthalene	5.84	156	174156	340.63	ng/ml	99
11) Acenaphthylene	6.07	152	282810	329.62	ng/ml	99
12) Acenaphthene	6.21	154	175805	333.91	ng/ml	90
13) Dibenzofuran	6.36	168	276036	368.73	ng/ml	94
14) 2,3,5-Trimethylnaphthalene	6.52	170	227423	453.75	ng/ml	85
16) Fluorene	6.64	166	233221	370.11	ng/ml	94
23) Dibenzothiophene	7.33	184	236172	249.35	ng/ml	86
27) Phenanthrene	7.44	178	338510	330.99	ng/ml	96
28) Anthracene	7.49	178	354813	350.07	ng/ml	98
29) Carbazole	7.65	167	17369	21.00	ng/ml	98
30) 1-Methylphenanthrene	7.94	192	293129	383.10	ng/ml	95
35) Fluoranthene	8.42	202	431003	368.82	ng/ml	98
38) Pyrene	8.62	202	448690	386.83	ng/ml	97
43) Benz(a)anthracene	10.03	228	379297	345.27	ng/ml	99
44) Chrysene	10.09	228	436175	410.43	ng/ml	99
50) Benzo(b)fluoranthene	12.30	252	435098	357.70	ng/ml	99
51) Benzo(k)fluoranthene	12.38	252	452575	387.00	ng/ml	100
52) Benzo(e)pyrene	13.09	252	434434	394.55	ng/ml	99
53) Benzo(a)pyrene	13.26	252	367066	367.99	ng/ml	100
54) Perylene	13.54	252	364364	362.45	ng/ml	99
55) Indeno(1,2,3-cd)pyrene	16.84	276	309540	353.45	ng/ml	98

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

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F010.D Vial: 7
Acq On : 30 Oct 2008 6:06 pm Operator: LWeiskopf
Sample : K0810048-003MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 03 10:52:21 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

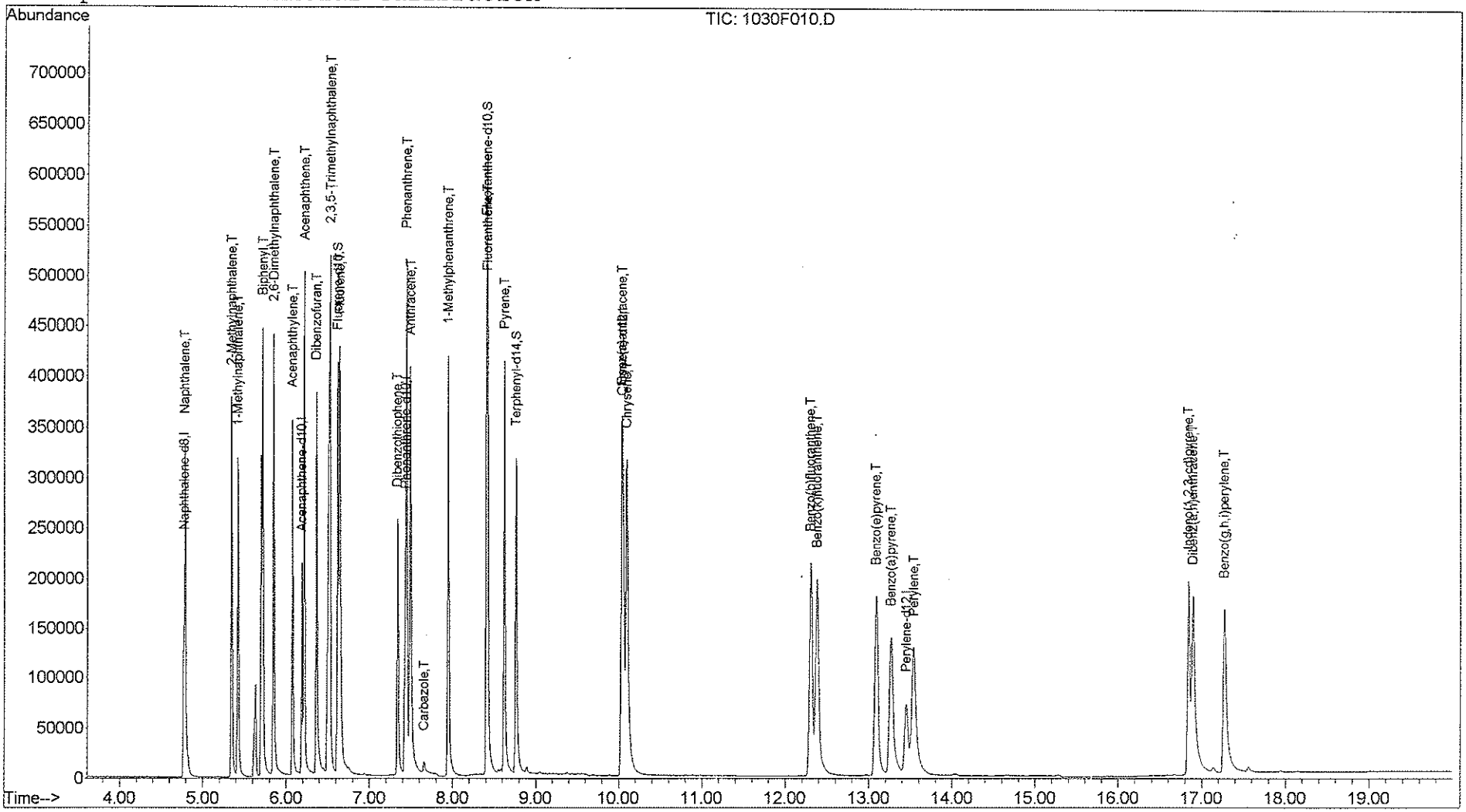
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
56)	Dibenz(a,h)anthracene	16.89	278	365361	400.83	ng/ml	85
57)	Benzo(g,h,i)perylene	17.27	276	380969	379.01	ng/ml	99

(#) = qualifier out of range (m) = manual integration
1030F010.D 1001ALK.M Mon Nov 03 10:57:24 2008 Page 2

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F010.D Vial: 7
Acq On : 30 Oct 2008 6:06 pm Operator: LWeiskopf
Sample : K0810048-003MS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:56 2008 Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration



COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Polynuclear Aromatic Hydrocarbons

Sample Name:	Batch QCDMS	**Units:**	ug/Kg
Lab Code:	KWG0811327-2	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**152**		2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
2-Methylnaphthalene	**173**		2.5	0.39	1	10/23/08	10/30/08	KWG0811327	
Acenaphthylene	**160**		2.5	0.24	1	10/23/08	10/30/08	KWG0811327	
Acenaphthene	**161**		2.5	0.23	1	10/23/08	10/30/08	KWG0811327	
Fluorene	**178**		2.5	0.50	1	10/23/08	10/30/08	KWG0811327	
Dibenzofuran	**178**		2.5	0.59	1	10/23/08	10/30/08	KWG0811327	
Phenanthrene	**163**		2.5	0.75	1	10/23/08	10/30/08	KWG0811327	
Anthracene	**168**		2.5	0.47	1	10/23/08	10/30/08	KWG0811327	
Fluoranthene	**184**		2.5	0.61	1	10/23/08	10/30/08	KWG0811327	
Pyrene	**191**		2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
Benzo(b)fluoranthene	**172**		2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(k)fluoranthene	**196**		2.5	0.15	1	10/23/08	10/30/08	KWG0811327	
Benz(a)anthracene	**170**		2.5	0.48	1	10/23/08	10/30/08	KWG0811327	
Chrysene	**204**		2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(a)pyrene	**181**		2.5	0.14	1	10/23/08	10/30/08	KWG0811327	
Indeno(1,2,3-cd)pyrene	**164**		2.5	0.16	1	10/23/08	10/30/08	KWG0811327	
Dibenz(a,h)anthracene	**201**		2.5	0.28	1	10/23/08	10/30/08	KWG0811327	
Benzo(g,h,i)perylene	**187**		2.5	0.64	1	10/23/08	10/30/08	KWG0811327	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	65	10-128	10/30/08	Acceptable
Fluoranthene-d10	66	29-121	10/30/08	Acceptable
Terphenyl-d14	73	24-141	10/30/08	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\103008\1030F011.D
Lab ID: KWG0811327-2 -- K0810048-003DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 10/30/2008 18:32
Date Quantitated: 11/03/2008 10:56
Batch ID: KWG0811762
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

for Batch QC only

K00000

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Pentachlorophenol	-31.6	NA	20	N+
Surrogates	2,4,6-Tribromophenol	0	12	152	I
	Terphenyl-d14	181	24	141	OC
	Fluorene-d10	162	10	128	I
	Fluoranthene-d10	166	29	121	—

Primary Review: 11/13/08

Secondary Review:

Printed: 11/03/2008 11:40:26
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8270C SIM PAH_S	**Collect Date:**		**Receive Date:**	10/29/2008

Analysis Lot:	KWG0811762	**Prep Lot:**	KWG0811327	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	771036	**Prep Date:**	10/23/2008		

Quant Method:	J:\MS11\METHODS\SIM\1001ALK.M	**Calibration ID:**	CAL7814
Title:			
Tune Ref:	J:\MS11\DATA\103008\1030F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\103008\1030F005.D	**Quant based on Method**	

Data File:	J:\MS11\DATA\103008\1030F011.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 18:32	**Quant Date:**	11/03/2008 10:56	**Vial:**	8
Run Type:	DMS			**Dilution:**	1.0
Lab ID:	KWG0811327-2 -- K0810048-003DMS			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.77	0.00	136	138042	200.00	OK
2	Acenaphthene-d10	6.19	0.00	164	79493	200.00	OK
3	Phenanthrene-d10	7.42	0.00	188	147063	200.00	OK
4	Chrysene-d12	10.05	0.00	240	165781	200.00	OK
5	Perylene-d12	13.45	0.00	264	174997	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.62	0.00	0.00	176	181740	323.65	162 65	10-128	*	
2	2,4,6-Tribromophenol			0.00	330	0d		0	12-152	*	
3	Fluoranthene-d10	8.40	0.00	0.00	212	347250	332.21	166 66	29-121	*	
4	Terphenyl-d14	8.76	0.00	0.00	244	312426	362.58	181 73	24-141	*	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.78		0.00	128	237830	306.33	152		
1	2-Methylnaphthalene	5.34		0.00	142	186369	350.15	173		
1	1-Methylnaphthalene	5.42		0.00	142	170621	362.06	179		
1	Biphenyl	5.72	0.01	0.00	154	211101	329.51	163		
1	2,6-Dimethylnaphthalene	5.85	0.01	0.00	156	158821	335.97	166		
1	C2-Naphthalenes				156	0		5.0	U	
1	C3-Naphthalenes				170	0		5.0	U	
1	C4-Naphthalenes				184	0		5.0	U	
2	Acenaphthylene	6.07		0.00	152	259303	322.48	160		
2	Acenaphthene	6.21		0.00	154	160071	324.41	161		
2	Dibenzofuran	6.36		0.00	168	252818	360.36	178		
2	2,3,5-Trimethylnaphthalene	6.52		0.00	170	213248	453.99	225		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\103008\1030F011.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 18:32	**Quant Date:**	11/03/2008 10:56	**Vial:**	8
Run Type:	DMS			**Dilution:**	1.0
Lab ID:	KWG0811327-2 -- K0810048-003DMS			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:** ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	6.64		0.00	166	211975	358.94	178		
2	C1-Fluorenes				180	0		5.0	U	
2	C2-Fluorenes				194	0		5.0	U	
2	C3-Fluorenes				208	0		5.0	U	
2	Pentachlorophenol				266	0d		2.9	U	
3	Dibenzothiophene	7.34	0.01	0.00	184	220940	251.85	125		
3	C1-Dibenzothiophenes				198	0		5.0	U	
3	C2-Dibenzothiophenes				212	0		5.0	U	
3	C3-Dibenzothiophenes				226	0		5.0	U	
3	Phenanthrene	7.44		0.00	178	311984	329.35	163		
3	Anthracene	7.49		0.00	178	318035	338.77	168		
3	Carbazole	7.66	0.03	0.00	167	5057	6.60	3.27		
3	1-Methylphenanthrene	7.94		0.00	192	271855	383.60	190		
3	C1-Phenanthrenes/Anthracenes				192	0		5.0	U	
3	C2-Phenanthrenes/Anthracenes				206	0		5.0	U	
3	C3-Phenanthrenes/Anthracenes				220	0		5.0	U	
3	C4-Phenanthrenes/Anthracenes				234	0		5.0	U	
3	Fluoranthene	8.42		0.00	202	402381	371.75	184		
4	Pyrene	8.62		0.00	202	417988	385.39	191		
4	C1-Fluoranthenes/Pyrenes				216	0		5.0	U	
4	C2-Fluoranthenes/Pyrenes				230	0		5.0	U	
4	C3-Fluoranthenes/Pyrenes				244	0		5.0	U	
4	Benz(a)anthracene	10.03		0.00	228	352125	342.79	170		
4	Chrysene	10.09		0.00	228	409394	411.98	204		
4	C1-Chrysenes				242	0		5.0	U	
4	C2-Chrysenes				256	0		5.0	U	
4	C3-Chrysenes				270	0		5.0	U	
4	C4-Chrysenes				284	0		5.0	U	
5	Benzo(b)fluoranthene	12.30	-0.01	0.00	252	390550	346.58	172		
5	Benzo(k)fluoranthene	12.38		0.00	252	429006	395.98	196		
5	Benzo(e)pyrene	13.09		0.00	252	402304	394.39	195		
5	Benzo(a)pyrene	13.26	-0.01	0.00	252	338227	366.01	181		
5	Perylene	13.53	-0.01	0.00	252	321593	345.31	171		
5	Indeno(1,2,3-cd)pyrene	16.84		0.00	276	268639m	331.11	164		
5	Dibenz(a,h)anthracene	16.89		0.00	278	343434	406.70	201		
5	Benzo(g,h,i)perylene	17.27	0.01	0.00	276	351491	377.46	187		

Prep Amount:	23.64 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	85.4 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F011.D Vial: 8
Acq On : 30 Oct 2008 6:32 pm Operator: LWeiskopf
Sample : K0810048-003DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 03 10:52:23 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.77	136	138042	200.00	ng/ml	-0.01
10) Acenaphthene-d10	6.19	164	79493	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.42	188	147063	200.00	ng/ml	0.00
37) Chrysene-d12	10.05	240	165781	200.00	ng/ml	0.00
49) Perylene-d12	13.45	264	174997	200.00	ng/ml	0.00
System Monitoring Compounds						
15) Fluorene-d10	6.62	176	181740	323.65	ng/ml	0.00
Spiked Amount 200.000			Recovery =	161.82%		
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery =	0.00%		
36) Fluoranthene-d10	8.40	212	347250	332.21	ng/ml	0.00
Spiked Amount 200.000			Recovery =	166.10%		
42) Terphenyl-d14	8.76	244	312426	362.58	ng/ml	0.00
Spiked Amount 200.000			Recovery =	181.29%		
Target Compounds						Qvalue
2) Naphthalene	4.78	128	237830	306.33	ng/ml	99
3) 2-Methylnaphthalene	5.34	142	186369	350.15	ng/ml	99
4) 1-Methylnaphthalene	5.42	142	170621	362.06	ng/ml	97
5) Biphenyl	5.72	154	211101	329.51	ng/ml	98
6) 2,6-Dimethylnaphthalene	5.85	156	158821	335.97	ng/ml	97
11) Acenaphthylene	6.07	152	259303	322.48	ng/ml	99
12) Acenaphthene	6.21	154	160071	324.41	ng/ml	90
13) Dibenzofuran	6.36	168	252818	360.36	ng/ml	98
14) 2,3,5-Trimethylnaphthalene	6.52	170	213248	453.99	ng/ml	77
16) Fluorene	6.64	166	211975	358.94	ng/ml	93
23) Dibenzothiophene	7.34	184	220940	251.85	ng/ml	93
27) Phenanthrene	7.44	178	311984	329.35	ng/ml	96
28) Anthracene	7.49	178	318035	338.77	ng/ml	98
29) Carbazole	7.66	167	5057	6.60	ng/ml	99
30) 1-Methylphenanthrene	7.94	192	271855	383.60	ng/ml	98
35) Fluoranthene	8.42	202	402381	371.75	ng/ml	99
38) Pyrene	8.62	202	417988	385.39	ng/ml	98
43) Benz(a)anthracene	10.03	228	352125	342.79	ng/ml	99
44) Chrysene	10.09	228	409394	411.98	ng/ml	99
50) Benzo(b)fluoranthene	12.30	252	390550	346.58	ng/ml	99
51) Benzo(k)fluoranthene	12.38	252	429006	395.98	ng/ml	99
52) Benzo(e)pyrene	13.09	252	402304	394.39	ng/ml	100
53) Benzo(a)pyrene	13.26	252	338227	366.01	ng/ml	99
54) Perylene	13.53	252	321593	345.31	ng/ml	98
55) Indeno(1,2,3-cd)pyrene	16.84	276	268639m	331.11	ng/ml	

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

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F011.D Vial: 8
Acq On : 30 Oct 2008 6:32 pm Operator: LWeiskopf
Sample : K0810048-003DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 03 10:52:23 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

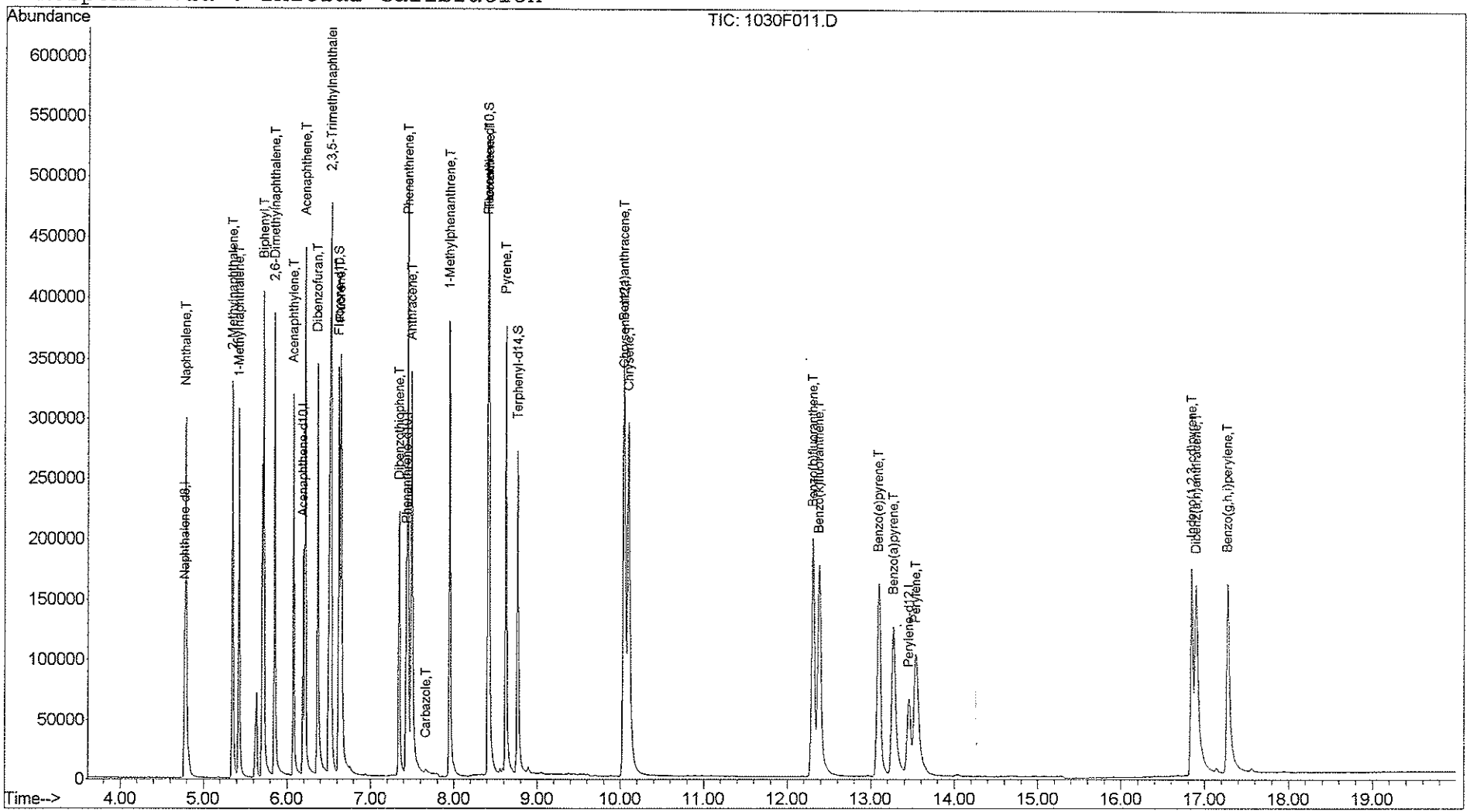
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
56)	Dibenz(a,h)anthracene	16.89	278	343434	406.70	ng/ml	83
57)	Benzo(g,h,i)perylene	17.27	276	351491	377.46	ng/ml	100

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

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F011.D Vial: 8
Acq On : 30 Oct 2008 6:32 pm Operator: LWeiskopf
Sample : K0810048-003DMS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:56 2008 Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration



998

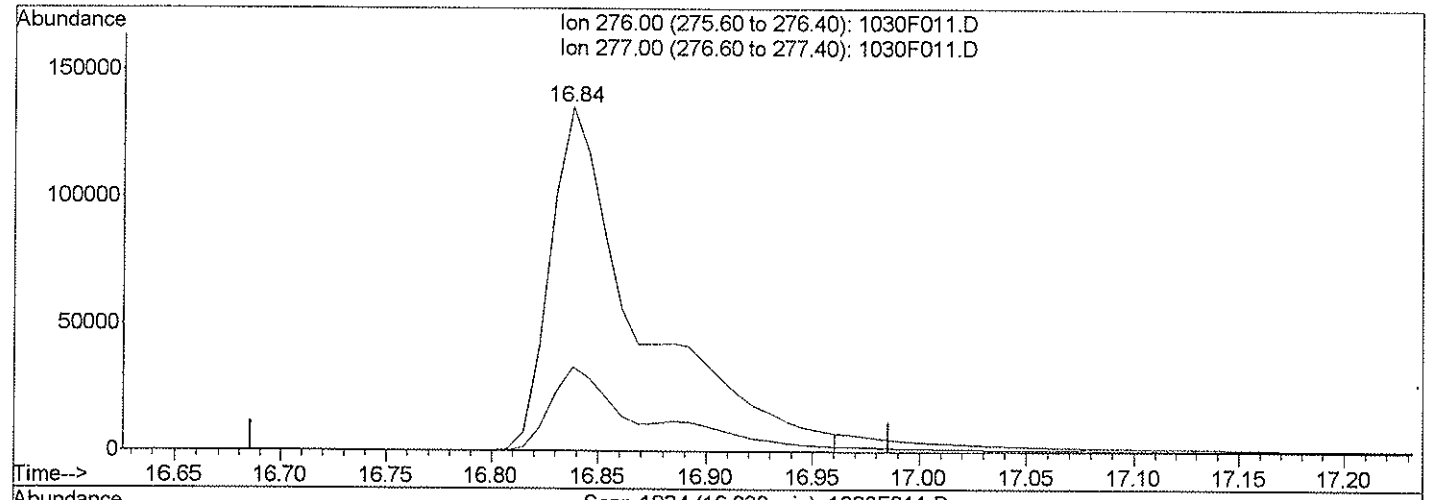
Quantitation Report (Qedit)

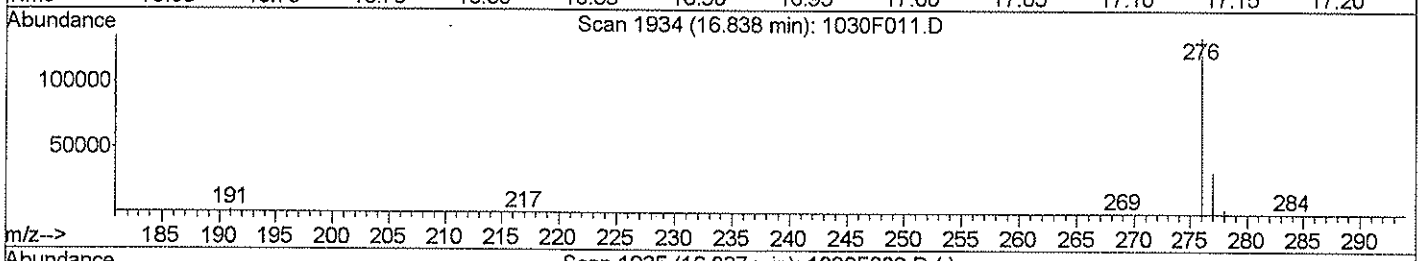
Data File : J:\MS11\DATA\103008\1030F011.D
Acq On : 30 Oct 2008 6:32 pm
Sample : K0810048-003DMS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:56 2008

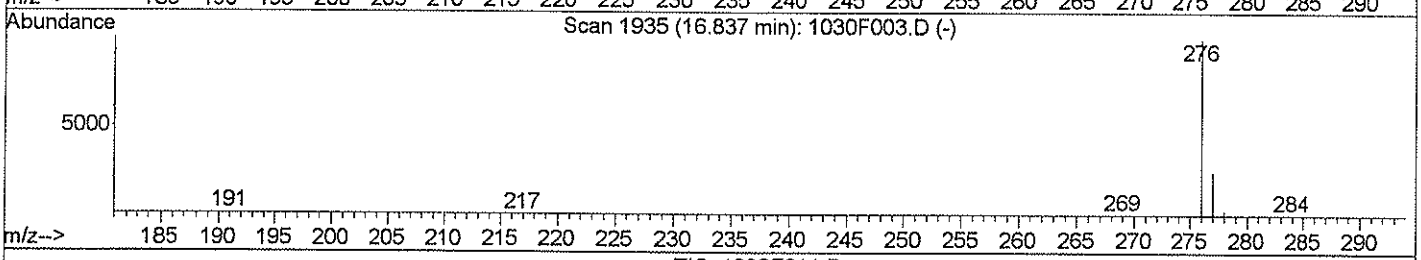
Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Multiple Level Calibration







TIC: 1030F011.D

(55) Indeno(1,2,3-cd)pyrene (T)

16.84min 488.76ng/ml

response 396546

Ion	Exp%	Act%
276.00	100	100
277.00	24.70	24.24
0.00	0.00	0.00
0.00	0.00	0.00

1030F011.D 1001ALK.M Mon Nov 03 10:56:35 2008

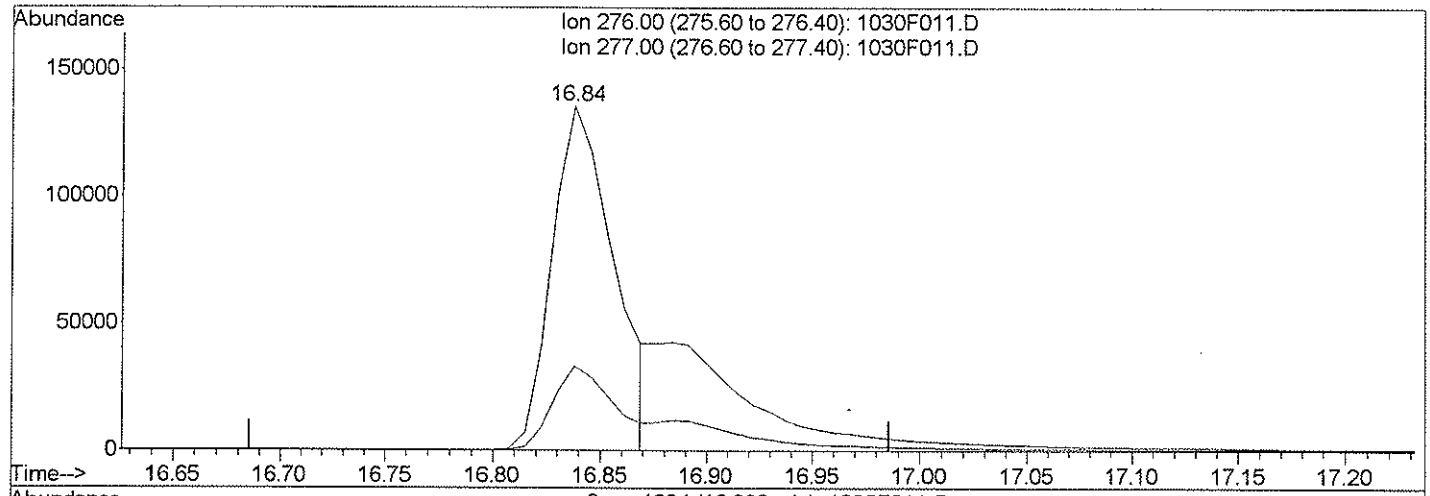
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\103008\1030F011.D
Acq On : 30 Oct 2008 6:32 pm
Sample : K0810048-003DMS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:56 2008

Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Multiple Level Calibration



TIC: 1030F011.D

(55) Indeno(1,2,3-cd)pyrene (T)

16.84min 331.11ng/ml m

response 268639

Ion	Exp%	Act%
276.00	100	100
277.00	24.70	24.35
0.00	0.00	0.00
0.00	0.00	0.00

OI 11/3/18

1030F011.D 1001ALK.M Mon Nov 03 10:56:39 2008

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Results

Client:	GeoEngineers, Inc.	**Service Request:**	K0810000
Project:	Dakota Creek Confirmation Samples/5147-006-04	**Date Collected:**	NA
Sample Matrix:	Soil	**Date Received:**	NA

Polynuclear Aromatic Hydrocarbons

Sample Name:	Lab Control Sample	**Units:**	ug/Kg
Lab Code:	KWG0811327-3	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270C SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**166**		2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
2-Methylnaphthalene	**192**		2.5	0.39	1	10/23/08	10/30/08	KWG0811327	
Acenaphthylene	**173**		2.5	0.24	1	10/23/08	10/30/08	KWG0811327	
Acenaphthene	**174**		2.5	0.23	1	10/23/08	10/30/08	KWG0811327	
Fluorene	**188**		2.5	0.50	1	10/23/08	10/30/08	KWG0811327	
Dibenzofuran	**193**		2.5	0.59	1	10/23/08	10/30/08	KWG0811327	
Phenanthrene	**165**		2.5	0.75	1	10/23/08	10/30/08	KWG0811327	
Anthracene	**174**		2.5	0.47	1	10/23/08	10/30/08	KWG0811327	
Fluoranthene	**181**		2.5	0.61	1	10/23/08	10/30/08	KWG0811327	
Pyrene	**191**		2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
Benzo(b)fluoranthene	**180**		2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(k)fluoranthene	**206**		2.5	0.15	1	10/23/08	10/30/08	KWG0811327	
Benz(a)anthracene	**179**		2.5	0.48	1	10/23/08	10/30/08	KWG0811327	
Chrysene	**212**		2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(a)pyrene	**197**		2.5	0.14	1	10/23/08	10/30/08	KWG0811327	
Indeno(1,2,3-cd)pyrene	**193**		2.5	0.16	1	10/23/08	10/30/08	KWG0811327	
Dibenz(a,h)anthracene	**228**		2.5	0.28	1	10/23/08	10/30/08	KWG0811327	
Benzo(g,h,i)perylene	**202**		2.5	0.64	1	10/23/08	10/30/08	KWG0811327	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	75	10-128	10/30/08	Acceptable
Fluoranthene-d10	74	29-121	10/30/08	Acceptable
Terphenyl-d14	82	24-141	10/30/08	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\103008\1030F006.D
Lab ID: KWG0811327-3
RunType: LCS
Matrix: SOIL

Date Acquired: 10/30/2008 16:20
Date Quantitated: 11/03/2008 10:54
Batch ID: KWG0811762
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K 10 000

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Pentachlorophenol	-31.6	NA	20	NT
Surrogates	2,4,6-Tribromophenol	0	12	152	+
	Terphenyl-d14	205	24	141	OK
	Fluorene-d10	187	10	128	I
	Fluoranthene-d10	184	29	121	I

Primary Review: 11/3/08
Secondary Review: 11·3·8

Printed: 11/03/2008 11:40:14
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8270C SIM PAH_S	**Collect Date:**		**Receive Date:**	10/29/2008

Analysis Lot:	KWG0811762	**Prep Lot:**	KWG0811327	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	771037	**Prep Date:**	10/23/2008		

Quant Method:	J:\MS11\METHODS\SIM\1001ALK.M	**Calibration ID:**	CAL7814
Title:			
Tune Ref:	J:\MS11\DATA\103008\1030F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\103008\1030F005.D	**Quant based on Method**	

Data File:	J:\MS11\DATA\103008\1030F006.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 16:20	**Quant Date:**	11/03/2008 10:54	**Vial:**	3
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG0811327-3			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.77	0.00	136	176882	200.00	OK
2	Acenaphthene-d10	6.19	0.00	164	102452	200.00	OK
3	Phenanthrene-d10	7.42	0.00	188	193851	200.00	OK
4	Chrysene-d12	10.05	0.00	240	214990	200.00	OK
5	Perylene-d12	13.46	0.01	264	228858	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.62	0.00	0.00	176	270863	374.27	187 75	10-128	*	
2	2,4,6-Tribromophenol			0.00	330	0d		0	12-152	*	
3	Fluoranthene-d10	8.40	0.00	0.00	212	506537	367.64	184 74	29-121	*	
4	Terphenyl-d14	8.76	0.00	0.00	244	459184	410.92	205 82	24-141	*	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.79	0.01	0.00	128	330640	332.35	166		
1	2-Methylnaphthalene	5.34		0.00	142	261546	383.49	192		
1	1-Methylnaphthalene	5.42		0.00	142	236660	391.93	196		
1	Biphenyl	5.72	0.01	0.00	154	297932	362.93	181		
1	2,6-Dimethylnaphthalene	5.85	0.01	0.00	156	225666	372.56	186		
1	C2-Naphthalenes				156	0		5.0	U	
1	C3-Naphthalenes				170	0		5.0	U	
1	C4-Naphthalenes				184	0		5.0	U	
2	Acenaphthylene	6.07		0.00	152	359185	346.60	173		
2	Acenaphthene	6.21		0.00	154	221905	348.95	174		
2	Dibenzofuran	6.36		0.00	168	349381	386.40	193		
2	2,3,5-Trimethylnaphthalene	6.52		0.00	170	238043	393.21	197		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\103008\1030F006.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 16:20	**Quant Date:**	11/03/2008 10:54	**Vial:**	3
Run Type:	LCS			**Dilution:**	1.0
Lab ID:	KWG0811327-3			**Soln Conc. Units:**	ng/ml

Target Compounds — **Final Conc. Units:** ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	6.64		0.00	166	285856	375.58	188		
2	C1-Fluorenes				180	0		5.0	U	
2	C2-Fluorenes				194	0		5.0	U	
2	C3-Fluorenes				208	0		5.0	U	
2	Pentachlorophenol				266	0d		2.9	U	
3	Dibenzothiophene	7.34	0.01	0.00	184	269961	233.46	117		
3	C1-Dibenzothiophenes				198	0		5.0	U	
3	C2-Dibenzothiophenes				212	0		5.0	U	
3	C3-Dibenzothiophenes				226	0		5.0	U	
3	Phenanthrene	7.44		0.00	178	411701	329.72	165		
3	Anthracene	7.49		0.00	178	430494	347.89	174		
3	Carbazole				167	0d		2.3	U	
3	1-Methylphenanthrene	7.94		0.00	192	354988	380.00	190		
3	C1-Phenanthrenes/Anthracenes				192	0		5.0	U	
3	C2-Phenanthrenes/Anthracenes				206	0		5.0	U	
3	C3-Phenanthrenes/Anthracenes				220	0		5.0	U	
3	C4-Phenanthrenes/Anthracenes				234	0		5.0	U	
3	Fluoranthene	8.42		0.00	202	516132	361.75	181		
4	Pyrene	8.62		0.00	202	537044	381.82	191		
4	C1-Fluoranthenes/Pyrenes				216	0		5.0	U	
4	C2-Fluoranthenes/Pyrenes				230	0		5.0	U	
4	C3-Fluoranthenes/Pyrenes				244	0		5.0	U	
4	Benz(a)anthracene	10.03		0.00	228	478192	358.97	179		
4	Chrysene	10.09		0.00	228	546961	424.44	212		
4	C1-Chrysenes				242	0		5.0	U	
4	C2-Chrysenes				256	0		5.0	U	
4	C3-Chrysenes				270	0		5.0	U	
4	C4-Chrysenes				284	0		5.0	U	
5	Benzo(b)fluoranthene	12.30	-0.01	0.00	252	531268	360.50	180		
5	Benzo(k)fluoranthene	12.38		0.00	252	584900	412.82	206		
5	Benzo(e)pyrene	13.09		0.00	252	550483	412.65	206		
5	Benzo(a)pyrene	13.26	-0.01	0.00	252	476840	394.56	197		
5	Perylene	13.54		0.00	252	443963	364.52	182		
5	Indeno(1,2,3-cd)pyrene	16.84		0.00	276	408965	385.44	193		
5	Dibenz(a,h)anthracene	16.89		0.00	278	503887	456.28	228		
5	Benzo(g,h,i)perylene	17.26		0.00	276	491912	403.93	202		

Prep Amount:	20.00 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F006.D
Acq On : 30 Oct 2008 4:20 pm
Sample : KWG0811327-3 LCS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 03 10:52:14 2008

Vial: 3
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.77	136	176882	200.00	ng/ml	-0.01
10) Acenaphthene-d10	6.19	164	102452	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.42	188	193851	200.00	ng/ml	0.00
37) Chrysene-d12	10.05	240	214990	200.00	ng/ml	0.00
49) Perylene-d12	13.46	264	228858	200.00	ng/ml	0.00
System Monitoring Compounds						
15) Fluorene-d10	6.62	176	270863	374.27	ng/ml	0.00
Spiked Amount 200.000			Recovery =	187.13%		
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery =	0.00%		
36) Fluoranthene-d10	8.40	212	506537	367.64	ng/ml	0.00
Spiked Amount 200.000			Recovery =	183.82%		
42) Terphenyl-d14	8.76	244	459184	410.92	ng/ml	0.00
Spiked Amount 200.000			Recovery =	205.46%		
Target Compounds						Qvalue
2) Naphthalene	4.79	128	330640	332.35	ng/ml	97
3) 2-Methylnaphthalene	5.34	142	261546	383.49	ng/ml	95
4) 1-Methylnaphthalene	5.42	142	236660	391.93	ng/ml	91
5) Biphenyl	5.72	154	297932	362.93	ng/ml	96
6) 2,6-Dimethylnaphthalene	5.85	156	225666	372.56	ng/ml	96
11) Acenaphthylene	6.07	152	359185	346.60	ng/ml	98
12) Acenaphthene	6.21	154	221905	348.95	ng/ml	98
13) Dibenzofuran	6.36	168	349381	386.40	ng/ml	84
14) 2,3,5-Trimethylnaphthalene	6.52	170	238043	393.21	ng/ml	99
16) Fluorene	6.64	166	285856	375.58	ng/ml	96
23) Dibenzothiophene	7.34	184	269961	233.46	ng/ml	91
27) Phenanthrene	7.44	178	411701	329.72	ng/ml	96
28) Anthracene	7.49	178	430494	347.89	ng/ml	98
30) 1-Methylphenanthrene	7.94	192	354988	380.00	ng/ml	95
35) Fluoranthene	8.42	202	516132	361.75	ng/ml	99
38) Pyrene	8.62	202	537044	381.82	ng/ml	99
43) Benz(a)anthracene	10.03	228	478192	358.97	ng/ml	99
44) Chrysene	10.09	228	546961	424.44	ng/ml	99
50) Benzo(b)fluoranthene	12.30	252	531268	360.50	ng/ml	99
51) Benzo(k)fluoranthene	12.38	252	584900	412.82	ng/ml	99
52) Benzo(e)pyrene	13.09	252	550483	412.65	ng/ml	99
53) Benzo(a)pyrene	13.26	252	476840	394.56	ng/ml	99
54) Perylene	13.54	252	443963	364.52	ng/ml	100
55) Indeno(1,2,3-cd)pyrene	16.84	276	408965	385.44	ng/ml	99
56) Dibenz(a,h)anthracene	16.89	278	503887	456.28	ng/ml	86

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

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F006.D
Acq On : 30 Oct 2008 4:20 pm
Sample : KWG0811327-3 LCS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 03 10:52:14 2008

Vial: 3
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
57) Benzo(g,h,i)perylene	17.26	276	491912	403.93	ng/ml	100

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

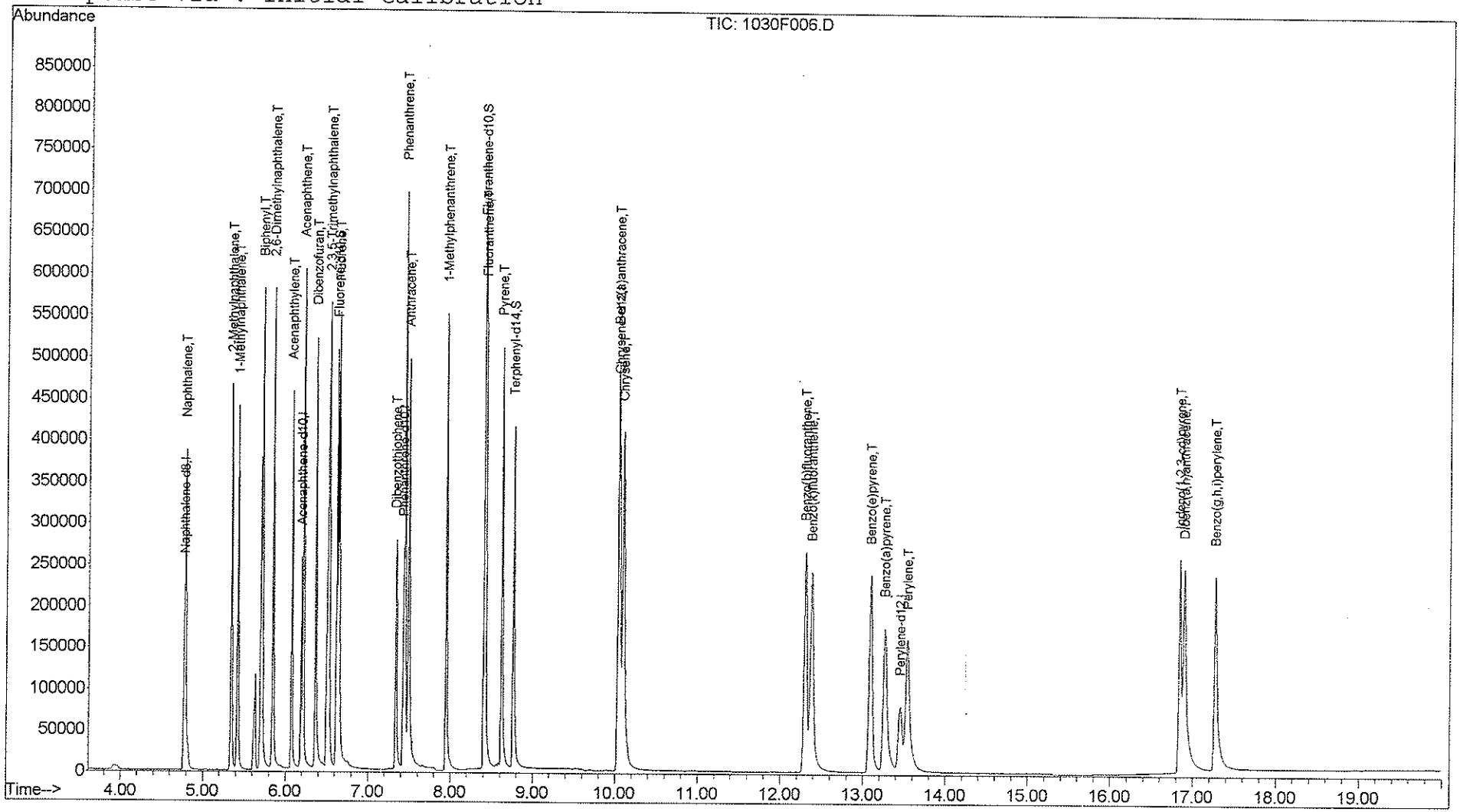
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F006.D
Acq On : 30 Oct 2008 4:20 pm
Sample : KWG0811327-3 LCS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:54 2008

Vial: 3
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration



875

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04
Sample Matrix: Soil

Service Request: K0810000
Date Collected: NA
Date Received: NA

Polynuclear Aromatic Hydrocarbons

Sample Name: Duplicate Lab Control Sample
Lab Code: KWG0811327-4

Units: ug/Kg
Basis: Dry

Extraction Method: EPA 3541
Analysis Method: 8270C SIM

Level: Low

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**173**		2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
2-Methylnaphthalene	**197**		2.5	0.39	1	10/23/08	10/30/08	KWG0811327	
Acenaphthylene	**177**		2.5	0.24	1	10/23/08	10/30/08	KWG0811327	
Acenaphthene	**182**		2.5	0.23	1	10/23/08	10/30/08	KWG0811327	
Fluorene	**199**		2.5	0.50	1	10/23/08	10/30/08	KWG0811327	
Dibenzofuran	**201**		2.5	0.59	1	10/23/08	10/30/08	KWG0811327	
Phenanthrene	**175**		2.5	0.75	1	10/23/08	10/30/08	KWG0811327	
Anthracene	**189**		2.5	0.47	1	10/23/08	10/30/08	KWG0811327	
Fluoranthene	**195**		2.5	0.61	1	10/23/08	10/30/08	KWG0811327	
Pyrene	**199**		2.5	0.37	1	10/23/08	10/30/08	KWG0811327	
Benzo(b)fluoranthene	**191**		2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(k)fluoranthene	**211**		2.5	0.15	1	10/23/08	10/30/08	KWG0811327	
Benz(a)anthracene	**184**		2.5	0.48	1	10/23/08	10/30/08	KWG0811327	
Chrysene	**214**		2.5	0.25	1	10/23/08	10/30/08	KWG0811327	
Benzo(a)pyrene	**200**		2.5	0.14	1	10/23/08	10/30/08	KWG0811327	
Indeno(1,2,3-cd)pyrene	**188**		2.5	0.16	1	10/23/08	10/30/08	KWG0811327	
Dibenz(a,h)anthracene	**218**		2.5	0.28	1	10/23/08	10/30/08	KWG0811327	
Benzo(g,h,i)perylene	**196**		2.5	0.64	1	10/23/08	10/30/08	KWG0811327	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	86	10-128	10/30/08	Acceptable
Fluoranthene-d10	84	29-121	10/30/08	Acceptable
Terphenyl-d14	91	24-141	10/30/08	Acceptable

Comments:

Exception Report

Data File: J:\MS11\DATA\103008\1030F007.D
Lab ID: KWG0811327-4
RunType: DLCS
Matrix: SOIL

Date Acquired: 10/30/2008 16:47
Date Quantitated: 11/03/2008 10:55
Batch ID: KWG0811762
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA		x
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

K 10000

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Continuing Calibration Recovery	Pentachlorophenol	-31.6	NA	20	MI
Surrogates	2,4,6-Tribromophenol	0	12	152	I
	Terphenyl-d14	228	24	141	QC
	Fluorene-d10	214	10	128	I
	Fluoranthene-d10	209	29	121	I

Primary Review: 11/3/08
Secondary Review: 11.3.8

Printed: 11/03/2008 11:40:18
u:\Stealth\Crystal.rpt\except2.rpt

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8270C SIM PAH_S	**Collect Date:**		**Receive Date:**	10/29/2008

Analysis Lot:	KWG0811762	**Prep Lot:**	KWG0811327	**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**	EPA 3541		
Prep Ref:	771038	**Prep Date:**	10/23/2008		

Quant Method:	J:\MS11\METHODS\SIM\1001ALK.M	**Calibration ID:**	CAL7814
Title:			
Tune Ref:	J:\MS11\DATA\103008\1030F001.D	**Method ID:**	MJ139
MB Ref:	J:\MS11\DATA\103008\1030F005.D	**Quant based on Method**	

Data File:	J:\MS11\DATA\103008\1030F007.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 16:47	**Quant Date:**	11/03/2008 10:55	**Vial:**	4
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG0811327-4			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.77	0.00	136	159531	200.00	OK
2	Acenaphthene-d10	6.19	0.00	164	92589	200.00	OK
3	Phenanthrene-d10	7.42	0.00	188	177046	200.00	OK
4	Chrysene-d12	10.05	0.00	240	201045	200.00	OK
5	Perylene-d12	13.45	0.00	264	207964	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.62	0.00	0.00	176	279999	428.10	214 86	10-128	*	
2	2,4,6-Tribromophenol			0.00	330	0d		0	12-152	*	
3	Fluoranthene-d10	8.40	0.00	0.00	212	525582	417.67	209 84	29-121	*	
4	Terphenyl-d14	8.76	0.00	0.00	244	476016	455.53	228 91	24-141	*	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.78		0.00	128	310138	345.65	173		
1	2-Methylnaphthalene	5.34		0.00	142	242950	394.97	197		
1	1-Methylnaphthalene	5.42		0.00	142	222851	409.20	205		
1	Biphenyl	5.72	0.01	0.00	154	275063	371.52	186		
1	2,6-Dimethylnaphthalene	5.85	0.01	0.00	156	207896	380.55	190		
1	C2-Naphthalenes				156	0		5.0	U	
1	C3-Naphthalenes				170	0		5.0	U	
1	C4-Naphthalenes				184	0		5.0	U	
2	Acenaphthylene	6.07		0.00	152	331331	353.78	177		
2	Acenaphthene	6.21		0.00	154	208901	363.49	182		
2	Dibenzofuran	6.36		0.00	168	329181	402.84	201		
2	2,3,5-Trimethylnaphthalene	6.52		0.00	170	259227	473.82	237		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
e: check for co-elution

Data File:	J:\MS11\DATA\103008\1030F007.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 16:47	**Quant Date:**	11/03/2008 10:55	**Vial:**	4
Run Type:	DLCS			**Dilution:**	1.0
Lab ID:	KWG0811327-4			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
2	Fluorene	6.64		0.00	166	274244	398.70	199		
2	C1-Fluorenes				180	0		5.0	U	
2	C2-Fluorenes				194	0		5.0	U	
2	C3-Fluorenes				208	0		5.0	U	
2	Pentachlorophenol				266	0d		2.9	U	
3	Dibenzothiophene	7.34	0.01	0.00	184	268527	254.26	127		
3	C1-Dibenzothiophenes				198	0		5.0	U	
3	C2-Dibenzothiophenes				212	0		5.0	U	
3	C3-Dibenzothiophenes				226	0		5.0	U	
3	Phenanthrene	7.44		0.00	178	398916	349.80	175		
3	Anthracene	7.49		0.00	178	427837	378.56	189		
3	Carbazole	7.64	0.01	0.00	167	85113	92.29	46.1		
3	1-Methylphenanthrene	7.94		0.00	192	348664	408.66	204		
3	C1-Phenanthrenes/Anthracenes				192	0		5.0	U	
3	C2-Phenanthrenes/Anthracenes				206	0		5.0	U	
3	C3-Phenanthrenes/Anthracenes				220	0		5.0	U	
3	C4-Phenanthrenes/Anthracenes				234	0		5.0	U	
3	Fluoranthene	8.42		0.00	202	507717	389.63	195		
4	Pyrene	8.62		0.00	202	523674	398.14	199		
4	C1-Fluoranthenes/Pyrenes				216	0		5.0	U	
4	C2-Fluoranthenes/Pyrenes				230	0		5.0	U	
4	C3-Fluoranthenes/Pyrenes				244	0		5.0	U	
4	Benz(a)anthracene	10.03		0.00	228	458790	368.29	184		
4	Chrysene	10.09		0.00	228	516740	428.80	214		
4	C1-Chrysenes				242	0		5.0	U	
4	C2-Chrysenes				256	0		5.0	U	
4	C3-Chrysenes				270	0		5.0	U	
4	C4-Chrysenes				284	0		5.0	U	
5	Benzo(b)fluoranthene	12.30	-0.01	0.00	252	511876	382.24	191		
5	Benzo(k)fluoranthene	12.37	-0.01	0.00	252	543448	422.10	211		
5	Benzo(e)pyrene	13.09		0.00	252	522727	431.21	216		
5	Benzo(a)pyrene	13.26	-0.01	0.00	252	438374	399.18	200		
5	Perylene	13.53	-0.01	0.00	252	387887	350.47	175		
5	Indeno(1,2,3-cd)pyrene	16.84		0.00	276	362661m	376.14	188		
5	Dibenz(a,h)anthracene	16.90	0.01	0.00	278	437957	436.42	218		
5	Benzo(g,h,i)perylene	17.26		0.00	276	433803	392.00	196		

Prep Amount:	20.00 g	**Dilution:**	1.0
Prep Final Vol:	10 ml	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F007.D Vial: 4
Acq On : 30 Oct 2008 4:47 pm Operator: LWeiskopf
Sample : KWG0811327-4 DLCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 03 10:52:16 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.77	136	159531	200.00	ng/ml	-0.01
10) Acenaphthene-d10	6.19	164	92589	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.42	188	177046	200.00	ng/ml	0.00
37) Chrysene-d12	10.05	240	201045	200.00	ng/ml	0.00
49) Perylene-d12	13.45	264	207964	200.00	ng/ml	0.00
System Monitoring Compounds						
15) Fluorene-d10	6.62	176	279999	428.10	ng/ml	0.00
Spiked Amount 200.000			Recovery =	214.05%		
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery =	0.00%		
36) Fluoranthene-d10	8.40	212	525582	417.67	ng/ml	0.00
Spiked Amount 200.000			Recovery =	208.84%		
42) Terphenyl-d14	8.76	244	476016	455.53	ng/ml	0.00
Spiked Amount 200.000			Recovery =	227.76%		
Target Compounds						Qvalue
2) Naphthalene	4.78	128	310138	345.65	ng/ml	97
3) 2-Methylnaphthalene	5.34	142	242950	394.97	ng/ml	97
4) 1-Methylnaphthalene	5.42	142	222851	409.20	ng/ml	91
5) Biphenyl	5.72	154	275063	371.52	ng/ml	96
6) 2,6-Dimethylnaphthalene	5.85	156	207896	380.55	ng/ml	96
11) Acenaphthylene	6.07	152	331331	353.78	ng/ml	99
12) Acenaphthene	6.21	154	208901	363.49	ng/ml	98
13) Dibenzofuran	6.36	168	329181	402.84	ng/ml	87
14) 2,3,5-Trimethylnaphthalene	6.52	170	259227	473.82	ng/ml	87
16) Fluorene	6.64	166	274244	398.70	ng/ml	97
23) Dibenzothiophene	7.34	184	268527	254.26	ng/ml	92
27) Phenanthrene	7.44	178	398916	349.80	ng/ml	96
28) Anthracene	7.49	178	427837	378.56	ng/ml	98
29) Carbazole	7.64	167	85113	92.29	ng/ml	99
30) 1-Methylphenanthrene	7.94	192	348664	408.66	ng/ml	94
35) Fluoranthene	8.42	202	507717	389.63	ng/ml	98
38) Pyrene	8.62	202	523674	398.14	ng/ml	98
43) Benz(a)anthracene	10.03	228	458790	368.29	ng/ml	99
44) Chrysene	10.09	228	516740	428.80	ng/ml	99
50) Benzo(b)fluoranthene	12.30	252	511876	382.24	ng/ml	99
51) Benzo(k)fluoranthene	12.37	252	543448	422.10	ng/ml	100
52) Benzo(e)pyrene	13.09	252	522727	431.21	ng/ml	99
53) Benzo(a)pyrene	13.26	252	438374	399.18	ng/ml	99
54) Perylene	13.53	252	387887	350.47	ng/ml	99
55) Indeno(1,2,3-cd)pyrene	16.84	276	362661m	376.14	ng/ml	

(#) = qualifier out of range (m) = manual integration
1030F007.D 1001ALK.M Mon Nov 03 10:57:13 2008 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F007.D Vial: 4
Acq On : 30 Oct 2008 4:47 pm Operator: LWeiskopf
Sample : KWG0811327-4 DLCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 03 10:52:16 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

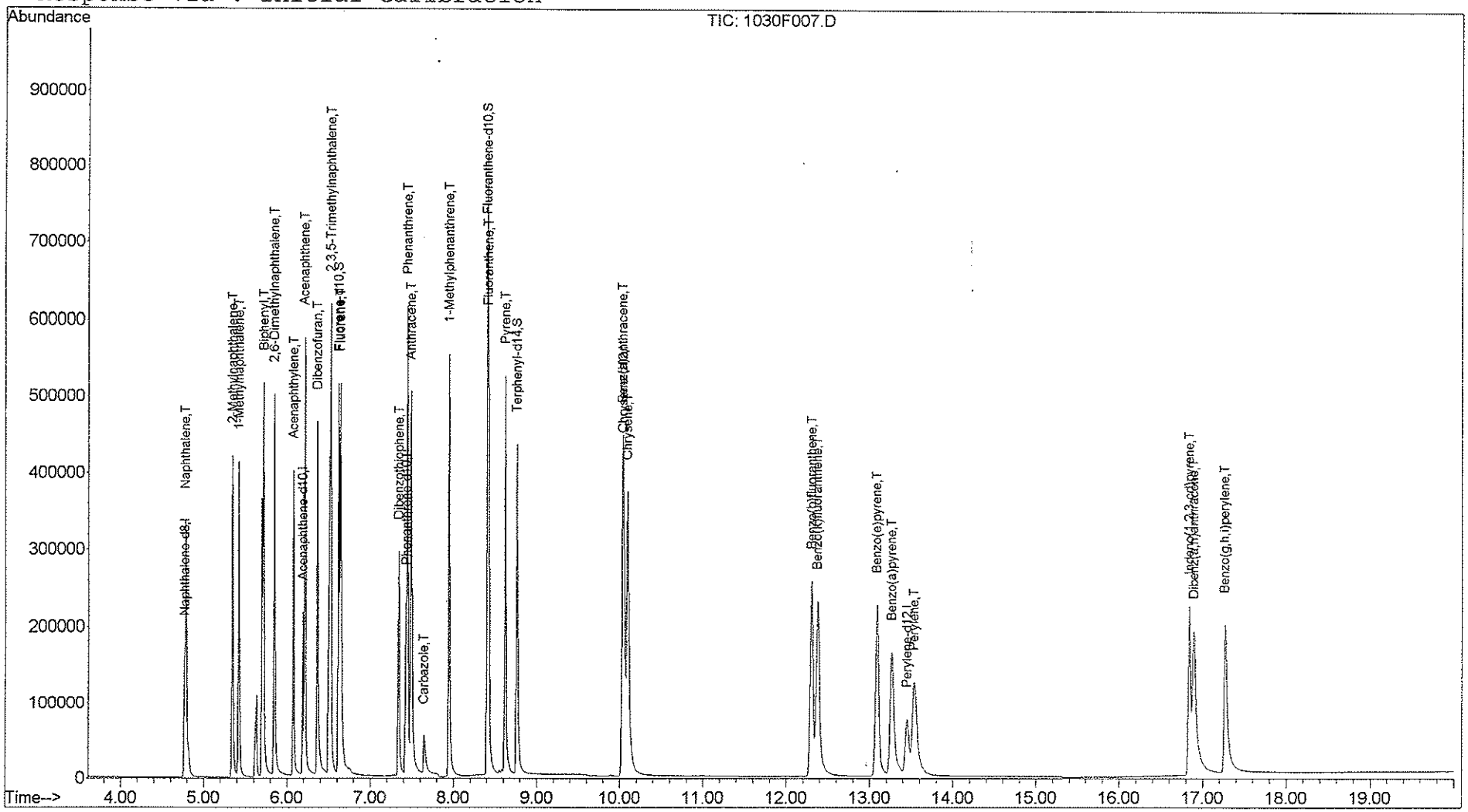
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
56)	Dibenz(a,h)anthracene	16.90	278	437957	436.42	ng/ml	88
57)	Benzo(g,h,i)perylene	17.26	276	433803	392.00	ng/ml	100

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

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F007.D Vial: 4
Acq On : 30 Oct 2008 4:47 pm Operator: LWeiskopf
Sample : KWG0811327-4 DLCS Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:55 2008 Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration



882

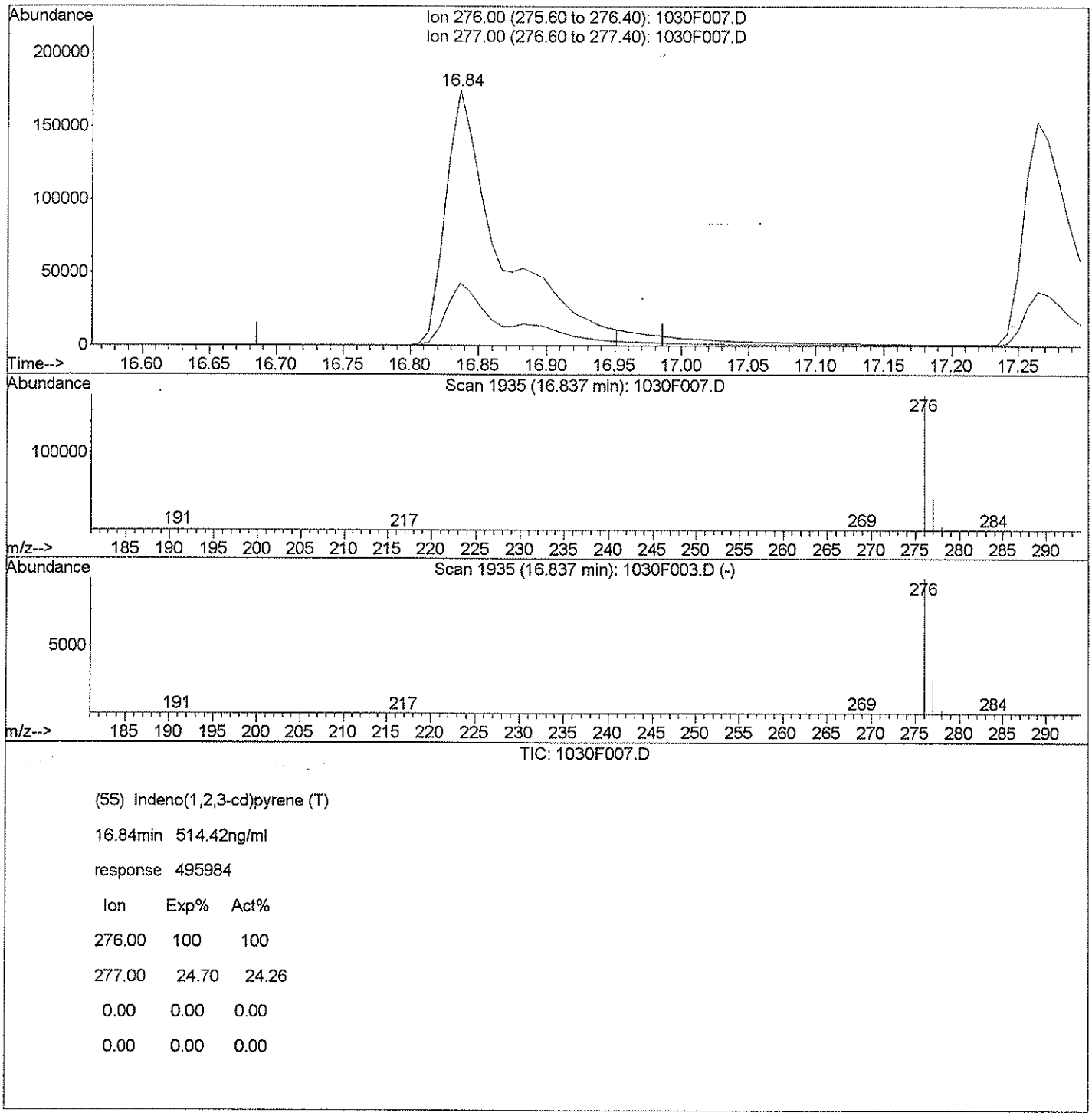
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\103008\1030F007.D
Acq On : 30 Oct 2008 4:47 pm
Sample : KWG0811327-4 DLCS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:55 2008

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Multiple Level Calibration



TIC: 1030F007.D

(55) Indeno(1,2,3-cd)pyrene (T)

16.84min 514.42ng/ml

response 495984

Ion	Exp%	Act%
276.00	100	100
277.00	24.70	24.26
0.00	0.00	0.00
0.00	0.00	0.00

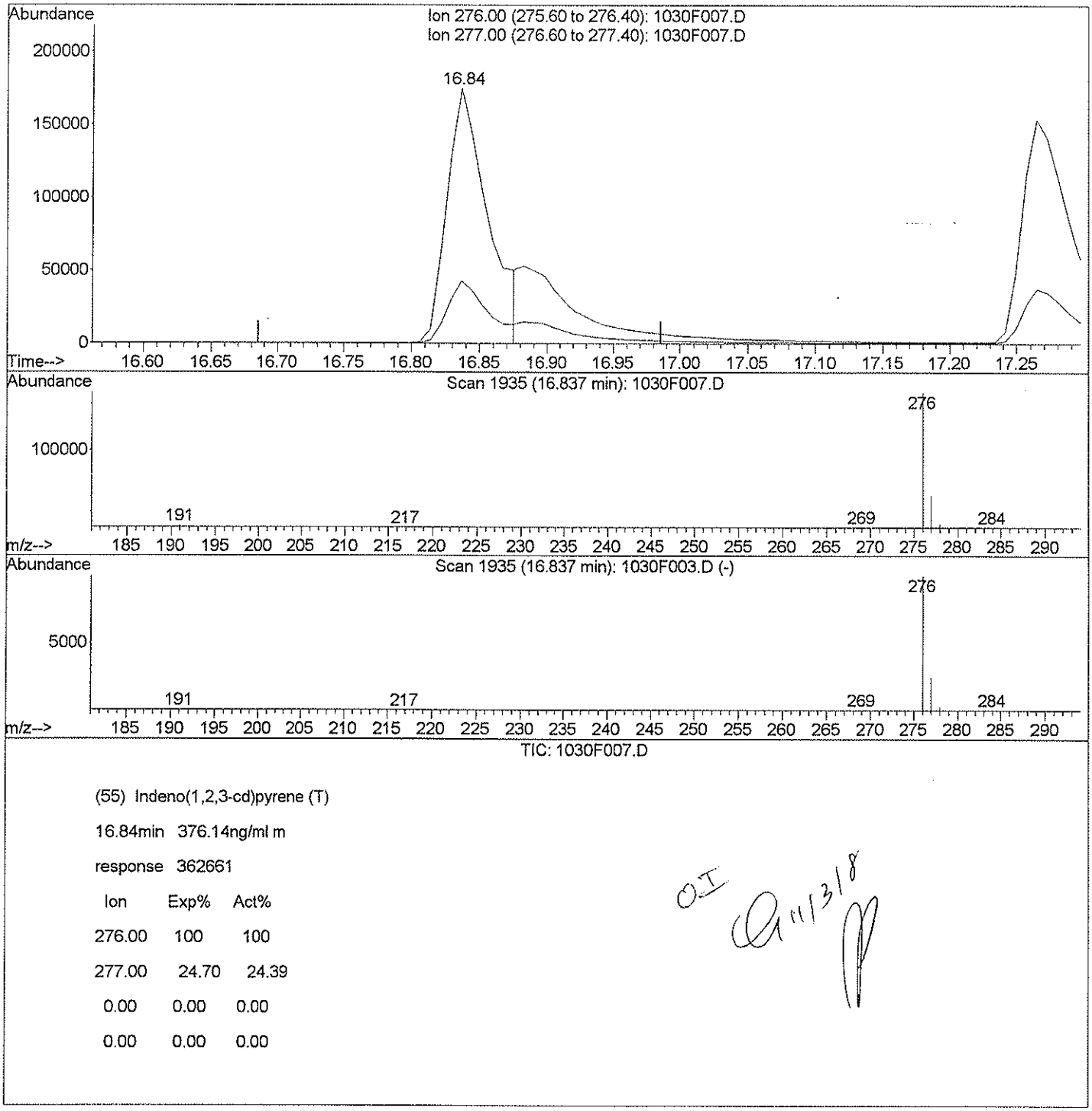
1030F007.D 1001ALK.M Mon Nov 03 10:55:18 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\103008\1030F007.D
Acq On : 30 Oct 2008 4:47 pm
Sample : KWG0811327-4 DLCS
Misc :
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:55 2008

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Multiple Level Calibration



TIC: 1030F007.D

(55) Indeno(1,2,3-cd)pyrene (T)

16.84min 376.14ng/ml m

response 362661

Ion	Exp%	Act%
276.00	100	100
277.00	24.70	24.39
0.00	0.00	0.00
0.00	0.00	0.00

OI 11/3/8

1030F007.D 1001ALK.M Mon Nov 03 10:55:22 2008

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

Standards Data

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/30/2008
Time Analyzed: 14:07

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS11\DATA\103008\1030F001.D
Instrument ID: MS11
Column:

Analysis Method: 8270C SIM
Analysis Lot: KWG0811762

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	52.8	419456	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	43.2	343488	PASS
70	69	0	2	0.6	2118	PASS
127	198	10	80	54.2	430528	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	57.0	794304	PASS
199	198	5	9	7.2	56840	PASS
275	198	10	60	35.9	284864	PASS
365	442	1	50	6.2	86952	PASS
441	443	0	100	73.1	203776	PASS
442	442	100	100	100.0	1392640	PASS
443	442	15	24	20.0	278592	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG0811762-2	J:\MS11\DATA\103008\1030F003.D	10/30/2008	15:00	
Method Blank	KWG0811327-5	J:\MS11\DATA\103008\1030F005.D	10/30/2008	15:54	
Lab Control Sample	KWG0811327-3	J:\MS11\DATA\103008\1030F006.D	10/30/2008	16:20	
Duplicate Lab Control Sample	KWG0811327-4	J:\MS11\DATA\103008\1030F007.D	10/30/2008	16:47	
Batch QCMS	KWG0811327-1	J:\MS11\DATA\103008\1030F010.D	10/30/2008	18:06	
Batch QCDMS	KWG0811327-2	J:\MS11\DATA\103008\1030F011.D	10/30/2008	18:32	
Batch QC	K0810048-003	J:\MS11\DATA\103008\1030F012.D	10/30/2008	18:59	
DCI 4-1	K0810000-001	J:\MS11\DATA\103008\1030F013.D	10/30/2008	19:25	
DCI 4-1a	K0810000-002	J:\MS11\DATA\103008\1030F014.D	10/30/2008	19:52	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Exception Report

Data File: J:\MS11\DATA\103008\1030F001.D
Lab ID: KWG0811762-1
RunType: DFTPP
Matrix: WATER

Date Acquired: 10/30/2008 14:07
Date Quantitated:
Batch ID: KWG0811762
Analysis Method: 8270C SIM
ListJoinID: LJ5442

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: 11/3/8

Secondary Review: 11·3·8

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270C SIM	**Collect Date:**		**Receive Date:**	11/03/2008

Analysis Lot:	KWG0811762	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\DFTPPPAH.M	**Calibration ID:**	CAL7814
Title:		**Report List ID:**	LJ1965
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Data File:	J:\MS11\DATA\103008\1030F001.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 14:07	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP			**Dilution:**	1.0
Lab ID:	KWG0811762-1			**Soln Conc. Units:**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	52.8	419456	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	43.2	343488	Pass
70	69	0	2	0.6	2118	Pass
127	198	10	80	54.2	430528	Pass
197	198	0	2	0.0	0	Pass
198	442	30	100	57.0	794304	Pass
199	198	5	9	7.2	56840	Pass
275	198	10	60	35.9	284864	Pass
365	442	1	50	6.2	86952	Pass
441	443	0.01	100	73.1	203776	Pass
442	442	100	100	100.0	1392640	Pass
443	442	15	24	20.0	278592	Pass

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

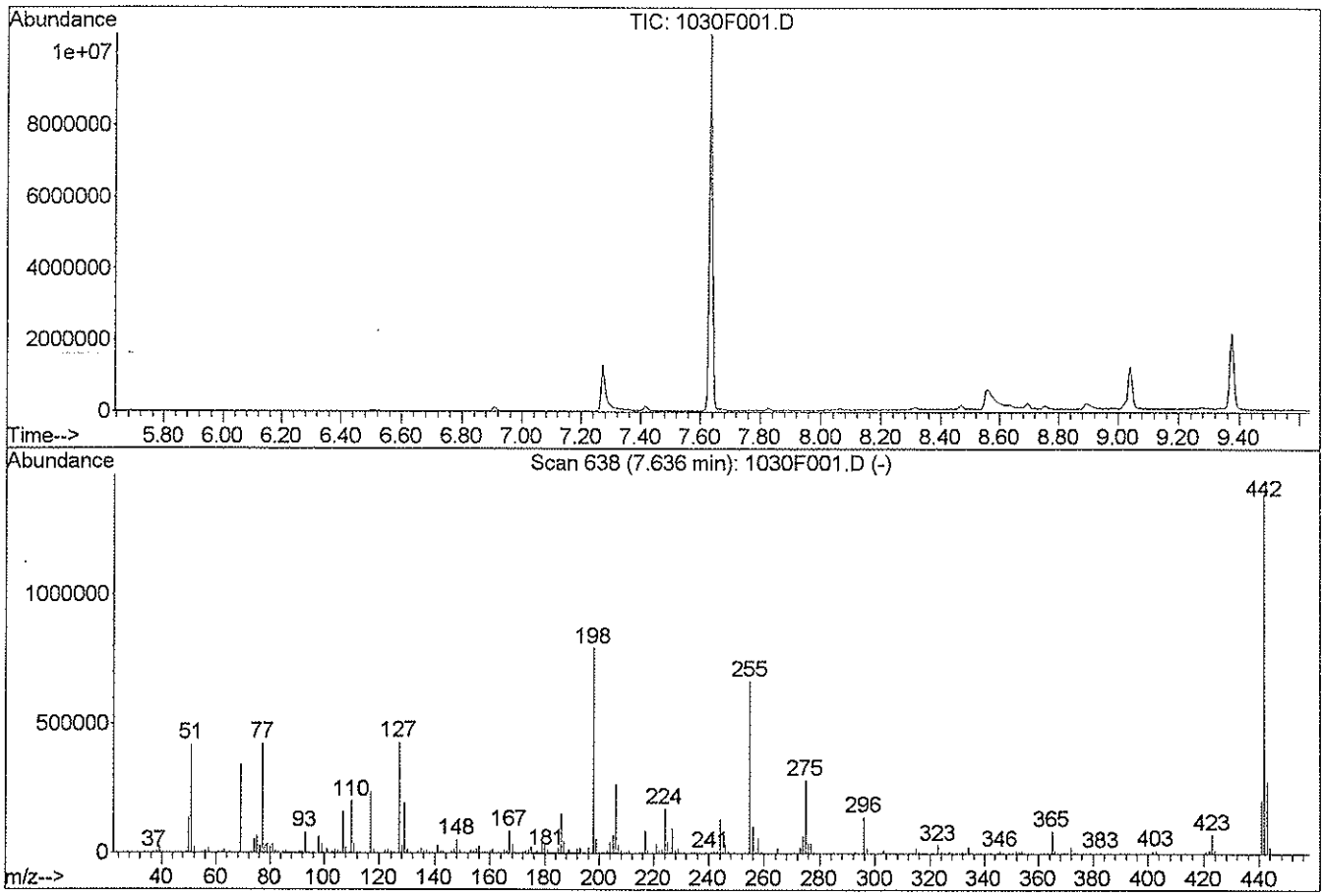
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

DFTPP

Data File : J:\MS11\DATA\103008\1030F001.D
Acq On : 30 Oct 2008 2:07 pm
Sample : DFTPP @ 3.0ug/mL | SVM27-37E
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS

Vial: 1
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00



Spectrum Information: Scan 638

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	52.8	419456	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	0.6	2118	PASS
127	198	10	80	54.2	430528	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	57.0	794304	PASS
199	198	5	9	7.2	56840	PASS
275	198	10	60	35.9	284864	PASS
365	442	1	50	6.2	86952	PASS
441	443	0.01	100	73.1	203776	PASS
442	442	30	100	100.0	1392640	PASS
443	442	15	24	20.0	278592	PASS

1030F001.D DFTPPPAH.M Mon Nov 03 10:51:11 2008

Scan 638 (7.636 min): 1030F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.90	205	49.05	5031	58.80	635	73.05	4807
37.10	3028	50.10	139584	60.00	585	74.10	53144
38.20	7831	51.05	419456	61.00	5080	75.00	65295
39.10	27974	52.10	23176	62.10	6260	76.10	27936
40.10	2043	53.10	1318	63.10	14068	77.10	424642
41.10	616	53.90	821	64.10	2367	78.00	30960
42.10	116	54.20	580	65.10	5428	79.00	35152
43.10	1008	55.10	2175	65.90	563	80.00	24352
44.10	505	56.00	10818	67.10	245	81.00	34807
47.00	1367	57.10	20497	69.00	343488	82.00	9569
47.90	896	58.00	1350	69.90	2118	82.95	6555

Scan 638 (7.636 min): 1030F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
84.05	1053	96.00	1965	108.00	22064	120.90	1201
85.00	4842	98.00	64144	110.00	202048	122.00	11726
85.95	11670	99.00	35057	111.00	37488	123.00	15658
86.95	4657	99.90	3440	112.00	5173	124.00	8105
88.00	2049	101.00	17896	113.00	2024	125.00	5706
89.00	1390	101.90	1052	114.80	881	127.00	430528
91.00	7416	103.00	5778	115.10	1068	127.95	32860
92.00	7150	104.00	12498	117.00	236672	129.00	195537
93.00	81656	105.00	10797	118.00	15046	130.00	15808
94.00	4823	106.00	5275	118.90	1762	131.10	4448
94.90	544	106.95	161870	120.00	3214	132.00	1715

Scan 638 (7.636 min): 1030F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
133.00	2098	144.00	2710	155.00	17112	166.00	9137
133.90	6431	145.00	2786	156.00	26952	167.00	85929
134.95	18186	146.00	8476	157.10	3686	168.00	35840
135.90	7618	146.95	15173	158.00	6745	169.00	6132
137.00	9092	148.00	51224	159.00	5087	169.90	2878
137.90	2528	149.00	10235	160.00	9593	171.00	3502
138.90	1540	149.90	2378	161.00	15969	171.90	6415
140.00	2936	151.00	2989	161.90	3795	173.00	7670
140.90	31304	151.90	2238	163.20	1474	174.00	13656
142.00	8251	153.00	11196	163.90	1389	175.00	23784
142.90	7181	154.00	6890	164.95	13061	176.00	4748

Scan 638 (7.636 min): 1030F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
177.00	11712	188.10	4383	200.00	4615	211.90	1754
177.90	3493	189.00	13214	201.40	2969	213.00	738
178.90	47216	190.00	2270	203.00	9440	214.90	4017
179.95	30357	191.00	5167	204.00	45136	215.90	8230
181.00	13683	191.90	16888	205.00	71936	216.90	88880
182.00	2356	193.00	19320	206.00	268000	217.90	11509
182.80	1369	194.00	3309	206.95	34507	219.00	1304
183.90	3178	195.00	1510	207.90	15229	220.90	36536
185.00	22736	196.00	23304	208.90	4073	221.80	11936
186.00	154816	197.90	794304	210.00	6043	222.90	18032
187.00	48376	198.90	56840	210.90	12409	224.00	173952

Scan 638 (7.636 min): 1030F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
224.90	43832	235.90	5236	246.90	7496	258.90	9457
225.90	4775	236.90	6570	247.95	1621	259.90	1214
226.90	98928	237.90	1440	249.00	4557	260.90	1519
227.90	12204	239.00	4020	249.80	827	263.00	612
228.90	18520	239.90	2169	251.00	978	263.75	1134
230.00	2358	240.90	5084	252.00	1170	264.90	24008
231.10	5159	241.90	10434	252.90	3094	265.80	3001
231.90	1292	243.00	9413	254.90	667712	266.90	888
232.90	1266	244.00	133696	255.90	104888	267.70	652
234.00	6162	245.00	16808	256.90	7902	269.90	539
234.90	7273	245.90	36824	257.90	58216	270.80	2475

Scan 638 (7.636 min): 1030F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
271.90	2257	284.90	4643	298.10	1338	312.90	2183
272.90	23664	286.00	1185	300.00	680	313.90	6231
273.90	66304	289.00	1370	300.90	2476	314.90	17856
274.90	284864	289.90	1847	302.00	2386	315.90	7722
275.90	40616	290.80	1008	302.90	12929	317.00	1010
276.90	38960	292.00	1791	304.00	3543	318.70	601
277.90	5749	292.90	9712	304.80	635	319.70	664
279.00	1257	294.00	2925	307.20	507	320.90	4230
281.90	598	295.90	141440	307.90	1671	321.90	1707
283.00	3868	296.90	19848	308.80	1025	322.90	33880
284.00	2375	297.90	1318	310.00	1082	324.00	5591

Scan 638 (7.636 min): 1030F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
324.90	1039	340.90	3602	356.00	551	382.90	4954
325.90	1016	342.20	981	358.70	555	383.90	1790
327.00	8911	345.90	10064	360.00	538	385.00	780
327.90	3690	347.00	2192	364.90	86952	389.90	2623
331.90	3680	347.60	628	365.90	10874	390.80	1444
332.90	4287	350.10	988	366.80	1092	392.00	1279
333.90	26272	350.90	668	369.90	1293	400.90	1420
335.00	6748	351.90	11727	370.90	2921	401.90	10104
336.00	1275	352.90	8856	371.90	25624	402.90	13655
338.80	518	353.90	10738	372.90	5930	404.00	4400
339.80	750	354.90	3158	373.80	628	414.80	815

Scan 638 (7.636 min): 1030F001.D
DFTPP @ 3.0ug/mL | SVM27-37E
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
420.80	10697						
421.90	11953						
422.90	75192						
423.90	15443						
425.00	1726						
440.90	203776						
441.90	1392640						
442.90	278592						
443.90	26712						
444.90	1479						

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04 **Calibration Date:** 10/01/2008

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL7814 **Column:** MS
Instrument ID: MS11

Level ID	File ID	Level ID	File ID
A	J:\MS11\DATA\100108\1001F020.D	F	J:\MS11\DATA\100108\1001F025.D
B	J:\MS11\DATA\100108\1001F021.D	G	J:\MS11\DATA\100108\1001F026.D
C	J:\MS11\DATA\100108\1001F022.D	H	J:\MS11\DATA\100108\1001F027.D
D	J:\MS11\DATA\100108\1001F023.D	I	J:\MS11\DATA\100108\1001F028.D
E	J:\MS11\DATA\100108\1001F024.D		

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Naphthalene	A	2.0	1.34	B	4.0	1.11	C	8.0	1.12	D	100	1.06	E	200	1.09
	F	400	1.10	G	1000	1.08	H	1600	1.10	I	2000	1.13			
2-Methylnaphthalene	A	2.0	0.763	B	4.0	0.714	C	8.0	0.708	D	100	0.746	E	200	0.758
	F	400	0.780	G	1000	0.790	H	1600	0.815	I	2000	0.866			
Acenaphthylene	A	2.0	1.89	B	4.0	1.86	C	8.0	1.83	D	100	1.91	E	200	2.01
	F	400	2.08	G	1000	2.15	H	1600	2.18	I	2000	2.30			
Acenaphthene	A	2.0	1.19	B	4.0	1.18	C	8.0	1.17	D	100	1.15	E	200	1.20
	F	400	1.22	G	1000	1.28	H	1600	1.34	I	2000	1.45			
Fluorene	A	2.0	1.42	B	4.0	1.25	C	8.0	1.35	D	100	1.41	E	200	1.47
	F	400	1.51	G	1000	1.59	H	1600	1.63	I	2000	1.75			
Dibenzofuran	A	2.0	1.63	B	4.0	1.59	C	8.0	1.59	D	100	1.70	E	200	1.77
	F	400	1.83	G	1000	1.87	H	1600	1.90	I	2000	2.02			
Phenanthrene	A	2.0	1.30	B	4.0	1.22	C	8.0	1.16	D	100	1.25	E	200	1.24
	F	400	1.31	G	1000	1.33	H	1600	1.35	I	2000	1.43			
Anthracene	A	2.0	1.26	B	4.0	1.19	C	8.0	1.10	D	100	1.23	E	200	1.23
	F	400	1.30	G	1000	1.36	H	1600	1.38	I	2000	1.44			
Fluoranthene	A	2.0	1.42	B	4.0	1.31	C	8.0	1.30	D	100	1.45	E	200	1.45
	F	400	1.50	G	1000	1.51	H	1600	1.62	I	2000	1.68			
Pyrene	A	2.0	1.44	B	4.0	1.30	C	8.0	1.31	D	100	1.24	E	200	1.28
	F	400	1.30	G	1000	1.27	H	1600	1.30	I	2000	1.34			
Benzo(b)fluoranthene	A	2.0	1.25	B	4.0	1.12	C	8.0	1.13	D	100	1.18	E	200	1.28
	F	400	1.34	G	1000	1.40	H	1600	1.42	I	2000	1.47			
Benzo(k)fluoranthene	A	2.0	1.17	B	4.0	1.20	C	8.0	1.17	D	100	1.16	E	200	1.23
	F	400	1.28	G	1000	1.29	H	1600	1.31	I	2000	1.34			
Benz(a)anthracene	A	2.0	1.50	B	4.0	1.27	C	8.0	1.22	D	100	1.09	E	200	1.17
	F	400	1.19	G	1000	1.20	H	1600	1.23	I	2000	1.27			
Chrysene	A	2.0	1.30	B	4.0	1.22	C	8.0	1.22	D	100	1.16	E	200	1.17
	F	400	1.19	G	1000	1.17	H	1600	1.16	I	2000	1.20			

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 10/01/2008

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL7814
Instrument ID: MS11

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzo(a)pyrene	A	2.0	1.00	B	4.0	0.933	C	8.0	0.885	D	100	0.983	E	200	1.06
	F	400	1.12	G	1000	1.15	H	1600	1.17	I	2000	1.21			
Indeno(1,2,3-cd)pyrene	A	2.0	1.14	B	4.0	0.661	C	8.0	0.652	D	100	0.781	E	200	0.850
	F	400	0.955	G	1000	1.06	H	1600	1.10	I	2000	1.15			
Dibenz(a,h)anthracene	A	2.0	0.972	B	4.0	0.788	C	8.0	0.732	D	100	0.833	E	200	0.918
	F	400	1.01	G	1000	1.09	H	1600	1.14	I	2000	1.20			
Benzo(g,h,i)perylene	A	2.0	1.14	B	4.0	0.948	C	8.0	0.902	D	100	0.982	E	200	1.04
	F	400	1.10	G	1000	1.13	H	1600	1.15	I	2000	1.19			
Fluorene-d10	A	2.0	1.32	B	4.0	1.23	C	8.0	1.26	D	100	1.31	E	200	1.37
	F	400	1.44	G	1000	1.51	H	1600	1.58	I	2000	1.71			
Fluoranthene-d10	A	2.0	1.29	B	4.0	1.27	C	8.0	1.24	D	100	1.37	E	200	1.35
	F	400	1.46	G	1000	1.52	H	1600	1.63	I	2000	1.67			
Terphenyl-d14	A	2.0	1.13	B	4.0	0.975	C	8.0	1.03	D	100	0.977	E	200	1.00
	F	400	1.02	G	1000	1.03	H	1600	1.05	I	2000	1.13			

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: GeoEngineers, Inc. **Service Request:** K0810000
Project: Dakota Creek Confirmation Samples/5147-006-04 **Calibration Date:** 10/01/2008

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL7814 **Column:** MS
Instrument ID: MS11

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Naphthalene	MS	AverageRF	% RSD	7.2		≤ 15	1.12		0.01
2-Methylnaphthalene	MS	AverageRF	% RSD	6.4		≤ 15	0.771		0.01
Acenaphthylene	MS	AverageRF	% RSD	8.1		≤ 15	2.02		0.01
Acenaphthene	MS	AverageRF	% RSD	8.0		≤ 15	1.24		0.01
Fluorene	MS	AverageRF	% RSD	10.2		≤ 15	1.49		0.01
Dibenzofuran	MS	AverageRF	% RSD	8.5		≤ 15	1.77		0.01
Phenanthrene	MS	AverageRF	% RSD	6.3		≤ 15	1.29		0.01
Anthracene	MS	AverageRF	% RSD	8.3		≤ 15	1.28		0.01
Fluoranthene	MS	AverageRF	% RSD	8.5		≤ 15	1.47		0.01
Pyrene	MS	AverageRF	% RSD	4.4		≤ 15	1.31		0.01
Benzo(b)fluoranthene	MS	AverageRF	% RSD	10.1		≤ 15	1.29		0.01
Benzo(k)fluoranthene	MS	AverageRF	% RSD	5.6		≤ 15	1.24		0.01
Benz(a)anthracene	MS	AverageRF	% RSD	9.1		≤ 15	1.24		0.01
Chrysene	MS	AverageRF	% RSD	3.9		≤ 15	1.20		0.01
Benzo(a)pyrene	MS	AverageRF	% RSD	10.6		≤ 15	1.06		0.01
Indeno(1,2,3-cd)pyrene	MS	AverageRF	% RSD	21.4	*	≤ 15	0.927		0.01
Dibenz(a,h)anthracene	MS	AverageRF	% RSD	16.8	*	≤ 15	0.965		0.01
Benzo(g,h,i)perylene	MS	AverageRF	% RSD	9.5		≤ 15	1.06		0.01
Fluorene-d10	SURR	AverageRF	% RSD	11.3		≤ 15	1.41		0.01
Fluoranthene-d10	SURR	AverageRF	% RSD	11.1		≤ 15	1.42		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	5.6		≤ 15	1.04		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Calibration Date: 10/01/2008
Date Analyzed: 10/02/2008

Second Source Calibration Verification
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration ID: CAL7814
Units: ng/ml

File ID: J:\MS11\DATA\100108\1001F030.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	400	1.12	1.12	0	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	420	0.771	0.801	4	NA	± 20 %	AverageRF
Acenaphthylene	400	440	2.02	2.20	9	NA	± 20 %	AverageRF
Acenaphthene	400	420	1.24	1.30	4	NA	± 20 %	AverageRF
Fluorene	400	430	1.49	1.59	7	NA	± 20 %	AverageRF
Dibenzofuran	400	440	1.77	1.96	11	NA	± 20 %	AverageRF
Phenanthrene	400	430	1.29	1.40	9	NA	± 20 %	AverageRF
Anthracene	400	420	1.28	1.34	5	NA	± 20 %	AverageRF
Fluoranthene	400	440	1.47	1.61	10	NA	± 20 %	AverageRF
Pyrene	400	400	1.31	1.31	0	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	410	1.29	1.33	3	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	440	1.24	1.35	9	NA	± 20 %	AverageRF
Benz(a)anthracene	400	400	1.24	1.25	1	NA	± 20 %	AverageRF
Chrysene	400	410	1.20	1.22	2	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	440	1.06	1.17	11	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	410	0.927	0.960	4	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	430	0.965	1.05	9	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	430	1.06	1.14	7	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† **SPCC Compound** ‡ **CCC Compound**

Injection Log

Directory: J:\MS11\DATA\100108

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	2	1001F013.D	1.	DFTPP @ 3.0ug/mL | SVM27-5G		1 Oct 2008 16:05
2	3	1001F014.D	1.	IB		1 Oct 2008 16:31
3	4	1001F015.D	1.	SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D		1 Oct 2008 16:58
4	5	1001F016.D	1.	SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E	NR	1 Oct 2008 17:24
5	6	1001F017.D	1.	SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F		1 Oct 2008 17:51
6	7	1001F018.D	1.	SIM-PAH ICAL @0.02/0.4ug/mL | SVM27-3G		1 Oct 2008 18:17
7	4	1001F019.D	1.	SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D		1 Oct 2008 18:46
8	4	1001F020.D	1.	SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D		1 Oct 2008 19:40
9	5	1001F021.D	1.	SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E		1 Oct 2008 20:07
10	6	1001F022.D	1.	SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F		1 Oct 2008 20:33
11	8	1001F023.D	1.	SIM-PAH ICAL @0.1/0.6ug/mL | SVM27-3H		1 Oct 2008 21:00
12	9	1001F024.D	1.	SIM-PAH ICAL @0.2/0.8ug/mL | SVM27-3I		1 Oct 2008 21:26
13	10	1001F025.D	1.	SIM-PAH ICAL @0.4/1.0ug/mL | SVM27-3J		1 Oct 2008 21:53
14	11	1001F026.D	1.	SIM-PAH ICAL @1.0/2.0ug/mL | SVM27-3K		1 Oct 2008 22:20
15	12	1001F027.D	1.	SIM-PAH ICAL @1.6/2.4ug/mL | SVM27-3L		1 Oct 2008 22:46
16	13	1001F028.D	1.	SIM-PAH ICAL @2.0/3.0ug/mL | SVM27-3M		1 Oct 2008 23:13
17	2	1001F029.D	1.	DFTPP @ 3.0ug/mL | SVM27-5G		1 Oct 2008 23:39
18	14	1001F030.D	1.	SIM-PAH ICV @0.4ug/mL | SVM27-13F		2 Oct 2008 00:06
19	15	1001F031.D	1.	SIM-PAH CCV @0.4ug/mL | SVM27-10G		2 Oct 2008 00:32
20	16	1001F032.D	1.	KWG0809255-3 MB		2 Oct 2008 00:59
21	17	1001F033.D	1.	K0808505-001		2 Oct 2008 01:26
22	18	1001F034.D	1.	KWG0809255-1 LCS		2 Oct 2008 01:52
23	19	1001F035.D	1.	KWG0809255-2 DLCS		2 Oct 2008 02:19
24	20	1001F036.D	1.	KWG0809907-3 MB		2 Oct 2008 02:45
25	21	1001F037.D	1.	KWG0809982-4 MB		2 Oct 2008 03:12
26	22	1001F038.D	1.	KWG0809907-1 LCS		2 Oct 2008 03:39
27	23	1001F039.D	1.	KWG0809907-2 DLCS		2 Oct 2008 04:05
28	24	1001F040.D	1.	KWG0809982-3 LCS		2 Oct 2008 04:32
29	25	1001F041.D	1.	KWG0809830-5 MB		2 Oct 2008 04:59
30	26	1001F042.D	1.	KWG0809830-3 LCS		2 Oct 2008 05:25
31	27	1001F043.D	1.	KWG0809830-4 DLCS		2 Oct 2008 05:52
32	28	1001F044.D	1.	KWG0809895-5 MB		2 Oct 2008 06:18
33	29	1001F045.D	1.	KWG0809895-3 LCS		2 Oct 2008 06:45
34	30	1001F046.D	1.	KWG0809895-4 DLCS		2 Oct 2008 07:12
35	31	1001F050.D	1.	K0808929-006MS		2 Oct 2008 07:38
36	32	1001F051.D	1.	K0808929-006DMS		2 Oct 2008 08:05

CAL 7814 / SIM-PAH-PCP ICAL

* DOES NOT pass for DOD

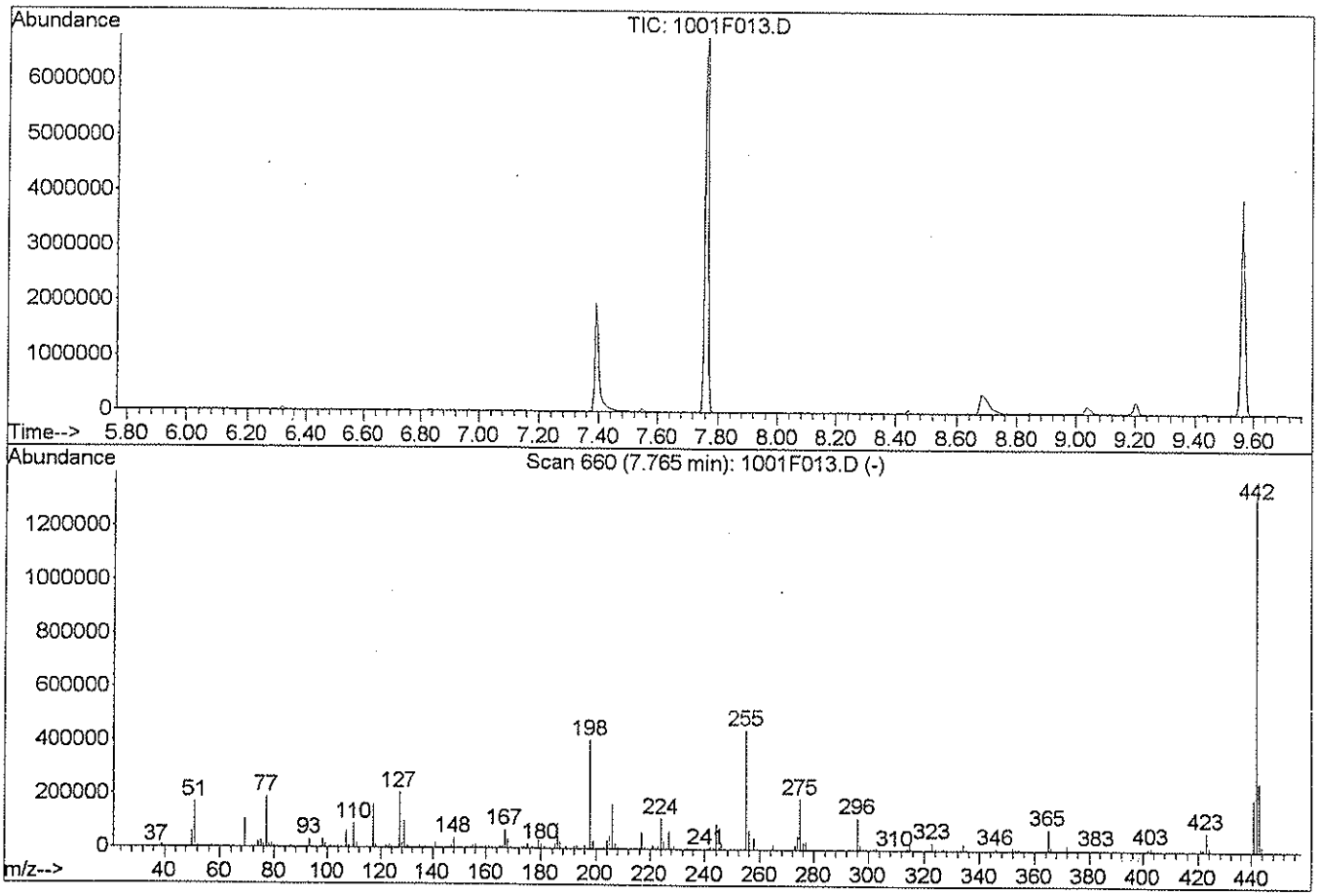
10/3/8

10/2/8

DFTPP

Data File : J:\MS11\DATA\100108\1001F013.D
Acq On : 1 Oct 2008 4:05 pm
Sample : DFTPP @ 3.0ug/mL | SVM27-5G
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00



Spectrum Information: Scan 660

11/01/18

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	41.4	168688	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	1.1	1200	PASS
127	198	10	80	50.9	207232	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	30.6	407488	PASS
199	198	5	9	7.4	30120	PASS
275	198	10	60	46.4	188928	PASS
365	442	1	50	6.1	80896	PASS
441	443	0.01	100	76.2	197248	PASS
442	442	30	100	100.0	1331200	PASS
443	442	15	24	19.4	258752	PASS

1001F013.D DFTPPPAH.M Thu Oct 02 08:22:50 2008

10/3/18

DFTPP @ 3.0ug/mL | SVM27-5G
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.00	692	52.90	1084	69.90	1200	83.10	1568
36.90	1592	55.10	1139	73.05	2211	85.10	1828
38.10	2612	56.10	3685	74.00	22184	86.00	6068
39.00	11278	57.00	6960	75.00	26048	87.10	2093
40.20	588	61.00	1569	76.10	12887	87.90	616
41.00	917	62.10	2162	77.10	189184	91.00	3065
44.00	1121	63.00	6319	78.10	11497	92.00	2345
45.00	644	64.00	777	79.00	13987	93.00	31344
50.10	59832	65.10	1699	80.00	7216	93.90	1831
51.05	168688	67.00	556	81.00	9249	95.00	830
52.00	7848	69.00	104800	82.00	2695	96.00	1384

Scan 660 (7.765 min): 1001F013.D
DFTPP @ 3.0ug/mL | SVM27-5G
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
98.00	31288	110.00	90816	124.00	5053	136.00	4369
99.00	15785	111.00	16816	124.90	3148	137.10	6733
100.00	1423	112.00	2996	127.00	207232	138.10	1433
101.00	5457	113.00	1040	128.00	19368	138.90	1098
102.10	1211	114.60	683	129.00	103848	140.00	1695
102.90	2339	117.00	161024	130.00	10065	141.00	18272
103.90	7047	118.00	10998	131.00	1794	142.00	5580
105.10	5228	119.10	1011	132.10	1527	143.00	4119
105.80	1789	120.00	1690	133.00	1077	144.00	871
107.00	62656	122.00	7239	134.00	4102	145.10	549
108.10	7930	123.00	10230	135.00	9846	146.00	4441

Scan 660 (7.765 min): 1001F013.D
DFTPP @ 3.0ug/mL | SVM27-5G
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
147.00	9448	158.00	2591	170.00	1847	181.00	6940
147.90	38960	158.90	2626	171.00	2079	182.00	922
149.00	5048	159.90	7846	171.90	3755	183.90	3830
150.00	1655	161.00	7429	173.00	5485	185.00	16272
150.90	2070	162.00	2651	174.00	8134	186.00	95664
151.90	1291	162.90	875	175.00	17840	187.00	26880
152.90	6019	165.00	8774	176.10	3089	188.10	2993
153.90	4020	166.00	6440	177.00	7130	188.90	8564
155.00	11050	166.90	67768	177.80	2100	189.90	1610
156.00	12554	167.90	35504	178.90	31040	190.90	3312
157.00	1972	169.00	4473	180.00	18216	192.00	10160

Scan 660 (7.765 min): 1001F013.D
DFTPP @ 3.0ug/mL | SVM27-5G
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
193.00	12870	205.00	46160	216.90	63800	228.90	11054
193.80	2549	206.00	166080	217.90	8012	230.10	2238
195.00	1227	207.00	21048	219.90	726	231.10	2970
195.90	12285	207.90	8148	221.00	14218	232.10	630
197.90	407488	209.00	2079	221.90	7320	233.10	973
199.00	30120	210.00	4050	222.90	11932	233.90	5684
199.90	3613	210.90	7660	224.00	116352	234.90	3759
200.90	845	212.00	1489	224.90	27280	236.00	4545
201.60	2147	213.10	639	226.00	3384	237.00	5039
203.00	7652	215.00	2981	226.90	68712	237.80	908
204.00	30600	216.00	6680	227.90	8893	238.90	2899

10/21/8

10/3/8

DFTPP @ 3.0ug/mL | SVM27-5G
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
239.90	2114	251.90	1153	265.90	2607	282.90	3685
240.90	3317	253.00	2153	269.90	965	283.90	1623
241.90	8979	254.90	445312	270.90	1017	284.90	4013
243.00	7136	255.90	71504	272.90	17816	286.00	961
244.00	95240	256.80	4480	273.90	50728	288.70	815
245.00	11475	257.90	45784	274.90	188928	289.90	1137
245.90	29912	258.90	6448	276.00	25976	292.00	1781
246.90	5562	260.00	978	276.90	29184	292.90	5227
247.90	1222	260.90	1077	278.00	5071	293.80	1072
249.00	2977	263.80	1113	278.80	1028	294.30	966
251.00	700	264.90	19368	282.00	544	295.90	119232

Scan 660 (7.765 min): 1001F013.D
DFTPP @ 3.0ug/mL | SVM27-5G
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
296.90	17320	313.00	1187	328.00	2883	346.70	1804
298.00	1598	314.00	4214	329.00	510	350.60	755
299.00	698	314.90	17520	331.80	2576	352.00	10532
300.90	1292	315.90	6110	333.00	2943	352.90	7916
301.90	1457	317.00	1664	333.90	24624	354.00	9019
302.90	11351	321.10	2300	335.00	6054	355.00	2161
304.00	3219	322.00	1079	335.80	1465	358.90	1263
304.90	716	322.90	28608	338.80	609	364.90	80896
307.80	1372	324.00	5117	340.90	3614	365.90	12073
308.70	867	326.00	767	341.90	1109	366.80	766
309.70	873	326.80	6734	345.90	9033	367.10	963

Scan 660 (7.765 min): 1001F013.D
DFTPP @ 3.0ug/mL | SVM27-5G
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
369.80	973	390.90	1741	422.90	70616		
371.00	1875	392.00	1017	423.90	15080		
371.90	19536	400.80	1255	425.00	1697		
372.90	5068	401.90	9924	440.90	197248		
373.80	617	402.90	13103	441.90	1331200		
376.80	822	403.90	4003	442.90	258752		
381.90	570	404.90	751	443.90	22656		
382.80	5325	409.90	622	444.80	1179		
384.00	1810	414.80	521				
384.90	597	420.90	10449				
390.00	2256	421.90	9363				

10/21/18

10/3/18

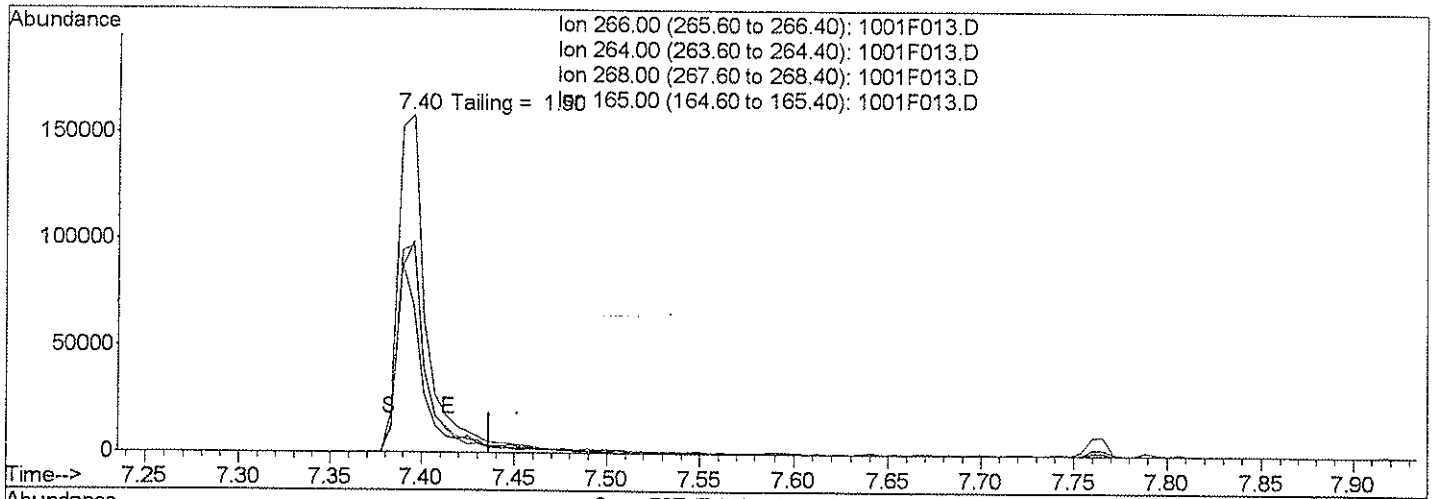
Quantitation Report (Qedit)

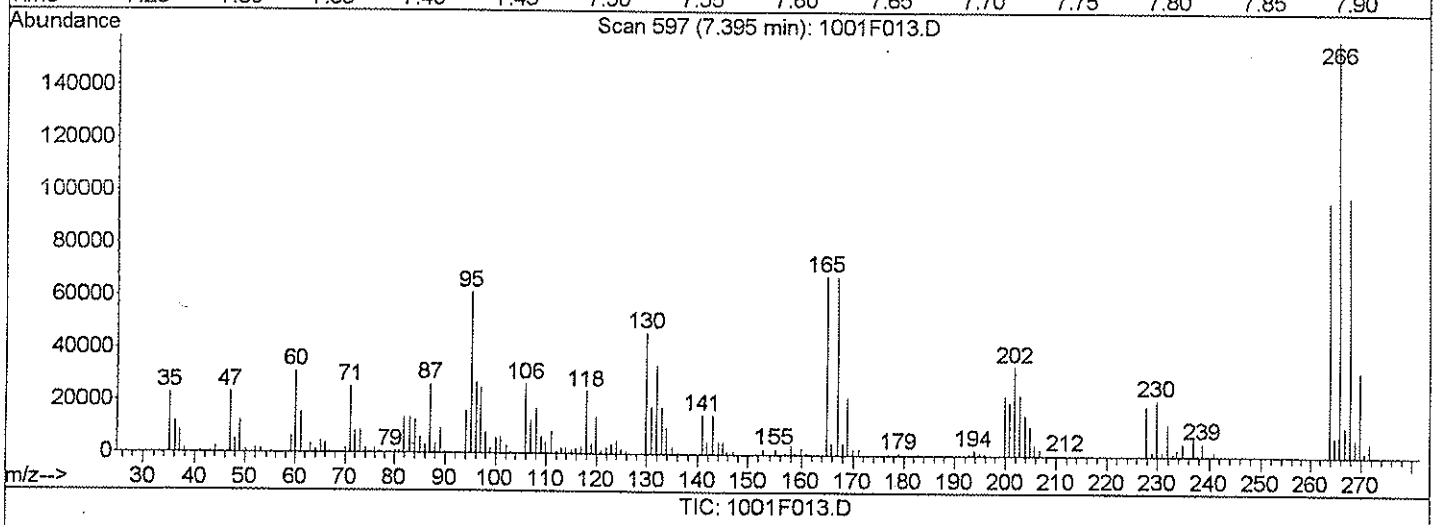
Data File : J:\MS11\DATA\100108\1001F013.D
Acq On : 1 Oct 2008 4:05 pm
Sample : DFTPP @ 3.0ug/mL | SVM27-5G
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 1 18:37 2008

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Oct 12 13:33:42 2004
Response via : Single Level Calibration





TIC: 1001F013.D

(1) Pentachlorophenol

6.94min 0.00ng/ml

response 0

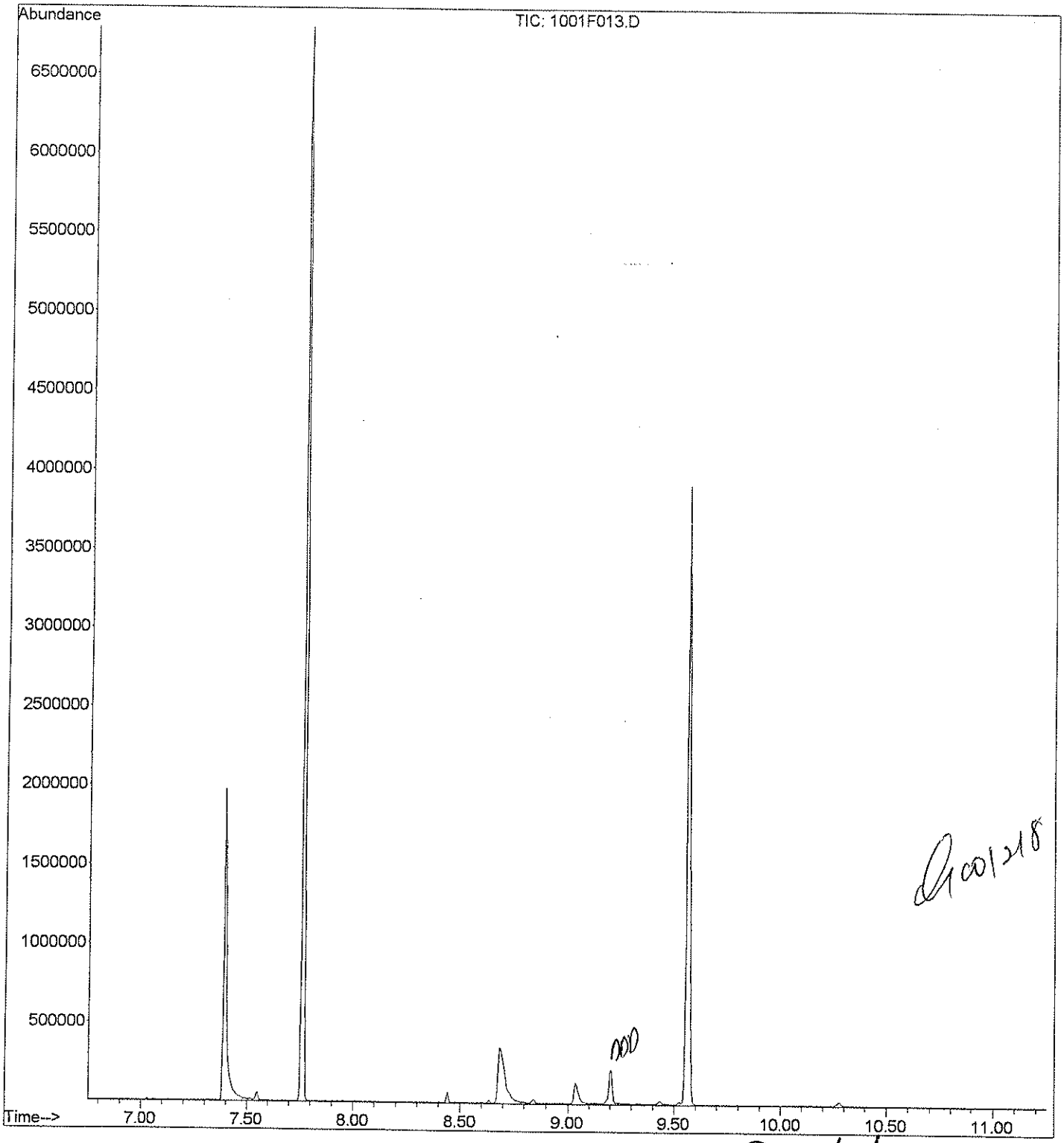
Ion	Exp%	Act%
266.00	100	0.00
264.00	64.50	0.00#
268.00	63.70	0.00#
165.00	28.70	0.00

10/2/18

10/3/18

1001F013.D DFTPPPAH.M Thu Oct 02 08:23:02 2008

File : J:\MS11\DATA\100108\1001F013.D
Operator : LWeiskopf
Acquired : 1 Oct 2008 4:05 pm using AcqMethod SIMLOC
Instrument : MS11
Sample Name: DFTPP @ 3.0ug/mL | SVM27-5G
Misc Info :
Vial Number: 2



Q 10/1/18

Q 10/3/8

1	4.904	rVB	0.071	33464	4.881	4.951	
2	5.257	rVB	0.041	11959	5.239	5.280	
3	5.403	rBV	0.024	4768	5.392	5.415	
4	5.885	rVB	0.029	4075	5.873	5.903	
5	6.144	rBV	0.041	8090	6.126	6.167	
6	6.320	rVB	0.035	32364	6.302	6.338	
7	6.414	rBV	0.029	5492	6.396	6.426	
8	6.467	rBV	0.024	3380	6.455	6.479	
9	6.614	rVB	0.053	9437	6.602	6.655	
10	6.673	rVB	0.035	5398	6.667	6.702	
11	6.708	rBV	0.035	6104	6.702	6.737	
12	6.749	rVB	0.065	5317	6.737	6.802	
13	6.943	rBV	0.024	3042	6.931	6.955	
14	7.037	rBV	0.035	6100	7.019	7.054	
15	7.113	rBV	0.024	3405	7.096	7.119	
16	7.178	rBV	0.029	2598	7.166	7.195	
17	7.260	rBV	0.024	2518	7.242	7.266	
18	7.319	rVB	0.047	4598	7.295	7.342	
19	7.389	rBV	0.147	2040725	7.360	7.507	
20	7.548	rVB	0.047	41063	7.524	7.571	
21	7.671	rBV	0.053	10133	7.660	7.712	
22	7.765	rVB	0.082	5305307	7.736	7.818	
23	7.877	rBV	0.029	3581	7.865	7.895	
24	7.906	rVV	0.024	2848	7.895	7.918	
25	7.953	rBV	0.035	6413	7.936	7.971	
26	8.000	rBV	0.059	5562	7.989	8.047	
27	8.194	rBV	0.053	5164	8.171	8.224	
28	8.300	rBV	0.035	3446	8.282	8.318	
29	8.353	rVB	0.029	4091	8.341	8.371	
30	8.400	rVV	0.024	2576	8.388	8.412	
31	8.441	rVB	0.041	48970	8.423	8.465	DOT Breakdown
32	8.517	rVB	0.035	5101	8.506	8.541	
33	8.635	rBV	0.041	12523	8.617	8.658	= 6.92
34	8.682	rVV	0.159	840116	8.658	8.817	
35	8.846	rVB	0.059	DOE 30860	8.823	8.882	
36	9.034	rBV	0.094	199838	9.011	9.105	
37	9.199	rBV	0.071	DOD 253489	9.158	9.228	
38	9.434	rVB	0.094	37586	9.399	9.493	
39	9.563	rVB	0.106	DOT 3841969	9.505	9.610	
40	9.698	rVB	0.035	5200	9.681	9.716	
41	9.757	rBV	0.018	3020	9.751	9.769	
42	9.939	rBV	0.041	4842	9.910	9.951	
43	9.969	rVV	0.029	3455	9.951	9.980	
44	10.022	rBV	0.029	4413	10.004	10.033	
45	10.145	rVB	0.024	2215	10.133	10.157	
46	10.274	rBV	0.088	41187	10.245	10.333	
47	10.374	rBV	0.018	3408	10.368	10.386	
48	10.462	rVB	0.041	3701	10.456	10.497	
49	10.597	rVB	0.041	5351	10.586	10.627	
50	10.779	rBV	0.035	5483	10.756	10.791	
51	10.868	rVB	0.035	3994	10.862	10.897	
52	10.926	rBV	0.024	3279	10.915	10.938	
53	10.991	rBV	0.041	7752	10.968	11.009	
54	11.050	rVB	0.024	2935	11.044	11.067	
55	11.079	rBV	0.018	2304	11.067	11.085	
56	11.291	rBV	0.041	6093	11.261	11.302	
57	11.443	rBV	0.041	4443	11.420	11.461	
58	11.590	rVB	0.029	3620	11.579	11.608	
59	11.802	rBV	0.024	2535	11.784	11.808	
60	12.031	rVB	0.029	2432	12.025	12.054	
61	12.078	rBV	0.029	2902	12.054	12.084	

1/20/18

10/3/16

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F014.D
Acq On : 1 Oct 2008 4:31 pm
Sample : IB
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 01 18:39:42 2008

Vial: 3
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 18:39:29 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.91	136	102299	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.32	164	60877	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.56	188	100652	200.00	ng/ml	0.00
37) Chrysene-d12	10.27	240	107453	200.00	ng/ml	0.00
49) Perylene-d12	13.88	264	121964	200.00	ng/ml	0.00
System Monitoring Compounds						
15) Fluorene-d10	0.00	176	0d	0.00	ng/ml	
Spiked Amount 200.000			Recovery =	0.00%		
20) 2,4,6 Tribromophenol	0.00	330	0d	0.00	ng/ml	
Spiked Amount 375.000			Recovery =	0.00%		
36) Fluoranthene-d10	0.00	212	0d	0.00	ng/ml	
Spiked Amount 200.000			Recovery =	0.00%		
42) Terphenyl-d14	0.00	244	0d	0.00	ng/ml	
Spiked Amount 200.000			Recovery =	0.00%		

Target Compounds Qvalue

10/2/18

10/3/18

(#) = qualifier out of range (m) = manual integration
1001F014.D 1001ALK.M Thu Oct 02 08:22:28 2008 Page 1

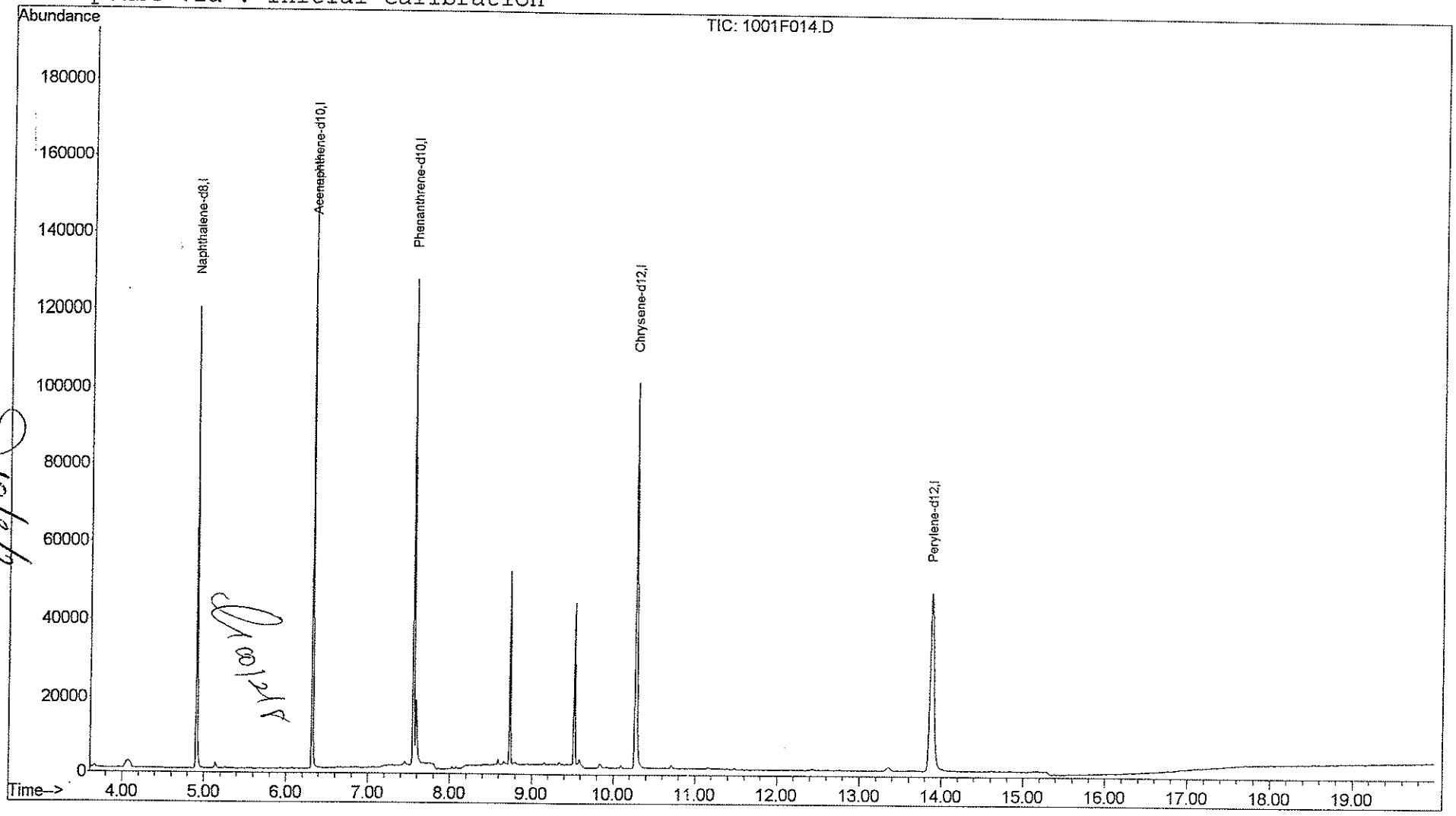
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F014.D
Acq On : 1 Oct 2008 4:31 pm
Sample : IB
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 8:22 2008

Vial: 3
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:55:26 2008
Response via : Initial Calibration



904

10/3/08

Initial Calibration Report (QA Reviewed)

Data File : J:\MS11\DATA\100108\1001F020.D
Acq On : 1 Oct 2008 7:40 pm
Sample : SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:37:14 2008

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 05:43:23 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.90	136	230146	200.00	ng/ml	0.06
10) Acenaphthene-d10	6.32	164	131729	200.00	ng/ml	0.07
22) Phenanthrene-d10	7.56	188	224302	200.00	ng/ml	0.07
37) Chrysene-d12	10.27	240	238183	200.00	ng/ml	0.14
49) Perylene-d12	13.88	264	239832	200.00	ng/ml	0.31
System Monitoring Compounds						
15) Fluorene-d10	6.75	176	1740	1.83	ng/ml	0.07
Spiked Amount 200.000			Recovery =	0.92%		
20) 2,4,6 Tribromophenol	6.99	330	193	1.19	ng/ml	0.08
Spiked Amount 375.000			Recovery =	0.32%		
36) Fluoranthene-d10	8.55	212	2888	1.78	ng/ml	0.09
Spiked Amount 200.000			Recovery =	0.89%		
42) Terphenyl-d14	8.91	244	2697	2.18	ng/ml	0.09
Spiked Amount 200.000			Recovery =	1.09%		
Target Compounds						Qvalue
2) Naphthalene	4.92	128	3073	2.37	ng/ml	98
3) 2-Methylnaphthalene	5.48	142	1757	1.93	ng/ml	94
4) 1-Methylnaphthalene	5.56	142	1424	1.75	ng/ml	100
5) Biphenyl	5.85	154	2045	1.83	ng/ml	96
6) 2,6-Dimethylnaphthalene	5.98	156	1570	1.92	ng/ml	97
11) Acenaphthylene	6.21	152	2489	1.78	ng/ml	93
12) Acenaphthene	6.34	154	1562	1.89	ng/ml	92
13) Dibenzofuran	6.50	168	2144m	1.74	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.66	170	1394	1.76	ng/ml	97
16) Fluorene	6.77	166	1866	1.80	ng/ml	99
21) Pentachlorophenol	7.44	266	4771	38.98	ng/ml	99
23) Dibenzothiophene	7.47	184	2478	1.83	ng/ml	87
27) Phenanthrene	7.57	178	2926	1.90	ng/ml	91
28) Anthracene	7.62	178	2815m	1.86	ng/ml	
29) Carbazole	7.77	167	2131	1.71	ng/ml	93
30) 1-Methylphenanthrene	8.08	192	1961	1.74	ng/ml	97
35) Fluoranthene	8.56	202	3195	1.84	ng/ml	94
38) Pyrene	8.77	202	3440	2.16	ng/ml	86
43) Benz(a)anthracene	10.26	228	3580	2.30	ng/ml	93
44) Chrysene	10.32	228	3108m	2.13	ng/ml	
50) Benzo(b)fluoranthene	12.69	252	2992	1.90	ng/ml	87
51) Benzo(k)fluoranthene	12.77	252	2795m	1.89	ng/ml	
52) Benzo(e)pyrene	13.51	252	3034	2.20	ng/ml	98
53) Benzo(a)pyrene	13.69	252	2401	1.80	ng/ml	94
54) Perylene	13.97	252	2757	2.06	ng/ml	92

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

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F020.D Vial: 4
Acq On : 1 Oct 2008 7:40 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:37:14 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 05:43:23 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

10/2/18

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.09	276	2736m	2.15	ng/ml	
56)	Dibenz(a,h)anthracene	17.14	278	2332m	1.77	ng/ml	
57)	Benzo(g,h,i)perylene	17.52	276	2738m	1.89	ng/ml	

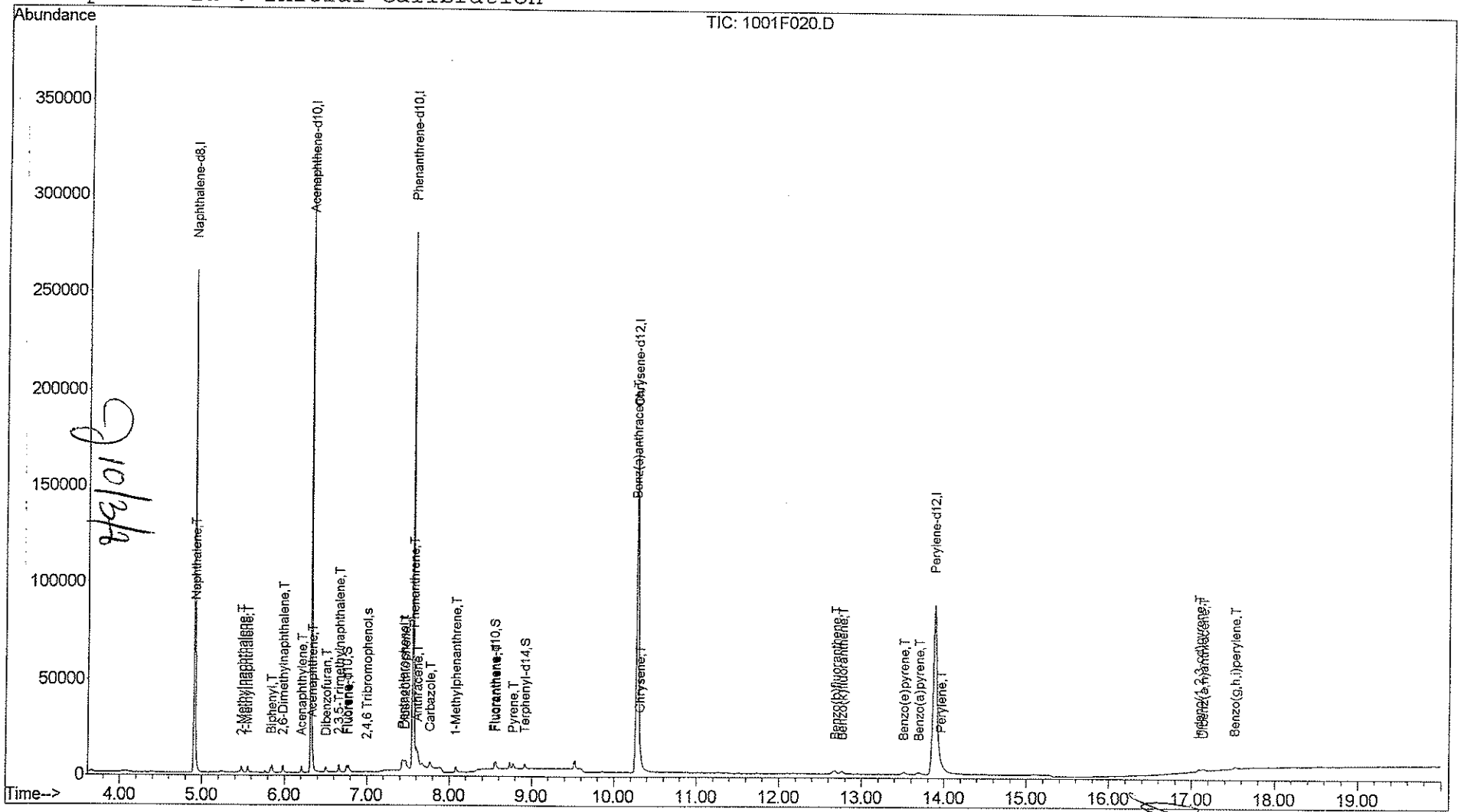
10/3/18

(#) = qualifier out of range (m) = manual integration
1001F020.D 1001ALK.M Thu Oct 02 05:42:20 2008 Page 2

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F020.D Vial: 4
Acq On : 1 Oct 2008 7:40 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:42 2008 Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 05:43:23 2008
Response via : Initial Calibration



907

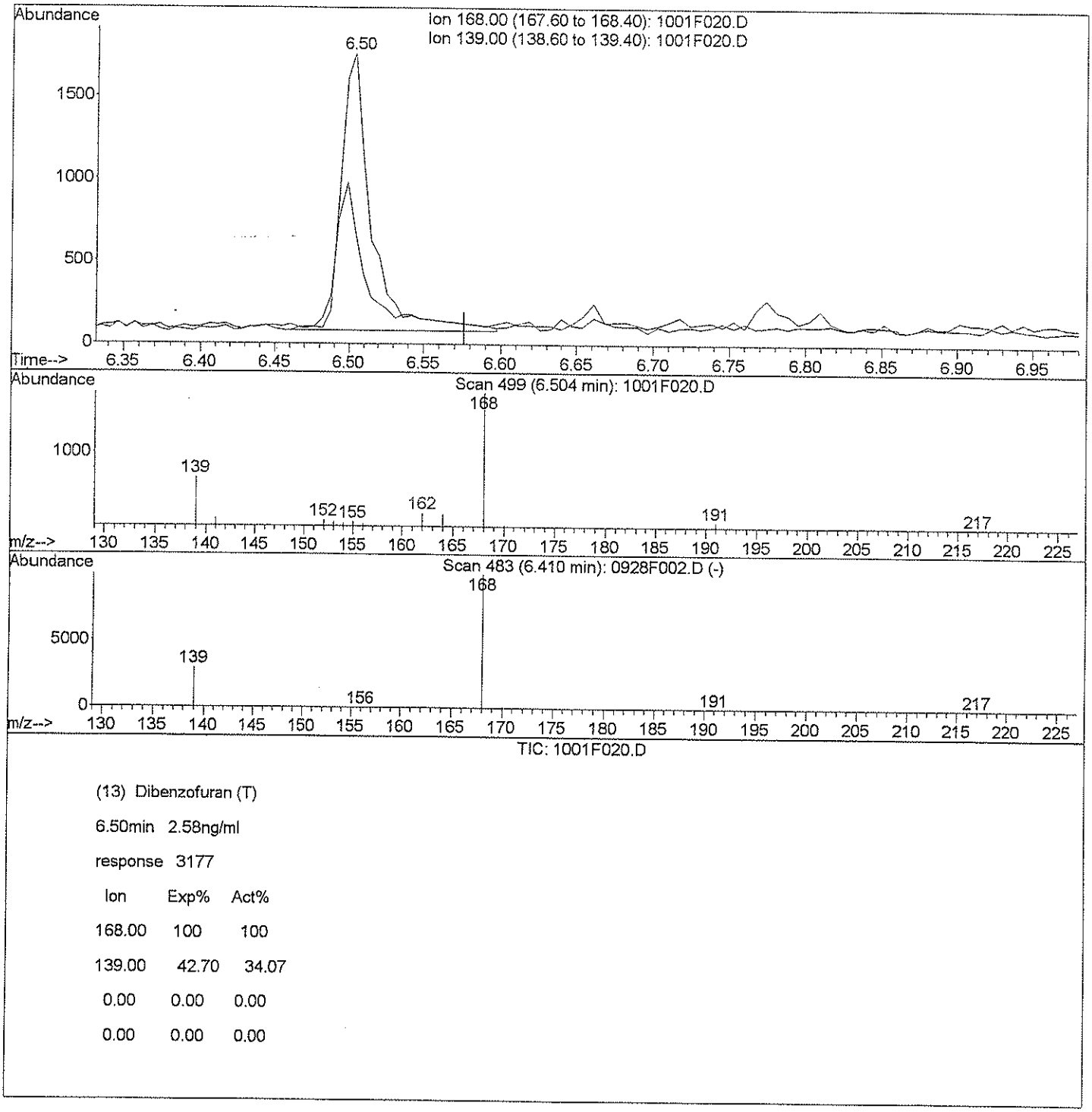
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F020.D
Acq On : 1 Oct 2008 7:40 pm
Sample : SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:37 2008

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 05:43:23 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.50min 2.58ng/ml

response 3177

Ion	Exp%	Act%
168.00	100	100
139.00	42.70	34.07
0.00	0.00	0.00
0.00	0.00	0.00

1001F020.D 1001ALK.M Thu Oct 02 05:40:36 2008

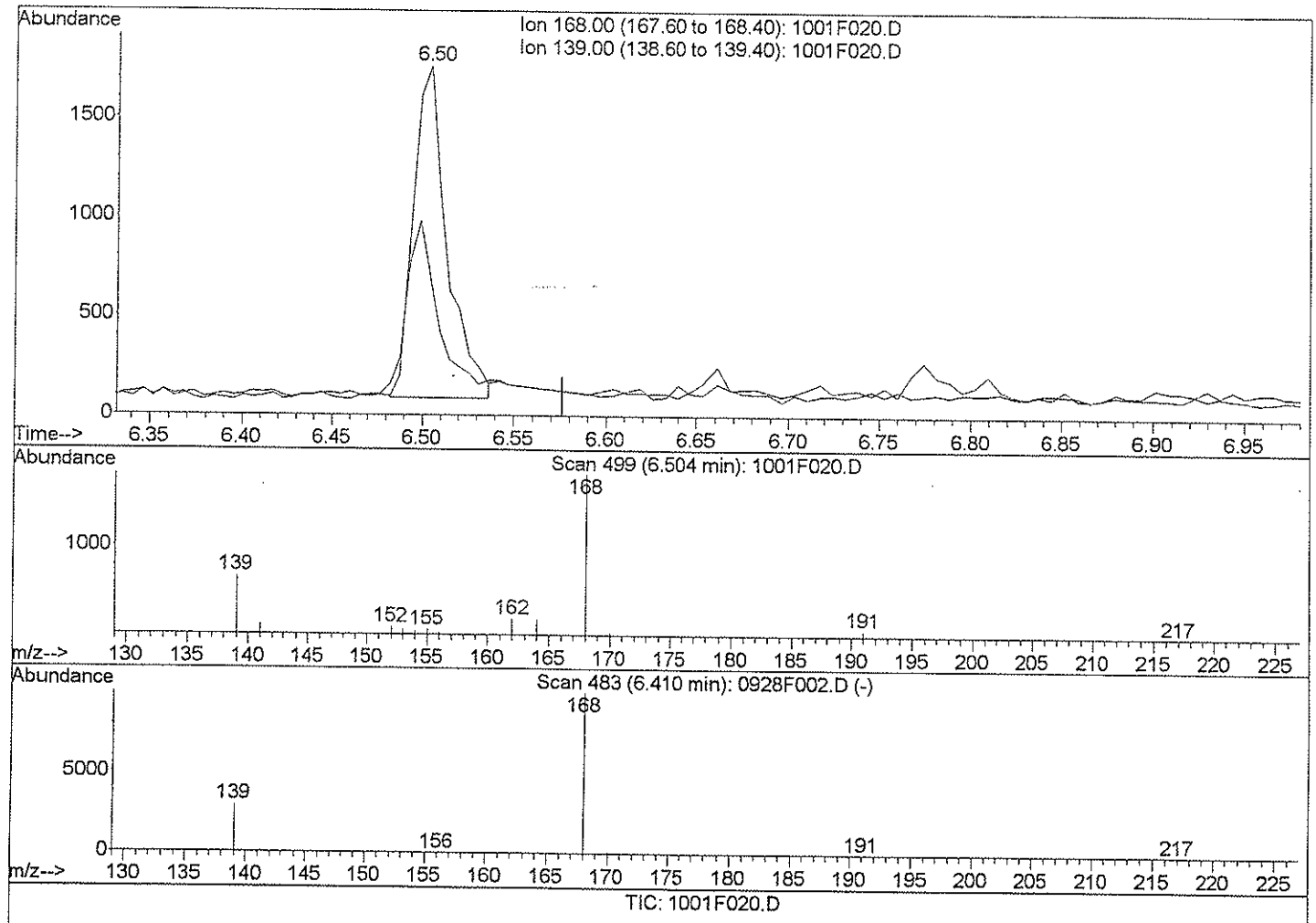
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F020.D
Acq On : 1 Oct 2008 7:40 pm
Sample : SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:40 2008

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 05:43:23 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.50min 1.74ng/ml m

response 2144

Ion	Exp%	Act%
168.00	100	100
139.00	42.70	39.15
0.00	0.00	0.00
0.00	0.00	0.00

OI 10/2/18

10/3/18

1001F020.D 1001ALK.M Thu Oct 02 05:40:41 2008

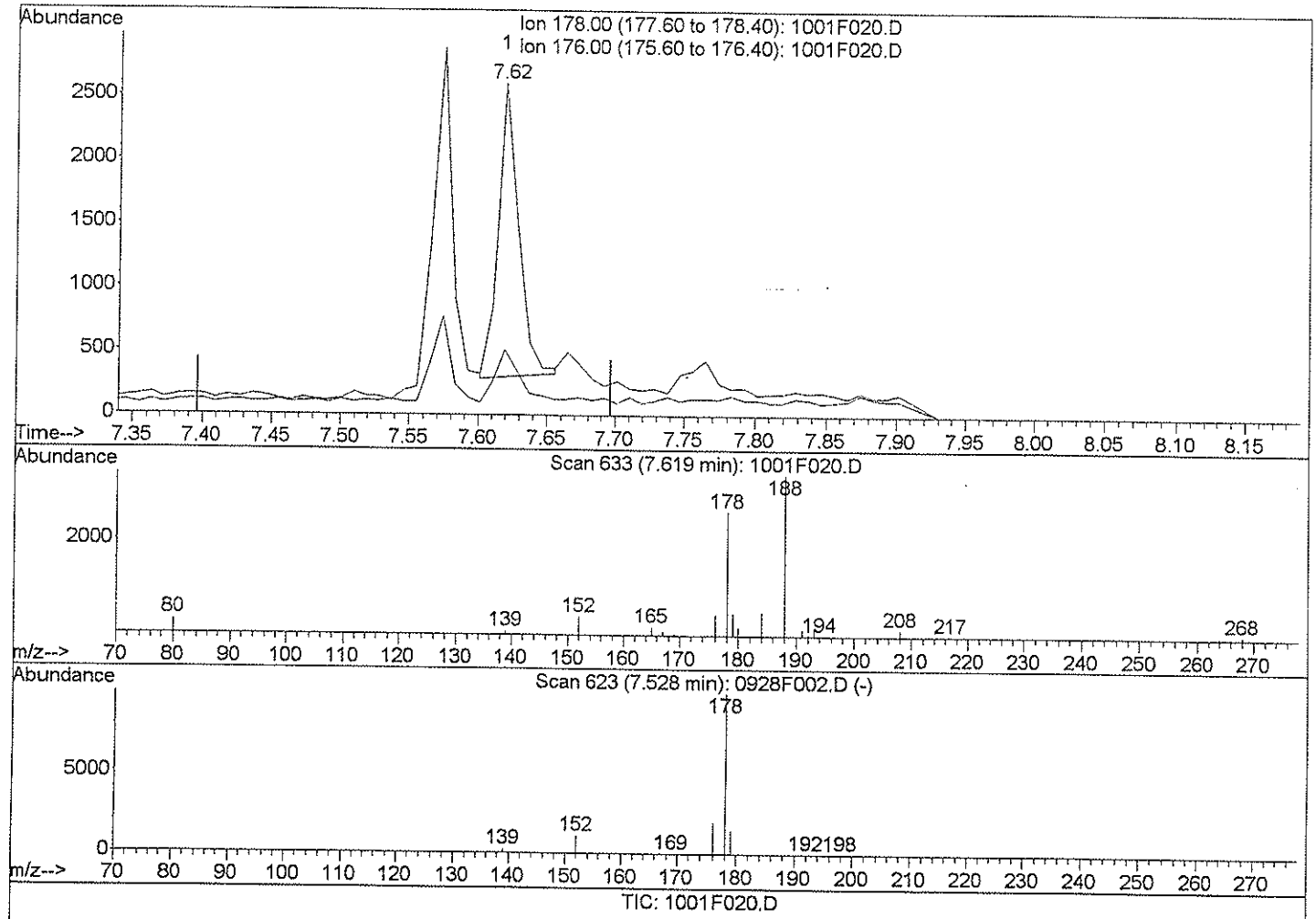
Quantification Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F020.D
Acq On : 1 Oct 2008 7:40 pm
Sample : SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:40 2008

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 05:43:23 2008
Response via : Multiple Level Calibration



TIC: 1001F020.D

(28) Anthracene (T)

7.62min 1.58ng/ml

response 2390

Ion	Exp%	Act%
178.00	100	100
176.00	19.00	18.13
0.00	0.00	0.00
0.00	0.00	0.00

1001F020.D 1001ALK.M Thu Oct 02 05:40:52 2008

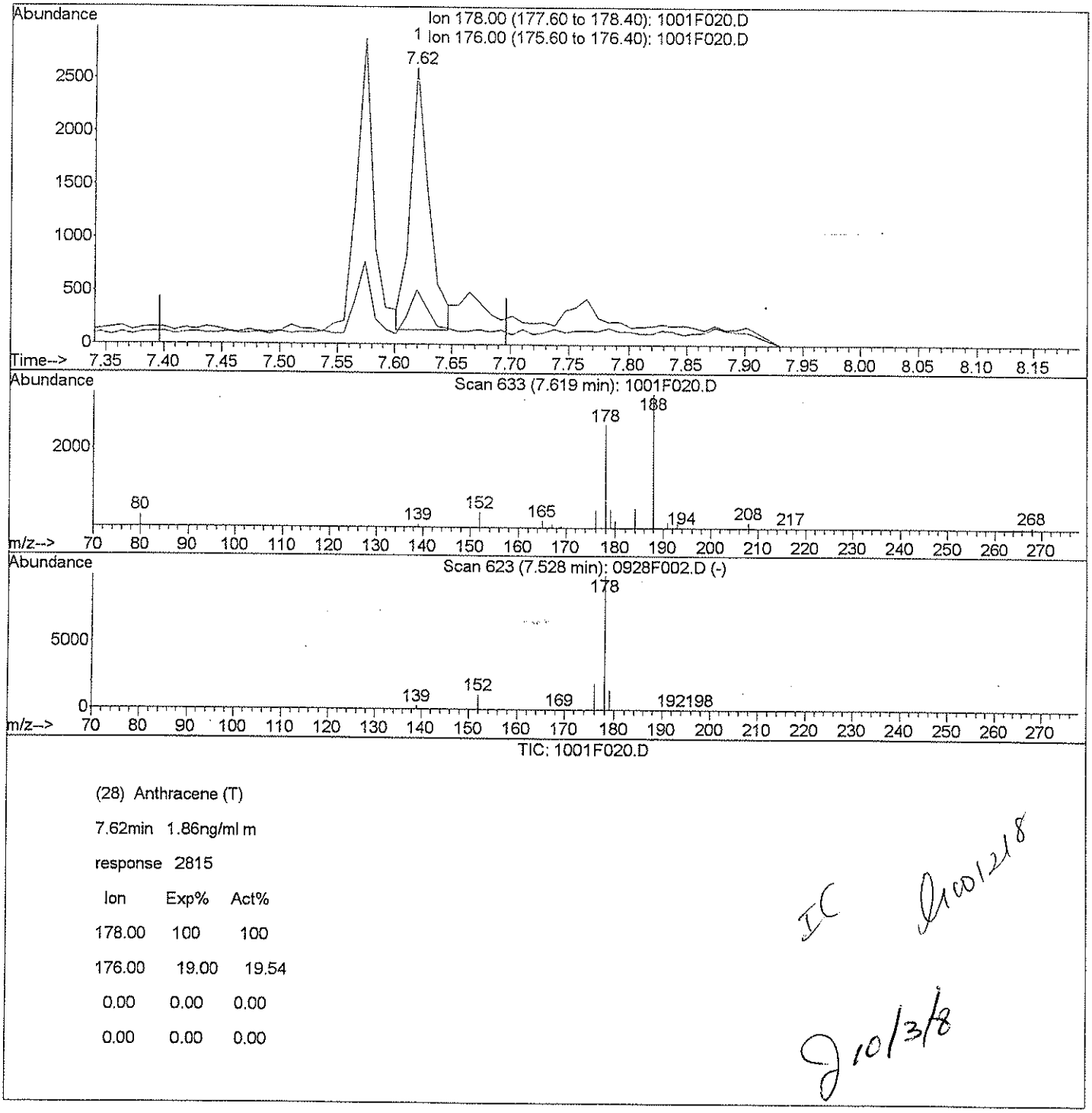
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F020.D
Acq On : 1 Oct 2008 7:40 pm
Sample : SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:40 2008

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 05:43:23 2008
Response via : Multiple Level Calibration



(28) Anthracene (T)

7.62min 1.86ng/ml m

response 2815

Ion	Exp%	Act%
178.00	100	100
176.00	19.00	19.54
0.00	0.00	0.00
0.00	0.00	0.00

IC 10/1218

10/3/8

1001F020.D 1001ALK.M Thu Oct 02 05:40:58 2008

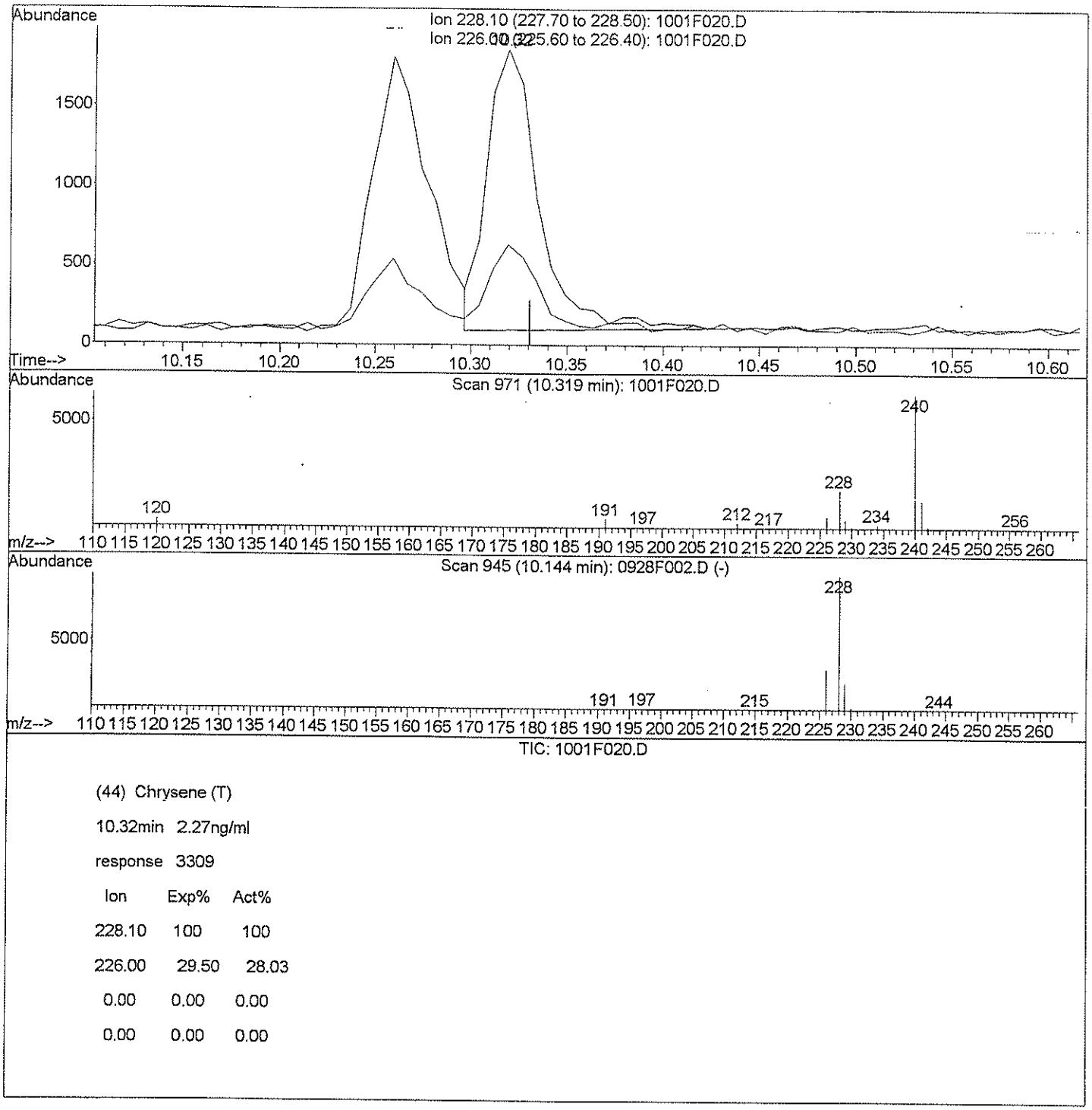
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F020.D
Acq On : 1 Oct 2008 7:40 pm
Sample : SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:40 2008

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 05:43:23 2008
Response via : Multiple Level Calibration



TIC: 1001F020.D

(44) Chrysene (T)

10.32min 2.27ng/ml

response 3309

Ion	Exp%	Act%
228.10	100	100
226.00	29.50	28.03
0.00	0.00	0.00
0.00	0.00	0.00

1001F020.D 1001ALK.M Thu Oct 02 05:41:11 2008

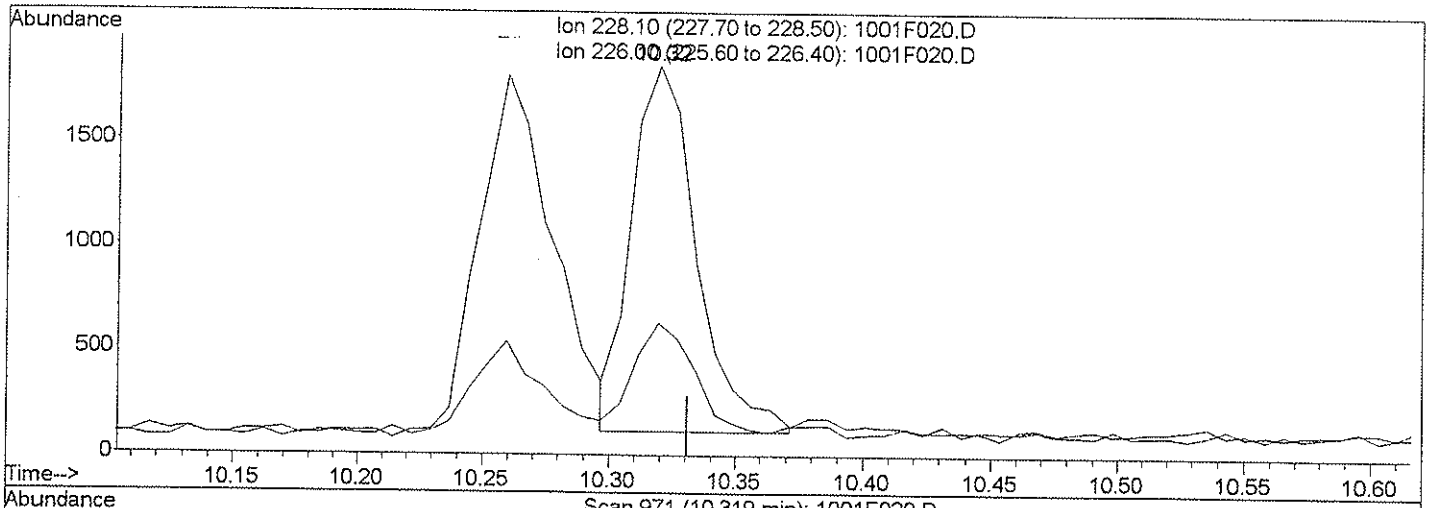
Quantitation Report (Qedit)

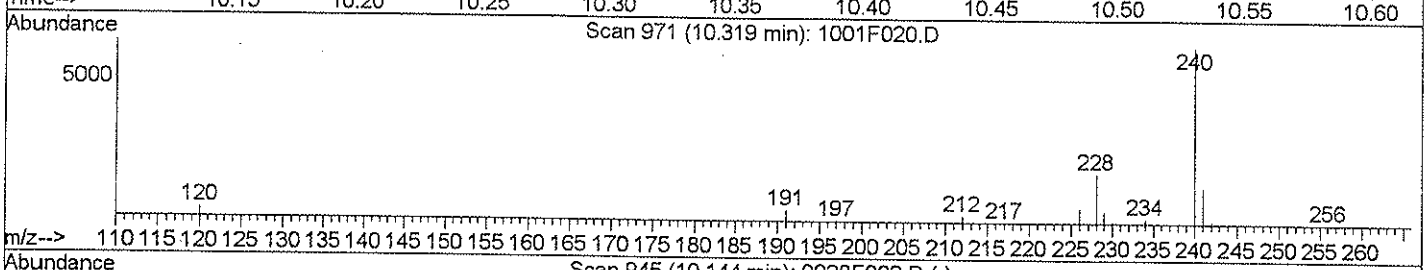
Data File : J:\MS11\DATA\100108\1001F020.D
Acq On : 1 Oct 2008 7:40 pm
Sample : SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:41 2008

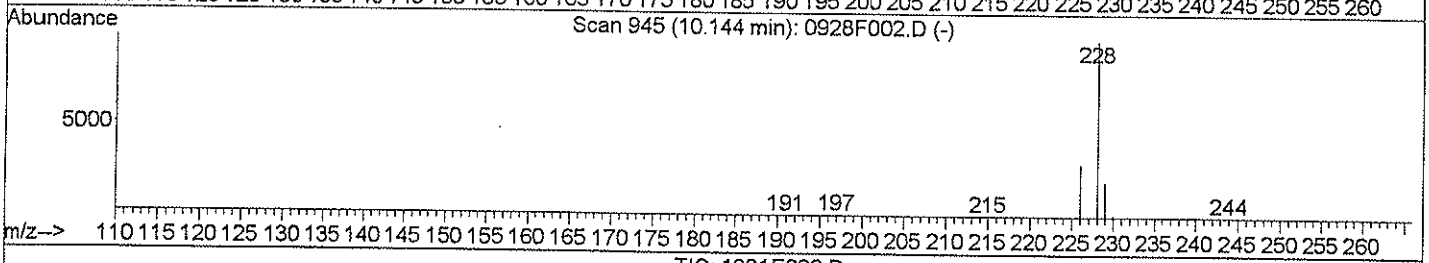
Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 05:43:23 2008
Response via : Multiple Level Calibration







TIC: 1001F020.D

(44) Chrysene (T)

10.32min 2.13ng/ml m

response 3108

Ion	Exp%	Act%
228.10	100	100
226.00	29.50	33.91
0.00	0.00	0.00
0.00	0.00	0.00

OI 10/1/18

10/3/18

1001F020.D 1001ALK.M Thu Oct 02 05:41:18 2008

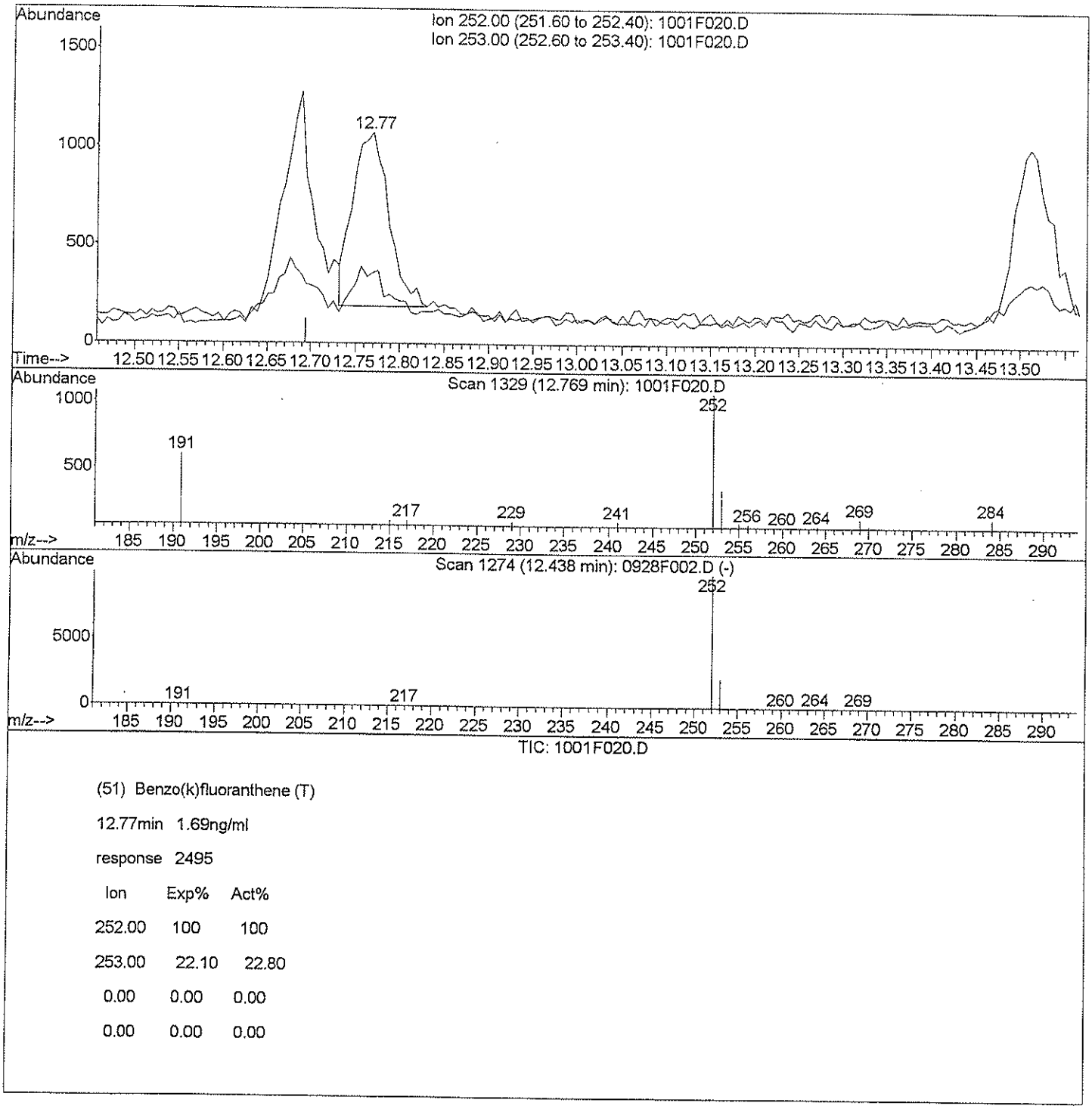
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F020.D
Acq On : 1 Oct 2008 7:40 pm
Sample : SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:41 2008

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 05:43:23 2008
Response via : Multiple Level Calibration



TIC: 1001F020.D

(51) Benzo(k)fluoranthene (T)

12.77min 1.69ng/ml

response 2495

Ion	Exp%	Act%
252.00	100	100
253.00	22.10	22.80
0.00	0.00	0.00
0.00	0.00	0.00

1001F020.D 1001ALK.M Thu Oct 02 05:41:25 2008

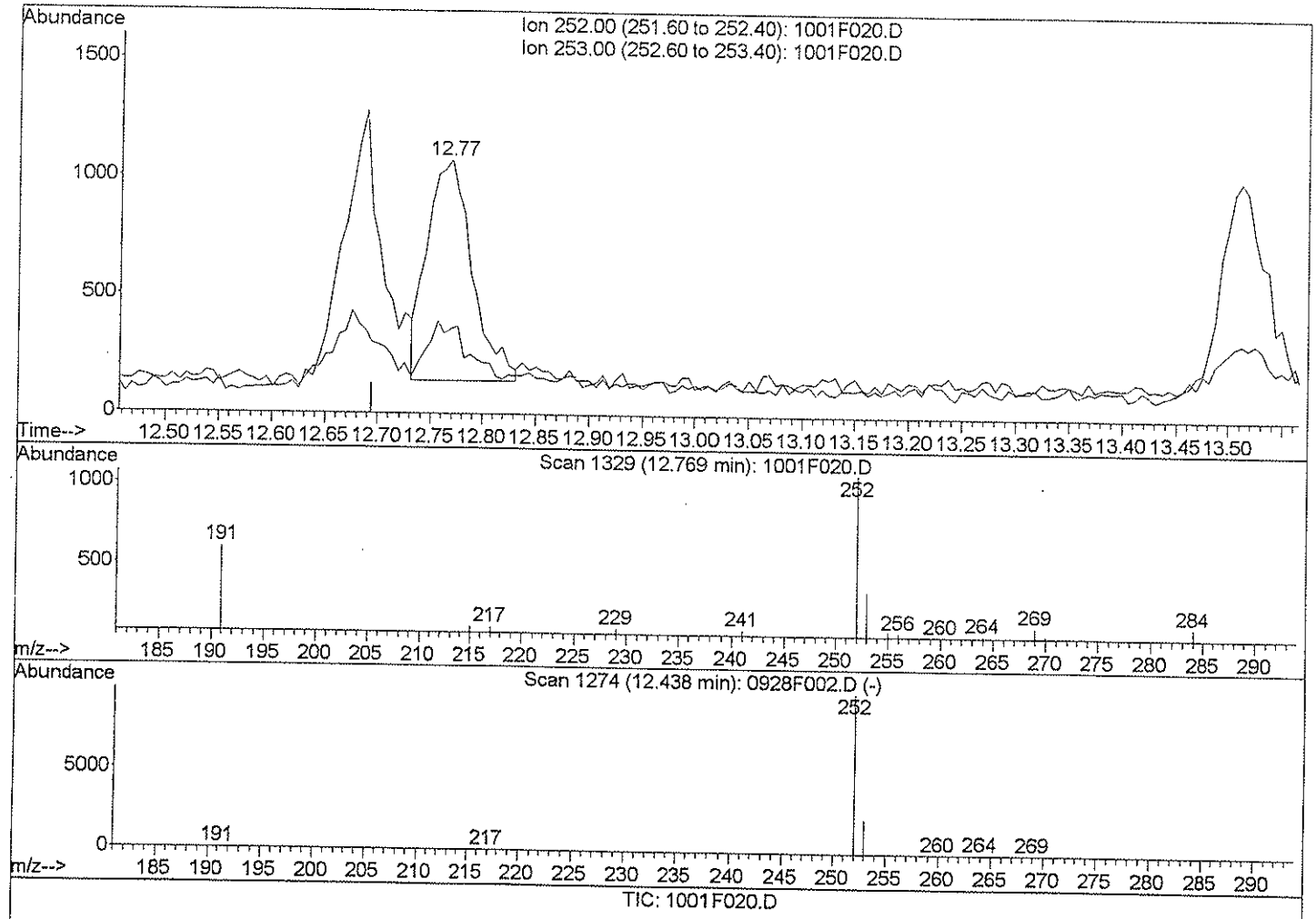
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F020.D
Acq On : 1 Oct 2008 7:40 pm
Sample : SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:41 2008

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 05:43:23 2008
Response via : Multiple Level Calibration



TIC: 1001F020.D

(51) Benzo(k)fluoranthene (T)

12.77min 1.89ng/ml m

response 2795

Ion	Exp%	Act%
252.00	100	100
253.00	22.10	33.36
0.00	0.00	0.00
0.00	0.00	0.00

IC 10/1/18

10/3/18

1001F020.D 1001ALK.M Thu Oct 02 05:41:33 2008

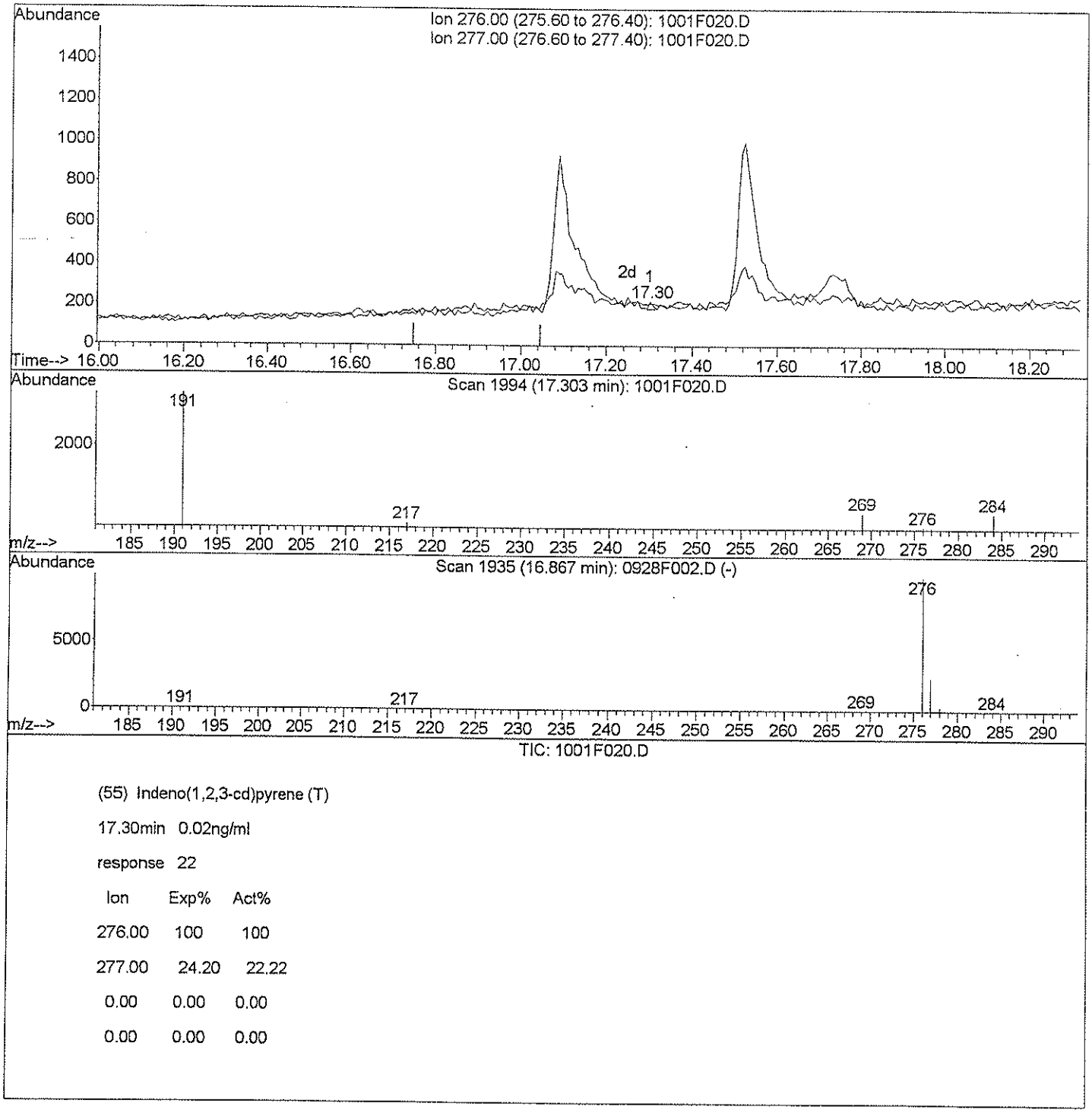
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F020.D
Acq On : 1 Oct 2008 7:40 pm
Sample : SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:41 2008

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 05:43:23 2008
Response via : Multiple Level Calibration



(55) Indeno(1,2,3-cd)pyrene (T)

17.30min 0.02ng/ml

response 22

Ion	Exp%	Act%
276.00	100	100
277.00	24.20	22.22
0.00	0.00	0.00
0.00	0.00	0.00

1001F020.D 1001ALK.M Thu Oct 02 05:41:38 2008

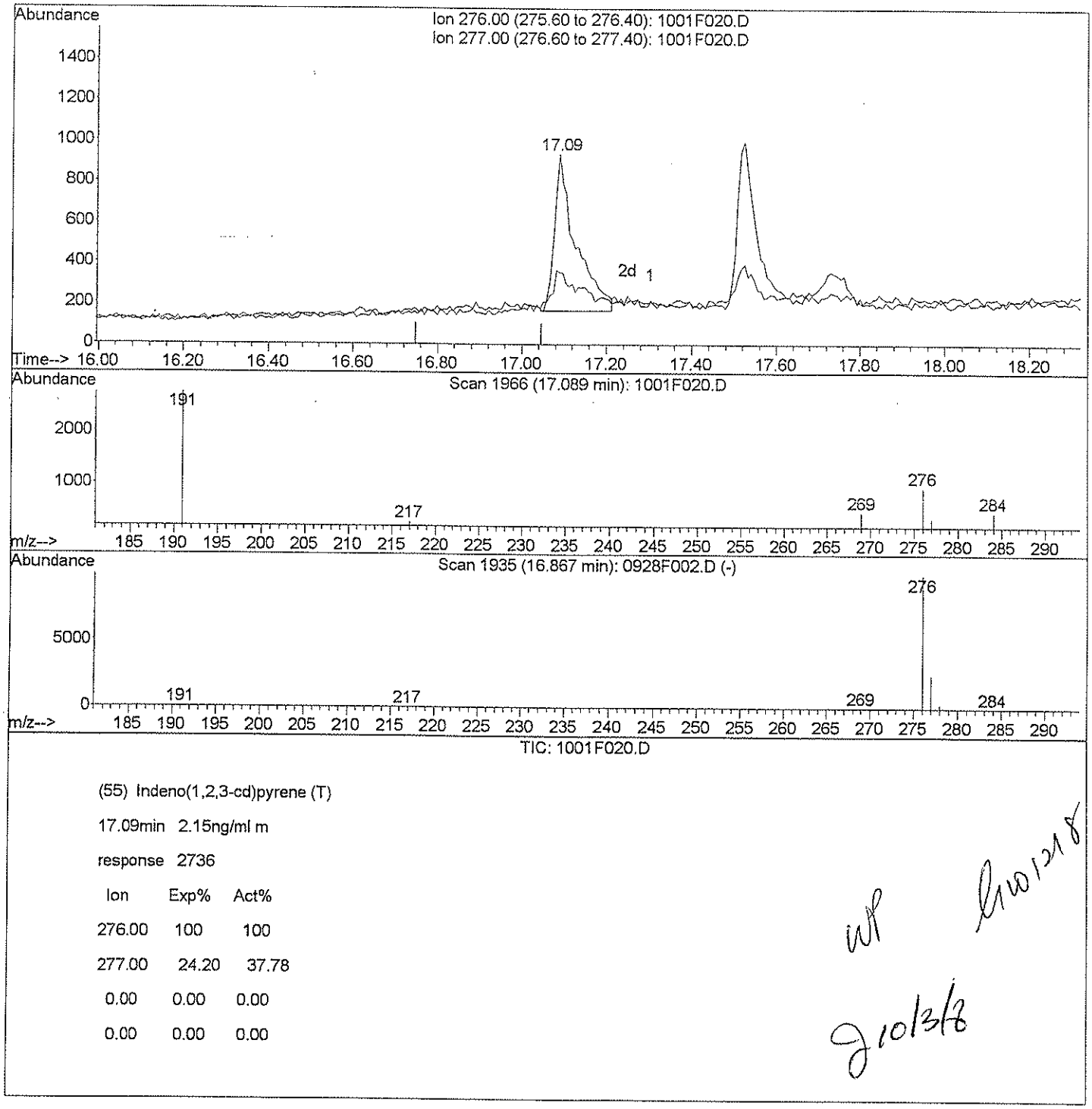
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F020.D
Acq On : 1 Oct 2008 7:40 pm
Sample : SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:41 2008

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 05:43:23 2008
Response via : Multiple Level Calibration



(55) Indeno(1,2,3-cd)pyrene (T)

17.09min 2.15ng/ml m

response 2736

Ion	Exp%	Act%
276.00	100	100
277.00	24.20	37.78
0.00	0.00	0.00
0.00	0.00	0.00

wf 10/2/08

10/3/08

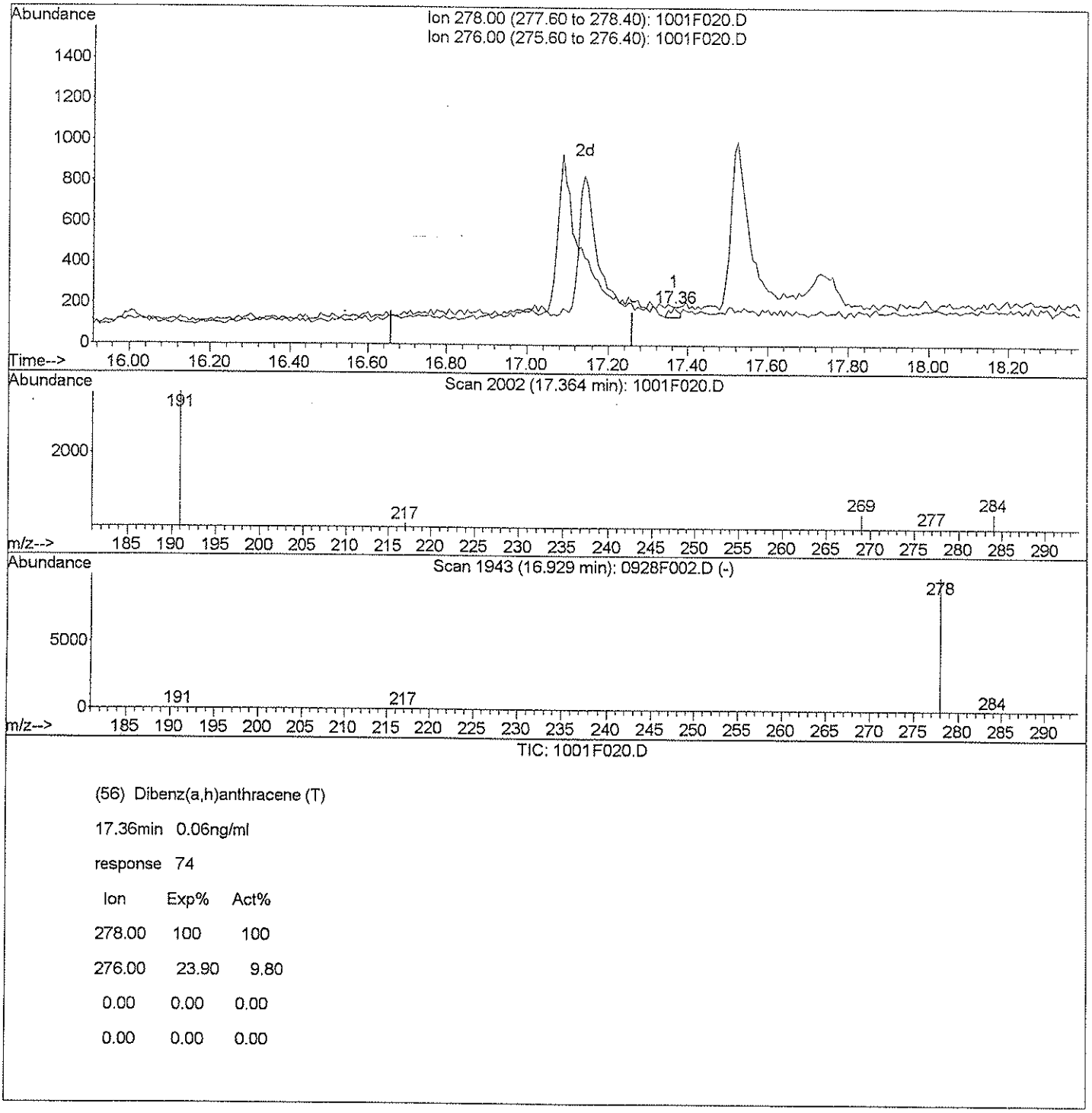
1001F020.D 1001ALK.M Thu Oct 02 05:41:47 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F020.D
Acq On : 1 Oct 2008 7:40 pm
Sample : SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:41 2008

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 05:43:23 2008
Response via : Multiple Level Calibration



TIC: 1001F020.D

(56) Dibenz(a,h)anthracene (T)

17.36min 0.06ng/ml

response 74

Ion	Exp%	Act%
278.00	100	100
276.00	23.90	9.80
0.00	0.00	0.00
0.00	0.00	0.00

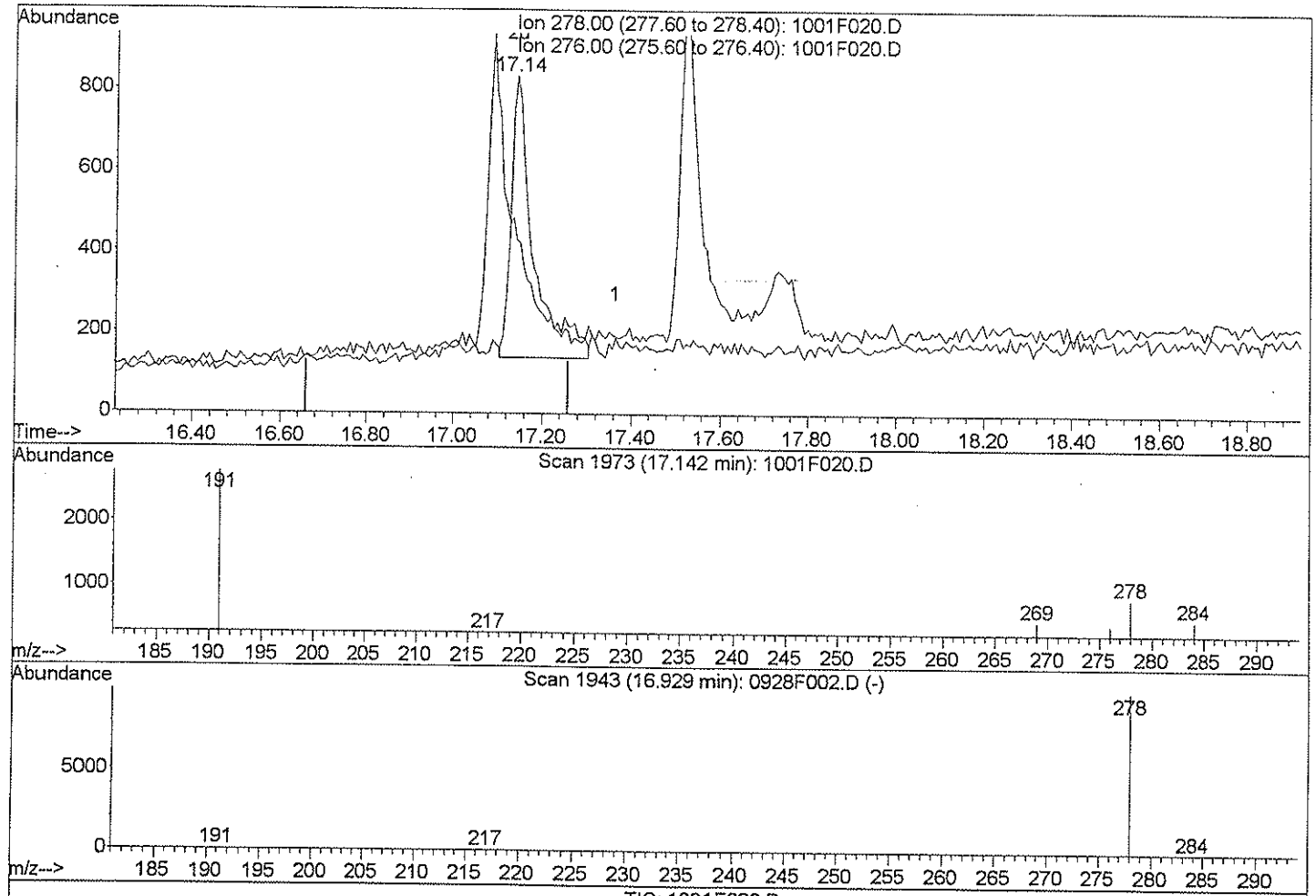
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F020.D
Acq On : 1 Oct 2008 7:40 pm
Sample : SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:42 2008

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 05:43:23 2008
Response via : Multiple Level Calibration



TIC: 1001F020.D

(56) Dibenz(a,h)anthracene (T)

17.14min 1.77ng/ml m

response 2332

Ion	Exp%	Act%
278.00	100	100
276.00	23.90	51.44
0.00	0.00	0.00
0.00	0.00	0.00

WL 10/1/08

10/3/08

1001F020.D 1001ALK.M Thu Oct 02 05:42:04 2008

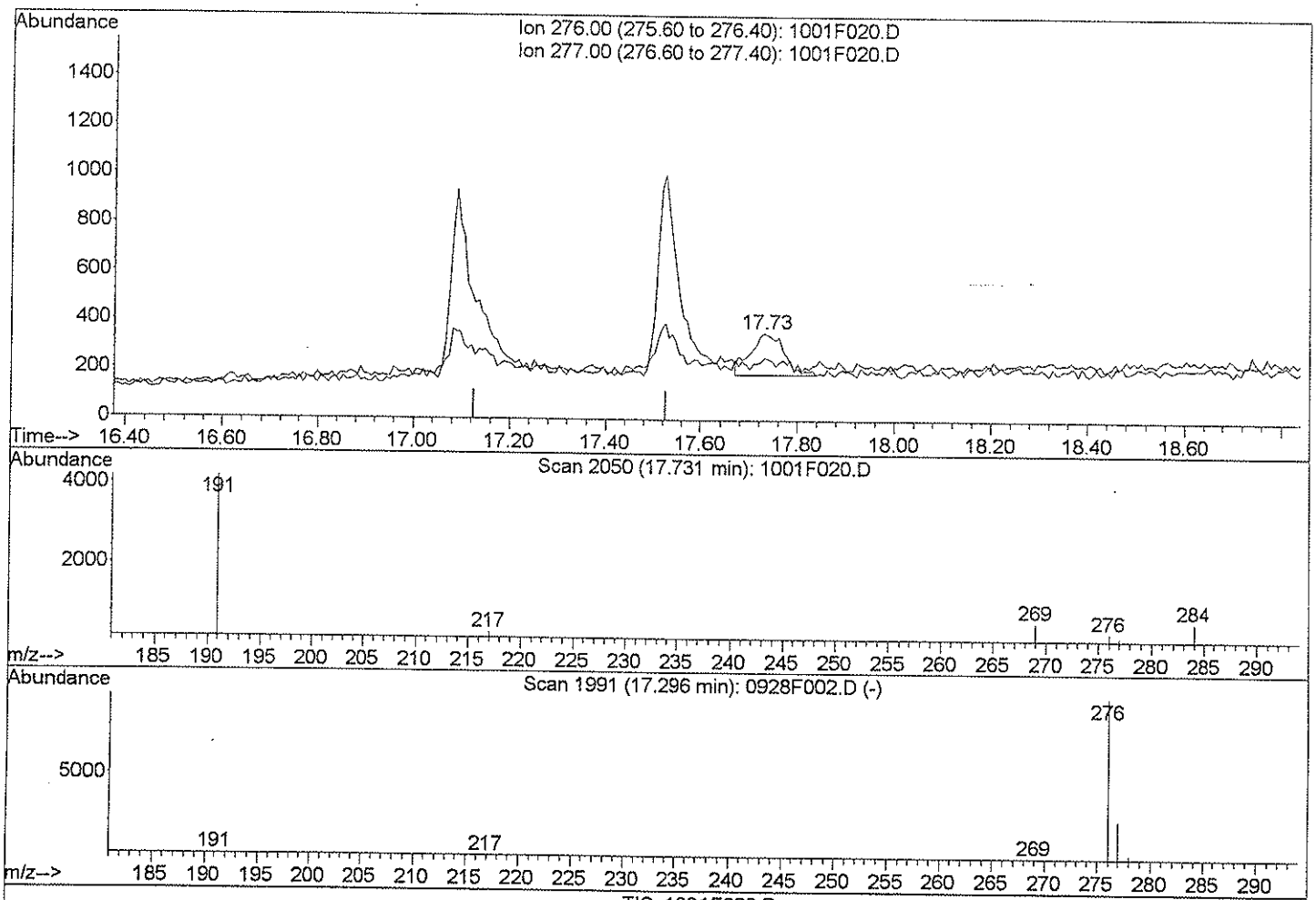
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F020.D
Acq On : 1 Oct 2008 7:40 pm
Sample : SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:42 2008

Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 05:43:23 2008
Response via : Multiple Level Calibration



TIC: 1001F020.D

(57) Benzo(g,h,i)perylene (T)

17.73min 0.57ng/ml

response 819

Ion	Exp%	Act%
276.00	100	100
277.00	24.10	17.06
0.00	0.00	0.00
0.00	0.00	0.00

1001F020.D 1001ALK.M Thu Oct 02 05:42:07 2008

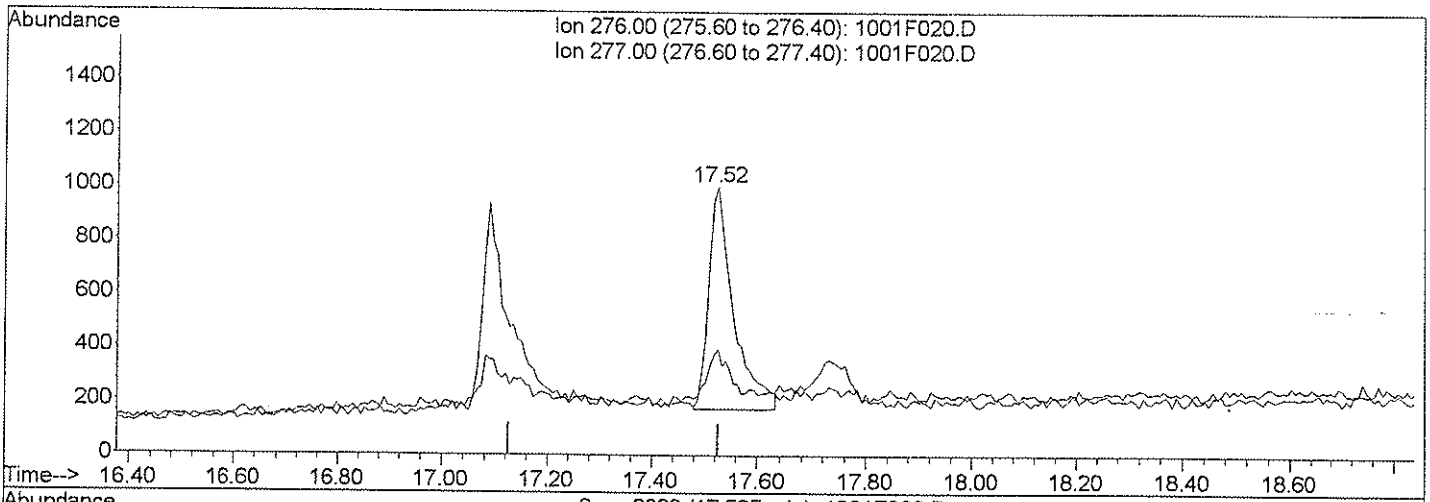
Quantitation Report (Qedit)

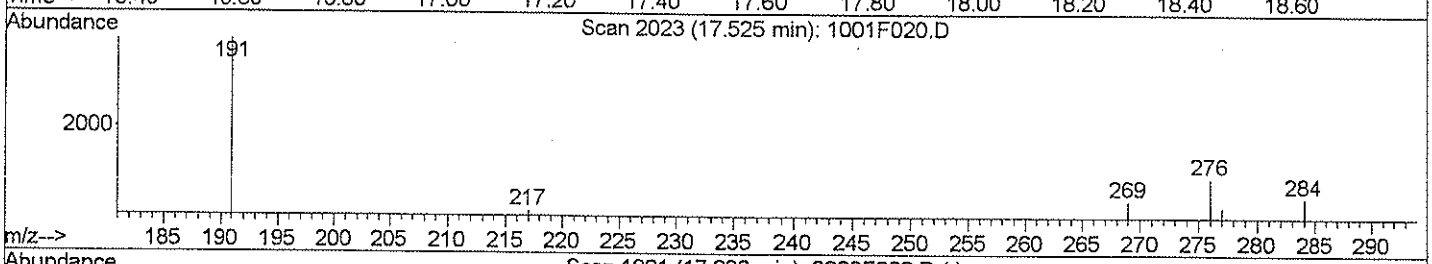
Data File : J:\MS11\DATA\100108\1001F020.D
Acq On : 1 Oct 2008 7:40 pm
Sample : SIM-PAH ICAL @.002/0.05ug/mL | SVM27-3D
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:42 2008

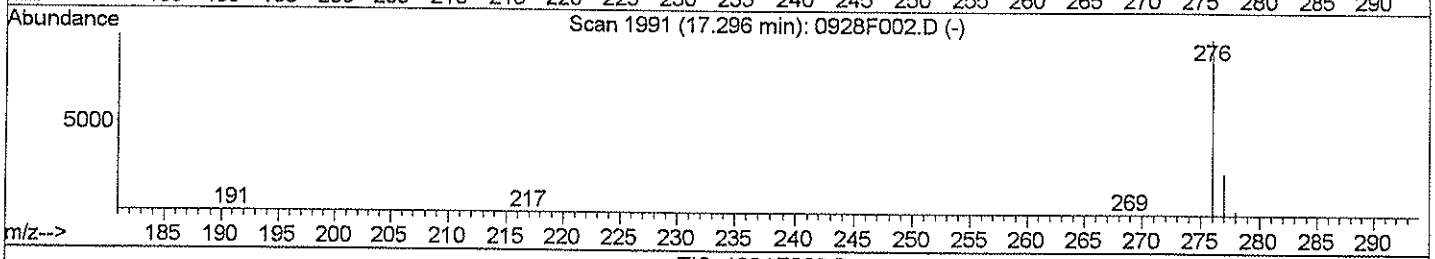
Vial: 4
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Oct 01 05:43:23 2008
Response via : Multiple Level Calibration







TIC: 1001F020.D

(57) Benzo(g,h,i)perylene (T)

17.52min 1.89ng/ml m

response 2738

Ion	Exp%	Act%
276.00	100	100
277.00	24.10	39.46
0.00	0.00	0.00
0.00	0.00	0.00

10/2/08

10/3/8

1001F020.D 1001ALK.M Thu Oct 02 05:42:13 2008

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F021.D
Acq On : 1 Oct 2008 8:07 pm
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:43:25 2008

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

10/2/08

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.91	136	229767	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.32	164	129344	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.55	188	215533	200.00	ng/ml	0.00
37) Chrysene-d12	10.27	240	230523	200.00	ng/ml	0.00
49) Perylene-d12	13.89	264	228428	200.00	ng/ml	0.02
System Monitoring Compounds						
15) Fluorene-d10	6.75	176	3180	3.40	ng/ml	0.01
Spiked Amount 200.000			Recovery =	1.70%		
20) 2,4,6 Tribromophenol	6.99	330	417	2.61	ng/ml	0.02
Spiked Amount 375.000			Recovery =	0.70%		
36) Fluoranthene-d10	8.55	212	5467	3.50	ng/ml	0.00
Spiked Amount 200.000			Recovery =	1.75%		
42) Terphenyl-d14	8.92	244	4497	3.76	ng/ml	0.00
Spiked Amount 200.000			Recovery =	1.88%		
Target Compounds						Qvalue
2) Naphthalene	4.92	128	5116	3.96	ng/ml	95
3) 2-Methylnaphthalene	5.48	142	3281	3.61	ng/ml	96
4) 1-Methylnaphthalene	5.56	142	3101	3.82	ng/ml	95
5) Biphenyl	5.85	154	4091	3.66	ng/ml	97
6) 2,6-Dimethylnaphthalene	5.98	156	2733	3.35	ng/ml	93
11) Acenaphthylene	6.20	152	4799	3.50	ng/ml	93
12) Acenaphthene	6.35	154	3045	3.76	ng/ml	92
13) Dibenzofuran	6.50	168	4114m	3.40	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.66	170	2718	3.49	ng/ml	99
16) Fluorene	6.77	166	3243	3.18	ng/ml	71
21) Pentachlorophenol	7.44	266	9330	77.64	ng/ml	93
23) Dibenzothiophene	7.47	184	4617	3.55	ng/ml	91
27) Phenanthrene	7.57	178	5246	3.55	ng/ml	93
28) Anthracene	7.62	178	5138	3.53	ng/ml	98
29) Carbazole	7.76	167	3653	3.04	ng/ml	97
30) 1-Methylphenanthrene	8.08	192	3817	3.53	ng/ml	100
35) Fluoranthene	8.56	202	5654	3.39	ng/ml	95
38) Pyrene	8.77	202	5985	3.88	ng/ml	92
43) Benz(a)anthracene	10.26	228	5872	3.90	ng/ml	95
44) Chrysene	10.32	228	5643	4.00	ng/ml	99
50) Benzo(b)fluoranthene	12.68	252	5116	3.41	ng/ml	93
51) Benzo(k)fluoranthene	12.76	252	5478m	3.89	ng/ml	
52) Benzo(e)pyrene	13.51	252	5217	3.97	ng/ml	98
53) Benzo(a)pyrene	13.70	252	4264	3.35	ng/ml	89
54) Perylene	13.98	252	4642	3.64	ng/ml	92

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

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F021.D Vial: 5
Acq On : 1 Oct 2008 8:07 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:43:25 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

10/2/18

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.09	276	3021m	2.49	ng/ml	
56)	Dibenz(a,h)anthracene	17.14	278	3601	2.87	ng/ml	79
57)	Benzo(g,h,i)perylene	17.52	276	4333	3.15	ng/ml	96

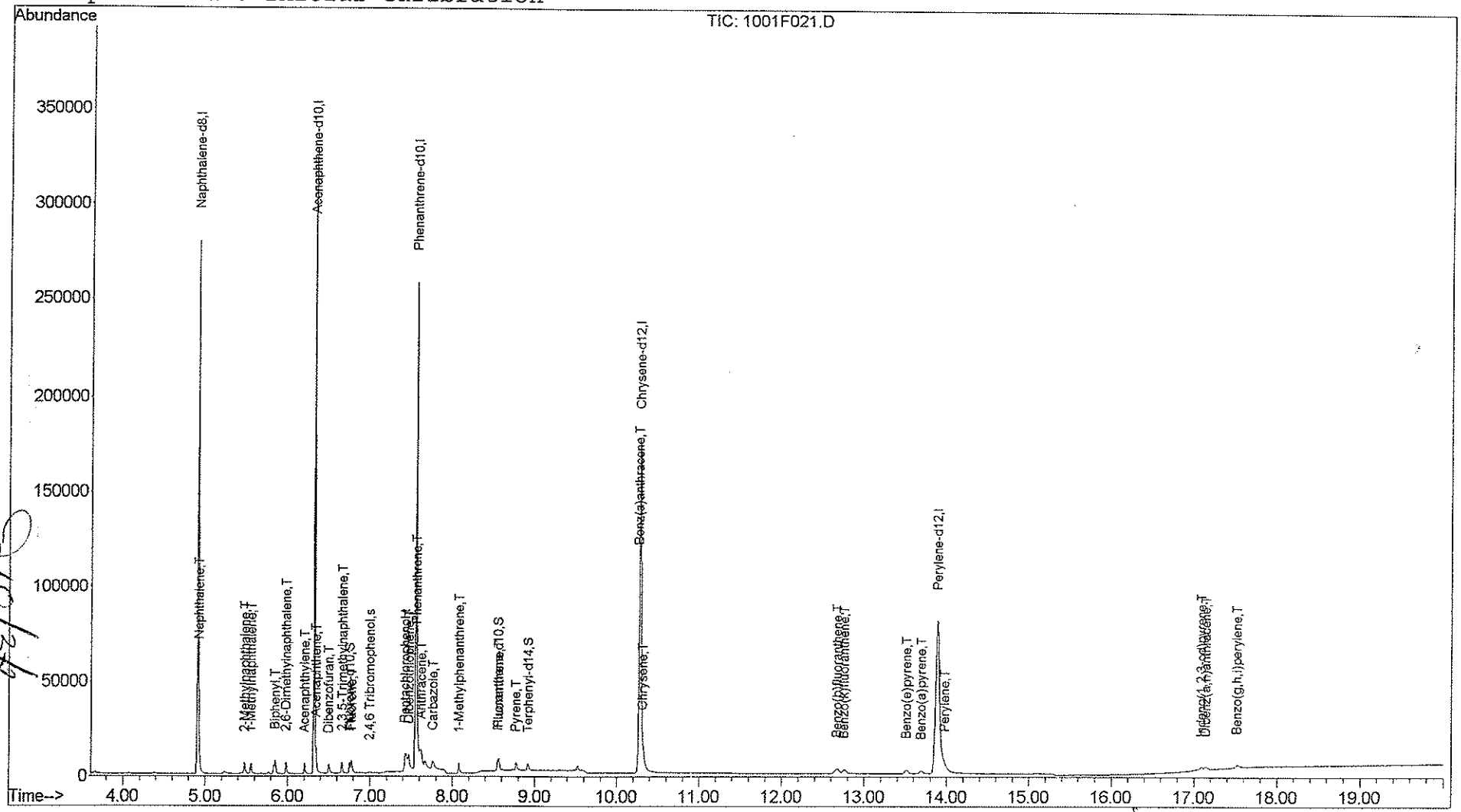
10/3/18

(#) = qualifier out of range (m) = manual integration
1001F021.D 1001ALK.M Thu Oct 02 05:50:43 2008 Page 2

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F021.D Vial: 5
Acq On : 1 Oct 2008 8:07 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:44 2008 Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration



924

10/1/08

10/1/08

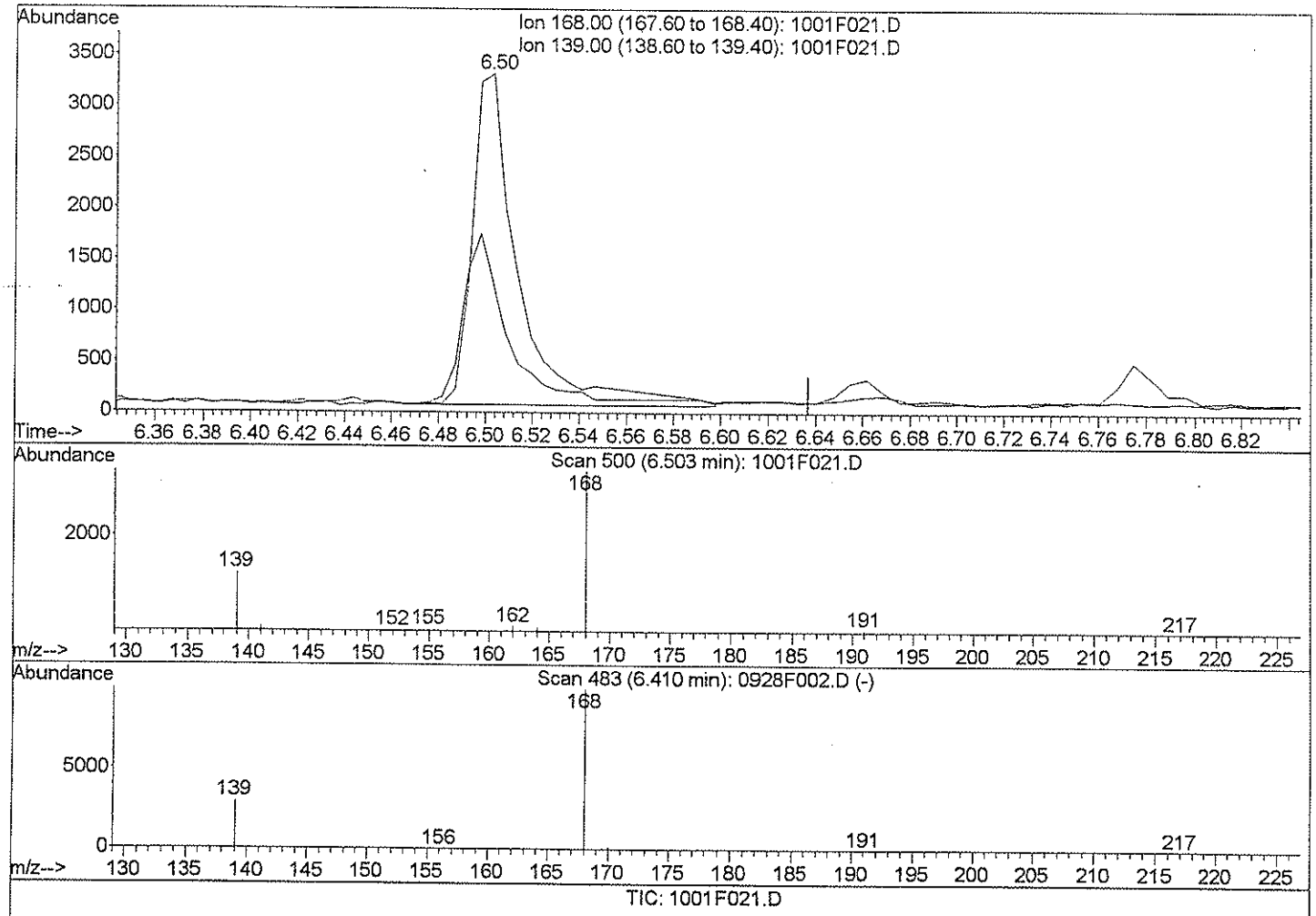
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F021.D
Acq On : 1 Oct 2008 8:07 pm
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:43 2008

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.50min 5.12ng/ml

response 6196

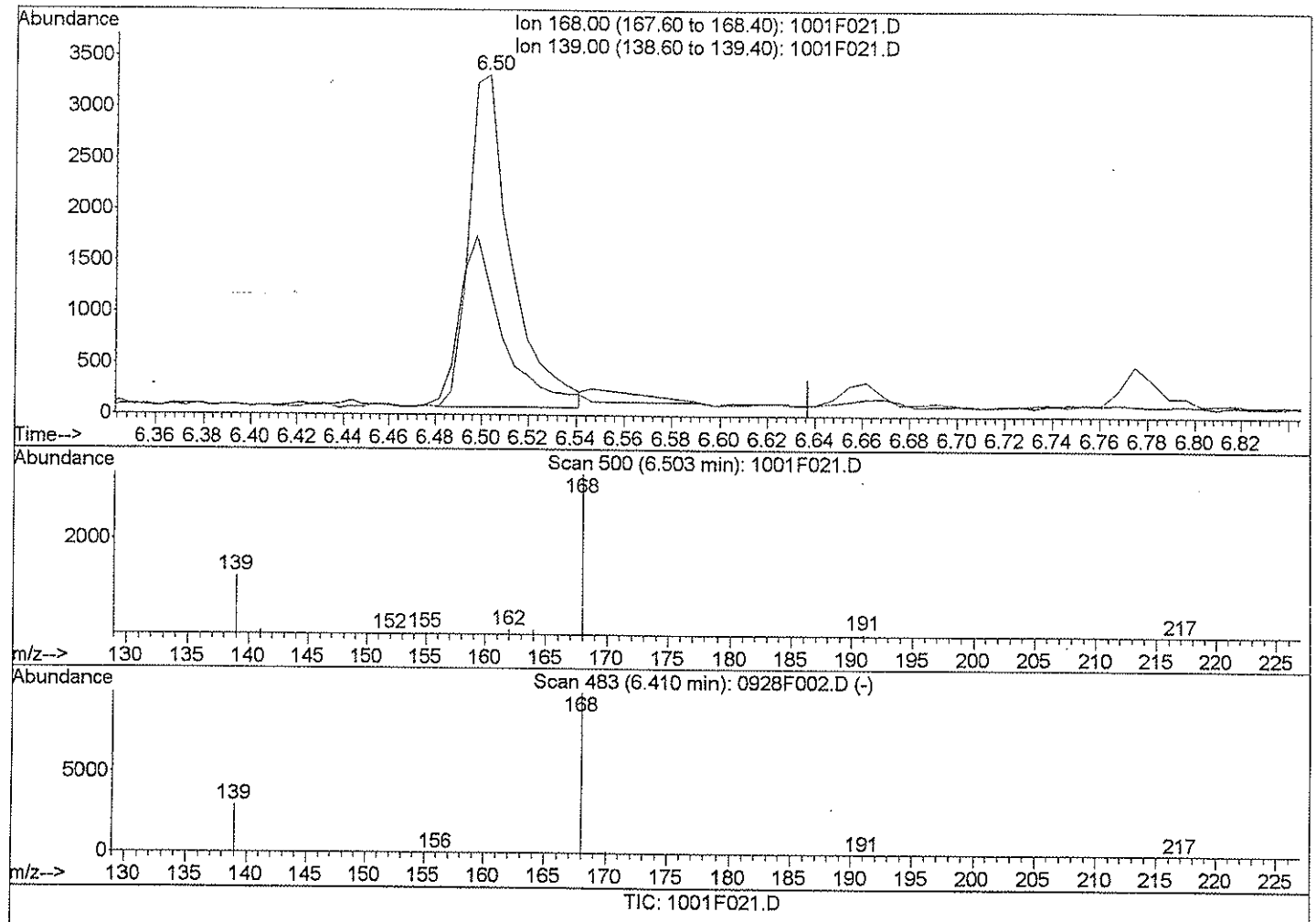
Ion	Exp%	Act%
168.00	100	100
139.00	51.00	36.23
0.00	0.00	0.00
0.00	0.00	0.00

1001F021.D 1001ALK.M Thu Oct 02 05:44:00 2008

Data File : J:\MS11\DATA\100108\1001F021.D
Acq On : 1 Oct 2008 8:07 pm
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:44 2008

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.50min 3.40ng/ml m

response 4114

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	37.78
0.00	0.00	0.00
0.00	0.00	0.00

OI 10/2/08

10/3/08

1001F021.D 1001ALK.M Thu Oct 02 05:44:07 2008

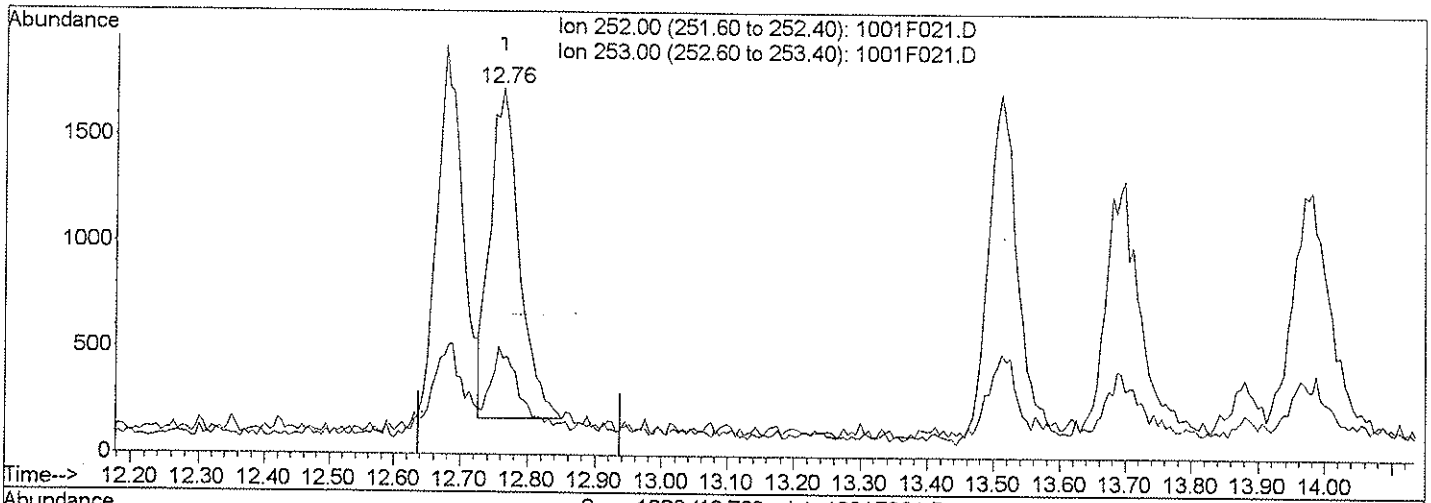
Quantitation Report (Qedit)

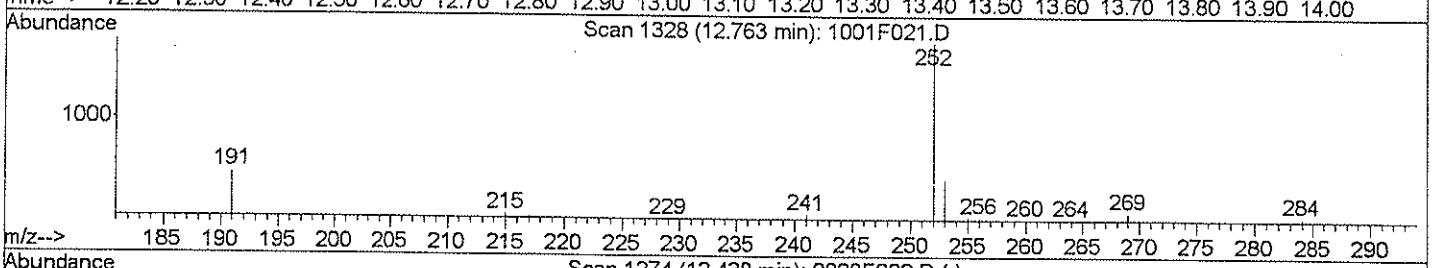
Data File : J:\MS11\DATA\100108\1001F021.D
Acq On : 1 Oct 2008 8:07 pm
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:44 2008

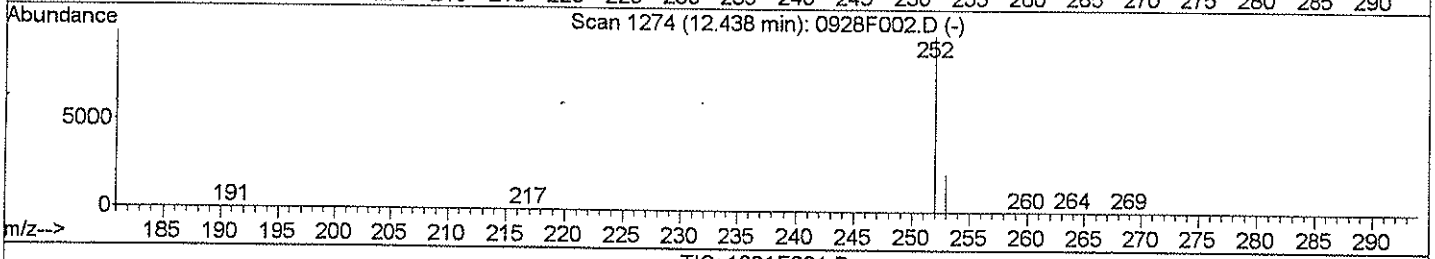
Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration







TIC: 1001F021.D

(51) Benzo(k)fluoranthene (T)

12.76min 3.38ng/ml

response 4751

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	19.38
0.00	0.00	0.00
0.00	0.00	0.00

1001F021.D 1001ALK.M Thu Oct 02 05:44:28 2008

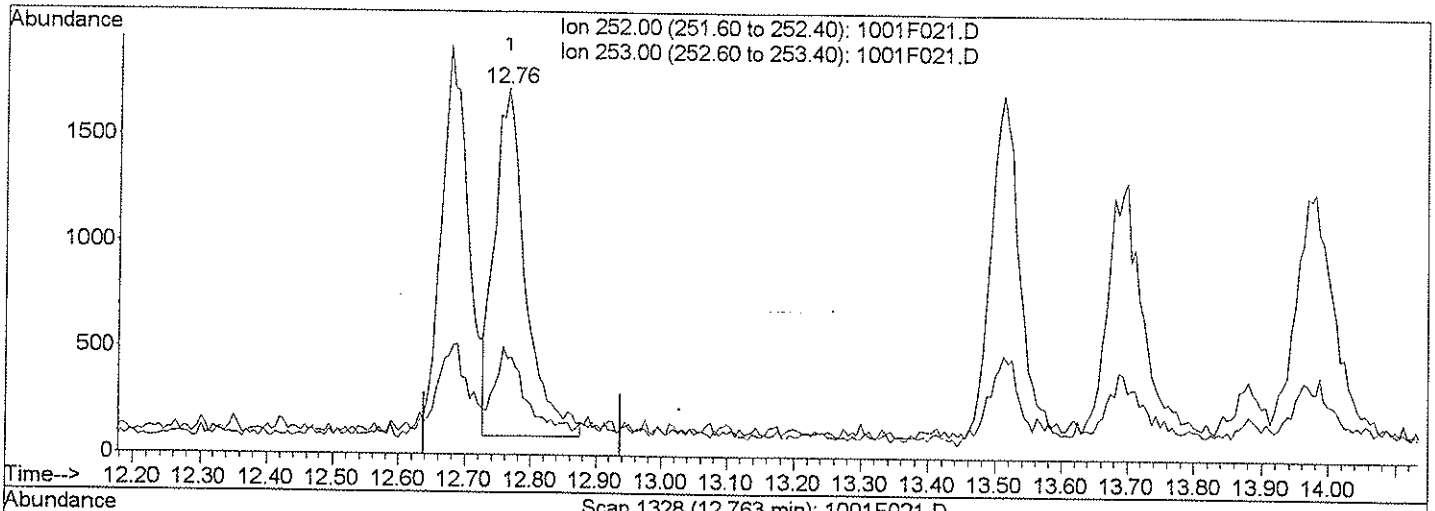
Quantitation Report (Qedit)

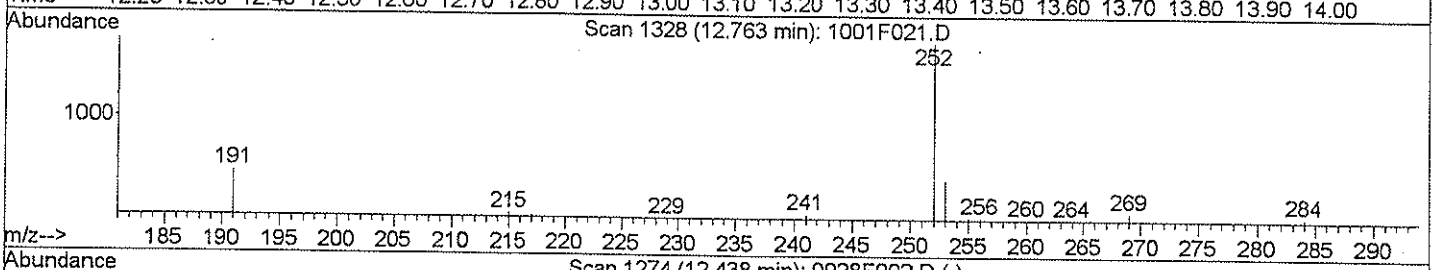
Data File : J:\MS11\DATA\100108\1001F021.D
Acq On : 1 Oct 2008 8:07 pm
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:44 2008

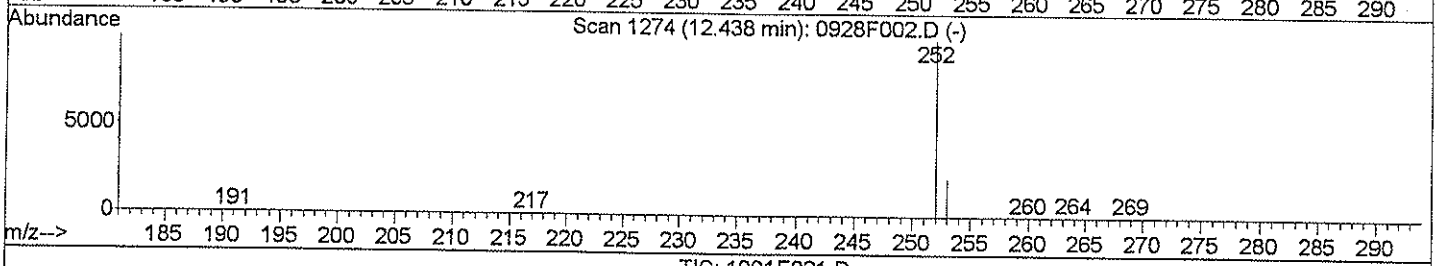
Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration







TIC: 1001F021.D

(51) Benzo(k)fluoranthene (T)

12.76min 3.89ng/ml m

response 5478

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	26.13
0.00	0.00	0.00
0.00	0.00	0.00

IC 10/2/08

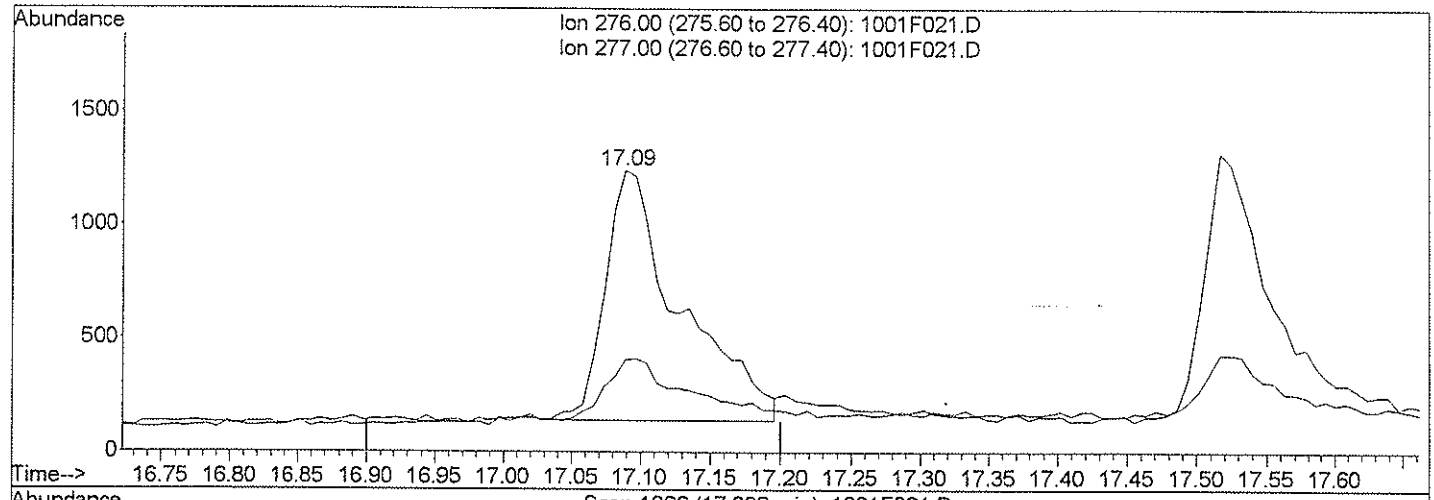
10/3/08

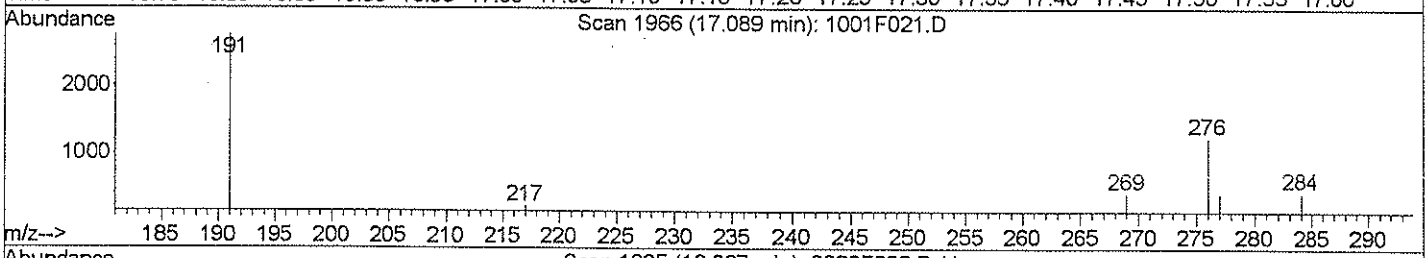
1001F021.D 1001ALK.M Thu Oct 02 05:44:34 2008

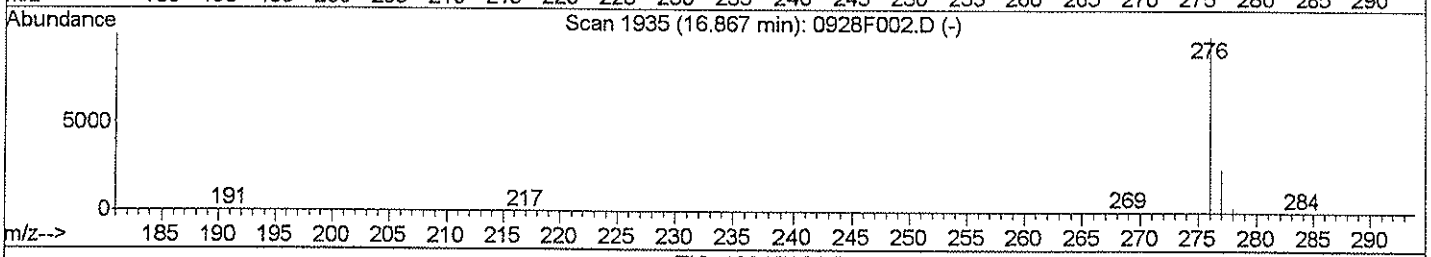
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F021.D Vial: 5
Acq On : 1 Oct 2008 8:07 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:44 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration







TIC: 1001F021.D

(55) Indeno(1,2,3-cd)pyrene (T)

17.09min 3.42ng/ml

response 4150

Ion	Exp%	Act%
276.00	100	100
277.00	24.70	23.48
0.00	0.00	0.00
0.00	0.00	0.00

1001F021.D 1001ALK.M Thu Oct 02 05:44:42 2008

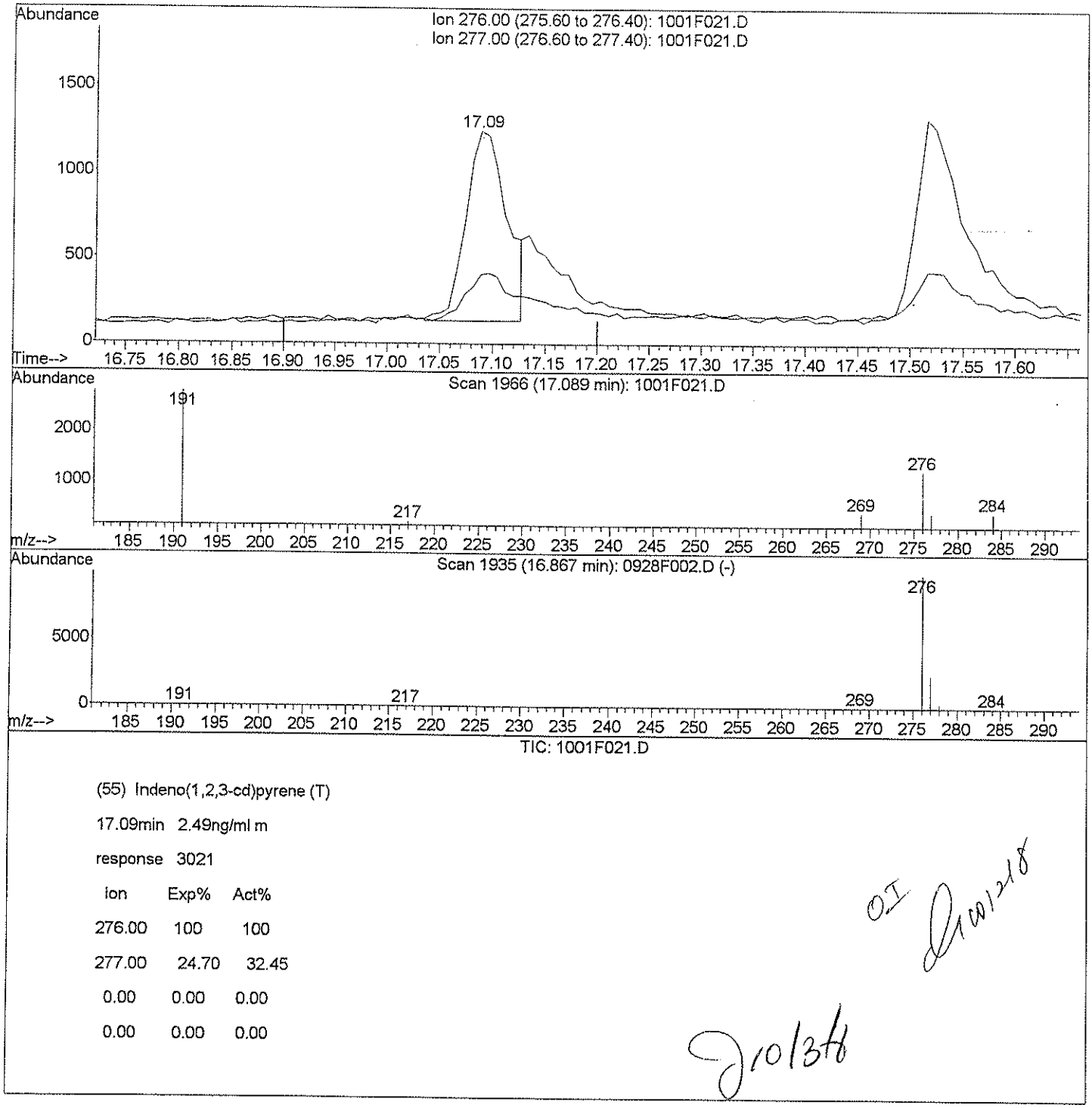
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F021.D
Acq On : 1 Oct 2008 8:07 pm
Sample : SIM-PAH ICAL @.004/0.1ug/mL | SVM27-3E
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:44 2008

Vial: 5
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



TIC: 1001F021.D

(55) Indeno(1,2,3-cd)pyrene (T)

17.09min 2.49ng/ml m

response 3021

ion	Exp%	Act%
276.00	100	100
277.00	24.70	32.45
0.00	0.00	0.00
0.00	0.00	0.00

OI 10/1/08

10/3/08

1001F021.D 1001ALK.M Thu Oct 02 05:44:55 2008

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F022.D
Acq On : 1 Oct 2008 8:33 pm
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:43:26 2008

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

10/2/08

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.91	136	215357	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.32	164	120415	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.56	188	200595	200.00	ng/ml	0.00
37) Chrysene-d12	10.27	240	210792	200.00	ng/ml	0.00
49) Perylene-d12	13.89	264	211871	200.00	ng/ml	0.02
System Monitoring Compounds						
15) Fluorene-d10	6.75	176	6072	6.98	ng/ml	0.01
Spiked Amount 200.000			Recovery =	3.49%		
20) 2,4,6 Tribromophenol	7.00	330	819	5.50	ng/ml	0.03
Spiked Amount 375.000			Recovery =	1.47%		
36) Fluoranthene-d10	8.55	212	9919	6.83	ng/ml	0.00
Spiked Amount 200.000			Recovery =	3.42%		
42) Terphenyl-d14	8.92	244	8711	7.96	ng/ml	0.00
Spiked Amount 200.000			Recovery =	3.98%		
Target Compounds						Qvalue
2) Naphthalene	4.93	128	9620	7.94	ng/ml	97
3) 2-Methylnaphthalene	5.48	142	6098	7.16	ng/ml	97
4) 1-Methylnaphthalene	5.55	142	5657	7.44	ng/ml	99
5) Biphenyl	5.85	154	7437	7.10	ng/ml	99
6) 2,6-Dimethylnaphthalene	5.98	156	5252	6.87	ng/ml	97
11) Acenaphthylene	6.21	152	8829	6.92	ng/ml	100
12) Acenaphthene	6.35	154	5650	7.49	ng/ml	90
13) Dibenzofuran	6.50	168	7643m	6.78	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.66	170	4986	6.87	ng/ml	89
16) Fluorene	6.77	166	6506	6.86	ng/ml	97
21) Pentachlorophenol	7.42	266	19032	170.11	ng/ml	92
23) Dibenzothiophene	7.47	184	8736	7.22	ng/ml	93
27) Phenanthrene	7.57	178	9318	6.78	ng/ml	96
28) Anthracene	7.62	178	8817m	6.51	ng/ml	
29) Carbazole	7.77	167	7167	6.42	ng/ml	96
30) 1-Methylphenanthrene	8.08	192	6832	6.78	ng/ml	98
35) Fluoranthene	8.56	202	10444	6.73	ng/ml	100
38) Pyrene	8.77	202	11008	7.81	ng/ml	96
43) Benz(a)anthracene	10.26	228	10297	7.48	ng/ml	97
44) Chrysene	10.32	228	10289	7.98	ng/ml	99
50) Benzo(b)fluoranthene	12.68	252	9535	6.86	ng/ml	100
51) Benzo(k)fluoranthene	12.76	252	9878m	7.57	ng/ml	
52) Benzo(e)pyrene	13.51	252	9167	7.52	ng/ml	99
53) Benzo(a)pyrene	13.70	252	7497	6.34	ng/ml	99
54) Perylene	13.98	252	7836	6.63	ng/ml	96

(#) = qualifier out of range (m) = manual integration
1001F022.D 1001ALK.M Thu Oct 02 05:50:46 2008 10/3/8 Page 1

Data File : J:\MS11\DATA\100108\1001F022.D
Acq On : 1 Oct 2008 8:33 pm
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:43:26 2008

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

10/2/08

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.09	276	5527m	4.91	ng/ml	
56)	Dibenz(a,h)anthracene	17.14	278	6204	5.34	ng/ml	75
57)	Benzo(g,h,i)perylene	17.52	276	7647	5.99	ng/ml	97

10/3/08

(#) = qualifier out of range (m) = manual integration
1001F022.D 1001ALK.M Thu Oct 02 05:50:46 2008 Page 2

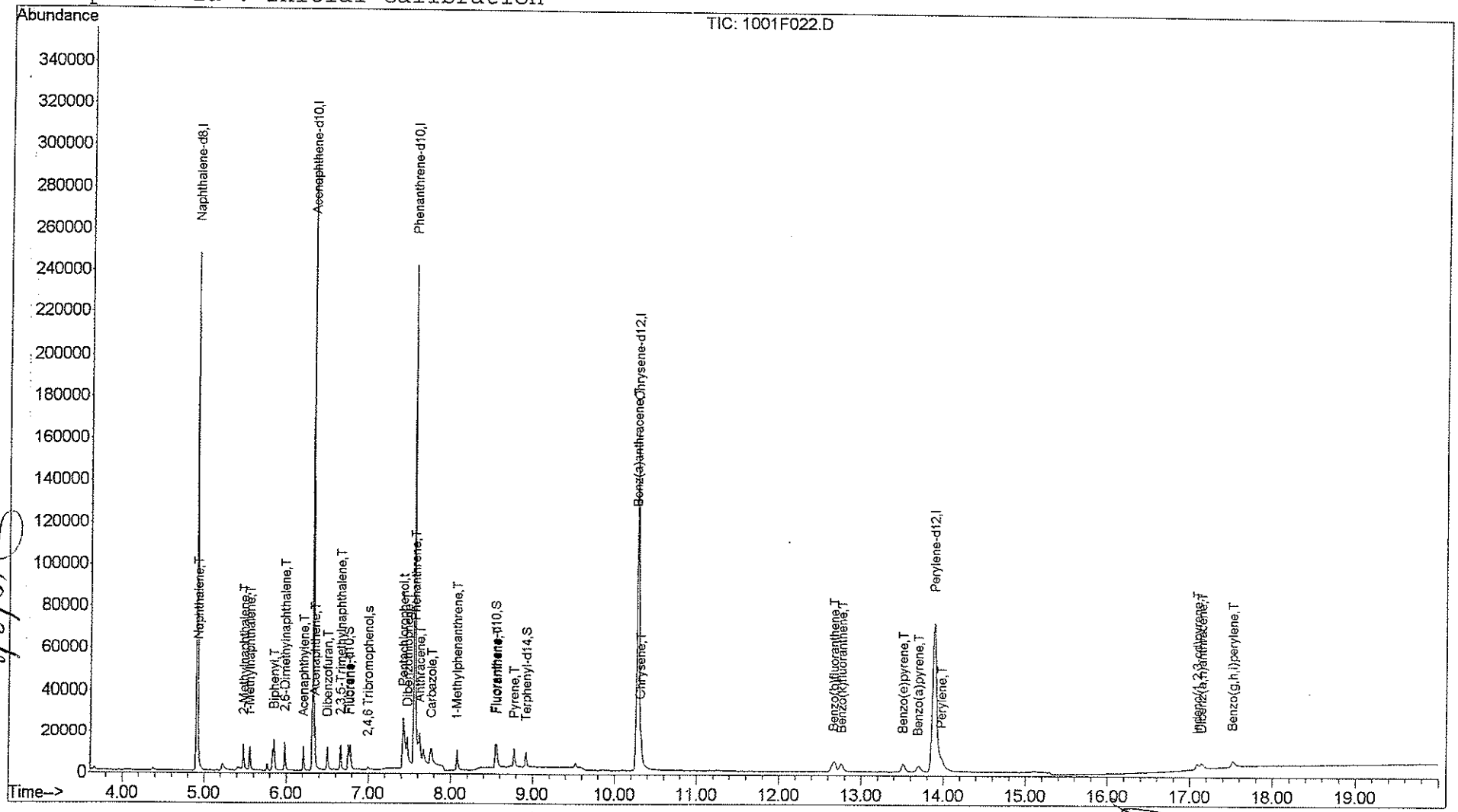
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F022.D
Acq On : 1 Oct 2008 8:33 pm
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:46 2008

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration



933

10/2/08

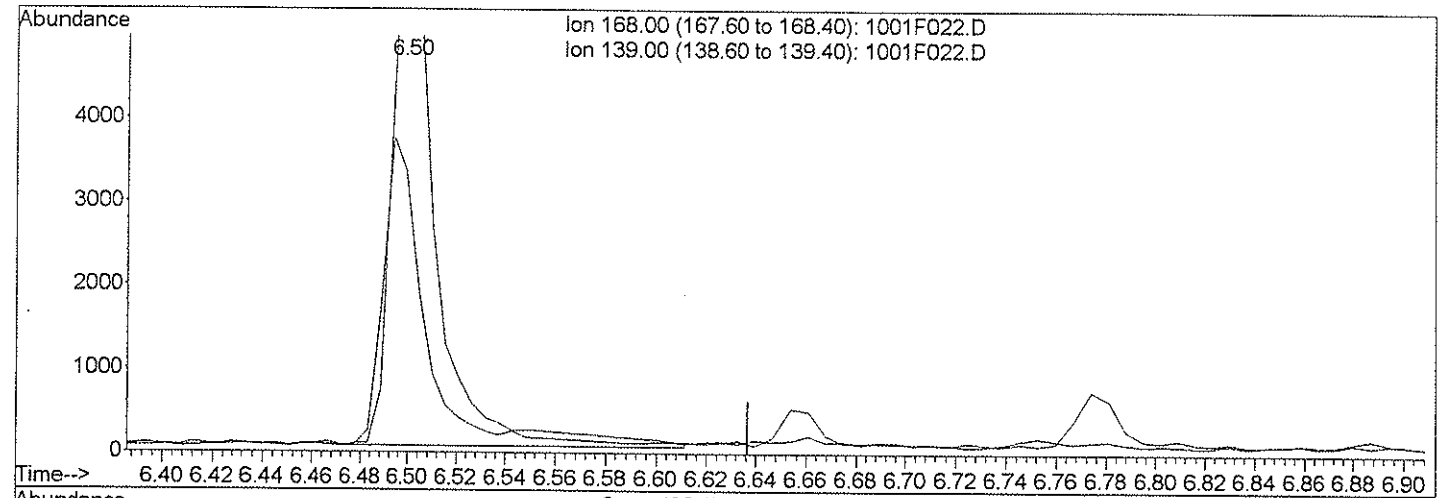
Quantitation Report (Qedit)

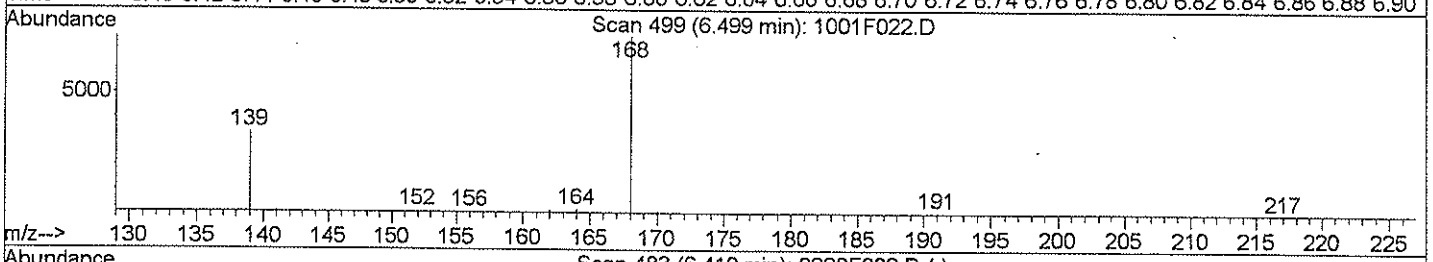
Data File : J:\MS11\DATA\100108\1001F022.D
Acq On : 1 Oct 2008 8:33 pm
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:43 2008

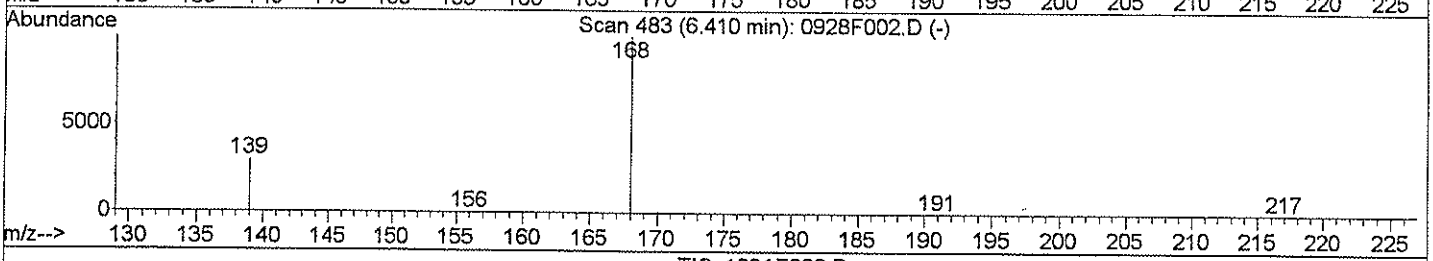
Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration







TIC: 1001F022.D

(13) Dibenzofuran (T)

6.50min 9.93ng/ml

response 11197

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	44.97
0.00	0.00	0.00
0.00	0.00	0.00

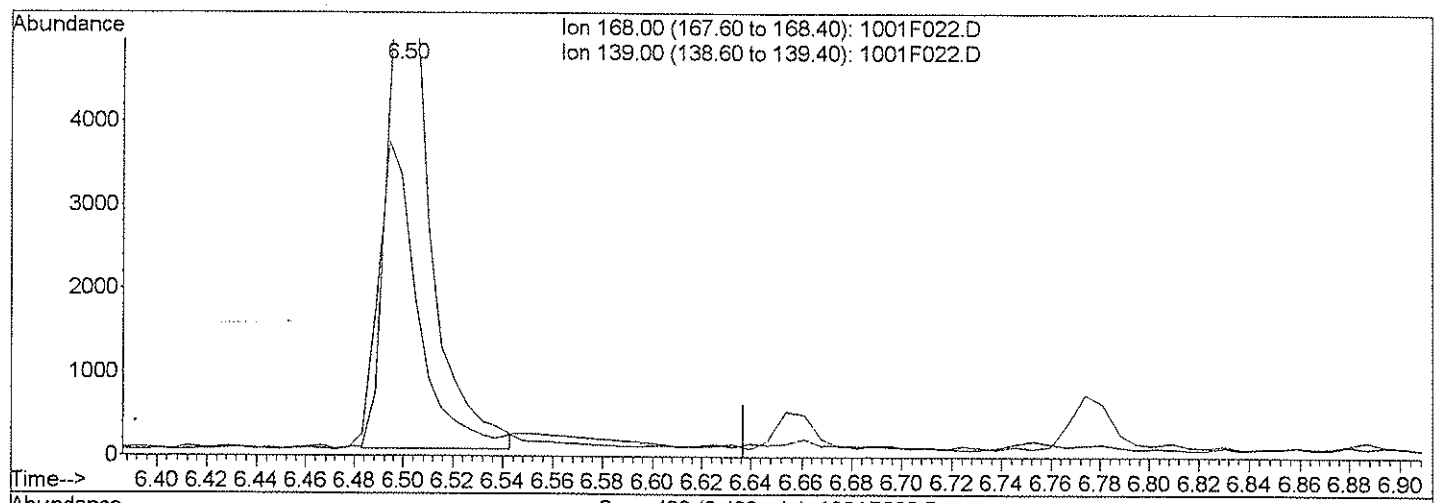
1001F022.D 1001ALK.M Thu Oct 02 05:45:11 2008

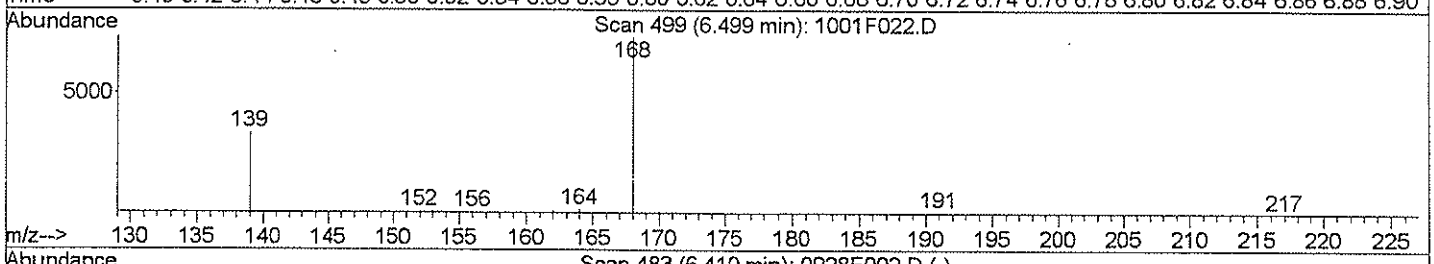
Quantitation Report (Qedit)

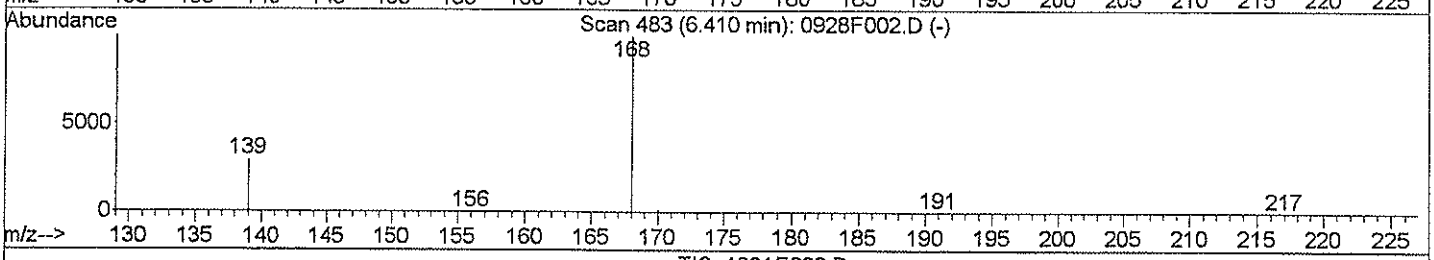
Data File : J:\MS11\DATA\100108\1001F022.D
Acq On : 1 Oct 2008 8:33 pm
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:45 2008

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration







TIC: 1001F022.D

(13) Dibenzofuran (T)

6.50min 6.78ng/ml m

response 7643

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	45.70
0.00	0.00	0.00
0.00	0.00	0.00

OI 10/2/18

10/3/18

1001F022.D 1001ALK.M Thu Oct 02 05:45:17 2008

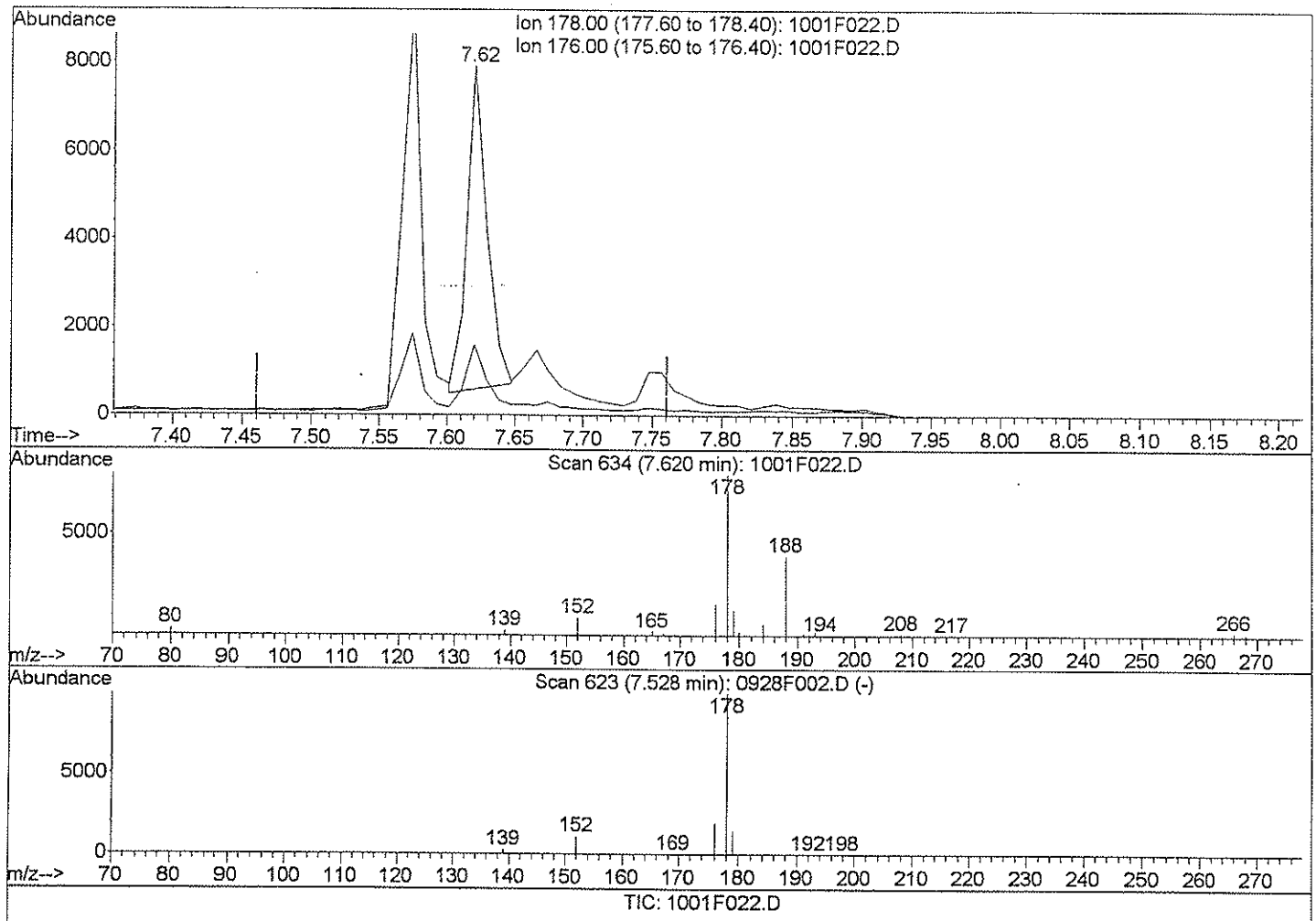
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F022.D
Acq On : 1 Oct 2008 8:33 pm
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:45 2008

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



(28) Anthracene (T)

7.62min 5.52ng/ml

response 7474

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	19.51
0.00	0.00	0.00
0.00	0.00	0.00

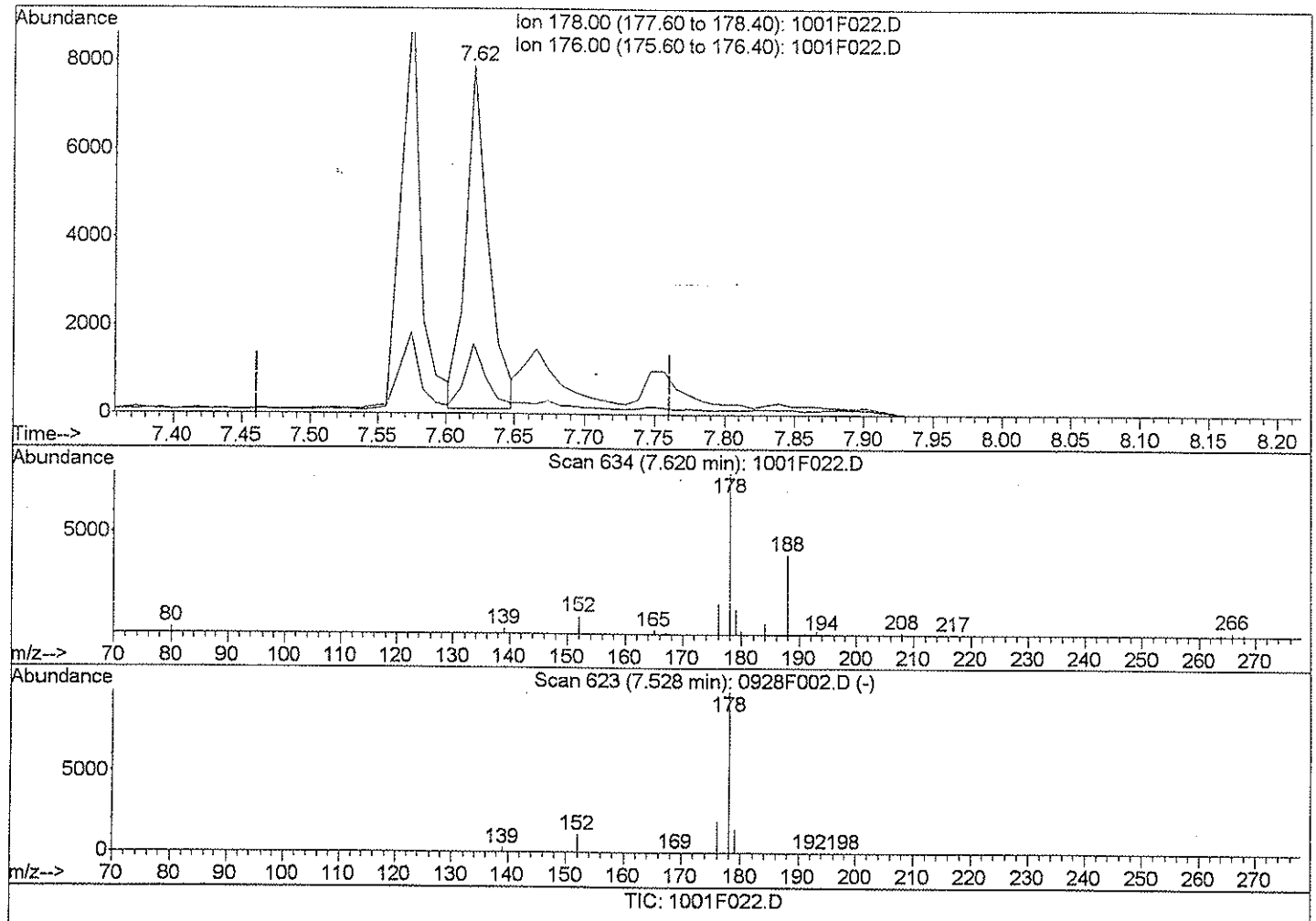
1001F022.D 1001ALK.M Thu Oct 02 05:45:29 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F022.D
Acq On : 1 Oct 2008 8:33 pm
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:45 2008

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



(28) Anthracene (T)

7.62min 6.51ng/ml m

response 8817

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	20.00
0.00	0.00	0.00
0.00	0.00	0.00

IC 10/2/18

10/3/18

1001F022.D 1001ALK.M Thu Oct 02 05:45:35 2008

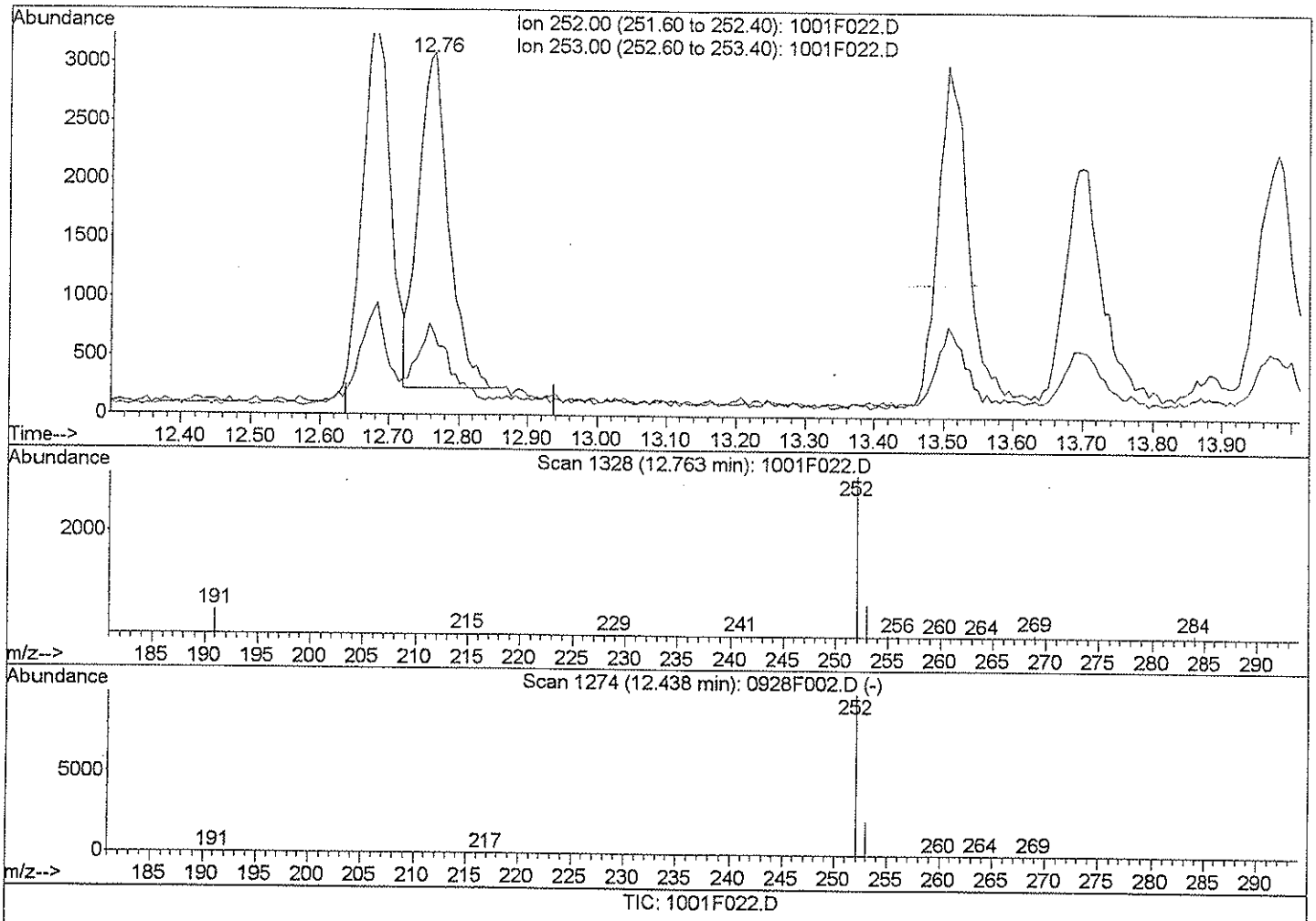
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F022.D
Acq On : 1 Oct 2008 8:33 pm
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:45 2008

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



TIC: 1001F022.D

(51) Benzo(k)fluoranthene (T)

12.76min 6.64ng/ml

response 8665

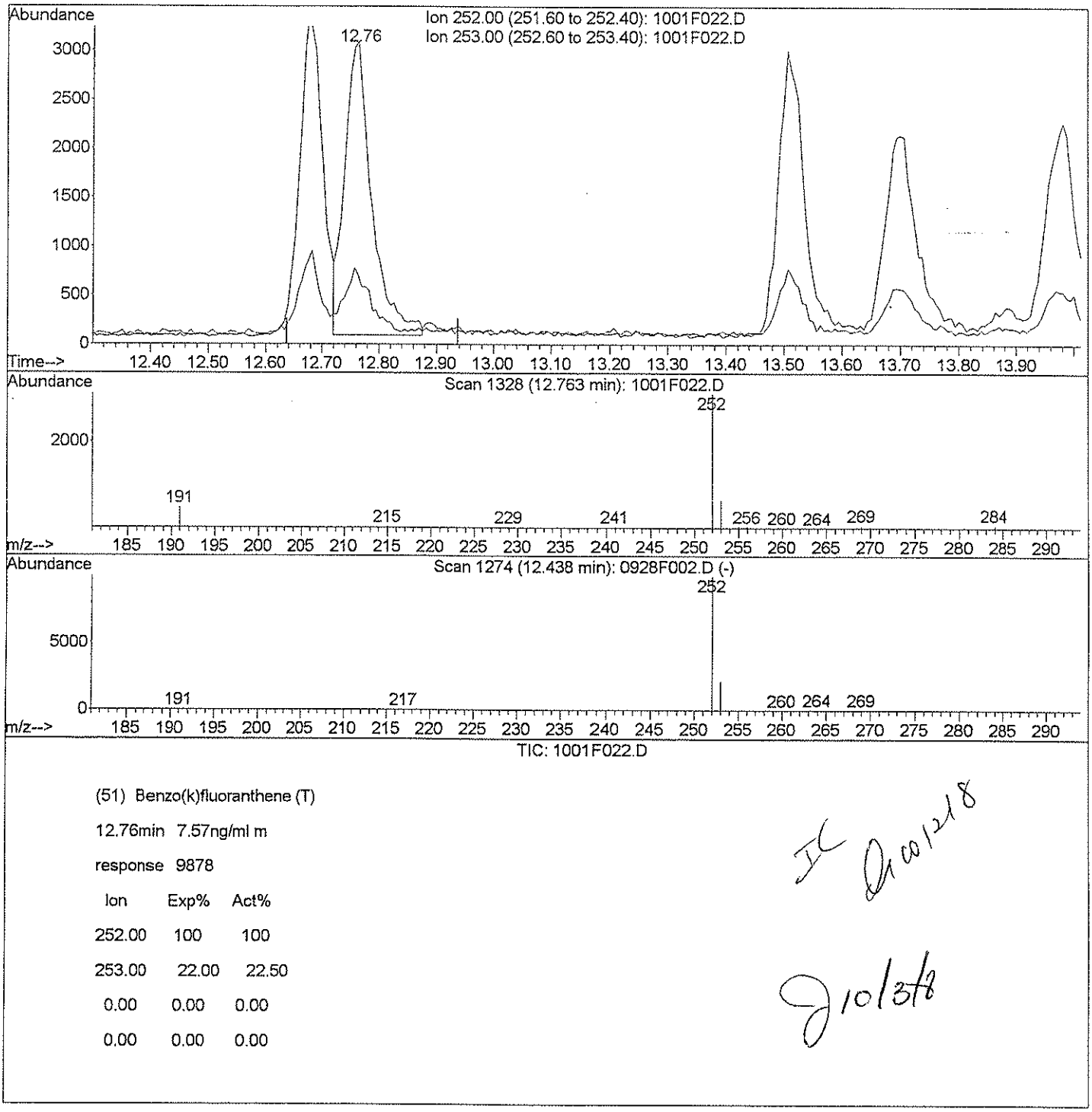
Ion	Exp%	Act%
252.00	100	100
253.00	22.00	19.78
0.00	0.00	0.00
0.00	0.00	0.00

1001F022.D 1001ALK.M Thu Oct 02 05:45:47 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F022.D Vial: 6
Acq On : 1 Oct 2008 8:33 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:45 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



TIC: 1001F022.D

(51) Benzo(k)fluoranthene (T)

12.76min 7.57ng/ml m

response 9878

Ion	Exp%	Act%
252.00	100	100
253.00	22.00	22.50
0.00	0.00	0.00
0.00	0.00	0.00

IC 10/2/08

10/3/08

1001F022.D 1001ALK.M Thu Oct 02 05:45:53 2008

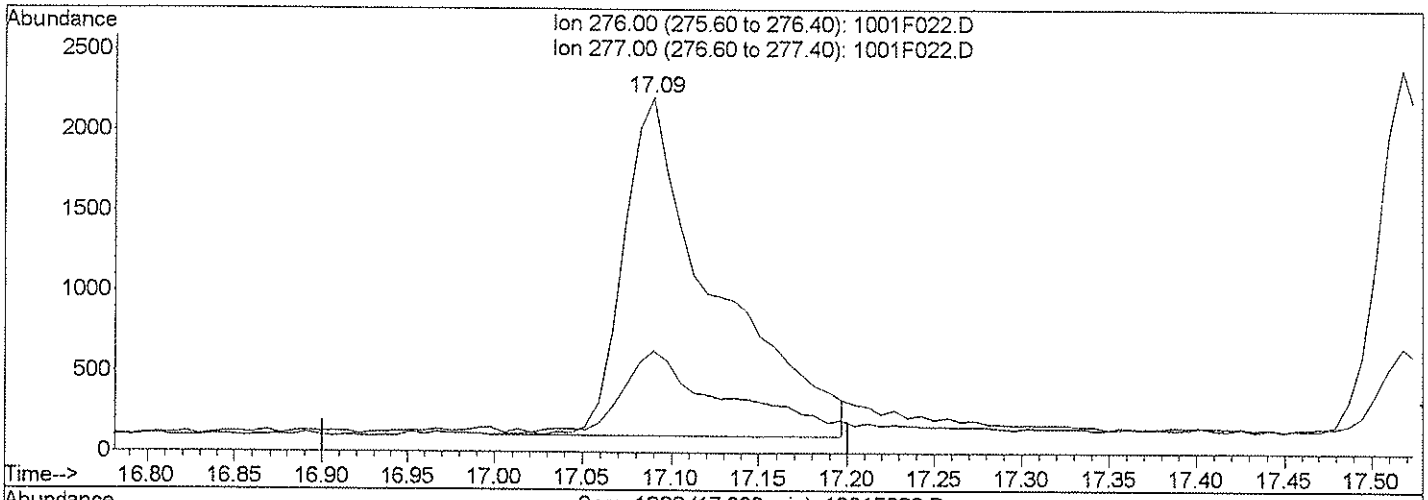
Quantitation Report (Qedit)

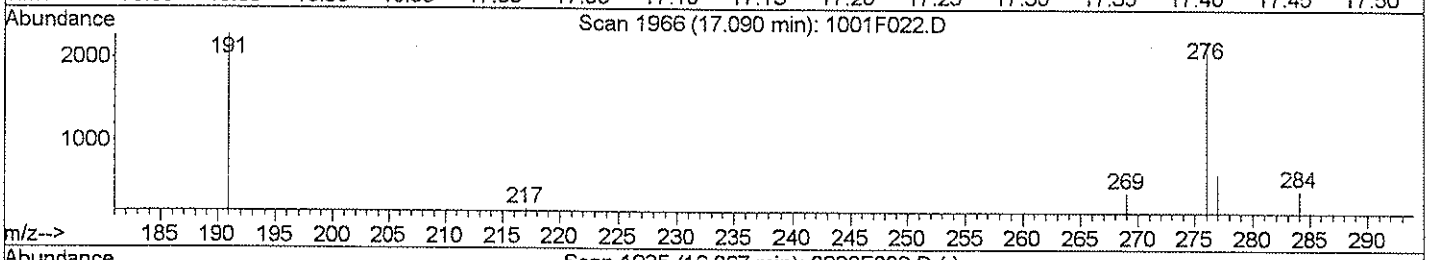
Data File : J:\MS11\DATA\100108\1001F022.D
Acq On : 1 Oct 2008 8:33 pm
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:45 2008

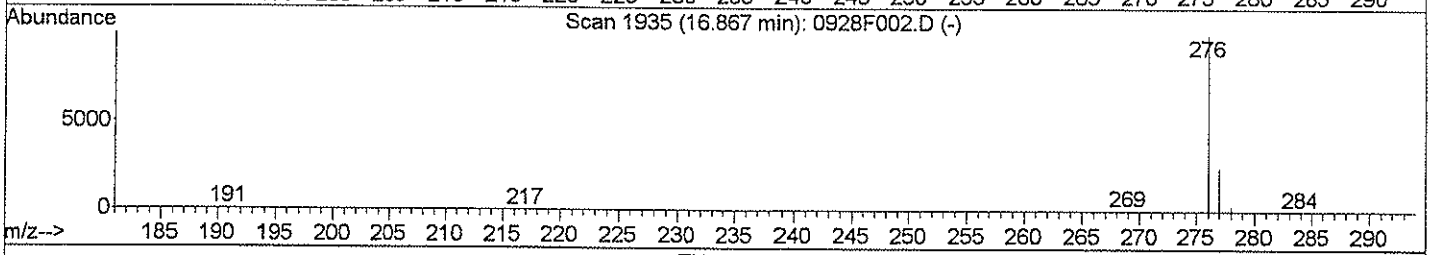
Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration







TIC: 1001F022.D

(55) Indeno(1,2,3-cd)pyrene (T)

17.09min 6.70ng/ml

response 7542

Ion	Exp%	Act%
276.00	100	100
277.00	24.70	22.76
0.00	0.00	0.00
0.00	0.00	0.00

1001F022.D 1001ALK.M Thu Oct 02 05:46:00 2008

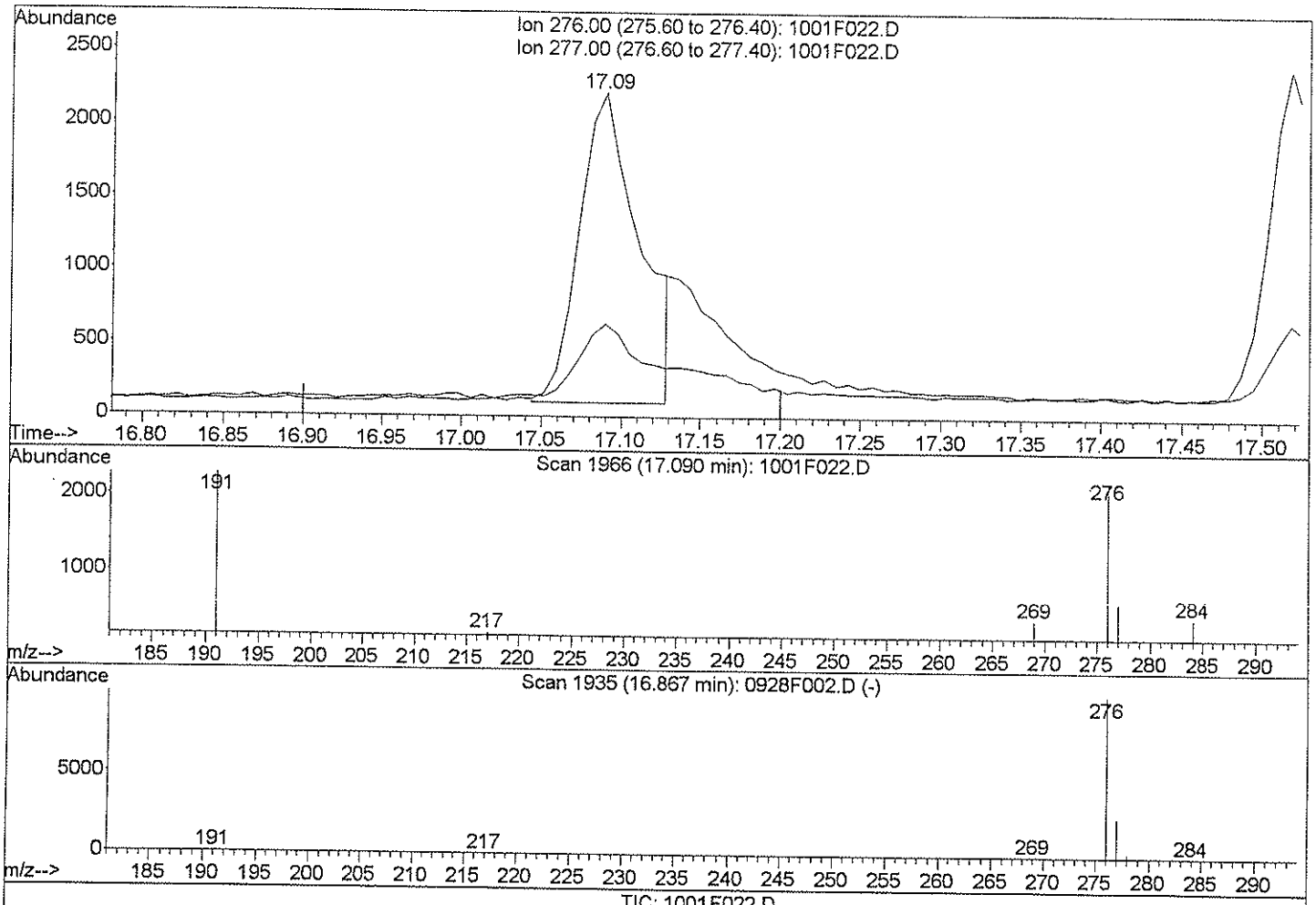
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F022.D
Acq On : 1 Oct 2008 8:33 pm
Sample : SIM-PAH ICAL @.008/0.2ug/mL | SVM27-3F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:46 2008

Vial: 6
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



(55) Indeno(1,2,3-cd)pyrene (T)

17.09min 4.91ng/ml m

response 5527

Ion	Exp%	Act%
276.00	100	100
277.00	24.70	28.51
0.00	0.00	0.00
0.00	0.00	0.00

10/2/08

10/3/08

1001F022.D 1001ALK.M Thu Oct 02 05:46:07 2008

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F023.D
Acq On : 1 Oct 2008 9:00 pm
Sample : SIM-PAH ICAL @0.1/0.6ug/mL | SVM27-3H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:43:26 2008

Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

10/2/18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.91	136	210781	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.32	164	120139	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.56	188	190252	200.00	ng/ml	0.00
37) Chrysene-d12	10.27	240	228300	200.00	ng/ml	0.00
49) Perylene-d12	13.88	264	235457	200.00	ng/ml	0.01
System Monitoring Compounds						
15) Fluorene-d10	6.75	176	78516	90.49	ng/ml	0.00
Spiked Amount 200.000			Recovery = 45.24%			
20) 2,4,6 Tribromophenol	6.98	330	10841	73.00	ng/ml	0.00
Spiked Amount 375.000			Recovery = 19.47%			
36) Fluoranthene-d10	8.54	212	130518	94.74	ng/ml	0.00
Spiked Amount 200.000			Recovery = 47.37%			
42) Terphenyl-d14	8.91	244	111497	94.07	ng/ml	0.00
Spiked Amount 200.000			Recovery = 47.03%			
Target Compounds						Qvalue
2) Naphthalene	4.92	128	112205	94.56	ng/ml	97
3) 2-Methylnaphthalene	5.47	142	78616	94.26	ng/ml	94
4) 1-Methylnaphthalene	5.55	142	69400	93.23	ng/ml	92
5) Biphenyl	5.84	154	95867	93.52	ng/ml	100
6) 2,6-Dimethylnaphthalene	5.98	156	68118	91.02	ng/ml	96
11) Acenaphthylene	6.20	152	114985	90.31	ng/ml	99
12) Acenaphthene	6.35	154	69098	91.83	ng/ml	92
13) Dibenzofuran	6.49	168	102267m	90.92	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.66	170	63807	88.14	ng/ml	97
16) Fluorene	6.77	166	84529	89.28	ng/ml	97
21) Pentachlorophenol	7.41	266	71848	643.66	ng/ml	100
23) Dibenzothiophene	7.46	184	113140	98.59	ng/ml	99
27) Phenanthrene	7.57	178	118773	91.06	ng/ml	100
28) Anthracene	7.61	178	117097	91.16	ng/ml	100
29) Carbazole	7.75	167	99567	94.00	ng/ml	95
30) 1-Methylphenanthrene	8.07	192	88463	92.56	ng/ml	95
35) Fluoranthene	8.55	202	138052	93.81	ng/ml	98
38) Pyrene	8.76	202	141415	92.69	ng/ml	98
43) Benz(a)anthracene	10.26	228	124774	83.72	ng/ml	98
44) Chrysene	10.32	228	132470	94.89	ng/ml	100
50) Benzo(b)fluoranthene	12.66	252	138690	89.74	ng/ml	99
51) Benzo(k)fluoranthene	12.74	252	136525	94.16	ng/ml	99
52) Benzo(e)pyrene	13.50	252	127128	93.83	ng/ml	98
53) Benzo(a)pyrene	13.68	252	115746	88.15	ng/ml	99
54) Perylene	13.97	252	115036	87.62	ng/ml	99

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

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F023.D
Acq On : 1 Oct 2008 9:00 pm
Sample : SIM-PAH ICAL @0.1/0.6ug/mL | SVM27-3H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:43:26 2008

Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

10/3/18

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.06	276	91954	73.50	ng/ml	97
56)	Dibenz(a,h)anthracene	17.12	278	98105	75.95	ng/ml	96
57)	Benzo(g,h,i)perylene	17.49	276	115567	81.42	ng/ml	98

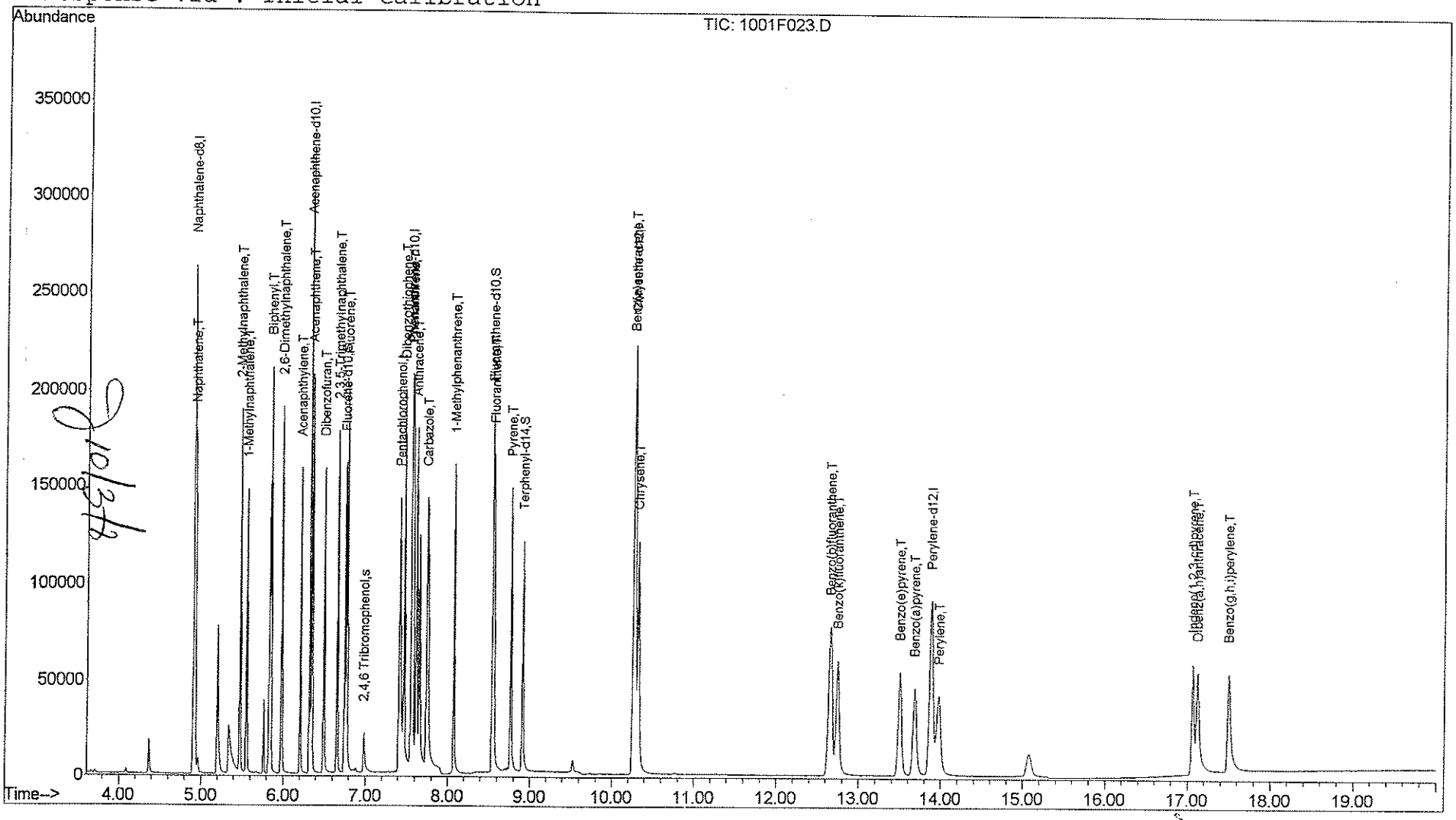
10/3/18

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

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F023.D Vial: 8
Acq On : 1 Oct 2008 9:00 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @0.1/0.6ug/mL | SVM27-3H Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:46 2008 Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration



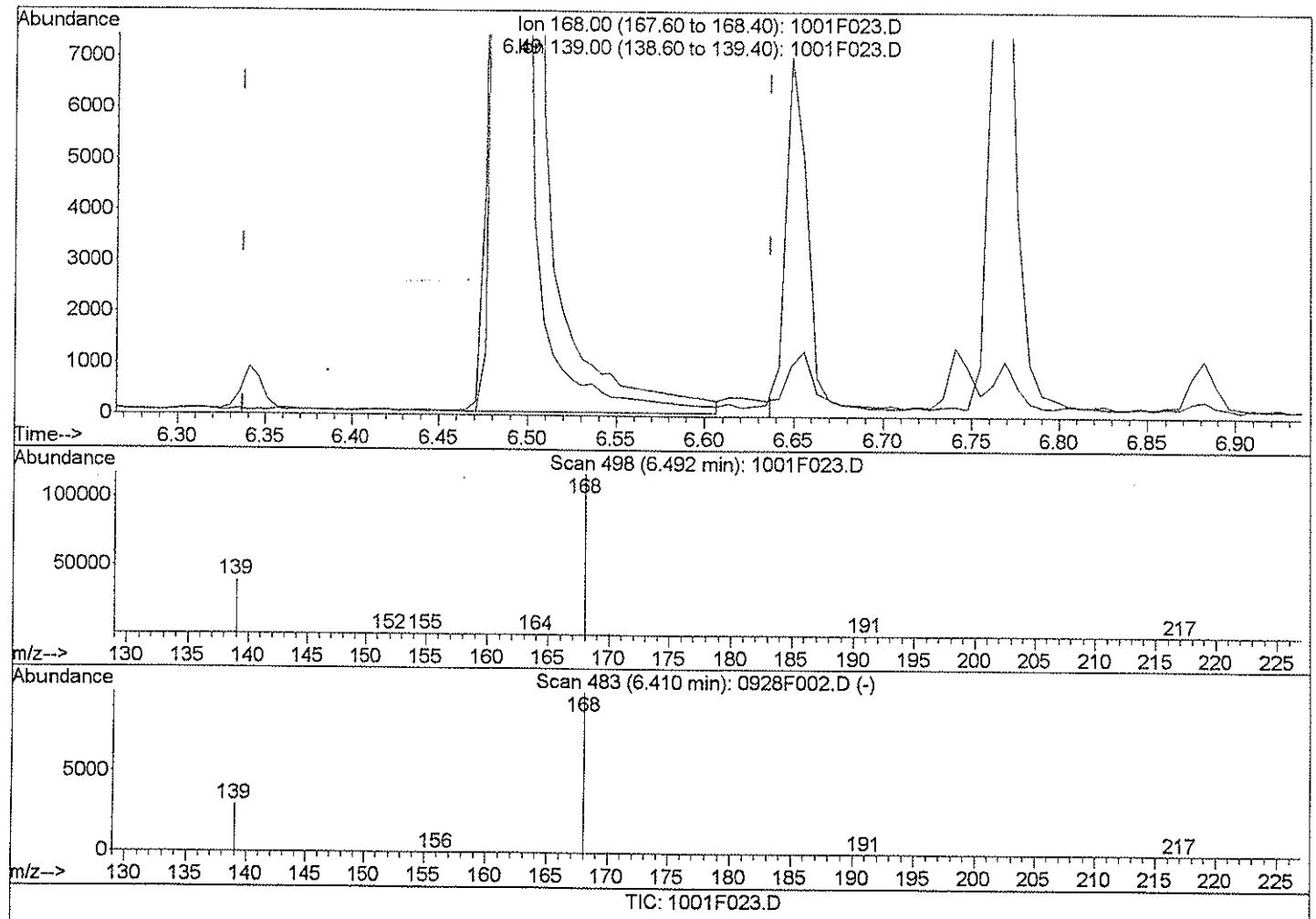
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F023.D
Acq On : 1 Oct 2008 9:00 pm
Sample : SIM-PAH ICAL @0.1/0.6ug/mL | SVM27-3H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:43 2008

Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



TIC: 1001F023.D

(13) Dibenzofuran (T)

6.49min 122.72ng/ml

response 138044

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	33.30
0.00	0.00	0.00
0.00	0.00	0.00

1001F023.D 1001ALK.M Thu Oct 02 05:46:21 2008

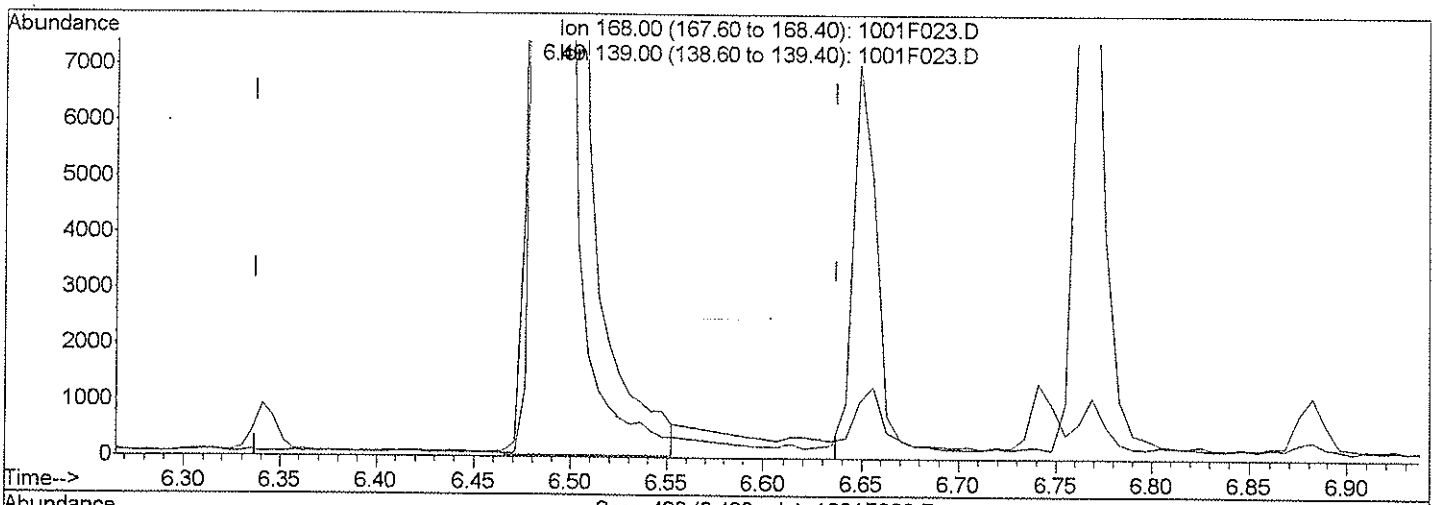
Quantitation Report (Qedit)

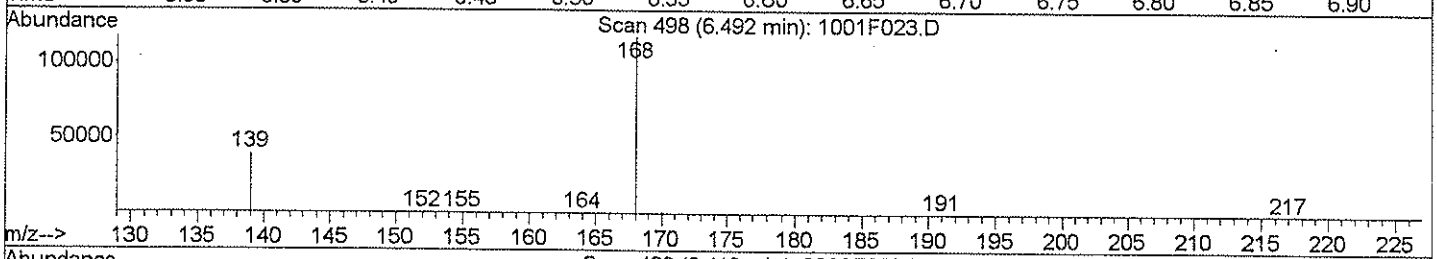
Data File : J:\MS11\DATA\100108\1001F023.D
Acq On : 1 Oct 2008 9:00 pm
Sample : SIM-PAH ICAL @0.1/0.6ug/mL | SVM27-3H
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:46 2008

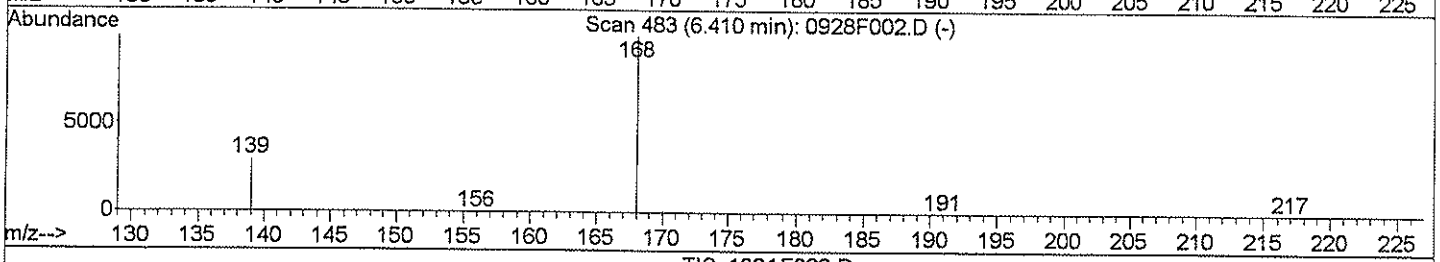
Vial: 8
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration







TIC: 1001F023.D

(13) Dibenzofuran (T)

6.49min 90.92ng/ml m

response 102267

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	33.36
0.00	0.00	0.00
0.00	0.00	0.00

OT 10/2/08

10/3/08

1001F023.D 1001ALK.M Thu Oct 02 05:46:26 2008

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F024.D
Acq On : 1 Oct 2008 9:26 pm
Sample : SIM-PAH ICAL @0.2/0.8ug/mL | SVM27-3I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:43:27 2008

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

10/2/18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.91	136	211560	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.31	164	119941	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.55	188	204971	200.00	ng/ml	0.00
37) Chrysene-d12	10.27	240	233335	200.00	ng/ml	0.00
49) Perylene-d12	13.88	264	242014	200.00	ng/ml	0.00
System Monitoring Compounds						
15) Fluorene-d10	6.75	176	163850	189.15	ng/ml	0.00
Spiked Amount 200.000			Recovery =	94.58%		
20) 2,4,6 Tribromophenol	6.98	330	24906	167.99	ng/ml	0.00
Spiked Amount 375.000			Recovery =	44.80%		
36) Fluoranthene-d10	8.54	212	277328	186.86	ng/ml	0.00
Spiked Amount 200.000			Recovery =	93.43%		
42) Terphenyl-d14	8.91	244	233569	192.82	ng/ml	0.00
Spiked Amount 200.000			Recovery =	96.41%		
Target Compounds						Qvalue
2) Naphthalene	4.92	128	230250	193.34	ng/ml	100
3) 2-Methylnaphthalene	5.47	142	160459	191.68	ng/ml	97
4) 1-Methylnaphthalene	5.55	142	144227	193.04	ng/ml	99
5) Biphenyl	5.84	154	194997	189.52	ng/ml	99
6) 2,6-Dimethylnaphthalene	5.97	156	141807	188.78	ng/ml	99
11) Acenaphthylene	6.20	152	240634	189.30	ng/ml	100
12) Acenaphthene	6.34	154	143718	191.31	ng/ml	96
13) Dibenzofuran	6.49	168	212277m	189.03	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.65	170	135906	188.04	ng/ml	92
16) Fluorene	6.77	166	176215	186.43	ng/ml	98
21) Pentachlorophenol	7.41	266	104245	935.43	ng/ml	100
23) Dibenzothiophene	7.47	184	239468	193.69	ng/ml	98
27) Phenanthrene	7.57	178	254230	180.92	ng/ml	98
28) Anthracene	7.61	178	251866m	182.00	ng/ml	
29) Carbazole	7.75	167	218400	191.39	ng/ml	98
30) 1-Methylphenanthrene	8.07	192	186918	181.54	ng/ml	92
35) Fluoranthene	8.55	202	296442	186.97	ng/ml	100
38) Pyrene	8.76	202	299081	191.80	ng/ml	99
43) Benz(a)anthracene	10.26	228	273664	179.65	ng/ml	97
44) Chrysene	10.32	228	272713	191.12	ng/ml	100
50) Benzo(b)fluoranthene	12.66	252	310491	195.47	ng/ml	100
51) Benzo(k)fluoranthene	12.74	252	297938	199.91	ng/ml	100
52) Benzo(e)pyrene	13.49	252	271103	194.67	ng/ml	99
53) Benzo(a)pyrene	13.67	252	257438	190.74	ng/ml	99
54) Perylene	13.96	252	250467	185.61	ng/ml	100

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

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F024.D Vial: 9
Acq On : 1 Oct 2008 9:26 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @0.2/0.8ug/mL | SVM27-3I Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:43:27 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

10/2/08

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.05	276	205703	159.96	ng/ml	98
56)	Dibenz(a,h)anthracene	17.11	278	222223	167.38	ng/ml	99
57)	Benzo(g,h,i)perylene	17.49	276	250840	171.95	ng/ml	98

10/3/8

(#) = qualifier out of range (m) = manual integration
1001F024.D 1001ALK.M Thu Oct 02 05:50:50 2008 Page 2

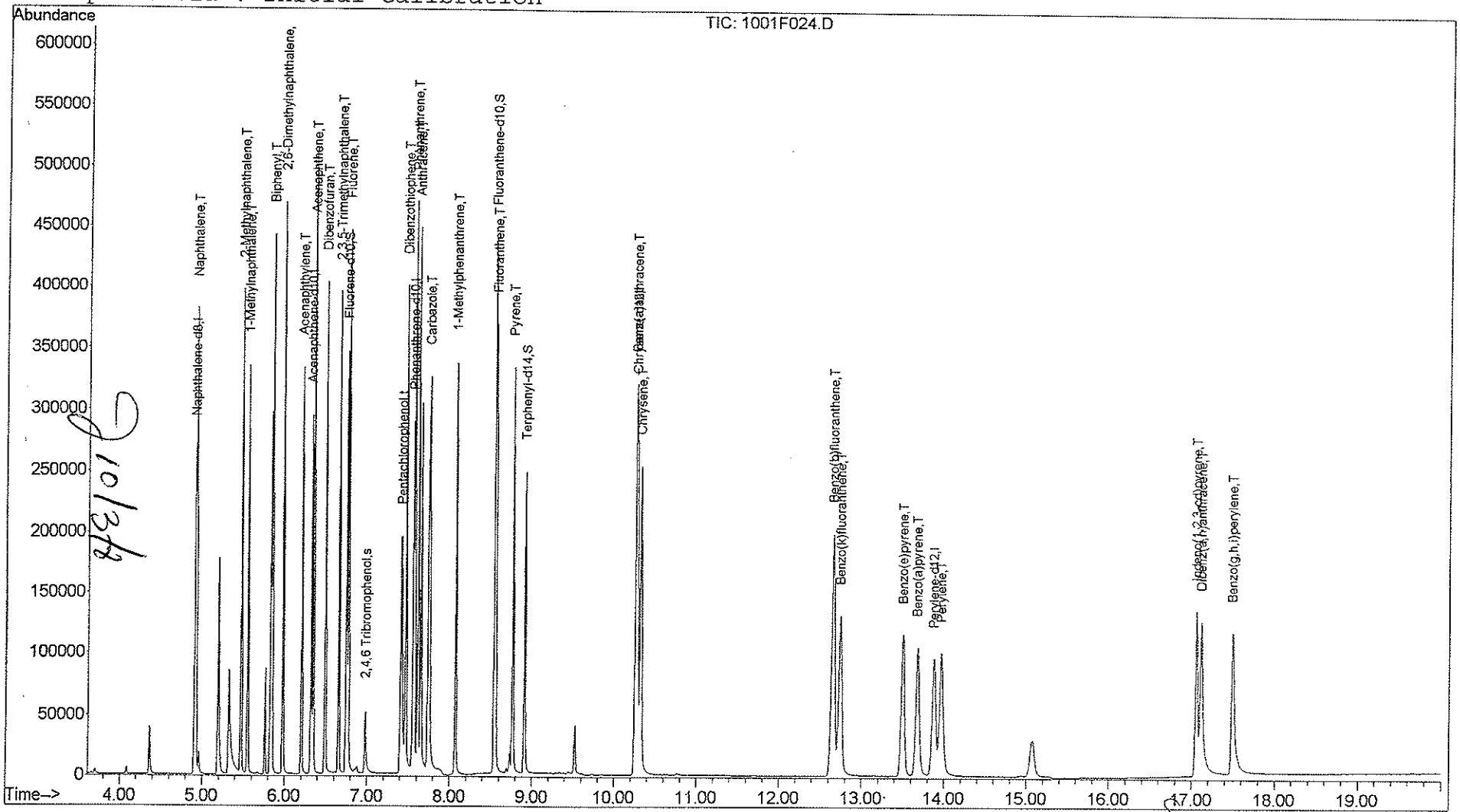
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F024.D
Acq On : 1 Oct 2008 9:26 pm
Sample : SIM-PAH ICAL @0.2/0.8ug/mL | SVM27-3I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:47 2008

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration

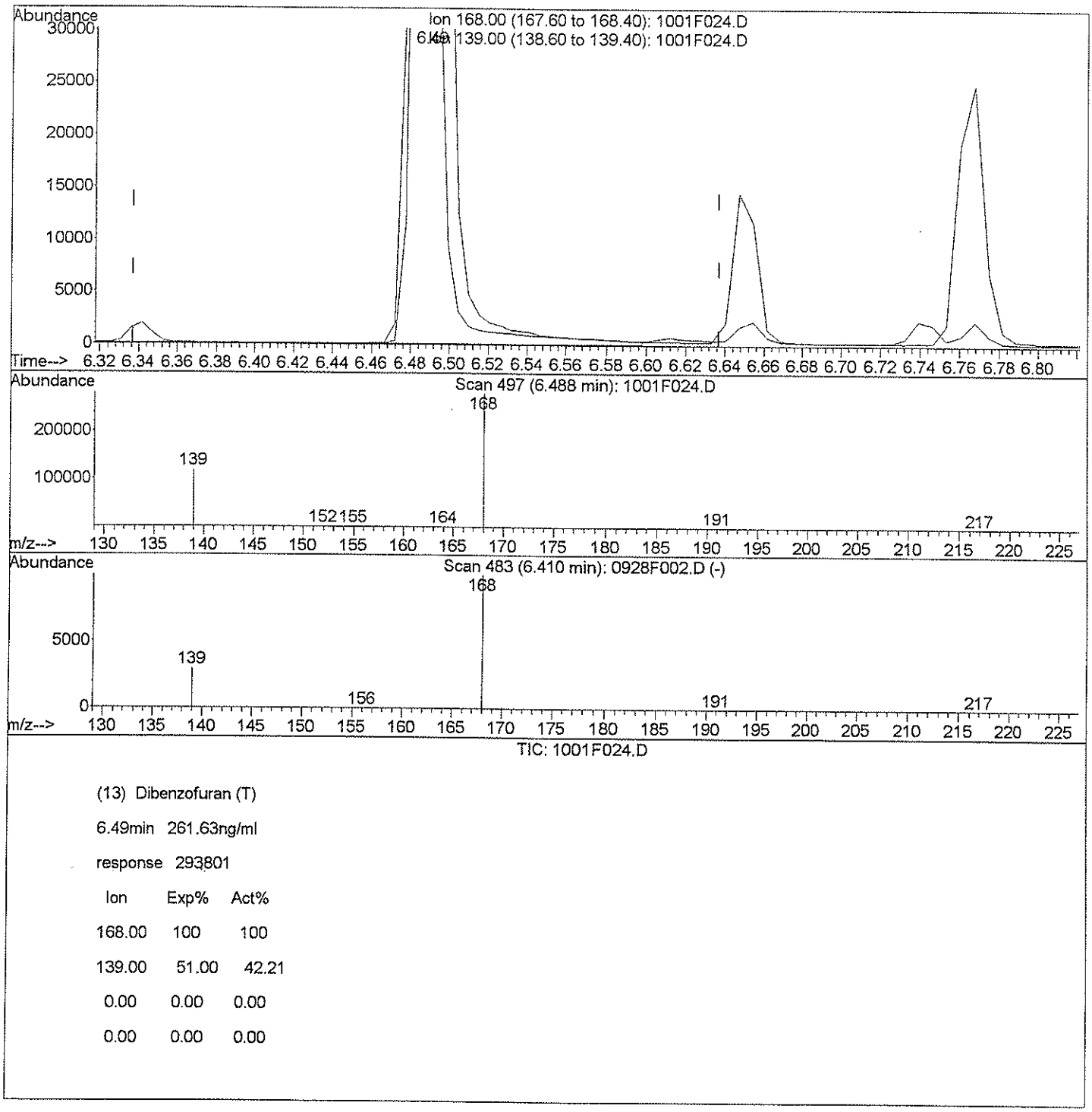


949

Data File : J:\MS11\DATA\100108\1001F024.D
Acq On : 1 Oct 2008 9:26 pm
Sample : SIM-PAH ICAL @0.2/0.8ug/mL | SVM27-3I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:43 2008

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.49min 261.63ng/ml

response 293801

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	42.21
0.00	0.00	0.00
0.00	0.00	0.00

1001F024.D 1001ALK.M Thu Oct 02 05:46:51 2008

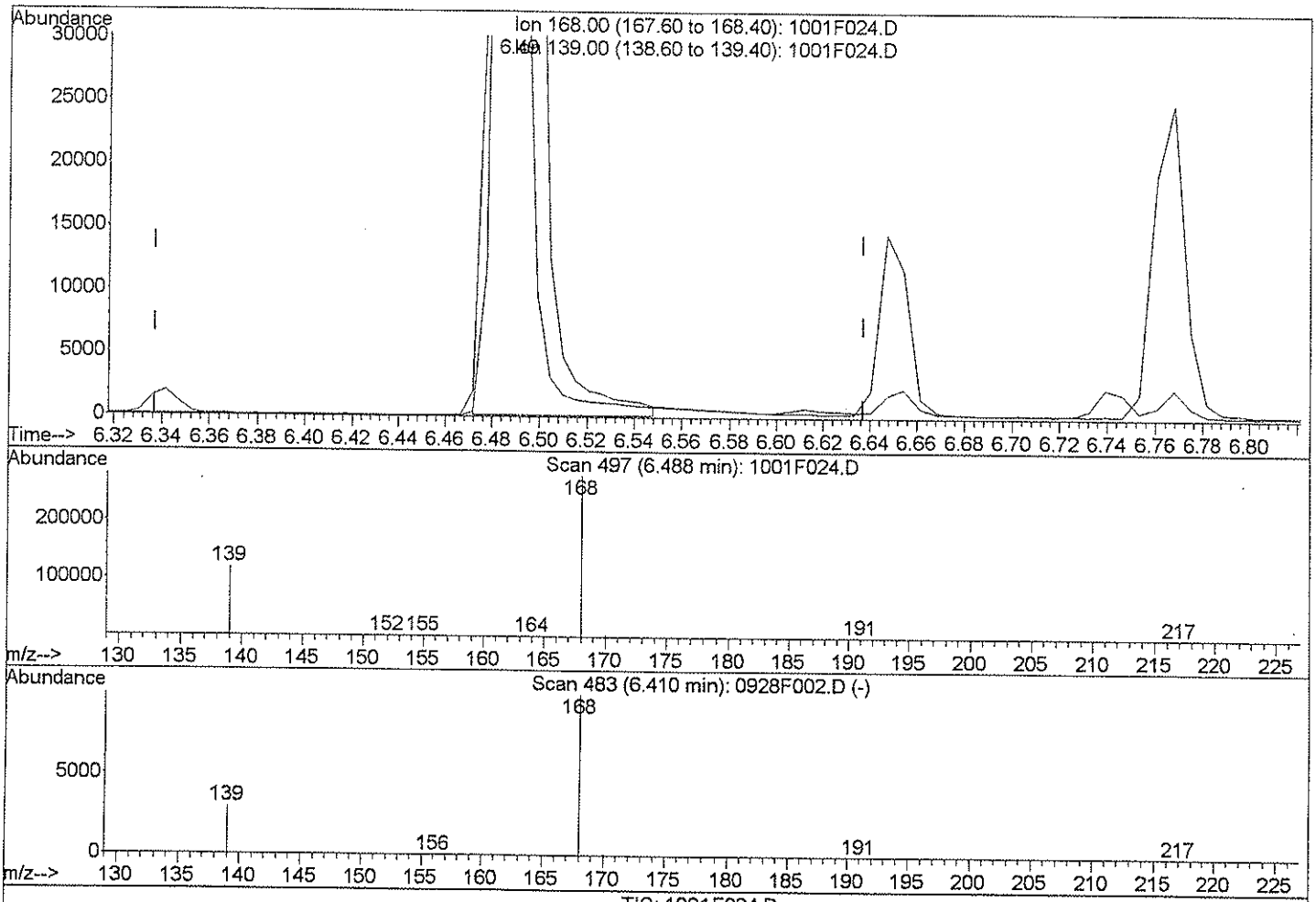
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F024.D
Acq On : 1 Oct 2008 9:26 pm
Sample : SIM-PAH ICAL @0.2/0.8ug/mL | SVM27-3I
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:46 2008

Vial: 9
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.49min 189.03ng/ml m

response 212277

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	42.24
0.00	0.00	0.00
0.00	0.00	0.00

10/2/18

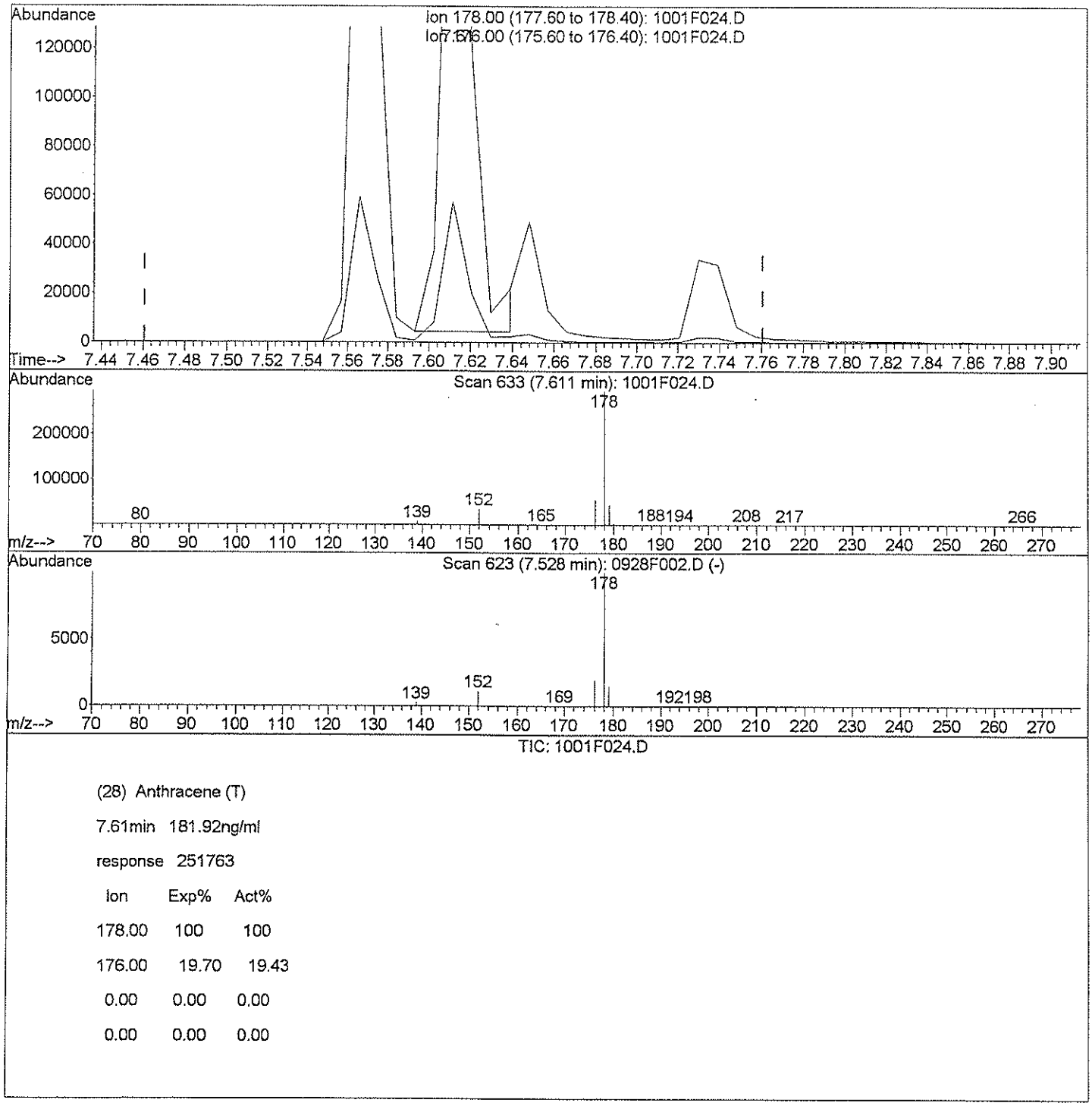
10/3/18

1001F024.D 1001ALK.M Thu Oct 02 05:46:57 2008

Quantitation Report (Quan)

Data File : J:\MS11\DATA\100108\1001F024.D Vial: 9
Acq On : 1 Oct 2008 9:26 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @0.2/0.8ug/mL | SVM27-3I Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:46 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



(28) Anthracene (T)

7.61min 181.92ng/ml

response 251763

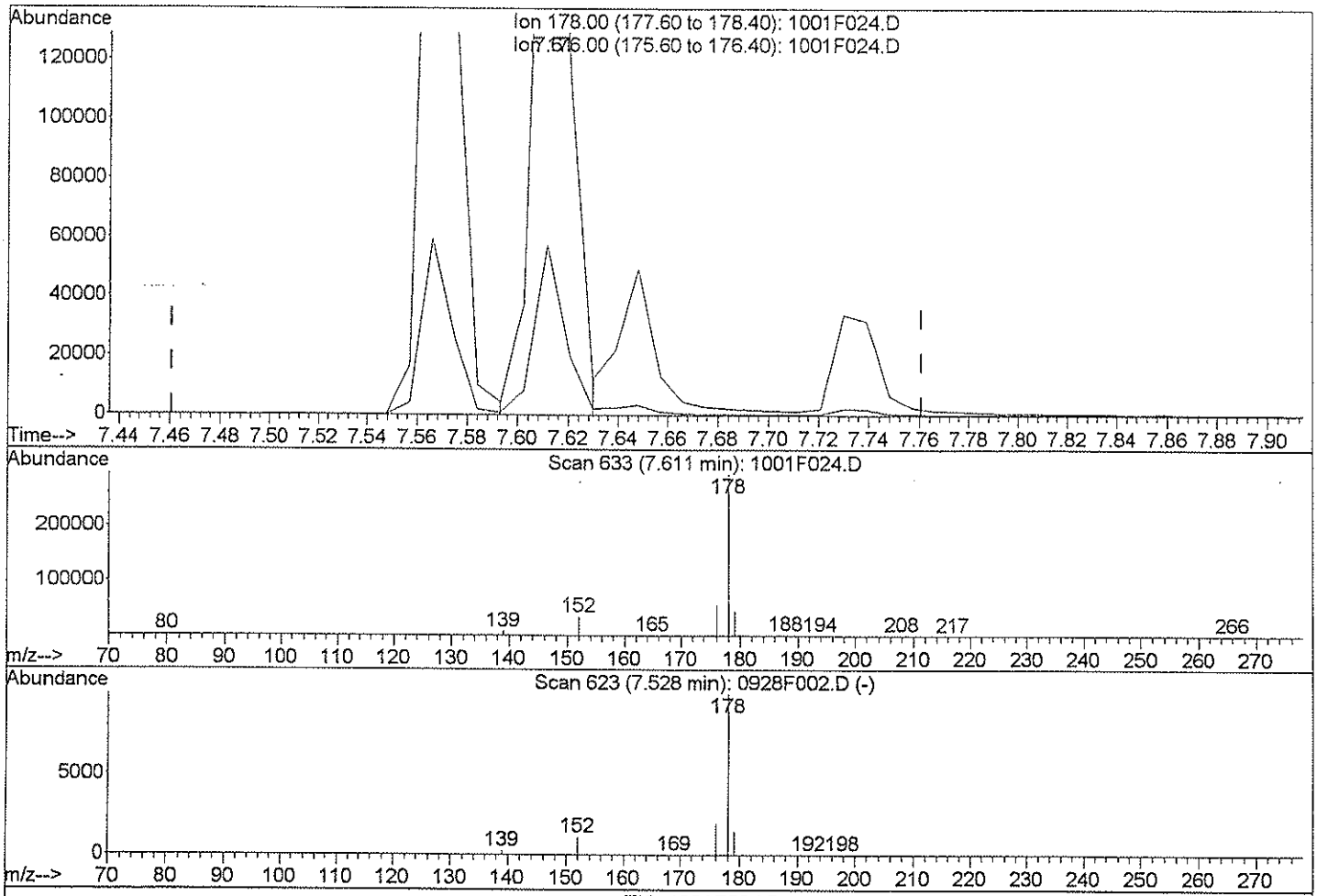
Ion	Exp%	Act%
178.00	100	100
176.00	19.70	19.43
0.00	0.00	0.00
0.00	0.00	0.00

1001F024.D 1001ALK.M Thu Oct 02 05:47:05 2008

Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F024.D Vial: 9
Acq On : 1 Oct 2008 9:26 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @0.2/0.8ug/mL | SVM27-3I Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:47 2008 Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



TIC: 1001F024.D

(28) Anthracene (T)

7.61min 182.00ng/ml m

response 251866

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	19.42
0.00	0.00	0.00
0.00	0.00	0.00

IC 10/2/08

10/3/08

1001F024.D 1001ALK.M Thu Oct 02 05:47:08 2008

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F025.D Vial: 10
Acq On : 1 Oct 2008 9:53 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @0.4/1.0ug/mL | SVM27-3J Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:43:28 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.91	136	203209	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.32	164	114838	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.55	188	192338	200.00	ng/ml	0.00
37) Chrysene-d12	10.27	240	231286	200.00	ng/ml	0.00
49) Perylene-d12	13.87	264	236042	200.00	ng/ml	0.00
System Monitoring Compounds						
15) Fluorene-d10	6.74	176	329593	397.38	ng/ml	0.00
Spiked Amount 200.000			Recovery = 198.69%			
20) 2,4,6 Tribromophenol	6.97	330	50071	352.74	ng/ml	0.00
Spiked Amount 375.000			Recovery = 94.06%			
36) Fluoranthene-d10	8.54	212	560814	402.69	ng/ml	0.00
Spiked Amount 200.000			Recovery = 201.35%			
42) Terphenyl-d14	8.91	244	472692	393.67	ng/ml	0.00
Spiked Amount 200.000			Recovery = 196.84%			
Target Compounds						Qvalue
2) Naphthalene	4.92	128	446028	389.91	ng/ml	100
3) 2-Methylnaphthalene	5.47	142	316900	394.12	ng/ml	100
4) 1-Methylnaphthalene	5.55	142	280388	390.70	ng/ml	100
5) Biphenyl	5.84	154	384140	388.69	ng/ml	100
6) 2,6-Dimethylnaphthalene	5.97	156	281836	390.60	ng/ml	100
11) Acenaphthylene	6.20	152	478413	393.07	ng/ml	100
12) Acenaphthene	6.34	154	279613	388.75	ng/ml	100
13) Dibenzofuran	6.49	168	419278m	389.96	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.66	170	272356	393.58	ng/ml	100
16) Fluorene	6.77	166	347284	383.74	ng/ml	100
21) Pentachlorophenol	7.41	266	128438	1203.74	ng/ml	100
23) Dibenzothiophene	7.46	184	485309	418.32	ng/ml	100
27) Phenanthrene	7.57	178	502487	381.08	ng/ml	100
28) Anthracene	7.61	178	501151m	385.91	ng/ml	
29) Carbazole	7.75	167	430489	402.02	ng/ml	100
30) 1-Methylphenanthrene	8.07	192	377858	391.09	ng/ml	100
35) Fluoranthene	8.55	202	575350	386.71	ng/ml	100
38) Pyrene	8.76	202	602058	389.51	ng/ml	100
43) Benz(a)anthracene	10.25	228	551804	365.45	ng/ml	100
44) Chrysene	10.32	228	548587	387.87	ng/ml	100
50) Benzo(b)fluoranthene	12.66	252	633916	409.18	ng/ml	100
51) Benzo(k)fluoranthene	12.74	252	605216	416.36	ng/ml	100
52) Benzo(e)pyrene	13.49	252	554314	408.11	ng/ml	100
53) Benzo(a)pyrene	13.67	252	527775	400.93	ng/ml	100
54) Perylene	13.96	252	512927	389.73	ng/ml	100

(#) = qualifier out of range (m) = manual integration
1001F025.D 1001ALK.M Thu Oct 02 05:50:53 2008 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F025.D Vial: 10
Acq On : 1 Oct 2008 9:53 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @0.4/1.0ug/mL | SVM27-3J Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:43:28 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

10/2/08

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.05	276	450706	359.35	ng/ml	100
56)	Dibenz(a,h)anthracene	17.10	278	475747	367.41	ng/ml	100
57)	Benzo(g,h,i)perylene	17.49	276	517363	363.61	ng/ml	100

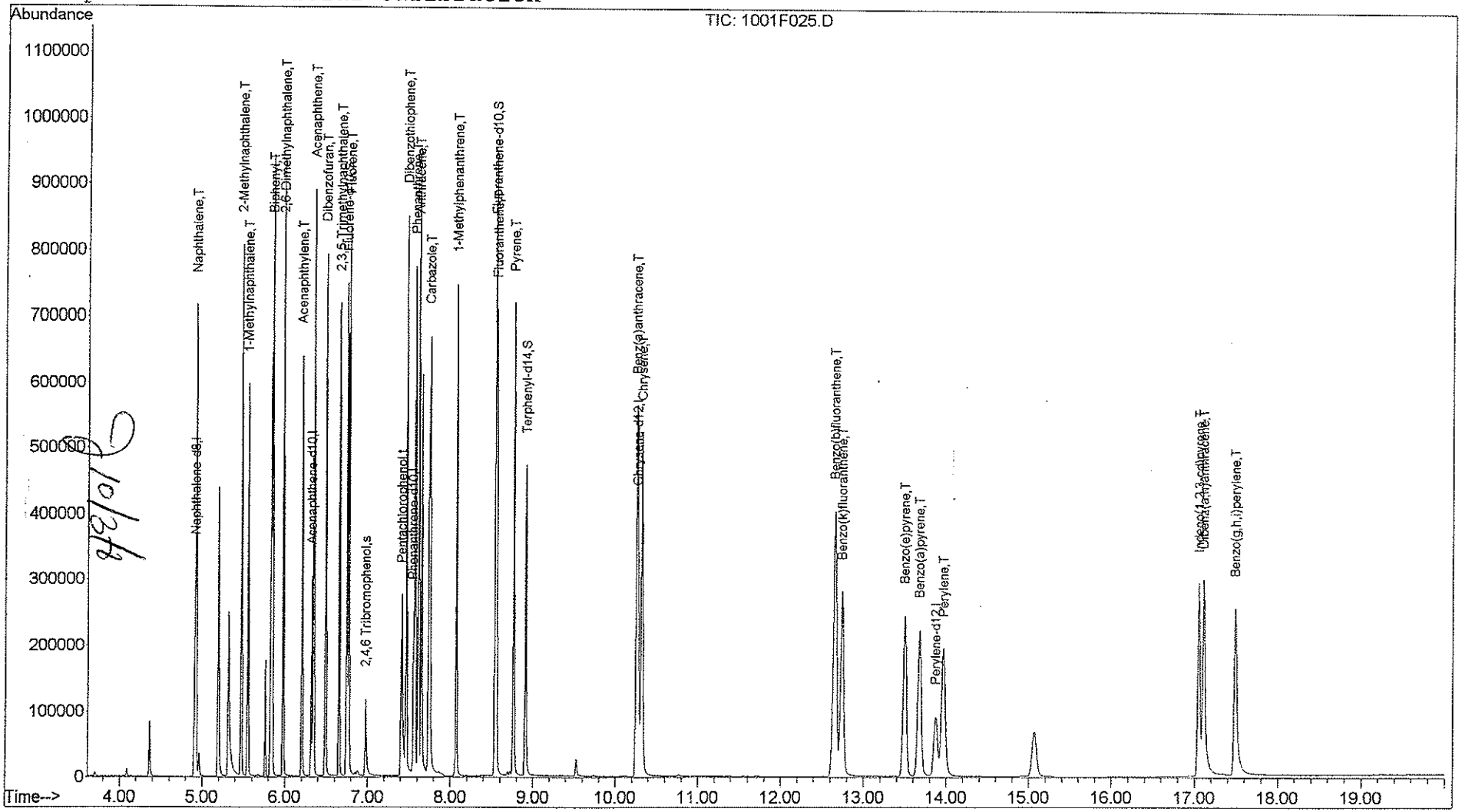
10/3/08

(#) = qualifier out of range (m) = manual integration
1001F025.D 1001ALK.M Thu Oct 02 05:50:53 2008 Page 2

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F025.D Vial: 10
Acq On : 1 Oct 2008 9:53 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @0.4/1.0ug/mL | SVM27-3J Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:48 2008 Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration



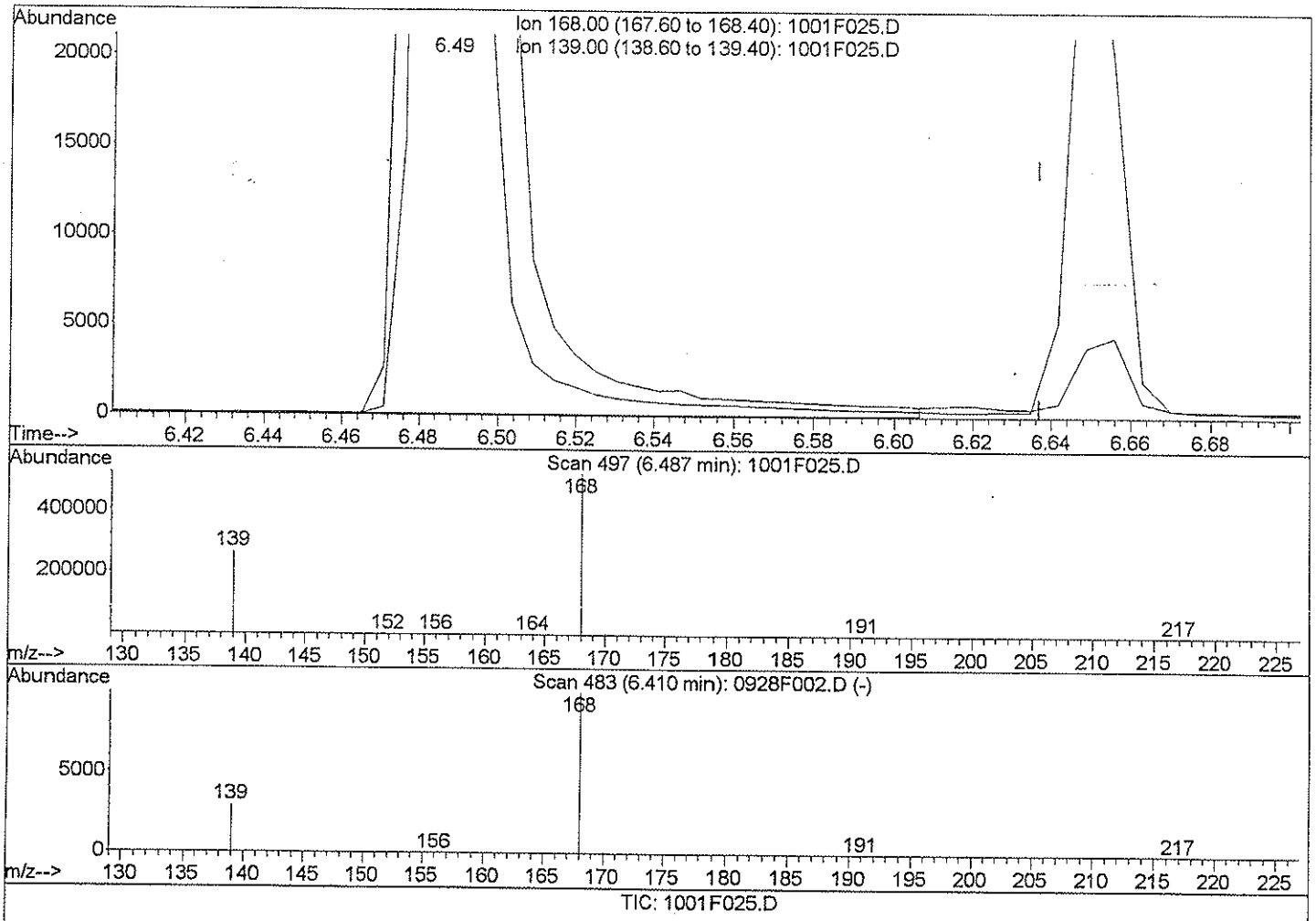
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F025.D
Acq On : 1 Oct 2008 9:53 pm
Sample : SIM-PAH ICAL @0.4/1.0ug/mL | SVM27-3J
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:43 2008

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.49min 520.51ng/ml

response 559648

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	50.99
0.00	0.00	0.00
0.00	0.00	0.00

1001F025.D 1001ALK.M Thu Oct 02 05:47:59 2008

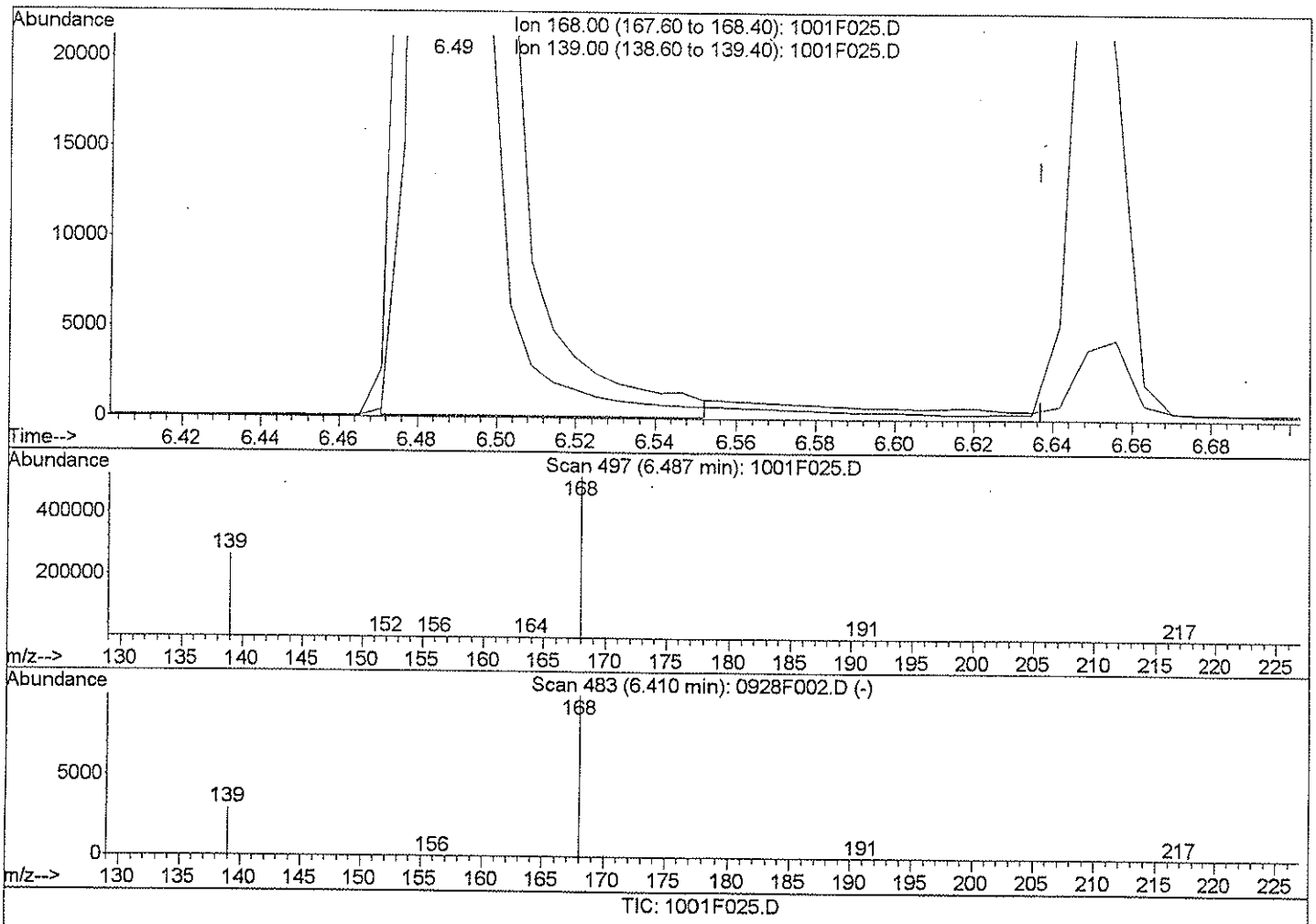
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F025.D
Acq On : 1 Oct 2008 9:53 pm
Sample : SIM-PAH ICAL @0.4/1.0ug/mL | SVM27-3J
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:48 2008

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



TIC: 1001F025.D

(13) Dibenzofuran (T)

6.49min 389.96ng/ml m

response 419278

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	51.00
0.00	0.00	0.00
0.00	0.00	0.00

OI 10/1/18

10/3/18

1001F025.D 1001ALK.M Thu Oct 02 05:48:04 2008

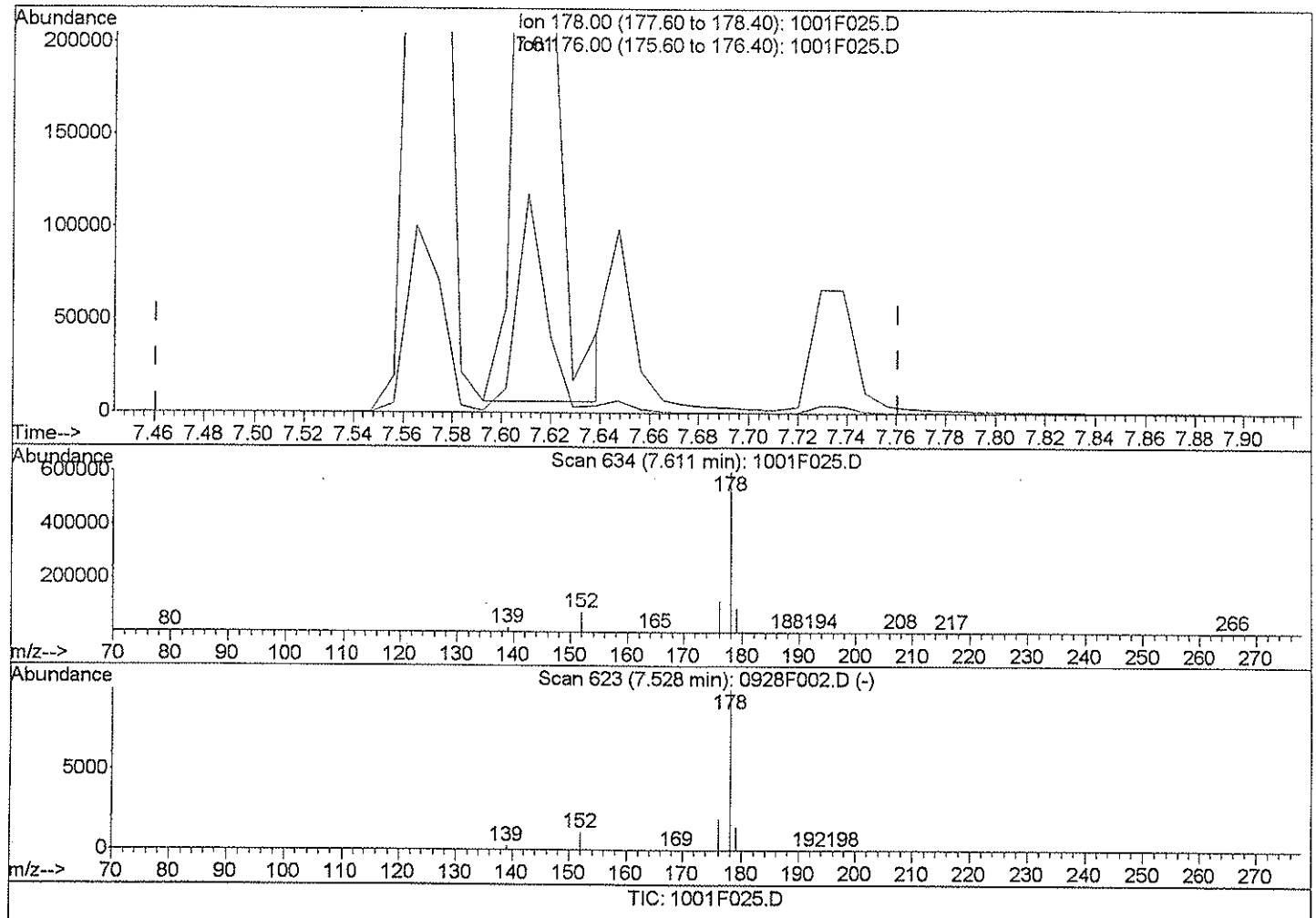
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F025.D
Acq On : 1 Oct 2008 9:53 pm
Sample : SIM-PAH ICAL @0.4/1.0ug/mL | SVM27-3J
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:48 2008

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



TIC: 1001F025.D

(28) Anthracene (T)

7.61min 391.23ng/ml

response 508061

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	19.68
0.00	0.00	0.00
0.00	0.00	0.00

1001F025.D 1001ALK.M Thu Oct 02 05:48:13 2008

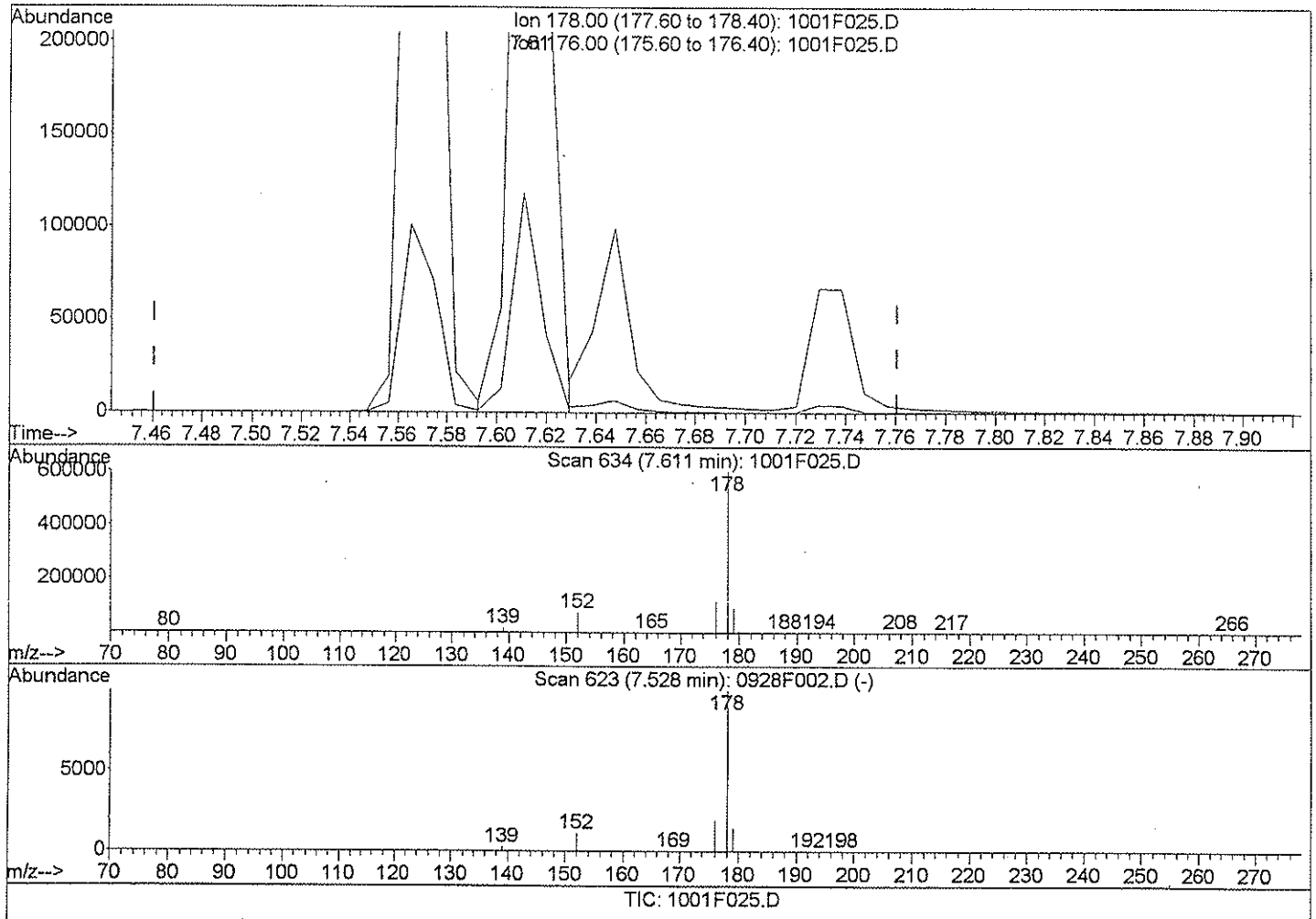
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F025.D
Acq On : 1 Oct 2008 9:53 pm
Sample : SIM-PAH ICAL @0.4/1.0ug/mL | SVM27-3J
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:48 2008

Vial: 10
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



TIC: 1001F025.D

(28) Anthracene (T)

7.61min 385.91ng/ml m

response 501151

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	19.68
0.00	0.00	0.00
0.00	0.00	0.00

OK 10/1/08

10/3/08

1001F025.D 1001ALK.M Thu Oct 02 05:48:17 2008

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F026.D Vial: 11
Acq On : 1 Oct 2008 10:20 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @1.0/2.0ug/mL | SVM27-3K Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:43:29 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.91	136	204181	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.31	164	113845	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.55	188	199062	200.00	ng/ml	0.00
37) Chrysene-d12	10.27	240	245351	200.00	ng/ml	0.00
49) Perylene-d12	13.87	264	240860	200.00	ng/ml	0.00
System Monitoring Compounds						
15) Fluorene-d10	6.75	176	860422	1046.44	ng/ml	0.00
Spiked Amount 200.000			Recovery = 523.22%			
20) 2,4,6 Tribromophenol	6.97	330	138093	981.31	ng/ml	0.00
Spiked Amount 375.000			Recovery = 261.68%			
36) Fluoranthene-d10	8.54	212	1511868	1048.91	ng/ml	0.00
Spiked Amount 200.000			Recovery = 524.46%			
42) Terphenyl-d14	8.91	244	1266223	994.10	ng/ml	0.00
Spiked Amount 200.000			Recovery = 497.05%			
Target Compounds						Qvalue
2) Naphthalene	4.92	128	1104469	960.91	ng/ml	98
3) 2-Methylnaphthalene	5.47	142	806054	997.70	ng/ml	100
4) 1-Methylnaphthalene	5.55	142	710447	985.25	ng/ml	99
5) Biphenyl	5.84	154	966080	972.87	ng/ml	99
6) 2,6-Dimethylnaphthalene	5.97	156	731103	1008.43	ng/ml	98
11) Acenaphthylene	6.20	152	1222057	1012.82	ng/ml	97
12) Acenaphthene	6.34	154	726943	1019.48	ng/ml	95
13) Dibenzofuran	6.49	168	1061837m	996.19	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.65	170	732053	1067.12	ng/ml	96
16) Fluorene	6.77	166	904984	1008.72	ng/ml	100
21) Pentachlorophenol	7.41	266	306099	2893.82	ng/ml	96
23) Dibenzothiophene	7.47	184	1241617	1034.09	ng/ml	94
27) Phenanthrene	7.57	178	1322818	969.32	ng/ml	100
28) Anthracene	7.61	178	1357186m	1009.80	ng/ml	
29) Carbazole	7.75	167	1115176	1006.25	ng/ml	98
30) 1-Methylphenanthrene	8.07	192	995019	995.06	ng/ml	97
35) Fluoranthene	8.55	202	1507475	978.99	ng/ml	98
38) Pyrene	8.76	202	1555976	948.96	ng/ml	99
43) Benz(a)anthracene	10.25	228	1475234	921.02	ng/ml	99
44) Chrysene	10.32	228	1430118	953.17	ng/ml	99
50) Benzo(b)fluoranthene	12.66	252	1683232	1064.76	ng/ml	99
51) Benzo(k)fluoranthene	12.74	252	1550741	1045.50	ng/ml	98
52) Benzo(e)pyrene	13.50	252	1438954	1038.23	ng/ml	100
53) Benzo(a)pyrene	13.68	252	1384577	1030.76	ng/ml	100
54) Perylene	13.97	252	1341687	999.03	ng/ml	98

(#) = qualifier out of range (m) = manual integration
1001F026.D 1001ALK.M Thu Oct 02 05:50:55 2008 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F026.D
Acq On : 1 Oct 2008 10:20 pm
Sample : SIM-PAH ICAL @1.0/2.0ug/mL | SVM27-3K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:43:29 2008

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00
Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

10/2/08

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.05	276	1271568	993.54	ng/ml	100
56)	Dibenz(a,h)anthracene	17.11	278	1308704	990.46	ng/ml	92
57)	Benzo(g,h,i)perylene	17.49	276	1357571	935.04	ng/ml	99

10/3/08

(#) = qualifier out of range (m) = manual integration
1001F026.D 1001ALK.M Thu Oct 02 05:50:55 2008 Page 2

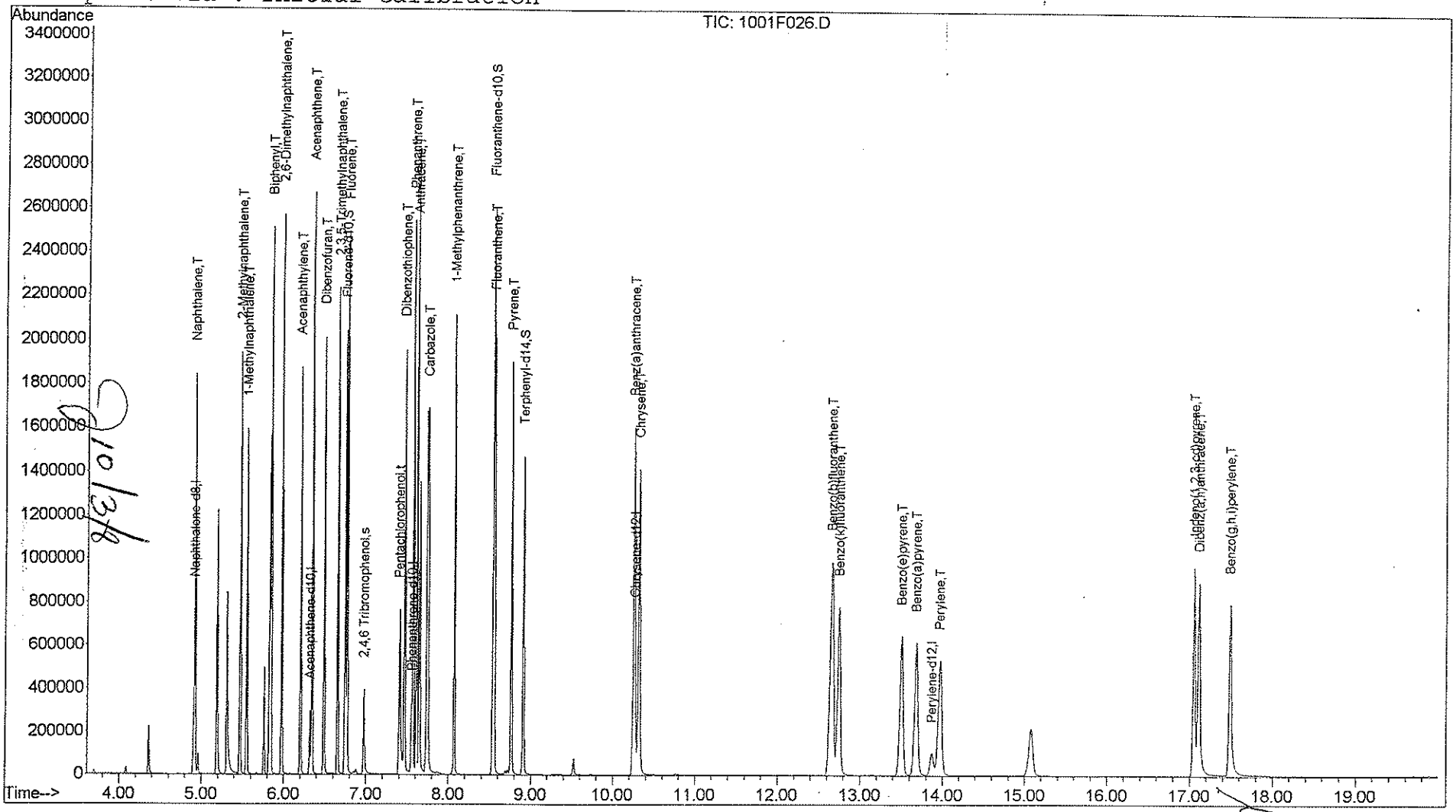
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F026.D
Acq On : 1 Oct 2008 10:20 pm
Sample : SIM-PAH ICAL @1.0/2.0ug/mL | SVM27-3K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:48 2008

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration



963

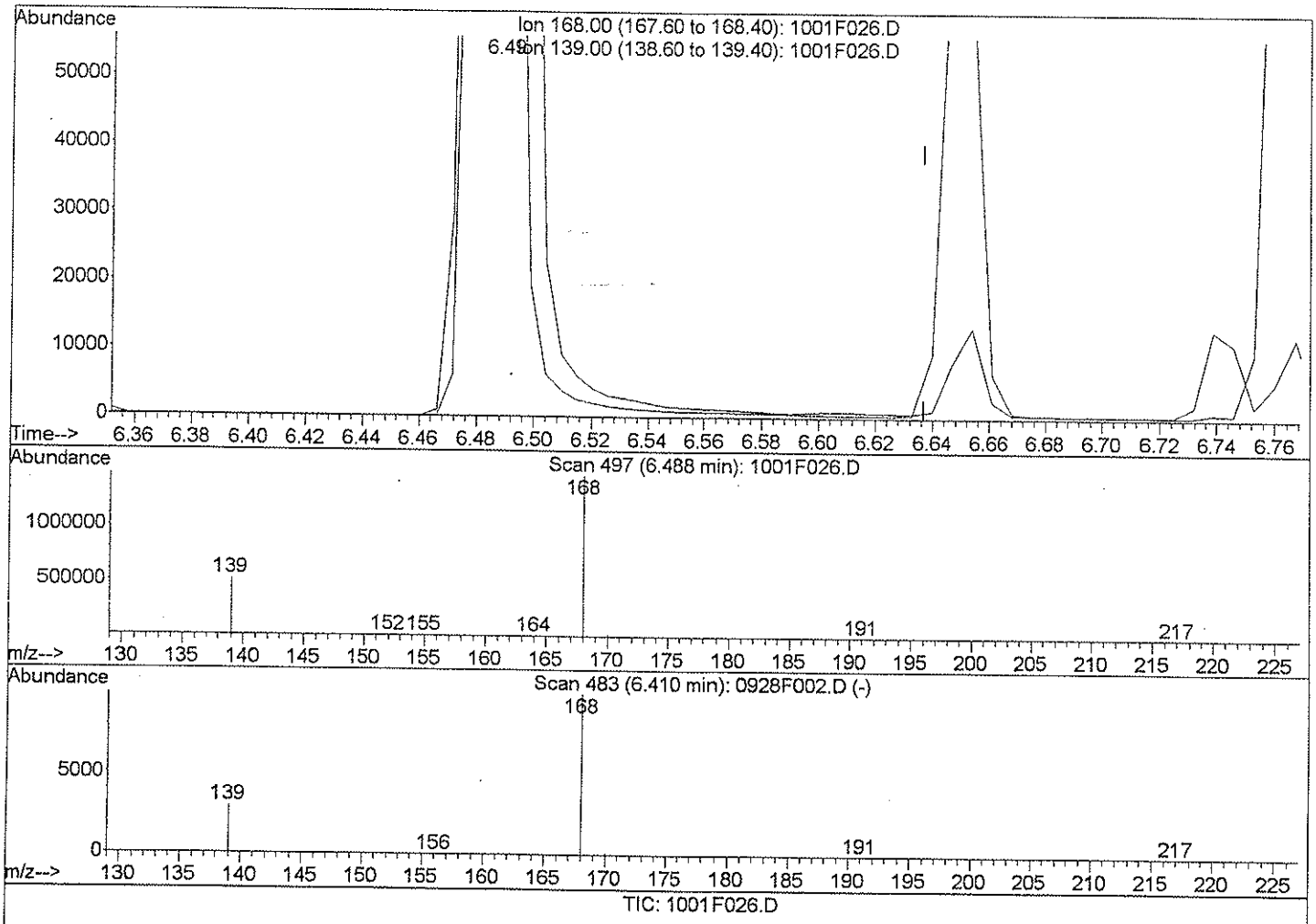
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F026.D
Acq On : 1 Oct 2008 10:20 pm
Sample : SIM-PAH ICAL @1.0/2.0ug/mL | SVM27-3K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:43 2008

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.49min 1393.55ng/ml

response 1485383

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	34.82
0.00	0.00	0.00
0.00	0.00	0.00

1001F026.D 1001ALK.M Thu Oct 02 05:48:34 2008

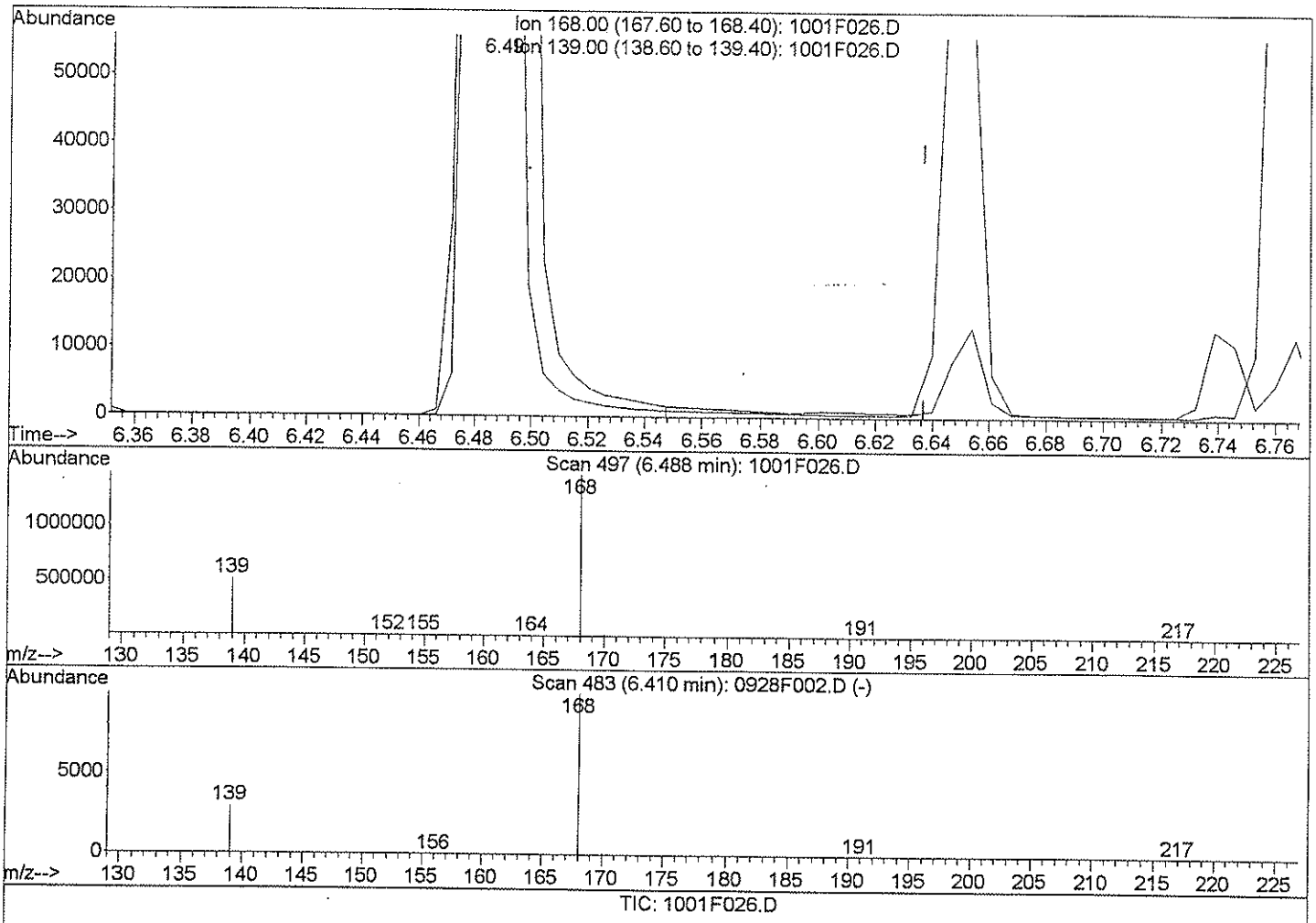
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F026.D
Acq On : 1 Oct 2008 10:20 pm
Sample : SIM-PAH ICAL @1.0/2.0ug/mL | SVM27-3K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:48 2008

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.49min 996.19ng/ml m

response 1061837

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	34.82
0.00	0.00	0.00
0.00	0.00	0.00

DT 10/1/08

10/3/08

1001F026.D 1001ALK.M Thu Oct 02 05:48:38 2008

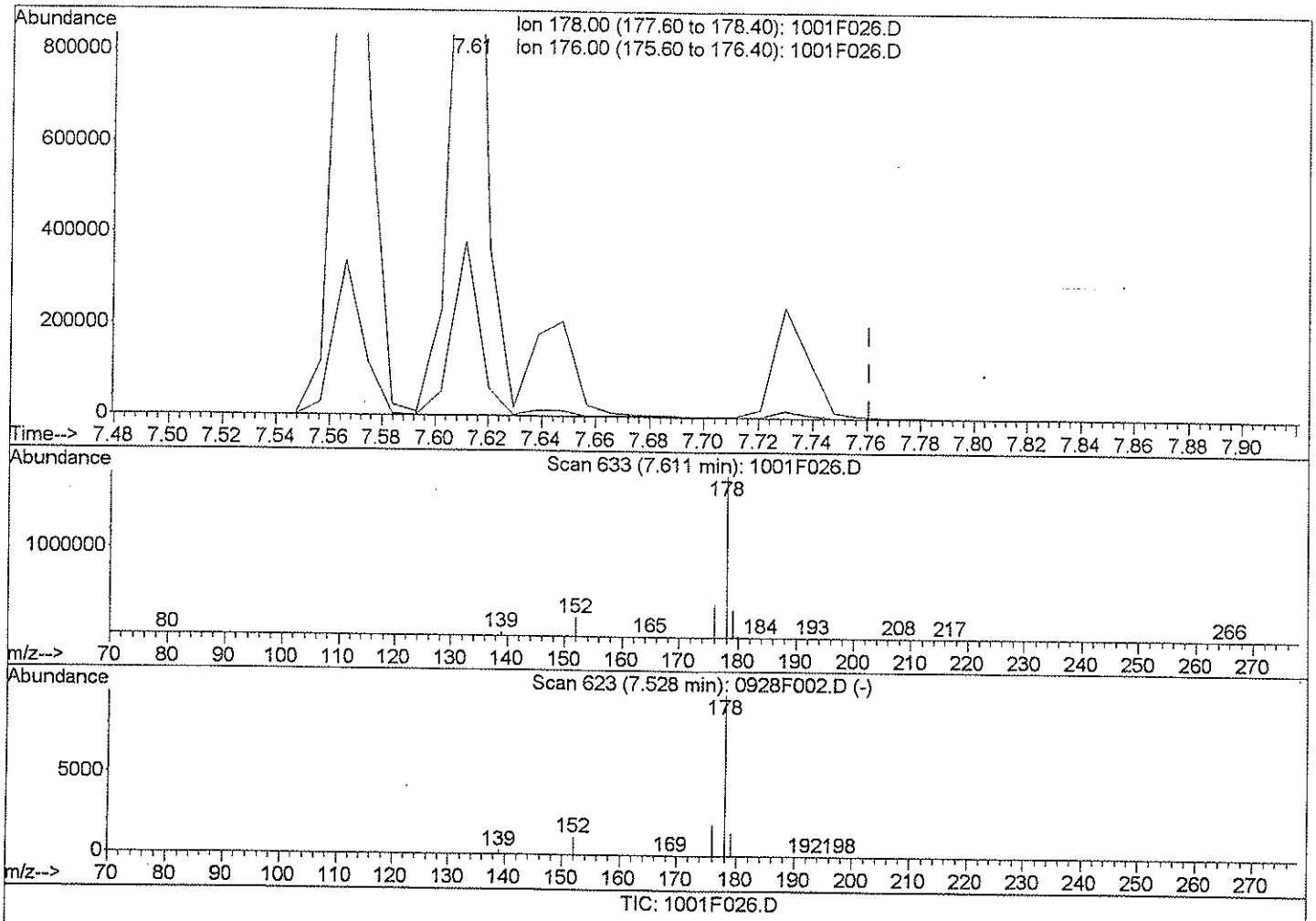
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F026.D
Acq On : 1 Oct 2008 10:20 pm
Sample : SIM-PAH ICAL @1.0/2.0ug/mL | SVM27-3K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:48 2008

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



(28) Anthracene (T)

7.61min 1178.45ng/ml

response 1583851

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	20.61
0.00	0.00	0.00
0.00	0.00	0.00

1001F026.D 1001ALK.M Thu Oct 02 05:48:46 2008

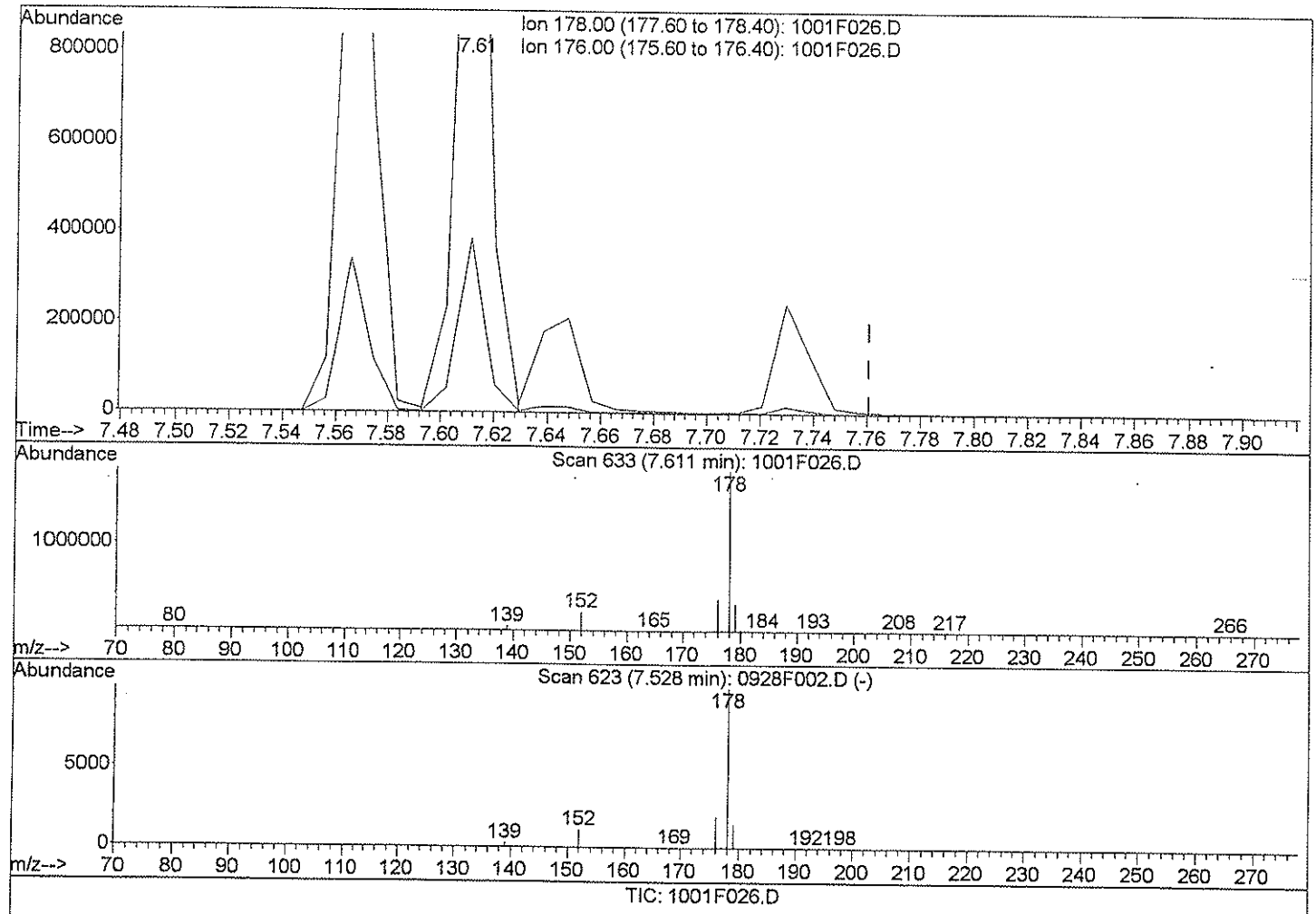
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F026.D
Acq On : 1 Oct 2008 10:20 pm
Sample : SIM-PAH ICAL @1.0/2.0ug/mL | SVM27-3K
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:48 2008

Vial: 11
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



(28) Anthracene (T)

7.61min 1009.80ng/ml m

response 1357186

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	20.61
0.00	0.00	0.00
0.00	0.00	0.00

01 10/2/18

10/3/18

1001F026.D 1001ALK.M Thu Oct 02 05:48:49 2008

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F027.D
Acq On : 1 Oct 2008 10:46 pm
Sample : SIM-PAH ICAL @1.6/2.4ug/mL | SVM27-3L
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:43:29 2008

Vial: 12
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

10/2/18

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.90	136	206871	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.32	164	115817	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.55	188	199188	200.00	ng/ml	0.00
37) Chrysene-d12	10.27	240	252754	200.00	ng/ml	0.00
49) Perylene-d12	13.88	264	242833	200.00	ng/ml	0.01
System Monitoring Compounds						
15) Fluorene-d10	6.75	176	1461388	1747.07	ng/ml	0.00
Spiked Amount 200.000			Recovery = 873.54%			
20) 2,4,6 Tribromophenol	6.97	330	241206	1684.87	ng/ml	0.00
Spiked Amount 375.000			Recovery = 449.30%			
36) Fluoranthene-d10	8.54	212	2592320	1797.38	ng/ml	0.00
Spiked Amount 200.000			Recovery = 898.69%			
42) Terphenyl-d14	8.91	244	2131548	1624.44	ng/ml	0.00
Spiked Amount 200.000			Recovery = 812.22%			
Target Compounds						Qvalue
2) Naphthalene	4.92	128	1812676	1556.56	ng/ml	97
3) 2-Methylnaphthalene	5.47	142	1349077	1648.12	ng/ml	100
4) 1-Methylnaphthalene	5.55	142	1183854	1620.42	ng/ml	99
5) Biphenyl	5.84	154	1602476	1592.76	ng/ml	96
6) 2,6-Dimethylnaphthalene	5.97	156	1241341	1689.95	ng/ml	98
11) Acenaphthylene	6.20	152	2020264	1645.85	ng/ml	96
12) Acenaphthene	6.34	154	1242911	1713.41	ng/ml	97
13) Dibenzofuran	6.49	168	1758747m	1621.92	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.65	170	1268489	1817.60	ng/ml	73
16) Fluorene	6.77	166	1507041	1651.18	ng/ml	95
21) Pentachlorophenol	7.41	266	402051	3736.22	ng/ml	100
23) Dibenzothiophene	7.46	184	2043911	1701.21	ng/ml	93
27) Phenanthrene	7.57	178	2158096	1580.38	ng/ml	97
28) Anthracene	7.61	178	2196662m	1633.37	ng/ml	
29) Carbazole	7.75	167	1822723	1643.65	ng/ml	95
30) 1-Methylphenanthrene	8.07	192	1722943	1721.93	ng/ml	94
35) Fluoranthene	8.56	202	2586074	1678.40	ng/ml	97
38) Pyrene	8.76	202	2630113	1557.07	ng/ml	98
43) Benz(a)anthracene	10.26	228	2479373	1502.59	ng/ml	99
44) Chrysene	10.32	228	2340199	1514.06	ng/ml	96
50) Benzo(b)fluoranthene	12.68	252	2762493	1733.28	ng/ml	98
51) Benzo(k)fluoranthene	12.75	252	2551399	1706.17	ng/ml	97
52) Benzo(e)pyrene	13.51	252	2330589	1667.90	ng/ml	99
53) Benzo(a)pyrene	13.69	252	2263618	1671.48	ng/ml	98
54) Perylene	13.99	252	2178057	1608.62	ng/ml	98

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

10/3/18

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F027.D Vial: 12
Acq On : 1 Oct 2008 10:46 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @1.6/2.4ug/mL | SVM27-3L Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:43:29 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

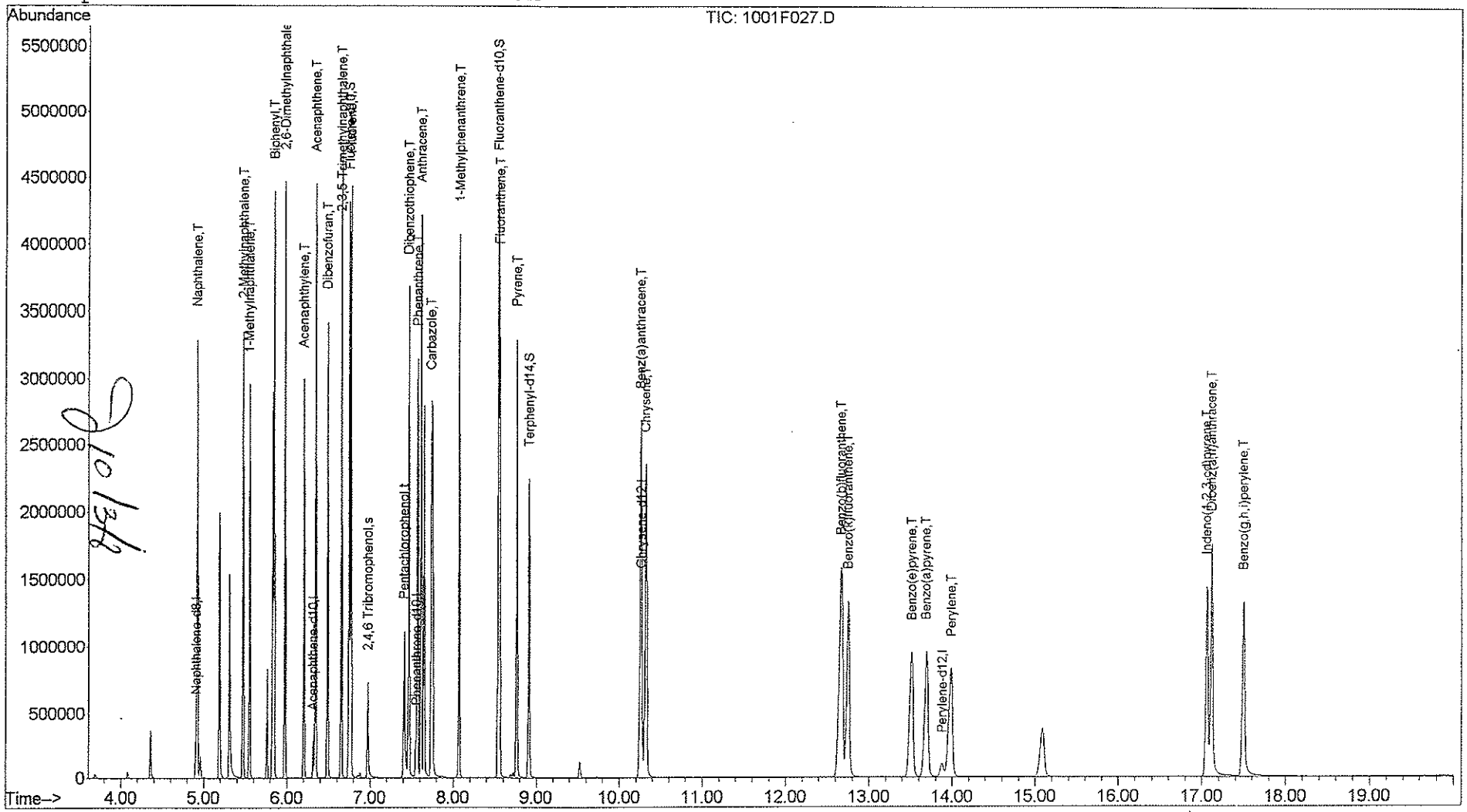
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.06	276	2136171	1655.53	ng/ml	99
56)	Dibenz(a,h)anthracene	17.12	278	2219348	1666.01	ng/ml	93
57)	Benzo(g,h,i)perylene	17.50	276	2233404	1525.78	ng/ml	96

(#) = qualifier out of range (m) = manual integration
1001F027.D 1001ALK.M Thu Oct 02 05:50:57 2008 Page 2

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F027.D Vial: 12
Acq On : 1 Oct 2008 10:46 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @1.6/2.4ug/mL | SVM27-3L Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:49 2008 Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration



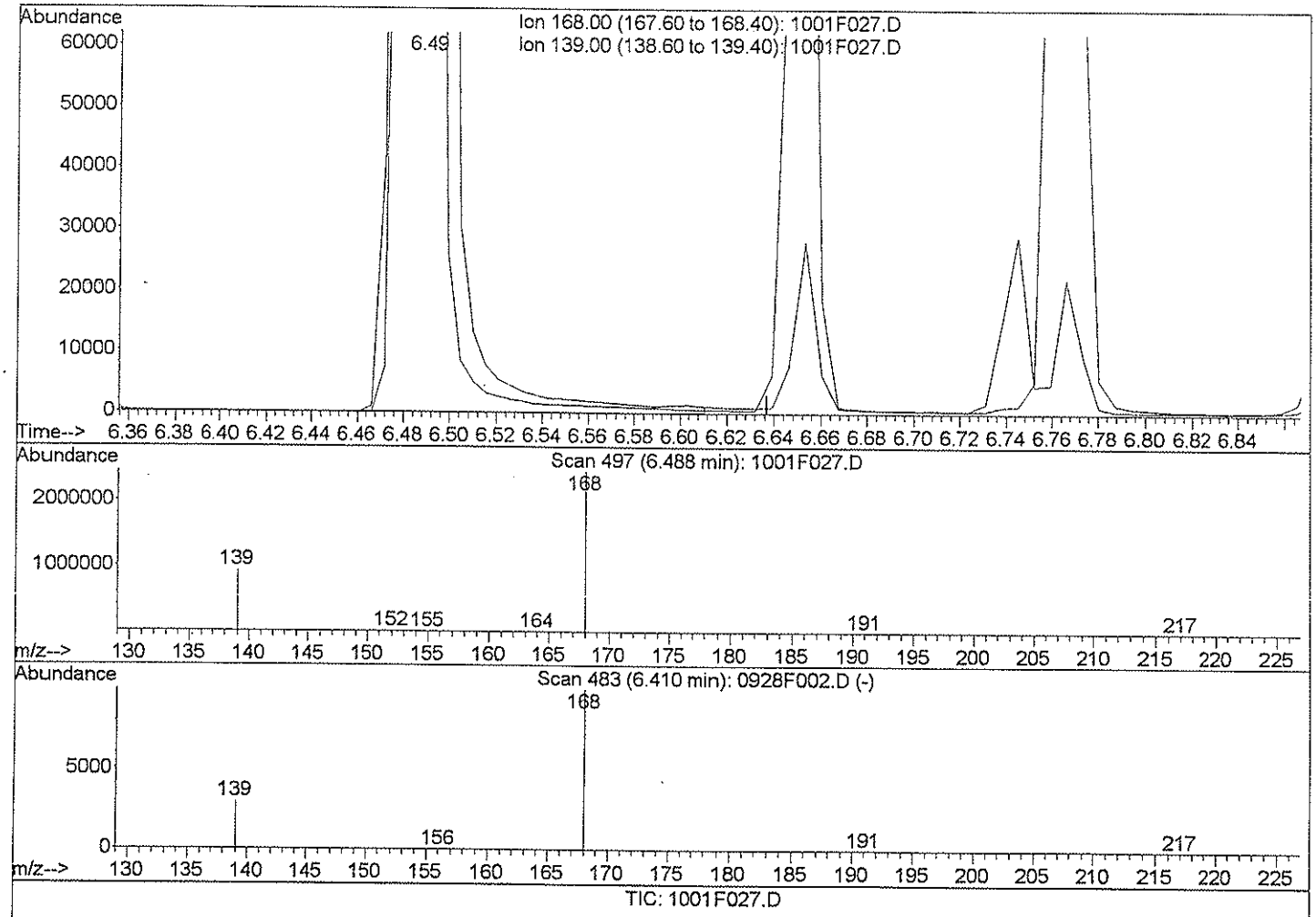
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F027.D
Acq On : 1 Oct 2008 10:46 pm
Sample : SIM-PAH ICAL @1.6/2.4ug/mL | SVM27-3L
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:43 2008

Vial: 12
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.49min 2240.29ng/ml

response 2429289

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	37.72
0.00	0.00	0.00
0.00	0.00	0.00

1001F027.D 1001ALK.M Thu Oct 02 05:49:10 2008

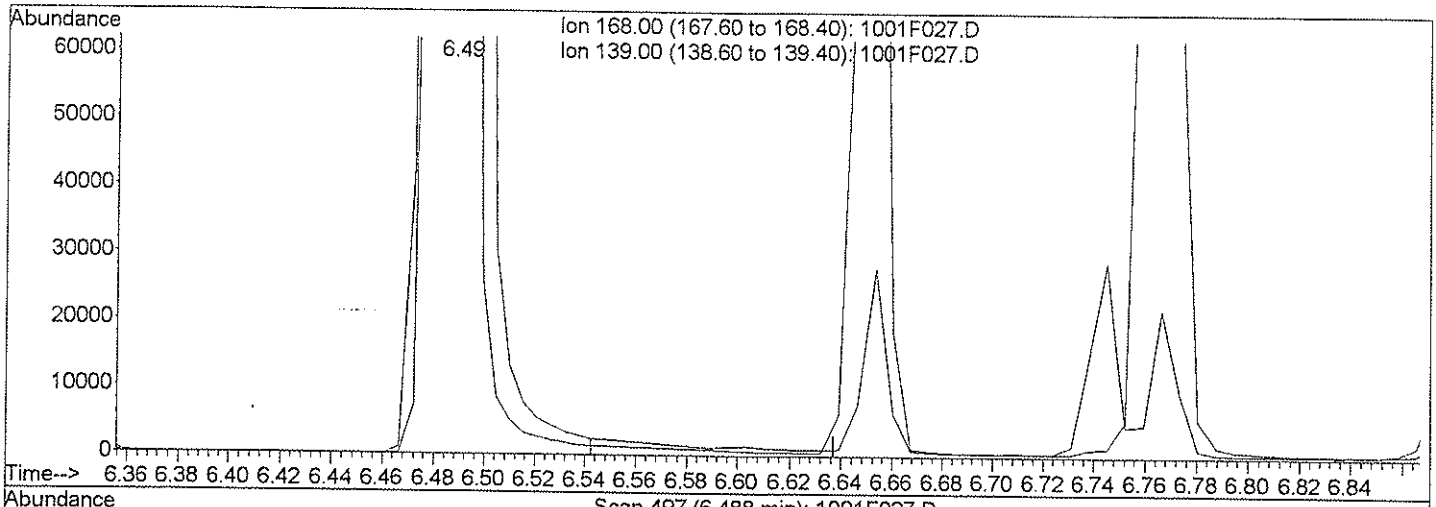
Quantitation Report (Qedit)

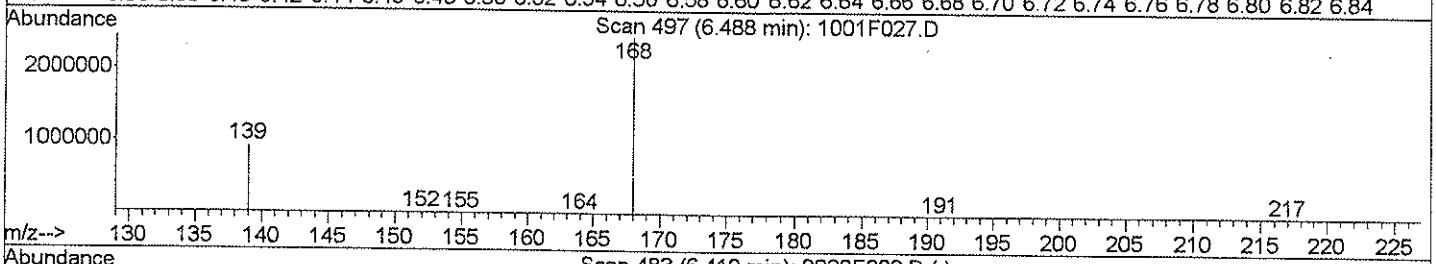
Data File : J:\MS11\DATA\100108\1001F027.D
Acq On : 1 Oct 2008 10:46 pm
Sample : SIM-PAH ICAL @1.6/2.4ug/mL | SVM27-3L
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:49 2008

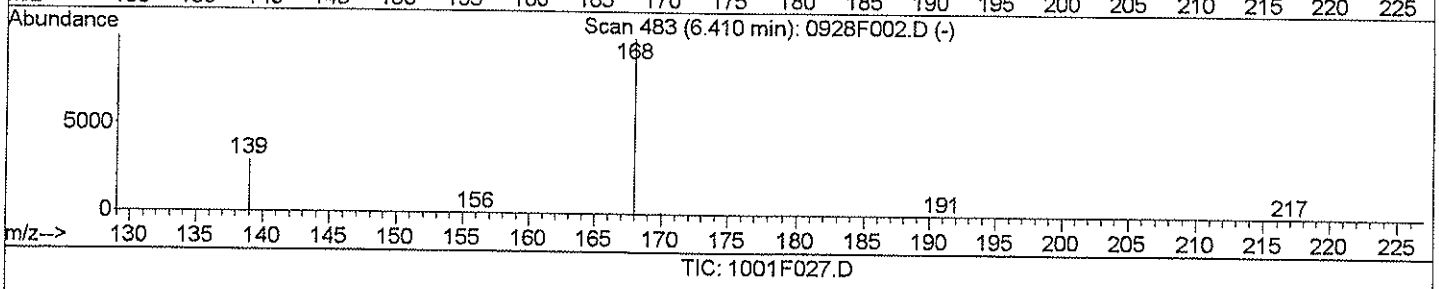
Vial: 12
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration







TIC: 1001F027.D

(13) Dibenzofuran (T)

6.49min 1621.92ng/ml m

response 1758747

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	37.72
0.00	0.00	0.00
0.00	0.00	0.00

10/1/8

10/3/8

1001F027.D 1001ALK.M Thu Oct 02 05:49:13 2008

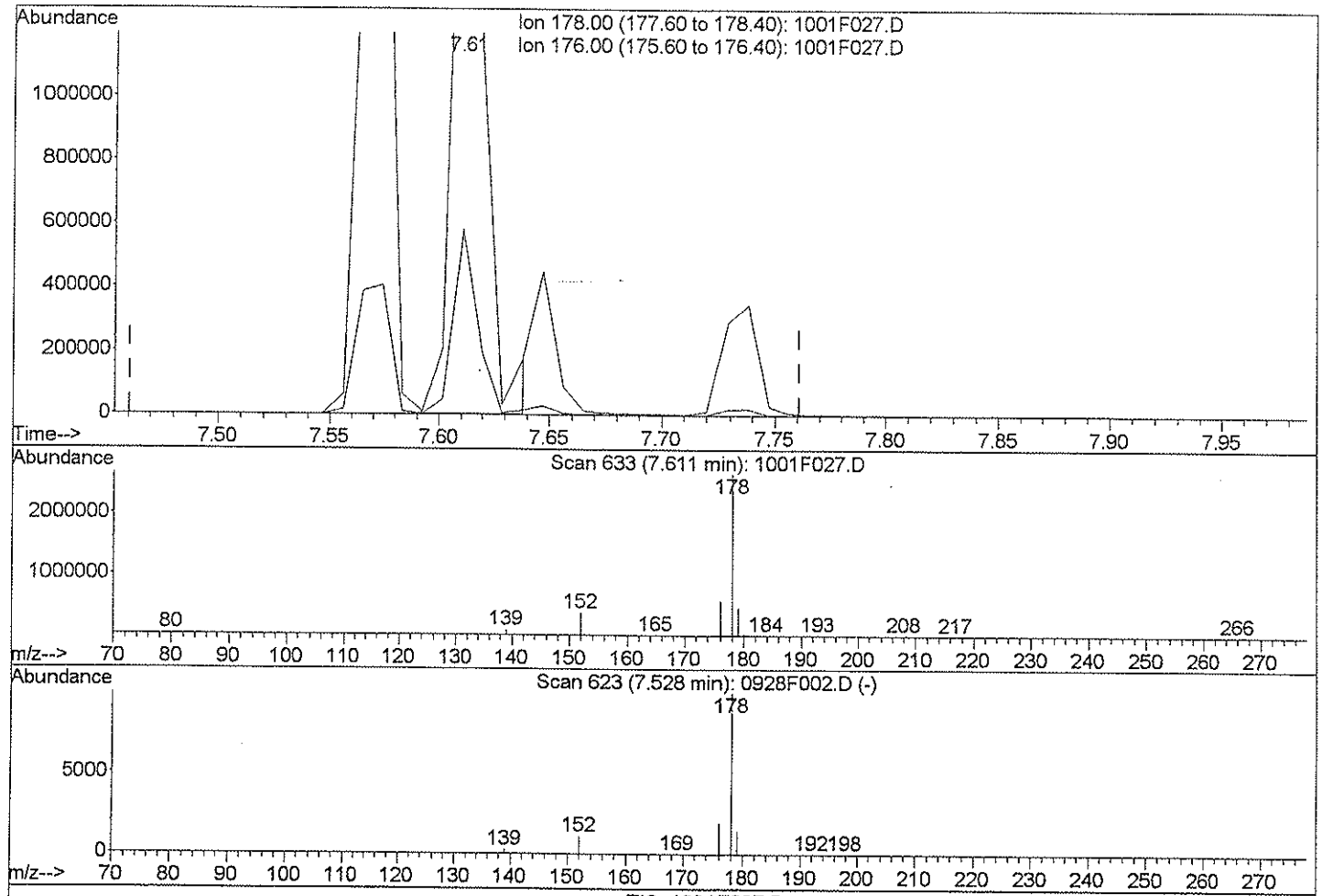
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F027.D
Acq On : 1 Oct 2008 10:46 pm
Sample : SIM-PAH ICAL @1.6/2.4ug/mL | SVM27-3L
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:49 2008

Vial: 12
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



TIC: 1001F027.D

(28) Anthracene (T)

7.61min 1701.22ng/ml

response 2287908

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	21.81
0.00	0.00	0.00
0.00	0.00	0.00

1001F027.D 1001ALK.M Thu Oct 02 05:49:22 2008

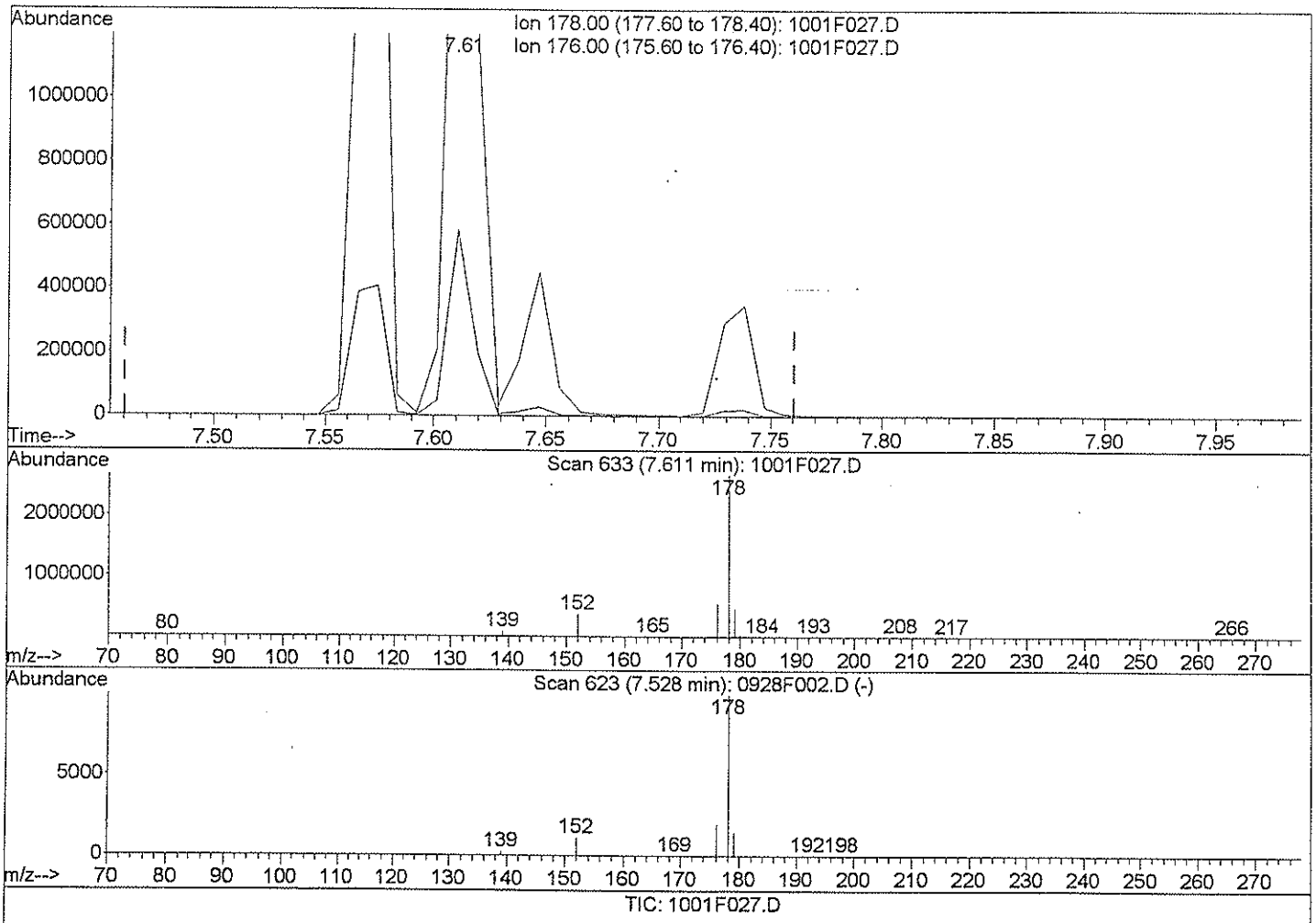
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F027.D
Acq On : 1 Oct 2008 10:46 pm
Sample : SIM-PAH ICAL @1.6/2.4ug/mL | SVM27-3L
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:49 2008

Vial: 12
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



(28) Anthracene (T)

7.61min 1633.37ng/ml m

response 2196662

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	21.80
0.00	0.00	0.00
0.00	0.00	0.00

OK 10/1/08

10/3/08

1001F027.D 1001ALK.M Thu Oct 02 05:49:26 2008

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F028.D
Acq On : 1 Oct 2008 11:13 pm
Sample : SIM-PAH ICAL @2.0/3.0ug/mL | SVM27-3M
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:43:30 2008

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.90	136	196753	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.32	164	109172	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.55	188	192156	200.00	ng/ml	0.00
37) Chrysene-d12	10.27	240	245377	200.00	ng/ml	0.00
49) Perylene-d12	13.88	264	235332	200.00	ng/ml	0.01
System Monitoring Compounds						
15) Fluorene-d10	6.75	176	1863844	2363.83	ng/ml	0.00
Spiked Amount 200.000			Recovery	= 1181.92%		
20) 2,4,6 Tribromophenol	6.97	330	306165	2268.79	ng/ml	0.00
Spiked Amount 375.000			Recovery	= 605.01%		
36) Fluoranthene-d10	8.54	212	3214652	2310.44	ng/ml	0.00
Spiked Amount 200.000			Recovery	= 1155.22%		
42) Terphenyl-d14	8.91	244	2770194	2174.62	ng/ml	0.00
Spiked Amount 200.000			Recovery	= 1087.31%		
Target Compounds						Qvalue
2) Naphthalene	4.92	128	2225152	2009.02	ng/ml	96
3) 2-Methylnaphthalene	5.47	142	1704305	2189.15	ng/ml	98
4) 1-Methylnaphthalene	5.55	142	1481920	2132.71	ng/ml	100
5) Biphenyl	5.84	154	2007825	2098.28	ng/ml	95
6) 2,6-Dimethylnaphthalene	5.97	156	1576207	2256.19	ng/ml	97
11) Acenaphthylene	6.20	152	2509726	2169.06	ng/ml	94
12) Acenaphthene	6.34	154	1585577	2318.83	ng/ml	98
13) Dibenzofuran	6.49	168	2205241m	2157.46	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.65	170	1589186	2415.73	ng/ml	67
16) Fluorene	6.77	166	1906640	2216.15	ng/ml	91
21) Pentachlorophenol	7.41	266	514630	5073.50	ng/ml	100
23) Dibenzothiophene	7.47	184	2543119	2194.18	ng/ml	89
27) Phenanthrene	7.57	178	2753684	2090.33	ng/ml	98
28) Anthracene	7.61	178	2766962m	2132.72	ng/ml	
29) Carbazole	7.75	167	2285611	2136.48	ng/ml	91
30) 1-Methylphenanthrene	8.07	192	2225090	2305.16	ng/ml	94
35) Fluoranthene	8.55	202	3227688	2171.47	ng/ml	90
38) Pyrene	8.76	202	3280715	2000.63	ng/ml	90
43) Benz(a)anthracene	10.26	228	3111041	1942.08	ng/ml	96
44) Chrysene	10.33	228	2949449	1965.60	ng/ml	97
50) Benzo(b)fluoranthene	12.68	252	3470869	2247.15	ng/ml	96
51) Benzo(k)fluoranthene	12.76	252	3153167	2175.79	ng/ml	97
52) Benzo(e)pyrene	13.52	252	2905895	2145.90	ng/ml	98
53) Benzo(a)pyrene	13.70	252	2838914	2163.10	ng/ml	98
54) Perylene	13.99	252	2718741	2071.95	ng/ml	97

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

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F028.D
Acq On : 1 Oct 2008 11:13 pm
Sample : SIM-PAH ICAL @2.0/3.0ug/mL | SVM27-3M
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 02 05:43:30 2008

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

10/2/08

Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55) Indeno(1,2,3-cd)pyrene	17.07	276	2705773	2163.81	ng/ml	97
56) Dibenz(a,h)anthracene	17.12	278	2835148m	2196.11	ng/ml	
57) Benzo(g,h,i)perylene	17.50	276	2812103	1982.37	ng/ml	96

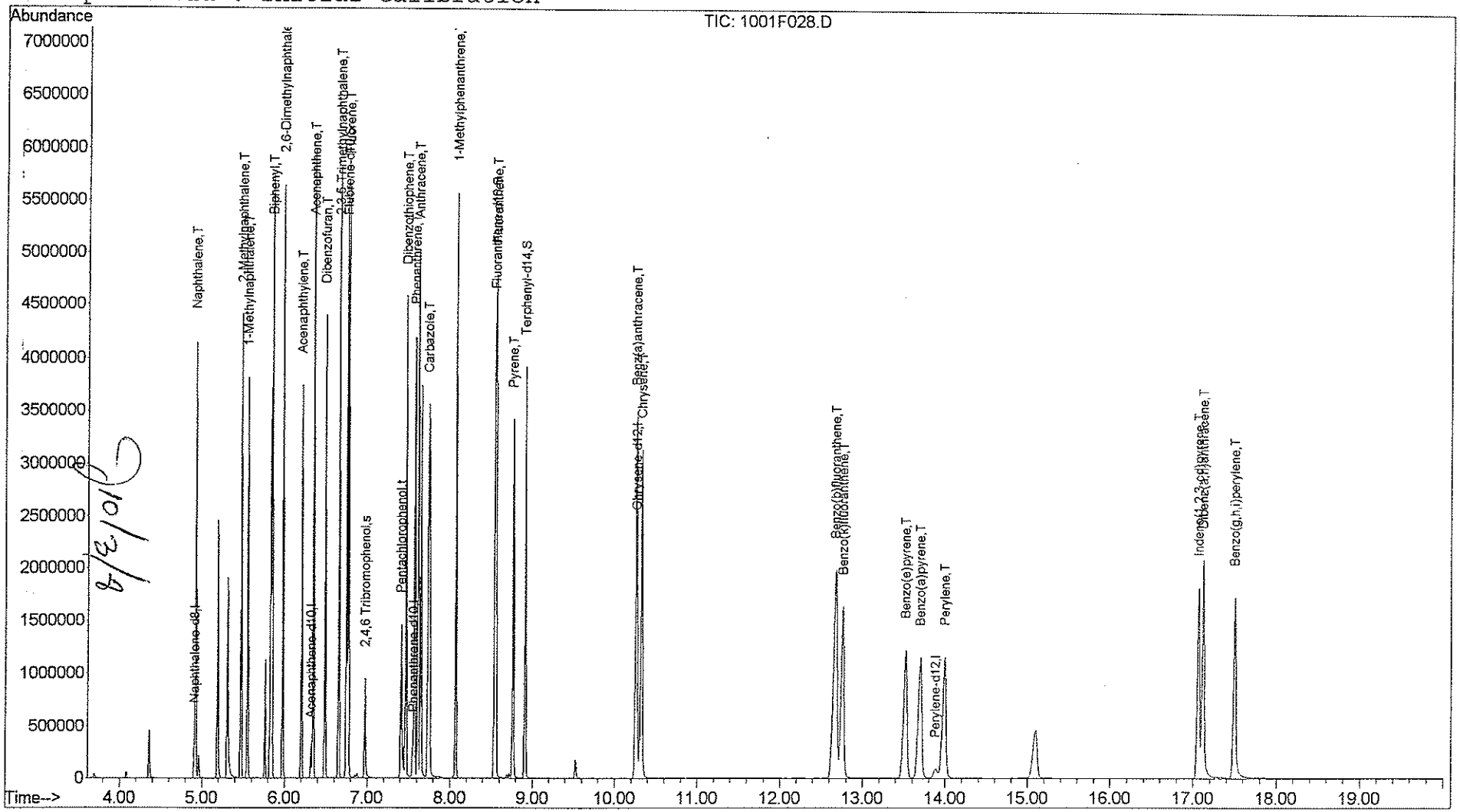
10/3/8

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

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F028.D Vial: 13
Acq On : 1 Oct 2008 11:13 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @2.0/3.0ug/mL | SVM27-3M Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:50 2008 Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Initial Calibration



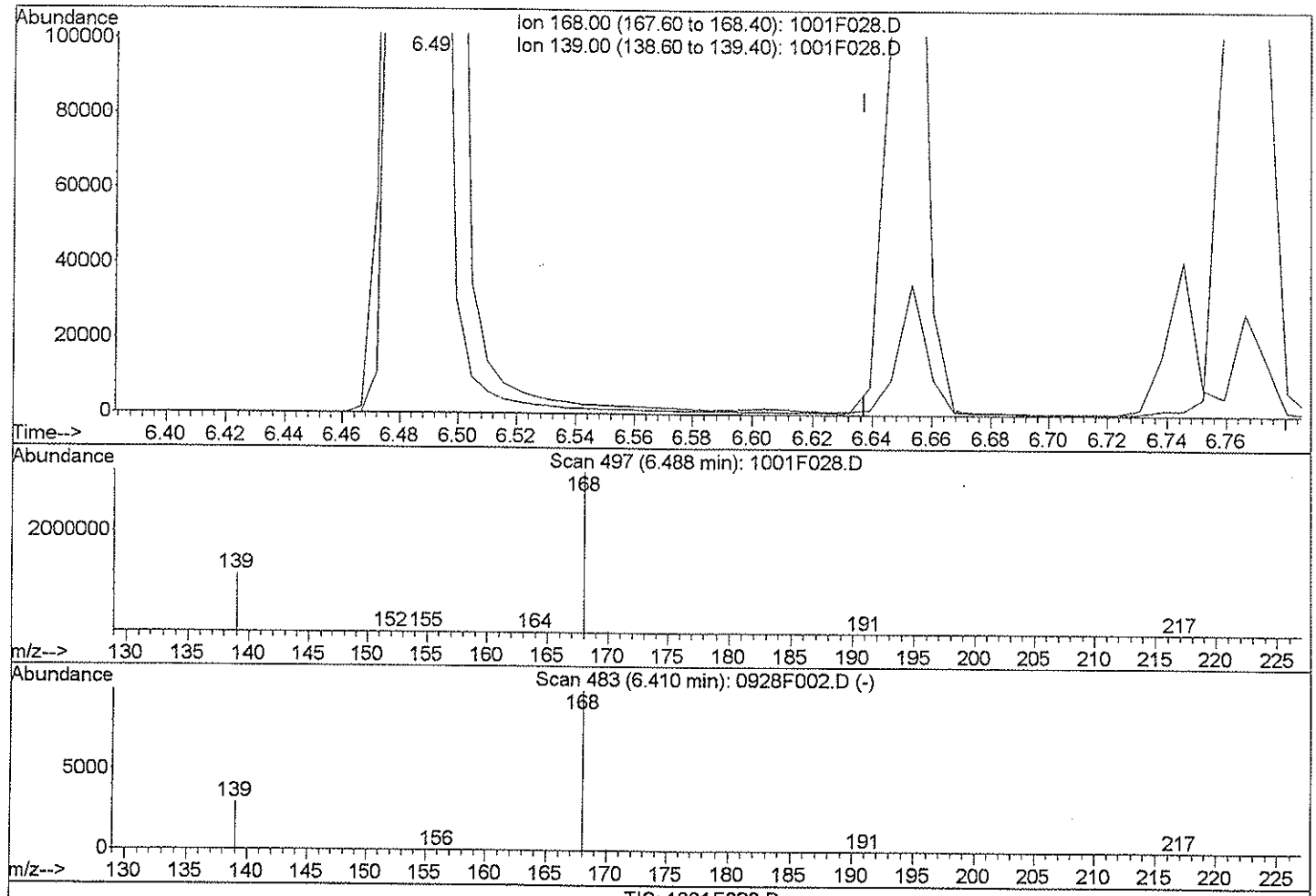
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F028.D
Acq On : 1 Oct 2008 11:13 pm
Sample : SIM-PAH ICAL @2.0/3.0ug/mL | SVM27-3M
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:43 2008

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



TIC: 1001F028.D

(13) Dibenzofuran (T)

6.49min 2996.81ng/ml

response 3063180

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	35.92
0.00	0.00	0.00
0.00	0.00	0.00

1001F028.D 1001ALK.M Thu Oct 02 05:49:40 2008

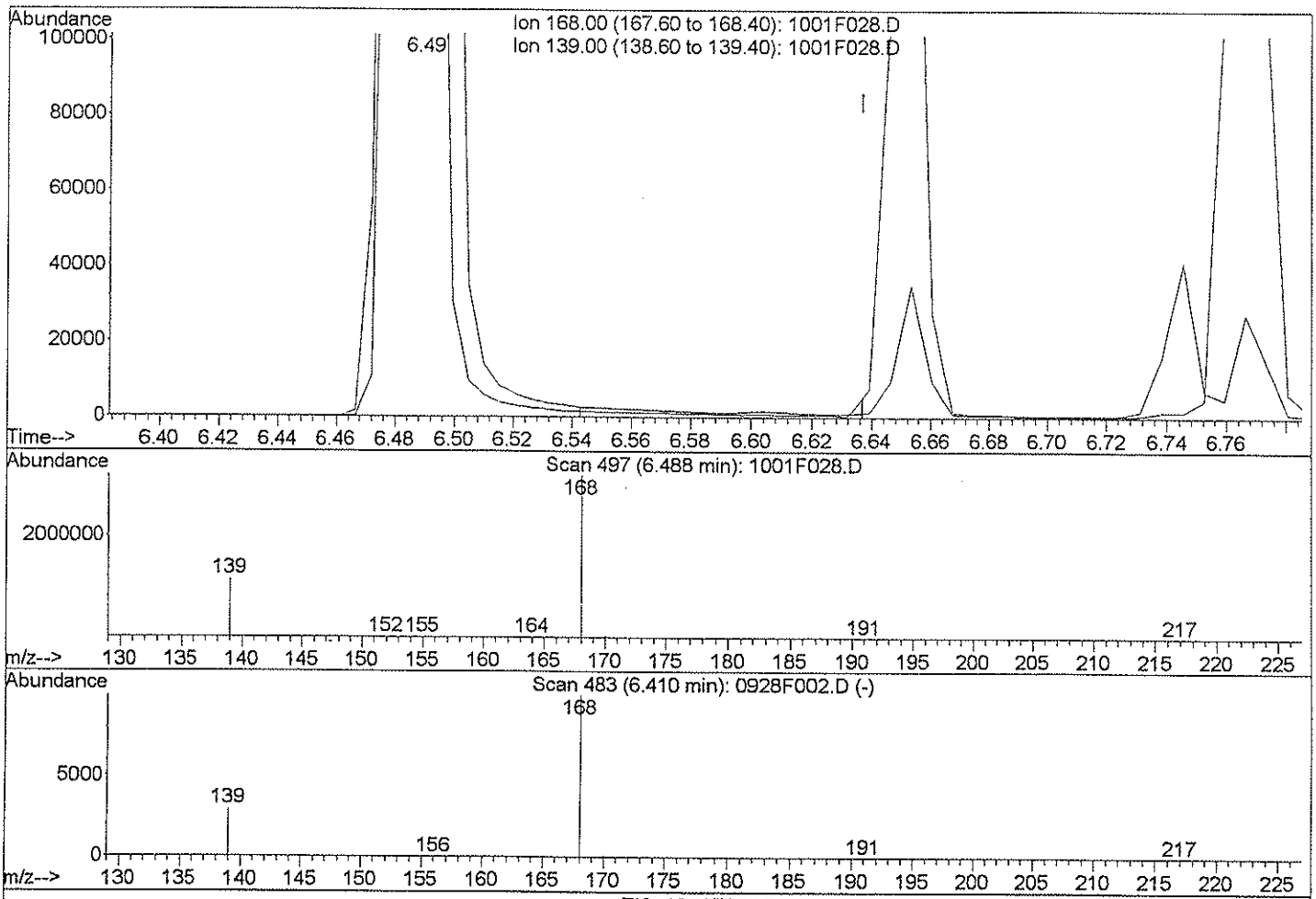
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F028.D
Acq On : 1 Oct 2008 11:13 pm
Sample : SIM-PAH ICAL @2.0/3.0ug/mL | SVM27-3M
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:49 2008

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



TIC: 1001F028.D

(13) Dibenzofuran (T)

6.49min 2157.46ng/ml m

response 2205241

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	35.92
0.00	0.00	0.00
0.00	0.00	0.00

10/1/2018

10/3/18

1001F028.D 1001ALK.M Thu Oct 02 05:49:45 2008

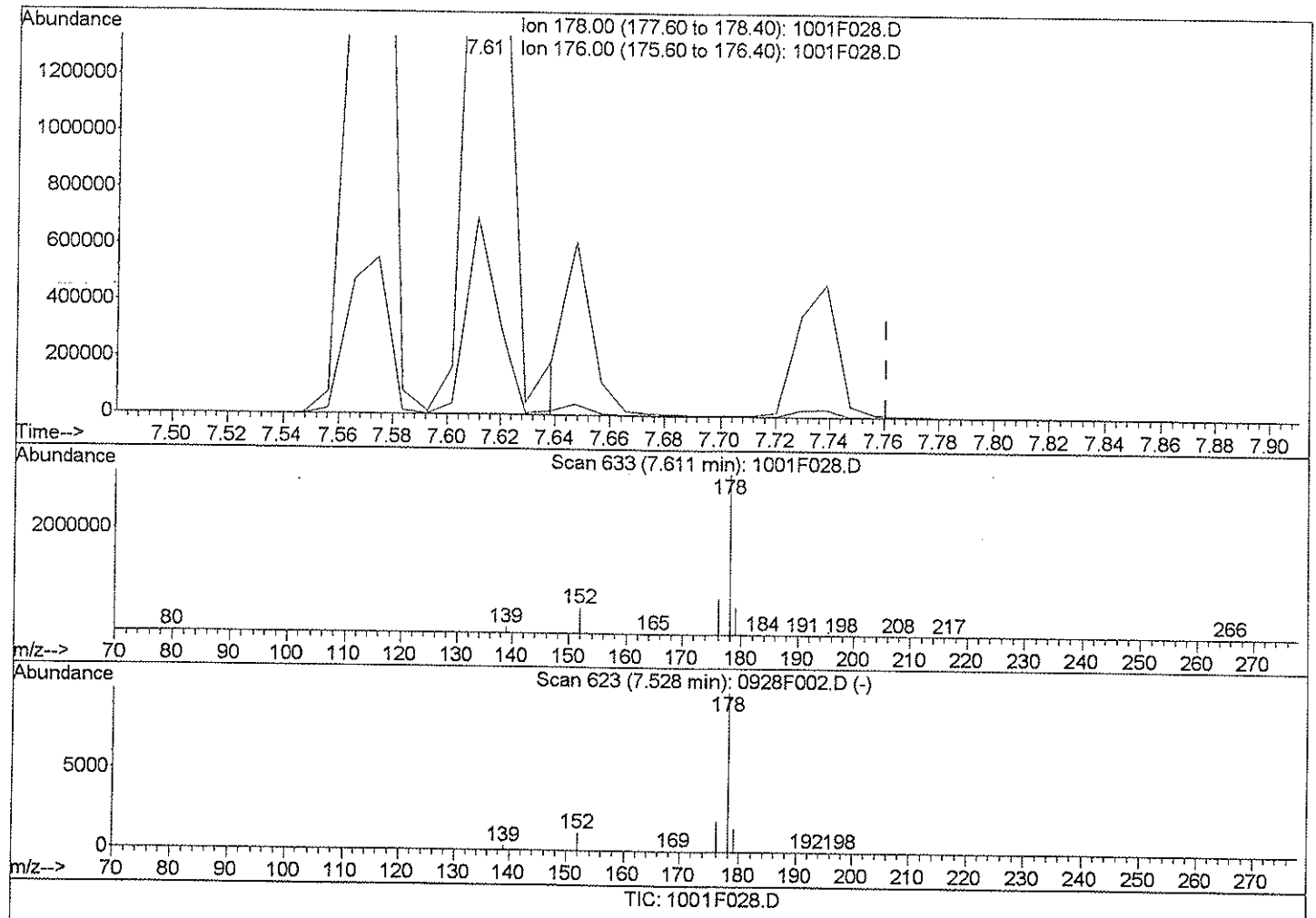
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F028.D
Acq On : 1 Oct 2008 11:13 pm
Sample : SIM-PAH ICAL @2.0/3.0ug/mL | SVM27-3M
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:49 2008

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



TIC: 1001F028.D

(28) Anthracene (T)

7.61min 2206.74ng/ml

response 2862996

ion	Exp%	Act%
178.00	100	100
176.00	19.70	22.49
0.00	0.00	0.00
0.00	0.00	0.00

1001F028.D 1001ALK.M Thu Oct 02 05:49:53 2008

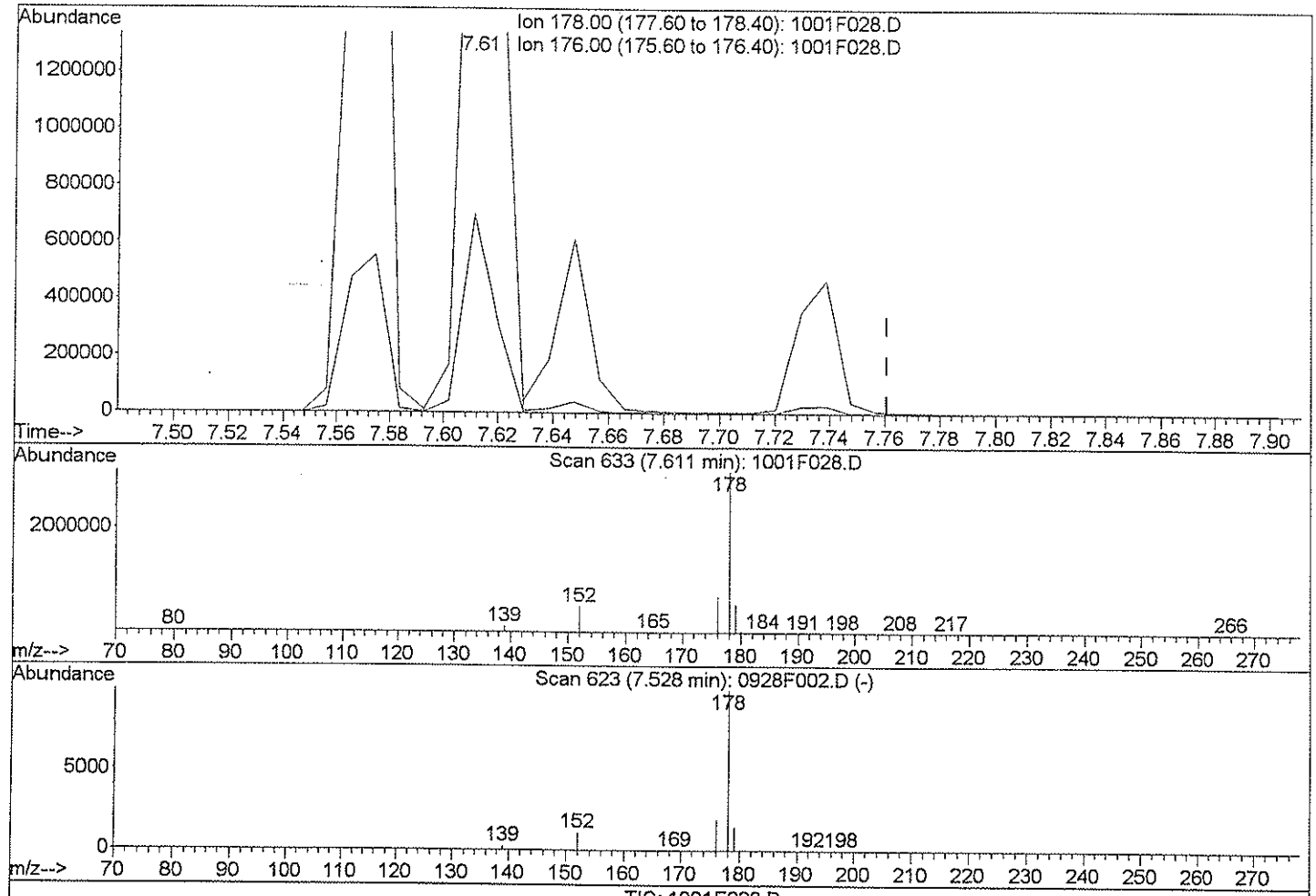
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F028.D
Acq On : 1 Oct 2008 11:13 pm
Sample : SIM-PAH ICAL @2.0/3.0ug/mL | SVM27-3M
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:49 2008

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



TIC: 1001F028.D

(28) Anthracene (T)

7.61min 2132.72ng/ml m

response 2766962

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	22.48
0.00	0.00	0.00
0.00	0.00	0.00

OI 10/2/08

10/3/08

1001F028.D 1001ALK.M Thu Oct 02 05:49:57 2008

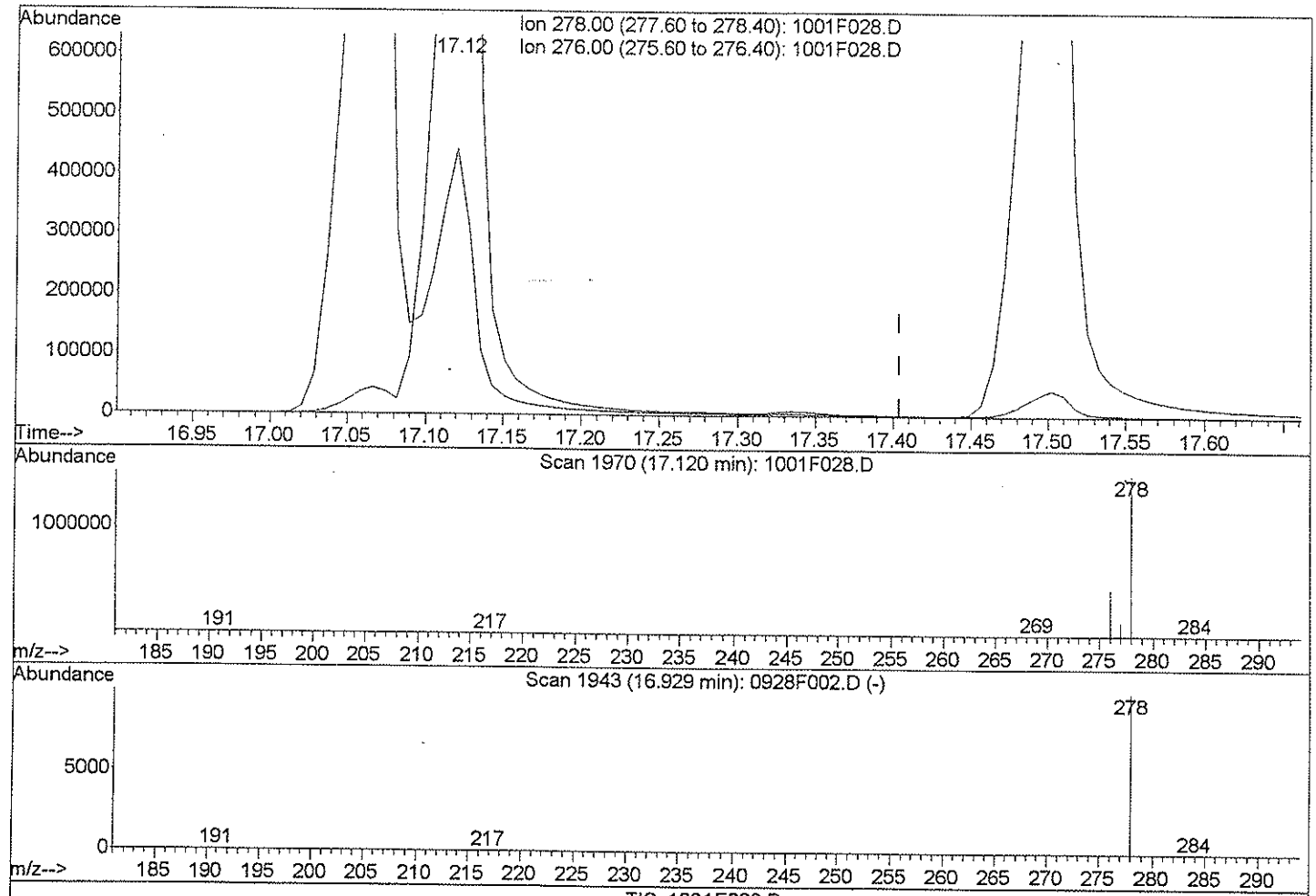
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F028.D
Acq On : 1 Oct 2008 11:13 pm
Sample : SIM-PAH ICAL @2.0/3.0ug/mL | SVM27-3M
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:49 2008

Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration



TIC: 1001F028.D

(56) Dibenz(a,h)anthracene (T)

17.12min 2269.21ng/ml

response 2929515

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	29.23
0.00	0.00	0.00
0.00	0.00	0.00

1001F028.D 1001ALK.M Thu Oct 02 05:50:08 2008

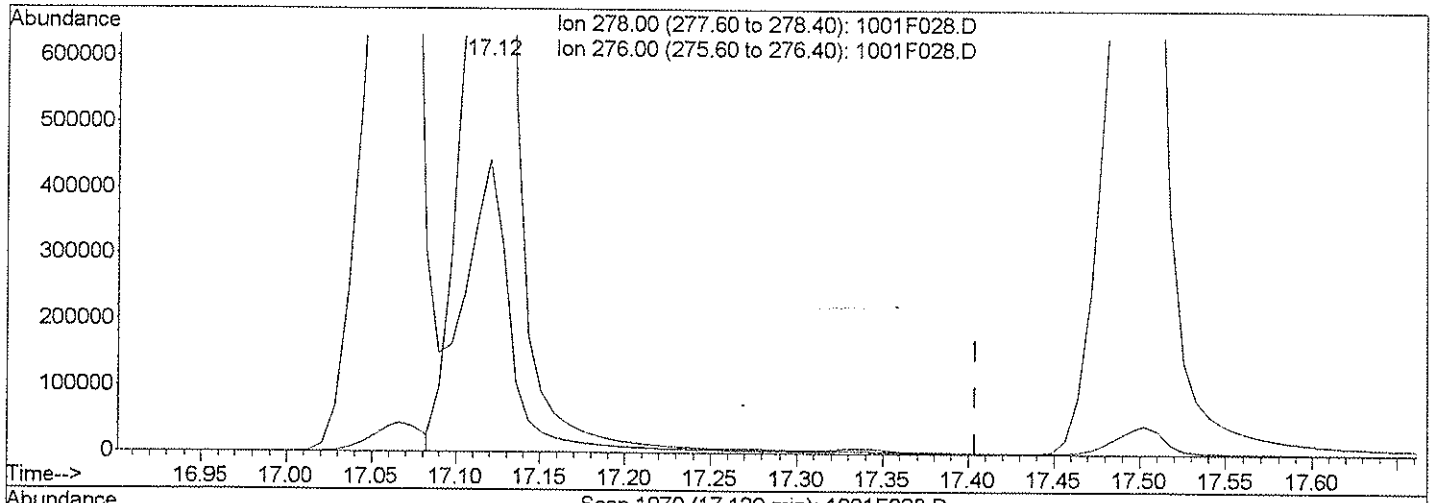
Quantitation Report (Qedit)

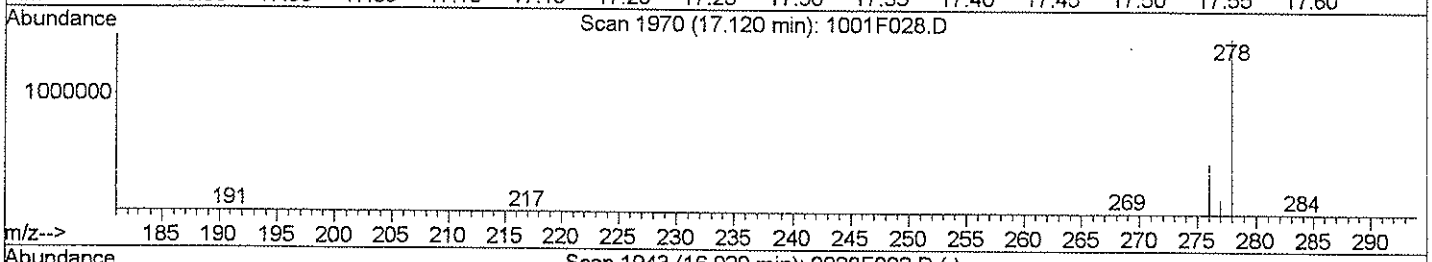
Data File : J:\MS11\DATA\100108\1001F028.D
Acq On : 1 Oct 2008 11:13 pm
Sample : SIM-PAH ICAL @2.0/3.0ug/mL | SVM27-3M
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 5:50 2008

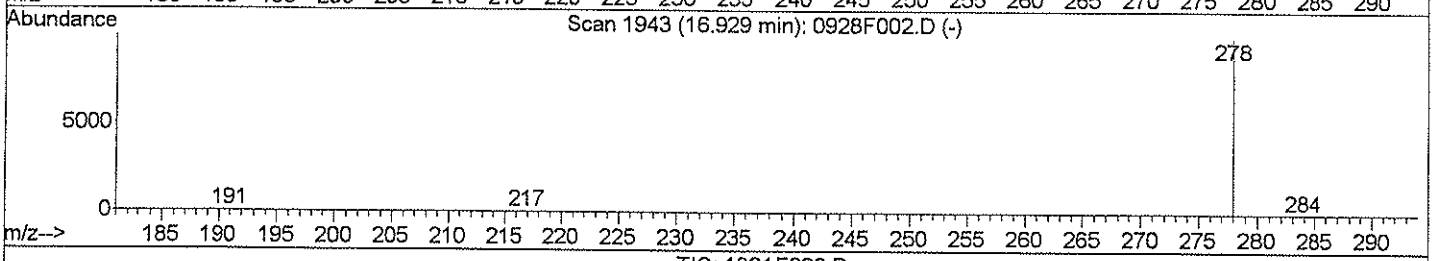
Vial: 13
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:42:54 2008
Response via : Multiple Level Calibration







TIC: 1001F028.D

(56) Dibenz(a,h)anthracene (T)

17.12min 2196.11ng/ml m

response 2835148

Ion	Exp%	Act%
278.00	100	100
276.00	29.70	29.24
0.00	0.00	0.00
0.00	0.00	0.00

OT 10/2/08

10/3/08

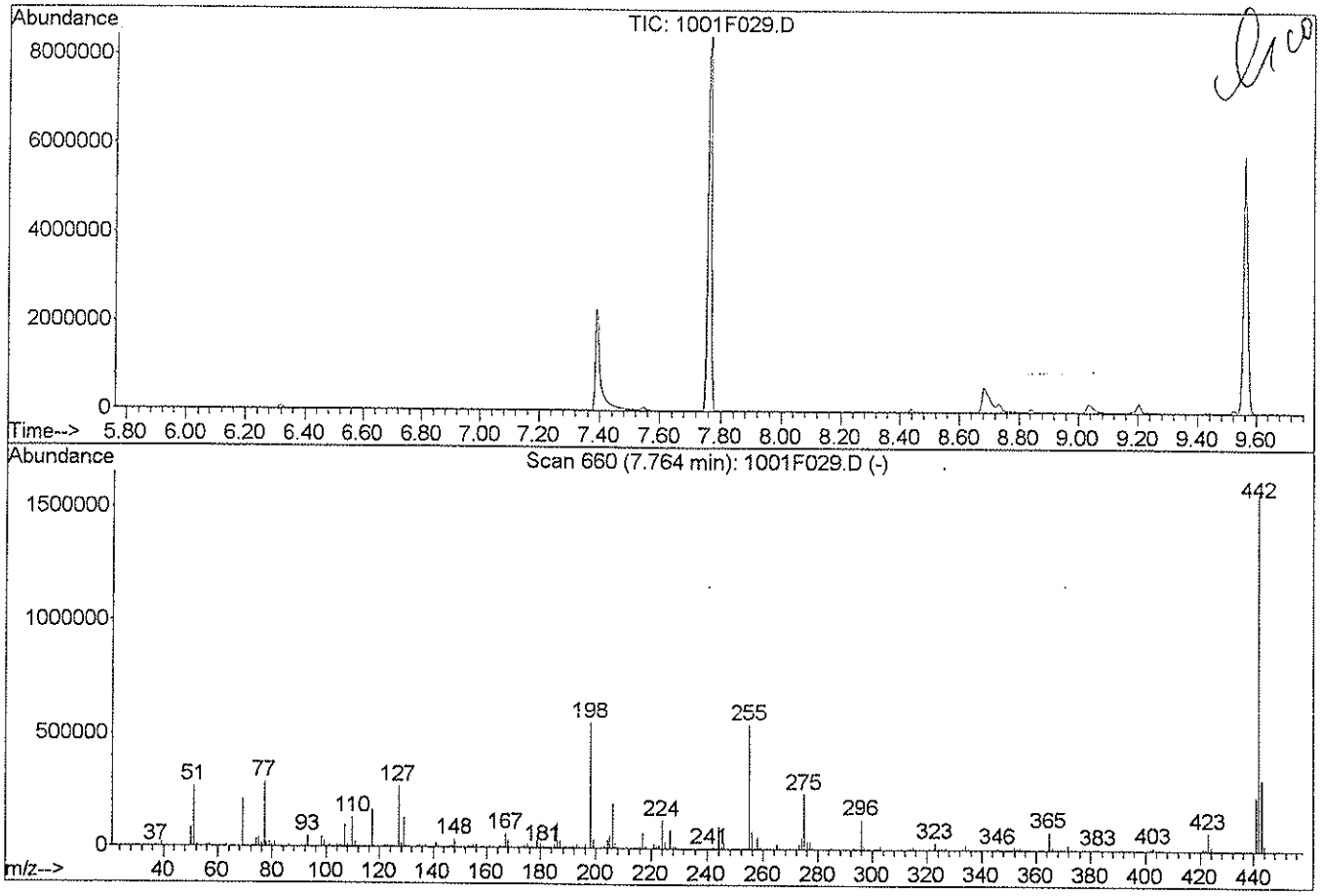
1001F028.D 1001ALK.M Thu Oct 02 05:50:12 2008

DFTPP

Data File : J:\MS11\DATA\100108\1001F029.D
Acq On : 1 Oct 2008 11:39 pm
Sample : DFTPP @ 3.0ug/mL | SVM27-5G
Misc :
MS Integration Params: RTEINT.P
Method : J:\MS11\METHODS\SIM\DFTPPPAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS

Vial: 2
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

10/2/18



Spectrum Information: Scan 660

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	48.0	267008	PASS
68	69	0.00	2	0.0	0	PASS
70	69	0.00	2	1.0	2175	PASS
127	198	10	80	48.2	268352	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	35.3	556352	PASS
199	198	5	9	6.9	38512	PASS
275	198	10	60	44.0	244800	PASS
365	442	1	50	5.1	81040	PASS
441	443	0.01	100	74.7	236160	PASS
442	442	30	100	100.0	1574912	PASS
443	442	15	24	20.1	316096	PASS

1001F029.D DFTPPPAH.M Thu Oct 02 08:23:42 2008

10/3/18

DFTPP @ 3.0ug/mL | SVM27-5G
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
35.00	101	51.10	267008	66.90	564	80.00	15244
36.10	758	52.10	12613	69.00	210560	81.00	21648
37.10	1918	55.00	853	70.00	2175	82.00	4519
38.10	4238	56.00	7146	70.90	601	83.00	3776
39.10	20288	57.00	11679	73.10	3040	83.95	396
40.20	1131	58.20	681	74.00	34256	85.00	4284
40.95	395	61.00	2229	75.00	43080	86.00	7311
42.90	511	62.10	3625	76.10	18168	87.00	3164
44.05	1824	63.00	10090	77.10	284288	88.00	889
49.00	2579	64.00	1639	78.00	20768	89.10	614
50.10	83792	65.00	3786	79.00	21944	91.00	5087

Scan 660 (7.764 min): 1001F029.D
DFTPP @ 3.0ug/mL | SVM27-5G
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
92.00	5595	105.00	8779	117.90	10407	129.90	12178
93.00	48240	107.00	98504	119.10	1009	131.00	3521
94.00	3306	108.00	12198	120.10	982	131.90	1207
94.90	378	109.00	3080	121.00	639	132.90	634
96.00	1808	110.00	132096	122.00	7658	134.00	4782
98.00	43968	111.00	22904	123.00	11555	135.00	12683
99.00	24600	112.00	3046	124.00	5635	136.00	6158
99.90	2498	113.00	1646	125.00	3943	137.00	8419
101.00	12404	115.00	580	127.00	268352	138.10	1820
103.00	3673	116.10	5947	128.00	19824	138.90	1000
104.00	8564	117.00	165760	129.00	131392	140.00	1587

Scan 660 (7.764 min): 1001F029.D
DFTPP @ 3.0ug/mL | SVM27-5G
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
140.90	21568	151.20	1150	162.00	2849	173.00	5364
142.00	5986	151.50	1379	163.00	573	173.90	9759
143.00	3988	152.90	5936	163.90	1029	175.00	17544
144.10	1574	154.10	4561	165.00	10282	176.00	3524
144.90	1100	154.90	11996	166.00	5791	177.00	7080
146.00	5581	156.00	15939	167.00	62928	177.80	2788
147.00	11041	156.90	1482	167.90	32776	178.90	35912
148.00	36536	157.90	3861	169.00	4479	180.00	19096
148.90	7036	158.90	2914	169.90	1074	181.00	9128
150.00	1294	160.00	6436	171.00	2358	182.00	1648
150.70	1793	161.00	9467	171.90	4484	182.70	761

Scan 660 (7.764 min): 1001F029.D
DFTPP @ 3.0ug/mL | SVM27-5G
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
183.10	586	194.00	3365	206.90	24112	219.90	1325
184.00	2645	195.00	1041	207.90	10599	221.00	21776
185.00	16267	195.90	18080	208.80	2880	221.90	9585
186.00	110576	197.90	556352	210.00	4316	222.90	14591
187.00	34936	198.90	38512	211.00	9288	224.00	125544
188.00	3790	199.90	3734	212.80	1067	224.90	30800
189.00	8780	201.20	2471	214.80	3083	226.00	4071
190.00	2046	203.00	8358	215.90	7758	226.90	82720
190.90	3871	204.00	35720	216.90	70864	227.90	11060
191.90	12125	204.90	55072	217.90	8431	228.90	14309
193.00	13863	206.00	199232	218.80	589	229.90	2200

10/21/16

10/3/16

DFTPP @ 3.0ug/mL | SVM27-5G
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
230.90	4643	242.00	9711	254.90	550400	267.55	249
231.80	1013	244.00	100576	255.90	77416	268.10	552
232.90	2021	245.00	14854	256.90	6832	269.80	1169
233.90	6514	245.90	28768	257.90	51120	271.00	1682
234.90	5064	246.90	6368	259.00	9011	272.00	2413
235.90	5021	247.80	1425	260.00	897	272.90	19584
237.00	5941	249.00	2897	260.90	955	273.90	50840
237.80	913	249.90	870	263.20	640	274.90	244800
238.90	3188	250.90	1022	263.80	2350	275.90	35760
239.90	2333	252.00	1223	264.90	22736	276.90	33608
241.00	3848	252.90	3904	265.75	3070	277.90	6508

Scan 660 (7.764 min): 1001F029.D
DFTPP @ 3.0ug/mL | SVM27-5G
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
278.80	648	292.90	7524	308.80	1287	324.90	669
281.90	1238	293.90	1383	310.00	1647	325.80	1115
282.90	4031	295.90	133248	312.90	1324	326.80	7793
284.00	2195	296.90	16704	313.80	6111	328.00	4165
284.90	5552	297.90	1335	314.90	13404	328.90	538
286.00	835	298.90	524	315.90	5784	331.90	2272
287.90	533	300.90	1196	317.00	1415	332.90	3724
289.00	1082	301.80	2791	320.90	3549	333.90	24200
290.00	976	302.90	13375	321.80	2208	335.00	6037
291.00	1177	303.90	3441	322.90	31920	335.80	817
291.90	1671	307.90	1893	324.00	6133	338.90	593

Scan 660 (7.764 min): 1001F029.D
DFTPP @ 3.0ug/mL | SVM27-5G
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
339.90	696	363.80	617	383.90	1424	415.00	525
341.00	4399	364.80	81040	384.90	764	420.90	12538
342.10	1359	365.90	11828	390.00	2654	421.90	9485
345.90	9586	367.10	887	391.00	2246	422.90	82424
346.70	1786	369.80	1041	392.00	1582	423.90	17144
349.80	1089	370.90	4234	401.00	1792	440.90	236160
351.90	13770	371.90	21320	401.90	9450	441.90	1574912
352.90	7890	372.90	6032	402.90	14481	442.90	316096
353.90	11668	374.00	676	403.80	5881	443.90	25960
354.90	2375	376.90	710	404.80	1281	444.90	1794
358.90	1259	382.80	5630	409.90	730		

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F030.D
Acq On : 2 Oct 2008 12:06 am
Sample : SIM-PAH ICV @0.4ug/mL | SVM27-13F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 02 08:09:10 2008

Vial: 14
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:55:26 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.90	136	177815	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.32	164	98602	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.55	188	166129	200.00	ng/ml	0.00
37) Chrysene-d12	10.27	240	204834	200.00	ng/ml	0.00
49) Perylene-d12	13.87	264	206335	200.00	ng/ml	0.00
System Monitoring Compounds						
15) Fluorene-d10	6.75	176	277888	398.97	ng/ml	0.00
Spiked Amount 200.000			Recovery =	199.49%		
20) 2,4,6 Tribromophenol	6.98	330	41900	381.47	ng/ml	0.00
Spiked Amount 375.000			Recovery =	101.73%		
36) Fluoranthene-d10	8.54	212	481653	407.91	ng/ml	0.00
Spiked Amount 200.000			Recovery =	203.96%		
42) Terphenyl-d14	8.90	244	407902	383.13	ng/ml	0.00
Spiked Amount 200.000			Recovery =	191.57%		
Target Compounds						Qvalue
2) Naphthalene	4.92	128	399413	399.38	ng/ml	98
3) 2-Methylnaphthalene	5.47	142	284893	415.53	ng/ml	94
4) 1-Methylnaphthalene	5.55	142	276712	455.85	ng/ml	92
5) Biphenyl	5.84	154	356950	432.54	ng/ml	98
6) 2,6-Dimethylnaphthalene	5.97	156	264635	434.60	ng/ml	99
11) Acenaphthylene	6.20	152	434121	435.26	ng/ml	100
12) Acenaphthene	6.34	154	255638	417.69	ng/ml	98
13) Dibenzofuran	6.49	168	385764m	443.29	ng/ml	
14) 2,3,5-Trimethylnaphthalene	6.65	170	256969	441.05	ng/ml	89
16) Fluorene	6.77	166	312641	426.81	ng/ml	96
21) Pentachlorophenol	7.41	266	162346	1512.12	ng/ml	97
23) Dibenzothiophene	7.46	184	437334	441.31	ng/ml	98
27) Phenanthrene	7.56	178	464540	434.11	ng/ml	100
28) Anthracene	7.61	178	444571m	419.21	ng/ml	
29) Carbazole	7.75	167	383102	442.73	ng/ml	99
30) 1-Methylphenanthrene	8.07	192	346385	432.67	ng/ml	91
35) Fluoranthene	8.56	202	536037	438.40	ng/ml	99
38) Pyrene	8.76	202	538334	401.71	ng/ml	99
43) Benz(a)anthracene	10.25	228	510605	402.30	ng/ml	99
44) Chrysene	10.32	228	498552	406.05	ng/ml	100
50) Benzo(b)fluoranthene	12.66	252	547597	412.14	ng/ml	99
51) Benzo(k)fluoranthene	12.74	252	558824	437.47	ng/ml	100
52) Benzo(e)pyrene	13.49	252	518960	431.49	ng/ml	99
53) Benzo(a)pyrene	13.67	252	481750	442.14	ng/ml	100
54) Perylene	13.96	252	478299	435.57	ng/ml	99

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

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F030.D
Acq On : 2 Oct 2008 12:06 am
Sample : SIM-PAH ICV @0.4ug/mL | SVM27-13F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 02 08:09:10 2008

Vial: 14
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:55:26 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

10/2/18

	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	17.05	276	396134	414.10	ng/ml	99
56)	Dibenz(a,h)anthracene	17.11	278	432728	434.62	ng/ml	95
57)	Benzo(g,h,i)perylene	17.49	276	469932	428.00	ng/ml	100

10/3/18

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

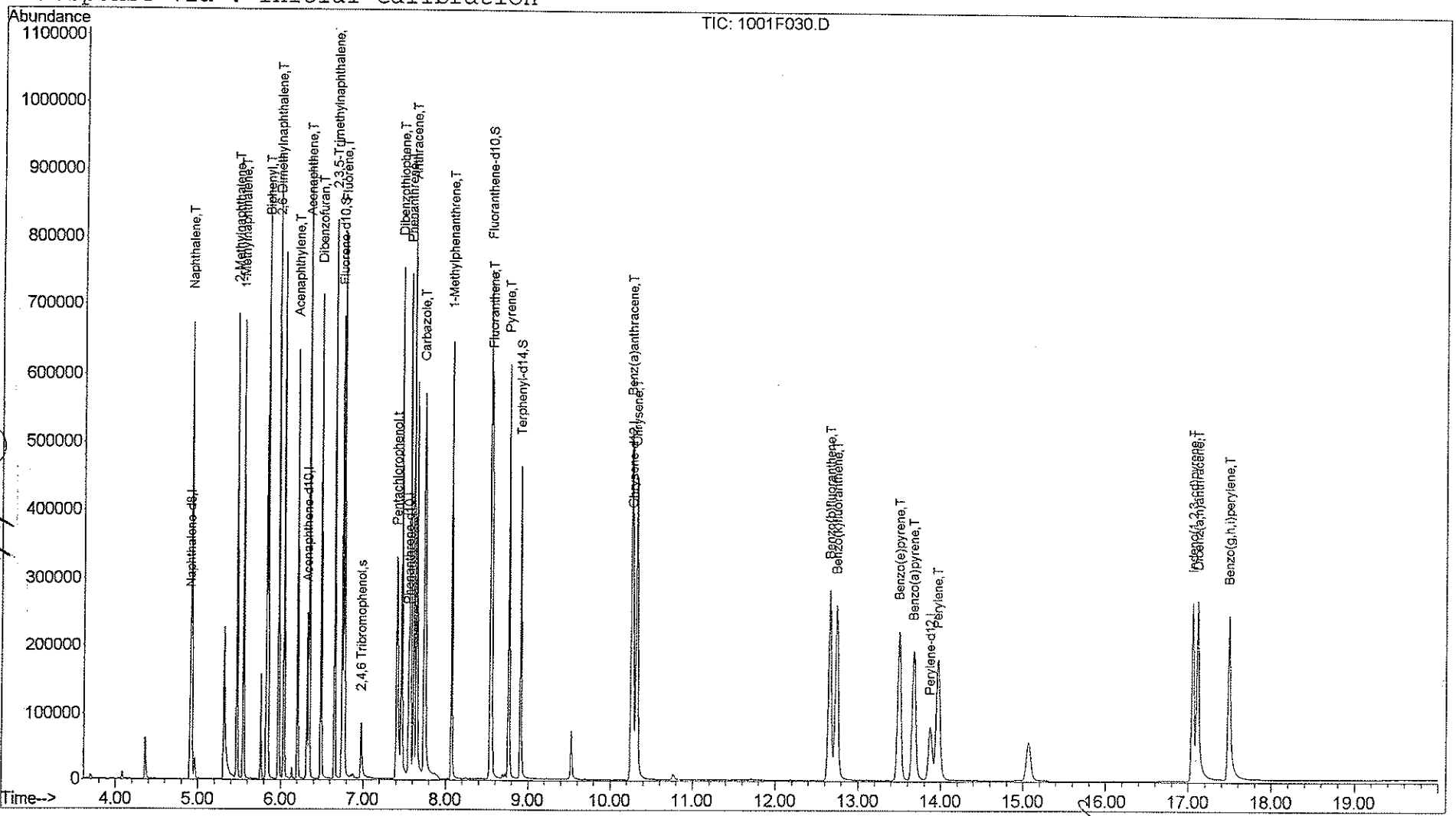
Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\100108\1001F030.D
Acq On : 2 Oct 2008 12:06 am
Sample : SIM-PAH ICV @0.4ug/mL | SVM27-13F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 8:09 2008

Vial: 14
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:55:26 2008
Response via : Initial Calibration



686

1001F030.D 1001ALK.M Thu Oct 02 08:09:55 2008

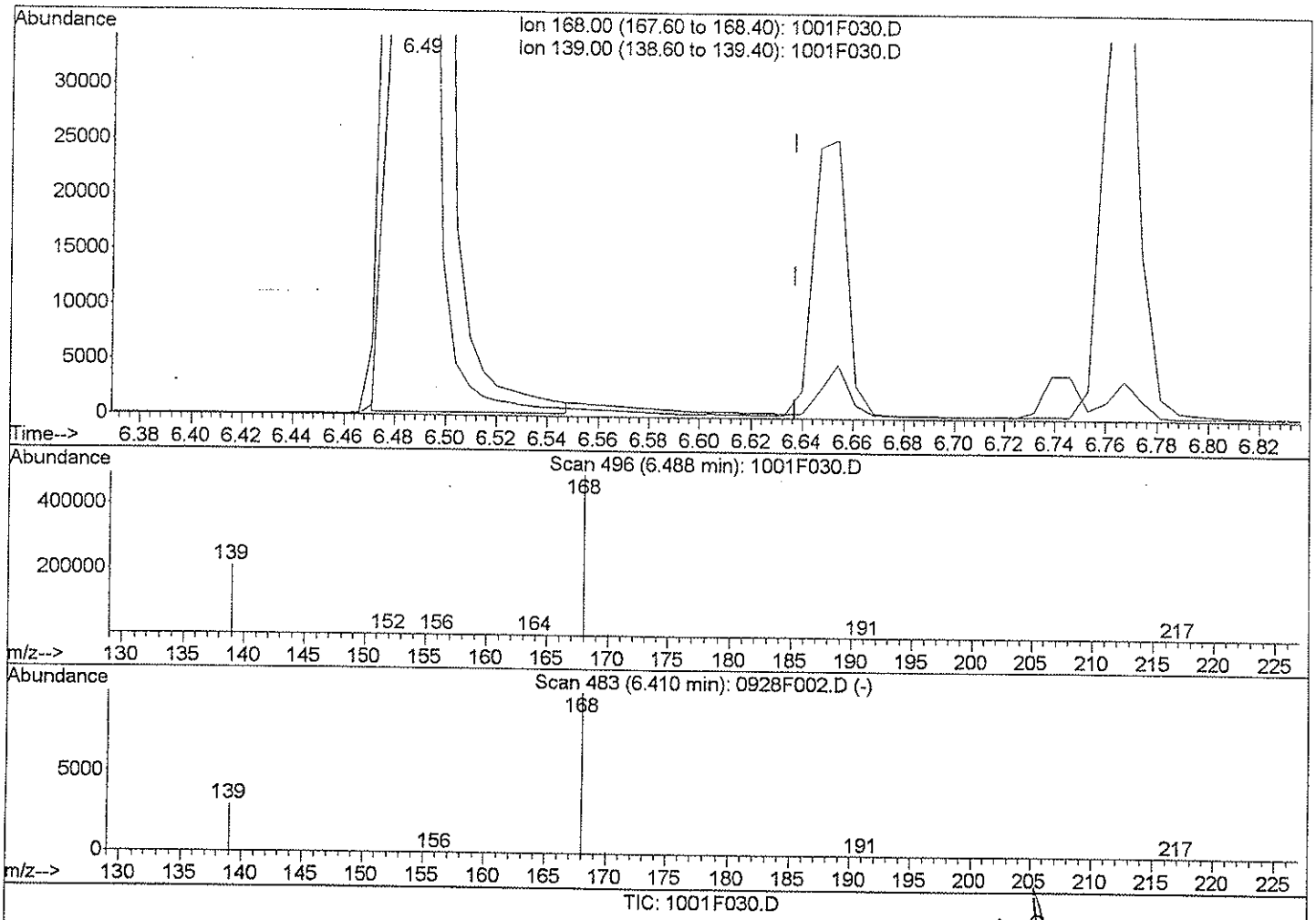
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F030.D
Acq On : 2 Oct 2008 12:06 am
Sample : SIM-PAH ICV @0.4ug/mL | SVM27-13F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 8:09 2008

Vial: 14
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:55:26 2008
Response via : Multiple Level Calibration



(13) Dibenzofuran (T)

6.49min 443.29ng/ml m

response 385764

Ion	Exp%	Act%
168.00	100	100
139.00	51.00	42.39
0.00	0.00	0.00
0.00	0.00	0.00

over integrated in original

10/31/08

10/31/08

1001F030.D 1001ALK.M Thu Oct 02 08:09:26 2008

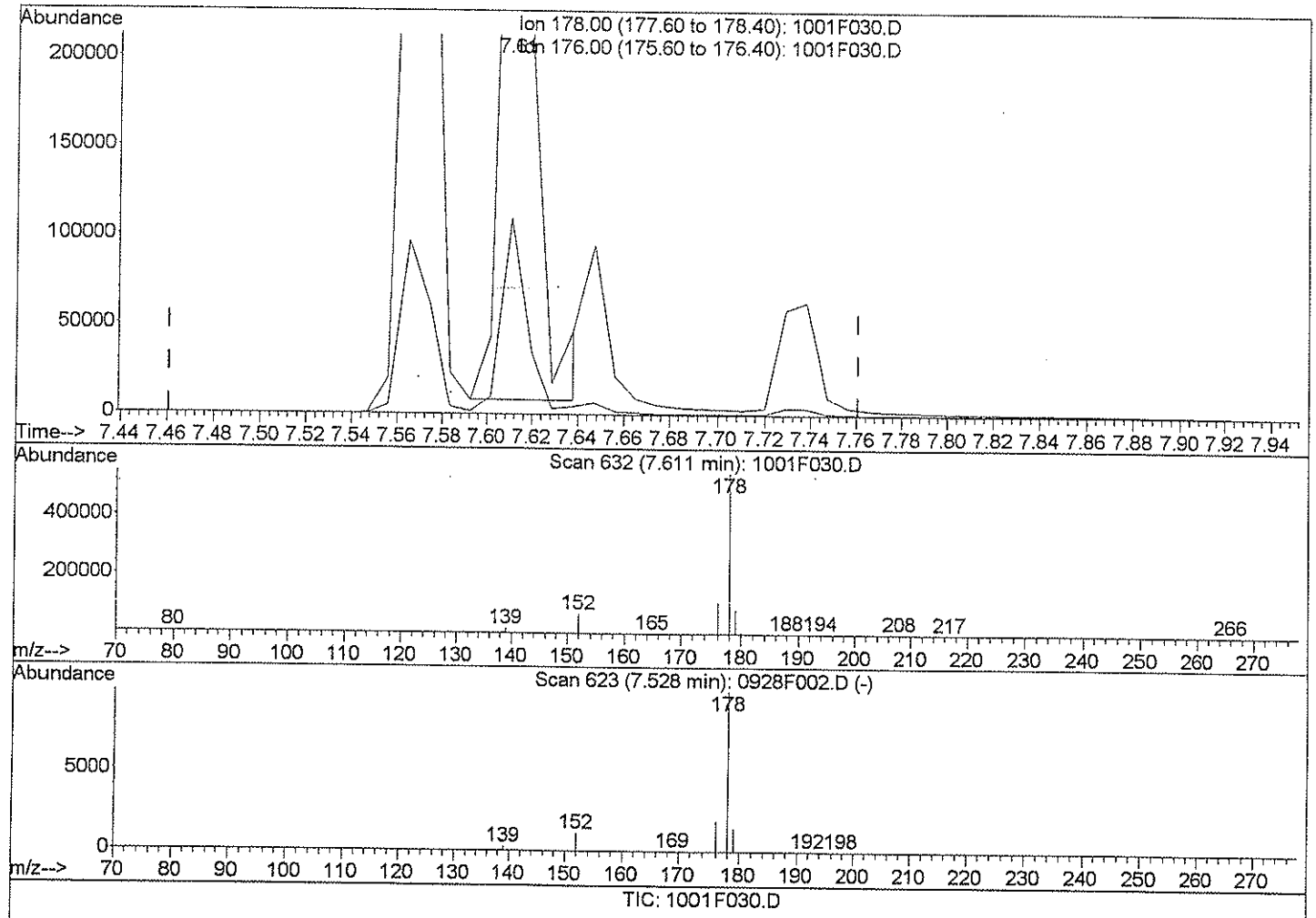
Quantitation Report (Qedit)

Data File : J:\MS11\DATA\100108\1001F030.D
Acq On : 2 Oct 2008 12:06 am
Sample : SIM-PAH ICV @0.4ug/mL | SVM27-13F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 8:09 2008

Vial: 14
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:55:26 2008
Response via : Multiple Level Calibration



(28) Anthracene (T)

7.61min 423.44ng/ml

response 449052

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	19.90
0.00	0.00	0.00
0.00	0.00	0.00

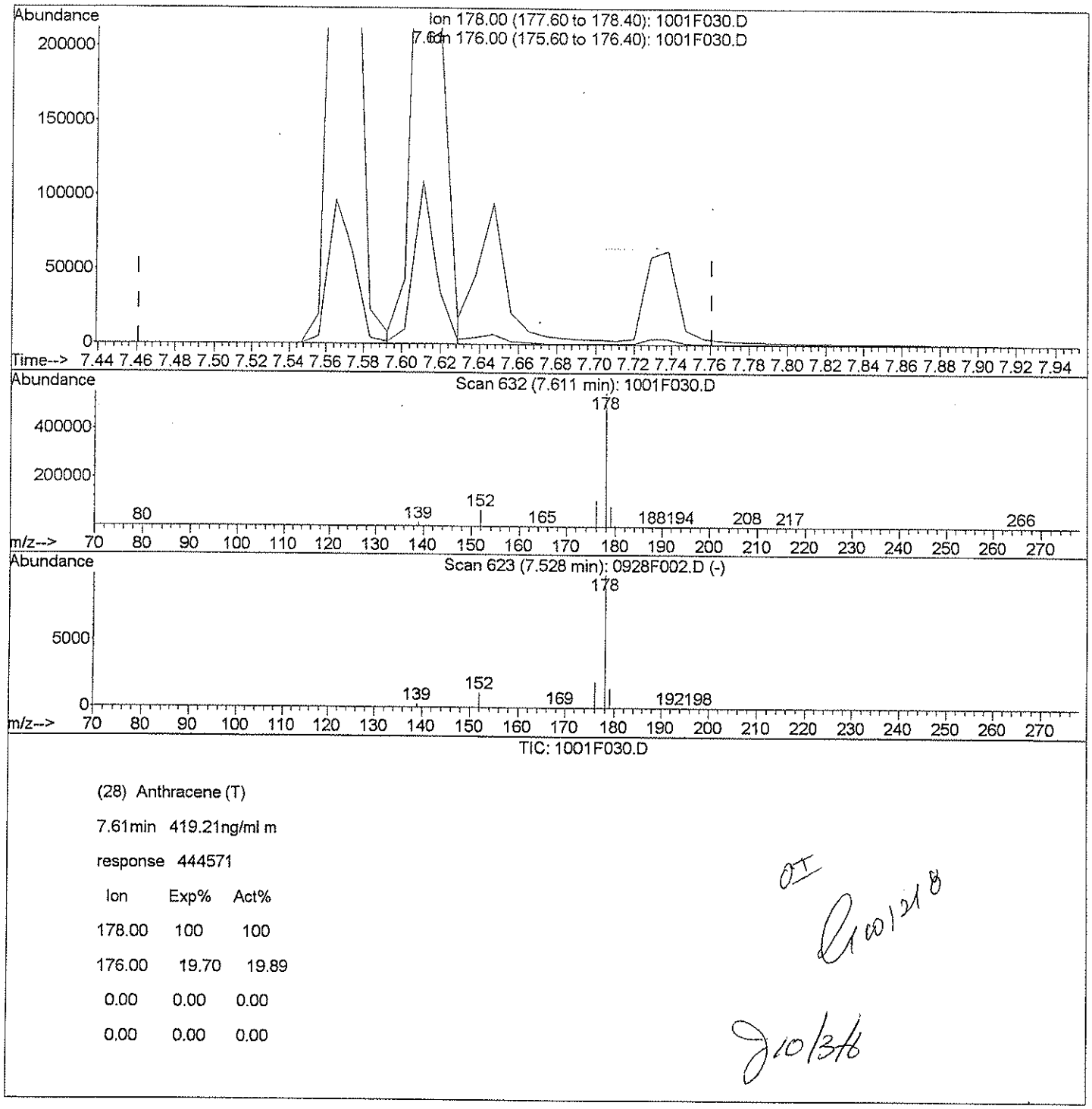
1001F030.D 1001ALK.M Thu Oct 02 08:09:35 2008

Data File : J:\MS11\DATA\100108\1001F030.D
Acq On : 2 Oct 2008 12:06 am
Sample : SIM-PAH ICV @0.4ug/mL | SVM27-13F
Misc :
MS Integration Params: RTEINT.P
Quant Time: Oct 2 8:09 2008

Vial: 14
Operator: LWeiskopf
Inst : MS11
Multiplr: 1.00

Quant Results File: temp.res

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Oct 02 05:55:26 2008
Response via : Multiple Level Calibration



(28) Anthracene (T)

7.61min 419.21ng/ml m

response 444571

Ion	Exp%	Act%
178.00	100	100
176.00	19.70	19.89
0.00	0.00	0.00
0.00	0.00	0.00

OT 10/21/8

10/3/8

1001F030.D 1001ALK.M Thu Oct 02 08:09:40 2008

Client: GeoEngineers, Inc.
Project: Dakota Creek Confirmation Samples/5147-006-04

Service Request: K0810000
Date Analyzed: 10/30/2008

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270C SIM

Calibration Date: 10/01/2008
Calibration ID: CAL7814
Analysis Lot: KWG0811762
Units: ng/ml

File ID: J:\MS11\DATA\103008\1030F003.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	380	0.01	1.12	1.07	-5	NA	± 20 %	AverageRF
2-Methylnaphthalene	400	410	0.01	0.771	0.795	3	NA	± 20 %	AverageRF
Acenaphthylene	400	390	0.01	2.02	1.99	-2	NA	± 20 %	AverageRF
Acenaphthene	400	390	0.01	1.24	1.21	-3	NA	± 20 %	AverageRF
Fluorene	400	410	0.01	1.49	1.53	3	NA	± 20 %	AverageRF
Dibenzofuran	400	410	0.01	1.77	1.79	2	NA	± 20 %	AverageRF
Phenanthrene	400	390	0.01	1.29	1.27	-1	NA	± 20 %	AverageRF
Anthracene	400	390	0.01	1.28	1.25	-2	NA	± 20 %	AverageRF
Fluoranthene	400	400	0.01	1.47	1.47	0	NA	± 20 %	AverageRF
Pyrene	400	390	0.01	1.31	1.28	-2	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	400	360	0.01	1.29	1.16	-10	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	400	380	0.01	1.24	1.18	-4	NA	± 20 %	AverageRF
Benz(a)anthracene	400	380	0.01	1.24	1.19	-4	NA	± 20 %	AverageRF
Chrysene	400	410	0.01	1.20	1.22	2	NA	± 20 %	AverageRF
Benzo(a)pyrene	400	400	0.01	1.06	1.05	-1	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	410	0.01	0.927	0.960	4	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	400	460	0.01	0.965	1.11	15	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	400	410	0.01	1.06	1.10	3	NA	± 20 %	AverageRF
Fluorene-d10	400	400	0.01	1.41	1.42	1	NA	± 20 %	AverageRF
Fluoranthene-d10	400	400	0.01	1.42	1.42	0	NA	± 20 %	AverageRF
Terphenyl-d14	400	390	0.01	1.04	1.01	-3	NA	± 20 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound ‡ CCC Compound

Exception Report

Data File: J:\MS11\DATA\103008\1030F003.D
Lab ID: KWG0811762-2
RunType: CCV
Matrix: WATER

Date Acquired: 10/30/2008 15:00
Date Quantitated: 11/03/2008 10:51
Batch ID: KWG0811762
Analysis Method: 8270C SIM
MethodJoinID: MJ139

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Average RSD	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: 11/3/08

Secondary Review: 11-3-8

Quantitation Report

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270C SIM	**Collect Date:**		**Receive Date:**	11/03/2008

Analysis Lot:	KWG0811762	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270C SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS11\METHODS\SIM\1001ALK.M	**Calibration ID:**	CAL7814
Title:			
Tune Ref:	J:\MS11\DATA\103008\1030F001.D	**Method ID:**	MJ139
MB Ref:		**Quant based on Method**	

Data File:	J:\MS11\DATA\103008\1030F003.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 15:00	**Quant Date:**	11/03/2008 10:51	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0811762-2			**Soln Conc. Units:**	ng/ml

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.77	-0.14	136	205758	200.00	OK
2	Acenaphthene-d10	6.19	-0.13	164	123358	200.00	OK
3	Phenanthrene-d10	7.42	-0.13	188	220161	200.00	OK
4	Chrysene-d12	10.05	-0.22	240	259101	200.00	OK
5	Perylene-d12	13.45	-0.42	264	284532	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
2	Fluorene-d10	6.62			176	351259	403.10		10-128	NA
2	2,4,6-Tribromophenol	6.86			330	54570	397.12		12-152	NA
3	Fluoranthene-d10	8.40			212	624660	399.19		29-121	NA
4	Terphenyl-d14	8.76			244	522806	388.21		24-141	NA

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.78			128	439096	379.43			
1	2-Methylnaphthalene	5.34			142	327083	412.28			
1	1-Methylnaphthalene	5.42			142	292243	416.06			
1	Biphenyl	5.71			154	374969	392.67			
1	2,6-Dimethylnaphthalene	5.84			156	286792	407.02			
2	Acenaphthylene	6.07			152	491097	393.57			
2	Acenaphthene	6.21			154	298241	389.50			
2	Dibenzofuran	6.36			168	442826	406.74			
2	2,3,5-Trimethylnaphthalene	6.52			170	266396	365.47			
2	Fluorene	6.64			166	377764	412.21			
2	Pentachlorophenol	7.29			266	137739m	1,025			
3	Dibenzothiophene	7.33			184	515191	392.28			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
c: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS11\DATA\103008\1030F003.D			**Instrument:**	MS11
Acqu Date:	10/30/2008 15:00	**Quant Date:**	11/03/2008 10:51	**Vial:**	2
Run Type:	CCV			**Dilution:**	1.0
Lab ID:	KWG0811762-2			**Soln Conc. Units:**	ng/ml

Target Compounds **Final Conc. Units:**

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	QuantMass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Phenanthrene	7.44			178	558917	394.12			
3	Anthracene	7.49			178	550900	391.99			
3	Carbazole	7.63			167	478207	417.01			
3	1-Methylphenanthrene	7.94			192	430815	406.06			
3	Fluoranthene	8.42			202	648675	400.32			
4	Pyrene	8.62			202	665865	392.81			
4	Benz(a)anthracene	10.03			228	615646	383.47			
4	Chrysene	10.09			228	631616	406.68			
5	Benzo(b)fluoranthene	12.31			252	661579	361.08			
5	Benzo(k)fluoranthene	12.38			252	673373	382.27			
5	Benzo(e)pyrene	13.09			252	631320	380.65			
5	Benzo(a)pyrene	13.27			252	595982	396.66			
5	Perylene	13.54			252	589262	389.15			
5	Indeno(1,2,3-cd)pyrene	16.84			276	546289	414.12			
5	Dibenz(a,h)anthracene	16.89			278	631542	459.98			
5	Benzo(g,h,i)perylene	17.26			276	624422	412.41			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F003.D Vial: 2
Acq On : 30 Oct 2008 3:00 pm Operator: LWeiskopf
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-35J Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 03 10:51:19 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:19:34 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.77	136	205758	200.00	ng/ml	0.00
10) Acenaphthene-d10	6.19	164	123358	200.00	ng/ml	0.00
22) Phenanthrene-d10	7.42	188	220161	200.00	ng/ml	0.00
37) Chrysene-d12	10.05	240	259101	200.00	ng/ml	0.00
49) Perylene-d12	13.45	264	284532	200.00	ng/ml	0.00
System Monitoring Compounds						
15) Fluorene-d10	6.62	176	351259	403.10	ng/ml	0.00
Spiked Amount 200.000			Recovery = 201.55%			
20) 2,4,6 Tribromophenol	6.86	330	54570	397.12	ng/ml	0.00
Spiked Amount 375.000			Recovery = 105.90%			
36) Fluoranthene-d10	8.40	212	624660	399.19	ng/ml	0.00
Spiked Amount 200.000			Recovery = 199.60%			
42) Terphenyl-d14	8.76	244	522806	388.21	ng/ml	0.00
Spiked Amount 200.000			Recovery = 194.10%			
Target Compounds						Qvalue
2) Naphthalene	4.78	128	439096	379.43	ng/ml	100
3) 2-Methylnaphthalene	5.34	142	327083	412.28	ng/ml	98
4) 1-Methylnaphthalene	5.42	142	292243	416.06	ng/ml	94
5) Biphenyl	5.71	154	374969	392.67	ng/ml	97
6) 2,6-Dimethylnaphthalene	5.84	156	286792	407.02	ng/ml	95
11) Acenaphthylene	6.07	152	491097	393.57	ng/ml	99
12) Acenaphthene	6.21	154	298241	389.50	ng/ml	88
13) Dibenzofuran	6.36	168	442826	406.74	ng/ml	84
14) 2,3,5-Trimethylnaphthalene	6.52	170	266396	365.47	ng/ml	93
16) Fluorene	6.64	166	377764	412.21	ng/ml	100
21) Pentachlorophenol	7.29	266	137739m	1025.47	ng/ml	
23) Dibenzothiophene	7.33	184	515191	392.28	ng/ml	91
27) Phenanthrene	7.44	178	558917	394.12	ng/ml	95
28) Anthracene	7.49	178	550900	391.99	ng/ml	96
29) Carbazole	7.63	167	478207	417.01	ng/ml	97
30) 1-Methylphenanthrene	7.94	192	430815	406.06	ng/ml	92
35) Fluoranthene	8.42	202	648675	400.32	ng/ml	98
38) Pyrene	8.62	202	665865	392.81	ng/ml	97
43) Benz(a)anthracene	10.03	228	615646	383.47	ng/ml	99
44) Chrysene	10.09	228	631616	406.68	ng/ml	100
50) Benzo(b)fluoranthene	12.31	252	661579	361.08	ng/ml	99
51) Benzo(k)fluoranthene	12.38	252	673373	382.27	ng/ml	99
52) Benzo(e)pyrene	13.09	252	631320	380.65	ng/ml	99
53) Benzo(a)pyrene	13.27	252	595982	396.66	ng/ml	100
54) Perylene	13.54	252	589262	389.15	ng/ml	100

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

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F003.D Vial: 2
Acq On : 30 Oct 2008 3:00 pm Operator: LWeiskopf
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-35J Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 03 10:51:19 2008 Quant Results File: 1001ALK.RES

Quant Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:19:34 2008
Response via : Initial Calibration
DataAcq Meth : A_ALKHAT

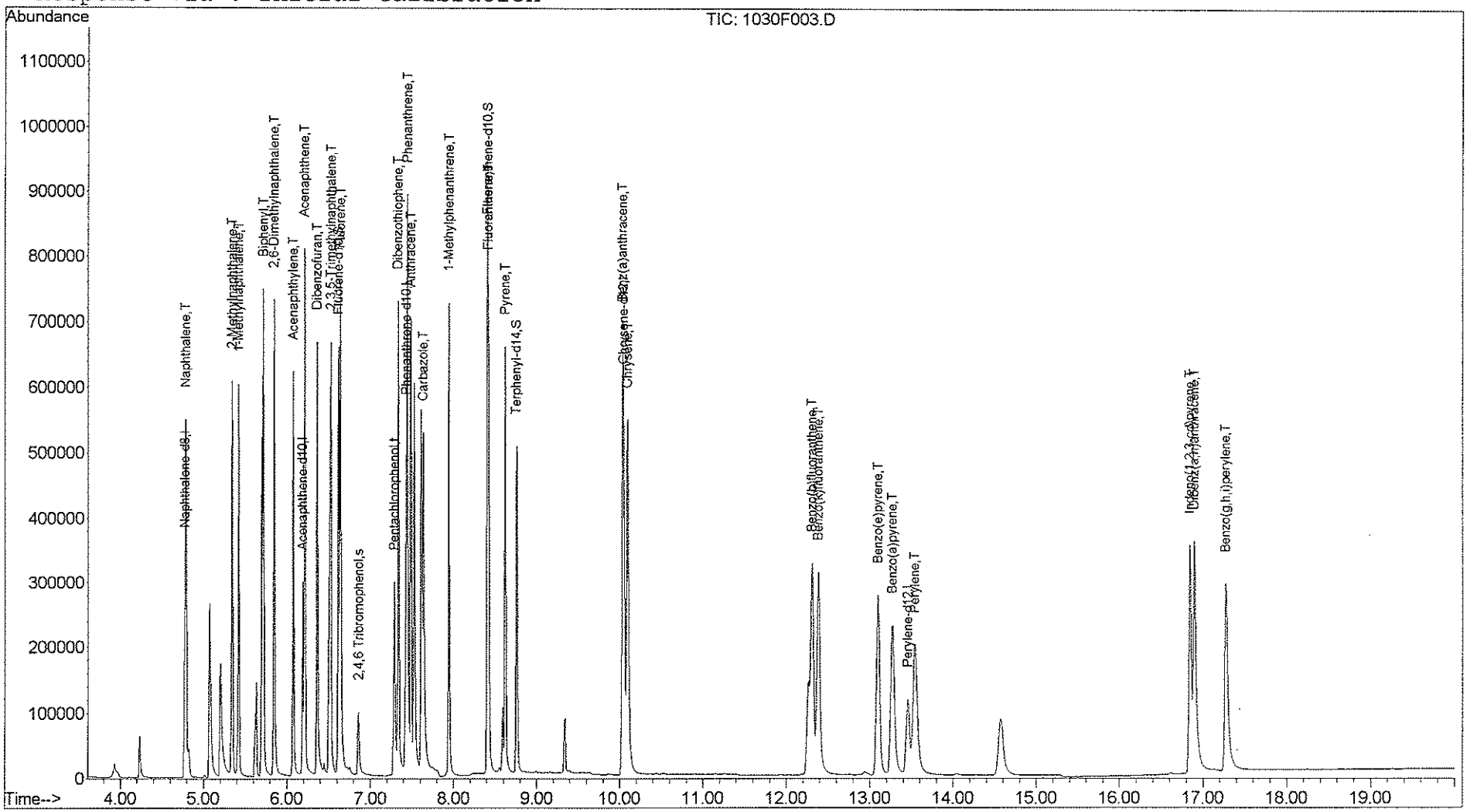
	Compound	R.T.	QIon	Response	Conc	Unit	Qvalue
55)	Indeno(1,2,3-cd)pyrene	16.84	276	546289	414.12	ng/ml	100
56)	Dibenz(a,h)anthracene	16.89	278	631542	459.98	ng/ml	91
57)	Benzo(g,h,i)perylene	17.26	276	624422	412.41	ng/ml	100

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

Quantitation Report (QT Reviewed)

Data File : J:\MS11\DATA\103008\1030F003.D Vial: 2
Acq On : 30 Oct 2008 3:00 pm Operator: LWeiskopf
Sample : SIM-PAH CCV @ 0.4ug/mL | SVM27-35J Inst : MS11
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 3 10:51 2008 Quant Results File: 1001ALK.RES

Method : J:\MS11\METHODS\SIM\1001ALK.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Mon Nov 03 10:51:47 2008
Response via : Initial Calibration



666

Organic Analysis:
Polynuclear Aromatic Hydrocarbons

Validation Package

Sample Prep and Screen Data

Injection Log

Directory: J:\MS11\DATA\103008

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1030F001.D	1.	DFTPP @ 3.0ug/mL | SVM27-37E		30 Oct 2008 14:0
2	2	1030F002.D	1.	SIM-PAH CCV @ 0.4ug/mL | SVM27-35J	NB	30 Oct 2008 14:3
3	2	1030F003.D	1.	SIM-PAH CCV @ 0.4ug/mL | SVM27-35J		30 Oct 2008 15:0
4	1	1030F004.D	1.	KWG0810676-5 MB		30 Oct 2008 15:2
5	2	1030F005.D	1.	KWG0811327-5 MB		30 Oct 2008 15:5
6	3	1030F006.D	1.	KWG0811327-3 LCS		30 Oct 2008 16:2
7	4	1030F007.D	1.	KWG0811327-4 DLCS		30 Oct 2008 16:4
8	5	1030F008.D	1.	KWG0810676-3 LCS		30 Oct 2008 17:1
9	6	1030F009.D	1.	KWG0810676-4 DLCS		30 Oct 2008 17:3
10	7	1030F010.D	1.	K0810048-003MS	Batch QC only	30 Oct 2008 18:0
11	8	1030F011.D	1.	K0810048-003DMS		30 Oct 2008 18:3
12	9	1030F012.D	1.	K0810048-003		30 Oct 2008 18:5
13	10	1030F013.D	1.	K0810000-001		30 Oct 2008 19:2
14	11	1030F014.D	1.	K0810000-002		30 Oct 2008 19:5
15	12	1030F015.D	1.	K0810048-001		30 Oct 2008 20:1
16	13	1030F016.D	1.	K0810048-002		30 Oct 2008 20:4
17	14	1030F017.D	1.	K0810048-004		30 Oct 2008 21:1
18	15	1030F018.D	1.	K0810048-005		30 Oct 2008 21:3
19	16	1030F019.D	1.	K0810048-006		30 Oct 2008 22:0
20	17	1030F020.D	1.	K0810048-007		30 Oct 2008 22:3
21	18	1030F021.D	1.	K0810048-008		30 Oct 2008 22:5
22	19	1030F022.D	1.	K0810048-009		30 Oct 2008 23:2
23	20	1030F023.D	1.	K0810048-010		30 Oct 2008 23:5
24	21	1030F024.D	1.	K0809731-006		31 Oct 2008 00:1
25	22	1030F025.D	1.	K0809731-007		31 Oct 2008 00:4
26	23	1030F026.D	1.	K0809765-012		31 Oct 2008 01:0
27	24	1030F027.D	1.	K0809765-013		31 Oct 2008 01:3
28	25	1030F028.D	1.	K0810032-006DIL 50X		31 Oct 2008 02:0
29	26	1030F029.D	1.	K0810032-005DIL 50X		31 Oct 2008 02:2
30	27	1030F030.D	1.	~~K0809598-001DIL 50X~~		31 Oct 2008 02:5
31	28	1030F031.D	1.	PR		31 Oct 2008 03:2
32	28	1030F032.D	1.	PR		31 Oct 2008 03:4

CAL 7814

~~CAL~~ CMS # 132617

11/3/08 11.3.8

files # 1, 3, 5, 6, 7, 10-14

Preparation Information

Group ID:	KWG0811327	**Prep Method:**	EPA 3541	**Prep Date:**	10/23/08 00:00
Department:	Semivoa GCMS				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K0810000-001	DCI 4-1	8270C SIM PAH_	SOIL	23.31g	10ml	
K0810000-002	DCI 4-1a	8270C SIM PAH_	SOIL	23.42g	10ml	
K0810032-005	Sediment-1	8270C SIM PAH_	SEDIMENT	40.06g	10ml	
K0810032-006	Dry Comp	8270C SIM PAH_	SEDIMENT	22.39g	10ml	
K0810048-001	08-FW-E-SS72-0-2	8270C SIM PAH_	SOIL	23.96g	10ml	
K0810048-002	08-FW-E-SS74-0-2	8270C SIM PAH_	SOIL	24.76g	10ml	
K0810048-003	08-FW-E-SS79-0-2	8270C SIM PAH_	SOIL	23.68g	10ml	
K0810048-004	08-FW-E-SS78-0-2	8270C SIM PAH_	SOIL	23.65g	10ml	
K0810048-005	08-FW-E-SS77-0-2	8270C SIM PAH_	SOIL	23.59g	10ml	
K0810048-006	08-FW-E-SS77-0-2B	8270C SIM PAH_	SOIL	23.49g	10ml	
K0810048-007	08-FW-E-SS76-0-2	8270C SIM PAH_	SOIL	23.73g	10ml	
K0810048-008	08-FW-E-SS75-0-2	8270C SIM PAH_	SOIL	23.52g	10ml	
K0810048-009	08-FW-A-SS10-0-2	8270C SIM PAH_	SOIL	21.79g	10ml	
K0810048-010	08-FW-A-SS13-0-2	8270C SIM PAH_	SOIL	22.97g	10ml	
KWG0811327-1	Matrix Spike	8270C SIM PAH_	SOIL	23.77g	10ml	
KWG0811327-2	Duplicate Matrix Spike	8270C SIM PAH_	SOIL	23.64g	10ml	
KWG0811327-3	Lab Control Sample	8270C SIM PAH_	SOIL	20.00g	10ml	
KWG0811327-4	Duplicate Lab Control Sampl	8270C SIM PAH_	SOIL	20.00g	10ml	
KWG0811327-5	Method Blank	8270C SIM PAH_	SOIL	40.06g	10ml	

Lab Code	Parent Lab Code	Comments
KWG0811327-1	K0810048-003	
KWG0811327-2	K0810048-003	

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K0810000-001	771032	SVM26-67D	50ul			LBerg
K0810000-002	771033	SVM26-67D	50ul			LBerg
K0810032-005	771034	SVM26-67D	50ul			LBerg
K0810032-006	771021	SVM26-67D	50ul			LBerg
K0810048-001	771022	SVM26-67D	50ul			LBerg
K0810048-002	771023	SVM26-67D	50ul			LBerg
K0810048-003	771024	SVM26-67D	50ul			LBerg
K0810048-004	771025	SVM26-67D	50ul			LBerg
K0810048-005	771026	SVM26-67D	50ul			LBerg
K0810048-006	771027	SVM26-67D	50ul			LBerg

Comments: IS = SVM 27 - 1D

Started By: DWood Assisted By: Training

Completed By: KSherrel Assisted By: Yes / No (No circled)

Reviewed By: AB Date: 10-30-08 Storage: AM11

Chain of Custody

Relinquished By: Kimberly D Sherrell Date: 10-29-08

Received By: Date: 10/31/8 Extracts Examined: Yes (circled) / No

Group ID:	KWG0811327	**Prep Method:**	EPA 3541	**Prep Date:**	10/23/08 00:00
Department:	Semivoa GCMS				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K0810048-007	771028	SVM26-67D	50uL			LBerg
K0810048-008	771029	SVM26-67D	50uL			LBerg
K0810048-009	771030	SVM26-67D	50uL			LBerg
K0810048-010	771031	SVM26-67D	50uL			LBerg
KWG0811327-1	771035	SVM26-67D	50uL	SVM27-15H	200uL	LBerg
KWG0811327-2	771036	SVM26-67D	50uL	SVM27-15H	200uL	LBerg
KWG0811327-3	771037	SVM26-67D	50uL	SVM27-15H	200uL	LBerg
KWG0811327-4	771038	SVM26-67D	50uL	SVM27-15H	200uL	LBerg
KWG0811327-5	771039	SVM26-67D	50uL			LBerg

Comments:

Started By: DWood Assisted By:

Completed By: KSherrel Assisted By:

Training: Yes / No (No) — Yes / No

Reviewed By: AB Date: 10-30-08 Storage:

Chain of Custody

Relinquished By: Kimberly D Sherrel Date: 10-29-08

Received By: Date: 10/31/8

Extracts Examined: Yes / No

Preparation Information

Group ID: KWG0811327 **Prep Method:** EPA 3541 **Prep Date:** 10/23/08 00:00
Department: Semivoa GCMS

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. 9	pH	Int. Vol.	Final Vol.	Surr. Added	Spike Added
1	K0810000-001	DCI 4-1	NA	✓	8270C SIM PAH_SIM	SOIL	23.21	NA	10mL	10mL	50uL	NA
2	K0810000-002	DCI 4-1a		✓	8270C SIM PAH_SIM	SOIL	23.42					
3	K0810032-005	Sediment-1		✓	8270C SIM PAH_SIM	SEDIMENT	40.06		20 mL			
4	K0810032-006	Dry Comp		✓	8270C SIM PAH_SIM	SEDIMENT	22.39		10-28-08 20mL 10-25-08			
5	K0810048-001	08-FW-E-SS72-0-2		✓	8270C SIM PAH_SIM	SOIL	23.96		10mL			
6	K0810048-002	08-FW-E-SS74-0-2		✓	8270C SIM PAH_SIM	SOIL	24.76					
7	K0810048-003	08-FW-E-SS79-0-2		✓	8270C SIM PAH_SIM	SOIL	23.68					
8	K0810048-004	08-FW-E-SS78-0-2		✓	8270C SIM PAH_SIM	SOIL	23.65					
9	K0810048-005	08-FW-E-SS77-0-2		✓	8270C SIM PAH_SIM	SOIL	23.59					
10	K0810048-006	08-FW-E-SS77-0-2B		✓	8270C SIM PAH_SIM	SOIL	23.49					
11	K0810048-007	08-FW-E-SS76-0-2		✓	8270C SIM PAH_SIM	SOIL	23.73					
12	K0810048-008	08-FW-E-SS75-0-2		✓	8270C SIM PAH_SIM	SOIL	23.52					
13	K0810048-009	08-FW-A-SS10-0-2		✓	8270C SIM PAH_SIM	SOIL	21.79					
14	K0810048-010	08-FW-A-SS13-0-2		✓	8270C SIM PAH_SIM	SOIL	22.97					
15	KWG0811327-1	Matrix Spike 100483		✓	8270C SIM PAH_SIM	SOIL	23.77					200uL
16	KWG0811327-2	Duplicate Matrix Spike 100483		✓	8270C SIM PAH_SIM	SOIL	23.64					
17	KWG0811327-3	Lab Control Sample		✓	8270C SIM PAH_SIM	SOIL	20.00					

76572

Comments:

Surrogate ID: SUM26.67D 100/1900ppm 50uL exp 1-23-09

Spike ID: SUM27.15H 25ppm 200uL exp 4-6-09

Witness: [signature] 10/23/08

Started By: DWood Assisted By:

Completed By: Assisted By:

Group ID:	KWG0811327	**Prep Method:**	EPA 3541	**Prep Date:**	10/23/08 00:00
Department:	Semivoa GCMS				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. g	pH	Int. Vol.	Final Vol.	Surr. Added	Spike Added
18	KWG0811327-4	Duplicate Lab Control Sample	N/A	-	8270C SIM PAH_SIM	SOIL	20.00	NA	1 ml	1 ml	50 ul	200 ul
19	KWG0811327-5	Method Blank	↓	-	8270C SIM PAH_SIM	SOIL	4000	↓	↓	↓	↓	NA

KD 102888

Comments:

Surrogate ID: See pg 1

Spike ID:

Witness: 10/23/08

Started By: DWood Assisted By:

Completed By: Assisted By:

Additional Prep Information For EPA 3541

Service Request K0810000/10032/10048 **Workgroup** KWG0811326/11327

DCM Lot Cx5165 Hexane Lot 48142

Start (Time/Date/Initial): 1600/10-23-08/DW LB

Stop (Time/Date/Initial): 1000/10-24-08/DW LB

Sulfate Lot # 48029825

S-Evap Temp: ——— N-evap Temp: 30° Silica gel Lot #: 47165727

Solvent Exchange: 10-28-08

Clean-up #1: 3630 Initial/Date: KD 10-29-08

Clean-up #2: ——— Initial/Date: ———

Extract Storage: Archived

Date Completed: 10-29-08

Comments/Observations:

Bench Sheet Review Check List
☑ Hold Times Met (if no, Reason:)
☑ Prep date, dept, method, product code correct in stealth
☑ Spike Information correct
☑ Weights/Volumes and units correct on raw and final bench sheets
☑ Sample IDs have been checked—Bottle numbers appended if required
☑ Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑ Training has been circled
☑ Extract Storage recorded
☑ Additional Prep Sheet completely filled out (NA or line out Blanks)
☑ All clean-ups have been noted on additional prep sheet
☑ Signed service request with Form V, if applicable, has been attached

CCI
ANALYTICAL
LABORATORIES

July 21, 2008

Ms. Victoria England
GeoEngineers, Inc.
600 Stewart St. Suite 1700
Seattle, WA 98101

Dear Ms. England,

On May 29th, 2008, 1 water and 6 soil samples were received from your Anacortes project. This project was identified with the client identification of 5147-006-01 and was assigned our identification number 805172. The sample identification and requested analyses are outlined on the attached CCI chain of custody record.

No abnormalities or nonconformances were observed during the analyses of the project samples.

I do hope this addresses all your needs. Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely

CCI Analytical Laboratories

Rick Bagan
Laboratory Director

CCI
ANALYTICAL
LABORATORIES
A Division of DataChem Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 6/16/2008
CCIL JOB #: 0805172
DATE RECEIVED: 5/29/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 5/27/2008 15:00 MW-5-5.0
CCIL SAMPLE #: -02

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND	3	1	MG/KG	5/29/2008	DLC
Methyl T-Butyl Ether***	EPA-8021	ND	0.1	1	MG/KG	5/29/2008	DLC
Benzene	EPA-8021	ND	0.03	1	MG/KG	5/29/2008	DLC
Toluene	EPA-8021	ND	0.05	1	MG/KG	5/29/2008	DLC
Ethylbenzene	EPA-8021	ND	0.05	1	MG/KG	5/29/2008	DLC
Xylenes	EPA-8021	ND	0.2	1	MG/KG	5/29/2008	DLC
TPH-Diesel Range	NWTPH-DX	200	25	1	MG/KG	5/29/2008	EBS
TPH-Oil Range	NWTPH-DX	91	50	1	MG/KG	5/29/2008	EBS
1,2-Dichloroethane (EDC)	EPA-8260	ND	10	1	UG/KG	5/29/2008	GAP
1,2-Dibromoethane (EDB)	EPA-8260	ND	5	1	UG/KG	5/29/2008	GAP
>C10-C12 Aliphatics	NWEPH	ND	5	1	MG/KG	6/11/2008	EBS
>C12-C16 Aliphatics	NWEPH	92	5	1	MG/KG	6/11/2008	EBS
>C16-C21 Aliphatics	NWEPH	170	5	1	MG/KG	6/11/2008	EBS
>C21-C34 Aliphatics	NWEPH	130	5	1	MG/KG	6/11/2008	EBS
>C10-C12 Aromatics	NWEPH	ND	5	1	MG/KG	6/11/2008	EBS
>C12-C16 Aromatics	NWEPH	9	5	1	MG/KG	6/11/2008	EBS
>C16-C21 Aromatics	NWEPH	73	5	1	MG/KG	6/11/2008	EBS
>C21-C34 Aromatics	NWEPH	48	5	1	MG/KG	6/11/2008	EBS
Total Aliphatics	NWEPH	390	10	1	MG/KG	6/11/2008	EBS
Total Aromatics	NWEPH	130	10	1	MG/KG	6/11/2008	EBS
Naphthalene	EPA-8270 SIM	0.02	0.02	1	MG/KG	6/4/2008	RAL
1-Methylnaphthalene	EPA-8270 SIM	0.03	0.02	1	MG/KG	6/4/2008	RAL
2-Methylnaphthalene	EPA-8270 SIM	0.05	0.02	1	MG/KG	6/4/2008	RAL
Acenaphthylene	EPA-8270 SIM	0.04	0.02	1	MG/KG	6/4/2008	RAL
Acenaphthene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/4/2008	RAL
Fluorene	EPA-8270 SIM	0.05	0.02	1	MG/KG	6/4/2008	RAL
Phenanthrene	EPA-8270 SIM	0.19	0.02	1	MG/KG	6/4/2008	RAL
Anthracene	EPA-8270 SIM	0.07	0.02	1	MG/KG	6/4/2008	RAL
Fluoranthene	EPA-8270 SIM	0.29	0.02	1	MG/KG	6/4/2008	RAL
Pyrene	EPA-8270 SIM	0.29	0.02	1	MG/KG	6/4/2008	RAL
Benzo[A]Anthracene	EPA-8270 SIM	0.13	0.02	1	MG/KG	6/4/2008	RAL
Chrysene	EPA-8270 SIM	0.17	0.02	1	MG/KG	6/4/2008	RAL

8620 Holly Drive Suite 100 Everett, WA 98208 425 356-2600 FAX 425 356-2626 Seattle 206 292-9059

CCI
ANALYTICAL
LABORATORIES
A Division of DataChem Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 6/16/2008
CCIL JOB #: 0805172
DATE RECEIVED: 5/29/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 5/27/2008 15:00 MW-5-5.0
CCIL SAMPLE #: -02

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Benzo[B]Fluoranthene	EPA-8270 SIM	0.13	0.02	1	MG/KG	6/4/2008	RAL
Benzo[K]Fluoranthene	EPA-8270 SIM	0.11	0.02	1	MG/KG	6/4/2008	RAL
Benzo(A)Pyrene	EPA-8270 SIM	0.13	0.02	1	MG/KG	6/4/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	0.13	0.02	1	MG/KG	6/4/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270 SIM	0.05	0.02	1	MG/KG	6/4/2008	RAL
Benzo[G,H,I]Perylene	EPA-8270 SIM	0.17	0.02	1	MG/KG	6/4/2008	RAL

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCTS WHICH ARE LIKELY WEATHERED DIESEL FUEL AND LUBE OIL.

OIL RANGE RESULT IS BIASED HIGH DUE TO DIESEL RANGE PRODUCT OVERLAP.

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

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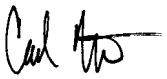

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 6/16/2008
CCIL JOB #: 0805172
DATE RECEIVED: 5/29/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 5/27/2008 15:10 MW-5-10.0
CCIL SAMPLE #: -03

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND	3	1	MG/KG	5/29/2008	DLC
Methyl T-Butyl Ether***	EPA-8021	ND	0.1	1	MG/KG	5/29/2008	DLC
Benzene	EPA-8021	ND	0.03	1	MG/KG	5/29/2008	DLC
Toluene	EPA-8021	ND	0.05	1	MG/KG	5/29/2008	DLC
Ethylbenzene	EPA-8021	ND	0.05	1	MG/KG	5/29/2008	DLC
Xylenes	EPA-8021	ND	0.2	1	MG/KG	5/29/2008	DLC
TPH-Diesel Range	NWTPH-DX	59	25	1	MG/KG	5/29/2008	EBS
TPH-Oil Range	NWTPH-DX	ND	50	1	MG/KG	5/29/2008	EBS
1,2-Dichloroethane (EDC)	EPA-8260	ND	10	1	UG/KG	5/29/2008	GAP
1,2-Dibromoethane (EDB)	EPA-8260	ND	5	1	UG/KG	5/29/2008	GAP
Naphthalene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/4/2008	RAL
1-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/4/2008	RAL
2-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/4/2008	RAL
Acenaphthylene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/4/2008	RAL
Acenaphthene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/4/2008	RAL
Fluorene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/4/2008	RAL
Phenanthrene	EPA-8270 SIM	0.16	0.02	1	MG/KG	6/4/2008	RAL
Anthracene	EPA-8270 SIM	0.04	0.02	1	MG/KG	6/4/2008	RAL
Fluoranthene	EPA-8270 SIM	0.29	0.02	1	MG/KG	6/4/2008	RAL
Pyrene	EPA-8270 SIM	0.27	0.02	1	MG/KG	6/4/2008	RAL
Benzo[A]Anthracene	EPA-8270 SIM	0.13	0.02	1	MG/KG	6/4/2008	RAL
Chrysene	EPA-8270 SIM	0.15	0.02	1	MG/KG	6/4/2008	RAL
Benzo[B]Fluoranthene	EPA-8270 SIM	0.12	0.02	1	MG/KG	6/4/2008	RAL
Benzo[K]Fluoranthene	EPA-8270 SIM	0.12	0.02	1	MG/KG	6/4/2008	RAL
Benzo(A)Pyrene	EPA-8270 SIM	0.13	0.02	1	MG/KG	6/4/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	0.09	0.02	1	MG/KG	6/4/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270 SIM	0.04	0.02	1	MG/KG	6/4/2008	RAL
Benzo[G,H,I]Perylene	EPA-8270 SIM	0.11	0.02	1	MG/KG	6/4/2008	RAL

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 5/27/2008 15:10 MW-5-10.0
CCIL SAMPLE #: -03

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY WEATHERED DIESEL FUEL.

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 5/27/2008 16:15 MW-5-RINSATE
CCIL SAMPLE #: -07

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Volatile Range	NWTPH-GX	ND	50	1	UG/L	5/29/2008	DLC
Methyl T-Butyl Ether***	EPA-8021	ND	3	1	UG/L	5/29/2008	DLC
Benzene	EPA-8021	ND	1	1	UG/L	5/29/2008	DLC
Toluene	EPA-8021	ND	1	1	UG/L	5/29/2008	DLC
Ethylbenzene	EPA-8021	ND	1	1	UG/L	5/29/2008	DLC
Xylenes	EPA-8021	ND	3	1	UG/L	5/29/2008	DLC
TPH-Diesel Range	NWTPH-DX	ND	130	1	UG/L	5/30/2008	EBS
TPH-Oil Range	NWTPH-DX	ND	250	1	UG/L	5/30/2008	EBS
1,2-Dichloroethane (EDC)	EPA-8260 SIM	ND	0.01	1	UG/L	5/30/2008	GAP
1,2-Dibromoethane (EDB)	EPA-8260 SIM	ND	0.01	1	UG/L	5/30/2008	GAP
Naphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL
1-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL
2-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL
Acenaphthylene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL
Acenaphthene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL
Fluorene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL
Phenanthrene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL
Anthracene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL
Fluoranthene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL
Pyrene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL
Benzo[A]Anthracene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL
Chrysene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL
Benzo[B]Fluoranthene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL
Benzo(A)Pyrene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL
Benzo[G,H,I]Perylene	EPA-8270 SIM	ND	0.02	1	UG/L	5/30/2008	RAL

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CLIENT SAMPLE ID: 5/27/2008 16:15 MW-5-RINSATE
CCIL SAMPLE #: -07

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY

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QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	METHOD	SUR ID	SPIKE AMOUNT	% RECV
0805172-02	NWTPH-GX	TFT	250 PPB	97
0805172-02	EPA-8021	TFT	250 PPB	91
0805172-02	NWTPH-DX	C25	5 PPM	105
0805172-02	EPA-8260	1,2-Dichloroethane-d4	100 PPB	116
0805172-02	NWEPH	C25	20 PPM	109
0805172-02	NWEPH	p-Terphenyl	20 PPM	112
0805172-02	EPA-8270 SIM	Terphenyl-d14	1 PPM	122
0805172-03	NWTPH-GX	TFT	250 PPB	81
0805172-03	EPA-8021	TFT	250 PPB	79
0805172-03	NWTPH-DX	C25	5 PPM	88
0805172-03	EPA-8260	1,2-Dichloroethane-d4	100 PPB	104
0805172-03	EPA-8270 SIM	Terphenyl-d14	1 PPM	114
0805172-07	NWTPH-GX	TFT	0.5 PPM	99
0805172-07	EPA-8021	TFT	0.5 PPM	99
0805172-07	NWTPH-DX	C25	5 PPM	88
0805172-07	EPA-8260 SIM	1,2-Dichloroethane-d4	0.8 PPB	100
0805172-07	EPA-8270 SIM	Terphenyl-d14	1 PPM	118

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QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	RESULT	ASSOCIATED SAMPLES
NWTPH-GX (TPH-Volatile Range)	ND(<3)	0805172 -02, 03
EPA-8021 (Methyl T-Butyl Ether)	ND(<0.1)	0805172 -02, 03
EPA-8021 (Benzene)	ND(<0.03)	0805172 -02, 03
EPA-8021 (Toluene)	ND(<0.05)	0805172 -02, 03
EPA-8021 (Ethylbenzene)	ND(<0.05)	0805172 -02, 03
EPA-8021 (Xylenes)	ND(<0.2)	0805172 -02, 03
NWTPH-DX (TPH-Diesel Range)	ND(<25)	0805172 -02, 03
NWTPH-DX (TPH-Oil Range)	ND(<50)	0805172 -02, 03
EPA-8260 (1,2-Dichloroethane (EDC))	ND(<10)	0805172 -02, 03
EPA-8260 (1,2-Dibromoethane (EDB))	ND(<5)	0805172 -02, 03
NWEPH (>C10-C12 Aliphatics)	ND(<5)	0805172 -02
NWEPH (>C12-C16 Aliphatics)	ND(<5)	0805172 -02
NWEPH (>C16-C21 Aliphatics)	ND(<5)	0805172 -02
NWEPH (>C21-C34 Aliphatics)	ND(<5)	0805172 -02
NWEPH (>C10-C12 Aromatics)	ND(<5)	0805172 -02
NWEPH (>C12-C16 Aromatics)	ND(<5)	0805172 -02
NWEPH (>C16-C21 Aromatics)	ND(<5)	0805172 -02
NWEPH (>C21-C34 Aromatics)	ND(<5)	0805172 -02
NWEPH (Total Aliphatics)	ND(<10)	0805172 -02
NWEPH (Total Aromatics)	ND(<10)	0805172 -02
EPA-8270 SIM (Naphthalene)	ND(<0.02)	0805172 -02, 03
EPA-8270 SIM (1-Methylnaphthalene)	ND(<0.02)	0805172 -02, 03
EPA-8270 SIM (2-Methylnaphthalene)	ND(<0.02)	0805172 -02, 03
EPA-8270 SIM (Acenaphthylene)	ND(<0.02)	0805172 -02, 03
EPA-8270 SIM (Acenaphthene)	ND(<0.02)	0805172 -02, 03
EPA-8270 SIM (Fluorene)	ND(<0.02)	0805172 -02, 03
EPA-8270 SIM (Phenanthrene)	ND(<0.02)	0805172 -02, 03
EPA-8270 SIM (Anthracene)	ND(<0.02)	0805172 -02, 03
EPA-8270 SIM (Fluoranthene)	ND(<0.02)	0805172 -02, 03
EPA-8270 SIM (Pyrene)	ND(<0.02)	0805172 -02, 03
EPA-8270 SIM (Benzo[A]Anthracene)	ND(<0.02)	0805172 -02, 03
EPA-8270 SIM (Chrysene)	ND(<0.02)	0805172 -02, 03
EPA-8270 SIM (Benzo[B]Fluoranthene)	ND(<0.02)	0805172 -02, 03

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QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	RESULT	ASSOCIATED SAMPLES
EPA-8270 SIM (Benzo[K]Fluoranthene)	ND(<0.02)	0805172 -02, 03
EPA-8270 SIM (Benzo(A)Pyrene)	ND(<0.02)	0805172 -02, 03
EPA-8270 SIM (Indeno[1,2,3-Cd]Pyrene)	ND(<0.02)	0805172 -02, 03
EPA-8270 SIM (Dibenz[A,H]Anthracene)	ND(<0.02)	0805172 -02, 03
EPA-8270 SIM (Benzo[G,H,I]Perylene)	ND(<0.02)	0805172 -02, 03
NWTPH-GX (TPH-Volatile Range)	ND(<50)	0805172 -07
EPA-8021 (Methyl T-Butyl Ether)	ND(<3)	0805172 -07
EPA-8021 (Benzene)	ND(<1)	0805172 -07
EPA-8021 (Toluene)	ND(<1)	0805172 -07
EPA-8021 (Ethylbenzene)	ND(<1)	0805172 -07
EPA-8021 (Xylenes)	ND(<3)	0805172 -07
NWTPH-DX (TPH-Diesel Range)	ND(<130)	0805172 -07
NWTPH-DX (TPH-Oil Range)	ND(<250)	0805172 -07
EPA-8260 SIM (1,2-Dichloroethane (EDC))	ND(<0.01)	0805172 -07
EPA-8260 SIM (1,2-Dibromoethane (EDB))	ND(<0.01)	0805172 -07
EPA-8270 SIM (Naphthalene)	ND(<0.02)	0805172 -07
EPA-8270 SIM (1-Methylnaphthalene)	ND(<0.02)	0805172 -07
EPA-8270 SIM (2-Methylnaphthalene)	ND(<0.02)	0805172 -07
EPA-8270 SIM (Acenaphthylene)	ND(<0.02)	0805172 -07
EPA-8270 SIM (Acenaphthene)	ND(<0.02)	0805172 -07
EPA-8270 SIM (Fluorene)	ND(<0.02)	0805172 -07
EPA-8270 SIM (Phenanthrene)	ND(<0.02)	0805172 -07
EPA-8270 SIM (Anthracene)	ND(<0.02)	0805172 -07
EPA-8270 SIM (Fluoranthene)	ND(<0.02)	0805172 -07
EPA-8270 SIM (Pyrene)	ND(<0.02)	0805172 -07
EPA-8270 SIM (Benzo[A]Anthracene)	ND(<0.02)	0805172 -07
EPA-8270 SIM (Chrysene)	ND(<0.02)	0805172 -07
EPA-8270 SIM (Benzo[B]Fluoranthene)	ND(<0.02)	0805172 -07
EPA-8270 SIM (Benzo[K]Fluoranthene)	ND(<0.02)	0805172 -07
EPA-8270 SIM (Benzo(A)Pyrene)	ND(<0.02)	0805172 -07
EPA-8270 SIM (Indeno[1,2,3-Cd]Pyrene)	ND(<0.02)	0805172 -07
EPA-8270 SIM (Dibenz[A,H]Anthracene)	ND(<0.02)	0805172 -07
EPA-8270 SIM (Benzo[G,H,I]Perylene)	ND(<0.02)	0805172 -07

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QUALITY CONTROL RESULTS

SPIKE/SPIKE DUPLICATE RESULTS

METHOD	ANALYTE	ASSOCIATED SAMPLES	SPIKE AMOUNT	DILUTION FACTOR	SPIKE RECOVERY	SPIKE DUP RECOVERY	RPD
NWTPH-GX	TPH-Volatile Range	0805172 -02, 03	25 MG/KG	1	85 %	83 %	2
EPA-8021	Methyl T-Butyl Ether	0805172 -02, 03	2 MG/KG	1	85 %	84 %	1
EPA-8021	Benzene	0805172 -02, 03	1 MG/KG	1	109 %	103 %	6
EPA-8021	Toluene	0805172 -02, 03	1 MG/KG	1	104 %	97 %	7
EPA-8021	Ethylbenzene	0805172 -02, 03	1 MG/KG	1	103 %	96 %	7
EPA-8021	Xylenes	0805172 -02, 03	3 MG/KG	1	105 %	99 %	6
NWTPH-DX	TPH-Diesel Range	0805172 -02, 03	125 MG/KG	1	87 %	86 %	1
EPA-8260	1,1-Dichloroethene	0805172 -02, 03	10 UG/KG	1	96 %	104 %	8
NWEPH	>C10-C12 Aliphatics	0805172 -02	20 MG/KG	1	91 %	91 %	0
NWEPH	>C12-C16 Aliphatics	0805172 -02	20 MG/KG	1	92 %	92 %	0
NWEPH	>C16-C21 Aliphatics	0805172 -02	20 MG/KG	1	93 %	94 %	1
NWEPH	>C21-C34 Aliphatics	0805172 -02	20 MG/KG	1	102 %	102 %	0
NWEPH	>C10-C12 Aromatics	0805172 -02	20 MG/KG	1	87 %	93 %	7
NWEPH	>C12-C16 Aromatics	0805172 -02	20 MG/KG	1	89 %	93 %	4
NWEPH	>C16-C21 Aromatics	0805172 -02	20 MG/KG	1	92 %	94 %	2
NWEPH	>C21-C34 Aromatics	0805172 -02	20 MG/KG	1	85 %	89 %	5
EPA-8270 SIM	Naphthalene	0805172 -02, 03	0.5 MG/KG	1	104 %	101 %	3
EPA-8270 SIM	Acenaphthene	0805172 -02, 03	0.5 MG/KG	1	102 %	104 %	2
EPA-8270 SIM	Pyrene	0805172 -02, 03	0.5 MG/KG	1	121 %	124 %	3
EPA-8270 SIM	Benzo[G,H,I]Perylene	0805172 -02, 03	0.5 MG/KG	1	125 %	117 %	6
NWTPH-GX	TPH-Volatile Range	0805172 -07	500 UG/L	1	87 %	85 %	2
EPA-8021	Methyl T-Butyl Ether	0805172 -07	40 UG/L	1	99 %	99 %	0
EPA-8021	Benzene	0805172 -07	20 UG/L	1	103 %	102 %	1
EPA-8021	Toluene	0805172 -07	20 UG/L	1	104 %	103 %	1
EPA-8021	Ethylbenzene	0805172 -07	20 UG/L	1	102 %	101 %	1
EPA-8021	Xylenes	0805172 -07	60 UG/L	1	105 %	103 %	2
NWTPH-DX	TPH-Diesel Range	0805172 -07	1250 UG/L	1	82 %	84 %	2
EPA-8260 SIM	1,1-Dichloroethene	0805172 -07	0.05 UG/L	1	112 %	108 %	4
EPA-8270 SIM	Naphthalene	0805172 -07	5 UG/L	1	86 %	86 %	0
EPA-8270 SIM	Acenaphthene	0805172 -07	5 UG/L	1	92 %	89 %	3
EPA-8270 SIM	Pyrene	0805172 -07	5 UG/L	1	123 %	109 %	12
EPA-8270 SIM	Benzo[G,H,I]Perylene	0805172 -07	5 UG/L	1	96 %	109 %	12

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Everett, WA 98208
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(206) 292-9059 Seattle
(425) 356-2626 Fax
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Chain Of Custody/ Laboratory Analysis Request

CCI Job# (Laboratory Use Only) 805172

Date 5-28-08 Page 1 Of 1

PROJECT ID: 5147-006-01
REPORT TO COMPANY: GeoEngineers
PROJECT MANAGER: Victoria England
ADDRESS: 600 Stewart St. Suite 1700
Seattle Wa 98101
PHONE: 206-728-2674 FAX:
P.O. NUMBER: E-MAIL: VEngland@GeoEngineers.com
INVOICE TO COMPANY: SAME
ATTENTION:
ADDRESS:

LABORATORY COPY

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	VPH / EPH *		EPH Added 6/11/08 per Robert					NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. MW-5-2.5	5/27	~~1450~~ 1450	S	1																						3	
2. MW-5-5.0		1500		2		X	X	X	X			~~X~~	X		X					X		⊗				5	
3. MW-5-~~7.5~~ 10.0		1510		3		X	X	X	X			~~X~~	X		X					X						5	
4. MW-5-12.5		1525		4																						3	
5. MW-5-15.0		1520		5																						4	
6. MW-5-17.5		1535		6																						4	
7. MW-5-Rinsate	5/27	1615	W	7		X	X	X	X			X			X												5	
8.																											
9.																											
10.																											

SPECIAL INSTRUCTIONS Samples 2, 3 rec'd per 5035 low kits

CCI Analytical Laboratories, Inc accepts and processes this request on the terms and conditions set forth on the reverse side. By its signature hereon, Customer accepts these terms and conditions.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: CEI 5-28-08 1230
   Received By: CCI 5/29/08 1010
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: ~~10~~ Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: ~~5~~ Standard | 3 | 1 | SAME DAY

OTHER:

Specify: ☒ Hold pending Dx + Gx Results.

* Turnaround request less than standard may incur Rush Charges

CCI
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A Division of DataChem Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/1/2008
CCIL JOB #: 0806105
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/17/2008 11:30 SB-8-0.5
CCIL SAMPLE #: -01

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-6010	120	2	4	MG/KG	6/30/2008	BAM

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

8620 Holly Drive Suite 100 Everett, WA 98208 425 356-2600 FAX 425 356-2626 Seattle 206 292-9059

CCI
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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/1/2008
CCIL JOB #: 0806105
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/17/2008 11:50 SB-8-4.0
CCIL SAMPLE #: -03

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-6010	300	2	4	MG/KG	6/30/2008	BAM

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.
** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/1/2008
CCIL JOB #: 0806105
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/17/2008 12:40 SB-10-0.5
CCIL SAMPLE #: -04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-6010	230	2	4	MG/KG	6/30/2008	BAM

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/1/2008
CCIL JOB #: 0806105
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/17/2008 13:00 SB-10-4.0
CCIL SAMPLE #: -06

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-6010	280	2	4	MG/KG	6/30/2008	BAM

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/1/2008
CCIL JOB #: 0806105
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/17/2008 14:00 SB-11-0.5
CCIL SAMPLE #: -07

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-6010	74	2	4	MG/KG	6/30/2008	BAM

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/1/2008
CCIL JOB #: 0806105
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/17/2008 14:20 SB-11-4.0
CCIL SAMPLE #: -09

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-6010	280	2	4	MG/KG	6/30/2008	BAM

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.
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APPROVED BY:

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/1/2008
CCIL JOB #: 0806105
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/17/2008 14:50 SB-11-RINSATE
CCIL SAMPLE #: -10

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-6010	ND	10	1	UG/L	6/30/2008	BAM

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.
** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/1/2008
CCIL JOB #: 0806105
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/17/2008 15:30 SS-1-1
CCIL SAMPLE #: -11

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-6010	190	2	4	MG/KG	6/30/2008	BAM

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/1/2008
CCIL JOB #: 0806105
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/17/2008 15:40 SS-2-1
CCIL SAMPLE #: -12

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-6010	98	2	4	MG/KG	6/30/2008	BAM

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.
** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/1/2008
CCIL JOB #: 0806105
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/17/2008 15:50 SS-3-1
CCIL SAMPLE #: -13

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-6010	2100	2	4	MG/KG	6/30/2008	BAM

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/1/2008
CCIL JOB #: 0806105
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/17/2008 16:00 SS-4-0.5
CCIL SAMPLE #: -14

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-6010	360	2	4	MG/KG	6/30/2008	BAM

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/1/2008
CCIL JOB #: 0806105
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01

QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	RESULT	ASSOCIATED SAMPLES
EPA-6010 (Zinc)	ND(<2.0)	0806105 -SOILS
EPA-6010 (Zinc)	ND(<10)	0806105 -WATER

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/1/2008
CCIL JOB #: 0806105
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01

QUALITY CONTROL RESULTS

SPIKE/SPIKE DUPLICATE RESULTS

METHOD	ANALYTE	ASSOCIATED SAMPLES	SPIKE AMOUNT	DILUTION FACTOR	SPIKE RECOVERY	SPIKE DUP RECOVERY	RPD
EPA-6010	Zinc	0806105 -SOILS	20 MG/KG	1	106 %	104 %	2
EPA-6010	Zinc	0806105 -WATER	1000 UG/L	1	109 %	109 %	0

APPROVED BY:

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CCI Analytical Laboratories
8620 Holly Drive
Everett, WA 98208
Phone (425) 356-2600
(206) 292-9059 Seattle
(425) 356-2626 Fax
http://www.ccilabs.com

Chain Of Custody/ Laboratory Analysis Request

CCI Job# (Laboratory Use Only) 806105

Date 6-17-08 Page 1 Of 2

PROJECT ID: 547-006-01
REPORT TO COMPANY: GeoEngineers
PROJECT MANAGER: Victoria England
ADDRESS: 600 Stewart St, Ste 1700
Seattle Wa
PHONE: 206-728-2674 FAX:
P.O. NUMBER: E-MAIL:
INVOICE TO COMPANY:
ATTENTION: SAME
ADDRESS:

ANALYSIS REQUESTED

OTHER (Specify)

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	ZINC							NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. SB-8-0.5	6-17-08	1130	S	1															⊗								1	
2. SB-8-2.0		1140		2																							1	
3. SB-8-4.0		1150		3															⊗								1	
4. SB-10-0.5		1240		4															⊗								1	
5. SB-10-2.0		1250		5																							1	
6. SB-10-4.0		1300		6															⊗								1	
7. SB-11-0.5		1400		7															⊗								1	
8. SB-11-2.0		1410		8																							1	
9. SB-11-4.0		1420		9															⊗								1	
10. SB-11-Rinsate		1450	W	10															⊗								8	

SPECIAL INSTRUCTIONS ⊗ Added 6/19/08 per V. England

CCI Analytical Laboratories, Inc accepts and processes this request on the terms and conditions set forth on the reverse side. By its signature hereon, Customer accepts these terms and conditions.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: [signature] CCI 6-17-08 1740
   Received By: [signature] CCI 6/17/08 1740
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 (Standard) | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 (Standard) | 3 | 1 | SAME DAY

OTHER: Specify:

* Turnaround request less than standard may incur Rush Charges

LABORATORY COPY

CCI Analytical Laboratories
8620 Holly Drive
Everett, WA 98208
Phone (425) 356-2600
(206) 292-9059 Seattle
(425) 356-2626 Fax
http://www.ccilabs.com

Chain Of Custody/ Laboratory Analysis Request

CCI Job# (Laboratory Use Only) 806105

Date 6-17-08 Page 2 Of 2

PROJECT ID:	5147-006-01
REPORT TO COMPANY:	GeoEngineers
PROJECT MANAGER:	Victoria England
ADDRESS:	600 Stewart St Ste 1700 Seattle Wa
PHONE:	206-728-2674 FAX:
P.O. NUMBER:	E-MAIL:
INVOICE TO COMPANY:	
ATTENTION:	SAME
ADDRESS:	

ANALYSIS REQUESTED

OTHER (Specify)

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	EDD Report	Zinc						NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. SS-1-1	6-17-08	1530	S	11																	X						
2. SS-2-1	↓	1540	↓	12																	X						
3. SS-3-1		1550		13																	X						
4. SS-4-0.5		1600		14																	X						
5.																											
6.																											
7.																											
8.																											
9.																											
10.																											

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SPECIAL INSTRUCTIONS (X) Added 6/19/08

CCI Analytical Laboratories, Inc accepts and processes this request on the terms and conditions set forth on the reverse side. By its signature hereon, Customer accepts these terms and conditions.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: [signature] CCI 6-17-08 1740
   Received By: [signature] CCI 6/17/08 1740
2. Relinquished By: _____
   Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify: _____

* Turnaround request less than standard may incur Rush Charges

CCI
ANALYTICAL
LABORATORIES

July 21, 2008

Ms. Victoria England
GeoEngineers, Inc.
600 Stewart St. Suite 1700
Seattle, WA 98101

Dear Ms. England,

On June 17th, 2008, 2 water and 50 soil samples were received from your Anacortes project. This project was identified with the client identification of 5147-006-01 and was assigned our identification number 806107. The sample identification and requested analyses are outlined on the attached CCI chain of custody record.

Our laboratory does not perform certain of the analyses requested. These analyses, which include Dioxins/Furans were subcontracted to Pace Analytical. The data package for these analyses is also being forwarded along with our report. The Pace Analytical report should be viewed as separate reports and the data has not been included in our report.

No abnormalities or nonconformances were observed during the analyses of the project samples.

I do hope this addresses all your needs. Please do not hesitate to call me if you have any questions or if I can be of further assistance.

Sincerely

CCI Analytical Laboratories

Rick Bagan
Laboratory Director

CCI
ANALYTICAL
LABORATORIES
A Division of DataChem Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/8/2008
CCIL JOB #: 0806107
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 16:55 SB-1-2.0
CCIL SAMPLE #: -02

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	8.7	5	4	MG/KG	7/2/2008	BAM

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

NOTE: TOTAL ALIPHATICS AND AROMATICS ARE BASED ON EC RANGE "ND" RESULTS SUMMED AT 1/2 OF REPORTING LIMIT

APPROVED BY:

8620 Holly Drive Suite 100 Everett, WA 98208 425 356-2600 FAX 425 356-2626 Seattle 206 292-9059

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/8/2008
CCIL JOB #: 0806107
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 17:00 SB-1-4.0
CCIL SAMPLE #: -03

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	ND	5	4	MG/KG	7/2/2008	BAM

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

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NOTE: TOTAL ALIPHATICS AND AROMATICS ARE BASED ON EC RANGE "ND" RESULTS SUMMED AT 1/2 OF REPORTING LIMIT

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/8/2008
CCIL JOB #: 0806107
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 16:35 SB-2-2.0
CCIL SAMPLE #: -06

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	ND	5	4	MG/KG	7/2/2008	BAM

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

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NOTE: TOTAL ALIPHATICS AND AROMATICS ARE BASED ON EC RANGE "ND" RESULTS SUMMED AT 1/2 OF REPORTING LIMIT

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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 16:40 SB-2-4.0
CCIL SAMPLE #: -07

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	ND	5	4	MG/KG	7/2/2008	BAM

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DATE: 7/8/2008
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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 11:10 SB-4-3.0
CCIL SAMPLE #: -15

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	ND	25	1	MG/KG	6/20/2008	EBS
TPH-Oil Range	NWTPH-DX	ND	50	1	MG/KG	6/20/2008	EBS
1,2-Dichloroethane (EDC)	EPA-8260	ND	10	1	UG/KG	6/24/2008	GAP
1,2-Dibromoethane (EDB)	EPA-8260	ND	5	1	UG/KG	6/24/2008	GAP
Methyl T-Butyl Ether	EPA-8260	ND	10	1	UG/KG	6/24/2008	GAP
>C10-C12 Aliphatics	NWEPH	ND	5	1	MG/KG	6/25/2008	EBS
>C12-C16 Aliphatics	NWEPH	ND	5	1	MG/KG	6/25/2008	EBS
>C16-C21 Aliphatics	NWEPH	ND	5	1	MG/KG	6/25/2008	EBS
>C21-C34 Aliphatics	NWEPH	ND	5	1	MG/KG	6/25/2008	EBS
>C10-C12 Aromatics	NWEPH	ND	5	1	MG/KG	6/25/2008	EBS
>C12-C16 Aromatics	NWEPH	ND	5	1	MG/KG	6/25/2008	EBS
>C16-C21 Aromatics	NWEPH	ND	5	1	MG/KG	6/25/2008	EBS
>C21-C34 Aromatics	NWEPH	ND	5	1	MG/KG	6/25/2008	EBS
Total Aliphatics	NWEPH	ND	10	1	MG/KG	6/25/2008	EBS
Total Aromatics	NWEPH	ND	10	1	MG/KG	6/25/2008	EBS
Naphthalene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
1-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
2-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Acenaphthylene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Acenaphthene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Fluorene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Phenanthrene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Anthracene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Fluoranthene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Pyrene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Benzo[A]Anthracene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Chrysene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Benzo[B]Fluoranthene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Benzo(A)Pyrene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL

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SEATTLE, WA 98101

DATE: 7/8/2008
CCIL JOB #: 0806107
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 11:10 SB-4-3.0
CCIL SAMPLE #: -15

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Benzo[G,H,I]Perylene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL

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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 12:20 SB-5-3.0
CCIL SAMPLE #: -20

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	ND	25	1	MG/KG	6/20/2008	EBS
TPH-Oil Range	NWTPH-DX	85	50	1	MG/KG	6/20/2008	EBS
1,2-Dichloroethane (EDC)	EPA-8260	ND	10	1	UG/KG	6/24/2008	GAP
1,2-Dibromoethane (EDB)	EPA-8260	ND	5	1	UG/KG	6/24/2008	GAP
Methyl T-Butyl Ether	EPA-8260	ND	10	1	UG/KG	6/24/2008	GAP
>C10-C12 Aliphatics	NWEPH	ND	5	1	MG/KG	6/25/2008	EBS
>C12-C16 Aliphatics	NWEPH	ND	5	1	MG/KG	6/25/2008	EBS
>C16-C21 Aliphatics	NWEPH	ND	5	1	MG/KG	6/25/2008	EBS
>C21-C34 Aliphatics	NWEPH	37	5	1	MG/KG	6/25/2008	EBS
>C10-C12 Aromatics	NWEPH	ND	5	1	MG/KG	6/25/2008	EBS
>C12-C16 Aromatics	NWEPH	ND	5	1	MG/KG	6/25/2008	EBS
>C16-C21 Aromatics	NWEPH	ND	5	1	MG/KG	6/25/2008	EBS
>C21-C34 Aromatics	NWEPH	23	5	1	MG/KG	6/25/2008	EBS
Total Aliphatics	NWEPH	45	10	1	MG/KG	6/25/2008	EBS
Total Aromatics	NWEPH	31	10	1	MG/KG	6/25/2008	EBS
Naphthalene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
1-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
2-Methylnaphthalene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Acenaphthylene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Acenaphthene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Fluorene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Phenanthrene	EPA-8270 SIM	0.04	0.02	1	MG/KG	6/24/2008	RAL
Anthracene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Fluoranthene	EPA-8270 SIM	0.10	0.02	1	MG/KG	6/24/2008	RAL
Pyrene	EPA-8270 SIM	0.10	0.02	1	MG/KG	6/24/2008	RAL
Benzo[A]Anthracene	EPA-8270 SIM	0.04	0.02	1	MG/KG	6/24/2008	RAL
Chrysene	EPA-8270 SIM	0.06	0.02	1	MG/KG	6/24/2008	RAL
Benzo[B]Fluoranthene	EPA-8270 SIM	0.05	0.02	1	MG/KG	6/24/2008	RAL
Benzo[K]Fluoranthene	EPA-8270 SIM	0.04	0.02	1	MG/KG	6/24/2008	RAL
Benzo(A)Pyrene	EPA-8270 SIM	0.05	0.02	1	MG/KG	6/24/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	0.04	0.02	1	MG/KG	6/24/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL

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CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/8/2008
CCIL JOB #: 0806107
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 12:20 SB-5-3.0
CCIL SAMPLE #: -20

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Benzo[G,H,I]Perylene	EPA-8270 SIM	0.06	0.02	1	MG/KG	6/24/2008	RAL

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCT WHICH IS LIKELY LUBE OIL.

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 10:00 SB-7-3.0
CCIL SAMPLE #: -28

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	760	25	1	MG/KG	6/20/2008	EBS
TPH-Oil Range	NWTPH-DX	370	50	1	MG/KG	6/20/2008	EBS
1,2-Dichloroethane (EDC)	EPA-8260	ND	10	1	UG/KG	6/24/2008	GAP
1,2-Dibromoethane (EDB)	EPA-8260	ND	5	1	UG/KG	6/24/2008	GAP
Methyl T-Butyl Ether	EPA-8260	ND	10	1	UG/KG	6/24/2008	GAP
>C10-C12 Aliphatics	NWEPH	29	5	1	MG/KG	6/25/2008	EBS
>C12-C16 Aliphatics	NWEPH	240	5	1	MG/KG	6/25/2008	EBS
>C16-C21 Aliphatics	NWEPH	130	5	1	MG/KG	6/25/2008	EBS
>C21-C34 Aliphatics	NWEPH	100	5	1	MG/KG	6/25/2008	EBS
>C10-C12 Aromatics	NWEPH	ND	5	1	MG/KG	6/25/2008	EBS
>C12-C16 Aromatics	NWEPH	20	5	1	MG/KG	6/25/2008	EBS
>C16-C21 Aromatics	NWEPH	77	5	1	MG/KG	6/25/2008	EBS
>C21-C34 Aromatics	NWEPH	78	5	1	MG/KG	6/25/2008	EBS
Total Aliphatics	NWEPH	500	10	1	MG/KG	6/25/2008	EBS
Total Aromatics	NWEPH	170	10	1	MG/KG	6/25/2008	EBS
Naphthalene	EPA-8270 SIM	0.03	0.02	1	MG/KG	6/24/2008	RAL
1-Methylnaphthalene	EPA-8270 SIM	0.03	0.02	1	MG/KG	6/24/2008	RAL
2-Methylnaphthalene	EPA-8270 SIM	0.05	0.02	1	MG/KG	6/24/2008	RAL
Acenaphthylene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Acenaphthene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Fluorene	EPA-8270 SIM	0.02	0.02	1	MG/KG	6/24/2008	RAL
Phenanthrene	EPA-8270 SIM	0.05	0.02	1	MG/KG	6/24/2008	RAL
Anthracene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Fluoranthene	EPA-8270 SIM	0.05	0.02	1	MG/KG	6/24/2008	RAL
Pyrene	EPA-8270 SIM	0.08	0.02	1	MG/KG	6/24/2008	RAL
Benzo[A]Anthracene	EPA-8270 SIM	0.02	0.02	1	MG/KG	6/24/2008	RAL
Chrysene	EPA-8270 SIM	0.03	0.02	1	MG/KG	6/24/2008	RAL
Benzo[B]Fluoranthene	EPA-8270 SIM	0.02	0.02	1	MG/KG	6/24/2008	RAL
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL
Benzo(A)Pyrene	EPA-8270 SIM	0.03	0.02	1	MG/KG	6/24/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	0.02	0.02	1	MG/KG	6/24/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	0.02	1	MG/KG	6/24/2008	RAL

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 10:00 SB-7-3.0
CCIL SAMPLE #: -28

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Benzo[G,H,I]Perylene	EPA-8270 SIM	0.04	0.02	1	MG/KG	6/24/2008	RAL

NOTE: CHROMATOGRAM INDICATES SAMPLE CONTAINS PRODUCTS WHICH ARE LIKELY WEATHERED DIESEL FUEL AND LUBE OIL.

MOTOR OIL RANGE PRODUCT RESULTS BIASED HIGH DUE TO DIESEL RANGE PRODUCT OVERLAP.

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 15:00 SB-12-0.5
CCIL SAMPLE #: -31

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	910	10	8	MG/KG	7/2/2008	BAM
Copper	EPA-6010	1100	2	8	MG/KG	7/2/2008	BAM
Zinc	EPA-6010	2800	4	8	MG/KG	7/2/2008	BAM

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 15:10 SB-12-4.0
CCIL SAMPLE #: -33

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	48	5	4	MG/KG	7/2/2008	BAM
Copper	EPA-6010	2000	1	4	MG/KG	7/2/2008	BAM
Zinc	EPA-6010	720	2	4	MG/KG	7/2/2008	BAM

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A Division of DataChem Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/8/2008
CCIL JOB #: 0806107
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 15:50 SB-13-0.5
CCIL SAMPLE #: -35

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	5.2	5	4	MG/KG	7/2/2008	BAM
Copper	EPA-6010	45	1	4	MG/KG	7/2/2008	BAM
Zinc	EPA-6010	65	2	4	MG/KG	7/2/2008	BAM

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

NOTE: TOTAL ALIPHATICS AND AROMATICS ARE BASED ON EC RANGE "ND" RESULTS SUMMED AT 1/2 OF REPORTING LIMIT

APPROVED BY:

8620 Holly Drive Suite 100 Everett, WA 98208 425 356-2600 FAX 425 356-2626 Seattle 206 292-9059

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WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 16:00 SB-13-4.0
CCIL SAMPLE #: -37

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	ND	5	4	MG/KG	7/2/2008	BAM
Copper	EPA-6010	73	1	4	MG/KG	7/2/2008	BAM
Zinc	EPA-6010	110	2	4	MG/KG	7/2/2008	BAM

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DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 14:40 SB-14-0.5
CCIL SAMPLE #: -39

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	73	5	4	MG/KG	7/2/2008	BAM
Copper	EPA-6010	920	1	4	MG/KG	7/2/2008	BAM
Zinc	EPA-6010	920	2	4	MG/KG	7/2/2008	BAM

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 14:50 SB-14-4.0
CCIL SAMPLE #: -41

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	ND	5	4	MG/KG	7/2/2008	BAM
Copper	EPA-6010	10	1	4	MG/KG	7/2/2008	BAM
Zinc	EPA-6010	38	2	4	MG/KG	7/2/2008	BAM

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 16:10 SB-15-0.5
CCIL SAMPLE #: -42

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	180	5	4	MG/KG	7/2/2008	BAM
Copper	EPA-6010	540	1	4	MG/KG	7/2/2008	BAM
Zinc	EPA-6010	770	2	4	MG/KG	7/2/2008	BAM

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 16:20 SB-15-4.0
CCIL SAMPLE #: -44

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	ND	5	4	MG/KG	7/2/2008	BAM
Copper	EPA-6010	22	1	4	MG/KG	7/2/2008	BAM
Zinc	EPA-6010	44	2	4	MG/KG	7/2/2008	BAM

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CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 14:00 SB-9-0.5
CCIL SAMPLE #: -46

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-6010	86	2	4	MG/KG	7/2/2008	BAM

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CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 14:20 SB-9-4.0
CCIL SAMPLE #: -48

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Zinc	EPA-6010	78	2	4	MG/KG	7/2/2008	BAM

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CLIENT PROJECT ID: 5147-006-01
CLIENT SAMPLE ID: 6/16/2008 13:00 SB-6-RINSATE
CCIL SAMPLE #: -49

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
TPH-Diesel Range	NWTPH-DX	ND	130	1	UG/L	6/20/2008	EBS
TPH-Oil Range	NWTPH-DX	ND	250	1	UG/L	6/20/2008	EBS
1,2-Dichloroethane (EDC)	EPA-8260 SIM	ND	0.01	1	UG/L	6/27/2008	GAP
1,2-Dibromoethane (EDB)	EPA-8260 SIM	ND	0.01	1	UG/L	6/27/2008	GAP
Methyl T-Butyl Ether	EPA-8260 SIM	ND	2	1	UG/L	6/27/2008	GAP
>C10-C12 Aliphatics	NWEPH	ND	50	1	UG/L	6/30/2008	EBS
>C12-C16 Aliphatics	NWEPH	ND	50	1	UG/L	6/30/2008	EBS
>C16-C21 Aliphatics	NWEPH	ND	50	1	UG/L	6/30/2008	EBS
>C21-C34 Aliphatics	NWEPH	ND	50	1	UG/L	6/30/2008	EBS
>C10-C12 Aromatics	NWEPH	ND	50	1	UG/L	6/30/2008	EBS
>C12-C16 Aromatics	NWEPH	ND	50	1	UG/L	6/30/2008	EBS
>C16-C21 Aromatics	NWEPH	ND	50	1	UG/L	6/30/2008	EBS
>C21-C34 Aromatics	NWEPH	ND	50	1	UG/L	6/30/2008	EBS
Total Aliphatics	NWEPH	ND	100	1	UG/L	6/30/2008	EBS
Total Aromatics	NWEPH	ND	100	1	UG/L	6/30/2008	EBS
Naphthalene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL
1-Methylnaphthalene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL
2-Methylnaphthalene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL
Acenaphthylene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL
Acenaphthene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL
Fluorene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL
Phenanthrene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL
Anthracene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL
Fluoranthene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL
Pyrene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL
Benzo[A]Anthracene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL
Chrysene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL
Benzo[B]Fluoranthene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL
Benzo[K]Fluoranthene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL
Benzo(A)Pyrene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL
Indeno[1,2,3-Cd]Pyrene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL
Dibenz[A,H]Anthracene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL

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CLIENT SAMPLE ID: 6/16/2008 13:00 SB-6-RINSATE
CCIL SAMPLE #: -49

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Benzo[G,H,I]Perylene	EPA-8270 SIM	ND	0.20	1	UG/L	7/1/2008	RAL

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QUALITY CONTROL RESULTS

SURROGATE RECOVERY

CCIL SAMPLE ID	METHOD	SUR ID	SPIKE AMOUNT	% RECV
0806107-15	NWTPH-DX	C25	5 PPM	93
0806107-15	EPA-8260	1,2-Dichloroethane-d4	100 PPB	100
0806107-15	EPA-8260	Toluene-d8	100 PPB	98
0806107-15	NWEPH	C25	20 PPM	104
0806107-15	NWEPH	p-Terphenyl	20 PPM	116
0806107-15	EPA-8270 SIM	Terphenyl-d14	1 PPM	101
0806107-20	NWTPH-DX	C25	5 PPM	99
0806107-20	EPA-8260	1,2-Dichloroethane-d4	100 PPB	110
0806107-20	EPA-8260	Toluene-d8	100 PPB	105
0806107-20	NWEPH	C25	20 PPM	102
0806107-20	NWEPH	p-Terphenyl	20 PPM	110
0806107-20	EPA-8270 SIM	Terphenyl-d14	1 PPM	104
0806107-28	NWTPH-DX	C25	5 PPM	97
0806107-28	EPA-8260	1,2-Dichloroethane-d4	100 PPB	109
0806107-28	EPA-8260	Toluene-d8	100 PPB	98
0806107-28	NWEPH	C25	20 PPM	91
0806107-28	NWEPH	p-Terphenyl	20 PPM	104
0806107-28	EPA-8270 SIM	Terphenyl-d14	1 PPM	88
0806107-49	NWTPH-DX	C25	5 PPM	85
0806107-49	EPA-8260 SIM	1,2-Dichloroethane-d4	0.8 PPB	126
0806107-49	NWEPH	C25	100 %	100
0806107-49	NWEPH	p-Terphenyl	100 %	109
0806107-49	EPA-8270 SIM	Terphenyl-d14	1 PPM	93

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QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	RESULT	ASSOCIATED SAMPLES
NWTPH-DX (TPH-Diesel Range)	ND(<25)	0806107 -15,20,28
NWTPH-DX (TPH-Oil Range)	ND(<50)	0806107 -15,20,28
EPA-8260 (1,2-Dichloroethane (EDC))	ND(<10)	0806107 -15,20,28
EPA-8260 (1,2-Dibromoethane (EDB))	ND(<5)	0806107 -15,20,28
EPA-8260 (Methyl T-Butyl Ether)	ND(<10)	0806107 -15,20,28
NWEPH (>C10-C12 Aliphatics)	ND(<5)	0806107 -15,20,28
NWEPH (>C12-C16 Aliphatics)	ND(<5)	0806107 -15,20,28
NWEPH (>C16-C21 Aliphatics)	ND(<5)	0806107 -15,20,28
NWEPH (>C21-C34 Aliphatics)	ND(<5)	0806107 -15,20,28
NWEPH (>C10-C12 Aromatics)	ND(<5)	0806107 -15,20,28
NWEPH (>C12-C16 Aromatics)	ND(<5)	0806107 -15,20,28
NWEPH (>C16-C21 Aromatics)	ND(<5)	0806107 -15,20,28
NWEPH (>C21-C34 Aromatics)	ND(<5)	0806107 -15,20,28
NWEPH (Total Aliphatics)	ND(<10)	0806107 -15,20,28
NWEPH (Total Aromatics)	ND(<10)	0806107 -15,20,28
EPA-8270 SIM (Naphthalene)	ND(<0.02)	0806107 -15,20,28
EPA-8270 SIM (1-Methylnaphthalene)	ND(<0.02)	0806107 -15,20,28
EPA-8270 SIM (2-Methylnaphthalene)	ND(<0.02)	0806107 -15,20,28
EPA-8270 SIM (Acenaphthylene)	ND(<0.02)	0806107 -15,20,28
EPA-8270 SIM (Acenaphthene)	ND(<0.02)	0806107 -15,20,28
EPA-8270 SIM (Fluorene)	ND(<0.02)	0806107 -15,20,28
EPA-8270 SIM (Phenanthrene)	ND(<0.02)	0806107 -15,20,28
EPA-8270 SIM (Anthracene)	ND(<0.02)	0806107 -15,20,28
EPA-8270 SIM (Fluoranthene)	ND(<0.02)	0806107 -15,20,28
EPA-8270 SIM (Pyrene)	ND(<0.02)	0806107 -15,20,28
EPA-8270 SIM (Benzo[A]Anthracene)	ND(<0.02)	0806107 -15,20,28
EPA-8270 SIM (Chrysene)	ND(<0.02)	0806107 -15,20,28
EPA-8270 SIM (Benzo[B]Fluoranthene)	ND(<0.02)	0806107 -15,20,28
EPA-8270 SIM (Benzo[K]Fluoranthene)	ND(<0.02)	0806107 -15,20,28
EPA-8270 SIM (Benzo(A)Pyrene)	ND(<0.02)	0806107 -15,20,28
EPA-8270 SIM (Indeno[1,2,3-Cd]Pyrene)	ND(<0.02)	0806107 -15,20,28
EPA-8270 SIM (Dibenz[A,H]Anthracene)	ND(<0.02)	0806107 -15,20,28
EPA-8270 SIM (Benzo[G,H,I]Perylene)	ND(<0.02)	0806107 -15,20,28

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CLIENT PROJECT ID: 5147-006-01

QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	RESULT	ASSOCIATED SAMPLES
EPA-6010 (Arsenic)	ND(<5.0)	0806107 -02 to 44
EPA-6010 (Copper)	ND(<1.0)	0806107 -02 to 44
EPA-6010 (Zinc)	ND(<2.0)	0806107 -02 to 44
EPA-6010 (Zinc)	ND(<2.0)	0806107 -46,48
NWTPH-DX (TPH-Diesel Range)	ND(<130)	0806107 -49
NWTPH-DX (TPH-Oil Range)	ND(<250)	0806107 -49
EPA-8260 SIM (1,2-Dichloroethane (EDC))	ND(<0.01)	0806107 -49
EPA-8260 SIM (1,2-Dibromoethane (EDB))	ND(<0.01)	0806107 -49
EPA-8260 (Methyl T-Butyl Ether)	ND(<2)	0806107 -49
NWEPH (>C10-C12 Aliphatics)	ND(<50)	0806107 -49
NWEPH (>C12-C16 Aliphatics)	ND(<50)	0806107 -49
NWEPH (>C16-C21 Aliphatics)	ND(<50)	0806107 -49
NWEPH (>C21-C34 Aliphatics)	ND(<50)	0806107 -49
NWEPH (>C10-C12 Aromatics)	ND(<50)	0806107 -49
NWEPH (>C12-C16 Aromatics)	ND(<50)	0806107 -49
NWEPH (>C16-C21 Aromatics)	ND(<50)	0806107 -49
NWEPH (>C21-C34 Aromatics)	ND(<50)	0806107 -49
NWEPH (Total Aliphatics)	ND(<100)	0806107 -49
NWEPH (Total Aromatics)	ND(<100)	0806107 -49
EPA-8270 SIM (Naphthalene)	ND(<0.02)	0806107 -49
EPA-8270 SIM (1-Methylnaphthalene)	ND(<0.02)	0806107 -49
EPA-8270 SIM (2-Methylnaphthalene)	ND(<0.02)	0806107 -49
EPA-8270 SIM (Acenaphthylene)	ND(<0.02)	0806107 -49
EPA-8270 SIM (Acenaphthene)	ND(<0.02)	0806107 -49
EPA-8270 SIM (Fluorene)	ND(<0.02)	0806107 -49
EPA-8270 SIM (Phenanthrene)	ND(<0.02)	0806107 -49
EPA-8270 SIM (Anthracene)	ND(<0.02)	0806107 -49
EPA-8270 SIM (Fluoranthene)	ND(<0.02)	0806107 -49
EPA-8270 SIM (Pyrene)	ND(<0.02)	0806107 -49
EPA-8270 SIM (Benzo[A]Anthracene)	ND(<0.02)	0806107 -49
EPA-8270 SIM (Chrysene)	ND(<0.02)	0806107 -49
EPA-8270 SIM (Benzo[B]Fluoranthene)	ND(<0.02)	0806107 -49
EPA-8270 SIM (Benzo[K]Fluoranthene)	ND(<0.02)	0806107 -49

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/8/2008
CCIL JOB #: 0806107
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01

QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	RESULT	ASSOCIATED SAMPLES
EPA-8270 SIM (Benzo(A)Pyrene)	ND(<0.02)	0806107 -49
EPA-8270 SIM (Indeno[1,2,3-Cd]Pyrene)	ND(<0.02)	0806107 -49
EPA-8270 SIM (Dibenz[A,H]Anthracene)	ND(<0.02)	0806107 -49
EPA-8270 SIM (Benzo[G,H,I]Perylene)	ND(<0.02)	0806107 -49

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CLIENT: GEOENGINEERS, INC.
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DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01

QUALITY CONTROL RESULTS

SPIKE/SPIKE DUPLICATE RESULTS

METHOD	ANALYTE	ASSOCIATED SAMPLES	SPIKE AMOUNT	DILUTION FACTOR	SPIKE RECOVERY	SPIKE DUP RECOVERY	RPD
NWTPH-DX	TPH-Diesel Range	0806107 -15,20,28	125 MG/KG	1	80 %	87 %	8
EPA-8260	1,1-Dichloroethene	0806107 -15,20,28	10 UG/KG	1	110 %	125 %	13
EPA-8260	Methyl T-Butyl Ether	0806107 -15,20,28	10 UG/KG	1	103 %	112 %	8
NWEPH	>C10-C12 Aliphatics	0806107 -15,20,28	20 MG/KG	1	88 %	90 %	2
NWEPH	>C12-C16 Aliphatics	0806107 -15,20,28	20 MG/KG	1	91 %	95 %	4
NWEPH	>C16-C21 Aliphatics	0806107 -15,20,28	20 MG/KG	1	93 %	98 %	5
NWEPH	>C21-C34 Aliphatics	0806107 -15,20,28	20 MG/KG	1	104 %	112 %	7
NWEPH	>C10-C12 Aromatics	0806107 -15,20,28	20 MG/KG	1	78 %	88 %	12
NWEPH	>C12-C16 Aromatics	0806107 -15,20,28	20 MG/KG	1	84 %	90 %	7
NWEPH	>C16-C21 Aromatics	0806107 -15,20,28	20 MG/KG	1	86 %	93 %	8
NWEPH	>C21-C34 Aromatics	0806107 -15,20,28	20 MG/KG	1	79 %	88 %	11
EPA-8270 SIM	Naphthalene	0806107 -15,20,28	0.5 MG/KG	1	65 %	73 %	12
EPA-8270 SIM	Acenaphthene	0806107 -15,20,28	0.5 MG/KG	1	72 %	75 %	4
EPA-8270 SIM	Pyrene	0806107 -15,20,28	0.5 MG/KG	1	83 %	84 %	1
EPA-8270 SIM	Benzo[G,H,I]Perylene	0806107 -15,20,28	0.5 MG/KG	1	78 %	95 %	20
EPA-6010	Arsenic	0806107 -02 to 44	20 MG/KG	1	100 %	103 %	3
EPA-6010	Copper	0806107 -02 to 44	20 MG/KG	1	102 %	104 %	2
EPA-6010	Zinc	0806107 -02 to 44	20 MG/KG	1	102 %	104 %	2
EPA-6010	Zinc	0806107 -46,48	20 MG/KG	1	103 %	103 %	0
NWTPH-DX	TPH-Diesel Range	0806107 -49	1250 UG/L	1	82 %	85 %	4
EPA-8260 SIM	1,1-Dichloroethene	0806107 -49	0.05 UG/L	1	86 %	95 %	11
NWEPH	>C10-C12 Aliphatics	0806107 -49	20 UG/L	1	81 %	59 %	31*
NWEPH	>C12-C16 Aliphatics	0806107 -49	20 UG/L	1	90 %	68 %	28*
NWEPH	>C16-C21 Aliphatics	0806107 -49	20 UG/L	1	92 %	73 %	23
NWEPH	>C21-C34 Aliphatics	0806107 -49	20 UG/L	1	102 %	81 %	23
NWEPH	>C10-C12 Aromatics	0806107 -49	20 UG/L	1	84 %	59 %	35*
NWEPH	>C12-C16 Aromatics	0806107 -49	20 UG/L	1	87 %	62 %	34*
NWEPH	>C16-C21 Aromatics	0806107 -49	20 UG/L	1	93 %	70 %	28*
NWEPH	>C21-C34 Aromatics	0806107 -49	20 UG/L	1	87 %	72 %	19
EPA-8270 SIM	Naphthalene	0806107 -49	5 UG/L	1	76 %	57 %	28*
EPA-8270 SIM	Acenaphthene	0806107 -49	5 UG/L	1	81 %	62 %	27
EPA-8270 SIM	Pyrene	0806107 -49	5 UG/L	1	89 %	74 %	19
EPA-8270 SIM	Benzo[G,H,I]Perylene	0806107 -49	5 UG/L	1	85 %	76 %	11

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 7/8/2008
CCIL JOB #: 0806107
DATE RECEIVED: 6/18/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: 5147-006-01

QUALITY CONTROL RESULTS

SPIKE/SPIKE DUPLICATE RESULTS

METHOD	ANALYTE	ASSOCIATED SAMPLES	SPIKE AMOUNT	DILUTION FACTOR	SPIKE RECOVERY	SPIKE DUP RECOVERY	RPD

* RPD OUTSIDE OF CONTROL LIMITS. ASSOCIATED SPIKE RESULTS WITHIN CONTROL LIMITS. NO CORRECTIVE ACTION TAKEN.

APPROVED BY:

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(206) 292-9059 Seattle
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Chain Of Custody/ Laboratory Analysis Request

CCI Job# (Laboratory Use Only) 806107

Date 6-16-08 Page 1 Of 6

PROJECT ID: 5147-006-01
REPORT TO COMPANY: GeoEngineers
PROJECT MANAGER: Victoria England
ADDRESS: 600 Stewart St. Ste 1700
Seattle Wa
PHONE: 206-728-2674 FAX:
P.O. NUMBER: E-MAIL:
INVOICE TO COMPANY: SAME
ATTENTION:
ADDRESS:

LABORATORY COPY

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	EDD Report	Arsenic						NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. SB-1-0.5	6-16-08	1650	S	1																						1	
2. SB-1-2.0		1655		2																⊗						1	
3. SB-1-4.0		1700		3																⊗						1	
4. SB-1-6.0		1705		4																						1	
5. SB-2-0.5		1630		5																						1	
6. SB-2-2.0		1635		6																⊗						1	
7. SB-2-4.0		1640		7																⊗						1	
8. SB-2-6.0		1645		8																						1	
9. SB-3-1.0		0810		9																						5	
10. SB-3-3.0		0850		10																						8	

SPECIAL INSTRUCTIONS ⊗ Added 6/19/08 per V. England

CCI Analytical Laboratories, Inc accepts and processes this request on the terms and conditions set forth on the reverse side. By its signature hereon, Customer accepts these terms and conditions.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: GEI 6-17-08 1740
Received By: CCI 6/17/08 1740
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 (Standard) | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 (Standard) | 3 | 1 | SAME DAY

OTHER: Specify: Samples 10, 11, 12, 15, 16, 18, 20, 21, 23, 25, 26, 28, 30, 33, 51 all 5035 full kits.

* Turnaround request less than standard may incur Rush Charges

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(206) 292-9059 Seattle
(425) 356-2626 Fax
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Chain Of Custody/ Laboratory Analysis Request

CCI Job# (Laboratory Use Only) 806107

Date 6-16-08 Page 2 Of 6

PROJECT ID: 5147-006-01
REPORT TO COMPANY: GeoEngineers
PROJECT MANAGER: Victoria England
ADDRESS: 600 Stewart St. Ste 1700
Seattle WA
PHONE: 206-728-2674 FAX:
P.O. NUMBER: E-MAIL:
INVOICE TO COMPANY:
ATTENTION: SAME
ADDRESS:

ANALYSIS REQUESTED

OTHER (Specify)

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	EDD Report + Diesel/Gasoline EPH Dioxins/Furans							NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. SB3-5-0	6-16-08	9:00	S	11																							8	
2. SB-3-7.0		9:10		12																							8	
3. SB3-9.0		9:20		13																							5	
4. SB-4-1.0		1100		14																							5	
5. SB-4-3.0		1110		15		⊗			⊗			⊗			⊗						⊗	⊗						8	
6. SB-4-5.0		1120		16																							8	
7. SB-4-7.5		1130		17																							4	
8. SB-4-9.0		1140		18																	⊗						8	
9. SB-5-1.0		1240		19																							5	
10. SB-5-3.0		1280		20		⊗			⊗			⊗			⊗						⊗	⊗						8	

SPECIAL INSTRUCTIONS ⊗ Added 6/19/08 per V. England

CCI Analytical Laboratories, Inc accepts and processes this request on the terms and conditions set forth on the reverse side. By its signature hereon, Customer accepts these terms and conditions.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: GEI 6-17-08 1740
   Received By: CCI 6/17/08 1740
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 (Standard) 5 3 2 1 SAME DAY

Fuels & Hydrocarbon Analysis: 5 (Standard) 3 1 SAME DAY

OTHER: Specify:

* Turnaround request less than standard may incur Rush Charges

LABORATORY COPY

CCI Analytical Laboratories
8620 Holly Drive
Everett, WA 98208
Phone (425) 356-2600
(206) 292-9059 Seattle
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Chain Of Custody/ Laboratory Analysis Request

CCI Job# (Laboratory Use Only) 906107

Date 6-16-08 Page 3 Of 6

PROJECT ID: 5147-006-01
REPORT TO COMPANY: GeoEngineers
PROJECT MANAGER: Victoria England
ADDRESS: 600 Stewart St. Ste 1700
Seattle Wa
PHONE: 206-728-2674 FAX:
P.O. NUMBER: E-MAIL:
INVOICE TO COMPANY:
ATTENTION: SAME
ADDRESS:

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☒	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	EDD Report	EPH	Dioxins/Furans					NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. SB-5-5.0	6-16-08	~~1300~~ 1230	S	~~30~~ 21																	⊗					8
2. SB-5-7.0		~~1340~~ 1240		~~31~~ 22																						4
3. SB-5-9.0		~~1320~~ 1250		~~32~~ 23																	⊗					8
4. SB-6-1.0		1320		24 ~~33~~																						4
5. SB-6-5.0		~~1340~~ 1330		25 ~~34~~																						8
6. SB-6-7.0		~~1350~~ 1350		26 ~~35~~																						8
7. SB-7-1.0		~~1000~~ 950		27 ~~36~~																						5
8. SB-7-3.0		1000		28 ~~37~~		⊗			⊗			⊗			⊗							⊗	⊗				8
9. SB-7-5.0		1020		29 ~~38~~																						5
10. SB-7-9.0	↓	1030	↓	30 ~~39~~																	⊗					8

LABORATORY COPY

SPECIAL INSTRUCTIONS ⊗ Added 6/19/08 per V. England

CCI Analytical Laboratories, Inc accepts and processes this request on the terms and conditions set forth on the reverse side. By its signature hereon, Customer accepts these terms and conditions.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: GEI 6-17-08 1740
   Received By: CCI 6/17/08 1740
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify:

* Turnaround request less than standard may incur Rush Charges

CCI Analytical Laboratories
8620 Holly Drive
Everett, WA 98208
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(206) 292-9059 Seattle
(425) 356-2626 Fax
http://www.ccilabs.com

Chain Of Custody/ Laboratory Analysis Request

CCI Job# (Laboratory Use Only) 806107

Date 6-16-08 Page 4 Of 6

PROJECT ID: 5147-006-01
REPORT TO COMPANY: GeoEngineers
PROJECT MANAGER: Victoria England
ADDRESS: 600 Stewart St. Ste 1700
Seattle WA
PHONE: 206-728-2674 FAX:
P.O. NUMBER: E-MAIL:
INVOICE TO COMPANY:
ATTENTION: SAME
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify): EDD Report Zn, As, Cu	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. SB-12-0.5	6-16-08	1500	S	31 ~~46~~															⊗		1
2. SB-12-2.0		1505		32 ~~47~~																	1
3. SB-12-4.0		1510		33 ~~42~~															⊗		4
4. SB-12-6.0		1515		34 ~~43~~																	1
5. SB-13-0.5		1550		35 ~~44~~															⊗		1
6. SB-13-2.0		1555		36 45																	1
7. SB-13-4.0		1600		37 ~~46~~															⊗		1
8. SB-13-6.0		1605		38 47																	1
9. SB ~~14~~ -0.5		1440		39 48															⊗		2
10. SB-14-2.0		1445		40 49																	1

SPECIAL INSTRUCTIONS ⊗ Added 6/19/08 per V. England

CCI Analytical Laboratories, Inc accepts and processes this request on the terms and conditions set forth on the reverse side. By its signature hereon, Customer accepts these terms and conditions.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: [illegible] GEI 6-17-08 1740
Received By: [illegible] CCI 6/17/08 1740
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 (Standard) 5 3 2 1 SAME DAY

Fuels & Hydrocarbon Analysis: 5 (Standard) 3 1 SAME DAY

OTHER: Specify:

* Turnaround request less than standard may incur Rush Charges

LABORATORY COPY

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Chain Of Custody/ Laboratory Analysis Request

CCI Job# (Laboratory Use Only) 806107

Date 6-16-08 Page 5 Of 6

PROJECT ID: 5147-006-01
REPORT TO COMPANY: GeoEngineers
PROJECT MANAGER: Victoria England
ADDRESS: 600 Stewart St. Ste 1700
Seattle WA
PHONE: 206-728-2674 FAX:
P.O. NUMBER: E-MAIL:
INVOICE TO COMPANY:
ATTENTION: SAME
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☒	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. SB-14-4.0	6-16-08	1450	S	41																⊗ As, Cu, Zn		2
2. SB-15-0.5		1610		42																⊗		1
3. SB-15-2.0		1615		43																		1
4. SB-15-4.0		1620		44																⊗		1
5. SB-15-6.0		1625		45																		1
6. SB-9-0.5		1400		46																⊗ Zn		2
7. SB-9-2.0		1410		47																		2
8. SB-9-4.0		1420		48																⊗		2
9. SB-6-Rinsate		1300	W	49		⊗			⊗			⊗		⊗	⊗	⊗				⊗ EPH		8
10. SB-7-11.0	6-16-08	1040	S	50																		5

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SPECIAL INSTRUCTIONS ⊗ Added 6/19/08 per V England

CCI Analytical Laboratories, Inc accepts and processes this request on the terms and conditions set forth on the reverse side. By its signature hereon, Customer accepts these terms and conditions.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: CCI 6-17-08 1740
   Received By: CCI 6/17/08 1740
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 (Standard) | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 (Standard) | 3 | 1 | SAME DAY

OTHER: Specify:

* Turnaround request less than standard may incur Rush Charges

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http://www.ccilabs.com

Chain Of Custody/ Laboratory Analysis Request

CCI Job# (Laboratory Use Only) 906107

Date 6-17-06 Page 6 of 6

PROJECT ID: B 5147-006-01
REPORT TO COMPANY: GeoEngineers
PROJECT MANAGER: Victoria England
ADDRESS: 6000 Sixth Ave ST. Ste 1700 Seattle WA
PHONE: 206-728-2674 FAX:
P.O. NUMBER: E-MAIL:
INVOICE TO COMPANY: SAME
ATTENTION:
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify)	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. SB-7-7.0	6.16.06	1020	S	01																8	
2. Trip Blank			W	02																4	
3.																					
4.																					
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					

LABORATORY COPY

SPECIAL INSTRUCTIONS

CCI Analytical Laboratories, Inc accepts and processes this request on the terms and conditions set forth on the reverse side. By its signature hereon, Customer accepts these terms and conditions.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: GEI 6-17-06 1740
   Received By: CCI 6/17/06 1740
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 (Standard) 5 3 2 1 SAME DAY

Fuels & Hydrocarbon Analysis: 5 (Standard) 3 1 SAME DAY

OTHER:
Specify:

* Turnaround request less than standard may incur Rush Charges

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

Report Prepared for:

Rick Bagan
CCI Analytical Laboratories
8620 Holly Drive, Suite 100
Everett WA 98208

REPORT OF LABORATORY ANALYSIS FOR PCDD/PCDF

Report Information:

Pace Project #: 1075603
Sample Receipt Date: 06/20/2008
Client Project #: 806107
Client Sub PO #: N/A
State Cert #: C218

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCDD/PCDF Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed and prepared by:

Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

Report Prepared Date:
July 14, 2008

Report of Laboratory Analysis

Pace Analytical Services, Inc.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on six samples submitted by a representative of CCI Analytical Laboratories. The samples were analyzed for the presence or absence of polychlorodibenzo-p-dioxins (PCDDs) and polychlorodibenzofurans (PCDFs) using a modified version of USEPA Method 8290. Reporting limits were based on signal-to-noise measurements.

The recoveries of the isotopically-labeled PCDD/PCDF internal standards in the sample extracts ranged from 45-106%. With the exception of one low value, which was flagged "P" on the results table, the labeled standard recoveries obtained for this project were within the 40-135% target range specified in Method 8290. Also, since the quantification of the native 2,3,7,8-substituted isomers was based on isotope dilution, the data were automatically corrected for variation in recovery and accurate values were obtained.

In some cases, interfering substances impacted the determinations of PCDD or PCDF congeners. The affected values were flagged "I" where incorrect isotope ratios were obtained, or "E" where polychlorinated diphenyl ethers were present.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain trace levels of several congeners. These were below the calibration range of the method. Sample levels similar to the corresponding blank levels were flagged "B" on the results tables and may be, at least partially, attributed to the background. It should be noted that levels less than ten times the background are not generally considered to be statistically different from the background.

Laboratory and matrix spike samples were also prepared with the sample batch using clean sand or sample matrix that had been fortified with native standard materials. The results show that the spiked native compounds were recovered at 90-135%, with relative percent differences of 4.4-18.8%. These results indicate high degrees of accuracy and precision for these determinations.

Appendix A

Sample Management

CCI Analytical Laboratories
8620 Holly Drive
Everett, WA 98208
Phone (425) 356-2600
(206) 292-9059 Seattle
(425) 356-2626 Fax
http://www.ccilabs.com

Chain Of Custody/ Laboratory Analysis Request

CCI Job# (Laboratory Use Only) 1075603

Date 6/19/08 Page 1 Of 1

PROJECT ID: 806107
REPORT TO COMPANY: CCI Analytical Laboratories
PROJECT MANAGER: Rick Bagan
ADDRESS: 8620 Holly Drive #100
Everett WA 98208
PHONE: 425 356 2600 FAX:
P.O. NUMBER: E-MAIL: rickb@ccilabs.com
INVOICE TO COMPANY:
ATTENTION: SAME
ADDRESS:

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify) Dioxins/Furans 8290	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. 806107-15	6/18/08	1110	Soil																X	1	
2. 18		1140																	X	1	
3. 20		1220																	X	1	
4. 23		1250																	X	1	
5. 28		1100																	X	1	
6. 30		1030																	X	1	
7.																					
8.																					
9.																					
10.																					

SPECIAL INSTRUCTIONS Please email report by 7/11/08 See attached desired reporting limits.

CCI Analytical Laboratories, Inc accepts and processes this request on the terms and conditions set forth on the reverse side. By its signature hereon, Customer accepts these terms and conditions.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Rick Bagan CCIAL 6/19/08 3:20 T=5.0
Received By: J. Richardson Pace Mn 6-20-08 09:36
2. Relinquished By:
Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify:

* Turnaround request less than standard may incur Rush Charges

LABORATORY COPY

Report No.....1075603_8290

1130

Pace Analytical

Sample Condition Upon Receipt

Client Name: CCI

Project # 1075603

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 8581 7497 6089

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☒ Other _____

Thermometer Used 230194010, 72310129 Type of Ice: (Wet) (Blue) None ☐ Samples on Ice, cooling process has begun

Cooler Temperature 5.0 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Date and Initials of person examining contents: JL 6-20-08

Comments:

Chain of Custody Present:	☑Yes	☐No	☐N/A
Chain of Custody Filled Out:	☑Yes	☐No	☐N/A
Chain of Custody Relinquished:	☑Yes	☐No	☐N/A
Sampler Name & Signature on COC:	☐Yes	☑No	☐N/A
Samples Arrived within Hold Time:	☑Yes	☐No	☐N/A
Short Hold Time Analysis (<72hr):	☐Yes	☑No	☐N/A
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A
Sufficient Volume:	☑Yes	☐No	☐N/A
Correct Containers Used:	☑Yes	☐No	☐N/A
-Pace Containers Used:	☐Yes	☑No	☐N/A
Containers Intact:	☑Yes	☐No	☐N/A
Filtered volume received for Dissolved tests	☐Yes	☐No	☑N/A
Sample Labels match COC:	☑Yes	☐No	☐N/A
-Includes date/time/ID/Analysis Matrix: SL			
All containers needing preservation have been checked.	☐Yes	☐No	☑N/A
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☑N/A
exceptions: VOA, coliform, TOC, O&G, WI-DRO (water)	☐Yes	☑No	
Samples checked for dechlorination:	☐Yes	☐No	☑N/A
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☑N/A
Trip Blank Present:	☐Yes	☐No	☑N/A
Trip Blank Custody Seals Present	☐Yes	☐No	☑N/A
Pace Trip Blank Lot # (if purchased):			

Comments:	Initial when completed	Lot # of added preservative
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: MAH **Date:** 6/23/08

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Appendix B

Sample Analysis Summary

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - CCI Analytical Laboratories

Client's Sample ID	806107-15		
Lab Sample ID	1075603001		
Filename	D80702A30		
Injected By	CVS		
Total Amount Extracted	14.7 g	Matrix	Soil
% Moisture	16.6	Dilution	NA
Dry Weight Extracted	12.3 g	Collected	06/16/2008
ICAL ID	D80702GC2	Received	06/20/2008
CCal Filename(s)	D80702A20 & D80702A44	Extracted	06/27/2008
Method Blank ID	BLANK-16804	Analyzed	07/03/2008 01:28

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.27	-----	0.052	BJ	2,3,7,8-TCDF-13C	2.00	85
Total TCDF	5.40	-----	0.052		2,3,7,8-TCDD-13C	2.00	84
					1,2,3,7,8-PeCDF-13C	2.00	83
2,3,7,8-TCDD	1.90	-----	0.061		2,3,4,7,8-PeCDF-13C	2.00	84
Total TCDD	3.30	-----	0.061		1,2,3,7,8-PeCDD-13C	2.00	94
					1,2,3,4,7,8-HxCDF-13C	2.00	77
1,2,3,7,8-PeCDF	0.15	-----	0.054	BJ	1,2,3,6,7,8-HxCDF-13C	2.00	73
2,3,4,7,8-PeCDF	0.57	-----	0.043	BJ	2,3,4,6,7,8-HxCDF-13C	2.00	72
Total PeCDF	5.00	-----	0.049		1,2,3,7,8,9-HxCDF-13C	2.00	72
					1,2,3,4,7,8-HxCDD-13C	2.00	78
1,2,3,7,8-PeCDD	0.20	-----	0.063	BJ	1,2,3,6,7,8-HxCDD-13C	2.00	73
Total PeCDD	1.50	-----	0.063	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	62
					1,2,3,4,7,8,9-HpCDF-13C	2.00	53
1,2,3,4,7,8-HxCDF	0.17	-----	0.038	BJ	1,2,3,4,6,7,8-HpCDD-13C	2.00	65
1,2,3,6,7,8-HxCDF	0.21	-----	0.045	BJ	OCDD-13C	4.00	45
2,3,4,6,7,8-HxCDF	0.34	-----	0.037	BJ			
1,2,3,7,8,9-HxCDF	-----	0.14	0.032	I	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	3.80	-----	0.038	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.14	-----	0.063	J	2,3,7,8-TCDD-37Cl4	0.20	94
1,2,3,6,7,8-HxCDD	0.25	-----	0.085	BJ			
1,2,3,7,8,9-HxCDD	0.25	-----	0.046	J			
Total HxCDD	3.50	-----	0.065	J			
1,2,3,4,6,7,8-HpCDF	1.40	-----	0.059	BJ	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	-----	0.11	0.081	I	Equivalence: 2.5 ng/Kg		
Total HpCDF	1.40	-----	0.070	BJ	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	2.40	-----	0.063	J			
Total HpCDD	4.80	-----	0.063				
OCDF	1.50	-----	0.088	BJ			
OCDD	20.00	-----	0.088				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - CCI Analytical Laboratories

Client's Sample ID	806107-18		
Lab Sample ID	1075603002		
Filename	D80702A32		
Injected By	CVS		
Total Amount Extracted	14.5 g	Matrix	Soil
% Moisture	16.0	Dilution	NA
Dry Weight Extracted	12.1 g	Collected	06/16/2008
ICAL ID	D80702GC2	Received	06/20/2008
CCal Filename(s)	D80702A20 & D80702A44	Extracted	06/27/2008
Method Blank ID	BLANK-16804	Analyzed	07/03/2008 02:23

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	ND	-----	0.056		2,3,7,8-TCDF-13C	2.00	92
Total TCDF	ND	-----	0.056		2,3,7,8-TCDD-13C	2.00	91
					1,2,3,7,8-PeCDF-13C	2.00	93
2,3,7,8-TCDD	ND	-----	0.076		2,3,4,7,8-PeCDF-13C	2.00	92
Total TCDD	0.110	-----	0.076	J	1,2,3,7,8-PeCDD-13C	2.00	106
					1,2,3,4,7,8-HxCDF-13C	2.00	85
1,2,3,7,8-PeCDF	-----	0.068	0.058	I	1,2,3,6,7,8-HxCDF-13C	2.00	82
2,3,4,7,8-PeCDF	-----	0.086	0.044	I	2,3,4,6,7,8-HxCDF-13C	2.00	82
Total PeCDF	0.068	-----	0.051	BJ	1,2,3,7,8,9-HxCDF-13C	2.00	82
					1,2,3,4,7,8-HxCDD-13C	2.00	89
1,2,3,7,8-PeCDD	ND	-----	0.078		1,2,3,6,7,8-HxCDD-13C	2.00	82
Total PeCDD	ND	-----	0.078		1,2,3,4,6,7,8-HpCDF-13C	2.00	76
					1,2,3,4,7,8,9-HpCDF-13C	2.00	64
1,2,3,4,7,8-HxCDF	-----	0.072	0.051	I	1,2,3,4,6,7,8-HpCDD-13C	2.00	83
1,2,3,6,7,8-HxCDF	-----	0.100	0.051	E	OCDD-13C	4.00	68
2,3,4,6,7,8-HxCDF	0.190	-----	0.052	BJ			
1,2,3,7,8,9-HxCDF	-----	0.110	0.056	E	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	0.440	-----	0.052	BJ	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.088	-----	0.068	J	2,3,7,8-TCDD-37Cl4	0.20	96
1,2,3,6,7,8-HxCDD	ND	-----	0.092				
1,2,3,7,8,9-HxCDD	ND	-----	0.092				
Total HxCDD	0.220	-----	0.084	BJ			
1,2,3,4,6,7,8-HpCDF	0.470	-----	0.083	BJ	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	-----	0.150	0.120	I	Equivalence: 0.14 ng/Kg		
Total HpCDF	0.670	-----	0.100	BJ	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	0.430	-----	0.100	J			
Total HpCDD	0.890	-----	0.100	BJ			
OCDF	0.460	-----	0.130	BJ			
OCDD	2.500	-----	0.110	BJ			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.
ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
B = Less than 10x higher than method blank level
E = PCDE Interference
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - CCI Analytical Laboratories

Client's Sample ID	806107-20		
Lab Sample ID	1075603003		
Filename	D80702A34		
Injected By	CVS		
Total Amount Extracted	14.0 g	Matrix	Soil
% Moisture	22.4	Dilution	NA
Dry Weight Extracted	10.9 g	Collected	06/16/2008
ICAL ID	D80702GC2	Received	06/20/2008
CCal Filename(s)	D80702A20 & D80702A44	Extracted	06/27/2008
Method Blank ID	BLANK-16804	Analyzed	07/03/2008 03:18

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	2.20	-----	0.021		2,3,7,8-TCDF-13C	2.00	91
Total TCDF	82.00	-----	0.021		2,3,7,8-TCDD-13C	2.00	84
					1,2,3,7,8-PeCDF-13C	2.00	85
2,3,7,8-TCDD	0.63	-----	0.097	J	2,3,4,7,8-PeCDF-13C	2.00	89
Total TCDD	9.10	-----	0.097		1,2,3,7,8-PeCDD-13C	2.00	98
					1,2,3,4,7,8-HxCDF-13C	2.00	82
1,2,3,7,8-PeCDF	1.30	-----	0.071	J	1,2,3,6,7,8-HxCDF-13C	2.00	77
2,3,4,7,8-PeCDF	6.30	-----	0.067		2,3,4,6,7,8-HxCDF-13C	2.00	77
Total PeCDF	78.00	-----	0.069		1,2,3,7,8,9-HxCDF-13C	2.00	77
					1,2,3,4,7,8-HxCDD-13C	2.00	81
1,2,3,7,8-PeCDD	-----	0.54	0.054	I	1,2,3,6,7,8-HxCDD-13C	2.00	76
Total PeCDD	7.40	-----	0.054		1,2,3,4,6,7,8-HpCDF-13C	2.00	68
					1,2,3,4,7,8,9-HpCDF-13C	2.00	56
1,2,3,4,7,8-HxCDF	1.10	-----	0.046	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	70
1,2,3,6,7,8-HxCDF	3.40	-----	0.062	J	OCDD-13C	4.00	54
2,3,4,6,7,8-HxCDF	3.30	-----	0.065	J			
1,2,3,7,8,9-HxCDF	0.50	-----	0.070	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	41.00	-----	0.061		1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.37	-----	0.048	J	2,3,7,8-TCDD-37Cl4	0.20	85
1,2,3,6,7,8-HxCDD	0.72	-----	0.048	BJ			
1,2,3,7,8,9-HxCDD	0.49	-----	0.071	J			
Total HxCDD	12.00	-----	0.056				
1,2,3,4,6,7,8-HpCDF	3.00	-----	0.055	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	0.44	-----	0.086	BJ	Equivalence: 3.9 ng/Kg		
Total HpCDF	7.30	-----	0.070		(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	5.30	-----	0.081				
Total HpCDD	10.00	-----	0.081				
OCDF	2.80	-----	0.140	BJ			
OCDD	30.00	-----	0.130				

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.
ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - CCI Analytical Laboratories

Client's Sample ID	806107-23		
Lab Sample ID	1075603004		
Filename	D80702A36		
Injected By	CVS		
Total Amount Extracted	15.6 g	Matrix	Soil
% Moisture	19.0	Dilution	NA
Dry Weight Extracted	12.6 g	Collected	06/16/2008
ICAL ID	D80702GC2	Received	06/20/2008
CCal Filename(s)	D80702A20 & D80702A44	Extracted	06/27/2008
Method Blank ID	BLANK-16804	Analyzed	07/03/2008 04:14

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.077	-----	0.040	BJ	2,3,7,8-TCDF-13C	2.00	96
Total TCDF	0.077	-----	0.040	BJ	2,3,7,8-TCDD-13C	2.00	97
					1,2,3,7,8-PeCDF-13C	2.00	95
2,3,7,8-TCDD	ND	-----	0.060		2,3,4,7,8-PeCDF-13C	2.00	96
Total TCDD	ND	-----	0.060		1,2,3,7,8-PeCDD-13C	2.00	104
					1,2,3,4,7,8-HxCDF-13C	2.00	93
1,2,3,7,8-PeCDF	-----	0.071	0.049	I	1,2,3,6,7,8-HxCDF-13C	2.00	89
2,3,4,7,8-PeCDF	ND	-----	0.047		2,3,4,6,7,8-HxCDF-13C	2.00	88
Total PeCDF	0.150	-----	0.048	BJ	1,2,3,7,8,9-HxCDF-13C	2.00	86
					1,2,3,4,7,8-HxCDD-13C	2.00	96
1,2,3,7,8-PeCDD	0.110	-----	0.066	BJ	1,2,3,6,7,8-HxCDD-13C	2.00	91
Total PeCDD	0.110	-----	0.066	BJ	1,2,3,4,6,7,8-HpCDF-13C	2.00	82
					1,2,3,4,7,8,9-HpCDF-13C	2.00	68
1,2,3,4,7,8-HxCDF	-----	0.060	0.048	I	1,2,3,4,6,7,8-HpCDD-13C	2.00	88
1,2,3,6,7,8-HxCDF	0.072	-----	0.048	BJ	OCDD-13C	4.00	67
2,3,4,6,7,8-HxCDF	0.160	-----	0.040	BJ			
1,2,3,7,8,9-HxCDF	0.054	-----	0.036	J	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	0.430	-----	0.043	BJ	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.066	-----	0.052	J	2,3,7,8-TCDD-37Cl4	0.20	104
1,2,3,6,7,8-HxCDD	-----	0.071	0.059	I			
1,2,3,7,8,9-HxCDD	0.082	-----	0.058	J			
Total HxCDD	0.150	-----	0.056	BJ			
1,2,3,4,6,7,8-HpCDF	0.340	-----	0.054	BJ	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	0.110	-----	0.083	BJ	Equivalence: 0.21 ng/Kg		
Total HpCDF	0.480	-----	0.068	BJ	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	0.310	-----	0.074	J			
Total HpCDD	0.610	-----	0.074	BJ			
OCDF	0.370	-----	0.130	BJ			
OCDD	0.970	-----	0.160	BJ			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.
ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - CCI Analytical Laboratories

Client's Sample ID	806107-28		
Lab Sample ID	1075603005		
Filename	D80702A38		
Injected By	CVS		
Total Amount Extracted	14.9 g	Matrix	Soil
% Moisture	20.8	Dilution	NA
Dry Weight Extracted	11.8 g	Collected	06/16/2008
ICAL ID	D80702GC2	Received	06/20/2008
CCal Filename(s)	D80702A20 & D80702A44	Extracted	06/27/2008
Method Blank ID	BLANK-16804	Analyzed	07/03/2008 05:09

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.080	-----	0.035	BJ	2,3,7,8-TCDF-13C	2.00	93
Total TCDF	0.310	-----	0.035	BJ	2,3,7,8-TCDD-13C	2.00	89
					1,2,3,7,8-PeCDF-13C	2.00	91
2,3,7,8-TCDD	0.080	-----	0.066	J	2,3,4,7,8-PeCDF-13C	2.00	93
Total TCDD	0.120	-----	0.066	J	1,2,3,7,8-PeCDD-13C	2.00	102
					1,2,3,4,7,8-HxCDF-13C	2.00	88
1,2,3,7,8-PeCDF	ND	-----	0.053		1,2,3,6,7,8-HxCDF-13C	2.00	86
2,3,4,7,8-PeCDF	0.092	-----	0.042	BJ	2,3,4,6,7,8-HxCDF-13C	2.00	86
Total PeCDF	0.092	-----	0.047	BJ	1,2,3,7,8,9-HxCDF-13C	2.00	83
					1,2,3,4,7,8-HxCDD-13C	2.00	89
1,2,3,7,8-PeCDD	0.120	-----	0.065	BJ	1,2,3,6,7,8-HxCDD-13C	2.00	86
Total PeCDD	0.200	-----	0.065	BJ	1,2,3,4,6,7,8-HpCDF-13C	2.00	81
					1,2,3,4,7,8,9-HpCDF-13C	2.00	66
1,2,3,4,7,8-HxCDF	-----	0.058	0.029	I	1,2,3,4,6,7,8-HpCDD-13C	2.00	83
1,2,3,6,7,8-HxCDF	-----	0.077	0.038	E	OCDD-13C	4.00	66
2,3,4,6,7,8-HxCDF	0.083	-----	0.033	BJ			
1,2,3,7,8,9-HxCDF	-----	0.053	0.048	I	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	0.150	-----	0.037	BJ	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	ND	-----	0.044		2,3,7,8-TCDD-37Cl4	0.20	94
1,2,3,6,7,8-HxCDD	ND	-----	0.066				
1,2,3,7,8,9-HxCDD	ND	-----	0.064				
Total HxCDD	0.370	-----	0.058	BJ			
1,2,3,4,6,7,8-HpCDF	-----	0.170	0.052	E	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	ND	-----	0.092		Equivalence: 0.26 ng/Kg		
Total HpCDF	0.076	-----	0.072	BJ	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	0.470	-----	0.063	J			
Total HpCDD	1.100	-----	0.063	BJ			
OCDF	-----	0.230	0.097	I			
OCDD	4.600	-----	0.110	BJ			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.

ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
B = Less than 10x higher than method blank level
E = PCDE Interference
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Sample Analysis Results

Client - CCI Analytical Laboratories

Client's Sample ID	806107-30		
Lab Sample ID	1075603006		
Filename	D80702A40		
Injected By	CVS		
Total Amount Extracted	15.4 g	Matrix	Soil
% Moisture	14.1	Dilution	NA
Dry Weight Extracted	13.2 g	Collected	06/16/2008
ICAL ID	D80702GC2	Received	06/20/2008
CCal Filename(s)	D80702A20 & D80702A44	Extracted	06/27/2008
Method Blank ID	BLANK-16804	Analyzed	07/03/2008 06:05

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.095	-----	0.037	BJ	2,3,7,8-TCDF-13C	2.00	91
Total TCDF	0.190	-----	0.037	BJ	2,3,7,8-TCDD-13C	2.00	86
					1,2,3,7,8-PeCDF-13C	2.00	95
2,3,7,8-TCDD	ND	-----	0.049		2,3,4,7,8-PeCDF-13C	2.00	95
Total TCDD	ND	-----	0.049		1,2,3,7,8-PeCDD-13C	2.00	104
					1,2,3,4,7,8-HxCDF-13C	2.00	88
1,2,3,7,8-PeCDF	-----	0.070	0.037	I	1,2,3,6,7,8-HxCDF-13C	2.00	85
2,3,4,7,8-PeCDF	-----	0.068	0.039	I	2,3,4,6,7,8-HxCDF-13C	2.00	84
Total PeCDF	ND	-----	0.038		1,2,3,7,8,9-HxCDF-13C	2.00	80
					1,2,3,4,7,8-HxCDD-13C	2.00	92
1,2,3,7,8-PeCDD	-----	0.076	0.048	I	1,2,3,6,7,8-HxCDD-13C	2.00	86
Total PeCDD	ND	-----	0.048		1,2,3,4,6,7,8-HpCDF-13C	2.00	80
					1,2,3,4,7,8,9-HpCDF-13C	2.00	65
1,2,3,4,7,8-HxCDF	0.046	-----	0.027	BJ	1,2,3,4,6,7,8-HpCDD-13C	2.00	83
1,2,3,6,7,8-HxCDF	-----	0.047	0.033	I	OCDD-13C	4.00	66
2,3,4,6,7,8-HxCDF	-----	0.051	0.030	I			
1,2,3,7,8,9-HxCDF	-----	0.043	0.026	I	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	0.150	-----	0.029	BJ	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	0.050	-----	0.035	J	2,3,7,8-TCDD-37Cl4	0.20	90
1,2,3,6,7,8-HxCDD	0.055	-----	0.043	BJ			
1,2,3,7,8,9-HxCDD	-----	0.088	0.043	I			
Total HxCDD	0.110	-----	0.041	BJ			
1,2,3,4,6,7,8-HpCDF	0.220	-----	0.049	BJ	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	0.120	-----	0.095	BJ	Equivalence: 0.096 ng/Kg		
Total HpCDF	0.480	-----	0.072	BJ	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	0.540	-----	0.083	J			
Total HpCDD	1.100	-----	0.083	BJ			
OCDF	0.310	-----	0.100	BJ			
OCDD	4.200	-----	0.086	BJ			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit.
ND = Not Detected
NA = Not Applicable
NC = Not Calculated

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
B = Less than 10x higher than method blank level
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Blank Analysis Results

Lab Sample ID	BLANK-16804	Matrix	Solid
Filename	D80702A25	Dilution	NA
Total Amount Extracted	20.5 g	Extracted	06/27/2008
ICAL ID	D80702GC1	Analyzed	07/02/2008 23:09
CCal Filename(s)	D80702A19 & D80702A43	Injected By	CVS

Native Isomers	Conc ng/Kg	EMPC ng/Kg	RL ng/Kg		Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.061	-----	0.023	J	2,3,7,8-TCDF-13C	2.00	82
Total TCDF	0.110	-----	0.023	J	2,3,7,8-TCDD-13C	2.00	71
					1,2,3,7,8-PeCDF-13C	2.00	85
2,3,7,8-TCDD	ND	-----	0.035		2,3,4,7,8-PeCDF-13C	2.00	94
Total TCDD	ND	-----	0.035		1,2,3,7,8-PeCDD-13C	2.00	104
					1,2,3,4,7,8-HxCDF-13C	2.00	72
1,2,3,7,8-PeCDF	0.083	-----	0.025	J	1,2,3,6,7,8-HxCDF-13C	2.00	70
2,3,4,7,8-PeCDF	0.079	-----	0.022	J	2,3,4,6,7,8-HxCDF-13C	2.00	69
Total PeCDF	0.160	-----	0.024	J	1,2,3,7,8,9-HxCDF-13C	2.00	71
					1,2,3,4,7,8-HxCDD-13C	2.00	76
1,2,3,7,8-PeCDD	0.068	-----	0.028	J	1,2,3,6,7,8-HxCDD-13C	2.00	70
Total PeCDD	0.068	-----	0.028	J	1,2,3,4,6,7,8-HpCDF-13C	2.00	71
					1,2,3,4,7,8,9-HpCDF-13C	2.00	67
1,2,3,4,7,8-HxCDF	0.083	-----	0.017	J	1,2,3,4,6,7,8-HpCDD-13C	2.00	78
1,2,3,6,7,8-HxCDF	0.070	-----	0.022	J	OCDD-13C	4.00	71
2,3,4,6,7,8-HxCDF	0.081	-----	0.018	J			
1,2,3,7,8,9-HxCDF	-----	0.080	0.025	I	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF	0.230	-----	0.020	J	1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	-----	0.034	0.024	I	2,3,7,8-TCDD-37Cl4	0.20	80
1,2,3,6,7,8-HxCDD	0.076	-----	0.018	J			
1,2,3,7,8,9-HxCDD	-----	0.084	0.020	I			
Total HxCDD	0.076	-----	0.020	J			
1,2,3,4,6,7,8-HpCDF	0.160	-----	0.028	J	Total 2,3,7,8-TCDD		
1,2,3,4,7,8,9-HpCDF	0.140	-----	0.034	J	Equivalence: 0.16 ng/Kg		
Total HpCDF	0.290	-----	0.031	J	(Using 2005 WHO Factors - Using PRL/2 where ND)		
1,2,3,4,6,7,8-HpCDD	-----	0.150	0.029	I			
Total HpCDD	0.170	-----	0.029	J			
OCDF	0.280	-----	0.052	J			
OCDD	0.790	-----	0.051	J			

Conc = Concentration (Totals include 2,3,7,8-substituted isomers).
EMPC = Estimated Maximum Possible Concentration
RL = Reporting Limit

Results reported on a total weight basis and are valid to no more than 2 significant figures.
J = Value below calibration range
I = Interference present

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Minneapolis, MN 55414

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Fax: 612- 607-6444

Method 8290 Laboratory Control Spike Results

Lab Sample ID	LCS-16805		
Filename	F80703A_08	Matrix	Solid
Total Amount Extracted	20.0 g	Dilution	NA
ICAL ID	F80624	Extracted	06/27/2008
CCal Filename(s)	F80703A_02 & F80703B_02	Analyzed	07/03/2008 18:17
Method Blank ID	BLANK-16804	Injected By	BAL

Native Isomers	Qs (ng)	Qm (ng)	% Rec.	Internal Standards	ng's Added	Percent Recovery
2,3,7,8-TCDF	0.20	0.19	95	2,3,7,8-TCDF-13C	2.00	79
Total TCDF				2,3,7,8-TCDD-13C	2.00	88
				1,2,3,7,8-PeCDF-13C	2.00	76
2,3,7,8-TCDD	0.20	0.20	99	2,3,4,7,8-PeCDF-13C	2.00	77
Total TCDD				1,2,3,7,8-PeCDD-13C	2.00	96
				1,2,3,4,7,8-HxCDF-13C	2.00	75
1,2,3,7,8-PeCDF	1.00	0.99	99	1,2,3,6,7,8-HxCDF-13C	2.00	73
2,3,4,7,8-PeCDF	1.00	0.97	97	2,3,4,6,7,8-HxCDF-13C	2.00	70
Total PeCDF				1,2,3,7,8,9-HxCDF-13C	2.00	74
				1,2,3,4,7,8-HxCDD-13C	2.00	85
1,2,3,7,8-PeCDD	1.00	0.90	90	1,2,3,6,7,8-HxCDD-13C	2.00	86
Total PeCDD				1,2,3,4,6,7,8-HpCDF-13C	2.00	79
				1,2,3,4,7,8,9-HpCDF-13C	2.00	74
1,2,3,4,7,8-HxCDF	1.00	0.94	94	1,2,3,4,6,7,8-HpCDD-13C	2.00	89
1,2,3,6,7,8-HxCDF	1.00	0.98	98	OCDD-13C	4.00	68
2,3,4,6,7,8-HxCDF	1.00	0.98	98			
1,2,3,7,8,9-HxCDF	1.00	0.96	96	1,2,3,4-TCDD-13C	2.00	NA
Total HxCDF				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	0.94	94	2,3,7,8-TCDD-37Cl4	0.20	100
1,2,3,6,7,8-HxCDD	1.00	0.98	98			
1,2,3,7,8,9-HxCDD	1.00	0.94	94			
Total HxCDD						
1,2,3,4,6,7,8-HpCDF	1.00	0.99	99			
1,2,3,4,7,8,9-HpCDF	1.00	1.03	103			
Total HpCDF						
1,2,3,4,6,7,8-HpCDD	1.00	0.98	98			
Total HpCDD						
OCDF	2.00	1.92	96			
OCDD	2.00	2.26	113			

Qs = Quantity Spiked
Qm = Quantity Measured
Rec. = Recovery (Expressed as Percent)
P = Recovery outside of target range
X = Background subtracted value
Nn = Value obtained from additional analysis
NA = Not Applicable
* = See Discussion

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
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Method 8290 Spiked Sample Report

Client - CCI Analytical Laboratories

Client's Sample ID	806107-15-MS		
Lab Sample ID	1075603001-MS		
Filename	D80702A22	Matrix	Soil
Total Amount Extracted	14.3 g	Dilution	NA
ICAL ID	D80702GC2	Extracted	06/27/2008
CCal Filename(s)	D80702A20 & D80702A44	Analyzed	07/02/2008 21:46
Method Blank ID	BLANK-16804	Injected By	CVS

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.22	109	2,3,7,8-TCDF-13C	2.00	92
				2,3,7,8-TCDD-13C	2.00	85
				1,2,3,7,8-PeCDF-13C	2.00	87
2,3,7,8-TCDD	0.20	0.22	109	2,3,4,7,8-PeCDF-13C	2.00	87
				1,2,3,7,8-PeCDD-13C	2.00	88
				1,2,3,4,7,8-HxCDF-13C	2.00	84
1,2,3,7,8-PeCDF	1.00	1.11	111	1,2,3,6,7,8-HxCDF-13C	2.00	81
2,3,4,7,8-PeCDF	1.00	1.08	108	2,3,4,6,7,8-HxCDF-13C	2.00	80
				1,2,3,7,8,9-HxCDF-13C	2.00	83
				1,2,3,4,7,8-HxCDD-13C	2.00	82
1,2,3,7,8-PeCDD	1.00	1.03	103	1,2,3,6,7,8-HxCDD-13C	2.00	78
				1,2,3,4,6,7,8-HpCDF-13C	2.00	70
				1,2,3,4,7,8,9-HpCDF-13C	2.00	64
1,2,3,4,7,8-HxCDF	1.00	1.09	109	1,2,3,4,6,7,8-HpCDD-13C	2.00	71
1,2,3,6,7,8-HxCDF	1.00	1.07	107	OCDD-13C	4.00	55
2,3,4,6,7,8-HxCDF	1.00	1.09	109			
1,2,3,7,8,9-HxCDF	1.00	1.07	107	1,2,3,4-TCDD-13C	2.00	NA
				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	1.05	105	2,3,7,8-TCDD-37Cl4	0.20	92
1,2,3,6,7,8-HxCDD	1.00	1.07	107			
1,2,3,7,8,9-HxCDD	1.00	1.04	104			
1,2,3,4,6,7,8-HpCDF	1.00	1.11	111			
1,2,3,4,7,8,9-HpCDF	1.00	1.20	120			
1,2,3,4,6,7,8-HpCDD	1.00	1.06	106			
OCDF	2.00	2.33	117			
OCDD	2.00	2.32	116			

Qs = Quantity Spiked Qm = Quantity Measured Rec. = Recovery (Expressed as Percent)

Results reported on a dry weight basis and are valid to no more than 2 significant figures.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
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Method 8290 Spiked Sample Report

Client - CCI Analytical Laboratories

Client's Sample ID	806107-15-MSD		
Lab Sample ID	1075603001-MSD		
Filename	D80702A24	Matrix	Soil
Total Amount Extracted	15.6 g	Dilution	NA
ICAL ID	D80702GC2	Extracted	06/27/2008
CCal Filename(s)	D80702A20 & D80702A44	Analyzed	07/02/2008 22:42
Method Blank ID	BLANK-16804	Injected By	CVS

Native Isomers	**Qs** (ng)	**Qm** (ng)	% Rec.	**Internal Standards**	**ng's Added**	**Percent Recovery**
2,3,7,8-TCDF	0.20	0.25	124	2,3,7,8-TCDF-13C	2.00	99
				2,3,7,8-TCDD-13C	2.00	94
				1,2,3,7,8-PeCDF-13C	2.00	94
2,3,7,8-TCDD	0.20	0.26	132	2,3,4,7,8-PeCDF-13C	2.00	92
				1,2,3,7,8-PeCDD-13C	2.00	96
				1,2,3,4,7,8-HxCDF-13C	2.00	104
1,2,3,7,8-PeCDF	1.00	1.23	123	1,2,3,6,7,8-HxCDF-13C	2.00	95
2,3,4,7,8-PeCDF	1.00	1.18	118	2,3,4,6,7,8-HxCDF-13C	2.00	94
				1,2,3,7,8,9-HxCDF-13C	2.00	91
				1,2,3,4,7,8-HxCDD-13C	2.00	94
1,2,3,7,8-PeCDD	1.00	1.09	109	1,2,3,6,7,8-HxCDD-13C	2.00	83
				1,2,3,4,6,7,8-HpCDF-13C	2.00	70
				1,2,3,4,7,8,9-HpCDF-13C	2.00	61
1,2,3,4,7,8-HxCDF	1.00	1.18	118	1,2,3,4,6,7,8-HpCDD-13C	2.00	63
1,2,3,6,7,8-HxCDF	1.00	1.19	119	OCDD-13C	4.00	37 P
2,3,4,6,7,8-HxCDF	1.00	1.20	120			
1,2,3,7,8,9-HxCDF	1.00	1.23	123	1,2,3,4-TCDD-13C	2.00	NA
				1,2,3,7,8,9-HxCDD-13C	2.00	NA
1,2,3,4,7,8-HxCDD	1.00	1.17	117	2,3,7,8-TCDD-37Cl4	0.20	102
1,2,3,6,7,8-HxCDD	1.00	1.18	118			
1,2,3,7,8,9-HxCDD	1.00	1.11	111			
1,2,3,4,6,7,8-HpCDF	1.00	1.25	125			
1,2,3,4,7,8,9-HpCDF	1.00	1.35	135			
1,2,3,4,6,7,8-HpCDD	1.00	1.13	113			
OCDF	2.00	2.54	127			
OCDD	2.00	2.42	121			

Qs = Quantity Spiked Qm = Quantity Measured Rec. = Recovery (Expressed as Percent)

Results reported on a dry weight basis and are valid to no more than 2 significant figures.
P = Recovery outside target range

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 8290 Spike Sample Results

Client - CCI Analytical Laboratories

Client Sample ID	806107-15			Dry Weights	
Lab Sample ID	1075603001	Sample Filename	D80702A30	Sample Amount	12.3 g
MS ID	1075603001-MS	MS Filename	D80702A22	MS Amount	11.9 g
MSD ID	1075603001-MSD	MSD Filename	D80702A24	MSD Amount	13.0 g

Analyte	Sample Conc. ng/Kg	MS/MSD Qs (ng)	MS Qm (ng)	MSD Qm (ng)	RPD	Background Subtracted MS % Rec.	MSD % Rec.	RPD
2,3,7,8-TCDF	0.270	0.20	0.22	0.25	12.4	108	122	12.5
2,3,7,8-TCDD	1.911	0.20	0.22	0.26	18.8	98	120	20.0
1,2,3,7,8-PeCDF	0.148	1.00	1.11	1.23	10.2	111	123	10.2
2,3,4,7,8-PeCDF	0.571	1.00	1.08	1.18	8.4	107	117	8.4
1,2,3,7,8-PeCDD	0.199	1.00	1.03	1.09	6.5	102	109	6.5
1,2,3,4,7,8-HxCDF	0.168	1.00	1.09	1.18	8.6	109	118	8.6
1,2,3,6,7,8-HxCDF	0.206	1.00	1.07	1.19	10.1	107	118	10.1
2,3,4,6,7,8-HxCDF	0.344	1.00	1.09	1.20	9.6	108	119	9.6
1,2,3,7,8,9-HxCDF	0.000	1.00	1.07	1.23	13.7	107	123	13.7
1,2,3,4,7,8-HxCDD	0.139	1.00	1.05	1.17	11.2	104	117	11.2
1,2,3,6,7,8-HxCDD	0.248	1.00	1.07	1.18	9.8	107	118	9.8
1,2,3,7,8,9-HxCDD	0.247	1.00	1.04	1.11	7.0	104	111	7.0
1,2,3,4,6,7,8-HpCDF	1.418	1.00	1.11	1.25	11.9	110	123	12.0
1,2,3,4,7,8,9-HpCDF	0.000	1.00	1.20	1.35	11.6	120	135	11.6
1,2,3,4,6,7,8-HpCDD	2.361	1.00	1.06	1.13	6.7	103	110	6.7
OCDF	1.458	2.00	2.33	2.54	8.4	116	126	8.4
OCDD	19.674	2.00	2.32	2.42	4.4	104	108	3.9

Definitions

MS = Matrix Spike
MSD = Matrix Spike Duplicate
Qm = Quantity Measured
Qs = Quantity Spiked
% Rec. = Percent Recovery
RPD = Relative Percent Difference
NA = Not Applicable
NC = Not Calculated

CDD = Chlorinated dibenzo-p-dioxin
CDF = Chlorinated dibenzo-p-furan
T = Tetra
Pe = Penta
Hx = Hexa
Hp = Hepta
O = Octa

CCI
ANALYTICAL
LABORATORIES
A Division of DataChem Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/9/2008
CCIL JOB #: 0809028
DATE RECEIVED: 9/5/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: JOHN HERZOG
CLIENT PROJECT ID: DAKOTA CREEK INDUSTRIES (DCI)
CLIENT SAMPLE ID: 9/5/2008 13:40 TP-13-2
CCIL SAMPLE #: -01

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	24	5	4	MG/KG	9/8/2008	BAM
Copper	EPA-6010	360	1	4	MG/KG	9/8/2008	BAM
Zinc	EPA-6010	290	2	4	MG/KG	9/8/2008	BAM

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

8620 Holly Drive Suite 100 Everett, WA 98208 425 356-2600 FAX 425 356-2626 Seattle 206 292-9059

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/9/2008
CCIL JOB #: 0809028
DATE RECEIVED: 9/5/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: JOHN HERZOG
CLIENT PROJECT ID: DAKOTA CREEK INDUSTRIES (DCI)
CLIENT SAMPLE ID: 9/5/2008 13:45 TP-13-4
CCIL SAMPLE #: -02

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	34	5	4	MG/KG	9/8/2008	BAM
Copper	EPA-6010	350	1	4	MG/KG	9/8/2008	BAM
Zinc	EPA-6010	350	2	4	MG/KG	9/8/2008	BAM

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APPROVED BY:

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CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/9/2008
CCIL JOB #: 0809028
DATE RECEIVED: 9/5/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: JOHN HERZOG
CLIENT PROJECT ID: DAKOTA CREEK INDUSTRIES (DCI)
CLIENT SAMPLE ID: 9/5/2008 13:16 TP-10-4
CCIL SAMPLE #: -04

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	ND	5	4	MG/KG	9/8/2008	BAM
Copper	EPA-6010	49	1	4	MG/KG	9/8/2008	BAM
Zinc	EPA-6010	44	2	4	MG/KG	9/8/2008	BAM

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

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APPROVED BY:

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/9/2008
CCIL JOB #: 0809028
DATE RECEIVED: 9/5/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: JOHN HERZOG
CLIENT PROJECT ID: DAKOTA CREEK INDUSTRIES (DCI)
CLIENT SAMPLE ID: 9/5/2008 13:18 TP-10-6
CCIL SAMPLE #: -05

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Copper	EPA-6010	34	1	4	MG/KG	9/8/2008	BAM

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APPROVED BY:

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600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/9/2008
CCIL JOB #: 0809028
DATE RECEIVED: 9/5/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: JOHN HERZOG
CLIENT PROJECT ID: DAKOTA CREEK INDUSTRIES (DCI)
CLIENT SAMPLE ID: 9/5/2008 12:40 TP-11-6
CCIL SAMPLE #: -08

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	ND	5	4	MG/KG	9/8/2008	BAM
Copper	EPA-6010	2.9	1	4	MG/KG	9/8/2008	BAM
Zinc	EPA-6010	16	2	4	MG/KG	9/8/2008	BAM

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CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/9/2008
CCIL JOB #: 0809028
DATE RECEIVED: 9/5/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: JOHN HERZOG
CLIENT PROJECT ID: DAKOTA CREEK INDUSTRIES (DCI)
CLIENT SAMPLE ID: 9/5/2008 11:55 TP-5-2
CCIL SAMPLE #: -11

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	15	5	4	MG/KG	9/8/2008	BAM
Copper	EPA-6010	100	1	4	MG/KG	9/8/2008	BAM
Zinc	EPA-6010	130	2	4	MG/KG	9/8/2008	BAM

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APPROVED BY:

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CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/9/2008
CCIL JOB #: 0809028
DATE RECEIVED: 9/5/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: JOHN HERZOG
CLIENT PROJECT ID: DAKOTA CREEK INDUSTRIES (DCI)
CLIENT SAMPLE ID: 9/5/2008 12:10 TP-5-4
CCIL SAMPLE #: -12

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	9.6	5	4	MG/KG	9/9/2008	BAM
Copper	EPA-6010	240	1	4	MG/KG	9/9/2008	BAM
Zinc	EPA-6010	170	2	4	MG/KG	9/9/2008	BAM

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/9/2008
CCIL JOB #: 0809028
DATE RECEIVED: 9/5/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: JOHN HERZOG
CLIENT PROJECT ID: DAKOTA CREEK INDUSTRIES (DCI)
CLIENT SAMPLE ID: 9/5/2008 12:20 TP-12-3
CCIL SAMPLE #: -13

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	ND	5	4	MG/KG	9/8/2008	BAM
Copper	EPA-6010	49	1	4	MG/KG	9/8/2008	BAM
Zinc	EPA-6010	84	2	4	MG/KG	9/8/2008	BAM

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DATE: 9/9/2008
CCIL JOB #: 0809028
DATE RECEIVED: 9/5/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: JOHN HERZOG
CLIENT PROJECT ID: DAKOTA CREEK INDUSTRIES (DCI)
CLIENT SAMPLE ID: 9/5/2008 11:15 TP-4-6
CCIL SAMPLE #: -16

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	ND	5	4	MG/KG	9/8/2008	BAM
Copper	EPA-6010	6.9	1	4	MG/KG	9/8/2008	BAM
Zinc	EPA-6010	18	2	4	MG/KG	9/8/2008	BAM

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APPROVED BY:

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/9/2008
CCIL JOB #: 0809028
DATE RECEIVED: 9/5/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: JOHN HERZOG
CLIENT PROJECT ID: DAKOTA CREEK INDUSTRIES (DCI)
CLIENT SAMPLE ID: 9/5/2008 10:20 TP-3-6
CCIL SAMPLE #: -20

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	ND	5	4	MG/KG	9/8/2008	BAM
Copper	EPA-6010	27	1	4	MG/KG	9/8/2008	BAM
Zinc	EPA-6010	56	2	4	MG/KG	9/8/2008	BAM

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APPROVED BY:

8620 Holly Drive Suite 100 Everett, WA 98208 425 356-2600 FAX 425 356-2626 Seattle 206 292-9059

CCI
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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/9/2008
CCIL JOB #: 0809028
DATE RECEIVED: 9/5/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: JOHN HERZOG
CLIENT PROJECT ID: DAKOTA CREEK INDUSTRIES (DCI)

QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	RESULT	ASSOCIATED SAMPLES
EPA-6010 (Arsenic)	ND(<5.0)	0809028 -01 to 20
EPA-6010 (Arsenic)	ND(<5.0)	0809028 -12
EPA-6010 (Copper)	ND(<1.0)	0809028 -01 to 20
EPA-6010 (Copper)	ND(<1.0)	0809028 -12
EPA-6010 (Zinc)	ND(<2.0)	0809028 -01 to 20
EPA-6010 (Zinc)	ND(<2.0)	0809028 -12

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CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/9/2008
CCIL JOB #: 0809028
DATE RECEIVED: 9/5/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: JOHN HERZOG
CLIENT PROJECT ID: DAKOTA CREEK INDUSTRIES (DCI)

QUALITY CONTROL RESULTS

SPIKE/SPIKE DUPLICATE RESULTS

METHOD	ANALYTE	ASSOCIATED SAMPLES	SPIKE AMOUNT	DILUTION FACTOR	SPIKE RECOVERY	SPIKE DUP RECOVERY	RPD
EPA-6010	Arsenic	0809028 -01 to 20	20 MG/KG	1	95 %	95 %	0
EPA-6010	Arsenic	0809028 -12	20 MG/KG	1	96 %	96 %	0
EPA-6010	Copper	0809028 -01 to 20	20 MG/KG	1	98 %	98 %	0
EPA-6010	Copper	0809028 -12	20 MG/KG	1	99 %	98 %	1
EPA-6010	Zinc	0809028 -01 to 20	20 MG/KG	1	95 %	94 %	1
EPA-6010	Zinc	0809028 -12	20 MG/KG	1	96 %	96 %	0

APPROVED BY:

8620 Holly Drive Suite 100 Everett, WA 98208 425 356-2600 FAX 425 356-2626 Seattle 206 292-9059

CCI Analytical Laboratories
8620 Holly Drive
Everett, WA 98208
Phone (425) 356-2600
(206) 292-9059 Seattle
(425) 356-2626 Fax
http://www.ccilabs.com

Chain Of Custody/ Laboratory Analysis Request

CCI Job# (Laboratory Use Only) 809028

Date 9/8/08 Page 1 Of 3

PROJECT ID: Dakota Creek Industries (DCI)
REPORT TO COMPANY: Geo Engineers Inc (GEI)
PROJECT MANAGER: John Herzog / Data to Victoria England
ADDRESS: 600 Stewart St Ste 1700
PHONE: 2067282674 FAX:
P.O. NUMBER: 5747006604 E-MAIL: vengland@geoengineers.com
INVOICE TO COMPANY: GEI
ATTENTION: Victoria England
ADDRESS: Seaboard

LABORATORY COPY

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify) As, Cu, Zn Archive	OTHER (Specify) Cu	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. TP-13-2	9/5/08	140pm	Soil	1															X				
2. TP-13-4	"	145pm	"	2															⊗	X			
3. TP-10-2	"	114 PM	"	3																X			
4. TP-10-4	"	116PM	"	4															X				
5. TP-10-6	"	118PM	"	5																X	⊗		
6. TP-10-8	"	120 PM	"	6																X			
7. TP-10-10	"	125pm	"	7																X			
8. TP-11-6	"	1240	"	8															X				
9. TP-11-8	"	1245	"	9																X			
10. TP-11-10	"	1255	"	10																X			

SPECIAL INSTRUCTIONS

CCI Analytical Laboratories, Inc accepts and processes this request on the terms and conditions set forth on the reverse side. By its signature hereon, Customer accepts these terms and conditions.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: Geo Engineers 9/5/08 437
   Received By: CCIAL 9/5/08 4:39
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify:

* Turnaround request less than standard may incur Rush Charges

CCI Analytical Laboratories
8620 Holly Drive
Everett, WA 98208
Phone (425) 356-2600
(206) 292-9059 Seattle
(425) 356-2626 Fax
http://www.ccilabs.com

Chain Of Custody/
Laboratory Analysis Request

CCI Job# (Laboratory Use Only) 809028

Date 9/5/08 VRE Page 2 Of 3

PROJECT ID: DCI
REPORT TO COMPANY: GEI
PROJECT MANAGER: J. Herzog / Report Data to Victoria England
ADDRESS: 600 Stewart St Ste 1200
PHONE: 206 728 2674 FAX:
P.O. NUMBER: 5747006 04 E-MAIL: vengland@geoengineers.com
INVOICE TO COMPANY: GEI
ATTENTION: Victoria England
ADDRESS: See above

LABORATORY COPY

ANALYSIS REQUESTED

SAMPLE I.D.	DATE	TIME	TYPE	LAB#	NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify)	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐	OTHER (Specify): As, Cu, Zn Archive	NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1. TP-5-2	9/5/08 VRE	1155	Soil	11															X			
2. TP-5-4	"	1210	Soil	12															⊗	X		
3. TP-12-3	"	1220	"	13															X			
4. TP-4-2	"	1105	"	14																X		
5. TP-4-4	"	1110	"	15																X		
6. TP-4-6	"	1115	"	16															X			
7. TP-4-8	"	1120	"	17																X		
8. TP-3-2	"	1015	"	18																X		
9. TP-3-4	"	1018	"	19																X		
10. TP-3-6	"	1020	"	20															X			

SPECIAL INSTRUCTIONS

CCI Analytical Laboratories, Inc accepts and processes this request on the terms and conditions set forth on the reverse side. By its signature hereon, Customer accepts these terms and conditions.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: GeoEngineers 9/5/08 VRE 437
   Received By: CCIAL 9/5/08 439
2. Relinquished By:
   Received By:

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis: 10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis: 5 Standard | 3 | 1 | SAME DAY

OTHER: Specify:

* Turnaround request less than standard may incur Rush Charges

Seattle

CHAIN OF CUSTODY RECORD

809028

VRS

GEOENGINEERS, INC.
8410 154TH AVENUE N.E.
REDMOND, WASHINGTON 98052
(425) 861-6000

GeoEngineers

DATE 9/5/08
PAGE 3 OF 3
LAB CCI
LAB NO.

PROJECT NAME/LOCATION DCE / Anacortes
PROJECT NUMBER 5147006 04
PROJECT MANAGER J. Herzog
SAMPLED BY Victoria England

SAMPLE IDENTIFICATION		SAMPLE COLLECTION			# OF	ANALYSIS REQUIRED											NOTES/COMMENTS
LAB	GEOENGINEERS	DATE	TIME	MATRIX	JARS	4J Cuzn	Archive										(Preserved, filtered, etc.)
21	TP-3-8	9/5/08	1025	Soil	1		X										
22	TP-3-10	11	1027	4	1		X										

RELINQUISHED BY	FIRM	RELINQUISHED BY	FIRM	RELINQUISHED BY	FIRM
SIGNATURE	GEE	SIGNATURE		SIGNATURE	
PRINTED NAME Victoria R England		PRINTED NAME		PRINTED NAME	
DATE 9/8/08	TIME 437	DATE	TIME	DATE	TIME
RECEIVED BY	**FIRM**	**RECEIVED BY**	**FIRM**	**RECEIVED BY**	**FIRM**
SIGNATURE	CCAL	SIGNATURE		SIGNATURE	
PRINTED NAME Rick Boyer		PRINTED NAME		PRINTED NAME	
DATE 9/5/08	TIME 4/39	DATE	TIME	DATE	TIME

ADDITIONAL COMMENTS:

CCI
ANALYTICAL
LABORATORIES
A Division of DataChem Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/24/2008
CCIL JOB #: 0809103
DATE RECEIVED: 9/19/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: DAKOTA CREEK 5147-006-01
CLIENT SAMPLE ID: 9/18/2008 16:00 TP-14-0-2
CCIL SAMPLE #: -01

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	ND	5.0	1	MG/KG	9/23/2008	SL
Copper	EPA-6010	92	1.0	1	MG/KG	9/23/2008	SL
Zinc	EPA-6010	110	2.0	1	MG/KG	9/23/2008	SL

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

8620 Holly Drive Suite 100 Everett, WA 98208 425 356-2600 FAX 425 356-2626 Seattle 206 292-9059

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ANALYTICAL
LABORATORIES
A Division of DataChem Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/24/2008
CCIL JOB #: 0809103
DATE RECEIVED: 9/19/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: DAKOTA CREEK 5147-006-01
CLIENT SAMPLE ID: 9/18/2008 16:10 TP-14-4-6
CCIL SAMPLE #: -03

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	ND	5.0	1	MG/KG	9/23/2008	SL
Copper	EPA-6010	94	1.0	1	MG/KG	9/23/2008	SL
Zinc	EPA-6010	70	2.0	1	MG/KG	9/23/2008	SL

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

8620 Holly Drive Suite 100 Everett, WA 98208 425 356-2600 FAX 425 356-2626 Seattle 206 292-9059

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A Division of DataChem Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/24/2008
CCIL JOB #: 0809103
DATE RECEIVED: 9/19/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: DAKOTA CREEK 5147-006-01
CLIENT SAMPLE ID: 9/18/2008 16:45 TP-15-2-4
CCIL SAMPLE #: -05

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	ND	5.0	1	MG/KG	9/23/2008	SL
Copper	EPA-6010	45	1.0	1	MG/KG	9/23/2008	SL
Zinc	EPA-6010	58	2.0	1	MG/KG	9/23/2008	SL

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

8620 Holly Drive Suite 100 Everett, WA 98208 425 356-2600 FAX 425 356-2626 Seattle 206 292-9059

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LABORATORIES
A Division of DataChem Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/24/2008
CCIL JOB #: 0809103
DATE RECEIVED: 9/19/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: DAKOTA CREEK 5147-006-01
CLIENT SAMPLE ID: 9/18/2008 17:00 TP-16-0-2
CCIL SAMPLE #: -06

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	ND	5.0	1	MG/KG	9/23/2008	SL
Copper	EPA-6010	66	1.0	1	MG/KG	9/23/2008	SL
Zinc	EPA-6010	99	2.0	1	MG/KG	9/23/2008	SL

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

8620 Holly Drive Suite 100 Everett, WA 98208 425 356-2600 FAX 425 356-2626 Seattle 206 292-9059

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LABORATORIES
A Division of DataChem Laboratories, Inc.

CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/24/2008
CCIL JOB #: 0809103
DATE RECEIVED: 9/19/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: DAKOTA CREEK 5147-006-01
CLIENT SAMPLE ID: 9/18/2008 17:30 TP-16-4-6
CCIL SAMPLE #: -08

DATA RESULTS

ANALYTE	METHOD	RESULTS*	REPORTING LIMITS	DILUTION FACTOR	UNITS**	ANALYSIS DATE	ANALYSIS BY
Arsenic	EPA-6010	ND	5.0	1	MG/KG	9/23/2008	SL
Copper	EPA-6010	52	1.0	1	MG/KG	9/23/2008	SL
Zinc	EPA-6010	68	2.0	1	MG/KG	9/23/2008	SL

* "ND" INDICATES ANALYTE ANALYZED FOR BUT NOT DETECTED AT LEVEL ABOVE REPORTING LIMIT. REPORTING LIMIT IS GIVEN IN PARENTHESES.

** UNITS FOR ALL NON LIQUID SAMPLES ARE REPORTED ON A DRY WEIGHT BASIS

APPROVED BY:

8620 Holly Drive Suite 100 Everett, WA 98208 425 356-2600 FAX 425 356-2626 Seattle 206 292-9059

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/24/2008
CCIL JOB #: 0809103
DATE RECEIVED: 9/19/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: DAKOTA CREEK 5147-006-01

QUALITY CONTROL RESULTS

BLANK RESULTS

METHOD	RESULT	ASSOCIATED SAMPLES
EPA-6010 (Arsenic)	ND(<5.0)	0809103 -01,03,05,06,08
EPA-6010 (Copper)	ND(<1.0)	0809103 -01,03,05,06,08
EPA-6010 (Zinc)	ND(<2.0)	0809103 -01,03,05,06,08

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CERTIFICATE OF ANALYSIS

CLIENT: GEOENGINEERS, INC.
600 STEWART ST. PLAZA 600 BUILDING, SUITE 1700
SEATTLE, WA 98101

DATE: 9/24/2008
CCIL JOB #: 0809103
DATE RECEIVED: 9/19/2008
WDOE ACCREDITATION #: C1336

CLIENT CONTACT: VICTORIA ENGLAND
CLIENT PROJECT ID: DAKOTA CREEK 5147-006-01

QUALITY CONTROL RESULTS

MATRIX SPIKE/SPIKE DUPLICATE RESULTS

METHOD	ANALYTE	PARENT SAMPLE	SPIKE AMOUNT	DILUTION FACTOR	SPIKE RECOVERY	SPIKE DUP RECOVERY	RPD
EPA-6010	Arsenic	0809103 -01	20 MG/KG	1	102 %	101 %	0
EPA-6010	Copper	0809103 -01	20 MG/KG	1	97 %	98 %	1
EPA-6010	Zinc	0809103 -01	20 MG/KG	1	89 %	89 %	0

APPROVED BY:

8620 Holly Drive Suite 100 Everett, WA 98208 425 356-2600 FAX 425 356-2626 Seattle 206 292-9059

CCI Analytical Laboratories
8620 Holly Drive
Everett, WA 98208
Phone (425) 356-2600
(206) 292-9059 Seattle
(425) 356-2626 Fax
http://www.ccilabs.com

Chain Of Custody/ Laboratory Analysis Request

CCI Job# (Laboratory Use Only) 809103

Date 9/19/08 Page 1 Of 1

PROJECT ID: Dakota Creek 5147-006-01
REPORT TO COMPANY: Geotechnews
PROJECT MANAGER: Victoria England
ADDRESS: Plaza 600 Bldg
600 Stewart St, Suite 1020
PHONE: 2067282674 FAX: 2067282232
P.O. NUMBER: 5147-006-01 E-MAIL: VEngland@Geotechnews.com
INVOICE TO COMPANY: Geotechnews
ATTENTION: John Herzog
ADDRESS:

LABORATORY COPY

SAMPLE I.D.	DATE	TIME	TYPE	LAB#
1. TP-14-0-2	9/10/08	4:00	Soil	1
2. TP-14-2-4		4:05		2
3. TP-14-4-6		4:10		3
4. TP-15-0-2		4:30		4
5. TP-15-2-4		4:45		5
6. TP-16-0-2		5:00		6
7. TP-16-2-4		5:15		7
8. TP-16-4-6		5:30		8
9.				
10.				

ANALYSIS REQUESTED

NWTPH-HCID	NWTPH-DX	NWTPH-GX	BTEX by EPA-8021	MTBE by EPA-8021 ☐ EPA-8260 ☐	Halogenated Volatiles by EPA 8260	Volatile Organic Compounds by EPA 8260	EDB / EDC by EPA 8260 SIM (water)	EDB / EDC by EPA 8260 (soil)	Semivolatile Organic Compounds by EPA 8270	Polycyclic Aromatic Hydrocarbons (PAH) by EPA-8270 SIM ☐	PCB ☐ Pesticides ☐ by EPA 8081/8082	Metals-MTCA-5 ☐ RCRA-8 ☐ Pri Pol ☐ TAL ☐	Metals Other (Specify) As, Cu, Zn	TCLP-Metals ☐ VOA ☐ Semi-Vol ☐ Pest ☐ Herbs ☐
													X	
													X	
													X	
													X	
													X	
													X	

OTHER (Specify): Archive Frozen

NUMBER OF CONTAINERS	RECEIVED IN GOOD CONDITION?
1	
1	
1	
1	
1	
1	
1	
1	

SPECIAL INSTRUCTIONS

CCI Analytical Laboratories, Inc accepts and processes this request on the terms and conditions set forth on the reverse side. By its signature hereon, Customer accepts these terms and conditions.

SIGNATURES (Name, Company, Date, Time):

1. Relinquished By: GEOENGineers 9/19/2008
   Received By: Shawn R Duncan CCIAL 9/19/08 12:40
2. Relinquished By: _____
   Received By: _____

TURNAROUND REQUESTED in Business Days*

Organic, Metals & Inorganic Analysis
10 Standard | 5 | 3 | 2 | 1 | SAME DAY

Fuels & Hydrocarbon Analysis
5 Standard | 3 | 1 | SAME DAY

OTHER:
Specify: _____

* Turnaround request less than standard may incur Rush Charges

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

October 17, 2014

Brian Tracy
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-10
Laboratory Reference No. 1410-019

Dear Brian:

Enclosed are the analytical results and associated quality control data for samples submitted on October 2, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

Case Narrative

Samples were collected on September 30, 2014 and received by the laboratory on October 2, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
GEI-13_2-3_093014	10-019-01	Soil	9-30-14	10-2-14	
GEI-14_2-3_093014	10-019-05	Soil	9-30-14	10-2-14	
GEI-15_5.5-6.5_093014	10-019-10	Soil	9-30-14	10-2-14	
GEI-17_7-8_093014	10-019-19	Soil	9-30-14	10-2-14	
GEI-18_8-9_093014	10-019-23	Soil	9-30-14	10-2-14	
GEI-20_6-7_093014	10-019-31	Soil	9-30-14	10-2-14	
GEI-21_5-6_093014	10-019-34	Soil	9-30-14	10-2-14	
GEI-21_7.5-8.5_093014	10-019-35	Soil	9-30-14	10-2-14	
GEI-23_7.5-8.5_093014	10-019-40	Soil	9-30-14	10-2-14	
GEI-25_7-8_093014	10-019-47	Soil	9-30-14	10-2-14	
GEI-26_6-7_093014	10-019-51	Soil	9-30-14	10-2-14	

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-019-01					
Client ID:	**GEI-13_2-3_093014**					
Arsenic	**85**	5.2	6010C	10-10-14	10-10-14	
Lab ID:	10-019-05					
Client ID:	**GEI-14_2-3_093014**					
Arsenic	**91**	5.2	6010C	10-10-14	10-10-14	
Lab ID:	10-019-19					
Client ID:	**GEI-17_7-8_093014**					
Nickel	**39**	2.7	6010C	10-10-14	10-10-14	
Lab ID:	10-019-23					
Client ID:	**GEI-18_8-9_093014**					
Arsenic	**11**	5.5	6010C	10-10-14	10-10-14	
Nickel	**200**	2.7	6010C	10-10-14	10-10-14	
Lab ID:	10-019-34					
Client ID:	**GEI-21_5-6_093014**					
Arsenic	**ND**	5.9	6010C	10-10-14	10-10-14	
Nickel	**28**	2.9	6010C	10-10-14	10-10-14	
Lab ID:	10-019-47					
Client ID:	**GEI-25_7-8_093014**					
Arsenic	**ND**	6.1	6010C	10-10-14	10-10-14	
Nickel	**130**	3.1	6010C	10-10-14	10-10-14	

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-019-51					
Client ID:	**GEI-26_6-7_093014**					
Arsenic	**ND**	5.8	6010C	10-10-14	10-10-14	
Nickel	**33**	2.9	6010C	10-10-14	10-10-14	

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-21_5-6_093014**					
Laboratory ID:	10-019-34					
Naphthalene	**ND**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
2-Methylnaphthalene	**ND**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
1-Methylnaphthalene	**ND**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
Acenaphthylene	**ND**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
Acenaphthene	**ND**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
Fluorene	**ND**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
Phenanthrene	**0.015**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
Anthracene	**ND**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
Fluoranthene	**0.019**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
Pyrene	**0.022**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[a]anthracene	**0.011**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
Chrysene	**0.015**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[b]fluoranthene	**0.012**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo(j,k)fluoranthene	**0.0084**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[a]pyrene	**0.011**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
Dibenz[a,h]anthracene	**ND**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[g,h,i]perylene	**0.010**	0.0079	EPA 8270D/SIM	10-7-14	10-7-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*72*	*43 - 116*				
Pyrene-d10	*85*	*33 - 124*				
Terphenyl-d14	*87*	*38 - 125*				

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-15_5.5-6.5_093014**					
Laboratory ID:	10-019-10					
Naphthalene	**0.036**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
2-Methylnaphthalene	**0.026**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
1-Methylnaphthalene	**0.060**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Acenaphthylene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Acenaphthene	**0.015**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Fluorene	**0.027**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Phenanthrene	**0.066**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Anthracene	**0.012**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Fluoranthene	**0.012**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Pyrene	**0.018**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo[a]anthracene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Chrysene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo[b]fluoranthene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo(j,k)fluoranthene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo[a]pyrene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Dibenz[a,h]anthracene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo[g,h,i]perylene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*64*	*32 - 114*				
Pyrene-d10	*67*	*33 - 121*				
Terphenyl-d14	*75*	*31 - 116*				

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-20_6-7_093014**					
Laboratory ID:	10-019-31					
Naphthalene	**0.032**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
2-Methylnaphthalene	**0.031**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
1-Methylnaphthalene	**0.28**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
Acenaphthylene	**0.020**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
Acenaphthene	**0.041**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
Fluorene	**0.066**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
Phenanthrene	**0.21**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
Anthracene	**0.033**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
Fluoranthene	**0.074**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
Pyrene	**0.12**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo[a]anthracene	**0.063**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
Chrysene	**0.065**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo[b]fluoranthene	**0.037**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo(j,k)fluoranthene	**0.020**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo[a]pyrene	**0.044**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
Indeno(1,2,3-c,d)pyrene	**0.021**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
Dibenz[a,h]anthracene	**0.0082**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo[g,h,i]perylene	**0.025**	0.0080	EPA 8270D/SIM	10-13-14	10-16-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*67*	*32 - 114*				
Pyrene-d10	*68*	*33 - 121*				
Terphenyl-d14	*75*	*31 - 116*				

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-21_7.5-8.5_093014**					
Laboratory ID:	10-019-35					
Naphthalene	**0.079**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
2-Methylnaphthalene	**0.031**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
1-Methylnaphthalene	**0.041**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
Acenaphthylene	**ND**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
Acenaphthene	**0.020**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
Fluorene	**0.019**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
Phenanthrene	**0.066**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
Anthracene	**0.018**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
Fluoranthene	**0.048**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
Pyrene	**0.047**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo[a]anthracene	**0.018**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
Chrysene	**0.018**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo[b]fluoranthene	**0.015**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo(j,k)fluoranthene	**0.011**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo[a]pyrene	**0.018**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
Indeno(1,2,3-c,d)pyrene	**ND**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
Dibenz[a,h]anthracene	**ND**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo[g,h,i]perylene	**0.012**	0.011	EPA 8270D/SIM	10-13-14	10-16-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*49*	*32 - 114*				
Pyrene-d10	*50*	*33 - 121*				
Terphenyl-d14	*60*	*31 - 116*				

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-23_7.5-8.5_093014**					
Laboratory ID:	10-019-40					
Naphthalene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
2-Methylnaphthalene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
1-Methylnaphthalene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Acenaphthylene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Acenaphthene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Fluorene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Phenanthrene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Anthracene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Fluoranthene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Pyrene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo[a]anthracene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Chrysene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo[b]fluoranthene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo(j,k)fluoranthene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo[a]pyrene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Dibenz[a,h]anthracene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Benzo[g,h,i]perylene	**ND**	0.0081	EPA 8270D/SIM	10-13-14	10-16-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*52*	*32 - 114*				
Pyrene-d10	*52*	*33 - 121*				
Terphenyl-d14	*57*	*31 - 116*				

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	10-10-14
Date Analyzed:	10-10-14
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1010SM3

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Nickel	6010C	**ND**	2.5

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 10-10-14
Date Analyzed: 10-10-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-020-40

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Nickel	**7.65**	**7.85**	3	2.5	

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 10-10-14
Date Analyzed: 10-10-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-020-40

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**93.3**	93	**93.3**	93	0	
Nickel	100	**103**	95	**105**	97	2	

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV101014P	1.00	0.976	2.4	+/- 10%
Nickel	ICV101014P	1.00	1.05	-5.0	+/- 10%
Arsenic	LLICV101014P	0.100	0.106	-6.0	+/- 30%
Nickel	LLICV101014P	0.0200	0.0201	-0.50	+/- 30%
Arsenic	CCV1101014P	10.0	9.82	1.8	+/- 10%
Nickel	CCV1101014P	2.00	2.05	-2.5	+/- 10%
Arsenic	CCV201014P	10.0	9.65	3.5	+/- 10%
Nickel	CCV201014P	2.00	2.03	-1.5	+/- 10%
Arsenic	LLCCV1101014P	0.100	0.110	-10	+/- 30%
Nickel	LLCCV1101014P	0.0200	0.0213	-6.5	+/- 30%
Arsenic	CCV3101014P	10.0	9.61	3.9	+/- 10%
Nickel	CCV3101014P	2.00	2.03	-1.5	+/- 10%
Arsenic	LLCCV2101014P	0.100	0.0935	6.5	+/- 30%
Nickel	LLCCV2101014P	0.0200	0.0224	-12	+/- 30%
Arsenic	CCV4101014P	10.0	9.75	2.5	+/- 10%
Nickel	CCV4101014P	2.00	2.04	-2.0	+/- 10%
Arsenic	LLCCV3101014P	0.100	0.108	-8.0	+/- 30%
Nickel	LLCCV3101014P	0.0200	0.0212	-6.0	+/- 30%
Arsenic	CCV5101014P	10.0	9.68	3.2	+/- 10%
Nickel	CCV5101014P	2.00	2.04	-2.0	+/- 10%
Arsenic	LLCCV4101014P	0.100	0.110	-10	+/- 30%
Nickel	LLCCV4101014P	0.0200	0.0194	3.0	+/- 30%

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1007S1					
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*89*	*43 - 116*				
Pyrene-d10	*92*	*33 - 124*				
Terphenyl-d14	*96*	*38 - 125*				

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1007S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0692**	**0.0589**	0.0833	0.0833	83	71	45 - 109	16	29	
Acenaphthylene	**0.0754**	**0.0660**	0.0833	0.0833	91	79	54 - 118	13	18	
Acenaphthene	**0.0727**	**0.0653**	0.0833	0.0833	87	78	60 - 108	11	14	
Fluorene	**0.0746**	**0.0711**	0.0833	0.0833	90	85	61 - 113	5	13	
Phenanthrene	**0.0623**	**0.0594**	0.0833	0.0833	75	71	63 - 106	5	13	
Anthracene	**0.0926**	**0.0855**	0.0833	0.0833	111	103	55 - 135	8	13	
Fluoranthene	**0.0758**	**0.0719**	0.0833	0.0833	91	86	66 - 118	5	13	
Pyrene	**0.0743**	**0.0705**	0.0833	0.0833	89	85	69 - 112	5	12	
Benzo[a]anthracene	**0.0781**	**0.0742**	0.0833	0.0833	94	89	58 - 118	5	13	
Chrysene	**0.0762**	**0.0728**	0.0833	0.0833	91	87	64 - 114	5	11	
Benzo[b]fluoranthene	**0.0681**	**0.0698**	0.0833	0.0833	82	84	52 - 125	2	19	
Benzo(j,k)fluoranthene	**0.0729**	**0.0649**	0.0833	0.0833	88	78	50 - 126	12	22	
Benzo[a]pyrene	**0.0738**	**0.0706**	0.0833	0.0833	89	85	43 - 123	4	16	
Indeno(1,2,3-c,d)pyrene	**0.0729**	**0.0703**	0.0833	0.0833	88	84	55 - 118	4	16	
Dibenz[a,h]anthracene	**0.0721**	**0.0699**	0.0833	0.0833	87	84	57 - 120	3	15	
Benzo[g,h,i]perylene	**0.0716**	**0.0692**	0.0833	0.0833	86	83	58 - 113	3	18	
Surrogate:										
2-Fluorobiphenyl					*87*	*68*	*43 - 116*			
Pyrene-d10					*91*	*86*	*33 - 124*			
Terphenyl-d14					*93*	*88*	*38 - 125*			

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1013S1					
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	10-13-14	10-14-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*73*	*32 - 114*				
Pyrene-d10	*63*	*33 - 121*				
Terphenyl-d14	*81*	*31 - 116*				

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1013S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0590**	**0.0571**	0.0833	0.0833	71	69	45 - 109	3	29	
Acenaphthylene	**0.0570**	**0.0557**	0.0833	0.0833	68	67	54 - 118	2	18	
Acenaphthene	**0.0603**	**0.0594**	0.0833	0.0833	72	71	60 - 108	2	14	
Fluorene	**0.0615**	**0.0610**	0.0833	0.0833	74	73	61 - 113	1	13	
Anthracene	**0.0784**	**0.0780**	0.0833	0.0833	94	94	55 - 135	1	13	
Fluoranthene	**0.0570**	**0.0565**	0.0833	0.0833	68	68	66 - 118	1	13	
Pyrene	**0.0577**	**0.0572**	0.0833	0.0833	69	69	69 - 112	1	12	
Benzo[a]anthracene	**0.0611**	**0.0617**	0.0833	0.0833	73	74	58 - 118	1	13	
Chrysene	**0.0661**	**0.0674**	0.0833	0.0833	79	81	64 - 114	2	11	
Benzo[b]fluoranthene	**0.0477**	**0.0477**	0.0833	0.0833	57	57	52 - 125	0	19	
Benzo(j,k)fluoranthene	**0.0613**	**0.0635**	0.0833	0.0833	74	76	50 - 126	4	22	
Benzo[a]pyrene	**0.0600**	**0.0612**	0.0833	0.0833	72	73	43 - 123	2	16	
Indeno(1,2,3-c,d)pyrene	**0.0655**	**0.0673**	0.0833	0.0833	79	81	55 - 118	3	16	
Dibenz[a,h]anthracene	**0.0671**	**0.0687**	0.0833	0.0833	81	82	57 - 120	2	15	
Benzo[g,h,i]perylene	**0.0677**	**0.0702**	0.0833	0.0833	81	84	58 - 113	4	18	
Surrogate:										
2-Fluorobiphenyl					*73*	*72*	*32 - 114*			
Pyrene-d10					*62*	*62*	*33 - 121*			
Terphenyl-d14					*78*	*80*	*31 - 116*			

Date of Report: October 17, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019
Project: 5147-006-10

% MOISTURE

Date Analyzed: 10-7,10&13-14

Client ID	Lab ID	% Moisture
GEI-13_2-3_093014	10-019-01	4
GEI-14_2-3_093014	10-019-05	4
GEI-15_5.5-6.5_093014	10-019-10	17
GEI-17_7-8_093014	10-019-19	9
GEI-18_8-9_093014	10-019-23	9
GEI-20_6-7_093014	10-019-31	17
GEI-21_5-6_093014	10-019-34	15
GEI-21_7.5-8.5_093014	10-019-35	41
GEI-23_7.5-8.5_093014	10-019-40	18
GEI-25_7-8_093014	10-019-47	19
GEI-26_6-7_093014	10-019-51	14

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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Chain of Custody

21

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nat Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Dissolved Nickel	Dissolved Arsenic				% Moisture
1	GEI-13-2-3-093014	9/30/14	1100	S	1																	~~X~~ NO DO	X				X
2	GEI-13-5-6-093014		1105																								
3	GEI-13-7-8-093014		1110																								
4	GEI-13-9-10-093014		1115																								
5	GEI-14-2-3-093014		1150																			~~X~~ NO DO	X				X
6	GEI-14-3.5-4.5-093014		1155																								
7	GEI-14-7-8-093014		1200																								
8	GEI-14-9-10-093014		1205																								
9	GEI-15-2-3-093014		1335																								
10	GEI-15-5.5-6.5-093014	↓	1340	↓	↓								X														X

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	10/2/14	0950
Received	[signature]	GEI	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions
(X) Added 10/10/14 BEP
STA

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

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Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DLI
Project Manager: Brian Tracy
Sampled by: Robert Treharn / Nate Stoman

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Dissolved Arsenic					% Moisture
11	GEI-15_10-11_093014	9/30/14	1345	S	1																						
12	GEI-15_12-13_093014		1350																								
13	GEI-16_2-3_093014		1125																								
14	GEI-16_4-5_093014		1130																								
15	GEI-16_6-7_093014		1135																								
16	GEI-16_8-9_093014		1140																								
17	GEI-17_1-2_093014		1245																								
18	GEI-17_4-5_093014		1255																								
19	GEI-17_7-8_093014		1250																			X					X
20	GEI-17_9-10_093014	↓	1300	↓	↓																						

	Signature	Company	Date	Time
Relinquished		GEI 10/2/14	~~9/2/14~~	950
Received		0825	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

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Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DC1
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nat Solomon

Turnaround Request (in working days)

(Check One)

☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
21	GE1-18-1-2-093014	9/30/14	1305	S	1																						
22	GE1-18-4-5-093014		1310																								
23	GE1-18-8-9-093014		1315																			X	X				X
24	GE1-18-9-10-093014		1320																								
25	GE1-19-2-3-093014		1215																								
26	GE1-19-4-5-093014		1220																								
27	GE1-19-7-8-093014		1225																								
28	GE1-19-9-10-093014		1230																								
29	GE1-20-2-3-093014		1400																								
30	GE1-20-4-5-093014		1405																								

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GE1	10/2/14	950	
Received		CORE	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

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Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DLI
Project Manager: Brian Tracey
Sampled by: Robert Trahan / Nate Sloman

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Dissolved Arsenic				% Moisture
31	GEI-20_6-7_09301#4	9/30/14	1410	S	1								X													X
32	GEI-20_8-9_09301#4		1415																							
33	GEI-21_1-2_09301#4		1500																							
34	GEI-21_5-6_09301#4		1505										X									X	X			X
35	GEI-21_7.5-8.5_09301#4		1510										X													X
36	GEI-21_9-10_09301#4		1515																							
37	GEI-23_1-2_09301#4		1520																							
38	GEI-23_2.5-3.5_09301#4		1525																							
39	GEI-23_5-6_09301#4		1530																							
40	GEI-23_7.5-8.5_09301#4	↓	1535	↓	↓								X													X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	[signature]	GEI	10/2/14	0950	
Received	[signature]	OEC	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

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Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DLI
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nate Stamm

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
41	GEI-24-2-3-093014	9/30/14	1605	S	1																						
42	GEI-24-4-5-093014	"	1610	"	"																						
43	GEI-24-6-7-093014	"	1615	"	"																						
44	GEI-24-9-10-093014	"	1620	"	"																						
45	GEI-25-1-2-093014	"	1800	"	"																						
46	GEI-25-4-5-093014	"	1805	"	"																						
47	GEI-25-7-8-093014	"	1810	"	"																	X	X				X
48	GEI-25-9-10-093014	"	1815	"	"																						
49	GEI-26-2-3-093014	"	1700	"	"																						
50	GEI-26-4-5-093014	"	1705	"	"																						

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10/2/14	950	
Received		GEI	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

Page 6 of 6

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Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nat Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
51	GE1-26-6-7_10 093014	9/30/14	1710	S	1																	X	X				X
52	GE1-29_2-3_093014		1625																								
53	GE1-29_5-6_093014		1630																								
54	GE1-29_8-9_093014		1635																								
55	GE1-29_9-10_093014		1640																								
56	GE1-30_3-4_093014		1710																								
57	GE1-30_5-6_093014		1745																								
58	GE1-30_7-8_093014		1750																								
59	GE1-30_9-10_093014		1755																								

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GE1	10/2/14	950	
Received		086	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Sample/Cooler Receipt and Acceptance Checklist

Client: GE

Client Project Name/Number: 5147-006-10

OnSite Project Number: 10-019

Initiated by: MM

Date Initiated: 10/2/14

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	N/A	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	N/A	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	Yes	No		1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	Yes	No	Temperature: 1.2		
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	N/A			
1.7 How were the samples delivered?	Client	Courier	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	Yes	No	1 2 3 4	
2.2 Was the COC legible and written in permanent ink?	Yes	No	1 2 3 4	
2.3 Have samples been relinquished and accepted by each custodian?	Yes	No	1 2 3 4	
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	No	1 2 3 4	
2.5 Were all of the samples listed on the COC submitted?	Yes	No	1 2 3 4	
2.6 Were any of the samples submitted omitted from the COC?	Yes	No	1 2 3 4	

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	No		1 2 3 4	
3.2 Were any sample labels missing or illegible?	Yes	No		1 2 3 4	
3.3 Have the correct containers been used for each analysis requested?	Yes	No		1 2 3 4	
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1 2 3 4	
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	N/A	1 2 3 4	
3.6 Is there sufficient sample submitted to perform requested analyses?	Yes	No		1 2 3 4	
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	No		1 2 3 4	
3.8 Was method 5035A used?	Yes	No	N/A	1 2 3 4	
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		N/A	1 2 3 4	

Explain any discrepancies:

24) Sample 52) GEI-29-2-3_093014 9/30/14 1625 on COC
1640 on label

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

RAW DATA

- PAHs EPA 8270D/SIM Data
- PAHs (added) EPA 8270D/SIM Data
- Total Metals EPA 6010C Data

PAHs Data

Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007030.D
Acq On : 7 Oct 2014 11:38 pm
Operator :
Sample : 10-019-34
Misc :
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Oct 07 23:53:56 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration

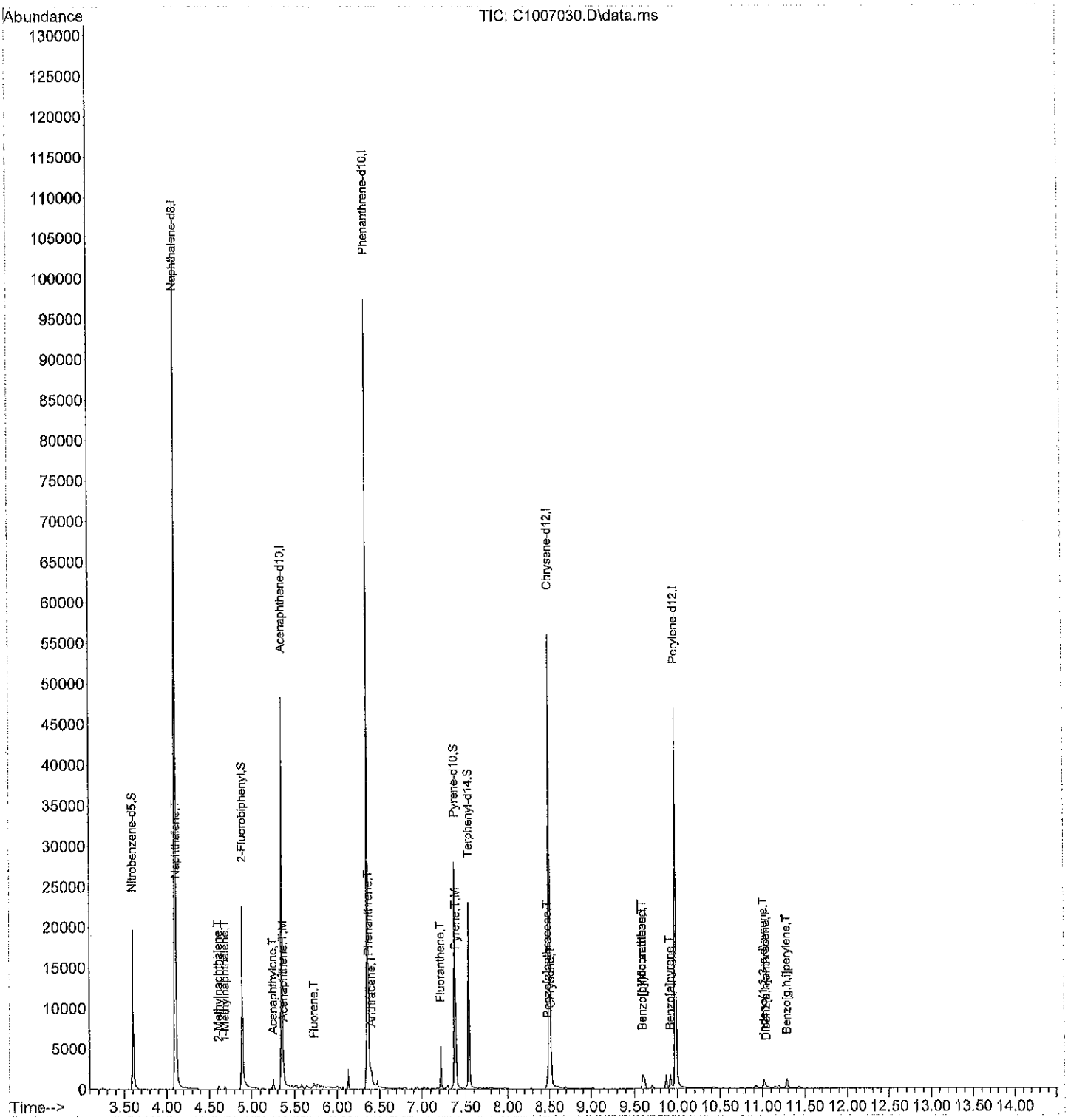
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.100	136	96358	2000.00	ppb	0.00
6) Acenaphthene-d10	5.357	164	48639	2000.00	ppb	0.00
10) Phenanthrene-d10	6.361	188	80978	2000.00	ppb	0.00
17) Chrysene-d12	8.503	240	59782	2000.00	ppb	0.00
21) Perylene-d12	9.977	264	54340	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.595	82	13539	791.26	ppb	0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery = 79.13%			
7) 2-Fluorobiphenyl	4.891	172	24654	721.93	ppb	0.00
Spiked Amount 1000.000	Range 25 - 89		Recovery = 72.19%			
11) Pyrene-d10	7.376	212	25402	848.95	ppb	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 84.90%			
18) Terphenyl-d14	7.538	244	18660	869.99	ppb	-0.01
Spiked Amount 1000.000	Range 39 - 92		Recovery = 87.00%			
Target Compounds						Qvalue
3) Naphthalene	4.112	128	608	11.65	ppb	100
4) 2-Methylnaphthalene	4.610	142	434	12.11	ppb	100
5) 1-Methylnaphthalene	4.688	142	352	10.60	ppb	100
8) Acenaphthylene	5.249	152	1056	21.90	ppb	100
9) Acenaphthene	5.372	153	253	7.77	ppb	100
12) Fluorene	5.727	166	596	17.62	ppb	100
13) Phenanthrene	6.377	178	3787	77.61	ppb	100
14) Anthracene	6.408	178	886	24.26	ppb	100
15) Fluoranthene	7.219	202	4178	97.03	ppb	100
16) Pyrene	7.387	202	5062	112.07	ppb	100
19) Benzo[a]anthracene	8.483	228	1864	55.78	ppb	100
20) Chrysene	8.522	228	2486	75.81	ppb	100
22) Benzo[b]fluoranthene	9.595	252	2113	58.55	ppb	100
23) Benzo(j,k)fluoranthene	9.595	252	2113	~~62.49~~ 42.05	ppb	100
24) Benzo[a]pyrene	9.915	252	1851	56.15	ppb	100
25) Indeno(1,2,3-c,d)pyrene	11.019	276	1431	37.65	ppb	100
26) Dibenz[a,h]anthracene	11.047	278	432	13.66	ppb	100
27) Benzo[g,h,i]perylene	11.289	276	1641	50.78	ppb	100

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

10/8/14

Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007030.D
Acq On : 7 Oct 2014 11:38 pm
Operator :
Sample : 10-019-34
Misc :
ALS Vial : 29 Sample Multiplier: 1

Quant Time: Oct 07 23:53:56 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007018.D
Acq On : 7 Oct 2014 7:19 pm
Operator :
Sample : MB1007S1
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 07 19:34:33 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration

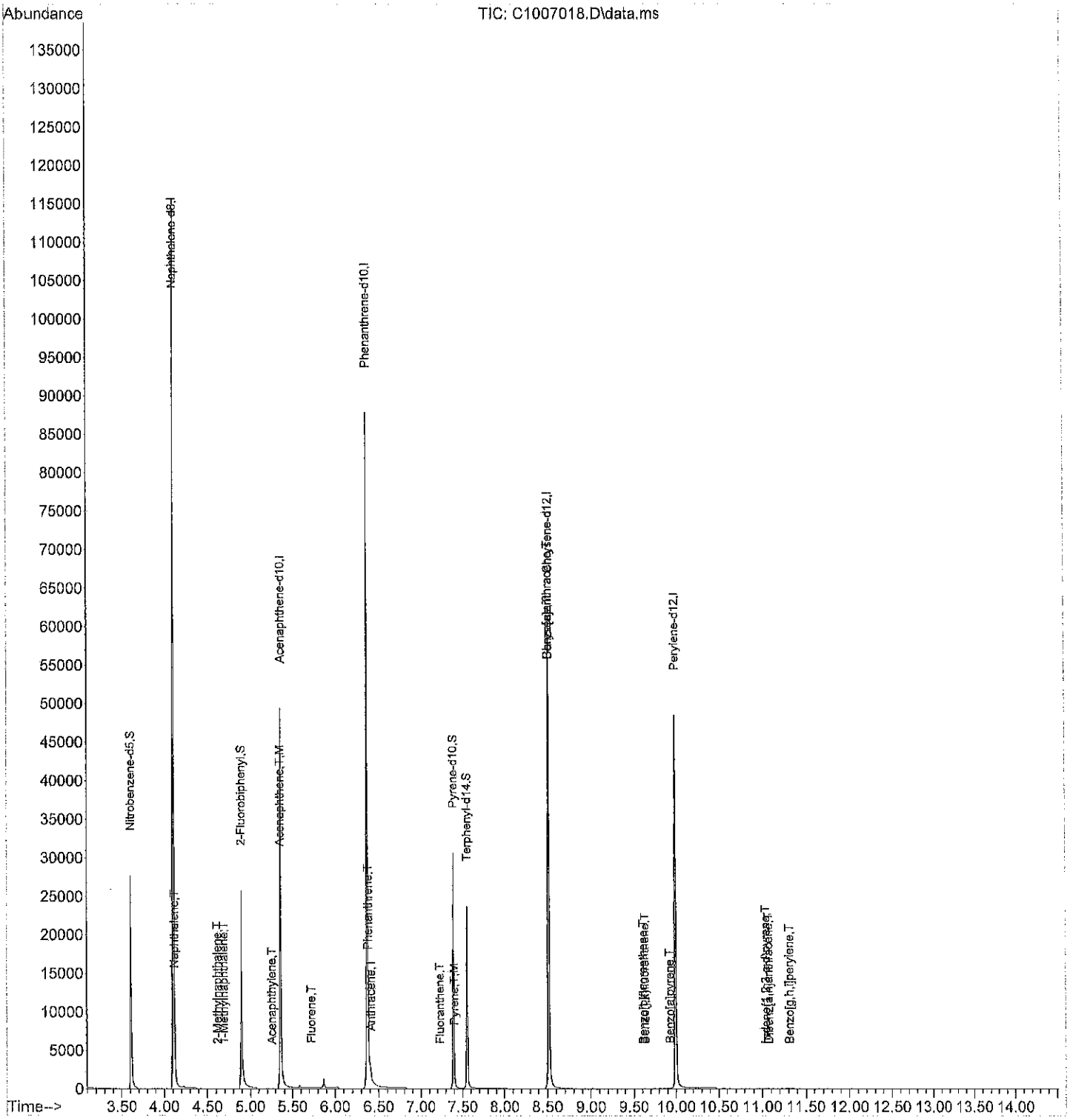
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.109	136	94126	2000.00	ppb	0.00
6) Acenaphthene-d10	5.364	164	46185	2000.00	ppb	0.00
10) Phenanthrene-d10	6.372	188	78539	2000.00	ppb	0.00
17) Chrysene-d12	8.518	240	60461	2000.00	ppb	0.00
21) Perylene-d12	9.997	264	54887	2000.00	ppb	0.01
System Monitoring Compounds						
2) Nitrobenzene-d5	3.604	82	16314	976.05	ppb	0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery = 97.61%#			
7) 2-Fluorobiphenyl	4.896	172	28893	891.01	ppb	0.00
Spiked Amount 1000.000	Range 25 - 89		Recovery = 89.10%#			
11) Pyrene-d10	7.392	212	26746	921.63	ppb	0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 92.16%			
18) Terphenyl-d14	7.555	244	20781	958.00	ppb	0.00
Spiked Amount 1000.000	Range 39 - 92		Recovery = 95.80%#			
Target Compounds						Qvalue
3) Naphthalene	4.121	128	84	1.65	ppb	100
4) 2-Methylnaphthalene	4.619	142	61	1.74	ppb	100
5) 1-Methylnaphthalene	4.693	142	37	1.14	ppb	100
8) Acenaphthylene	5.257	152	34	0.74	ppb	100
9) Acenaphthene	5.357	153	16	0.52	ppb	100
12) Fluorene	5.727	166	48	1.46	ppb	100
13) Phenanthrene	6.384	178	141	2.98	ppb	100
14) Anthracene	6.415	178	22	0.62	ppb	100
15) Fluoranthene	7.230	202	46	1.10	ppb	100
16) Pyrene	7.404	202	102	2.33	ppb	100
19) Benzo[a]anthracene	8.514	228	200	5.92	ppb	100
20) Chrysene	8.514	228	200	~~6.03~~	ppb	100
22) Benzo[b]fluoranthene	9.611	252	32	0.88	ppb	100
23) Benzo(j,k)fluoranthene	9.634	252	35	1.02	ppb	100
24) Benzo[a]pyrene	9.931	252	35	1.05	ppb	100
25) Indeno(1,2,3-c,d)pyrene	11.044	276	46	1.20	ppb	100
26) Dibenz[a,h]anthracene	11.075	278	41	1.28	ppb	100
27) Benzo[g,h,i]perylene	11.313	276	52	1.59	ppb	100

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

10/8/14 SM

Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007018.D
Acq On : 7 Oct 2014 7:19 pm
Operator :
Sample : MB1007S1
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 07 19:34:33 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007019.D
Acq On : 7 Oct 2014 7:41 pm
Operator :
Sample : SB1007S1
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Oct 07 19:56:10 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration

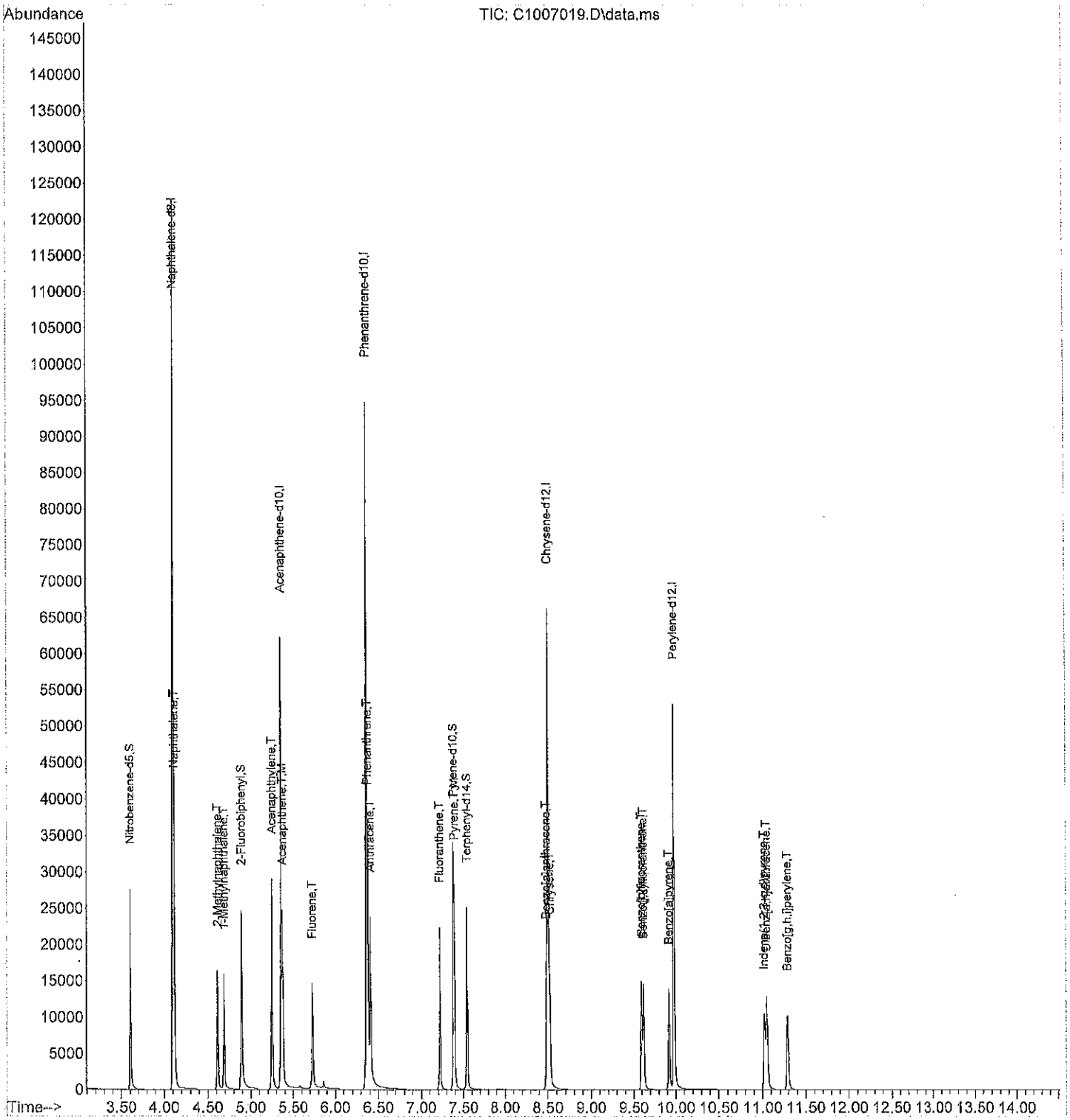
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.106	136	100022	2000.00	ppb	0.00
6) Acenaphthene-d10	5.358	164	48512	2000.00	ppb	0.00
10) Phenanthrene-d10	6.365	188	81656	2000.00	ppb	0.00
17) Chrysene-d12	8.506	240	63076	2000.00	ppb	0.00
21) Perylene-d12	9.981	264	58577	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.601	82	16963	955.05	ppb	0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery = 95.50%#			
7) 2-Fluorobiphenyl	4.891	172	29523	866.76	ppb	0.00
Spiked Amount 1000.000	Range 25 - 89		Recovery = 86.68%			
11) Pyrene-d10	7.381	212	27358	906.73	ppb	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 90.67%			
18) Terphenyl-d14	7.544	244	21100	932.38	ppb	0.00
Spiked Amount 1000.000	Range 39 - 92		Recovery = 93.24%#			
Target Compounds						Qvalue
3) Naphthalene	4.118	128	22505	415.37	ppb	100
4) 2-Methylnaphthalene	4.614	142	14217	382.17	ppb	100
5) 1-Methylnaphthalene	4.688	142	14326	415.75	ppb	100
8) Acenaphthylene	5.250	152	21762	452.46	ppb	100
9) Acenaphthene	5.373	153	14164	436.27	ppb	100
12) Fluorene	5.728	166	15258	447.44	ppb	100
13) Phenanthrene	6.377	178	18382	373.59	ppb	100
14) Anthracene	6.408	178	20455	555.32	ppb	100
15) Fluoranthene	7.219	202	19746	454.77	ppb	100
16) Pyrene	7.393	202	20315	446.02	ppb	100
19) Benzo[a]anthracene	8.486	228	16520	468.58	ppb	100
20) Chrysene	8.525	228	15827	457.46	ppb	100
22) Benzo[b]fluoranthene	9.595	252	15900	408.68	ppb	100
23) Benzo(j,k)fluoranthene	9.618	252	15945	437.48	ppb	100
24) Benzo[a]pyrene	9.918	252	15734	442.78	ppb	100
25) Indeno(1,2,3-c,d)pyrene	11.020	276	17925	437.46	ppb	100
26) Dibenz[a,h]anthracene	11.048	278	14740	432.46	ppb	100
27) Benzo[g,h,i]perylene	11.290	276	14959	429.37	ppb	100

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

10/8/14 SM

Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007019.D
Acq On : 7 Oct 2014 7:41 pm
Operator :
Sample : SB1007S1
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Oct 07 19:56:10 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007020.D
Acq On : 7 Oct 2014 8:02 pm
Operator :
Sample : SB1007S1 DUP
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Oct 07 20:17:50 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration

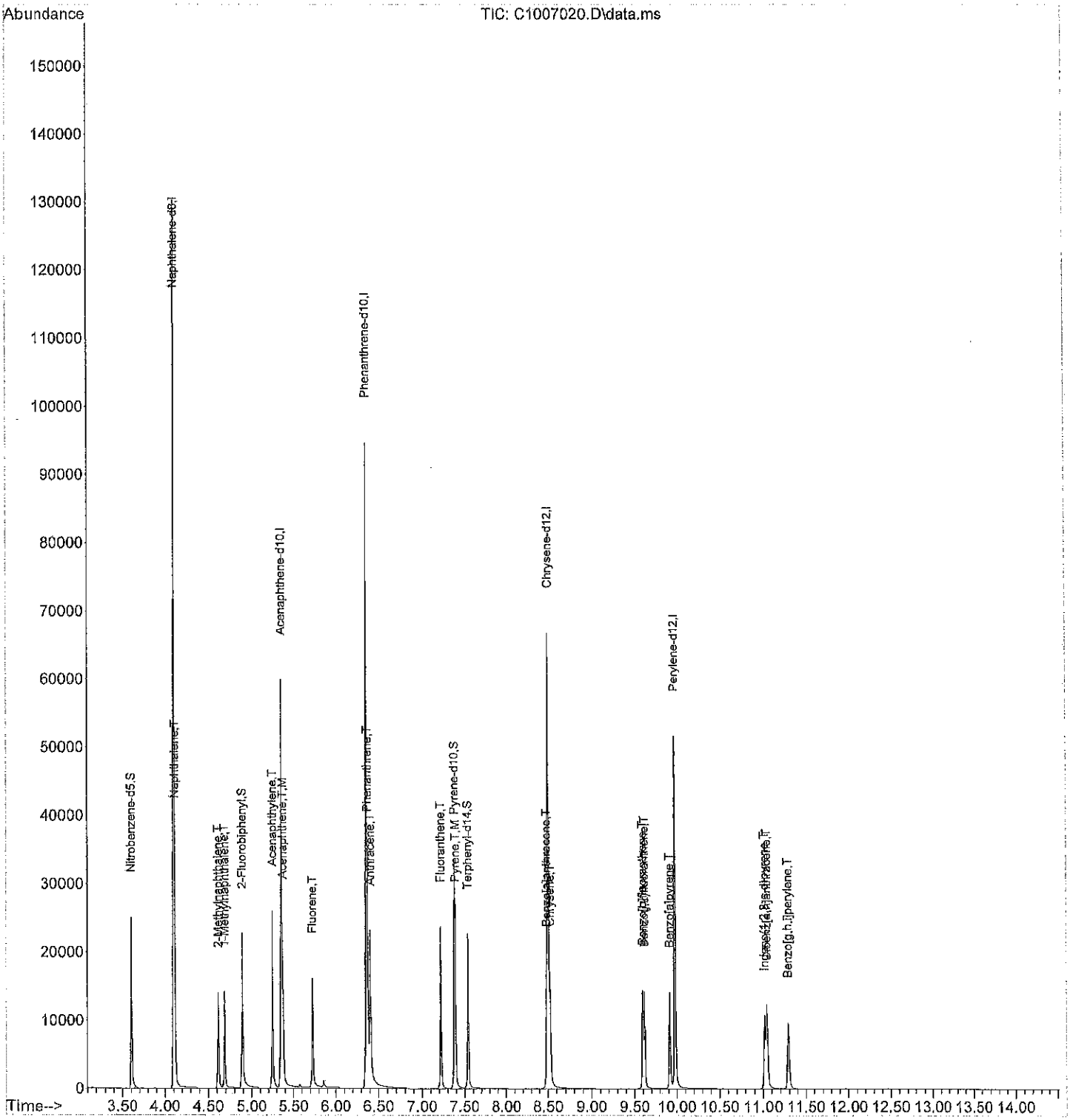
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.105	136	104728	2000.00	ppb	0.00
6) Acenaphthene-d10	5.358	164	51313	2000.00	ppb	0.00
10) Phenanthrene-d10	6.365	188	86458	2000.00	ppb	0.00
17) Chrysene-d12	8.502	240	66173	2000.00	ppb	0.00
21) Perylene-d12	9.977	264	61293	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.600	82	14737	792.44	ppb	0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery = 79.24%			
7) 2-Fluorobiphenyl	4.891	172	24413	677.62	ppb	0.00
Spiked Amount 1000.000	Range 25 - 89		Recovery = 67.76%			
11) Pyrene-d10	7.382	212	27369	856.72	ppb	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 85.67%			
18) Terphenyl-d14	7.538	244	20790	875.68	ppb	-0.01
Spiked Amount 1000.000	Range 39 - 92		Recovery = 87.57%			
Target Compounds						Qvalue
3) Naphthalene	4.117	128	20062	353.64	ppb	100
4) 2-Methylnaphthalene	4.614	142	12751	327.36	ppb	100
5) 1-Methylnaphthalene	4.688	142	13165	364.89	ppb	100
8) Acenaphthylene	5.250	152	20150	396.07	ppb	100
9) Acenaphthene	5.373	153	13452	391.72	ppb	100
12) Fluorene	5.727	166	15404	426.64	ppb	100
13) Phenanthrene	6.377	178	18580	356.64	ppb	100
14) Anthracene	6.408	178	20013	513.15	ppb	100
15) Fluoranthene	7.219	202	19820	431.12	ppb	100
16) Pyrene	7.393	202	20392	422.84	ppb	100
19) Benzo[a]anthracene	8.482	228	16464	445.14	ppb	100
20) Chrysene	8.525	228	15855	436.82	ppb	100
22) Benzo[b]fluoranthene	9.595	252	17061	419.09	ppb	100
23) Benzo(j,k)fluoranthene	9.618	252	14854	389.49	ppb	100
24) Benzo[a]pyrene	9.915	252	15753	423.67	ppb	100
25) Indeno(1,2,3-c,d)pyrene	11.020	276	18079	421.67	ppb	100
26) Dibenz[a,h]anthracene	11.047	278	14950	419.18	ppb	100
27) Benzo[g,h,i]perylene	11.285	276	15136	415.20	ppb	100

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

10/8/14 gm

Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007020.D
Acq On : 7 Oct 2014 8:02 pm
Operator :
Sample : SB1007S1 DUP
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Oct 07 20:17:50 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration



Calibration Report Corey

Method Path : C:\msdchem\1\METHODS\
Method File : CSIM1007.M
Title : PAH'S BY SIMS
Last Update : Tue Oct 07 17:28:36 2014
Response Via : Initial Calibration

Calibration Files
10 =C1007005 20 =C1007006 50 =C1007007 100 =C1007008 200 =C1007009 500 =C1007010
1000=C1007011 5000=C1007012

		Compound	Fit	Constant	Linear	Quad	RSD/Cf
1)	I	Naphthalene-d8		----------ISTD----------			
2)	S	Nitrobenzene-d5	Avg	-----	0.3551	-----	0.1048
3)	T	Naphthalene	Avg	-----	1.0834	-----	0.1014
4)	T	2-Methylnaphthalene	Avg	-----	0.7438	-----	0.1197
5)	T	1-Methylnaphthalene	Avg	-----	0.6890	-----	0.0896
6)	I	Acenaphthene-d10		----------ISTD----------			
7)	S	2-Fluorobiphenyl	Avg	-----	1.4042	-----	0.0824
8)	T	Acenaphthylene	Avg	-----	1.9829	-----	0.1839
9)	T,M	Acenaphthene	Avg	-----	1.3385	-----	0.1040
10)	I	Phenanthrene-d10		----------ISTD----------			
11)	S	Pyrene-d10	Avg	-----	0.7390	-----	0.1105
12)	T	Fluorene	Avg	-----	0.8352	-----	0.1026
13)	T	Phenanthrene	Avg	-----	1.2051	-----	0.1677
14)	T	Anthracene	Avg	-----	0.9022	-----	0.0621
15)	T	Fluoranthene	Avg	-----	1.0635	-----	0.1135
16)	T,M	Pyrene	Avg	-----	1.1156	-----	0.1277
17)	I	Chrysene-d12		----------ISTD----------			
18)	S	Terphenyl-d14	LinF	-----	0.7176	-----	0.9987
19)	T	Benzo[a]anthracene	LinF	-----	1.1179	-----	0.9998
20)	T	Chrysene	Avg	-----	1.0970	-----	0.1068
21)	I	Perylene-d12		----------ISTD----------			
22)	T	Benzo[b]fluorant...	Avg	-----	1.3284	-----	0.1067
23)	T	Benzo(j,k)fluora...	Avg	-----	1.2444	-----	0.0834
24)	T	Benzo[a]pyrene	Avg	-----	1.2133	-----	0.0962
25)	T	Indeno(1,2,3-c,d...	Avg	-----	1.3990	-----	0.0880
26)	T	Dibenz[a,h]anthr...	Avg	-----	1.1637	-----	0.1508
27)	T	Benzo[g,h,i]pery...	Avg	-----	1.1895	-----	0.1038

CSIM1007.M Wed Oct 08 09:31:57 2014

Evaluate Continuing Calibration Report

Data Path : X:\SEMIVOLS\COREY\DATA\C141007\
Data File : C1007013.D
Acq On : 7 Oct 2014 5:30 pm
Operator :
Sample : ICVPAH1007
Misc : SV4-39-06
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 07 17:45:49 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	2000.000	2000.000	0.0	101	0.00
2	S	Nitrobenzene-d5	500.000	486.310	2.7	108	0.00
3	T	Naphthalene	500.000	497.621	0.5	109	0.00
4	T	2-Methylnaphthalene	500.000	492.697	1.5	110	0.00
5	T	1-Methylnaphthalene	500.000	513.443	-2.7	111	0.00
6	I	Acenaphthene-d10	2000.000	2000.000	0.0	101	0.00
7	S	2-Fluorobiphenyl	500.000	532.019	-6.4	111	0.00
8	T	Acenaphthylene	500.000	496.175	0.8	112	0.00
9	T,M	Acenaphthene	500.000	495.131	1.0	109	0.00
10	I	Phenanthrene-d10	2000.000	2000.000	0.0	101	0.00
11	S	Pyrene-d10	500.000	509.760	-2.0	113	0.00
12	T	Fluorene	500.000	512.771	-2.6	112	0.00
13	T	Phenanthrene	500.000	475.367	4.9	114	0.00
14	T	Anthracene	500.000	506.977	-1.4	106	0.00
15	T	Fluoranthene	500.000	506.059	-1.2	111	0.00
16	T,M	Pyrene	500.000	504.612	-0.9	112	0.00
17	I	Chrysene-d12	2000.000	2000.000	0.0	101	0.00
18	S	Terphenyl-d14	500.000	543.632	-8.7	83	0.00
19	T	Benzo[a]anthracene	500.000	530.698	-6.1	111	0.00
20	T	Chrysene	500.000	517.468	-3.5	113	0.00
21	I	Perylene-d12	2000.000	2000.000	0.0	100	0.00
22	T	Benzo[b]fluoranthene	500.000	523.336	-4.7	115	0.00
23	T	Benzo(j,k)fluoranthene	500.000	513.793	-2.8	107	0.00
24	T	Benzo[a]pyrene	500.000	514.381	-2.9	112	0.00
25	T	Indeno(1,2,3-c,d)pyrene	500.000	513.416	-2.7	110	0.00
26	T	Dibenz[a,h]anthracene	500.000	502.985	-0.6	111	0.00
27	T	Benzo[g,h,i]perylene	500.000	506.341	-1.3	109	0.00

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

Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007013.D
Acq On : 7 Oct 2014 5:30 pm
Operator :
Sample : ICVPAH1007
Misc : SV4-39-06
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 07 17:45:49 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration

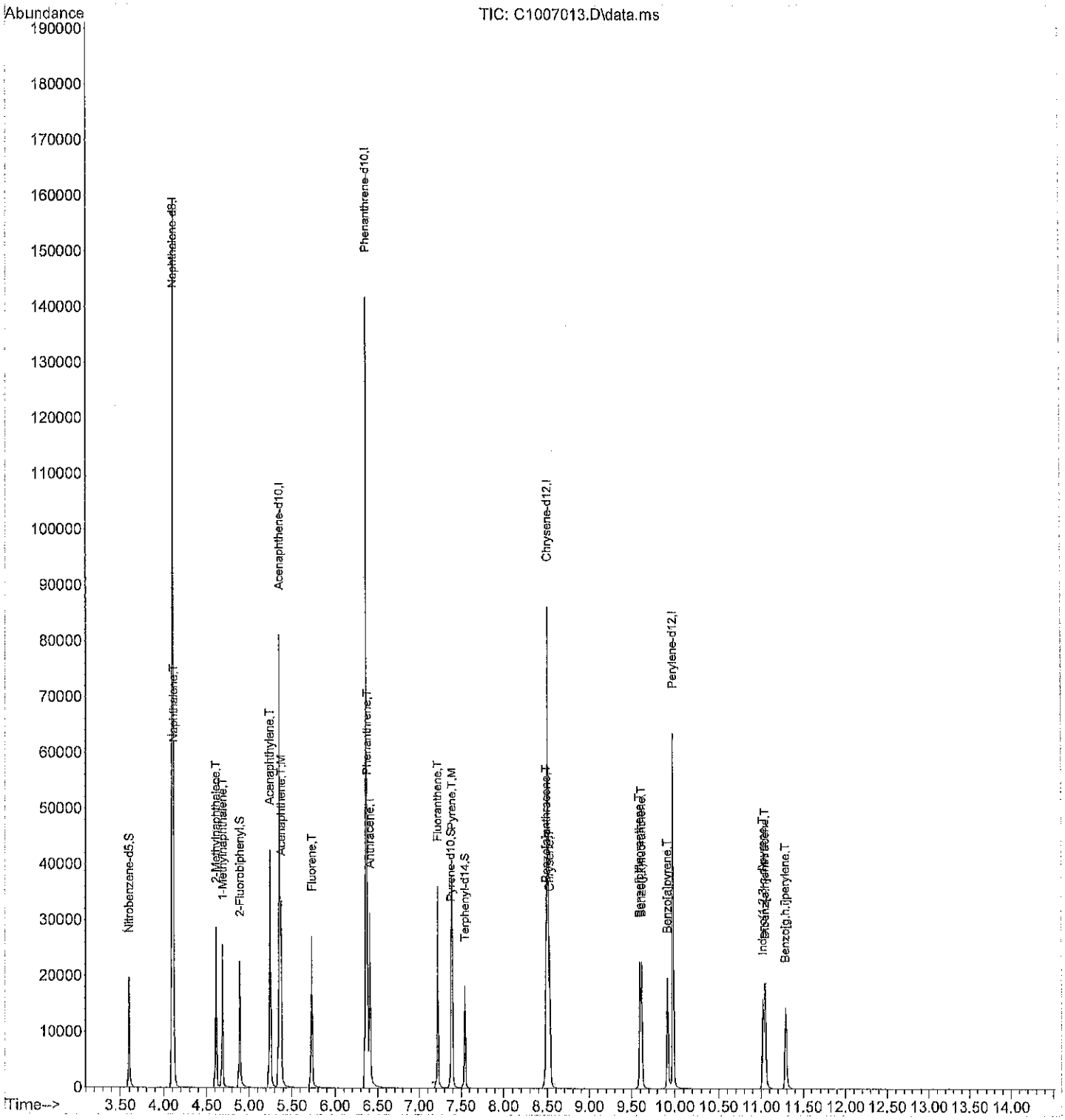
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.106	136	133760	2000.00	ppb	0.00
6) Acenaphthene-d10	5.357	164	67832	2000.00	ppb	0.00
10) Phenanthrene-d10	6.365	188	115902	2000.00	ppb	0.00
17) Chrysene-d12	8.507	240	85863	2000.00	ppb	0.00
21) Perylene-d12	9.985	264	73256	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.601	82	11551	486.31	ppb	0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery = 48.63%			
7) 2-Fluorobiphenyl	4.895	172	25338	532.02	ppb	0.00
Spiked Amount 1000.000	Range 25 - 89		Recovery = 53.20%			
11) Pyrene-d10	7.381	212	21831	509.76	ppb	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 50.98%			
18) Terphenyl-d14	7.550	244	16747	543.63	ppb	0.00
Spiked Amount 1000.000	Range 39 - 92		Recovery = 54.36%			
Target Compounds						Qvalue
3) Naphthalene	4.118	128	36056	497.62	ppb	100
4) 2-Methylnaphthalene	4.614	142	24511	492.70	ppb	100
5) 1-Methylnaphthalene	4.692	142	23660	513.44	ppb	100
8) Acenaphthylene	5.249	152	33369	496.17	ppb	100
9) Acenaphthene	5.380	153	22477	495.13	ppb	100
12) Fluorene	5.735	166	24819	512.77	ppb	100
13) Phenanthrene	6.380	178	33199	475.37	ppb	100
14) Anthracene	6.411	178	26506	506.98	ppb	100
15) Fluoranthene	7.225	202	31188	506.06	ppb	100
16) Pyrene	7.393	202	32623	504.61	ppb	100
19) Benzo[a]anthracene	8.491	228	25469	530.70	ppb	100
20) Chrysene	8.530	228	24371	517.47	ppb	100
22) Benzo[b]fluoranthene	9.599	252	25463	523.34	ppb	100
23) Benzo(j,k)fluoranthene	9.622	252	23419	513.79	ppb	100
24) Benzo[a]pyrene	9.919	252	22859	514.38	ppb	100
25) Indeno(1,2,3-c,d)pyrene	11.024	276	26309	513.42	ppb	100
26) Dibenz[a,h]anthracene	11.051	278	21440	502.99	ppb	100
27) Benzo[g,h,i]perylene	11.289	276	22061	506.34	ppb	100

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

10/7/14

Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007013.D
Acq On : 7 Oct 2014 5:30 pm
Operator :
Sample : ICVPAH1007
Misc : SV4-39-06
ALS Vial : 12 Sample Multiplier: 1

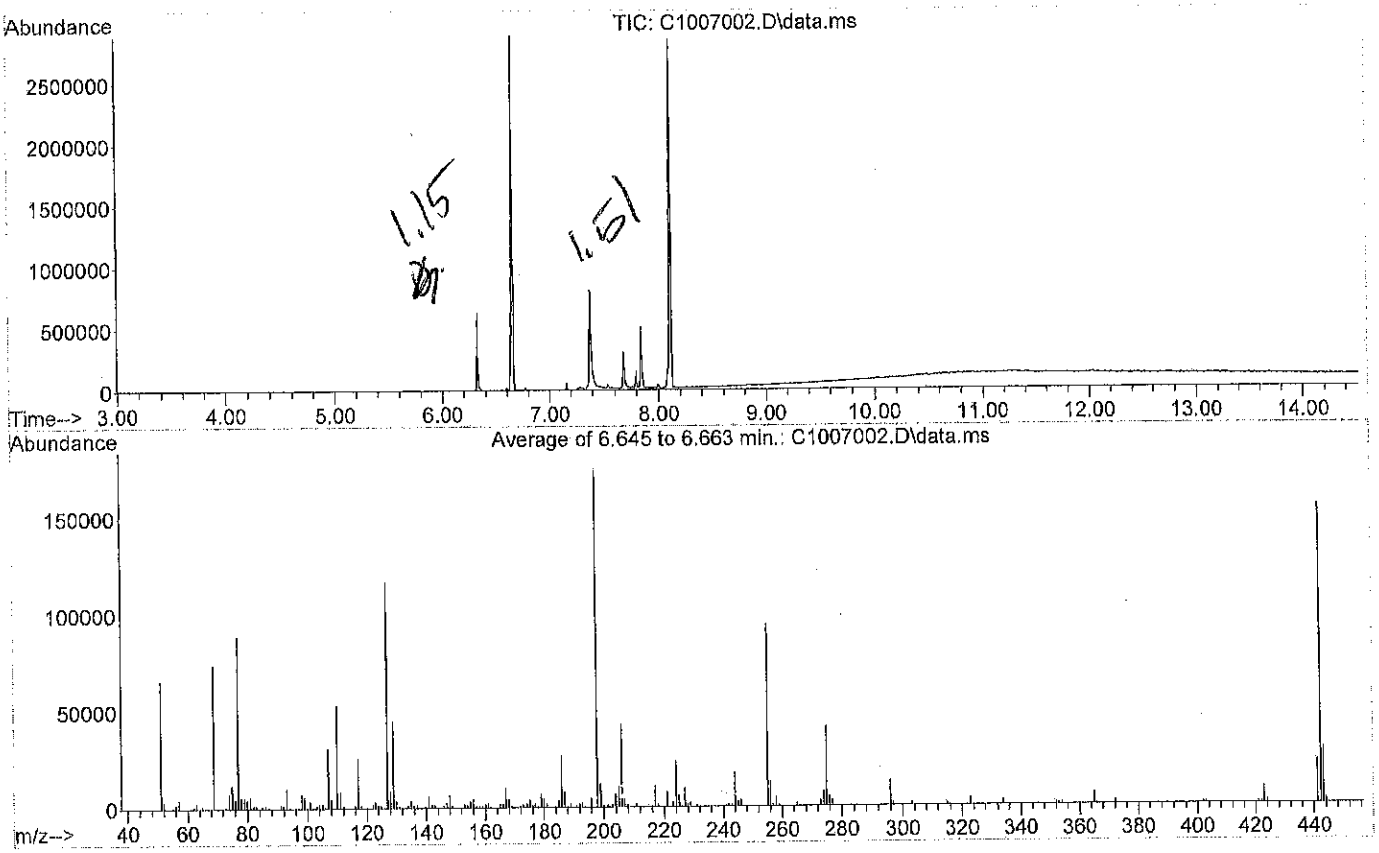
Quant Time: Oct 07 17:45:49 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\COREY\DATA\C141007\
Data File : C1007002.D
Acq On : 7 Oct 2014 12:41 pm
Operator :
Sample : DFTPP
Misc : SV4-39-01
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : X:\SEMIVOLS\COREY\DATA\C141006\C1006016.D\CSIM1002.M
Title : PAH'S BY SIMS
Last Update : Thu Oct 02 17:23:20 2014



Spectrum Information: Average of 6.645 to 6.663 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	37.8	66257	PASS
68	69	0.00	2	1.0	740	PASS
69	198	0.00	100	42.4	74402	PASS
70	69	0.00	2	0.5	370	PASS
127	198	25	75	66.8	117042	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	175290	PASS
199	198	5	9	7.1	12394	PASS
275	198	10	30	23.4	41081	PASS
365	198	0.75	100	3.5	6214	PASS
441	443	0.01	100	76.3	22561	PASS
442	198	40	110	88.6	155338	PASS
443	442	15	24	19.0	29569	PASS

PAHs (added) Data

Onsite Environmental Inc. Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C141016\
Data File : C1016010.D
Acq On : 16 Oct 2014 1:07 pm
Operator :
Sample : 10-019-10
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 16 13:22:31 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Oct 15 08:58:38 2014
Response via : Initial Calibration

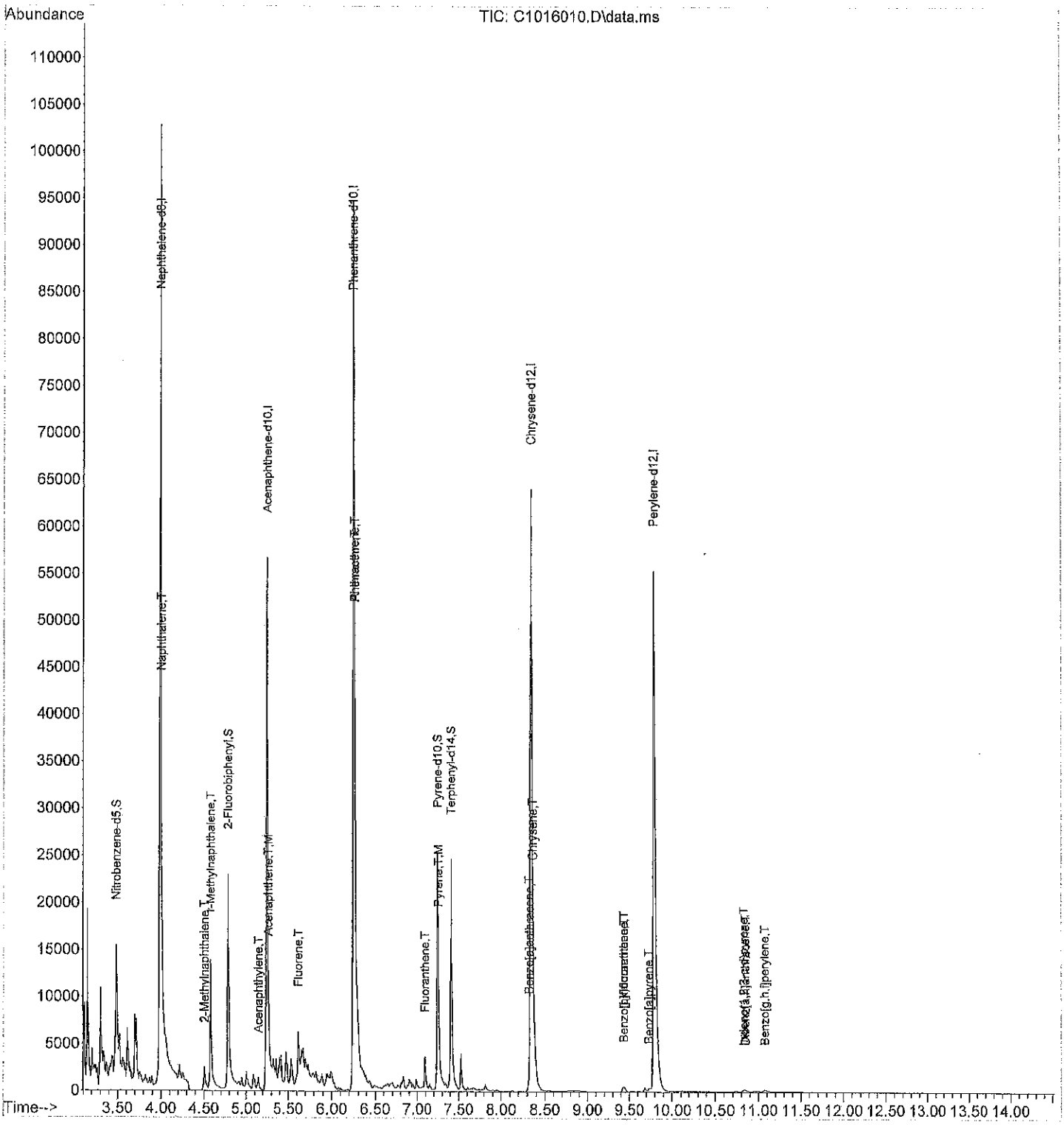
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.988	136	137303	2000.00	ppb	0.00
6) Acenaphthene-d10	5.246	164	75812	2000.00	ppb	0.00
10) Phenanthrene-d10	6.246	188	131540	2000.00	ppb	0.00
17) Chrysene-d12	8.343	240	112206	2000.00	ppb	0.00
21) Perylene-d12	9.793	264	105100	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.483	82	12146	693.64	ppb	0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery = 69.36%			
7) 2-Fluorobiphenyl	4.782	172	33264	637.33	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 63.73%			
11) Pyrene-d10	7.243	212	33149	666.51	ppb	-0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 66.65%			
18) Terphenyl-d14	7.406	244	29658	754.29	ppb	-0.01
Spiked Amount 1000.000	Range 39 - 92		Recovery = 75.43%			
Target Compounds						Qvalue
3) Naphthalene	4.000	128	11749	177.92	ppb	100
4) 2-Methylnaphthalene	4.505	142	3859	128.73	ppb	100
5) 1-Methylnaphthalene	4.575	142	16190	297.92	ppb	100
8) Acenaphthylene	5.146	152	1032	15.69	ppb	100
9) Acenaphthene	5.262	153	3327	73.84	ppb	100
12) Fluorene	5.616	166	6711	136.19	ppb	100
13) Phenanthrene	6.261	178	17483	328.68	ppb	100
14) Anthracene	~~6.261~~ 6.292	178	17483	~~244.51~~	ppb	61.41 100
15) Fluoranthene	7.093	202	4178	61.13	ppb	100
16) Pyrene	7.255	202	6317	87.87	ppb	100
19) Benzo[a]anthracene	8.323	228	1296	27.64	ppb	100
20) Chrysene	8.363	228	2217	33.01	ppb	100
22) Benzo[b]fluoranthene	9.434	252	1417	~~29.98~~	ppb	16.54 100
23) Benzo(j,k)fluoranthene	9.434	252	1417	~~20.43~~	ppb	9.60 100
24) Benzo[a]pyrene	9.730	252	419	8.04	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.824	276	463	7.06	ppb	100
26) Dibenz[a,h]anthracene	10.844	278	171	3.11	ppb	100
27) Benzo[g,h,i]perylene	11.074	276	557	10.16	ppb	100

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

10/17/14
EM

Data Path : C:\MSDCHEM\1\DATA\C141016\
Data File : C1016010.D
Acq On : 16 Oct 2014 1:07 pm
Operator :
Sample : 10-019-10
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 16 13:22:31 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Oct 15 08:58:38 2014
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\C141016\
Data File : C1016013.D
Acq On : 16 Oct 2014 2:21 pm
Operator :
Sample : 10-019-31
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 16 14:36:07 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Oct 15 08:58:38 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.989	136	133113	2000.00	ppb	0.00
6) Acenaphthene-d10	5.247	164	69419	2000.00	ppb	0.00
10) Phenanthrene-d10	6.250	188	110668	2000.00	ppb	0.00
17) Chrysene-d12	8.344	240	91599	2000.00	ppb	0.00
21) Perylene-d12	9.800	264	87000	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.484	82	13861	816.50	ppb	0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery = 81.65%			
7) 2-Fluorobiphenyl	4.782	172	32241	674.62	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 67.46%			
11) Pyrene-d10	7.250	212	28460	680.16	ppb	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 68.02%			
18) Terphenyl-d14	7.406	244	24076	750.08	ppb	-0.01
Spiked Amount 1000.000	Range 39 - 92		Recovery = 75.01%			
Target Compounds						Qvalue
3) Naphthalene	4.001	128	12905	201.58	ppb	100
4) 2-Methylnaphthalene	4.501	142	4437	152.67	ppb	100
5) 1-Methylnaphthalene	4.575	142	73526	1395.58	ppb	100
8) Acenaphthylene	5.139	152	6119	101.58	ppb	100
9) Acenaphthene	5.262	153	8555	207.34	ppb	100
12) Fluorene	5.617	166	13674	329.83	ppb	100
13) Phenanthrene	6.261	178	45869	1024.97	ppb	100
14) Anthracene	6.292	178	10052	167.10	ppb	100
15) Fluoranthene	7.093	202	21408	372.29	ppb	100
16) Pyrene	7.261	202	35848	592.70	ppb	100
19) Benzo[a]anthracene	8.328	228	12069	315.25	ppb	100
20) Chrysene	8.367	228	17945	327.30	ppb	100
22) Benzo[b]fluoranthene	9.430	252	12937	330.66	ppb	100
23) Benzo(j,k)fluoranthene	9.438	252	12937	225.38	ppb	100
24) Benzo[a]pyrene	9.742	252	9472	219.67	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.822	276	5579	102.76	ppb	100
26) Dibenz[a,h]anthracene	10.846	278	1864	40.99	ppb	100
27) Benzo[g,h,i]perylene	11.072	276	5778	127.36	ppb	100

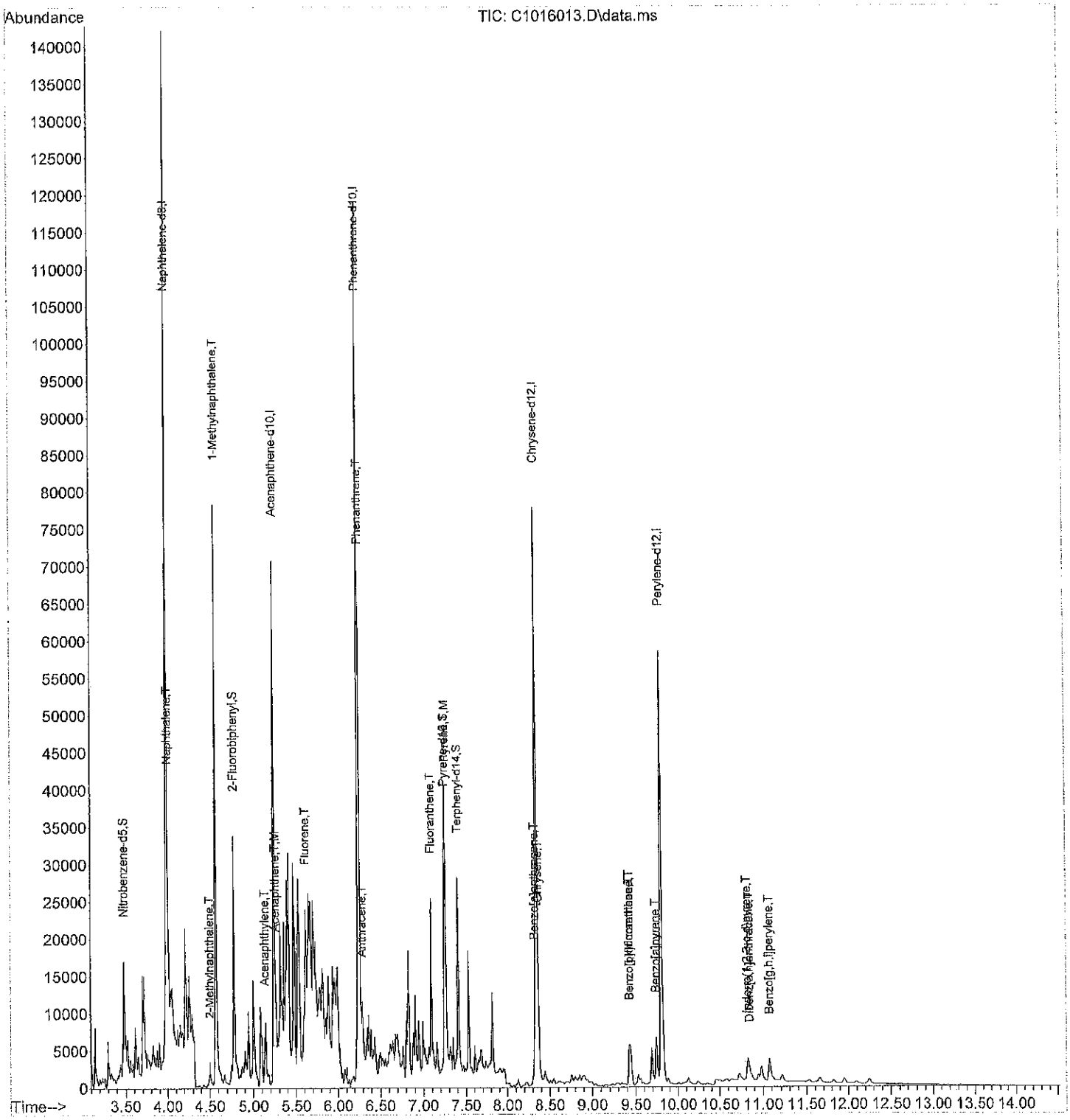
(#) = qualifier out of range (m) = manual integration (+) = signals summed

160.14
186.58
102.18

10/17/14 SM

Data Path : C:\MSDCHEM\1\DATA\C141016\
Data File : C1016013.D
Acq On : 16 Oct 2014 2:21 pm
Operator :
Sample : 10-019-31
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Oct 16 14:36:07 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Oct 15 08:58:38 2014
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\C141016\
Data File : C1016012.D
Acq On : 16 Oct 2014 1:59 pm
Operator :
Sample : 10-019-35
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 16 14:14:13 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Oct 15 08:58:38 2014
Response via : Initial Calibration

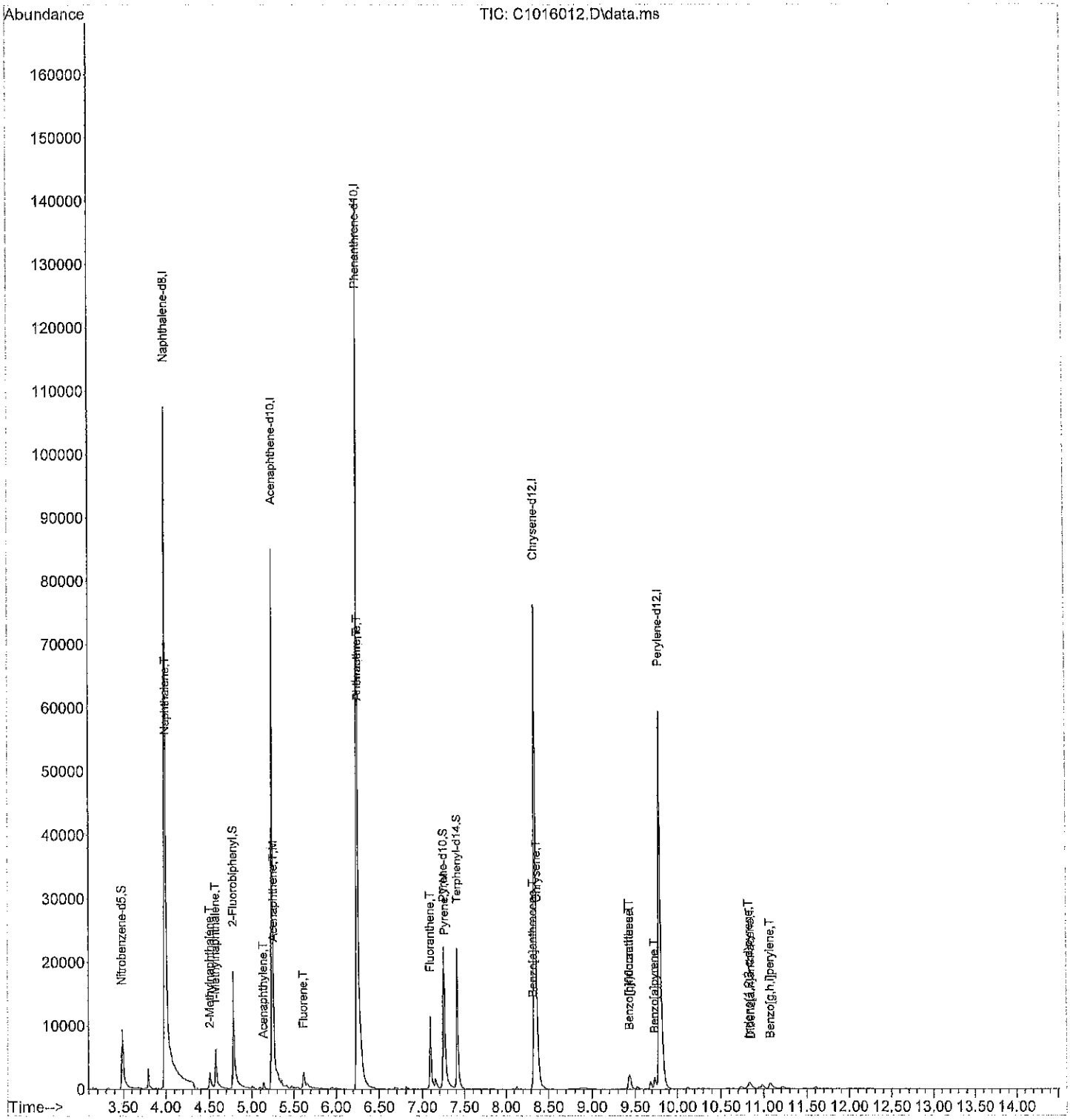
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.991	136	158271	2000.00	ppb	0.00
6) Acenaphthene-d10	5.246	164	89089	2000.00	ppb	0.00
10) Phenanthrene-d10	6.249	188	159013	2000.00	ppb	0.00
17) Chrysene-d12	8.342	240	124966	2000.00	ppb	0.00
21) Perylene-d12	9.796	264	104796	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.486	82	11590	574.20	ppb	0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery = 57.42%			
7) 2-Fluorobiphenyl	4.783	172	30046	489.88	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 48.99%			
11) Pyrene-d10	7.251	212	29974	498.55	ppb	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 49.85%			
18) Terphenyl-d14	7.413	244	26473	604.54	ppb	0.00
Spiked Amount 1000.000	Range 39 - 92		Recovery = 60.45%			
Target Compounds						Qvalue
3) Naphthalene	4.002	128	21224	278.83	ppb	100
4) 2-Methylnaphthalene	4.506	142	3798	109.91	ppb	100
5) 1-Methylnaphthalene	4.576	142	9093	145.16	ppb	100
8) Acenaphthylene	5.138	152	1075	13.91	ppb	100
9) Acenaphthene	5.261	153	3776	71.31	ppb	100
12) Fluorene	5.615	166	3984	66.88	ppb	100
13) Phenanthrene	6.260	178	14906	231.82	ppb	100
14) Anthracene	6.260 29	178	14906	~~172.45~~	ppb 64.79	100
15) Fluoranthene	7.094	202	13840	167.50	ppb	100
16) Pyrene	7.262	202	14511	166.98	ppb	100
19) Benzo[a]anthracene	8.327	228	3380	64.71	ppb	100
20) Chrysene	8.366	228	4718	63.07	ppb	100
22) Benzo[b]fluoranthene	9.433	252	5096	~~108.13~~	ppb 52.33	100
23) Benzo(j,k)fluoranthene	9.433	252	5100	~~73.76~~	ppb 38.75	100
24) Benzo[a]pyrene	9.733	252	3316	63.84	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.827	276	2147	32.83	ppb	100
26) Dibenz[a,h]anthracene	10.846	278	565	10.32	ppb	100
27) Benzo[g,h,i]perylene	11.076	276	2309	42.25	ppb	100

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

10/17/14
SM

Data Path : C:\MSDCHEM\1\DATA\C141016\
Data File : C1016012.D
Acq On : 16 Oct 2014 1:59 pm
Operator :
Sample : 10-019-35
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 16 14:14:13 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Oct 15 08:58:38 2014
Response via : Initial Calibration



Onsite Environmental Inc. Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C141016\
Data File : C1016011.D
Acq On : 16 Oct 2014 1:29 pm
Operator :
Sample : 10-019-40
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 16 13:44:29 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Oct 15 08:58:38 2014
Response via : Initial Calibration

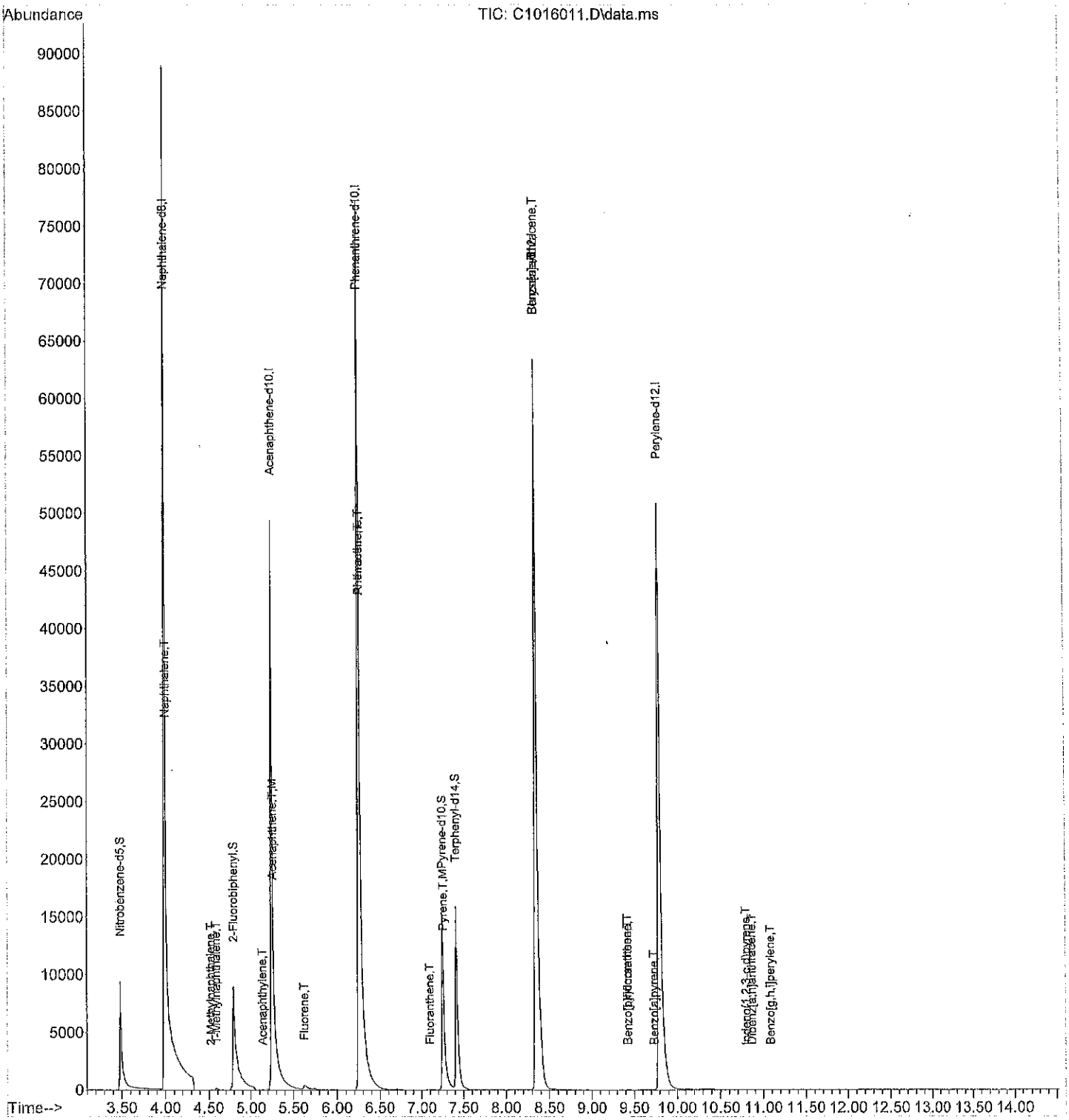
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Naphthalene-d8	3.989	136	145497	2000.00	ppb		0.00
6) Acenaphthene-d10	5.246	164	84086	2000.00	ppb		0.00
10) Phenanthrene-d10	6.250	188	152328	2000.00	ppb		0.00
17) Chrysene-d12	8.344	240	136058	2000.00	ppb		0.00
21) Perylene-d12	9.795	264	124880	2000.00	ppb		0.00
System Monitoring Compounds							
2) Nitrobenzene-d5	3.484	82	10798	581.93	ppb		0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery = 58.19%				
7) 2-Fluorobiphenyl	4.794	172	30312	523.62	ppb		0.00
Spiked Amount 1000.000	Range 25 - 89		Recovery = 52.36%				
11) Pyrene-d10	7.250	212	30131	523.15	ppb		0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 52.31%				
18) Terphenyl-d14	7.412	244	27019	566.71	ppb		0.00
Spiked Amount 1000.000	Range 39 - 92		Recovery = 56.67%				
Target Compounds							Qvalue
3) Naphthalene	4.001	128	347	4.96	ppb		100
4) 2-Methylnaphthalene	4.525	142	59	1.86	ppb		100
5) 1-Methylnaphthalene	4.587	142	355	6.16	ppb		100
8) Acenaphthylene	5.139	152	75	1.03	ppb		100
9) Acenaphthene	5.262	153	571	11.43	ppb		100
12) Fluorene	5.632	166	937	16.42	ppb		100
13) Phenanthrene	6.265	178	798	12.96	ppb		100
14) Anthracene	6.265	178	798	~~9.64 ppb~~		ϕ	100
15) Fluoranthene	7.099	202	140	1.77	ppb	ϕ	100
16) Pyrene	7.261	202	162	1.95	ppb		100
19) Benzo[a]anthracene	8.344	228	499	8.78	ppb		100
20) Chrysene	8.344	228	499	~~6.13 ppb~~		a	100
22) Benzo[b]fluoranthene	9.425	252	75	1.34	ppb		100
23) Benzo(j,k)fluoranthene	9.425	252	75	~~0.91 ppb~~		ϕ	100
24) Benzo[a]pyrene	9.737	252	30	0.48	ppb		100
25) Indeno(1,2,3-c,d)pyrene	10.799	276	3	0.04	ppb		100
26) Dibenz[a,h]anthracene	10.865	278	13	0.20	ppb		100
27) Benzo[g,h,i]perylene	11.088	276	4	0.06	ppb		100

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

10/17/14 SM

Data Path : C:\MSDCHEM\1\DATA\C141016\
Data File : C1016011.D
Acq On : 16 Oct 2014 1:29 pm
Operator :
Sample : 10-019-40
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Oct 16 13:44:29 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Oct 15 08:58:38 2014
Response via : Initial Calibration



Onsite Environmental Inc. Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C141014\
Data File : C1014004.D
Acq On : 14 Oct 2014 10:40 am
Operator :
Sample : MB1013S1
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 14 10:55:56 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Mon Oct 13 08:43:12 2014
Response via : Initial Calibration

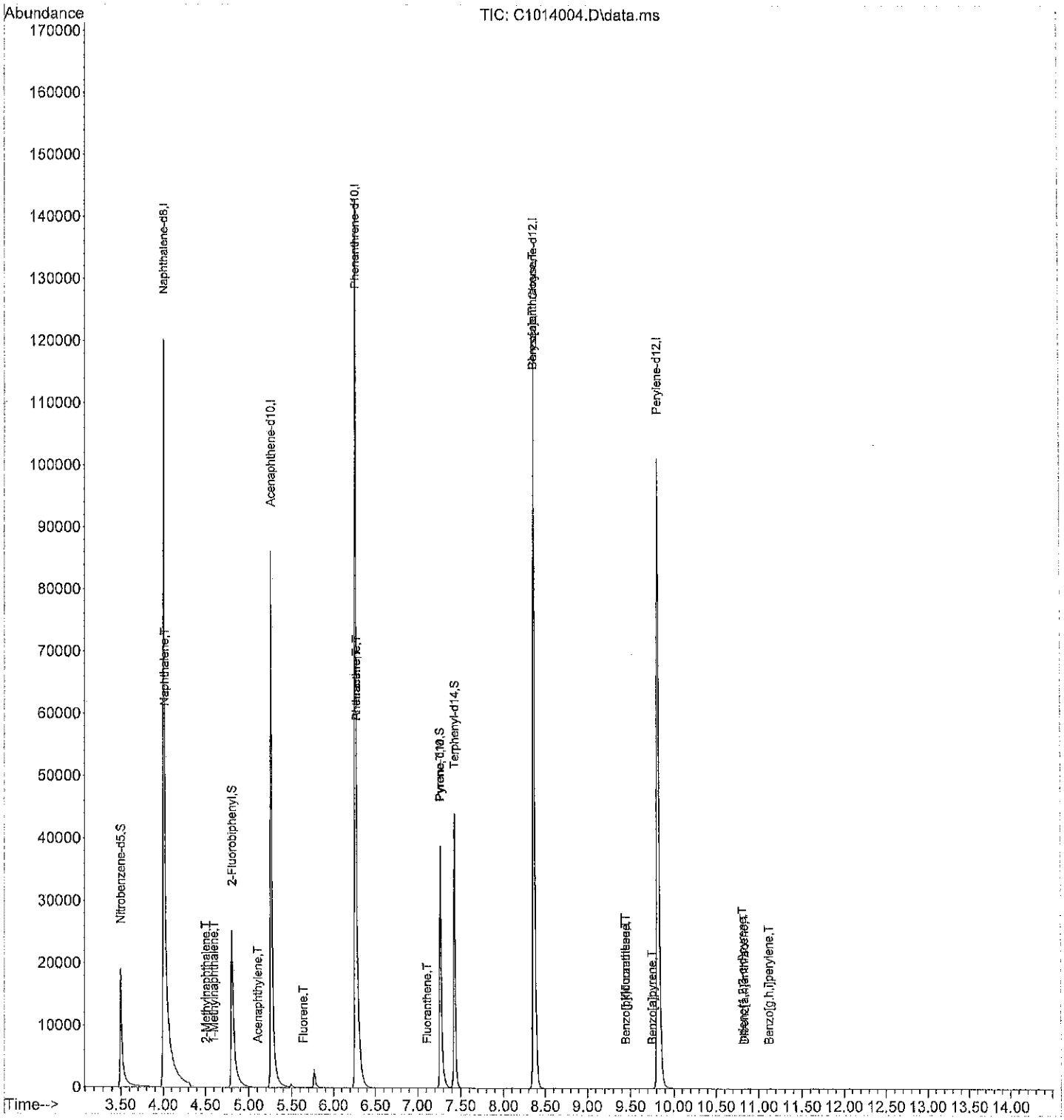
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.005	136	212039	2000.00	ppb	-0.05
6) Acenaphthene-d10	5.261	164	114162	2000.00	ppb	-0.05
10) Phenanthrene-d10	6.265	188	202734	2000.00	ppb	-0.05
17) Chrysene-d12	8.363	240	188131	2000.00	ppb	-0.08
21) Perylene-d12	9.816	264	177537	2000.00	ppb	-0.09
System Monitoring Compounds						
2) Nitrobenzene-d5	3.500	82	21378	831.55	ppb	-0.05
Spiked Amount 1000.000	Range 24 - 92		Recovery = 83.15%			
7) 2-Fluorobiphenyl	4.807	172	59332	734.75	ppb	-0.04
Spiked Amount 1000.000	Range 25 - 89		Recovery = 73.47%			
11) Pyrene-d10	7.262	212	59689	631.14	ppb	-0.06
Spiked Amount 1000.000	Range 40 - 110		Recovery = 63.11%			
18) Terphenyl-d14	7.431	244	52886	806.37	ppb	-0.06
Spiked Amount 1000.000	Range 39 - 92		Recovery = 80.64%			
Target Compounds						Qvalue
3) Naphthalene	4.017	128	116	1.06	ppb	100
4) 2-Methylnaphthalene	4.506	142	6	0.08	ppb	100
5) 1-Methylnaphthalene	4.600	142	45	0.60	ppb	100
8) Acenaphthylene	5.107	152	143	1.31	ppb	100
9) Acenaphthene	0.000		0	N.D.		
12) Fluorene	5.639	166	31	0.40	ppb	100
13) Phenanthrene	6.280	178	512	4.41	ppb	100
14) Anthracene	6.280	178	512	5.42	ppb	100
15) Fluoranthene	7.111	202	47	0.40	ppb	100
16) Pyrene	7.268	202	140	1.14	ppb	100
19) Benzo[a]anthracene	8.359	228	544	5.90	ppb	100
20) Chrysene	8.359	228	544	5.81	ppb	100
22) Benzo[b]fluoranthene	9.445	252	26	0.23	ppb	100
23) Benzo(j,k)fluoranthene	9.445	252	26	0.27	ppb	100
24) Benzo[a]pyrene	9.753	252	22	0.22	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.812	276	2	0.02	ppb	100
26) Dibenz[a,h]anthracene	10.831	278	4	0.05	ppb	100
27) Benzo[g,h,i]perylene	11.124	276	15	0.17	ppb	100

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

10/14/14

Data Path : C:\MSDCHEM\1\DATA\C141014\
Data File : C1014004.D
Acq On : 14 Oct 2014 10:40 am
Operator :
Sample : MB1013S1
Misc :
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Oct 14 10:55:56 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Mon Oct 13 08:43:12 2014
Response via : Initial Calibration



Onsite Environmental Inc. Quantitation Report (QT Reviewed)

Data Path : X:\SEMIVOLS\COREY\DATA\C141014\
Data File : C1014005.D
Acq On : 14 Oct 2014 11:02 am
Operator :
Sample : SB1013S1
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 14 14:13:51 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Mon Oct 13 08:43:12 2014
Response via : Initial Calibration

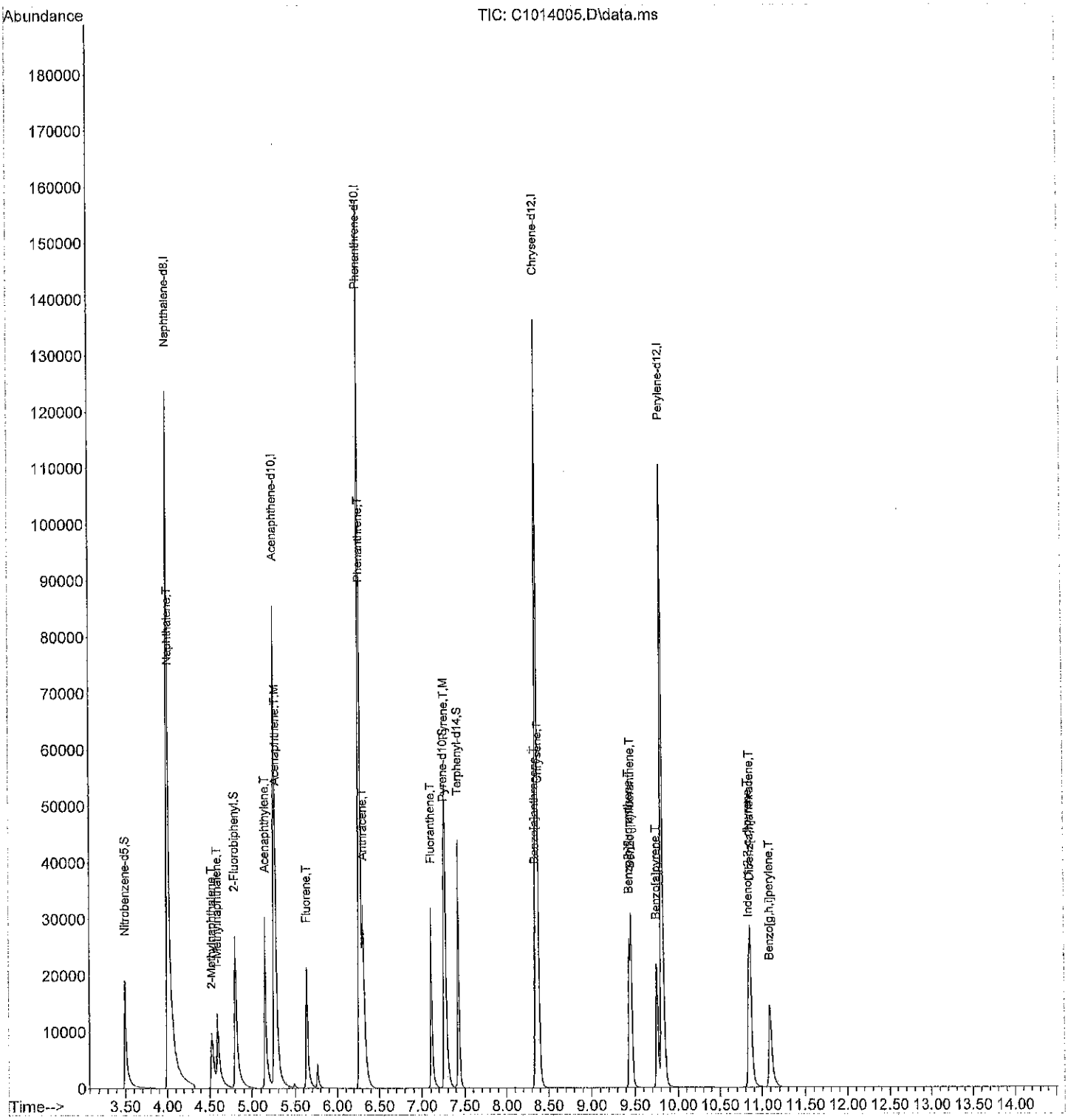
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.006	136	217029	2000.00	ppb	-0.05
6) Acenaphthene-d10	5.254	164	117573	2000.00	ppb	-0.05
10) Phenanthrene-d10	6.261	188	210361	2000.00	ppb	-0.05
17) Chrysene-d12	8.363	240	196861	2000.00	ppb	-0.08
21) Perylene-d12	9.816	264	186492	2000.00	ppb	-0.09
System Monitoring Compounds						
2) Nitrobenzene-d5	3.501	82	21831	829.64	ppb	-0.05
Spiked Amount 1000.000	Range 24 - 92		Recovery = 82.96%			
7) 2-Fluorobiphenyl	4.801	172	60429	726.62	ppb	-0.04
Spiked Amount 1000.000	Range 25 - 89		Recovery = 72.66%			
11) Pyrene-d10	7.261	212	60986	621.48	ppb	-0.07
Spiked Amount 1000.000	Range 40 - 110		Recovery = 62.15%			
18) Terphenyl-d14	7.429	244	53850	784.66	ppb	-0.06
Spiked Amount 1000.000	Range 39 - 92		Recovery = 78.47%			
Target Compounds						Qvalue
3) Naphthalene	4.018	128	39567	354.12	ppb	100
4) 2-Methylnaphthalene	4.528	142	22884	297.90	ppb	100
5) 1-Methylnaphthalene	4.595	142	31723	412.97	ppb	100
8) Acenaphthylene	5.154	152	38330	342.19	ppb	100
9) Acenaphthene	5.277	153	25811	361.51	ppb	100
12) Fluorene	5.640	166	29374	369.30	ppb	100
13) Phenanthrene	6.277	178	36437m	302.28	ppb	
14) Anthracene	6.312	178	46109	470.47	ppb	100
15) Fluoranthene	7.110	202	41211	341.77	ppb	100
16) Pyrene	7.272	202	43964m	345.93	ppb	
19) Benzo[a]anthracene	8.343	228	35350	366.66	ppb	100
20) Chrysene	8.386	228	38887	396.56	ppb	100
22) Benzo[b]fluoranthene	9.441	252	33514	286.13	ppb	100
23) Benzo(j,k)fluoranthene	9.461	252	37136	367.54	ppb	100
24) Benzo[a]pyrene	9.754	252	37048	359.83	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.844	276	44533	393.24	ppb	100
26) Dibenz[a,h]anthracene	10.863	278	37471	402.61	ppb	100
27) Benzo[g,h,i]perylene	11.094	276	37376	406.19	ppb	100

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

10/14/14 SMC

Data Path : X:\SEMIVOLS\COREY\DATA\C141014\
Data File : C1014005.D
Acq On : 14 Oct 2014 11:02 am
Operator :
Sample : SB1013S1
Misc :
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Oct 14 14:13:51 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Mon Oct 13 08:43:12 2014
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\COREY\DATA\C141014\
Data File : C1014006.D
Acq On : 14 Oct 2014 11:24 am
Operator :
Sample : SB1013S1 DUP
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 14 14:15:07 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Mon Oct 13 08:43:12 2014
Response via : Initial Calibration

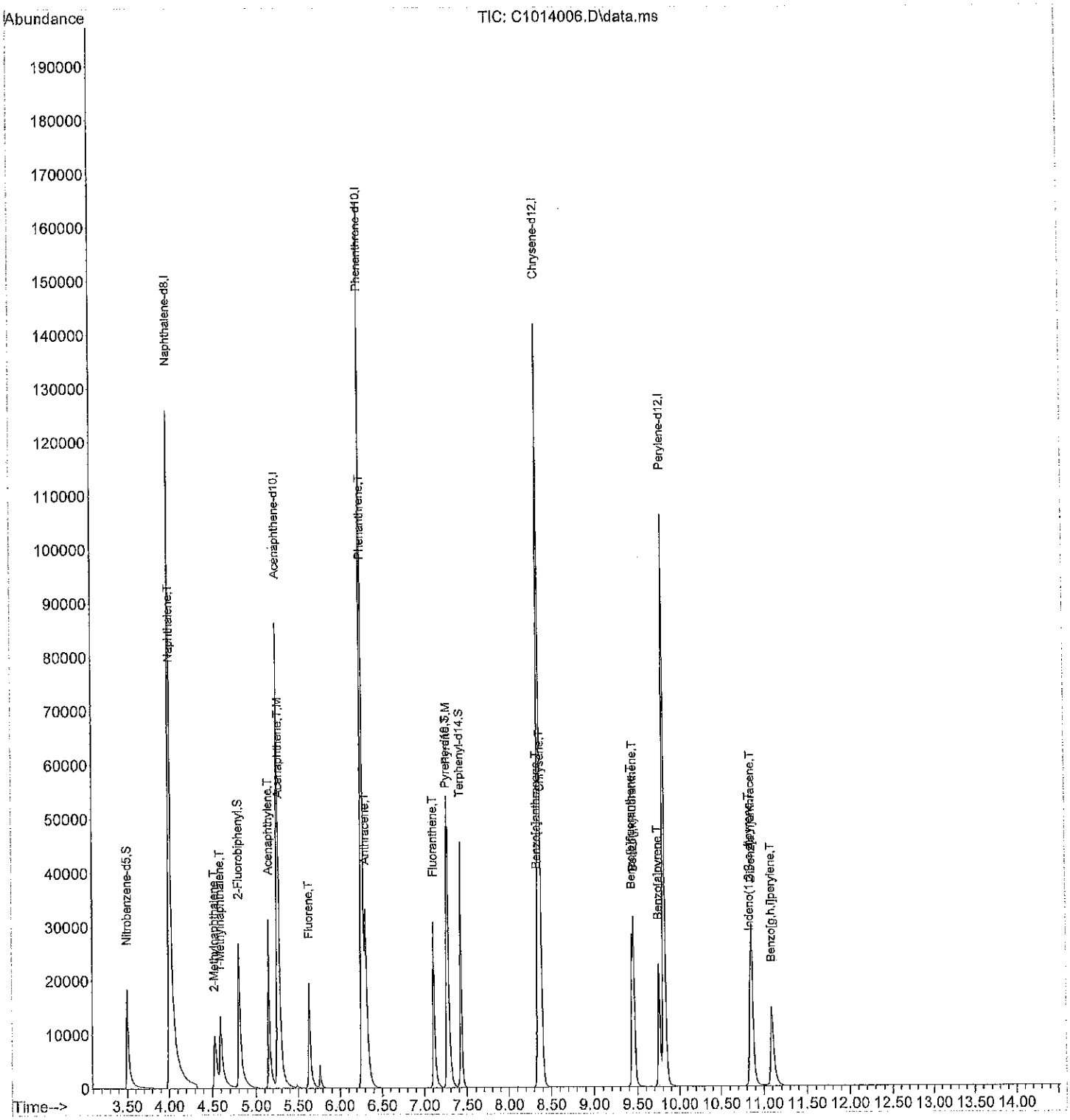
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.007	136	223696	2000.00	ppb	-0.05
6) Acenaphthene-d10	5.255	164	120115	2000.00	ppb	-0.05
10) Phenanthrene-d10	6.264	188	213603	2000.00	ppb	-0.05
17) Chrysene-d12	8.362	240	200605	2000.00	ppb	-0.08
21) Perylene-d12	9.815	264	190433	2000.00	ppb	-0.09
System Monitoring Compounds						
2) Nitrobenzene-d5	3.501	82	22065	813.54	ppb	-0.05
Spiked Amount 1000.000	Range 24 - 92		Recovery = 81.35%			
7) 2-Fluorobiphenyl	4.806	172	60783	715.41	ppb	-0.04
Spiked Amount 1000.000	Range 25 - 89		Recovery = 71.54%			
11) Pyrene-d10	7.262	212	61913	621.35	ppb	-0.06
Spiked Amount 1000.000	Range 40 - 110		Recovery = 62.14%			
18) Terphenyl-d14	7.430	244	56100	802.18	ppb	-0.06
Spiked Amount 1000.000	Range 39 - 92		Recovery = 80.22%			
Target Compounds						Qvalue
3) Naphthalene	4.018	128	39489	342.88	ppb	100
4) 2-Methylnaphthalene	4.529	142	22360	282.41	ppb	100
5) 1-Methylnaphthalene	4.595	142	32478	410.20	ppb	100
8) Acenaphthylene	5.155	152	38261	334.34	ppb	100
9) Acenaphthene	5.278	153	25998	356.42	ppb	100
12) Fluorene	5.640	166	29561	366.01	ppb	100
13) Phenanthrene	6.276	178	35757m	292.13	ppb	
14) Anthracene	6.311	178	46597	468.23	ppb	100
15) Fluoranthene	7.111	202	41472	338.71	ppb	100
16) Pyrene	7.273	202	44288m	343.19	ppb	
19) Benzo[a]anthracene	8.342	228	36360	370.10	ppb	100
20) Chrysene	8.385	228	40400	404.30	ppb	100
22) Benzo[b]fluoranthene	9.440	252	34258	286.43	ppb	100
23) Benzo(j,k)fluoranthene	9.460	252	39331	381.21	ppb	100
24) Benzo[a]pyrene	9.756	252	38620	367.34	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.842	276	46667	403.56	ppb	100
26) Dibenz[a,h]anthracene	10.866	278	39158	412.03	ppb	100
27) Benzo[g,h,i]perylene	11.096	276	39595	421.40	ppb	100

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

10/14/14

Data Path : X:\SEMIVOLS\COREY\DATA\C141014\
Data File : C1014006.D
Acq On : 14 Oct 2014 11:24 am
Operator :
Sample : SB1013S1 DUP
Misc :
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Oct 14 14:15:07 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Mon Oct 13 08:43:12 2014
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : X:\SEMIVOLS\COREY\DATA\C141014\
Data File : C1014003.D
Acq On : 14 Oct 2014 10:17 am
Operator :
Sample : PAHCCV1009
Misc : SV4-39-09
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 14 10:34:15 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Mon Oct 13 08:43:12 2014
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	2000.000	2000.000	0.0	92	-0.05
2	S	Nitrobenzene-d5	500.000	621.145	-24.2#	116	-0.05
3	T	Naphthalene	500.000	527.969	-5.6	100	-0.05
4	T	2-Methylnaphthalene	500.000	440.952	11.8	85	-0.05
5	T	1-Methylnaphthalene	500.000	535.811	-7.2	103	-0.05
6	I	Acenaphthene-d10	2000.000	2000.000	0.0	89	-0.05
7	S	2-Fluorobiphenyl	500.000	537.693	-7.5	98	-0.04
8	T	Acenaphthylene	500.000	499.985	0.0	95	-0.05
9	T,M	Acenaphthene	500.000	534.547	-6.9	100	-0.05
10	I	Phenanthrene-d10	2000.000	2000.000	0.0	88	-0.05
11	S	Pyrene-d10	500.000	457.123	8.6	90	-0.06
12	T	Fluorene	500.000	532.797	-6.6	98	-0.04
13	T	Phenanthrene	500.000	408.214	18.4	78	-0.05
14	T	Anthracene	500.000	596.933	-19.4	110	-0.05
15	T	Fluoranthene	500.000	502.080	-0.4	93	-0.06
16	T,M	Pyrene	500.000	498.376	0.3	92	-0.06
17	I	Chrysene-d12	2000.000	2000.000	0.0	81	-0.08
18	S	Terphenyl-d14	500.000	576.405	-15.3	67	-0.06
19	T	Benzo[a]anthracene	500.000	541.825	-8.4	84	-0.08
20	T	Chrysene	500.000	561.299	-12.3	96	-0.08
21	I	Perylene-d12	2000.000	2000.000	0.0	81	-0.09
22	T	Benzo[b]fluoranthene	500.000	448.151	10.4	75	-0.09
23	T	Benzo(j,k)fluoranthene	500.000	526.983	-5.4	94	-0.09
24	T	Benzo[a]pyrene	500.000	534.394	-6.9	91	-0.09
25	T	Indeno(1,2,3-c,d)pyrene	500.000	573.197	-14.6	97	-0.11
26	T	Dibenz[a,h]anthracene	500.000	582.998	-16.6	98	-0.11
27	T	Benzo[g,h,i]perylene	500.000	593.757	-18.8	101	-0.11

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

Data Path : X:\SEMIVOLS\COREY\DATA\C141014\
Data File : C1014003.D
Acq On : 14 Oct 2014 10:17 am
Operator :
Sample : PAHCCV1009
Misc : SV4-39-09
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 14 10:34:15 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Mon Oct 13 08:43:12 2014
Response via : Initial Calibration

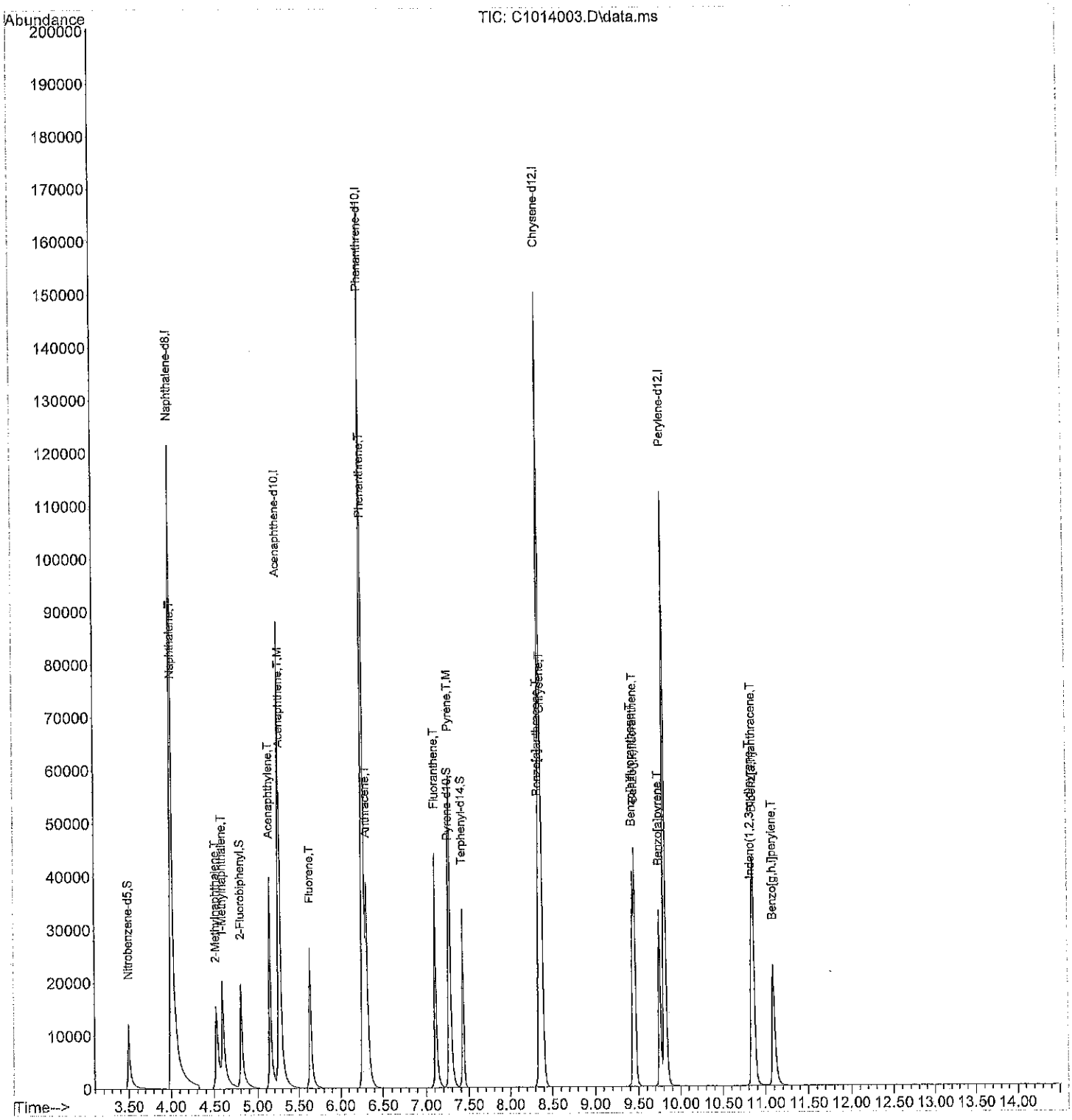
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.002	136	211656	2000.00	ppb	-0.05
6) Acenaphthene-d10	5.255	164	116033	2000.00	ppb	-0.05
10) Phenanthrene-d10	6.264	188	212205	2000.00	ppb	-0.05
17) Chrysene-d12	8.362	240	199822	2000.00	ppb	-0.08
21) Perylene-d12	9.815	264	182505	2000.00	ppb	-0.09
System Monitoring Compounds						
2) Nitrobenzene-d5	3.497	82	15940	621.14	ppb	-0.05
Spiked Amount 1000.000	Range 24 - 92		Recovery = 62.11%			
7) 2-Fluorobiphenyl	4.806	172	44131	537.69	ppb	-0.04
Spiked Amount 1000.000	Range 25 - 89		Recovery = 53.77%			
11) Pyrene-d10	7.262	212	45251	457.12	ppb	-0.06
Spiked Amount 1000.000	Range 40 - 110		Recovery = 45.71%			
18) Terphenyl-d14	7.425	244	40153	576.41	ppb	-0.06
Spiked Amount 1000.000	Range 39 - 92		Recovery = 57.64%			
Target Compounds						Qvalue
3) Naphthalene	4.019	128	57532	527.97	ppb	100
4) 2-Methylnaphthalene	4.521	142	33034	440.95	ppb	100
5) 1-Methylnaphthalene	4.595	142	40140m	535.81	ppb	
8) Acenaphthylene	5.147	152	55272	499.99	ppb	100
9) Acenaphthene	5.278	153	37666	534.55	ppb	100
12) Fluorene	5.640	166	42750	532.80	ppb	100
13) Phenanthrene	6.276	178	49638	408.21	ppb	100
14) Anthracene	6.311	178	59016m	596.93	ppb	
15) Fluoranthene	7.111	202	61073	502.08	ppb	100
16) Pyrene	7.274	202	63893	498.38	ppb	100
19) Benzo[a]anthracene	8.343	228	53023	541.82	ppb	100
20) Chrysene	8.382	228	55869	561.30	ppb	100
22) Benzo[b]fluoranthene	9.436	252	51369	448.15	ppb	100
23) Benzo(j,k)fluoranthene	9.460	252	52107	526.98	ppb	100
24) Benzo[a]pyrene	9.752	252	53844	534.39	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.838	276	63524	573.20	ppb	100
26) Dibenz[a,h]anthracene	10.862	278	53100	583.00	ppb	100
27) Benzo[g,h,i]perylene	11.092	276	53467	593.76	ppb	100

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

10/14/14 SM

Data Path : X:\SEMIVOLS\COREY\DATA\C141014\
Data File : C1014003.D
Acq On : 14 Oct 2014 10:17 am
Operator :
Sample : PAHCCV1009
Misc : SV4-39-09
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 14 10:34:15 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Mon Oct 13 08:43:12 2014
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : X:\SEMIVOLS\COREY\DATA\C141016\
Data File : C1016003.D
Acq On : 16 Oct 2014 10:34 am
Operator :
Sample : PAHCCV1016
Misc : SV4-39-22
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 16 10:51:06 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Oct 15 08:58:38 2014
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	2000.000	2000.000	0.0	91	0.00
2	S	Nitrobenzene-d5	500.000	510.264	-2.1	99	0.00
3	T	Naphthalene	500.000	500.801	-0.2	96	0.00
4	T	2-Methylnaphthalene	500.000	431.668	13.7	85	0.00
5	T	1-Methylnaphthalene	500.000	537.646	-7.5	98	0.00
6	I	Acenaphthene-d10	2000.000	2000.000	0.0	97	0.00
7	S	2-Fluorobiphenyl	500.000	449.082	10.2	94	0.00
8	T	Acenaphthylene	500.000	451.360	9.7	100	0.00
9	T,M	Acenaphthene	500.000	490.937	1.8	101	0.00
10	I	Phenanthrene-d10	2000.000	2000.000	0.0	99	0.00
11	S	Pyrene-d10	500.000	497.749	0.5	106	-0.01
12	T	Fluorene	500.000	474.103	5.2	102	0.00
13	T	Phenanthrene	500.000	404.372	19.1	91	0.00
14	T	Anthracene	500.000	501.040	-0.2	102	0.00
15	T	Fluoranthene	500.000	482.470	3.5	105	0.00
16	T,M	Pyrene	500.000	501.391	-0.3	109	-0.01
17	I	Chrysene-d12	2000.000	2000.000	0.0	101	0.00
18	S	Terphenyl-d14	500.000	509.857	-2.0	78	0.00
19	T	Benzo[a]anthracene	500.000	459.827	8.0	99	0.00
20	T	Chrysene	500.000	488.733	2.3	113	0.00
21	I	Perylene-d12	2000.000	2000.000	0.0	102	-0.01
22	T	Benzo[b]fluoranthene	500.000	464.668	7.1	113	0.00
23	T	Benzo(j,k)fluoranthene	500.000	495.793	0.8	105	0.00
24	T	Benzo[a]pyrene	500.000	532.600	-6.5	111	-0.01
25	T	Indeno(1,2,3-c,d)pyrene	500.000	502.875	-0.6	108	-0.01
26	T	Dibenz[a,h]anthracene	500.000	497.989	0.4	106	-0.01
27	T	Benzo[g,h,i]perylene	500.000	505.827	-1.2	106	-0.01

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

Data Path : C:\MSDCHEM\1\DATA\C141016\
Data File : C1016003.D
Acq On : 16 Oct 2014 10:34 am
Operator :
Sample : PAHCCV1016
Misc : SV4-39-22
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 16 10:49:44 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Oct 15 08:58:38 2014
Response via : Initial Calibration

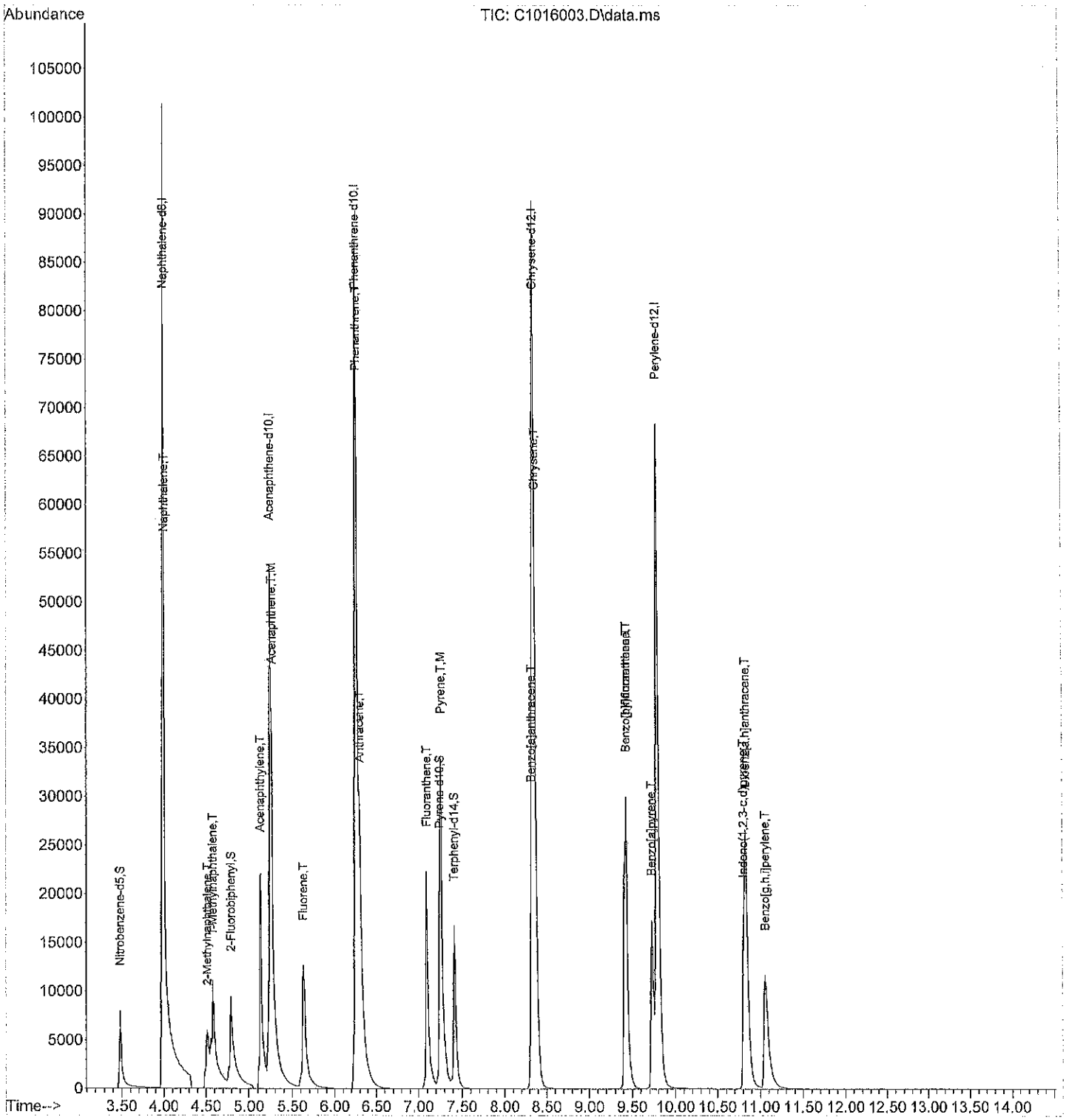
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	3.989	136	174999	2000.00	ppb	0.00
6) Acenaphthene-d10	5.239	164	101287	2000.00	ppb	0.00
10) Phenanthrene-d10	6.249	188	186756	2000.00	ppb	0.00
17) Chrysene-d12	8.339	240	175884	2000.00	ppb	0.00
21) Perylene-d12	9.784	264	164049	2000.00	ppb	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5	3.484	82	11388	510.26	ppb	0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery = 51.03%			
7) 2-Fluorobiphenyl	4.794	172	31315	449.08	ppb	0.00
Spiked Amount 1000.000	Range 25 - 89		Recovery = 44.91%			
11) Pyrene-d10	7.244	212	35147	497.75	ppb	-0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 49.78%			
18) Terphenyl-d14	7.412	244	31424	509.86	ppb	0.00
Spiked Amount 1000.000	Range 39 - 92		Recovery = 50.99%			
Target Compounds						Qvalue
3) Naphthalene	4.000	128	42149	500.80	ppb	100
4) 2-Methylnaphthalene	4.513	142	14132	~~369.87~~	ppb	431.07 100
5) 1-Methylnaphthalene	4.579	142	37239	537.65	ppb	100
8) Acenaphthylene	5.131	152	39671	451.36	ppb	100
9) Acenaphthene	5.262	153	29555	490.94	ppb	100
12) Fluorene	5.632	166	33169	474.10	ppb	100
13) Phenanthrene	6.261	178	30538	404.37	ppb	100
14) Anthracene	6.300	178	50863	501.04	ppb	100
15) Fluoranthene	7.093	202	46819	482.47	ppb	100
16) Pyrene	7.255	202	51175	501.39	ppb	100
19) Benzo[a]anthracene	8.320	228	33802	459.83	ppb	100
20) Chrysene	8.359	228	51453	488.73	ppb	100
22) Benzo[b]fluoranthene	9.433	252	88541	~~1200.14~~	ppb	464.07 100
23) Benzo(j,k)fluoranthene	9.433	252	88541	~~818.03~~	ppb	495.77 100
24) Benzo[a]pyrene	9.726	252	43304	532.60	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.812	276	51481	502.88	ppb	100
26) Dibenz[a,h]anthracene	10.836	278	42699	497.99	ppb	100
27) Benzo[g,h,i]perylene	11.062	276	43273	505.83	ppb	100

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

10/16/14

Data Path : C:\MSDCHEM\1\DATA\C141016\
Data File : C1016003.D
Acq On : 16 Oct 2014 10:34 am
Operator :
Sample : PAHCCV1016
Misc : SV4-39-22
ALS Vial : 3 Sample Multiplier: 1

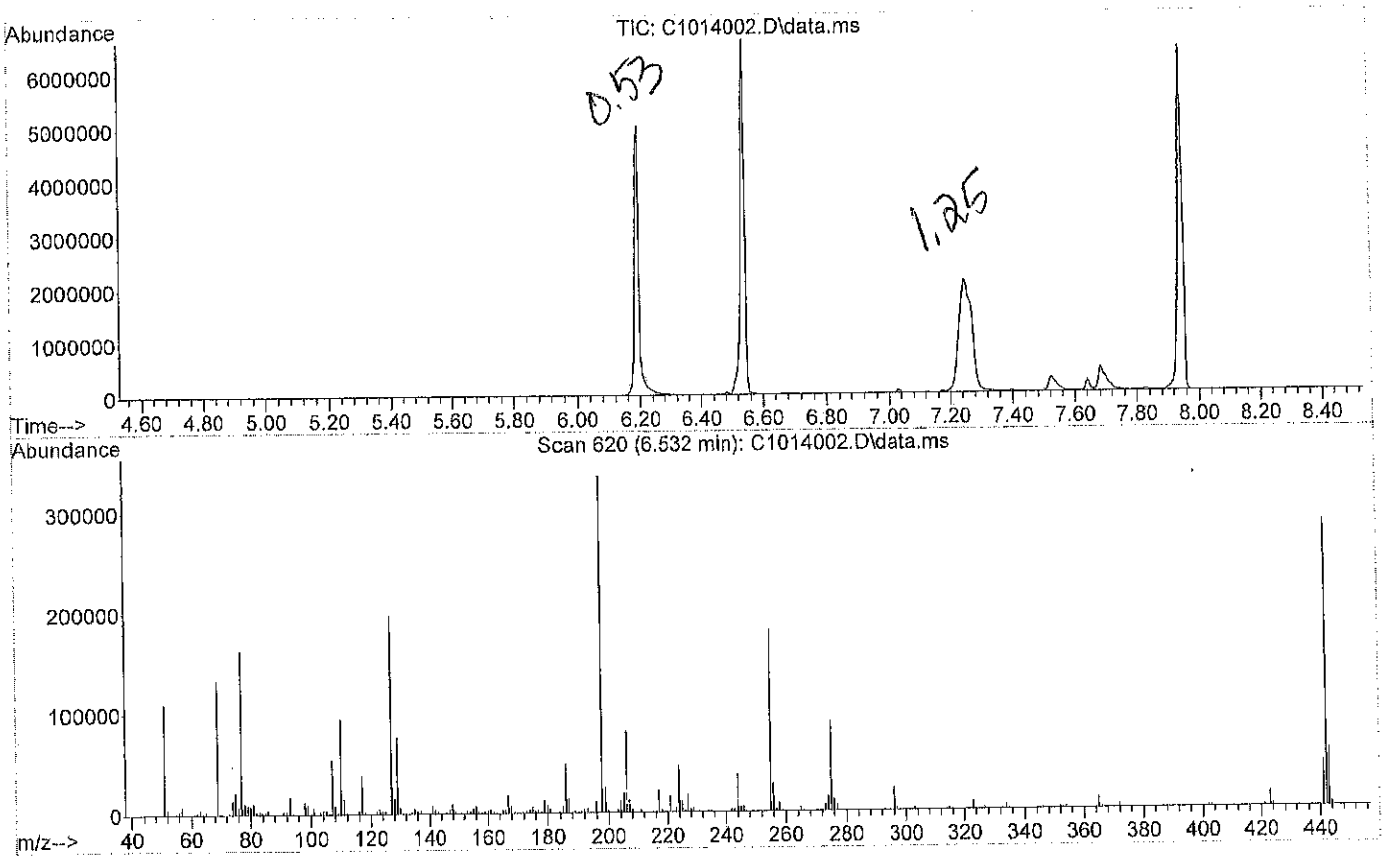
Quant Time: Oct 16 10:49:44 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1010.M
Quant Title : PAH'S BY SIMS
QLast Update : Wed Oct 15 08:58:38 2014
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\COREY\DATA\C141014\
Data File : C1014002.D
Acq On : 14 Oct 2014 9:56 am
Operator :
Sample : DFTPP
Misc : SV4-39-01
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\CSIM1010.M
Title : PAH'S BY SIMS
Last Update : Mon Oct 13 08:43:12 2014



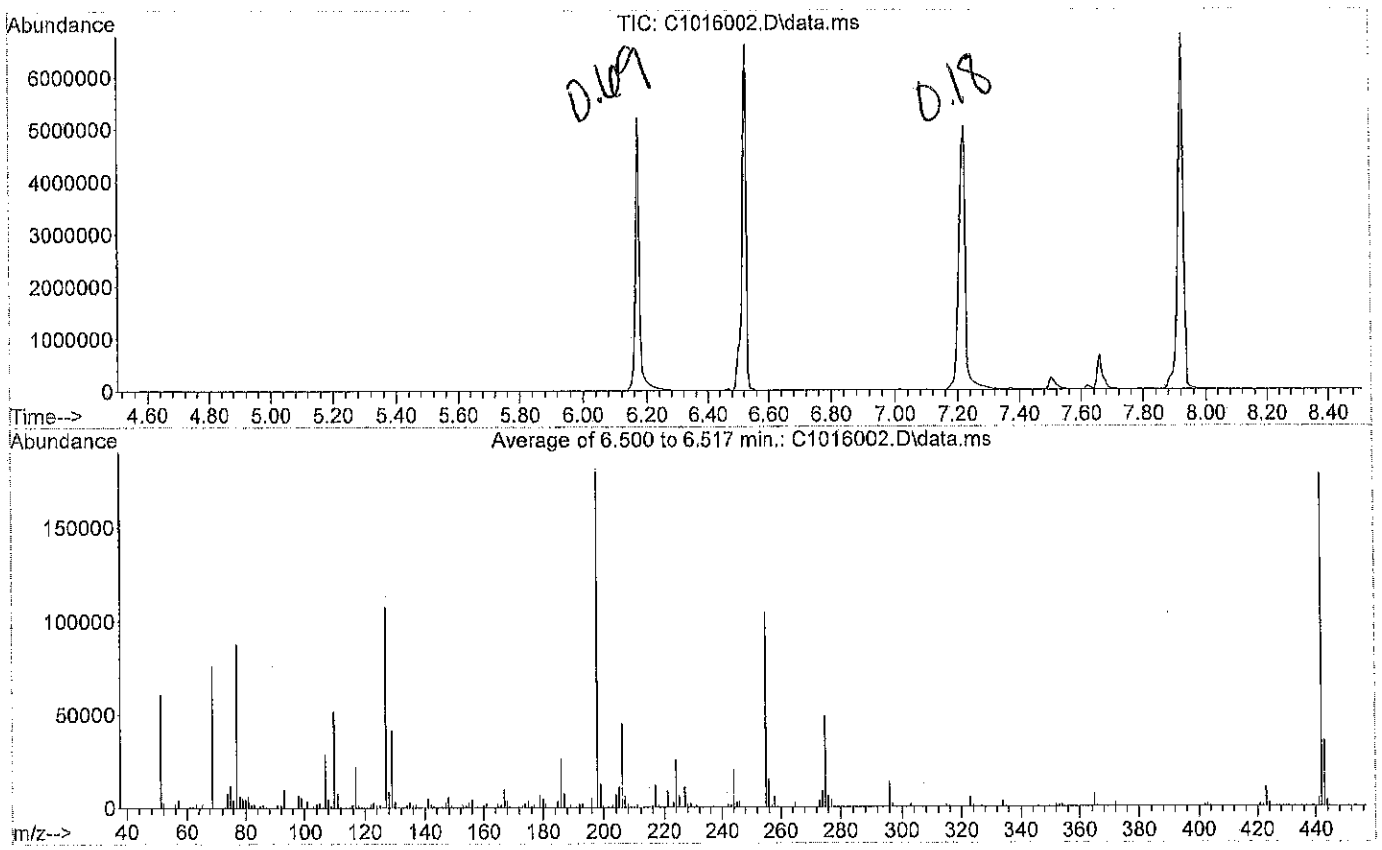
Spectrum Information: Scan 620

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	32.6	109920	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	39.7	133888	PASS
70	69	0.00	2	0.4	588	PASS
127	198	25	75	58.7	197952	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	337472	PASS
199	198	5	9	7.5	25448	PASS
275	198	10	30	26.3	88856	PASS
365	198	0.75	100	3.4	11614	PASS
441	443	0.01	100	77.3	45424	PASS
442	198	40	110	84.7	285760	PASS
443	442	15	24	20.6	58728	PASS

Data Path : X:\SEMIVOLS\COREY\DATA\C141016\
Data File : C1016002.D
Acq On : 16 Oct 2014 10:13 am
Operator :
Sample : DFTPP
Misc : SV4-39-01
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\CSIM1010.M
Title : PAH'S BY SIMS
Last Update : Wed Oct 15 08:58:38 2014



Spectrum Information: Average of 6.500 to 6.517 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	33.5	60650	PASS
68	69	0.00	2	0.3	210	PASS
69	198	0.00	100	41.8	75750	PASS
70	69	0.00	2	0.7	508	PASS
127	198	25	75	59.4	107594	PASS
197	198	0.00	1	0.1	187	PASS
198	198	100	100	100.0	181070	PASS
199	198	5	9	7.1	12826	PASS
275	198	10	30	27.0	48830	PASS
365	198	0.75	100	3.9	7041	PASS
441	443	0.01	100	13.3	4666	PASS
442	198	40	110	98.2	177894	PASS
443	442	15	24	19.7	35111	PASS

Total Metals Data

P141010F1. Mean Only Report 10/13/2014, 1:40:19 PM

Sample	Label	Calc Conc.	Units	Date/Time
Blank	As 188.980	0.000	ppb	10/10/2014, 9:28:40 AM
	Ni 231.604	0.000	ppb	
Standard 5	As 188.980	100.00	ppb	10/10/2014, 9:32:44 AM
	Ni 231.604	20.000	ppb	
Standard 4	As 188.980	1000.0	ppb	10/10/2014, 9:36:46 AM
	Ni 231.604	200.00	ppb	
Standard 3	As 188.980	10000	ppb	10/10/2014, 9:40:51 AM
	Ni 231.604	2000.0	ppb	
Standard 2	As 188.980	25000	ppb	10/10/2014, 9:44:55 AM
	Ni 231.604	5000.0	ppb	
Standard 1	Ni 231.604	10000	ppb	10/10/2014, 9:48:59 AM
Initial Calib Verif	As 188.980	975.99	ppb	10/10/2014, 9:55:38 AM
	Ni 231.604	1048.0	ppb	
LLICV	As 188.980	106.12	ppb	10/10/2014, 10:09:31 AM
	Ni 231.604	20.060	ppb	
Initial Calib Blank	As 188.980	8.129uv	ppb	10/10/2014, 10:14:46 AM
	Ni 231.604	-2.013uv	ppb	
Cont Calib Verif	As 188.980	9823.4	ppb	10/10/2014, 10:18:52 AM
	Ni 231.604	2049.0	ppb	
Cont Calib Blank	As 188.980	6.561uv	ppb	10/10/2014, 10:27:31 AM
	Ni 231.604	0.488uv	ppb	
ICSA	As 188.980	27.572	ppb	10/10/2014, 10:31:35 AM
	Ni 231.604	2.083uv	ppb	
ICSAB	As 188.980	2455.6	ppb	10/10/2014, 10:35:40 AM
	Ni 231.604	885.32	ppb	
BLK	As 188.980	16.956	ppb	10/10/2014, 10:39:45 AM
	Ni 231.604	0.521uv	ppb	
MB1010TM1	As 188.980	9.463uv	ppb	10/10/2014, 10:46:30 AM
	Ni 231.604	-0.239uv	ppb	
SB1010TM1	As 188.980	1997.7	ppb	10/10/2014, 10:50:35 AM
	Ni 231.604	2003.7	ppb	
09-321-01	As 188.980	16.518uv	ppb	10/10/2014, 10:54:40 AM
	Ni 231.604	8.076	ppb	
09-321-01 D	As 188.980	3.429uv	ppb	10/10/2014, 10:58:45 AM
	Ni 231.604	1.337	ppb	

P141010F1. Mean Only Report 10/13/2014, 1:40:19 PM

Sample	Label	Calc Conc.	Units	Date/Time
09-321-01 L	As 188.980	16.561	ppb	10/10/2014, 11:02:50 AM
	Ni 231.604	-1.093uv	ppb	
09-321-01 MS	As 188.980	2022.4	ppb	10/10/2014, 11:06:55 AM
	Ni 231.604	2005.4	ppb	
09-321-01 MSD	As 188.980	2021.3	ppb	10/10/2014, 11:11:00 AM
	Ni 231.604	2011.5	ppb	
Cont Calib Verif	As 188.980	9653.8	ppb	10/10/2014, 11:15:06 AM
	Ni 231.604	2030.1	ppb	
Cont Calib Blank	As 188.980	20.498	ppb	10/10/2014, 11:20:48 AM
	Ni 231.604	0.647uv	ppb	
LLCCV	As 188.980	109.96	ppb	10/10/2014, 11:24:51 AM
	Ni 231.604	21.273	ppb	
MB1010SM3	As 188.980	-4.627uv	ppb	10/10/2014, 12:46:41 PM
	Ni 231.604	-1.734uv	ppb	
SB1010SM3	As 188.980	1854.4	ppb	10/10/2014, 12:50:44 PM
	Ni 231.604	2007.5	ppb	
10-020-40	As 188.980	30.430	ppb	10/10/2014, 12:54:47 PM
	Ni 231.604	152.58	ppb	
10-020-40 D	As 188.980	23.633	ppb	10/10/2014, 12:58:52 PM
	Ni 231.604	157.08	ppb	
10-020-40 L	As 188.980	24.173	ppb	10/10/2014, 1:02:56 PM
	Ni 231.604	29.371	ppb	
10-020-40 MS	As 188.980	1865.3	ppb	10/10/2014, 1:07:00 PM
	Ni 231.604	2056.2	ppb	
10-020-40 MSD	As 188.980	1866.0	ppb	10/10/2014, 1:11:04 PM
	Ni 231.604	2095.7	ppb	
10-019-01	As 188.980	1617.0	ppb	10/10/2014, 1:15:07 PM
	Ni 231.604	2109.2	ppb	
10-019-05	As 188.980	1746.5	ppb	10/10/2014, 1:19:11 PM
	Ni 231.604	818.11	ppb	
10-019-19	As 188.980	558.23	ppb	10/10/2014, 1:23:15 PM
	Ni 231.604	719.75	ppb	
Cont Calib Verif	As 188.980	9610.9	ppb	10/10/2014, 1:27:19 PM
	Ni 231.604	2028.3	ppb	
Cont Calib Blank	As 188.980	9.575	ppb	10/10/2014, 1:32:17 PM

P141010F1. Mean Only Report 10/13/2014, 1:40:19 PM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	1.460	ppb	
LLCCV	As 188.980	93.503	ppb	10/10/2014, 1:36:21 PM
	Ni 231.604	22.351	ppb	
10-019-23	As 188.980	192.28	ppb	10/10/2014, 1:43:13 PM
	Ni 231.604	3687.4	ppb	
10-019-34	As 188.980	58.754	ppb	10/10/2014, 1:47:17 PM
	Ni 231.604	481.08	ppb	
10-019-47	As 188.980	89.475	ppb	10/10/2014, 1:51:21 PM
	Ni 231.604	2172.7	ppb	
10-019-51	As 188.980	56.119	ppb	10/10/2014, 1:55:25 PM
	Ni 231.604	575.98	ppb	
10-020-02	As 188.980	74.113	ppb	10/10/2014, 1:59:31 PM
	Ni 231.604	551.10	ppb	
10-020-10	As 188.980	64.743	ppb	10/10/2014, 2:03:36 PM
	Ni 231.604	868.54	ppb	
10-020-12	As 188.980	104.58	ppb	10/10/2014, 2:07:41 PM
	Ni 231.604	816.37	ppb	
10-020-35	As 188.980	110.34	ppb	10/10/2014, 2:11:46 PM
	Ni 231.604	913.94	ppb	
10-020-37	As 188.980	48.431	ppb	10/10/2014, 2:15:51 PM
	Ni 231.604	298.01	ppb	
10-020-43	As 188.980	9.740	ppb	10/10/2014, 2:19:53 PM
	Ni 231.604	107.38	ppb	
Cont Calib Verif	As 188.980	9749.1	ppb	10/10/2014, 2:23:55 PM
	Ni 231.604	2043.8	ppb	
Cont Calib Blank	As 188.980	2.016uv	ppb	10/10/2014, 3:36:40 PM
	Ni 231.604	0.068uv	ppb	
LLCCV	As 188.980	108.39	ppb	10/10/2014, 3:41:17 PM
	Ni 231.604	21.247	ppb	
10-020-60	As 188.980	59.191	ppb	10/10/2014, 3:47:16 PM
	Ni 231.604	459.80	ppb	
09-311-01	As 188.980	32.721	ppb	10/10/2014, 3:51:21 PM
	Ni 231.604	5203.4	ppb	
09-311-01 X 5	As 188.980	9.931uv	ppb	10/10/2014, 4:01:54 PM
	Ni 231.604	1231.5	ppb	

P141010F1. Mean Only Report 10/13/2014, 1:40:19 PM

Sample	Label	Calc Conc.	Units	Date/Time
BLK	As 188.980	9.558	ppb	10/10/2014, 4:10:28 PM
	Ni 231.604	0.613uv	ppb	
MB1010SM5	As 188.980	7.819uv	ppb	10/10/2014, 4:14:33 PM
	Ni 231.604	-2.162uv	ppb	
SB1010SM5	As 188.980	1953.7	ppb	10/10/2014, 4:18:36 PM
	Ni 231.604	2132.9	ppb	
09-324-01	As 188.980	1164.4	ppb	10/10/2014, 4:22:41 PM
	Ni 231.604	566.08	ppb	
09-324-01 D	As 188.980	1062.6	ppb	10/10/2014, 4:26:47 PM
	Ni 231.604	555.68	ppb	
09-324-01 L	As 188.980	262.28	ppb	10/10/2014, 4:30:53 PM
	Ni 231.604	129.10	ppb	
09-324-01 MS	As 188.980	2936.5	ppb	10/10/2014, 4:34:58 PM
	Ni 231.604	2464.2	ppb	
Cont Calib Verif	As 188.980	9684.5	ppb	10/10/2014, 4:39:03 PM
	Ni 231.604	2039.1	ppb	
Cont Calib Blank	As 188.980	9.625uv	ppb	10/10/2014, 4:43:41 PM
	Ni 231.604	-0.092uv	ppb	
LLCCV	As 188.980	109.52	ppb	10/10/2014, 4:47:45 PM
	Ni 231.604	19.444	ppb	

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

November 26, 2014

Brian Tracy
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-10
Laboratory Reference No. 1410-019B

Dear Brian:

Enclosed are the analytical results and associated quality control data for samples submitted on October 2, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

Case Narrative

Samples were collected on September 30, 2014 and received by the laboratory on October 2, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
GEI-13_2-3_093014	10-019-01	Soil	9-30-14	10-2-14	
GEI-13_5-6_093014	10-019-02	Soil	9-30-14	10-2-14	
GEI-13_7-8_093014	10-019-03	Soil	9-30-14	10-2-14	
GEI-14_2-3_093014	10-019-05	Soil	9-30-14	10-2-14	
GEI-14_3.5-4.5_093014	10-019-06	Soil	9-30-14	10-2-14	
GEI-14_7-8_093014	10-019-07	Soil	9-30-14	10-2-14	
GEI-15_2-3_093014	10-019-09	Soil	9-30-14	10-2-14	
GEI-15_5.5-6.5_093014	10-019-10	Soil	9-30-14	10-2-14	
GEI-15_10-11_093014	10-019-11	Soil	9-30-14	10-2-14	
GEI-16_2-3_093014	10-019-13	Soil	9-30-14	10-2-14	
GEI-16_6-7_093014	10-019-15	Soil	9-30-14	10-2-14	
GEI-17_1-2_093014	10-019-17	Soil	9-30-14	10-2-14	
GEI-17_4-5_093014	10-019-18	Soil	9-30-14	10-2-14	
GEI-17_7-8_093014	10-019-19	Soil	9-30-14	10-2-14	
GEI-18_1-2_093014	10-019-21	Soil	9-30-14	10-2-14	
GEI-18_4-5_093014	10-019-22	Soil	9-30-14	10-2-14	
GEI-18_9-10_093014	10-019-24	Soil	9-30-14	10-2-14	
GEI-23_1-2_093014	10-019-37	Soil	9-30-14	10-2-14	
GEI-23_5-6_093014	10-019-39	Soil	9-30-14	10-2-14	
GEI-24_2-3_093014	10-019-41	Soil	9-30-14	10-2-14	
GEI-24_4-5_093014	10-019-42	Soil	9-30-14	10-2-14	
GEI-25_1-2_093014	10-019-45	Soil	9-30-14	10-2-14	
GEI-25_4-5_093014	10-019-46	Soil	9-30-14	10-2-14	
GEI-25_9-10_093014	10-019-48	Soil	9-30-14	10-2-14	
GEI-30_3-4_093014	10-019-56	Soil	9-30-14	10-2-14	
GEI-30_7-8_093014	10-019-58	Soil	9-30-14	10-2-14	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-019-01					
Client ID:	**GEI-13_2-3_093014**					
Nickel	**110**	2.6	6010C	10-10-14	10-10-14	
Lab ID:	10-019-02					
Client ID:	**GEI-13_5-6_093014**					
Arsenic	**ND**	5.2	6010C	11-24-14	11-24-14	
Lab ID:	10-019-03					
Client ID:	**GEI-13_7-8_093014**					
Arsenic	**ND**	5.3	6010C	11-24-14	11-24-14	
Nickel	**12**	2.6	6010C	11-24-14	11-24-14	
Lab ID:	10-019-05					
Client ID:	**GEI-14_2-3_093014**					
Nickel	**43**	2.6	6010C	10-10-14	10-10-14	
Lab ID:	10-019-06					
Client ID:	**GEI-14_3.5-4.5_093014**					
Arsenic	**6.5**	5.9	6010C	11-24-14	11-24-14	
Lab ID:	10-019-07					
Client ID:	**GEI-14_7-8_093014**					
Arsenic	**7.4**	7.3	6010C	11-24-14	11-24-14	
Nickel	**13**	3.7	6010C	11-24-14	11-24-14	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil

Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-019-09					
Client ID:	**GEI-15_2-3_093014**					
Arsenic	**ND**	5.2	6010C	11-24-14	11-24-14	
Lab ID:	10-019-10					
Client ID:	**GEI-15_5.5-6.5_093014**					
Nickel	**41**	3.0	6010C	11-26-14	11-26-14	
Lab ID:	10-019-11					
Client ID:	**GEI-15_10-11_093014**					
Nickel	**39**	3.0	6010C	11-24-14	11-24-14	
Lab ID:	10-019-13					
Client ID:	**GEI-16_2-3_093014**					
Arsenic	**6.6**	5.9	6010C	11-24-14	11-24-14	
Nickel	**36**	3.0	6010C	11-24-14	11-24-14	
Lab ID:	10-019-15					
Client ID:	**GEI-16_6-7_093014**					
Arsenic	**ND**	6.6	6010C	11-24-14	11-24-14	
Nickel	**6.2**	3.3	6010C	11-24-14	11-24-14	
Lab ID:	10-019-17					
Client ID:	**GEI-17_1-2_093014**					
Nickel	**41**	2.6	6010C	11-24-14	11-24-14	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-019-18					
Client ID:	**GEI-17_4-5_093014**					
Arsenic	**8.0**	5.1	6010C	11-24-14	11-24-14	
Lab ID:	10-019-19					
Client ID:	**GEI-17_7-8_093014**					
Arsenic	**31**	5.5	6010C	10-10-14	10-10-14	
Lab ID:	10-019-21					
Client ID:	**GEI-18_1-2_093014**					
Arsenic	**5.2**	5.2	6010C	11-24-14	11-24-14	
Nickel	**36**	2.6	6010C	11-24-14	11-24-14	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-019-22					
Client ID:	**GEI-18_4-5_093014**					
Arsenic	**18**	5.4	6010C	11-24-14	11-24-14	
Nickel	**37**	2.7	6010C	11-24-14	11-24-14	
Lab ID:	10-019-24					
Client ID:	**GEI-18_9-10_093014**					
Arsenic	**6.9**	5.6	6010C	11-24-14	11-24-14	
Nickel	**49**	2.8	6010C	11-24-14	11-24-14	
Lab ID:	10-019-37					
Client ID:	**GEI-23_1-2_093014**					
Arsenic	**ND**	5.2	6010C	11-24-14	11-24-14	
Nickel	**27**	2.6	6010C	11-24-14	11-24-14	
Lab ID:	10-019-39					
Client ID:	**GEI-23_5-6_093014**					
Arsenic	**12**	8.7	6010C	11-24-14	11-24-14	
Lab ID:	10-019-41					
Client ID:	**GEI-24_2-3_093014**					
Arsenic	**ND**	5.2	6010C	11-24-14	11-24-14	
Nickel	**40**	2.6	6010C	11-24-14	11-24-14	
Lab ID:	10-019-42					
Client ID:	**GEI-24_4-5_093014**					
Arsenic	**ND**	5.2	6010C	11-24-14	11-24-14	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-019-45					
Client ID:	**GEI-25_1-2_093014**					
Nickel	**36**	2.6	6010C	11-24-14	11-24-14	
Lab ID:	10-019-46					
Client ID:	**GEI-25_4-5_093014**					
Arsenic	**ND**	6.0	6010C	11-24-14	11-24-14	
Nickel	**80**	3.0	6010C	11-24-14	11-24-14	
Lab ID:	10-019-48					
Client ID:	**GEI-25_9-10_093014**					
Nickel	**130**	3.0	6010C	11-24-14	11-24-14	
Lab ID:	10-019-56					
Client ID:	**GEI-30_3-4_093014**					
Nickel	**7.3**	2.7	6010C	11-24-14	11-25-14	
Lab ID:	10-019-58					
Client ID:	**GEI-30_7-8_093014**					
Nickel	**8.9**	2.8	6010C	11-24-14	11-25-14	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	10-10-14
Date Analyzed:	10-10-14
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1010SM3

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	5.0
Nickel	6010C	**ND**	2.5

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	11-24-14
Date Analyzed:	11-24-14
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1124SM2

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	5.0
Nickel	6010C	**ND**	2.5

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	11-24-14
Date Analyzed:	11-25-14
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1124SM3

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	5.0
Nickel	6010C	**ND**	2.5

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	11-26-14
Date Analyzed:	11-26-14
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1126SM1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	5.0
Nickel	6010C	**ND**	2.5

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 10-10-14
Date Analyzed: 10-10-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-020-40

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	5.0	
Nickel	**7.65**	**7.85**	3	2.5	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 11-24-14
Date Analyzed: 11-24-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-019-02

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	5.0	
Nickel	**9.90**	**9.65**	3	2.5	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 11-24-14
Date Analyzed: 11-25-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-021-23

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	5.0	
Nickel	**10.2**	**11.7**	13	2.5	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 11-26-14
Date Analyzed: 11-26-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 11-019-10

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**5.30**	**ND**	NA	5.0	
Nickel	**33.6**	**32.3**	4	2.5	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 10-10-14
Date Analyzed: 10-10-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-020-40

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**93.3**	93	**93.3**	93	0	
Nickel	100	**103**	95	**105**	97	2	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 11-24-14
Date Analyzed: 11-24-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-019-02

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**97.1**	97	**98.1**	98	1	
Nickel	100	**106**	96	**106**	96	0	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 11-24-14
Date Analyzed: 11-25-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-021-23

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**96.5**	97	**104**	104	7	
Nickel	100	**102**	91	**103**	93	2	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 11-26-14
Date Analyzed: 11-26-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 11-019-10

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**87.8**	83	**84.3**	79	4	
Nickel	100	**126**	92	**124**	90	2	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV101014P	1.00	0.976	2.4	+/- 10%
Nickel	ICV101014P	1.00	1.05	-5.0	+/- 10%
Arsenic	LLICV101014P	0.100	0.106	-6.0	+/- 30%
Nickel	LLICV101014P	0.0200	0.0201	-0.50	+/- 30%
Arsenic	CCV1101014P	10.0	9.82	1.8	+/- 10%
Nickel	CCV1101014P	2.00	2.05	-2.5	+/- 10%
Arsenic	CCV2101014P	10.0	9.65	3.5	+/- 10%
Nickel	CCV2101014P	2.00	2.03	-1.5	+/- 10%
Arsenic	LLCCV2101014P	0.100	0.110	-10	+/- 30%
Nickel	LLCCV2101014P	0.0200	0.0213	-6.5	+/- 30%
Arsenic	CCV3101014P	10.0	9.61	3.9	+/- 10%
Nickel	CCV3101014P	2.00	2.03	-1.5	+/- 10%
Arsenic	LLCCV3101014P	0.100	0.0935	6.5	+/- 30%
Nickel	LLCCV3101014P	0.0200	0.0224	-12	+/- 30%

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV112414P	1.00	0.994	1	+/- 10%
Nickel	ICV112414P	1.00	1.04	-4.0	+/- 10%
Arsenic	LLICV112414P	0.100	0.114	-14	+/- 30%
Nickel	LLICV112414P	0.0200	0.0222	-11	+/- 30%
Arsenic	CCV1112414P	10.0	9.98	0.20	+/- 10%
Nickel	CCV1112414P	2.00	1.97	1.5	+/- 10%
Arsenic	CCV2112414P	10.0	10.2	-2.0	+/- 10%
Nickel	CCV2112414P	2.00	2.04	-2.0	+/- 10%
Arsenic	LLCCV2112414P	0.100	0.110	-10	+/- 30%
Nickel	LLCCV2112414P	0.0200	0.0193	3.5	+/- 30%
Arsenic	CCV3112414P	10.0	10.2	-2.0	+/- 10%
Nickel	CCV3112414P	2.00	2.04	-2.0	+/- 10%
Arsenic	LLCCV3112414P	0.100	0.118	-18	+/- 30%
Nickel	LLCCV3112414P	0.0200	0.0207	-3.5	+/- 30%
Arsenic	CCV4112414P	10.0	10.2	-2.0	+/- 10%
Nickel	CCV4112414P	2.00	2.03	-1.5	+/- 10%
Arsenic	LLCCV4112414P	0.100	0.122	-22	+/- 30%
Nickel	LLCCV4112414P	0.0200	0.0226	-13	+/- 30%
Arsenic	CCV5112414P	10.0	10.2	-2.0	+/- 10%
Nickel	CCV5112414P	2.00	2.02	-1.0	+/- 10%
Arsenic	LLCCV5112414P	0.100	0.128	-28	+/- 30%
Nickel	LLCCV5112414P	0.0200	0.0207	-3.5	+/- 30%
Arsenic	CCV6112414P	10.0	10.1	-1.0	+/- 10%
Nickel	CCV6112414P	2.00	1.97	1.5	+/- 10%
Arsenic	LLCCV6112414P	0.100	0.121	-21	+/- 30%
Nickel	LLCCV6112414P	0.0200	0.0233	-17	+/- 30%

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV7112414P	10.0	10.0	0	+/- 10%
Nickel	CCV7112414P	2.00	1.94	3.0	+/- 10%
Arsenic	LLCCV7112414P	0.100	0.115	-15	+/- 30%
Nickel	LLCCV7112414P	0.0200	0.0216	-8.0	+/- 30%
Arsenic	CCV8112414P	10.0	9.83	1.7	+/- 10%
Nickel	CCV8112414P	2.00	1.89	5.5	+/- 10%
Arsenic	LLCCV8112414P	0.100	0.0982	1.8	+/- 30%
Nickel	LLCCV8112414P	0.0200	0.0190	5.0	+/- 30%

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV112514P	1.00	0.992	0.80	+/- 10%
Nickel	ICV112514P	1.00	1.03	-3.0	+/- 10%
Arsenic	LLICV112514P	0.100	0.125	-25	+/- 30%
Nickel	LLICV112514P	0.0200	0.0204	-2.0	+/- 30%
Arsenic	CCV1112514P	10.0	9.93	0.70	+/- 10%
Nickel	CCV1112514P	2.00	1.97	1.5	+/- 10%
Arsenic	CCV2112514P	10.0	9.95	0.50	+/- 10%
Nickel	CCV2112514P	2.00	1.97	1.5	+/- 10%
Arsenic	LLCCV2112514P	0.100	0.106	-6.0	+/- 30%
Nickel	LLCCV2112514P	0.0200	0.0227	-14	+/- 30%
Arsenic	CCV3112514P	10.0	9.95	0.50	+/- 10%
Nickel	CCV3112514P	2.00	1.98	1.0	+/- 10%
Arsenic	LLCCV3112514P	0.100	0.105	-5.0	+/- 30%
Nickel	LLCCV3112514P	0.0200	0.0225	-13	+/- 30%
Arsenic	CCV4112514P	10.0	10.1	-1.0	+/- 10%
Nickel	CCV4112514P	2.00	1.99	0.50	+/- 10%
Arsenic	LLCCV4112514P	0.100	0.109	-9.0	+/- 30%
Nickel	LLCCV4112514P	0.0200	0.0189	5.5	+/- 30%

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV112614P	1.00	1.03	-3.0	+/- 10%
Nickel	ICV112614P	1.00	1.07	-7.0	+/- 10%
Arsenic	LLICV111614P	0.100	0.129	-29	+/- 30%
Nickel	LLICV111614P	0.0200	0.0188	6.0	+/- 30%
Arsenic	CCV1112614P	10.0	10.2	-2.0	+/- 10%
Nickel	CCV1112614P	2.00	2.05	-2.5	+/- 10%
Arsenic	CCV2112614P	10.0	10.2	-2.0	+/- 10%
Nickel	CCV2112614P	2.00	2.06	-3.0	+/- 10%
Arsenic	LLCCV2112614P	0.100	0.125	-25	+/- 30%
Nickel	LLCCV2112614P	0.0200	0.0211	-5.5	+/- 30%

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

% MOISTURE

Date Analyzed: 11-24-14

Client ID	Lab ID	% Moisture
GEI-13_5-6_093014	10-019-02	3
GEI-13_7-8_093014	10-019-03	5
GEI-14_3.5-4.5_093014	10-019-06	15
GEI-14_7-8_093014	10-019-07	32
GEI-15_2-3_093014	10-019-09	4
GEI-15_10-11_093014	10-019-11	17
GEI-16_2-3_093014	10-019-13	15
GEI-16_6-7_093014	10-019-15	24
GEI-17_1-2_093014	10-019-17	5
GEI-17_4-5_093014	10-019-18	2
GEI-18_1-2_093014	10-019-21	3
GEI-18_4-5_093014	10-019-22	7
GEI-18_9-10_093014	10-019-24	10
GEI-23_1-2_093014	10-019-37	4
GEI-23_5-6_093014	10-019-39	43
GEI-24_2-3_093014	10-019-41	3
GEI-24_4-5_093014	10-019-42	4
GEI-25_1-2_093014	10-019-45	3

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019B
Project: 5147-006-10

% MOISTURE

Date Analyzed: 11-24-14

Client ID	Lab ID	% Moisture
GEI-25_4-5_093014	10-019-46	17
GEI-25_9-10_093014	10-019-48	16
GEI-30_3-4_093014	10-019-56	7
GEI-30_7-8_093014	10-019-58	12

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 6

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nat Solomon

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Diesel	Arsenic				% Moisture
1	GEI-13_2-3_093014	9/30/14	1100	S	1																	●	X				X
2	GEI-13_5-6_093014		1105																			●	●				●
3	GEI-13_7-8_093014		1110																			●	●				●
4	GEI-13_9-10_093014		1115																								
5	GEI-14_2-3_093014		1150																			●	X				X
6	GEI-14_3.5-4.5_093014		1155																			●	●				●
7	GEI-14_7-8_093014		1200																			●	●				●
8	GEI-14_9-10_093014		1205																								
9	GEI-15_2-3_093014		1335																				●				●
10	GEI-15_5.5-6.5_093014		1340		5								⊗									●					⊗

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	10/2/14	0950
Received	[signature]	[signature]	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

⊗ Added 10/10/14 ~~BG~~ STA

● Added 11/17/14. DB (STA)

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐

Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DLI
Project Manager: Brian Tracy
Sampled by: Robert Traban / Nate Stoman

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Dissolved Arsenic				% Moisture
11	GEI-15_10-11_093014	9/30/14	1345	S	1																	●				●
12	GEI-15_12-13_093014		1350																							
13	GEI-16_2-3_093014		1125																			●	●			●
14	GEI-16_4-5_093014		1130																							
15	GEI-16_6-7_093014		1135																			●	●			●
16	GEI-16_8-9_093014		1140																							
17	GEI-17_1-2_093014		1245																			●				●
18	GEI-17_4-5_093014		1255																				●			●
19	GEI-17_7-8_093014		1250																			X	●			X
20	GEI-17_9-10_093014	↓	1300	S	↓																					

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		~~GEI~~ 10/2/14	~~9/30/14~~	950	
Received		0826	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DC1
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nat Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
21	GE1-18-1-2-093014	9/30/14	1305	S	1																	●	●				●
22	GE1-18-4-5-093014		1310																			●	●				●
23	GE1-18-6-9-093014		1315																			X	X				X
24	GE1-18-9-10-093014		1320																			●	●				●
25	GE1-19-2-3-093014		1215																								
26	GE1-19-4-5-093014		1220																								
27	GE1-19-7-8-093014		1225																								
28	GE1-19-9-10-093014		1230																								
29	GE1-20-2-3-093014		1400																								
30	GE1-20-4-5-093014	↓	1405	↓	↓																						

	Signature	Company	Date	Time
Relinquished	[signature]	GE1	10/2/14	950
Received	[signature]	ORE	10/2/14	0952
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐

Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DLI
Project Manager: Brian Tracey
Sampled by: Robert Trahan / Nate Sloman

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
31	GEI-20_6-7_093014	9/30/14	1410	S	1								X														X
32	GEI-20_8-9_093014		1415																								
33	GEI-21_1-2_093014		1500																								
34	GEI-21_5-6_093014		1505										X									X	X				X
35	GEI-21_7.5-8.5_093014		1510										X														X
36	GEI-21_9-10_093014		1515																								
37	GEI-23_1-2_093014		1520																			●	●				●
38	GEI-23_2.5-3.5_093014		1525																								
39	GEI-23_5-6_093014		1530																				●				●
40	GEI-23_7.5-8.5_093014		1535										X														X

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	10/2/14	0950
Received	[signature]	OSE	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐

Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Geo Engineers
Project Number: 5147-006-10
Project Name: DLI
Project Manager: Brian Tracy
Sampled by: Robert Trohan / Nate Stamm

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
41	GEI-24-2-3_093014	9/30/14	1605	S	1																	●	●				●
42	GEI-24-4-5_093014		1610																				●				●
43	GEI-24-6-7_093014		1615																								
44	GEI-24-9-10_093014		1620																								
45	GEI-25-1-2_093014		1800																			●					●
46	GEI-25-4-5_093014		1805																			●	●				●
47	GEI-25-7-8_093014		1810																			X	X				X
48	GEI-25-9-10_093014		1815																			●					●
49	GEI-26-2-3_093014		1700																								
50	GEI-26-4-5_093014	↓	1705	↓	↓																						

	Signature	Company	Date	Time
Relinquished		GEI	10/2/14	950
Received		GEI	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐

Electronic Data Deliverables (EDDs) ☒ _____

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Company: GEO Engineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nat Solomon

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
51	GEI-26-6-7_10 093014	9/30/14	1710	S	1																	X	X				X
52	GEI-29_2-3_093014		1625																								
53	GEI-29_5-6_093014		1630																								
54	GEI-29_8-9_093014		1635																								
55	GEI-29_9-10_093014		1640																								
56	GEI-30_3-4_093014		1710																			●					●
57	GEI-30_5-6_093014		1745																								
58	GEI-30_7-8_093014		1750																			●					●
59	GEI-30_9-10_093014		1755																								

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10/2/14	950	
Received		GEO	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Sample/Cooler Receipt and Acceptance Checklist

Client: GE

Client Project Name/Number: 5147-006-10

OnSite Project Number: 10-019

Initiated by: MM

Date Initiated: 10/2/14

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	N/A	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	N/A	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	Yes	No		1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	Yes	No	Temperature: 1.2		
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	N/A			
1.7 How were the samples delivered?	Client	Courier	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	Yes	No	1 2 3 4	
2.2 Was the COC legible and written in permanent ink?	Yes	No	1 2 3 4	
2.3 Have samples been relinquished and accepted by each custodian?	Yes	No	1 2 3 4	
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	No	1 2 3 4	
2.5 Were all of the samples listed on the COC submitted?	Yes	No	1 2 3 4	
2.6 Were any of the samples submitted omitted from the COC?	Yes	No	1 2 3 4	

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	No		1 2 3 4	
3.2 Were any sample labels missing or illegible?	Yes	No		1 2 3 4	
3.3 Have the correct containers been used for each analysis requested?	Yes	No		1 2 3 4	
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1 2 3 4	
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	N/A	1 2 3 4	
3.6 Is there sufficient sample submitted to perform requested analyses?	Yes	No		1 2 3 4	
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	No		1 2 3 4	
3.8 Was method 5035A used?	Yes	No	N/A	1 2 3 4	
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		N/A	1 2 3 4	

Explain any discrepancies:

24) Sample 52) GEI-29-2-3_093014 9/30/14 1625 on COC
1640 on label

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

RAW DATA

- Total Metals EPA 6010C Data

Total Metals Data

P141010F1. Mean Only Report 11/25/2014, 5:30:13 PM

Sample	Label	Calc Conc.	Units	Date/Time
Blank	As 188.980	0.000	ppb	10/10/2014, 9:28:40 AM
	Ni 231.604	0.000	ppb	
Standard 5	As 188.980	100.00	ppb	10/10/2014, 9:32:44 AM
	Ni 231.604	20.000	ppb	
Standard 4	As 188.980	1000.0	ppb	10/10/2014, 9:36:46 AM
	Ni 231.604	200.00	ppb	
Standard 3	As 188.980	10000	ppb	10/10/2014, 9:40:51 AM
	Ni 231.604	2000.0	ppb	
Standard 2	As 188.980	25000	ppb	10/10/2014, 9:44:55 AM
	Ni 231.604	5000.0	ppb	
Standard 1	Ni 231.604	10000	ppb	10/10/2014, 9:48:59 AM
Initial Calib Verif	As 188.980	975.99	ppb	10/10/2014, 9:55:38 AM
	Ni 231.604	1048.0	ppb	
LLICV	As 188.980	106.12	ppb	10/10/2014, 10:09:31 AM
	Ni 231.604	20.060	ppb	
Initial Calib Blank	As 188.980	8.129uv	ppb	10/10/2014, 10:14:46 AM
	Ni 231.604	-2.013uv	ppb	
Cont Calib Verif	As 188.980	9823.4	ppb	10/10/2014, 10:18:52 AM
	Ni 231.604	2049.0	ppb	
Cont Calib Blank	As 188.980	6.561uv	ppb	10/10/2014, 10:27:31 AM
	Ni 231.604	0.488uv	ppb	
ICSA	As 188.980	27.572	ppb	10/10/2014, 10:31:35 AM
	Ni 231.604	2.083uv	ppb	
ICSAB	As 188.980	2455.6	ppb	10/10/2014, 10:35:40 AM
	Ni 231.604	885.32	ppb	
BLK	As 188.980	16.956	ppb	10/10/2014, 10:39:45 AM
	Ni 231.604	0.521uv	ppb	
MB1010TM1	As 188.980	9.463uv	ppb	10/10/2014, 10:46:30 AM
	Ni 231.604	-0.239uv	ppb	
SB1010TM1	As 188.980	1997.7	ppb	10/10/2014, 10:50:35 AM
	Ni 231.604	2003.7	ppb	
09-321-01	As 188.980	16.518uv	ppb	10/10/2014, 10:54:40 AM
	Ni 231.604	8.076	ppb	
09-321-01 D	As 188.980	3.429uv	ppb	10/10/2014, 10:58:45 AM
	Ni 231.604	1.337	ppb	

P141010F1. Mean Only Report 11/25/2014, 5:30:13 PM

Sample	Label	Calc Conc.	Units	Date/Time
09-321-01 L	As 188.980	16.561	ppb	10/10/2014, 11:02:50 AM
	Ni 231.604	-1.093uv	ppb	
09-321-01 MS	As 188.980	2022.4	ppb	10/10/2014, 11:06:55 AM
	Ni 231.604	2005.4	ppb	
09-321-01 MSD	As 188.980	2021.3	ppb	10/10/2014, 11:11:00 AM
	Ni 231.604	2011.5	ppb	
Cont Calib Verif	As 188.980	9653.8	ppb	10/10/2014, 11:15:06 AM
	Ni 231.604	2030.1	ppb	
Cont Calib Blank	As 188.980	20.498	ppb	10/10/2014, 11:20:48 AM
	Ni 231.604	0.647uv	ppb	
LLCCV	As 188.980	109.96	ppb	10/10/2014, 11:24:51 AM
	Ni 231.604	21.273	ppb	
MB1010SM3	As 188.980	-4.627uv	ppb	10/10/2014, 12:46:41 PM
	Ni 231.604	-1.734uv	ppb	
SB1010SM3	As 188.980	1854.4	ppb	10/10/2014, 12:50:44 PM
	Ni 231.604	2007.5	ppb	
10-020-40	As 188.980	30.430	ppb	10/10/2014, 12:54:47 PM
	Ni 231.604	152.58	ppb	
10-020-40 D	As 188.980	23.633	ppb	10/10/2014, 12:58:52 PM
	Ni 231.604	157.08	ppb	
10-020-40 L	As 188.980	24.173	ppb	10/10/2014, 1:02:56 PM
	Ni 231.604	29.371	ppb	
10-020-40 MS	As 188.980	1865.3	ppb	10/10/2014, 1:07:00 PM
	Ni 231.604	2056.2	ppb	
10-020-40 MSD	As 188.980	1866.0	ppb	10/10/2014, 1:11:04 PM
	Ni 231.604	2095.7	ppb	
10-019-01	As 188.980	1617.0	ppb	10/10/2014, 1:15:07 PM
	Ni 231.604	2109.2	ppb	
10-019-05	As 188.980	1746.5	ppb	10/10/2014, 1:19:11 PM
	Ni 231.604	818.11	ppb	
10-019-19	As 188.980	558.23	ppb	10/10/2014, 1:23:15 PM
	Ni 231.604	719.75	ppb	
Cont Calib Verif	As 188.980	9610.9	ppb	10/10/2014, 1:27:19 PM
	Ni 231.604	2028.3	ppb	
Cont Calib Blank	As 188.980	9.575	ppb	10/10/2014, 1:32:17 PM

P141010F1. Mean Only Report 11/25/2014, 5:30:13 PM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	1.460	ppb	
LLCCV	As 188.980	93.503	ppb	10/10/2014, 1:36:21 PM
	Ni 231.604	22.351	ppb	

P141124F1B. Mean Only Report 11/25/2014, 1:43:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
Blank	As 188.980	0.000	ppb	11/24/2014, 9:32:46 AM
	Ni 231.604	0.000	ppb	
Standard 5	As 188.980	100.00	ppb	11/24/2014, 9:36:49 AM
	Ni 231.604	20.000	ppb	
Standard 4	As 188.980	1000.0	ppb	11/24/2014, 9:40:52 AM
	Ni 231.604	200.00	ppb	
Standard 3	As 188.980	10000	ppb	11/24/2014, 9:44:58 AM
	Ni 231.604	2000.0	ppb	
Standard 2	As 188.980	25000	ppb	11/24/2014, 9:49:02 AM
	Ni 231.604	5000.0	ppb	
Standard 1	Ni 231.604	10000	ppb	11/24/2014, 9:53:05 AM
Initial Calib Verif	As 188.980	994.47	ppb	11/24/2014, 10:10:26 AM
	Ni 231.604	1039.5	ppb	
LLICV	As 188.980	114.49	ppb	11/24/2014, 10:18:40 AM
	Ni 231.604	22.217	ppb	
Initial Calib Blank	As 188.980	0.076uv	ppb	11/24/2014, 10:24:06 AM
	Ni 231.604	3.336uv	ppb	
Cont Calib Verif	As 188.980	9978.2	ppb	11/24/2014, 10:28:08 AM
	Ni 231.604	1972.3	ppb	
Cont Calib Blank	As 188.980	15.195uv	ppb	11/24/2014, 10:34:06 AM
	Ni 231.604	4.057	ppb	
ICSA	As 188.980	21.640	ppb	11/24/2014, 10:38:11 AM
	Ni 231.604	8.867	ppb	
ICSAB	As 188.980	2572.0	ppb	11/24/2014, 10:49:35 AM
	Ni 231.604	830.56	ppb	
MB1121PH1	As 188.980	3.492uv	ppb	11/24/2014, 10:56:03 AM
	Ni 231.604	5.298	ppb	
SB1121PH1	As 188.980	2010.5	ppb	11/24/2014, 11:00:08 AM
	Ni 231.604	2052.5	ppb	
11-184-01a	As 188.980	14.202	ppb	11/24/2014, 11:04:13 AM
	Ni 231.604	3.521	ppb	
11-184-01a D	As 188.980	4.519uv	ppb	11/24/2014, 11:08:17 AM
	Ni 231.604	2.370	ppb	
11-184-01a L	As 188.980	15.200	ppb	11/24/2014, 11:12:22 AM
	Ni 231.604	1.261uv	ppb	

P141124F1B. Mean Only Report 11/25/2014, 1:43:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
11-184-01a MS	As 188.980	1700.9	ppb	11/24/2014, 11:16:26 AM
	Ni 231.604	1757.1	ppb	
11-184-01a MSD	As 188.980	1869.2	ppb	11/24/2014, 11:20:30 AM
	Ni 231.604	1954.4	ppb	
11-191-01	As 188.980	32.580	ppb	11/24/2014, 11:24:35 AM
	Ni 231.604	6.174	ppb	
Cont Calib Verif	As 188.980	10247	ppb	11/24/2014, 11:28:40 AM
	Ni 231.604	2039.8	ppb	
Cont Calib Blank	As 188.980	16.198	ppb	11/24/2014, 11:34:42 AM
	Ni 231.604	13.844	ppb	
LLCCV	As 188.980	109.75	ppb	11/24/2014, 11:38:47 AM
	Ni 231.604	19.256	ppb	
MB1124SM1	As 188.980	18.181	ppb	11/24/2014, 11:47:16 AM
	Ni 231.604	0.566uv	ppb	
SB1124SM1	As 188.980	1993.2	ppb	11/24/2014, 11:51:22 AM
	Ni 231.604	2088.0	ppb	
11-237-01a,01b Comp.	As 188.980	71.557	ppb	11/24/2014, 11:55:27 AM
	Ni 231.604	482.42	ppb	
11-237-01a,01b Comp.	As 188.980	61.675	ppb	11/24/2014, 11:59:30 AM
	Ni 231.604	477.07	ppb	
11-237-01a,01b Comp.	As 188.980	29.431	ppb	11/24/2014, 12:03:33 PM
	Ni 231.604	102.44	ppb	
11-237-01a,01b Comp.	As 188.980	1904.7	ppb	11/24/2014, 12:07:38 PM
	Ni 231.604	2367.8	ppb	
11-237-01a,01b Comp.	As 188.980	1917.7	ppb	11/24/2014, 12:11:43 PM
	Ni 231.604	2368.9	ppb	
Cont Calib Verif	As 188.980	10247	ppb	11/24/2014, 12:20:52 PM
	Ni 231.604	2039.2	ppb	
Cont Calib Blank	As 188.980	12.003	ppb	11/24/2014, 12:28:45 PM
	Ni 231.604	2.459	ppb	
LLCCV	As 188.980	118.38	ppb	11/24/2014, 12:32:50 PM
	Ni 231.604	20.732	ppb	
MB1124WH1	As 188.980	2.642uv	ppb	11/24/2014, 12:48:10 PM
	Ni 231.604	2.502	ppb	
SB1124WH1	As 188.980	2087.1	ppb	11/24/2014, 12:52:14 PM

P141124F1B. Mean Only Report 11/25/2014, 1:43:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	2116.5	ppb	
11-213-09	As 188.980	15.317	ppb	11/24/2014, 12:56:17 PM
	Ni 231.604	6.815	ppb	
11-213-09 D	As 188.980	11.271uv	ppb	11/24/2014, 1:00:21 PM
	Ni 231.604	2.300uv	ppb	
11-213-09 L	As 188.980	-4.065uv	ppb	11/24/2014, 1:04:24 PM
	Ni 231.604	1.277uv	ppb	
11-213-09 MS	As 188.980	2040.9	ppb	11/24/2014, 1:08:28 PM
	Ni 231.604	2069.9	ppb	
11-213-09 MSD	As 188.980	2022.4	ppb	11/24/2014, 1:12:31 PM
	Ni 231.604	2020.6	ppb	
11-230-01a	As 188.980	21.945	ppb	11/24/2014, 1:16:34 PM
	Ni 231.604	13.486	ppb	
11-151-01a(1120WH1)	As 188.980	35.412	ppb	11/24/2014, 1:20:38 PM
	Ni 231.604	4.983	ppb	
11-151-03a(1120WH1)	As 188.980	23.862uv	ppb	11/24/2014, 1:24:42 PM
	Ni 231.604	11.451	ppb	
Cont Calib Verif	As 188.980	10231	ppb	11/24/2014, 1:34:55 PM
	Ni 231.604	2031.5	ppb	
Cont Calib Blank	As 188.980	7.345uv	ppb	11/24/2014, 1:40:19 PM
	Ni 231.604	6.866	ppb	
LLCCV	As 188.980	122.04	ppb	11/24/2014, 1:44:23 PM
	Ni 231.604	22.636	ppb	
MB1124WH1	As 188.980	15.620uv	ppb	11/24/2014, 1:50:42 PM
	Ni 231.604	1.830uv	ppb	
11-226-01	As 188.980	4.819uv	ppb	11/24/2014, 2:02:00 PM
	Ni 231.604	2.764	ppb	
11-183-06	As 188.980	107.47	ppb	11/24/2014, 2:06:05 PM
	Ni 231.604	291.38	ppb	
BLK	As 188.980	1.615uv	ppb	11/24/2014, 2:10:13 PM
	Ni 231.604	-0.251uv	ppb	
MB1121F1	As 188.980	-0.653uv	ppb	11/24/2014, 2:21:36 PM
	Ni 231.604	-2.656uv	ppb	
SB1121F1	As 188.980	-4.058uv	ppb	11/24/2014, 2:25:42 PM
	Ni 231.604	-1.423uv	ppb	

P141124F1B. Mean Only Report 11/25/2014, 1:43:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
11-230-01c X 1.11	As 188.980	14.728	ppb	11/24/2014, 2:29:44 PM
	Ni 231.604	7.963	ppb	
11-230-01c X 1.11 D	As 188.980	1.199uv	ppb	11/24/2014, 2:33:48 PM
	Ni 231.604	3.699	ppb	
11-230-01c X 1.11 L	As 188.980	1.233uv	ppb	11/24/2014, 2:37:52 PM
	Ni 231.604	3.954	ppb	
11-230-01c X 1.11 MS	As 188.980	13.310	ppb	11/24/2014, 2:41:55 PM
	Ni 231.604	6.659	ppb	
Cont Calib Verif	As 188.980	10172	ppb	11/24/2014, 2:50:48 PM
	Ni 231.604	2018.3	ppb	
Cont Calib Blank	As 188.980	5.116uv	ppb	11/24/2014, 3:32:51 PM
	Ni 231.604	5.723	ppb	
LLCCV	As 188.980	128.21	ppb	11/24/2014, 4:01:33 PM
	Ni 231.604	20.650	ppb	
11-230-01c X 1.11 MS	As 188.980	10.563	ppb	11/24/2014, 4:20:51 PM
	Ni 231.604	6.291	ppb	
MB1124SM2	As 188.980	-2.659uv	ppb	11/24/2014, 4:40:09 PM
	Ni 231.604	3.548	ppb	
SB1124SM2	As 188.980	1955.8	ppb	11/24/2014, 4:44:15 PM
	Ni 231.604	2056.4	ppb	
10-019-02	As 188.980	53.251	ppb	11/24/2014, 4:48:19 PM
	Ni 231.604	198.05	ppb	
10-019-02 D	As 188.980	39.811	ppb	11/24/2014, 4:52:22 PM
	Ni 231.604	192.84	ppb	
10-019-02 L	As 188.980	9.692uv	ppb	11/24/2014, 4:56:27 PM
	Ni 231.604	46.264	ppb	
10-019-02 MS	As 188.980	1942.4	ppb	11/24/2014, 5:00:32 PM
	Ni 231.604	2119.2	ppb	
10-019-02 MSD	As 188.980	1961.2	ppb	11/24/2014, 5:04:36 PM
	Ni 231.604	2116.6	ppb	
10-019-03	As 188.980	48.531	ppb	11/24/2014, 5:08:41 PM
	Ni 231.604	225.86	ppb	
10-019-06	As 188.980	110.16	ppb	11/24/2014, 5:12:47 PM
	Ni 231.604	608.80	ppb	

P141124F1B. Mean Only Report 11/25/2014, 1:43:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
Cont Calib Verif	As 188.980	10110	ppb	11/24/2014, 5:24:48 PM
	Ni 231.604	1966.7	ppb	
Cont Calib Blank	As 188.980	14.280uv	ppb	11/24/2014, 5:31:00 PM
	Ni 231.604	5.024	ppb	
LLCCV	As 188.980	121.05	ppb	11/24/2014, 5:41:17 PM
	Ni 231.604	23.341	ppb	
11-247-01(11-247-01)	As 188.980	219.90	ppb	11/24/2014, 5:50:40 PM
	Ni 231.604	218.62	ppb	
10-019-07	As 188.980	100.50	ppb	11/24/2014, 6:01:41 PM
	Ni 231.604	180.38	ppb	
10-019-09	As 188.980	92.160	ppb	11/24/2014, 6:05:45 PM
	Ni 231.604	706.47	ppb	
10-019-11	As 188.980	41.235	ppb	11/24/2014, 6:09:49 PM
	Ni 231.604	651.33	ppb	
10-019-13	As 188.980	111.97	ppb	11/24/2014, 6:13:53 PM
	Ni 231.604	606.08	ppb	
10-019-15	As 188.980	32.959	ppb	11/24/2014, 6:17:57 PM
	Ni 231.604	93.752	ppb	
10-019-17	As 188.980	98.710	ppb	11/24/2014, 6:22:02 PM
	Ni 231.604	779.67	ppb	
10-019-18	As 188.980	156.17	ppb	11/24/2014, 6:26:07 PM
	Ni 231.604	836.96	ppb	
10-019-21	As 188.980	101.20	ppb	11/24/2014, 6:30:11 PM
	Ni 231.604	688.25	ppb	
BLK	As 188.980	15.523uv	ppb	11/24/2014, 6:34:14 PM
	Ni 231.604	0.598uv	ppb	
Cont Calib Verif	As 188.980	10035	ppb	11/24/2014, 6:38:17 PM
	Ni 231.604	1936.3	ppb	
Cont Calib Blank	As 188.980	7.234uv	ppb	11/24/2014, 6:44:27 PM
	Ni 231.604	4.667	ppb	
LLCCV	As 188.980	115.49	ppb	11/24/2014, 6:48:34 PM
	Ni 231.604	21.616	ppb	
10-019-22	As 188.980	329.28	ppb	11/24/2014, 6:57:29 PM
	Ni 231.604	682.24	ppb	
10-019-24	As 188.980	124.75	ppb	11/24/2014, 7:01:35 PM

P141124F1B. Mean Only Report 11/25/2014, 1:43:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	878.42	ppb	
10-019-37	As 188.980	38.413	ppb	11/24/2014, 7:05:38 PM
	Ni 231.604	515.47	ppb	
10-019-39	As 188.980	131.94	ppb	11/24/2014, 7:09:42 PM
	Ni 231.604	247.99	ppb	
10-019-41	As 188.980	37.252	ppb	11/24/2014, 7:13:46 PM
	Ni 231.604	769.59	ppb	
10-019-42	As 188.980	13.457	ppb	11/24/2014, 7:17:50 PM
	Ni 231.604	741.52	ppb	
10-019-45	As 188.980	94.959	ppb	11/24/2014, 7:21:55 PM
	Ni 231.604	703.32	ppb	
10-019-46	As 188.980	77.951	ppb	11/24/2014, 7:26:00 PM
	Ni 231.604	1329.4	ppb	
10-019-48	As 188.980	71.918	ppb	11/24/2014, 7:30:06 PM
	Ni 231.604	2263.3	ppb	
BLK	As 188.980	7.255uv	ppb	11/24/2014, 7:34:12 PM
	Ni 231.604	1.357uv	ppb	
Cont Calib Verif	As 188.980	9830.0	ppb	11/24/2014, 7:38:17 PM
	Ni 231.604	1885.8	ppb	
Cont Calib Blank	As 188.980	22.786	ppb	11/24/2014, 7:42:21 PM
	Ni 231.604	4.007	ppb	
LLCCV	As 188.980	98.182	ppb	11/24/2014, 7:47:26 PM
	Ni 231.604	19.001	ppb	
11-212-22 X 10	As 188.980	11.427	ppb	11/24/2014, 7:55:56 PM
	Ni 231.604	5.924	ppb	
11-212-22 D X 10	As 188.980	10.330uv	ppb	11/24/2014, 7:59:59 PM
	Ni 231.604	9.664	ppb	
11-212-22 L X 50	As 188.980	-2.264uv	ppb	11/24/2014, 8:04:02 PM
	Ni 231.604	6.452	ppb	
11-212-22 MS X 10	As 188.980	207.85	ppb	11/24/2014, 8:08:05 PM
	Ni 231.604	203.76	ppb	
11-212-22 MSD X 10	As 188.980	212.09	ppb	11/24/2014, 8:12:07 PM
	Ni 231.604	203.32	ppb	
BLK	As 188.980	-4.899uv	ppb	11/24/2014, 8:16:10 PM
	Ni 231.604	6.226	ppb	

P141124F1B. Mean Only Report 11/25/2014, 1:43:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
Cont Calib Verif	As 188.980	9850.0	ppb	11/24/2014, 8:20:12 PM
	Ni 231.604	1877.8	ppb	
Cont Calib Blank	As 188.980	36.807	ppb	11/24/2014, 8:24:15 PM
	Ni 231.604	4.986	ppb	
LLCCV	As 188.980	110.27	ppb	11/24/2014, 8:28:17 PM
	Ni 231.604	21.506	ppb	

P141125F1. Mean Only Report 11/25/2014, 2:24:46 PM

Sample	Label	Calc Conc.	Units	Date/Time
Blank	As 188.980	0.000	ppb	11/25/2014, 9:54:04 AM
	Ni 231.604	0.000	ppb	
Standard 5	As 188.980	100.00	ppb	11/25/2014, 9:58:10 AM
	Ni 231.604	20.000	ppb	
Standard 4	As 188.980	1000.0	ppb	11/25/2014, 10:02:16 AM
	Ni 231.604	200.00	ppb	
Standard 3	As 188.980	10000	ppb	11/25/2014, 10:06:20 AM
	Ni 231.604	2000.0	ppb	
Standard 2	As 188.980	25000	ppb	11/25/2014, 10:10:26 AM
	Ni 231.604	5000.0	ppb	
Standard 1	Ni 231.604	10000	ppb	11/25/2014, 10:14:32 AM
Initial Calib Verif	As 188.980	992.15	ppb	11/25/2014, 10:35:54 AM
	Ni 231.604	1027.9	ppb	
LLICV	As 188.980	124.87	ppb	11/25/2014, 10:42:54 AM
	Ni 231.604	20.438	ppb	
Initial Calib Blank	As 188.980	2.418uv	ppb	11/25/2014, 10:48:22 AM
	Ni 231.604	3.311uv	ppb	
Cont Calib Verif	As 188.980	9925.6	ppb	11/25/2014, 10:52:26 AM
	Ni 231.604	1969.9	ppb	
Cont Calib Blank	As 188.980	11.190	ppb	11/25/2014, 11:00:01 AM
	Ni 231.604	0.318uv	ppb	
ICSA	As 188.980	6.598uv	ppb	11/25/2014, 11:04:05 AM
	Ni 231.604	2.635uv	ppb	
ICSAB	As 188.980	2468.8	ppb	11/25/2014, 11:08:08 AM
	Ni 231.604	812.15	ppb	
MB1125WH2	As 188.980	2.441uv	ppb	11/25/2014, 11:15:17 AM
	Ni 231.604	-0.624uv	ppb	
SB1125WH2	As 188.980	10.915	ppb	11/25/2014, 11:19:25 AM
	Ni 231.604	-0.783uv	ppb	
11-243-01	As 188.980	57.199	ppb	11/25/2014, 11:23:30 AM
	Ni 231.604	0.938	ppb	
11-243-01 D	As 188.980	62.055	ppb	11/25/2014, 11:27:34 AM
	Ni 231.604	2.137uv	ppb	
11-243-01 L	As 188.980	30.332	ppb	11/25/2014, 11:31:40 AM
	Ni 231.604	-2.470uv	ppb	

Sample	Label	Calc Conc.	Units	Date/Time
11-243-01 MS	As 188.980	63.966	ppb	11/25/2014, 11:35:43 AM
	Ni 231.604	0.748uv	ppb	
11-243-01 MSD	As 188.980	70.299	ppb	11/25/2014, 11:39:46 AM
	Ni 231.604	2.515	ppb	
MRI ICP1(T.V=50)	As 188.980	101.98	ppb	11/25/2014, 11:50:17 AM
	Ni 231.604	19.072	ppb	
Cont Calib Verif	As 188.980	9954.9	ppb	11/25/2014, 11:56:32 AM
	Ni 231.604	1974.9	ppb	
Cont Calib Blank	As 188.980	21.928	ppb	11/25/2014, 12:02:56 PM
	Ni 231.604	-0.711uv	ppb	
LLCCV	As 188.980	106.21	ppb	11/25/2014, 12:07:00 PM
	Ni 231.604	22.662	ppb	
MRI ICP1(T.V=50)	As 188.980	104.20	ppb	11/25/2014, 12:12:12 PM
	Ni 231.604	18.348	ppb	
MRI ICP1(T.V=125)	As 188.980	239.56	ppb	11/25/2014, 12:17:49 PM
	Ni 231.604	50.344	ppb	
MB1124SM3	As 188.980	4.177uv	ppb	11/25/2014, 12:25:21 PM
	Ni 231.604	-0.714uv	ppb	
SB1124SM3	As 188.980	1858.2	ppb	11/25/2014, 12:29:26 PM
	Ni 231.604	1925.6	ppb	
10-021-23	As 188.980	37.061	ppb	11/25/2014, 12:33:29 PM
	Ni 231.604	203.92	ppb	
10-021-23 D	As 188.980	51.177	ppb	11/25/2014, 12:37:33 PM
	Ni 231.604	232.80	ppb	
10-021-23 L	As 188.980	19.140	ppb	11/25/2014, 12:41:39 PM
	Ni 231.604	42.105	ppb	
10-021-23 MS	As 188.980	1930.4	ppb	11/25/2014, 12:45:44 PM
	Ni 231.604	2031.1	ppb	
10-021-23 MSD	As 188.980	2073.3	ppb	11/25/2014, 12:49:49 PM
	Ni 231.604	2066.8	ppb	
11-230-01a X 10	As 188.980	14.534	ppb	11/25/2014, 12:53:55 PM
	Ni 231.604	3.650	ppb	
Cont Calib Verif	As 188.980	9951.3	ppb	11/25/2014, 12:57:59 PM
	Ni 231.604	1978.0	ppb	
Cont Calib Blank	As 188.980	11.894	ppb	11/25/2014, 1:04:07 PM

P141125F1. Mean Only Report 11/25/2014, 2:24:46 PM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	-0.503uv	ppb	
LLCCV	As 188.980	104.77	ppb	11/25/2014, 1:08:12 PM
	Ni 231.604	22.503	ppb	
10-019-056	As 188.980	32.383	ppb	11/25/2014, 1:28:22 PM
	Ni 231.604	136.34	ppb	
10-019-058	As 188.980	31.659	ppb	11/25/2014, 1:32:25 PM
	Ni 231.604	157.39	ppb	
10-021-06	As 188.980	97.258	ppb	11/25/2014, 1:36:31 PM
	Ni 231.604	647.03	ppb	
10-021-08	As 188.980	45.622	ppb	11/25/2014, 1:40:36 PM
	Ni 231.604	151.68	ppb	
10-021-10	As 188.980	139.50	ppb	11/25/2014, 1:44:39 PM
	Ni 231.604	451.94	ppb	
10-021-14	As 188.980	67.196	ppb	11/25/2014, 1:48:43 PM
	Ni 231.604	595.36	ppb	
10-021-23	As 188.980	227.04	ppb	11/25/2014, 1:52:46 PM
	Ni 231.604	843.66	ppb	
10-021-30	As 188.980	44.971	ppb	11/25/2014, 1:56:50 PM
	Ni 231.604	969.39	ppb	
10-021-31	As 188.980	50.289	ppb	11/25/2014, 2:00:53 PM
	Ni 231.604	988.66	ppb	
10-021-35	As 188.980	35.337	ppb	11/25/2014, 2:04:56 PM
	Ni 231.604	760.71	ppb	
Cont Calib Verif	As 188.980	10084	ppb	11/25/2014, 2:09:00 PM
	Ni 231.604	1987.6	ppb	
Cont Calib Blank	As 188.980	3.633uv	ppb	11/25/2014, 2:16:44 PM
	Ni 231.604	-0.558uv	ppb	
LLCCV	As 188.980	109.21	ppb	11/25/2014, 2:20:48 PM
	Ni 231.604	18.935	ppb	

P141126F1. Mean Only Report 11/26/2014, 1:22:41 PM

Sample	Label	Calc Conc.	Units	Date/Time
Blank	As 188.980	0.000	ppb	11/26/2014, 10:59:31 AM
	Ni 231.604	0.000	ppb	
Standard 5	As 188.980	100.00	ppb	11/26/2014, 11:03:34 AM
	Ni 231.604	20.000	ppb	
Standard 4	As 188.980	1000.0	ppb	11/26/2014, 11:07:36 AM
	Ni 231.604	200.00	ppb	
Standard 3	As 188.980	10000	ppb	11/26/2014, 11:11:39 AM
	Ni 231.604	2000.0	ppb	
Standard 2	As 188.980	25000	ppb	11/26/2014, 11:26:51 AM
	Ni 231.604	5000.0	ppb	
Standard 1	Ni 231.604	10000	ppb	11/26/2014, 11:19:47 AM
Initial Calib Verif	As 188.980	1034.7	ppb	11/26/2014, 11:35:25 AM
	Ni 231.604	1067.1	ppb	
LLICV	As 188.980	128.80	ppb	11/26/2014, 11:48:21 AM
	Ni 231.604	18.799	ppb	
Initial Calib Blank	As 188.980	24.822	ppb	11/26/2014, 11:54:16 AM
	Ni 231.604	-6.952uv	ppb	
Cont Calib Verif	As 188.980	10166	ppb	11/26/2014, 11:58:22 AM
	Ni 231.604	2054.0	ppb	
Cont Calib Blank	As 188.980	34.240	ppb	11/26/2014, 12:09:57 PM
	Ni 231.604	-0.346uv	ppb	
ICSA	As 188.980	22.066	ppb	11/26/2014, 12:14:02 PM
	Ni 231.604	1.180uv	ppb	
ICSAB	As 188.980	2502.8	ppb	11/26/2014, 12:18:07 PM
	Ni 231.604	847.69	ppb	
MB1126SM1	As 188.980	29.145	ppb	11/26/2014, 12:25:07 PM
	Ni 231.604	-4.344uv	ppb	
SB1126SM1	As 188.980	1949.9	ppb	11/26/2014, 12:29:13 PM
	Ni 231.604	2064.1	ppb	
10-019-10	As 188.980	105.75	ppb	11/26/2014, 12:33:15 PM
	Ni 231.604	671.21	ppb	
10-019-10 D	As 188.980	99.008	ppb	11/26/2014, 12:37:16 PM
	Ni 231.604	646.21	ppb	
10-019-10 L	As 188.980	49.485	ppb	11/26/2014, 12:41:21 PM
	Ni 231.604	138.88	ppb	

P141126F1. Mean Only Report 11/26/2014, 1:22:41 PM

Sample	Label	Calc Conc.	Units	Date/Time
10-019-10 MS	As 188.980	1756.0	ppb	11/26/2014, 12:45:25 PM
	Ni 231.604	2519.3	ppb	
10-019-10 MSD	As 188.980	1685.2	ppb	11/26/2014, 12:49:29 PM
	Ni 231.604	2476.2	ppb	
11-193-07 X 10	As 188.980	32.208	ppb	11/26/2014, 12:53:32 PM
	Ni 231.604	3.732uv	ppb	
Cont Calib Verif	As 188.980	10241	ppb	11/26/2014, 12:57:36 PM
	Ni 231.604	2055.7	ppb	
Cont Calib Blank	As 188.980	40.954	ppb	11/26/2014, 1:03:49 PM
	Ni 231.604	-3.196uv	ppb	
LLCCV	As 188.980	125.19	ppb	11/26/2014, 1:14:23 PM
	Ni 231.604	21.089	ppb	

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

January 15, 2015

Brian Tracy
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-10
Laboratory Reference No. 1410-019C

Dear Brian:

Enclosed are the analytical results and associated quality control data for samples submitted on October 2, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019C
Project: 5147-006-10

Case Narrative

Samples were collected on September 30, 2014 and received by the laboratory on October 2, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019C
Project: 5147-006-10

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
GEI-14_9-10_093014	10-019-08	Soil	9-30-14	10-2-14	
GEI-15_5.5-6.5_093014	10-019-10	Soil	9-30-14	10-2-14	
GEI-17_9-10_093014	10-019-20	Soil	9-30-14	10-2-14	
GEI-19_2-3_093014	10-019-25	Soil	9-30-14	10-2-14	
GEI-19_4-5_093014	10-019-26	Soil	9-30-14	10-2-14	
GEI-19_7-8_093014	10-019-27	Soil	9-30-14	10-2-14	
GEI-19_9-10_093014	10-019-28	Soil	9-30-14	10-2-14	
GEI-20_2-3_093014	10-019-29	Soil	9-30-14	10-2-14	
GEI-20_8-9_093014	10-019-32	Soil	9-30-14	10-2-14	
GEI-21_1-2_093014	10-019-33	Soil	9-30-14	10-2-14	
GEI-21_7.5-8.5_093014	10-019-35	Soil	9-30-14	10-2-14	
GEI-23_7.5-8.5_093014	10-019-40	Soil	9-30-14	10-2-14	
GEI-24_6-7_093014	10-019-43	Soil	9-30-14	10-2-14	
GEI-24_9-10_093014	10-019-44	Soil	9-30-14	10-2-14	
GEI-25_1-2_093014	10-019-45	Soil	9-30-14	10-2-14	
GEI-26_2 -3_093014	10-019-49	Soil	9-30-14	10-2-14	
GEI-29_2-3_093014	10-019-52	Soil	9-30-14	10-2-14	
GEI-30_3-4_093014	10-019-56	Soil	9-30-14	10-2-14	
GEI-30_9-10_093014	10-019-59	Soil	9-30-14	10-2-14	

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019C
Project: 5147-006-10

TOTAL METALS
EPA 6010C/6020A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-019-08					
Client ID:	**GEI-14_9-10_093014**					
Arsenic	**ND**	6.4	6010C	1-9-15	1-9-15	
Lab ID:	10-019-10					
Client ID:	**GEI-15_5.5-6.5_093014**					
Arsenic	**ND**	6.0	6010C	1-9-15	1-9-15	
Lab ID:	10-019-20					
Client ID:	**GEI-17_9-10_093014**					
Arsenic	**8.1**	5.6	6010C	1-9-15	1-9-15	
Nickel	**58**	2.8	6010C	1-9-15	1-9-15	
Lab ID:	10-019-25					
Client ID:	**GEI-19_2-3_093014**					
Nickel	**43**	2.6	6010C	1-9-15	1-9-15	
Lab ID:	10-019-26					
Client ID:	**GEI-19_4-5_093014**					
Arsenic	**ND**	5.2	6010C	1-9-15	1-9-15	
Lab ID:	10-019-27					
Client ID:	**GEI-19_7-8_093014**					
Arsenic	**2.6**	1.9	6020A	1-9-15	1-15-15	

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019C
Project: 5147-006-10

TOTAL METALS
EPA 6010C/6020A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-019-28					
Client ID:	**GEI-19_9-10_093014**					
Nickel	**29**	3.1	6010C	1-9-15	1-9-15	
Lab ID:	10-019-29					
Client ID:	**GEI-20_2-3_093014**					
Nickel	**37**	2.6	6010C	1-9-15	1-9-15	
Lab ID:	10-019-32					
Client ID:	**GEI-20_8-9_093014**					
Arsenic	**5.7**	2.8	6020A	1-9-15	1-15-15	
Lab ID:	10-019-33					
Client ID:	**GEI-21_1-2_093014**					
Nickel	**33**	2.6	6010C	1-9-15	1-9-15	
Lab ID:	10-019-35					
Client ID:	**GEI-21_7.5-8.5_093014**					
Arsenic	**3.1**	2.1	6020A	1-9-15	1-9-15	
Lab ID:	10-019-40					
Client ID:	**GEI-23_7.5-8.5_093014**					
Arsenic	**ND**	6.1	6010C	1-9-15	1-9-15	

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019C
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-019-43					
Client ID:	**GEI-24_6-7_093014**					
Arsenic	**13**	5.6	6010C	1-9-15	1-12-15	
Lab ID:	10-019-44					
Client ID:	**GEI-24_9-10_093014**					
Arsenic	**ND**	6.3	6010C	1-9-15	1-12-15	
Lab ID:	10-019-45					
Client ID:	**GEI-25_1-2_093014**					
Arsenic	**7.5**	5.2	6010C	1-9-15	1-12-15	
Lab ID:	10-019-49					
Client ID:	**GEI-26_2 -3_093014**					
Arsenic	**5.4**	5.2	6010C	1-9-15	1-12-15	
Nickel	**40**	2.6	6010C	1-9-15	1-12-15	
Lab ID:	10-019-52					
Client ID:	**GEI-29_2-3_093014**					
Nickel	**42**	2.7	6010C	1-9-15	1-12-15	
Lab ID:	10-019-56					
Client ID:	**GEI-30_3-4_093014**					
Arsenic	**ND**	5.4	6010C	1-9-15	1-12-15	

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019C
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-019-59					
Client ID:	**GEI-30_9-10_093014**					
Nickel	**11**	3.0	6010C	1-9-15	1-12-15	

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019C
Project: 5147-006-10

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	1-9-15
Date Analyzed:	1-9-15
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0109SM2

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	5.0
Nickel	6010C	**ND**	2.5

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019C
Project: 5147-006-10

TOTAL ARSENIC
EPA 6020A
METHOD BLANK QUALITY CONTROL

Date Extracted:	1-9-15
Date Analyzed:	1-15-15
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0109SM2

Analyte	Method	Result	PQL
Arsenic	6020A	**ND**	1.3

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019C
Project: 5147-006-10

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 1-9-15
Date Analyzed: 1-9-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-019-26

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	5.0	
Nickel	**9.70**	**10.6**	9	2.5	

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019C
Project: 5147-006-10

TOTAL ARSENIC
EPA 6020A
DUPLICATE QUALITY CONTROL

Date Extracted: 1-9-15
Date Analyzed: 1-15-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-019-26

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**1.62**	**1.90**	16	1.3	

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019C
Project: 5147-006-10

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 1-9-15
Date Analyzed: 1-9-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-019-26

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**93.4**	93	**93.1**	93	0	
Nickel	100	**106**	97	**107**	97	1	

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019C
Project: 5147-006-10

TOTAL ARSENIC
EPA 6020A
MS/MSD QUALITY CONTROL

Date Extracted: 1-9-15
Date Analyzed: 1-15-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-019-26

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**93.7**	92	**94.6**	93	1	

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019C
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV010915P	1.00	0.984	1.6	+/- 10%
Nickel	ICV010915P	1.00	1.04	-4.0	+/- 10%
Arsenic	LLICV1010915P	0.100	0.0842	16	+/- 30%
Nickel	LLICV1010915P	0.0200	0.0217	-8.5	+/- 30%
Arsenic	CCV1010915P	10.0	9.80	2.0	+/- 10%
Nickel	CCV1010915P	2.00	2.00	0	+/- 10%
Arsenic	CCV2010915P	10.0	10.2	-2.0	+/- 10%
Nickel	CCV2010915P	2.00	2.04	-2.0	+/- 10%
Arsenic	LLCCV2010915P	0.100	0.116	-16	+/- 30%
Nickel	LLCCV2010915P	0.0200	0.0202	-1.0	+/- 30%
Arsenic	CCV3010915P	10.0	9.91	0.90	+/- 10%
Nickel	CCV3010915P	2.00	2.03	-1.5	+/- 10%
Arsenic	LLCCV3010915P	0.100	0.116	-16	+/- 30%
Nickel	LLCCV3010915P	0.0200	0.0178	11	+/- 30%
Arsenic	CCV4010915P	10.0	9.60	4.0	+/- 10%
Nickel	CCV4010915P	2.00	2.06	-3.0	+/- 10%
Arsenic	LLCCV4010915P	0.100	0.114	-14	+/- 30%
Nickel	LLCCV4010915P	0.0200	0.0208	-4.0	+/- 30%
Arsenic	CCV5010915P	10.0	9.66	3.4	+/- 10%
Nickel	CCV5010915P	2.00	2.05	-2.5	+/- 10%
Arsenic	LLCCV5010915P	0.100	0.100	0	+/- 30%
Nickel	LLCCV5010915P	0.0200	0.0217	-8.5	+/- 30%

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019C
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV6010915P	10.0	9.55	4.5	+/- 10%
Nickel	CCV6010915P	2.00	2.08	-4.0	+/- 10%
Arsenic	LLCCV6010915P	0.100	0.110	-10	+/- 30%
Nickel	LLCCV6010915P	0.0200	0.0224	-12	+/- 30%
Arsenic	CCV7010915P	10.0	9.53	4.7	+/- 10%
Nickel	CCV7010915P	2.00	2.06	-3.0	+/- 10%
Arsenic	LLCCV7010915P	0.100	0.104	-4.0	+/- 30%
Nickel	LLCCV7010915P	0.0200	0.0212	-6.0	+/- 30%
Arsenic	CCV8010915P	10.0	9.66	3.4	+/- 10%
Nickel	CCV8010915P	2.00	2.06	-3.0	+/- 10%
Arsenic	LLCCV8010915P	0.100	0.0942	5.8	+/- 30%
Nickel	LLCCV8010915P	0.0200	0.0186	7.0	+/- 30%

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019C
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV011215P	1.00	0.989	1.1	+/- 10%
Nickel	ICV010915P	1.00	1.06	-6.0	+/- 10%
Arsenic	LLICV1011215P	0.100	0.109	-9.0	+/- 30%
Nickel	LLICV1011215P	0.0200	0.0215	-7.5	+/- 30%
Arsenic	CCV1011215P	10.0	10.1	-1.0	+/- 10%
Nickel	CCV1011215P	2.00	2.05	-2.5	+/- 10%
Arsenic	CCV2011215P	10.0	10.0	0	+/- 10%
Nickel	CCV2011215P	2.00	2.05	-2.5	+/- 10%
Arsenic	LLCCV2011215P	0.100	0.103	-3.0	+/- 30%
Nickel	LLCCV2011215P	0.0200	0.0233	-17	+/- 30%

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019C
Project: 5147-006-10

TOTAL ARSENIC
EPA 6020A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV1011515X	0.0500	0.0498	0.40	+/- 10%
Arsenic	LLICV011515X	0.000500	0.000510	-2.0	+/- 30%
Arsenic	CCV1011515X	0.0400	0.0399	0.25	+/- 10%
Arsenic	CCV2011515X	0.0400	0.0393	1.8	+/- 10%
Arsenic	LLCCV011515X	0.000500	0.000469	6.2	+/- 30%
Arsenic	CCV3011515X	0.0400	0.0394	1.5	+/- 10%
Arsenic	LLCCV011515X	0.000500	0.000540	-8.0	+/- 30%

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019C
Project: 5147-006-10

% MOISTURE

Date Analyzed: 1-9-15

Client ID	Lab ID	% Moisture
GEI-14_9-10_093014	10-019-08	22
GEI-17_9-10_093014	10-019-20	11
GEI-19_2-3_093014	10-019-25	5
GEI-19_4-5_093014	10-019-26	3
GEI-19_7-8_093014	10-019-27	35
GEI-19_9-10_093014	10-019-28	19
GEI-20_2-3_093014	10-019-29	4
GEI-20_8-9_093014	10-019-32	55
GEI-21_1-2_093014	10-019-33	4
GEI-24_6-7_093014	10-019-43	11
GEI-24_9-10_093014	10-019-44	21
GEI-26_2 -3_093014	10-019-49	4
GEI-29_2-3_093014	10-019-52	8
GEI-30_9-10_093014	10-019-59	17

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nat Solomon

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
1	GEI-13_2-3_093014	9/30/14	1100	S	1																	●	X				X
2	GEI-13_5-6_093014	"	1105	"	"																	●	●				●
3	GEI-13_7-8_093014	"	1110	"	"																	●	●				●
4	GEI-13_9-10_093014	"	1115	"	"																						
5	GEI-14_2-3_093014	"	1150	"	"																	●	X				X
6	GEI-14_3.5-4.5_093014	"	1155	"	"																	●	●				●
7	GEI-14_7-8_093014	"	1200	"	"																	●	●				●
8	GEI-14_9-10_093014	"	1205	"	"																		O				O
9	GEI-15_2-3_093014	"	1335	"	"																		●				●
10	GEI-15_5.5-6.5_093014	"	1340	"	5								⊗									●	O				⊗

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	10/2/14	0950
Received	[signature]	GEI	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

⊗ Added 10/10/14 ~~BG~~ STA
● Added 11/17/14. DB (STA)
O - added 1/7/15. DB (STA)

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐

Electronic Data Deliverables (EDDs) ☒ _____

20

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Chain of Custody

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DLI
Project Manager: Brian Tracy
Sampled by: Robert Treban / Nate Sloman

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
11	GEI-15_10-11_093014	9/30/14	1345	S	1																	●					●
12	GEI-15_12-13_093014		1350																								
13	GEI-16_2-3_093014		1125																			●	●				●
14	GEI-16_4-5_093014		1130																								
15	GEI-16_6-7_093014		1135																			●	●				●
16	GEI-16_8-9_093014		1140																								
17	GEI-17_1-2_093014		1245																			●					●
18	GEI-17_4-5_093014		1255																				●				●
19	GEI-17_7-8_093014		1258																			X	●				X
20	GEI-17_9-10_093014	↓	1300	↓	↓																	○	○				○

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI 10/2/14	~~9/2/14~~	950	
Received		OSE	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
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Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DC1
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nat Solomon

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Days ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
21	GE1-18-1-2-093014	9/30/14	1305	S	1																	●	●				●
22	GE1-18-4-5-093014		1310																			●	●				●
23	GE1-18-6-9-093014		1315																			X	X				X
24	GE1-18-9-10-093014		1320																			●	●				●
25	GE1-19-2-3-093014		1215																			○					○
26	GE1-19-4-5-093014		1220																				○				○
27	GE1-19-7-8-093014		1225																				○				○
28	GE1-19-9-10-093014		1230																			○					○
29	GE1-20-2-3-093014		1400																			○					○
30	GE1-20-4-5-093014	↓	1405	↓	↓																						

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GE1	10/2/14	950	
Received		CORE	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
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Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DLI
Project Manager: Brian Tracey
Sampled by: Robert Trahan / Nate Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
31	GEI-20_6-7_09301814	9/30/14	1410	S	1								X														X
32	GEI-20_8-9_09301814	"	1415	"	"																		O				O
33	GEI-21_1-2_09301814	"	1500	"	"																	O					O
34	GEI-21_5-6_09301814	"	1505	"	"								X									X	X				X
35	GEI-21_7.5-8.5_09301814	"	1510	"	"								X										O				X
36	GEI-21_9-10_09301814	"	1515	"	"																						
37	GEI-23_1-2_09301814	"	1520	"	"																	●	●				●
38	GEI-23_2.5-3.5_09301814	"	1525	"	"																						
39	GEI-23_5-6_09301814	"	1530	"	"																		●				●
40	GEI-23_7.5-8.5_09301814	"	1535	"	"								X										O				X

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	10/2/14	0950
Received	[signature]	OSE	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
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Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DLI
Project Manager: Brian Tracy
Sampled by: Robert Trohen / Nate Stamm

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
41	GEI-24-2-3-093014	9/30/14	1605	S	1																	●	●				●
42	GEI-24-4-5-093014		1610																				●				●
43	GEI-24-6-7-093014		1615																				○				○
44	GEI-24-9-10-093014		1620																				○				○
45	GEI-25-1-2-093014		1800																			●	○				●
46	GEI-25-4-5-093014		1805																			●	●				●
47	GEI-25-7-8-093014		1810																			X	X				X
48	GEI-25-9-10-093014		1815																			●					●
49	GEI-26-2-3-093014		1700																			○	○				○
50	GEI-26-4-5-093014		1705																								

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10/2/14	950	
Received		GSE	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

Page 6 of 6

Company: GEO Engineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nat Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
51	GEI-28-6-7_10 093014	9/30/14	1710	S	1																	X	X				X
52	GEI-29_2-3_093014		1625																			O					O
53	GEI-29_5-6_093014		1630																								
54	GEI-29_8-9_093014		1635																								
55	GEI-29_9-10_093014		1640																								
56	GEI-30_3-4_093014		1710																			●	O				●
57	GEI-30_5-6_093014		1745																								
58	GEI-30_7-8_093014		1750																			●					●
59	GEI-30_9-10_093014		1755																			O					O

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10/2/14	950	
Received		GEI	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Sample/Cooler Receipt and Acceptance Checklist

Client: GE

Client Project Name/Number: 5147-006-10

OnSite Project Number: 10-019

Initiated by: MM

Date Initiated: 10/2/14

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	N/A	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	N/A	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	Yes	No		1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	Yes	No	Temperature: 1.2		
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	N/A			
1.7 How were the samples delivered?	Client	Courier	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	Yes	No	1 2 3 4	
2.2 Was the COC legible and written in permanent ink?	Yes	No	1 2 3 4	
2.3 Have samples been relinquished and accepted by each custodian?	Yes	No	1 2 3 4	
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	No	1 2 3 4	
2.5 Were all of the samples listed on the COC submitted?	Yes	No	1 2 3 4	
2.6 Were any of the samples submitted omitted from the COC?	Yes	No	1 2 3 4	

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	No		1 2 3 4	
3.2 Were any sample labels missing or illegible?	Yes	No		1 2 3 4	
3.3 Have the correct containers been used for each analysis requested?	Yes	No		1 2 3 4	
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1 2 3 4	
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	N/A	1 2 3 4	
3.6 Is there sufficient sample submitted to perform requested analyses?	Yes	No		1 2 3 4	
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	No		1 2 3 4	
3.8 Was method 5035A used?	Yes	No	N/A	1 2 3 4	
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		N/A	1 2 3 4	

Explain any discrepancies:

24) Sample 52) GEI-29-2-3_093014 9/30/14 1625 on COC
1640 on label

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

RAW DATA

- Total Arsenic EPA 6010C Data

Total Arsenic Data

P150109F1B. Mean Only Report 1/14/2015, 3:43:51 PM

Sample	Label	Calc Conc.	Units	Date/Time
Blank	As 188.980	0.000	ppb	1/9/2015, 10:01:53 AM
	Ni 231.604	0.000	ppb	
Standard 5	As 188.980	100.00	ppb	1/9/2015, 10:06:29 AM
	Ni 231.604	20.000	ppb	
Standard 4	As 188.980	1000.0	ppb	1/9/2015, 10:11:06 AM
	Ni 231.604	200.00	ppb	
Standard 3	As 188.980	10000	ppb	1/9/2015, 10:15:42 AM
	Ni 231.604	2000.0	ppb	
Standard 2	As 188.980	25000	ppb	1/9/2015, 10:20:16 AM
	Ni 231.604	5000.0	ppb	
Standard 1	Ni 231.604	10000	ppb	1/9/2015, 10:24:49 AM
Initial Calib Verif	As 188.980	984.47	ppb	1/9/2015, 10:37:45 AM
	Ni 231.604	1037.6	ppb	
LLICV	As 188.980	84.225	ppb	1/9/2015, 10:53:38 AM
	Ni 231.604	21.675	ppb	
Initial Calib Blank	As 188.980	-1.583uv	ppb	1/9/2015, 11:00:50 AM
	Ni 231.604	0.018uv	ppb	
Cont Calib Verif	As 188.980	9805.5	ppb	1/9/2015, 11:05:26 AM
	Ni 231.604	2005.3	ppb	
Cont Calib Blank	As 188.980	22.290uv	ppb	1/9/2015, 11:09:59 AM
	Ni 231.604	-1.106uv	ppb	
ICSA	As 188.980	48.515	ppb	1/9/2015, 11:14:36 AM
	Ni 231.604	1.814	ppb	
ICSAB	As 188.980	2348.6	ppb	1/9/2015, 11:19:12 AM
	Ni 231.604	846.60	ppb	
MB0109SM1	As 188.980	-2.283uv	ppb	1/9/2015, 11:29:17 AM
	Ni 231.604	1.636uv	ppb	
SB0109SM1	As 188.980	1909.9	ppb	1/9/2015, 11:33:55 AM
	Ni 231.604	1988.3	ppb	
01-035-04a	As 188.980	62.274	ppb	1/9/2015, 11:38:32 AM
	Ni 231.604	226.87	ppb	
01-035-04a D	As 188.980	69.356	ppb	1/9/2015, 11:43:07 AM
	Ni 231.604	231.02	ppb	
01-035-04a L	As 188.980	24.623	ppb	1/9/2015, 11:47:41 AM
	Ni 231.604	47.561	ppb	

P150109F1B. Mean Only Report 1/14/2015, 3:43:51 PM

Sample	Label	Calc Conc.	Units	Date/Time
01-035-04a MS	As 188.980	1943.1	ppb	1/9/2015, 11:52:14 AM
	Ni 231.604	2040.5	ppb	
01-035-04a MSD	As 188.980	1964.2	ppb	1/9/2015, 11:56:48 AM
	Ni 231.604	2055.6	ppb	
Cont Calib Verif	As 188.980	10170	ppb	1/9/2015, 12:01:20 PM
	Ni 231.604	2043.1	ppb	
Cont Calib Blank	As 188.980	-14.370uv	ppb	1/9/2015, 12:09:23 PM
	Ni 231.604	0.941uv	ppb	
LLCCV	As 188.980	116.03	ppb	1/9/2015, 12:21:55 PM
	Ni 231.604	20.187	ppb	
01-027-01	As 188.980	96.525	ppb	1/9/2015, 12:30:01 PM
	Ni 231.604	386.32	ppb	
01-026-01	As 188.980	86.444	ppb	1/9/2015, 12:34:40 PM
	Ni 231.604	598.22	ppb	
01-026-02	As 188.980	84.105	ppb	1/9/2015, 12:39:17 PM
	Ni 231.604	521.24	ppb	
Cont Calib Verif	As 188.980	9905.7	ppb	1/9/2015, 12:43:53 PM
	Ni 231.604	2030.4	ppb	
Cont Calib Blank	As 188.980	11.114uv	ppb	1/9/2015, 12:48:30 PM
	Ni 231.604	-1.556uv	ppb	
LLCCV	As 188.980	116.39	ppb	1/9/2015, 12:53:06 PM
	Ni 231.604	17.810	ppb	
MB0109TM1	As 188.980	4.421	ppb	1/9/2015, 1:02:57 PM
	Ni 231.604	-0.488uv	ppb	
SB0109TM1	As 188.980	1974.1	ppb	1/9/2015, 1:07:29 PM
	Ni 231.604	1986.7	ppb	
01-031-01	As 188.980	10.793uv	ppb	1/9/2015, 1:12:03 PM
	Ni 231.604	60.431	ppb	
01-031-01 D	As 188.980	3.086uv	ppb	1/9/2015, 1:16:38 PM
	Ni 231.604	56.891	ppb	
01-031-01 L	As 188.980	-6.606uv	ppb	1/9/2015, 1:21:10 PM
	Ni 231.604	9.638	ppb	
01-031-01 MS	As 188.980	1944.4	ppb	1/9/2015, 1:25:45 PM
	Ni 231.604	1999.9	ppb	
01-031-01 MSD	As 188.980	1932.2	ppb	1/9/2015, 1:30:19 PM

P150109F1B. Mean Only Report 1/14/2015, 3:43:51 PM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	2041.3	ppb	
Cont Calib Verif	As 188.980	9605.4	ppb	1/9/2015, 1:34:53 PM
	Ni 231.604	2056.0	ppb	
Cont Calib Blank	As 188.980	37.909	ppb	1/9/2015, 1:39:26 PM
	Ni 231.604	2.686	ppb	
LLCCV	As 188.980	113.94	ppb	1/9/2015, 1:44:00 PM
	Ni 231.604	20.850	ppb	
12-121-03	As 188.980	-5.340uv	ppb	1/9/2015, 3:39:46 PM
	Ni 231.604	1.842	ppb	
12-121-03 X 10	As 188.980	10.416	ppb	1/9/2015, 3:44:20 PM
	Ni 231.604	-1.958uv	ppb	
12-121-03	As 188.980	28.627	ppb	1/9/2015, 3:59:32 PM
	Ni 231.604	0.174uv	ppb	
12-121-03 X 10	As 188.980	14.843uv	ppb	1/9/2015, 4:04:04 PM
	Ni 231.604	-3.514uv	ppb	
Cont Calib Verif	As 188.980	9659.1	ppb	1/9/2015, 4:10:04 PM
	Ni 231.604	2053.5	ppb	
Cont Calib Blank	As 188.980	10.939	ppb	1/9/2015, 4:23:23 PM
	Ni 231.604	1.111uv	ppb	
LLCCV	As 188.980	100.27	ppb	1/9/2015, 4:44:31 PM
	Ni 231.604	21.753	ppb	
01-007-01a(0109SM1)	As 188.980	42.435	ppb	1/9/2015, 4:56:23 PM
	Ni 231.604	118.10	ppb	
01-007-02a	As 188.980	43.805	ppb	1/9/2015, 5:00:57 PM
	Ni 231.604	127.65	ppb	
01-007-03a	As 188.980	62.382	ppb	1/9/2015, 5:05:30 PM
	Ni 231.604	332.51	ppb	
01-036-01	As 188.980	32.386	ppb	1/9/2015, 5:10:04 PM
	Ni 231.604	322.82	ppb	
01-036-02	As 188.980	68.713	ppb	1/9/2015, 5:14:36 PM
	Ni 231.604	474.58	ppb	
Cont Calib Verif	As 188.980	9545.8	ppb	1/9/2015, 5:19:10 PM
	Ni 231.604	2078.6	ppb	
Cont Calib Blank	As 188.980	30.208	ppb	1/9/2015, 5:23:43 PM
	Ni 231.604	7.904	ppb	

P150109F1B. Mean Only Report 1/14/2015, 3:43:51 PM

Sample	Label	Calc Conc.	Units	Date/Time
LLCCV	As 188.980	109.91	ppb	1/9/2015, 5:28:18 PM
	Ni 231.604	22.416	ppb	
MB0109SM2	As 188.980	-2.887uv	ppb	1/9/2015, 5:47:42 PM
	Ni 231.604	2.619uv	ppb	
SB0109SM2	As 188.980	1816.6	ppb	1/9/2015, 5:52:16 PM
	Ni 231.604	1991.7	ppb	
10-019-26	As 188.980	35.491	ppb	1/9/2015, 5:56:51 PM
	Ni 231.604	193.75	ppb	
10-019-26 D	As 188.980	28.328	ppb	1/9/2015, 6:01:24 PM
	Ni 231.604	212.33	ppb	
10-019-26 L	As 188.980	1.128uv	ppb	1/9/2015, 6:05:58 PM
	Ni 231.604	43.610	ppb	
10-019-26 MS	As 188.980	1849.7	ppb	1/9/2015, 6:10:33 PM
	Ni 231.604	2124.8	ppb	
10-019-26 MSD	As 188.980	1834.8	ppb	1/9/2015, 6:15:06 PM
	Ni 231.604	2139.4	ppb	
10-019-08	As 188.980	90.739	ppb	1/9/2015, 6:19:42 PM
	Ni 231.604	558.22	ppb	
10-019-10	As 188.980	97.993	ppb	1/9/2015, 6:24:15 PM
	Ni 231.604	693.08	ppb	
BLK	As 188.980	13.012	ppb	1/9/2015, 6:28:47 PM
	Ni 231.604	-1.539uv	ppb	
Cont Calib Verif	As 188.980	9529.3	ppb	1/9/2015, 6:33:20 PM
	Ni 231.604	2061.5	ppb	
Cont Calib Blank	As 188.980	10.350uv	ppb	1/9/2015, 6:37:54 PM
	Ni 231.604	1.482uv	ppb	
LLCCV	As 188.980	104.22	ppb	1/9/2015, 6:42:26 PM
	Ni 231.604	21.253	ppb	
10-019-20	As 188.980	145.04	ppb	1/9/2015, 6:47:01 PM
	Ni 231.604	1032.6	ppb	
10-019-25	As 188.980	47.705	ppb	1/9/2015, 6:51:35 PM
	Ni 231.604	813.51	ppb	
10-019-27	As 188.980	35.295	ppb	1/9/2015, 6:56:08 PM
	Ni 231.604	191.69	ppb	

P150109F1B. Mean Only Report 1/14/2015, 3:43:51 PM

Sample	Label	Calc Conc.	Units	Date/Time
10-019-28	As 188.980	55.453	ppb	1/9/2015, 7:00:42 PM
	Ni 231.604	468.08	ppb	
10-019-29	As 188.980	92.491	ppb	1/9/2015, 7:05:14 PM
	Ni 231.604	710.21	ppb	
10-019-32	As 188.980	63.415	ppb	1/9/2015, 7:09:46 PM
	Ni 231.604	332.78	ppb	
10-019-33	As 188.980	34.156	ppb	1/9/2015, 7:14:19 PM
	Ni 231.604	625.64	ppb	
10-019-35	As 188.980	28.902	ppb	1/9/2015, 7:18:51 PM
	Ni 231.604	257.59	ppb	
10-019-40	As 188.980	19.619	ppb	1/9/2015, 7:23:25 PM
	Ni 231.604	120.18	ppb	
BLK	As 188.980	9.480uv	ppb	1/9/2015, 7:27:58 PM
	Ni 231.604	0.176uv	ppb	
Cont Calib Verif	As 188.980	9657.6	ppb	1/9/2015, 7:32:32 PM
	Ni 231.604	2062.6	ppb	
Cont Calib Blank	As 188.980	23.139	ppb	1/9/2015, 7:37:04 PM
	Ni 231.604	2.490	ppb	
LLCCV	As 188.980	94.182	ppb	1/9/2015, 7:41:39 PM
	Ni 231.604	18.579	ppb	

P150112F1. Mean Only Report 1/14/2015, 3:46:59 PM

Sample	Label	Calc Conc.	Units	Date/Time
Blank	As 188.980	0.000	ppb	1/12/2015, 10:20:20 AM
	Ni 231.604	0.000	ppb	
Standard 5	As 188.980	100.00	ppb	1/12/2015, 10:25:33 AM
	Ni 231.604	20.000	ppb	
Standard 4	As 188.980	1000.0	ppb	1/12/2015, 10:30:08 AM
	Ni 231.604	200.00	ppb	
Standard 3	As 188.980	10000	ppb	1/12/2015, 10:34:44 AM
	Ni 231.604	2000.0	ppb	
Standard 2	As 188.980	25000	ppb	1/12/2015, 10:39:19 AM
	Ni 231.604	5000.0	ppb	
Standard 1	Ni 231.604	10000	ppb	1/12/2015, 10:43:51 AM
Initial Calib Verif	As 188.980	989.36	ppb	1/12/2015, 11:09:35 AM
	Ni 231.604	1061.0	ppb	
LLICV	As 188.980	108.98	ppb	1/12/2015, 11:41:27 AM
	Ni 231.604	21.522	ppb	
Initial Calib Blank	As 188.980	-0.531uv	ppb	1/12/2015, 11:48:30 AM
	Ni 231.604	2.349	ppb	
Cont Calib Verif	As 188.980	10132	ppb	1/12/2015, 11:53:05 AM
	Ni 231.604	2053.8	ppb	
Cont Calib Blank	As 188.980	11.660uv	ppb	1/12/2015, 12:01:33 PM
	Ni 231.604	5.094	ppb	
ICSA	As 188.980	9.503uv	ppb	1/12/2015, 12:06:06 PM
	Ni 231.604	13.814	ppb	
ICSAB	As 188.980	2436.4	ppb	1/12/2015, 12:10:41 PM
	Ni 231.604	877.64	ppb	
BLK	As 188.980	5.902uv	ppb	1/12/2015, 12:23:52 PM
	Ni 231.604	1.019uv	ppb	
10-019-43	As 188.980	228.45	ppb	1/12/2015, 12:28:30 PM
	Ni 231.604	944.26	ppb	
10-019-44	As 188.980	51.753	ppb	1/12/2015, 12:33:07 PM
	Ni 231.604	225.81	ppb	
10-019-45	As 188.980	145.19	ppb	1/12/2015, 12:37:44 PM
	Ni 231.604	952.50	ppb	
10-019-49	As 188.980	104.38	ppb	1/12/2015, 12:42:21 PM
	Ni 231.604	768.50	ppb	

P150112F1. Mean Only Report 1/14/2015, 3:46:59 PM

Sample	Label	Calc Conc.	Units	Date/Time
10-019-52	As 188.980	93.572	ppb	1/12/2015, 12:46:58 PM
	Ni 231.604	771.51	ppb	
10-019-56	As 188.980	25.359	ppb	1/12/2015, 12:51:35 PM
	Ni 231.604	188.26	ppb	
10-019-59	As 188.980	18.945	ppb	1/12/2015, 12:56:11 PM
	Ni 231.604	177.34	ppb	
Cont Calib Verif	As 188.980	10010	ppb	1/12/2015, 1:00:46 PM
	Ni 231.604	2055.0	ppb	
Cont Calib Blank	As 188.980	-8.733uv	ppb	1/12/2015, 1:09:55 PM
	Ni 231.604	7.357	ppb	
LLCCV	As 188.980	103.34	ppb	1/12/2015, 1:21:32 PM
	Ni 231.604	23.321	ppb	

Dataset Report

User Name: kmckinney
Computer Name: ICPMS-2013
Dataset File Path: C:\NexIONData\DataSet\X150115A\
Report Date/Time: Thursday, January 15, 2015 11:15:14

The Dataset

Batch ID	Sample ID	Date and Time	Read Type	Samp. File Name	Description
SmartTune - T	Torch Alignment	07:36:03 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\Torch Alignment.001	
SmartTune - N	Nebulizer Gas Flow S	07:37:14 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\Nebulizer Gas Flow STD-KED [NEB].00	
SmartTune - A	AutoLens STD/DRC	07:39:59 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\AutoLens STD-DRC.003	
SmartTune - K	KED Mode AutoLens	07:44:23 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\KED Mode AutoLens.004	
SmartTune - D	Daily Performance Ch	07:49:08 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\Daily Performance Check.005	
SmartTune - D	Daily Performance Ch	07:51:59 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\Daily Performance Check.006	
SmartTune - M	Mass Calibration and I	07:54:35 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\Mass Calibration and Resolution.007	
	Blank	08:02:22 Thu 15-J	Blank	C:\NexIONData\DataSet\X150115A\Blank.001	
	Standard 1	08:06:42 Thu 15-J	Standard #1	C:\NexIONData\DataSet\X150115A\Standard 1.002	
	Standard 2	08:11:00 Thu 15-J	Standard #2	C:\NexIONData\DataSet\X150115A\Standard 2.003	
	Standard 3	08:15:19 Thu 15-J	Standard #3	C:\NexIONData\DataSet\X150115A\Standard 3.004	
	Standard 4	08:19:39 Thu 15-J	Standard #4	C:\NexIONData\DataSet\X150115A\Standard 4.005	
	Standard 5	08:23:57 Thu 15-J	Standard #5	C:\NexIONData\DataSet\X150115A\Standard 5.006	
	Standard 6	08:28:16 Thu 15-J	Standard #6	C:\NexIONData\DataSet\X150115A\Standard 6.007	
	Standard 7	08:32:35 Thu 15-J	Standard #7	C:\NexIONData\DataSet\X150115A\Standard 7.008	
	QC Std 1	08:37:53 Thu 15-J	QC Std #1	C:\NexIONData\DataSet\X150115A\QC Std 1.009	
	QC Std 2	08:43:13 Thu 15-J	QC Std #2	C:\NexIONData\DataSet\X150115A\QC Std 2.010	
	QC Std 3	08:47:32 Thu 15-J	QC Std #3	C:\NexIONData\DataSet\X150115A\QC Std 3.011	
	QC Std 4	08:51:52 Thu 15-J	QC Std #4	C:\NexIONData\DataSet\X150115A\QC Std 4.012	
	QC Std 6	08:56:11 Thu 15-J	QC Std #6	C:\NexIONData\DataSet\X150115A\QC Std 6.013	
	QC Std 8	09:00:50 Thu 15-J	QC Std #8	C:\NexIONData\DataSet\X150115A\QC Std 8.014	
	ICSA	09:05:09 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\ICSA.015	
	ICSAB	09:09:28 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\ICSAB.016	
	MB0109SM2 50X	09:26:38 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\MB0109SM2 50X.017	
	SB0109SM2 50X	09:30:56 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\SB0109SM2 50X.018	
	10-019-26 50X	09:35:14 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\10-019-26 50X.019	
	10-019-26D 50X	09:39:31 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\10-019-26D 50X.020	
	10-019-26L 250X	09:43:49 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\10-019-26L 250X.021	
	10-019-26MS 50X	09:48:08 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\10-019-26MS 50X.022	
	10-019-26MSD 50X	09:52:27 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\10-019-26MSD 50X.023	
	BL	09:56:46 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\BL.024	
	QC Std 6	10:01:05 Thu 15-J	QC Std #6	C:\NexIONData\DataSet\X150115A\QC Std 6.025	
	QC Std 8	10:05:44 Thu 15-J	QC Std #8	C:\NexIONData\DataSet\X150115A\QC Std 8.026	
	QC Std 9	10:10:03 Thu 15-J	QC Std #9	C:\NexIONData\DataSet\X150115A\QC Std 9.027	
	QC Std 10	10:14:22 Thu 15-J	QC Std #10	C:\NexIONData\DataSet\X150115A\QC Std 10.028	
	10-019-26PS 50X	10:18:42 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\10-019-26PS 50X.029	
	10-019-27 50X	10:23:00 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\10-019-27 50X.030	
	10-019-32 50X	10:27:19 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\10-019-32 50X.031	
	10-019-35 50X	10:31:37 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\10-019-35 50X.032	
	10-019-32 50X	10:44:58 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\10-019-32 50X.033	
	BL	10:49:16 Thu 15-J	Sample	C:\NexIONData\DataSet\X150115A\BL.034	
	QC Std 6	10:53:34 Thu 15-J	QC Std #6	C:\NexIONData\DataSet\X150115A\QC Std 6.035	
	QC Std 8	10:58:13 Thu 15-J	QC Std #8	C:\NexIONData\DataSet\X150115A\QC Std 8.036	
	QC Std 9	11:02:32 Thu 15-J	QC Std #9	C:\NexIONData\DataSet\X150115A\QC Std 9.037	
	QC Std 10	11:06:51 Thu 15-J	QC Std #10	C:\NexIONData\DataSet\X150115A\QC Std 10.038	

Quantitative Analysis - Summary Report

Sample ID: Blank

Sample Date/Time: Thursday, January 15, 2015 08:02:22
Report Date/Time: Thursday, January 15, 2015 08:03:50
Solution Type: Blank
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1066801.3	1.5				ug/L		Standard
⌈>	Ge	72	462537.5	1.1				ug/L		Standard
|	As	75	12090.5	2.6				ug/L		Standard
|	As-1	75	142.3	92.8				ug/L		Standard
|	Se	77	152.7	6.7				ug/L		Standard
|	Se	78	12322.3	1.7				ug/L		Standard
|	Br	79	543.3	2.1				ug/L		Standard
⌊	Se	82	165.0	7.3				ug/L		Standard
	Kr	83	146.0	7.7				ug/L		Standard
	Y	89	1181256.0	3.2				ug/L		Standard
	In	115	1007774.9	0.2				ug/L		Standard
	Tb	159	1164051.2	0.6				ug/L		Standard
⌈>	Ge-1	72	10389.1	6.1				ug/L		KED
⌊	As-2	75	4.3	35.3				ug/L		KED
	Y-1	89	21098.3	5.4				mg/L		KED
	In-1	115	18632.8	7.0				ug/L		KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
⌈>	72	Ge-1		
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Date/Time: Thursday, January 15, 2015 08:06:42
Report Date/Time: Thursday, January 15, 2015 08:08:09
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1094431.0	1.8				ug/L	1066801	Standard
⌈>	**Ge**	72	464072.7	0.4				ug/L	462538	Standard
|	**As**	75	11968.7	0.7				ug/L	12091	Standard
|	**As-1**	75	518.3	8.5	**0.2000**	0.023	11.3	ug/L	142	Standard
|	**Se**	77	180.3	7.3				ug/L	153	Standard
|	**Se**	78	11909.3	0.7				ug/L	12322	Standard
|	**Br**	79	510.7	3.5				ug/L	543	Standard
⌊	**Se**	82	197.7	7.0				ug/L	165	Standard
	Kr	83	126.0	4.8				ug/L	146	Standard
	Y	89	1053897.3	1.5				ug/L	1181256	Standard
	In	115	1020816.2	0.3				ug/L	1007775	Standard
	Tb	159	1165054.4	0.4				ug/L	1164051	Standard
⌈>	**Ge-1**	72	11569.7	1.1				ug/L	10389	KED
⌊	**As-2**	75	21.0	36.0	**0.2000**	0.091	45.7	ug/L	4	KED
	Y-1	89	24224.2	1.0				mg/L	21098	KED
	In-1	115	21715.6	0.9				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
⌈>	72	Ge-1		
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 2

Sample Date/Time: Thursday, January 15, 2015 08:11:00
Report Date/Time: Thursday, January 15, 2015 08:12:28
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1064355.8	1.9				ug/L	1066801	Standard
⌈>	Ge	72	446553.0	0.4				ug/L	462538	Standard
|	As	75	12719.0	0.7	**0.5000**	0.050	9.9	ug/L	12091	Standard
|	As-1	75	1274.3	3.0	**0.5146**	0.015	3.0	ug/L	142	Standard
|	Se	77	230.7	5.9	**0.5000**	0.085	17.0	ug/L	153	Standard
|	Se	78	12157.5	0.7				ug/L	12322	Standard
|	Br	79	502.3	3.8				ug/L	543	Standard
⌊	Se	82	297.7	0.8	**0.5000**	0.005	1.0	ug/L	165	Standard
	Kr	83	120.3	5.4				ug/L	146	Standard
	Y	89	999860.7	0.8				ug/L	1181256	Standard
	In	115	986667.4	0.3				ug/L	1007775	Standard
	Tb	159	1114703.5	1.3				ug/L	1164051	Standard
⌈>	Ge-1	72	11473.6	0.8				ug/L	10389	KED
⌊	As-2	75	41.3	1.4	**0.4936**	0.012	2.5	ug/L	4	KED
	Y-1	89	23889.0	1.4				mg/L	21098	KED
	In-1	115	21298.5	1.2				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
⌈>	72	Ge-1		
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Date/Time: Thursday, January 15, 2015 08:15:19
Report Date/Time: Thursday, January 15, 2015 08:16:47
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1046877.3	2.7				ug/L	1066801	Standard
⌈>	**Ge**	72	443221.9	2.3				ug/L	462538	Standard
|	**As**	75	16263.9	1.9	**2.0133**	0.145	7.2	ug/L	12091	Standard
|	**As-1**	75	5152.4	2.8	**2.0172**	0.049	2.4	ug/L	142	Standard
|	**Se**	77	517.3	1.8	**2.0129**	0.056	2.8	ug/L	153	Standard
|	**Se**	78	12995.2	1.1	**2.0000**	0.383	19.2	ug/L	12322	Standard
|	**Br**	79	479.3	9.9				ug/L	543	Standard
⌊	**Se**	82	758.4	2.2	**2.0101**	0.055	2.7	ug/L	165	Standard
	Kr	83	112.3	11.1				ug/L	146	Standard
	Y	89	946764.3	0.3				ug/L	1181256	Standard
	In	115	957351.1	0.1				ug/L	1007775	Standard
	Tb	159	1073210.4	1.0				ug/L	1164051	Standard
⌈>	**Ge-1**	72	11120.3	1.4				ug/L	10389	KED
⌊	**As-2**	75	170.3	4.4	**2.0183**	0.101	5.0	ug/L	4	KED
	Y-1	89	23027.5	0.5				mg/L	21098	KED
	In-1	115	20712.4	1.5				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
⌈>	72	Ge-1		
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 4

Sample Date/Time: Thursday, January 15, 2015 08:19:39
Report Date/Time: Thursday, January 15, 2015 08:21:06
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1094615.4	0.6				ug/L	1066801	Standard
>	**Ge**	72	457939.1	0.4				ug/L	462538	Standard
	As	75	23266.9	0.8	**4.9544**	0.051	1.0	ug/L	12091	Standard
	As-1	75	12934.4	1.1	**4.9969**	0.060	1.2	ug/L	142	Standard
	Se	77	1038.7	3.7	**4.9473**	0.212	4.3	ug/L	153	Standard
	Se	78	14811.7	1.3	**4.8804**	0.253	5.2	ug/L	12322	Standard
	Br	79	465.3	6.2				ug/L	543	Standard
	Se	82	1779.4	2.4	**5.0331**	0.134	2.7	ug/L	165	Standard
	Kr	83	114.3	3.1				ug/L	146	Standard
	Y	89	969073.0	3.3				ug/L	1181256	Standard
	In	115	977918.0	2.0				ug/L	1007775	Standard
	Tb	159	1105149.4	1.2				ug/L	1164051	Standard
>	**Ge-1**	72	11437.6	0.5				ug/L	10389	KED
	As-2	75	421.7	8.0	**4.9907**	0.422	8.4	ug/L	4	KED
	Y-1	89	23842.2	1.1				mg/L	21098	KED
	In-1	115	21510.2	1.5				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
>	72	Ge-1		
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 5

Sample Date/Time: Thursday, January 15, 2015 08:23:57
Report Date/Time: Thursday, January 15, 2015 08:25:25
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1110319.0	1.0				ug/L	1066801	Standard
⌈>	**Ge**	72	465874.0	1.1				ug/L	462538	Standard
|	**As**	75	58428.0	0.9	**19.9961**	0.483	2.4	ug/L	12091	Standard
|	**As-1**	75	52148.5	2.0	**19.9979**	0.535	2.7	ug/L	142	Standard
|	**Se**	77	3746.2	1.8	**19.9783**	0.498	2.5	ug/L	153	Standard
|	**Se**	78	23336.0	0.9	**20.0049**	0.654	3.3	ug/L	12322	Standard
|	**Br**	79	466.0	7.0				ug/L	543	Standard
⌊	**Se**	82	6727.3	3.0	**20.0059**	0.673	3.4	ug/L	165	Standard
	Kr	83	115.0	14.4				ug/L	146	Standard
	Y	89	1015287.0	0.4				ug/L	1181256	Standard
	In	115	989157.5	0.3				ug/L	1007775	Standard
	Tb	159	1120665.7	1.0				ug/L	1164051	Standard
⌈>	**Ge-1**	72	11496.3	0.7				ug/L	10389	KED
⌊	**As-2**	75	1618.1	0.5	**19.9441**	0.208	1.0	ug/L	4	KED
	Y-1	89	23583.1	1.0				mg/L	21098	KED
	In-1	115	21283.0	1.4				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
⌈>	72	Ge-1		
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 6

Sample Date/Time: Thursday, January 15, 2015 08:28:16
Report Date/Time: Thursday, January 15, 2015 08:29:44
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1101613.7	1.2				ug/L	1066801	Standard
[>	Ge	72	462139.5	0.9				ug/L	462538	Standard
|	As	75	105476.8	1.1	40.1462	0.514	1.3	ug/L	12091	Standard
|	As-1	75	104522.1	1.1	40.0962	0.544	1.4	ug/L	142	Standard
|	Se	77	7205.8	3.2	39.9030	1.592	4.0	ug/L	153	Standard
|	Se	78	34765.3	0.8	40.2961	0.109	0.3	ug/L	12322	Standard
|	Br	79	481.7	3.3				ug/L	543	Standard
[	Se	82	13318.2	0.4	40.0902	0.445	1.1	ug/L	165	Standard
	Kr	83	120.7	6.0				ug/L	146	Standard
	Y	89	1024159.1	0.4				ug/L	1181256	Standard
	In	115	986105.2	0.4				ug/L	1007775	Standard
	Tb	159	1107586.4	0.8				ug/L	1164051	Standard
[>	Ge-1	72	11146.3	1.4				ug/L	10389	KED
[	As-2	75	3219.4	2.0	40.2063	1.097	2.7	ug/L	4	KED
	Y-1	89	23642.2	0.4				mg/L	21098	KED
	In-1	115	21261.2	0.4				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
[>	72	Ge		
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
[	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
[>	72	Ge-1		
[	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 7

Sample Date/Time: Thursday, January 15, 2015 08:32:35
Report Date/Time: Thursday, January 15, 2015 08:34:02
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1040895.0	0.6				ug/L	1066801	Standard
⌈>	**Ge**	72	433737.1	1.6				ug/L	462538	Standard
|	**As**	75	232725.9	1.4	**100.2343**	1.944	1.9	ug/L	12091	Standard
|	**As-1**	75	245527.2	1.6	**100.0751**	2.094	2.1	ug/L	142	Standard
|	**Se**	77	16912.7	0.4	**100.1812**	2.041	2.0	ug/L	153	Standard
|	**Se**	78	65596.6	0.2	**100.5512**	2.191	2.2	ug/L	12322	Standard
|	**Br**	79	448.3	4.6				ug/L	543	Standard
⌊	**Se**	82	30859.3	1.0	**99.9542**	2.312	2.3	ug/L	165	Standard
	Kr	83	113.0	5.3				ug/L	146	Standard
	Y	89	931673.0	0.5				ug/L	1181256	Standard
	In	115	929047.8	0.6				ug/L	1007775	Standard
	Tb	159	1049432.6	1.1				ug/L	1164051	Standard
⌈>	**Ge-1**	72	10662.0	0.8				ug/L	10389	KED
⌊	**As-2**	75	7650.0	1.0	**99.9915**	0.604	0.6	ug/L	4	KED
	Y-1	89	22255.3	1.0				mg/L	21098	KED
	In-1	115	19945.4	0.7				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
⌈>	72	Ge-1		
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 1
Sample Date/Time: Thursday, January 15, 2015 08:37:53
Report Date/Time: Thursday, January 15, 2015 08:39:21
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1026309.5	0.3				ug/L	1066801	Standard
>	Ge	72	433039.1	1.0				ug/L	462538	Standard
	As	75	118416.1	1.1	**48.5604**	0.454	0.9	ug/L	12091	Standard
	As-1	75	118173.7	1.0	**48.2098**	0.325	0.7	ug/L	142	Standard
	Se	77	8323.4	0.7	**48.9398**	0.203	0.4	ug/L	153	Standard
	Se	78	37958.4	1.0	**49.2306**	0.472	1.0	ug/L	12322	Standard
	Br	79	446.0	0.2				ug/L	543	Standard
	Se	82	14855.4	0.6	**47.9243**	0.199	0.4	ug/L	165	Standard
	Kr	83	111.0	12.2				ug/L	146	Standard
	Y	89	921313.2	0.7				ug/L	1181256	Standard
	In	115	914355.9	0.7				ug/L	1007775	Standard
	Tb	159	1030703.4	0.7				ug/L	1164051	Standard
>	Ge-1	72	10408.1	2.0				ug/L	10389	KED
	As-2	75	3720.5	1.0	**49.8056**	1.471	3.0	ug/L	4	KED
	Y-1	89	21804.0	1.1				mg/L	21098	KED
	In-1	115	19837.5	1.0				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		93.622
	75	As	97.121	
	75	As-1	96.420	
	77	Se	97.880	
	78	Se	98.461	
	79	Br		
	82	Se	95.849	
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
>	72	Ge-1		100.183
	75	As-2	99.611	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Thursday, January 15, 2015 08:43:13
Report Date/Time: Thursday, January 15, 2015 08:44:40
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	992382.0	0.5				ug/L	1066801	Standard
⌈>	Ge	72	417014.4	1.1				ug/L	462538	Standard
|	As	75	10944.7	1.4	**0.0210**	0.080	379.1	ug/L	12091	Standard
|	As-1	75	292.4	35.9	**0.0698**	0.045	65.2	ug/L	142	Standard
|	Se	77	158.3	8.9	**0.1280**	0.078	61.1	ug/L	153	Standard
|	Se	78	11111.7	1.3	**0.0043**	0.174	4064.7	ug/L	12322	Standard
|	Br	79	456.7	1.6				ug/L	543	Standard
⌊	Se	82	196.7	5.1	**0.1622**	0.033	20.4	ug/L	165	Standard
	Kr	83	102.3	2.0				ug/L	146	Standard
	Y	89	886683.1	0.2				ug/L	1181256	Standard
	In	115	876191.8	0.2				ug/L	1007775	Standard
	Tb	159	986646.5	0.4				ug/L	1164051	Standard
⌈>	Ge-1	72	10049.9	2.0				ug/L	10389	KED
⌊	As-2	75	6.7	31.2	**0.0347**	0.031	88.8	ug/L	4	KED
	Y-1	89	21082.9	2.1				mg/L	21098	KED
	In-1	115	18785.5	1.9				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		90.158
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
⌈>	72	Ge-1		96.735
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Thursday, January 15, 2015 08:47:32
Report Date/Time: Thursday, January 15, 2015 08:48:59
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	971391.1	3.2				ug/L	1066801	Standard
⌈>	Ge	72	407118.4	0.7				ug/L	462538	Standard
|	As	75	15251.6	0.3	**2.2234**	0.055	2.5	ug/L	12091	Standard
|	As-1	75	4869.3	1.6	**2.0611**	0.047	2.3	ug/L	142	Standard
|	Se	77	488.0	6.3	**2.2496**	0.175	7.8	ug/L	153	Standard
|	Se	78	12190.9	0.5	**2.6657**	0.069	2.6	ug/L	12322	Standard
|	Br	79	442.7	10.5				ug/L	543	Standard
⌊	Se	82	727.7	0.9	**2.0198**	0.037	1.8	ug/L	165	Standard
	Kr	83	109.3	5.5				ug/L	146	Standard
	Y	89	863785.7	0.0				ug/L	1181256	Standard
	In	115	865119.1	0.6				ug/L	1007775	Standard
	Tb	159	963745.5	0.2				ug/L	1164051	Standard
⌈>	Ge-1	72	10022.5	1.5				ug/L	10389	KED
⌊	As-2	75	155.3	4.4	**2.1041**	0.125	6.0	ug/L	4	KED
	Y-1	89	20744.7	1.1				mg/L	21098	KED
	In-1	115	18705.6	0.5				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		88.018
|	75	As	111.170	
|	75	As-1	103.053	
|	77	Se	112.479	
|	78	Se	133.285	
|	79	Br		
⌊	82	Se	100.988	
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
⌈>	72	Ge-1		96.471
⌊	75	As-2	105.207	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Thursday, January 15, 2015 08:51:52
Report Date/Time: Thursday, January 15, 2015 08:53:19
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	981837.0	0.2				ug/L	1066801	Standard
⌈>	**Ge**	72	408265.3	1.3				ug/L	462538	Standard
|	**As**	75	11707.9	0.6	**0.4989**	0.085	17.0	ug/L	12091	Standard
|	**As-1**	75	1262.7	2.5	**0.4927**	0.020	4.1	ug/L	142	Standard
|	**Se**	77	220.0	2.4	**0.5409**	0.022	4.1	ug/L	153	Standard
|	**Se**	78	11133.0	0.4	**0.5090**	0.236	46.4	ug/L	12322	Standard
|	**Br**	79	414.7	3.0				ug/L	543	Standard
⌊	**Se**	82	286.3	7.2	**0.4864**	0.068	14.0	ug/L	165	Standard
	Kr	83	107.3	3.3				ug/L	146	Standard
	Y	89	865886.6	1.9				ug/L	1181256	Standard
	In	115	859451.7	0.2				ug/L	1007775	Standard
	Tb	159	973956.7	1.0				ug/L	1164051	Standard
⌈>	**Ge-1**	72	9975.8	1.1				ug/L	10389	KED
⌊	**As-2**	75	40.7	7.1	**0.5102**	0.039	7.6	ug/L	4	KED
	Y-1	89	20908.6	2.2				mg/L	21098	KED
	In-1	115	18850.6	3.5				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
⌈>	72Ge		88.266
|	75As	99.785	
|	75As-1	98.545	
|	77Se	108.172	
|	78Se	101.794	
|	79Br		
⌊	82Se	97.284	
	83Kr		
	89Y		
	115In		
	159Tb		
⌈>	72Ge-1		96.022
⌊	75As-2	102.044	
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 15, 2015 08:56:11
Report Date/Time: Thursday, January 15, 2015 08:57:38
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1006621.0	1.2				ug/L	1066801	Standard
⌈>	Ge	72	418374.2	0.3				ug/L	462538	Standard
|	As	75	96624.3	0.8	**40.2149**	0.443	1.1	ug/L	12091	Standard
|	As-1	75	94317.5	0.3	**39.8162**	0.160	0.4	ug/L	142	Standard
|	Se	77	6572.8	1.9	**39.8433**	0.687	1.7	ug/L	153	Standard
|	Se	78	32080.3	1.9	**40.3732**	1.221	3.0	ug/L	12322	Standard
|	Br	79	416.0	2.9				ug/L	543	Standard
⌊	Se	82	11730.1	0.6	**39.0753**	0.172	0.4	ug/L	165	Standard
	Kr	83	102.7	8.8				ug/L	146	Standard
	Y	89	894306.4	1.7				ug/L	1181256	Standard
	In	115	891022.5	1.0				ug/L	1007775	Standard
	Tb	159	1000931.5	1.2				ug/L	1164051	Standard
⌈>	Ge-1	72	10355.8	0.5				ug/L	10389	KED
⌊	As-2	75	2968.3	0.5	**39.9110**	0.302	0.8	ug/L	4	KED
	Y-1	89	21727.8	0.6				mg/L	21098	KED
	In-1	115	19573.2	1.2				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		90.452
|	75	As	100.537	
|	75	As-1	99.541	
|	77	Se	99.608	
|	78	Se	100.933	
|	79	Br		
⌊	82	Se	97.688	
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
⌈>	72	Ge-1		99.679
⌊	75	As-2	99.778	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Thursday, January 15, 2015 09:00:50
Report Date/Time: Thursday, January 15, 2015 09:02:18
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	975651.1	1.7				ug/L	1066801	Standard
⌈>	Ge	72	406105.2	0.6				ug/L	462538	Standard
|	As	75	10733.9	1.4	**0.0571**	0.042	73.8	ug/L	12091	Standard
|	As-1	75	199.4	45.8	**0.0326**	0.040	123.2	ug/L	142	Standard
|	Se	77	167.3	5.4	**0.2126**	0.064	30.2	ug/L	153	Standard
|	Se	78	10913.8	1.9	**0.1875**	0.276	147.2	ug/L	12322	Standard
|	Br	79	418.3	4.6				ug/L	543	Standard
⌊	Se	82	165.0	10.3	**0.0702**	0.062	87.9	ug/L	165	Standard
	Kr	83	105.7	5.2				ug/L	146	Standard
	Y	89	858965.2	1.0				ug/L	1181256	Standard
	In	115	856365.3	0.2				ug/L	1007775	Standard
	Tb	159	961501.7	0.2				ug/L	1164051	Standard
⌈>	Ge-1	72	9994.8	1.3				ug/L	10389	KED
⌊	As-2	75	5.0	40.0	**0.0118**	0.029	243.6	ug/L	4	KED
	Y-1	89	20921.0	0.5				mg/L	21098	KED
	In-1	115	18792.5	1.3				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
⌈>	72Ge		87.799
|	75As		
|	75As-1		
|	77Se		
|	78Se		
|	79Br		
⌊	82Se		
	83Kr		
	89Y		
	115In		
	159Tb		
⌈>	72Ge-1		96.205
⌊	75As-2		
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Date/Time: Thursday, January 15, 2015 09:05:09
Report Date/Time: Thursday, January 15, 2015 09:06:37
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	923482.9	0.2				ug/L	1066801	Standard
⌈>	Ge	72	368833.0	0.1				ug/L	462538	Standard
|	As	75	10381.7	1.1	**0.3942**	0.061	15.6	ug/L	12091	Standard
|	As-1	75	103.6	102.3	**-0.0047**	0.051	1079.8	ug/L	142	Standard
|	Se	77	841.7	4.5	**5.0565**	0.260	5.1	ug/L	153	Standard
|	Se	78	10648.3	0.6	**1.7988**	0.113	6.3	ug/L	12322	Standard
|	Br	79	4994.9	0.3				ug/L	543	Standard
⌊	Se	82	161.0	4.7	**0.1127**	0.030	26.4	ug/L	165	Standard
	Kr	83	138.0	8.2				ug/L	146	Standard
	Y	89	873634.4	0.8				ug/L	1181256	Standard
	In	115	820265.6	1.0				ug/L	1007775	Standard
	Tb	159	989043.1	0.4				ug/L	1164051	Standard
⌈>	Ge-1	72	9090.2	1.5				ug/L	10389	KED
⌊	As-2	75	4.0	43.3	**0.0035**	0.027	786.3	ug/L	4	KED
	Y-1	89	20024.0	1.5				mg/L	21098	KED
	In-1	115	17642.7	0.9				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		79.741
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
⌈>	72	Ge-1		87.498
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: ICSAB

Sample Date/Time: Thursday, January 15, 2015 09:09:28
Report Date/Time: Thursday, January 15, 2015 09:10:55
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	919759.5	1.7				ug/L	1066801	Standard
⌈>	**Ge**	72	371378.4	0.5				ug/L	462538	Standard
|	**As**	75	48515.2	0.5	**20.5176**	0.030	0.1	ug/L	12091	Standard
|	**As-1**	75	42481.3	0.8	**20.1759**	0.092	0.5	ug/L	142	Standard
|	**Se**	77	3743.8	1.9	**25.2593**	0.396	1.6	ug/L	153	Standard
|	**Se**	78	20001.0	0.3	**21.9593**	0.295	1.3	ug/L	12322	Standard
|	**Br**	79	5559.7	0.5				ug/L	543	Standard
⌊	**Se**	82	5510.1	1.4	**20.4411**	0.299	1.5	ug/L	165	Standard
	Kr	83	141.7	2.5				ug/L	146	Standard
	Y	89	898545.7	0.6				ug/L	1181256	Standard
	In	115	839065.6	1.0				ug/L	1007775	Standard
	Tb	159	1006528.9	0.4				ug/L	1164051	Standard
⌈>	**Ge-1**	72	9455.1	1.2				ug/L	10389	KED
⌊	**As-2**	75	1350.4	2.2	**19.8554**	0.193	1.0	ug/L	4	KED
	Y-1	89	20565.5	0.6				mg/L	21098	KED
	In-1	115	17988.7	1.3				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
⌈>	72Ge		80.292
|	75As		
|	75As-1		
|	77Se		
|	78Se		
|	79Br		
⌊	82Se		
	83Kr		
	89Y		
	115In		
	159Tb		
⌈>	72Ge-1		91.010
⌊	75As-2		
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: MB0109SM2 50X

Sample Date/Time: Thursday, January 15, 2015 09:26:38
Report Date/Time: Thursday, January 15, 2015 09:28:05
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1014260.0	2.2				ug/L	1066801	Standard
⌈>	**Ge**	72	409694.1	0.5				ug/L	462538	Standard
|	**As**	75	10831.2	1.8	**0.0582**	0.066	113.9	ug/L	12091	Standard
|	**As-1**	75	-52.0	119.2	**-0.0769**	0.027	34.8	ug/L	142	Standard
|	**Se**	77	938.7	2.6	**5.0811**	0.178	3.5	ug/L	153	Standard
|	**Se**	78	11145.3	1.9	**0.4536**	0.326	71.9	ug/L	12322	Standard
|	**Br**	79	1471.1	1.3				ug/L	543	Standard
⌊	**Se**	82	119.3	13.8	**-0.0926**	0.055	59.1	ug/L	165	Standard
	Kr	83	101.0	9.4				ug/L	146	Standard
	Y	89	888696.3	0.6				ug/L	1181256	Standard
	In	115	904556.9	0.1				ug/L	1007775	Standard
	Tb	159	1004919.6	0.4				ug/L	1164051	Standard
⌈>	**Ge-1**	72	10638.3	0.5				ug/L	10389	KED
⌊	**As-2**	75	1.7	34.6	**-0.0363**	0.008	20.9	ug/L	4	KED
	Y-1	89	22408.9	0.1				mg/L	21098	KED
	In-1	115	20115.6	1.5				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
⌈>	72Ge		88.575
|	75As		
|	75As-1		
|	77Se		
|	78Se		
|	79Br		
⌊	82Se		
	83Kr		
	89Y		
	115In		
	159Tb		
⌈>	72Ge-1		102.398
⌊	75As-2		
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: SB0109SM2 50X

Sample Date/Time: Thursday, January 15, 2015 09:30:56
Report Date/Time: Thursday, January 15, 2015 09:32:23
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1051881.2	1.8				ug/L	1066801	Standard
⌈>	Ge	72	418201.3	0.5				ug/L	462538	Standard
|	As	75	86055.2	0.3	**35.2713**	0.137	0.4	ug/L	12091	Standard
|	As-1	75	81799.4	0.2	**34.5390**	0.155	0.4	ug/L	142	Standard
|	Se	77	7199.1	0.7	**43.7418**	0.436	1.0	ug/L	153	Standard
|	Se	78	28832.7	1.0	**34.1317**	0.305	0.9	ug/L	12322	Standard
|	Br	79	1607.4	2.4				ug/L	543	Standard
⌊	Se	82	9686.3	1.0	**32.1925**	0.270	0.8	ug/L	165	Standard
	Kr	83	110.0	9.4				ug/L	146	Standard
	Y	89	882922.7	1.3				ug/L	1181256	Standard
	In	115	943600.6	0.6				ug/L	1007775	Standard
	Tb	159	1046952.2	0.2				ug/L	1164051	Standard
⌈>	Ge-1	72	10964.9	0.6				ug/L	10389	KED
⌊	As-2	75	2917.0	2.1	**37.0357**	0.667	1.8	ug/L	4	KED
	Y-1	89	23251.9	0.4				mg/L	21098	KED
	In-1	115	20615.6	0.4				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		90.415
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
⌈>	72	Ge-1		105.542
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-019-26 50X

Sample Date/Time: Thursday, January 15, 2015 09:35:14
Report Date/Time: Thursday, January 15, 2015 09:36:41
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1095828.7	1.6				ug/L	1066801	Standard
⌈>	Ge	72	421560.0	0.7				ug/L	462538	Standard
|	As	75	12277.4	1.0	**0.5860**	0.049	8.3	ug/L	12091	Standard
|	As-1	75	1425.5	3.5	**0.5436**	0.020	3.7	ug/L	142	Standard
|	Se	77	1040.0	4.0	**5.5356**	0.227	4.1	ug/L	153	Standard
|	Se	78	11239.4	0.3	**0.0174**	0.154	883.3	ug/L	12322	Standard
|	Br	79	1573.1	0.8				ug/L	543	Standard
⌊	Se	82	168.7	12.7	**0.0615**	0.075	122.4	ug/L	165	Standard
	Kr	83	109.7	2.3				ug/L	146	Standard
	Y	89	948162.1	0.1				ug/L	1181256	Standard
	In	115	926672.9	0.2				ug/L	1007775	Standard
	Tb	159	1049503.7	0.7				ug/L	1164051	Standard
⌈>	Ge-1	72	10810.8	1.0				ug/L	10389	KED
⌊	As-2	75	54.7	10.6	**0.6465**	0.068	10.5	ug/L	4	KED
	Y-1	89	24287.3	1.5				mg/L	21098	KED
	In-1	115	20383.7	0.5				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		91.141
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
⌈>	72	Ge-1		104.058
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-019-26D 50X

Sample Date/Time: Thursday, January 15, 2015 09:39:31
Report Date/Time: Thursday, January 15, 2015 09:40:58
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1097413.7	2.7				ug/L	1066801	Standard
[>	**Ge**	72	424085.6	1.3				ug/L	462538	Standard
|	**As**	75	12066.2	1.6	**0.4540**	0.035	7.6	ug/L	12091	Standard
|	**As-1**	75	1283.8	1.0	**0.4811**	0.011	2.2	ug/L	142	Standard
|	**Se**	77	1109.7	0.2	**5.9244**	0.075	1.3	ug/L	153	Standard
|	**Se**	78	11108.3	1.6	**-0.3610**	0.125	34.7	ug/L	12322	Standard
|	**Br**	79	1540.4	2.4				ug/L	543	Standard
[	**Se**	82	144.3	8.8	**-0.0228**	0.047	208.3	ug/L	165	Standard
	Kr	83	110.0	11.2				ug/L	146	Standard
	Y	89	953262.6	1.0				ug/L	1181256	Standard
	In	115	920588.2	1.3				ug/L	1007775	Standard
	Tb	159	1043555.0	0.9				ug/L	1164051	Standard
[>	**Ge-1**	72	10865.1	1.7				ug/L	10389	KED
[	**As-2**	75	63.7	10.1	**0.7600**	0.097	12.7	ug/L	4	KED
	Y-1	89	24115.0	0.8				mg/L	21098	KED
	In-1	115	20226.1	0.7				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
[>	72	Ge		91.687
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
[	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
[>	72	Ge-1		104.582
[	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-019-26L 250X

Sample Date/Time: Thursday, January 15, 2015 09:43:49
Report Date/Time: Thursday, January 15, 2015 09:45:17
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1045699.8	1.1				ug/L	1066801	Standard
⌈>	**Ge**	72	425134.8	1.8				ug/L	462538	Standard
|	**As**	75	11194.5	0.7	**0.0392**	0.122	311.6	ug/L	12091	Standard
|	**As-1**	75	249.8	39.7	**0.0499**	0.043	85.6	ug/L	142	Standard
|	**Se**	77	312.3	10.9	**1.0464**	0.180	17.2	ug/L	153	Standard
|	**Se**	78	11202.4	0.3	**-0.2288**	0.459	200.7	ug/L	12322	Standard
|	**Br**	79	622.7	3.5				ug/L	543	Standard
⌊	**Se**	82	117.7	18.0	**-0.1119**	0.078	69.8	ug/L	165	Standard
	Kr	83	95.3	9.5				ug/L	146	Standard
	Y	89	914028.3	1.0				ug/L	1181256	Standard
	In	115	885788.5	0.4				ug/L	1007775	Standard
	Tb	159	998154.8	1.0				ug/L	1164051	Standard
⌈>	**Ge-1**	72	10573.2	0.5				ug/L	10389	KED
⌊	**As-2**	75	17.0	30.6	**0.1663**	0.069	41.7	ug/L	4	KED
	Y-1	89	22577.2	0.9				mg/L	21098	KED
	In-1	115	19796.1	1.6				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		91.914
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
⌈>	72	Ge-1		101.772
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-019-26MS 50X

Sample Date/Time: Thursday, January 15, 2015 09:48:08
Report Date/Time: Thursday, January 15, 2015 09:49:36
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1117854.5	0.9				ug/L	1066801	Standard
>	**Ge**	72	424295.9	1.1				ug/L	462538	Standard
	As	75	90538.4	1.1	**36.7654**	0.050	0.1	ug/L	12091	Standard
	As-1	75	86307.9	1.2	**35.9218**	0.339	0.9	ug/L	142	Standard
	Se	77	7370.2	0.9	**44.1458**	0.124	0.3	ug/L	153	Standard
	Se	78	29663.8	1.4	**34.9159**	0.743	2.1	ug/L	12322	Standard
	Br	79	1985.1	2.2				ug/L	543	Standard
	Se	82	10023.5	1.2	**32.8491**	0.658	2.0	ug/L	165	Standard
	Kr	83	125.3	1.8				ug/L	146	Standard
	Y	89	946316.1	0.4				ug/L	1181256	Standard
	In	115	948309.3	0.8				ug/L	1007775	Standard
	Tb	159	1053281.8	1.2				ug/L	1164051	Standard
>	**Ge-1**	72	11354.2	1.6				ug/L	10389	KED
	As-2	75	3053.3	3.1	**37.4578**	1.736	4.6	ug/L	4	KED
	Y-1	89	24786.5	1.2				mg/L	21098	KED
	In-1	115	21045.6	0.8				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		91.732
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
>	72	Ge-1		109.289
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-019-26MSD 50X

Sample Date/Time: Thursday, January 15, 2015 09:52:27
Report Date/Time: Thursday, January 15, 2015 09:53:55
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1104988.7	1.1				ug/L	1066801	Standard
>	**Ge**	72	422352.8	0.2				ug/L	462538	Standard
	As	75	91466.1	1.6	**37.3886**	0.603	1.6	ug/L	12091	Standard
	As-1	75	87044.3	1.4	**36.3945**	0.462	1.3	ug/L	142	Standard
	Se	77	7519.6	0.9	**45.2682**	0.391	0.9	ug/L	153	Standard
	Se	78	29926.3	1.2	**35.6741**	0.556	1.6	ug/L	12322	Standard
	Br	79	1785.4	2.0				ug/L	543	Standard
	Se	82	10051.9	0.6	**33.0936**	0.269	0.8	ug/L	165	Standard
	Kr	83	96.0	3.8				ug/L	146	Standard
	Y	89	928958.6	0.4				ug/L	1181256	Standard
	In	115	932525.8	0.6				ug/L	1007775	Standard
	Tb	159	1042130.8	1.1				ug/L	1164051	Standard
>	**Ge-1**	72	11196.1	0.8				ug/L	10389	KED
	As-2	75	3041.3	3.0	**37.8232**	1.247	3.3	ug/L	4	KED
	Y-1	89	24754.8	2.6				mg/L	21098	KED
	In-1	115	20734.3	3.0				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		91.312
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
>	72	Ge-1		107.767
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: BL

Sample Date/Time: Thursday, January 15, 2015 09:56:46
Report Date/Time: Thursday, January 15, 2015 09:58:14
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1001488.9	1.8				ug/L	1066801	Standard
⌈>	**Ge**	72	415153.1	1.7				ug/L	462538	Standard
|	**As**	75	10806.5	0.5	**-0.0202**	0.109	539.5	ug/L	12091	Standard
|	**As-1**	75	188.8	21.8	**0.0262**	0.019	72.8	ug/L	142	Standard
|	**Se**	77	165.0	4.2	**0.1745**	0.037	21.2	ug/L	153	Standard
|	**Se**	78	10976.5	0.2	**-0.1579**	0.371	234.9	ug/L	12322	Standard
|	**Br**	79	410.0	3.4				ug/L	543	Standard
⌊	**Se**	82	157.0	1.9	**0.0304**	0.014	44.8	ug/L	165	Standard
	Kr	83	99.0	10.5				ug/L	146	Standard
	Y	89	868977.6	1.4				ug/L	1181256	Standard
	In	115	855638.3	1.5				ug/L	1007775	Standard
	Tb	159	967356.5	0.5				ug/L	1164051	Standard
⌈>	**Ge-1**	72	10389.8	0.9				ug/L	10389	KED
⌊	**As-2**	75	7.0	14.3	**0.0358**	0.013	37.2	ug/L	4	KED
	Y-1	89	21782.3	0.0				mg/L	21098	KED
	In-1	115	19402.4	0.8				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		89.756
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
⌈>	72	Ge-1		100.006
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 15, 2015 10:01:05
Report Date/Time: Thursday, January 15, 2015 10:02:33
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1012852.7	1.5				ug/L	1066801	Standard
>	Ge	72	414324.8	1.0				ug/L	462538	Standard
	As	75	94004.6	0.8	**39.4217**	0.823	2.1	ug/L	12091	Standard
	As-1	75	91371.1	1.3	**38.9539**	0.899	2.3	ug/L	142	Standard
	Se	77	6535.8	1.0	**40.0131**	0.544	1.4	ug/L	153	Standard
	Se	78	31310.6	1.0	**39.4821**	0.842	2.1	ug/L	12322	Standard
	Br	79	350.3	3.1				ug/L	543	Standard
	Se	82	11298.8	1.4	**37.9984**	0.894	2.4	ug/L	165	Standard
	Kr	83	98.3	9.8				ug/L	146	Standard
	Y	89	872458.9	1.2				ug/L	1181256	Standard
	In	115	862785.4	0.3				ug/L	1007775	Standard
	Tb	159	969048.1	0.6				ug/L	1164051	Standard
>	Ge-1	72	10407.5	0.8				ug/L	10389	KED
	As-2	75	2940.3	1.1	**39.3396**	0.687	1.7	ug/L	4	KED
	Y-1	89	21942.8	0.9				mg/L	21098	KED
	In-1	115	19863.5	0.7				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		89.576
	75	As	98.554	
	75	As-1	97.385	
	77	Se	100.033	
	78	Se	98.705	
	79	Br		
	82	Se	94.996	
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
>	72	Ge-1		100.177
	75	As-2	98.349	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Thursday, January 15, 2015 10:05:44
Report Date/Time: Thursday, January 15, 2015 10:07:12
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	979289.1	2.2				ug/L	1066801	Standard
>	**Ge**	72	400977.3	1.5				ug/L	462538	Standard
	As	75	10407.9	1.9	**-0.0344**	0.167	485.3	ug/L	12091	Standard
	As-1	75	163.6	24.8	**0.0178**	0.018	101.1	ug/L	142	Standard
	Se	77	159.7	10.0	**0.1775**	0.116	65.5	ug/L	153	Standard
	Se	78	10612.9	2.0	**-0.1330**	0.709	533.1	ug/L	12322	Standard
	Br	79	370.7	2.8				ug/L	543	Standard
	Se	82	160.3	3.4	**0.0610**	0.024	39.6	ug/L	165	Standard
	Kr	83	93.0	17.8				ug/L	146	Standard
	Y	89	841216.7	2.0				ug/L	1181256	Standard
	In	115	828288.9	1.0				ug/L	1007775	Standard
	Tb	159	929952.7	1.2				ug/L	1164051	Standard
>	**Ge-1**	72	9992.8	0.8				ug/L	10389	KED
	As-2	75	6.3	24.1	**0.0303**	0.022	72.3	ug/L	4	KED
	Y-1	89	21001.1	0.3				mg/L	21098	KED
	In-1	115	18869.6	0.5				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
>	72Ge		86.691
	75As		
	75As-1		
	77Se		
	78Se		
	79Br		
	82Se		
	83Kr		
	89Y		
	115In		
	159Tb		
>	72Ge-1		96.186
	75As-2		
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Thursday, January 15, 2015 10:10:03
Report Date/Time: Thursday, January 15, 2015 10:11:31
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	951484.9	0.8				ug/L	1066801	Standard
[>	Ge	72	394906.3	0.6				ug/L	462538	Standard
|	As	75	14489.6	0.1	**2.0720**	0.043	2.1	ug/L	12091	Standard
|	As-1	75	4669.9	1.0	**2.0370**	0.025	1.2	ug/L	142	Standard
|	Se	77	458.7	6.6	**2.1547**	0.216	10.0	ug/L	153	Standard
|	Se	78	11586.4	0.6	**2.1787**	0.291	13.4	ug/L	12322	Standard
|	Br	79	345.0	4.3				ug/L	543	Standard
[	Se	82	710.4	5.2	**2.0361**	0.145	7.1	ug/L	165	Standard
	Kr	83	88.0	12.9				ug/L	146	Standard
	Y	89	830227.8	2.0				ug/L	1181256	Standard
	In	115	818639.4	0.8				ug/L	1007775	Standard
	Tb	159	916137.0	0.8				ug/L	1164051	Standard
[>	Ge-1	72	9989.8	0.6				ug/L	10389	KED
[	As-2	75	155.7	10.3	**2.1145**	0.221	10.5	ug/L	4	KED
	Y-1	89	21055.2	1.0				mg/L	21098	KED
	In-1	115	18672.4	0.4				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
[>	72	Ge		85.378
|	75	As	103.598	
|	75	As-1	101.852	
|	77	Se	107.735	
|	78	Se	108.935	
|	79	Br		
[	82	Se	101.807	
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
[>	72	Ge-1		96.157
[	75	As-2	105.725	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Thursday, January 15, 2015 10:14:22
Report Date/Time: Thursday, January 15, 2015 10:15:50
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	977566.0	1.6				ug/L	1066801	Standard
⌈>	**Ge**	72	401614.3	1.3				ug/L	462538	Standard
|	**As**	75	11651.4	1.0	**0.5648**	0.116	20.5	ug/L	12091	Standard
|	**As-1**	75	1169.6	10.0	**0.4611**	0.057	12.5	ug/L	142	Standard
|	**Se**	77	202.0	11.8	**0.4468**	0.137	30.6	ug/L	153	Standard
|	**Se**	78	11074.6	0.7	**0.7569**	0.367	48.5	ug/L	12322	Standard
|	**Br**	79	337.3	4.5				ug/L	543	Standard
⌊	**Se**	82	249.0	10.8	**0.3725**	0.105	28.1	ug/L	165	Standard
	Kr	83	92.3	5.3				ug/L	146	Standard
	Y	89	838237.5	1.5				ug/L	1181256	Standard
	In	115	830251.7	1.0				ug/L	1007775	Standard
	Tb	159	931947.2	0.5				ug/L	1164051	Standard
⌈>	**Ge-1**	72	9880.7	0.7				ug/L	10389	KED
⌊	**As-2**	75	37.3	6.2	**0.4687**	0.031	6.6	ug/L	4	KED
	Y-1	89	21078.9	1.2				mg/L	21098	KED
	In-1	115	18849.9	1.9				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		86.828
|	75	As	112.952	
|	75	As-1	92.223	
|	77	Se	89.362	
|	78	Se	151.372	
|	79	Br		
⌊	82	Se	74.506	
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
⌈>	72	Ge-1		95.107
⌊	75	As-2	93.730	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-019-26PS 50X

Sample Date/Time: Thursday, January 15, 2015 10:18:42
Report Date/Time: Thursday, January 15, 2015 10:20:09
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1097349.1	2.4				ug/L	1066801	Standard
⌈>	Ge	72	421475.3	2.2				ug/L	462538	Standard
|	As	75	95288.3	1.1	**39.2744**	1.185	3.0	ug/L	12091	Standard
|	As-1	75	91497.1	1.1	**38.3555**	1.149	3.0	ug/L	142	Standard
|	Se	77	7222.2	1.8	**43.5618**	1.767	4.1	ug/L	153	Standard
|	Se	78	31159.6	0.2	**38.1761**	1.456	3.8	ug/L	12322	Standard
|	Br	79	1216.4	2.7				ug/L	543	Standard
⌊	Se	82	10785.1	2.0	**35.6396**	1.479	4.1	ug/L	165	Standard
	Kr	83	109.0	3.3				ug/L	146	Standard
	Y	89	931003.6	1.5				ug/L	1181256	Standard
	In	115	902903.3	0.5				ug/L	1007775	Standard
	Tb	159	1020751.8	0.7				ug/L	1164051	Standard
⌈>	Ge-1	72	10883.8	0.6				ug/L	10389	KED
⌊	As-2	75	3176.0	0.8	**40.6335**	0.449	1.1	ug/L	4	KED
	Y-1	89	24465.9	0.8				mg/L	21098	KED
	In-1	115	20374.9	0.6				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		91.122
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
⌈>	72	Ge-1		104.762
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-019-27 50X
Sample Date/Time: Thursday, January 15, 2015 10:23:00
Report Date/Time: Thursday, January 15, 2015 10:24:28
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1098784.1	1.4				ug/L	1066801	Standard
⌈>	Ge	72	416228.0	0.5				ug/L	462538	Standard
|	As	75	12065.4	1.4	**0.5594**	0.096	17.2	ug/L	12091	Standard
|	As-1	75	1490.5	10.1	**0.5791**	0.067	11.5	ug/L	142	Standard
|	Se	77	1691.1	2.6	**9.6697**	0.227	2.3	ug/L	153	Standard
|	Se	78	11015.9	0.6	**-0.1406**	0.149	106.1	ug/L	12322	Standard
|	Br	79	10672.0	0.9				ug/L	543	Standard
⌊	Se	82	189.3	8.1	**0.1387**	0.055	39.6	ug/L	165	Standard
	Kr	83	99.3	10.1				ug/L	146	Standard
	Y	89	914833.4	0.1				ug/L	1181256	Standard
	In	115	924194.1	0.2				ug/L	1007775	Standard
	Tb	159	1033757.5	0.4				ug/L	1164051	Standard
⌈>	Ge-1	72	11080.0	0.5				ug/L	10389	KED
⌊	As-2	75	57.3	17.8	**0.6633**	0.127	19.2	ug/L	4	KED
	Y-1	89	24489.3	2.0				mg/L	21098	KED
	In-1	115	20463.0	1.0				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		89.988
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
⌈>	72	Ge-1		106.650
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-019-32 50X
Sample Date/Time: Thursday, January 15, 2015 10:27:19
Report Date/Time: Thursday, January 15, 2015 10:28:46
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	458.7	13.5				ug/L	1066801	Standard
>	Ge	72	96.3	23.5				ug/L	462538	Standard
	As	75	4375.4	8.0	**9186.8016**	1930.789	21.0	ug/L	12091	Standard
	As-1	75	83.4	107.5	**161.8169**	186.748	115.4	ug/L	142	Standard
	Se	77	156.3	28.8	**4492.2775**	1929.309	42.9	ug/L	153	Standard
	Se	78	4652.4	6.6	**40157.7036**	8315.580	20.7	ug/L	12322	Standard
	Br	79	91.7	2.7				ug/L	543	Standard
	Se	82	148.3	11.5	**2263.1607**	666.404	29.4	ug/L	165	Standard
	Kr	83	170.3	21.3				ug/L	146	Standard
	Y	89	53.3	30.3				ug/L	1181256	Standard
	In	115	66.2	54.2				ug/L	1007775	Standard
	Tb	159	31.0	128.0				ug/L	1164051	Standard
>	Ge-1	72	7.7	150.6				ug/L	10389	KED
	As-2	75	3.0	115.5	**108.3956**	53.671	49.5	ug/L	4	KED
	Y-1	89	11.0	89.5				mg/L	21098	KED
	In-1	115	10.9	87.1				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		0.021
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
>	72	Ge-1		0.074
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-019-35 50X
Sample Date/Time: Thursday, January 15, 2015 10:31:37
Report Date/Time: Thursday, January 15, 2015 10:33:05
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1201027.5	1.1				ug/L	1066801	Standard
>	Ge	72	450033.9	0.7				ug/L	462538	Standard
	As	75	12495.7	1.4	**0.3192**	0.039	12.1	ug/L	12091	Standard
	As-1	75	1719.2	8.9	**0.6210**	0.056	9.0	ug/L	142	Standard
	Se	77	2124.5	1.3	**11.3756**	0.248	2.2	ug/L	153	Standard
	Se	78	11292.1	0.8	**-1.2497**	0.107	8.6	ug/L	12322	Standard
	Br	79	27649.4	1.3				ug/L	543	Standard
	Se	82	219.0	6.8	**0.1832**	0.043	23.3	ug/L	165	Standard
	Kr	83	97.7	16.5				ug/L	146	Standard
	Y	89	1001154.4	1.2				ug/L	1181256	Standard
	In	115	989600.7	1.3				ug/L	1007775	Standard
	Tb	159	1106610.0	0.6				ug/L	1164051	Standard
>	Ge-1	72	11917.3	2.1				ug/L	10389	KED
	As-2	75	67.3	13.4	**0.7314**	0.122	16.6	ug/L	4	KED
	Y-1	89	26726.3	1.1				mg/L	21098	KED
	In-1	115	22078.1	1.8				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		97.297
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
>	72	Ge-1		114.709
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-019-32 50X

Sample Date/Time: Thursday, January 15, 2015 10:44:58
Report Date/Time: Thursday, January 15, 2015 10:46:25
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1214267.7	1.2				ug/L	1066801	Standard
>	**Ge**	72	430978.6	0.7				ug/L	462538	Standard
	As	75	12793.8	0.7	**0.6963**	0.048	6.8	ug/L	12091	Standard
	As-1	75	2093.2	1.9	**0.8046**	0.022	2.8	ug/L	142	Standard
	Se	77	2129.2	2.4	**11.9426**	0.247	2.1	ug/L	153	Standard
	Se	78	11279.1	1.5	**-0.3793**	0.243	64.1	ug/L	12322	Standard
	Br	79	16535.2	0.7				ug/L	543	Standard
	Se	82	243.7	10.8	**0.2943**	0.083	28.1	ug/L	165	Standard
	Kr	83	108.7	9.2				ug/L	146	Standard
	Y	89	978155.8	1.4				ug/L	1181256	Standard
	In	115	975929.1	0.5				ug/L	1007775	Standard
	Tb	159	1094866.8	1.0				ug/L	1164051	Standard
>	**Ge-1**	72	12045.4	1.5				ug/L	10389	KED
	As-2	75	94.0	4.3	**1.0298**	0.035	3.4	ug/L	4	KED
	Y-1	89	27602.3	2.6				mg/L	21098	KED
	In-1	115	21958.9	1.6				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		93.177
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
>	72	Ge-1		115.943
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: BL
Sample Date/Time: Thursday, January 15, 2015 10:49:16
Report Date/Time: Thursday, January 15, 2015 10:50:42
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1012114.5	0.9				ug/L	1066801	Standard
>	**Ge**	72	411680.3	0.4				ug/L	462538	Standard
	As	75	10550.9	0.7	**-0.1003**	0.025	25.0	ug/L	12091	Standard
	As-1	75	70.2	87.7	**-0.0243**	0.026	108.1	ug/L	142	Standard
	Se	77	144.3	8.1	**0.0531**	0.072	135.5	ug/L	153	Standard
	Se	78	10735.0	0.7	**-0.4552**	0.167	36.6	ug/L	12322	Standard
	Br	79	1138.7	3.0				ug/L	543	Standard
	Se	82	115.7	4.8	**-0.1070**	0.017	16.1	ug/L	165	Standard
	Kr	83	83.0	17.0				ug/L	146	Standard
	Y	89	863999.7	1.0				ug/L	1181256	Standard
	In	115	853951.8	0.3				ug/L	1007775	Standard
	Tb	159	951461.3	0.8				ug/L	1164051	Standard
>	**Ge-1**	72	10496.9	3.7				ug/L	10389	KED
	As-2	75	3.0	57.7	**-0.0189**	0.022	116.8	ug/L	4	KED
	Y-1	89	22088.7	2.6				mg/L	21098	KED
	In-1	115	19403.4	2.2				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
>	72Ge		89.005
	75As		
	75As-1		
	77Se		
	78Se		
	79Br		
	82Se		
	83Kr		
	89Y		
	115In		
	159Tb		
>	72Ge-1		101.037
	75As-2		
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Thursday, January 15, 2015 10:53:34
Report Date/Time: Thursday, January 15, 2015 10:55:02
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1006918.0	1.5				ug/L	1066801	Standard
>	**Ge**	72	409914.3	0.5				ug/L	462538	Standard
	As	75	92974.6	1.0	**39.4014**	0.243	0.6	ug/L	12091	Standard
	As-1	75	90479.1	1.4	**38.9817**	0.345	0.9	ug/L	142	Standard
	Se	77	6362.8	1.9	**39.3585**	0.889	2.3	ug/L	153	Standard
	Se	78	31068.1	0.1	**39.6577**	0.248	0.6	ug/L	12322	Standard
	Br	79	822.7	3.2				ug/L	543	Standard
	Se	82	11257.4	1.1	**38.2636**	0.242	0.6	ug/L	165	Standard
	Kr	83	87.7	5.7				ug/L	146	Standard
	Y	89	866965.5	0.6				ug/L	1181256	Standard
	In	115	837479.4	1.0				ug/L	1007775	Standard
	Tb	159	946237.3	0.2				ug/L	1164051	Standard
>	**Ge-1**	72	10427.5	0.5				ug/L	10389	KED
	As-2	75	2954.3	4.3	**39.4472**	1.649	4.2	ug/L	4	KED
	Y-1	89	22080.1	1.0				mg/L	21098	KED
	In-1	115	19543.1	0.2				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		88.623
	75	As	98.503	
	75	As-1	97.454	
	77	Se	98.396	
	78	Se	99.144	
	79	Br		
	82	Se	95.659	
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
>	72	Ge-1		100.369
	75	As-2	98.618	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Thursday, January 15, 2015 10:58:13
Report Date/Time: Thursday, January 15, 2015 10:59:41
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	968614.6	0.7				ug/L	1066801	Standard
>	**Ge**	72	400212.0	0.7				ug/L	462538	Standard
	As	75	10655.3	0.6	**0.0953**	0.042	44.2	ug/L	12091	Standard
	As-1	75	210.8	16.2	**0.0387**	0.015	37.7	ug/L	142	Standard
	Se	77	185.7	1.9	**0.3469**	0.030	8.6	ug/L	153	Standard
	Se	78	10825.1	0.5	**0.3298**	0.210	63.8	ug/L	12322	Standard
	Br	79	653.3	8.0				ug/L	543	Standard
	Se	82	165.3	3.9	**0.0796**	0.023	28.9	ug/L	165	Standard
	Kr	83	90.7	14.1				ug/L	146	Standard
	Y	89	840567.6	2.8				ug/L	1181256	Standard
	In	115	819414.1	0.6				ug/L	1007775	Standard
	Tb	159	919854.6	0.1				ug/L	1164051	Standard
>	**Ge-1**	72	10086.6	1.2				ug/L	10389	KED
	As-2	75	7.0	62.3	**0.0391**	0.062	158.0	ug/L	4	KED
	Y-1	89	21396.3	1.4				mg/L	21098	KED
	In-1	115	19111.6	1.6				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		86.525
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
>	72	Ge-1		97.088
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Thursday, January 15, 2015 11:02:32
Report Date/Time: Thursday, January 15, 2015 11:04:00
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	976675.2	1.6				ug/L	1066801	Standard
>	**Ge**	72	397897.6	1.5				ug/L	462538	Standard
	As	75	14873.1	1.0	**2.2073**	0.059	2.7	ug/L	12091	Standard
	As-1	75	4745.9	3.7	**2.0546**	0.051	2.5	ug/L	142	Standard
	Se	77	466.7	4.2	**2.1825**	0.086	3.9	ug/L	153	Standard
	Se	78	11897.0	0.4	**2.6327**	0.348	13.2	ug/L	12322	Standard
	Br	79	598.3	1.3				ug/L	543	Standard
	Se	82	712.0	4.2	**2.0222**	0.087	4.3	ug/L	165	Standard
	Kr	83	100.0	1.0				ug/L	146	Standard
	Y	89	843574.9	2.2				ug/L	1181256	Standard
	In	115	815557.9	0.7				ug/L	1007775	Standard
	Tb	159	923211.4	1.1				ug/L	1164051	Standard
>	**Ge-1**	72	10027.9	1.0				ug/L	10389	KED
	As-2	75	143.3	4.2	**1.9349**	0.081	4.2	ug/L	4	KED
	Y-1	89	21314.9	0.2				mg/L	21098	KED
	In-1	115	18816.5	0.8				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		86.025
	75	As	110.366	
	75	As-1	102.731	
	77	Se	109.127	
	78	Se	131.634	
	79	Br		
	82	Se	101.111	
	83	Kr		
	89	Y		
	115	In		
	159	Tb		
>	72	Ge-1		96.523
	75	As-2	96.747	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 10

Sample Date/Time: Thursday, January 15, 2015 11:06:51
Report Date/Time: Thursday, January 15, 2015 11:08:18
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION\Data\Sample\SAMPLE6020A.sam
Method File: C:\NexION\Data\Method\X150115A.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	999423.9	1.1				ug/L	1066801	Standard
>	**Ge**	72	410023.5	0.8				ug/L	462538	Standard
	As	75	11655.6	0.6	**0.4495**	0.080	17.8	ug/L	12091	Standard
	As-1	75	1209.9	4.7	**0.4674**	0.022	4.8	ug/L	142	Standard
	Se	77	221.0	3.6	**0.5413**	0.052	9.6	ug/L	153	Standard
	Se	78	11076.0	0.8	**0.3021**	0.332	109.8	ug/L	12322	Standard
	Br	79	542.3	4.5				ug/L	543	Standard
	Se	82	263.7	5.4	**0.4040**	0.042	10.4	ug/L	165	Standard
	Kr	83	95.7	6.8				ug/L	146	Standard
	Y	89	861573.2	1.8				ug/L	1181256	Standard
	In	115	840318.9	0.3				ug/L	1007775	Standard
	Tb	159	941392.1	0.5				ug/L	1164051	Standard
>	**Ge-1**	72	10265.0	2.2				ug/L	10389	KED
	As-2	75	44.0	10.4	**0.5395**	0.059	11.0	ug/L	4	KED
	Y-1	89	21814.6	1.3				mg/L	21098	KED
	In-1	115	19435.7	1.0				ug/L	18633	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
>	72Ge		88.647
	75As	89.901	
	75As-1	93.479	
	77Se	108.267	
	78Se	60.426	
	79Br		
	82Se	80.793	
	83Kr		
	89Y		
	115In		
	159Tb		
>	72Ge-1		98.806
	75As-2	107.901	
	89Y-1		
	115In-1		

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

February 18, 2015

Brian Tracy
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-10
Laboratory Reference No. 1410-019D

Dear Brian:

Enclosed are the analytical results and associated quality control data for samples submitted on October 2, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: February 18, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019D
Project: 5147-006-10

Case Narrative

Samples were collected on September 30, 2014 and received by the laboratory on October 2, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: February 18, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019D
Project: 5147-006-10

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
GEI-16_8-9_093014	10-019-16	Soil	9-30-14	10-2-14	
GEI-20_4-5_093014	10-019-30	Soil	9-30-14	10-2-14	
GEI-20_8-9_093014	10-019-32	Soil	9-30-14	10-2-14	
GEI-29_2-3_093014	10-019-52	Soil	9-30-14	10-2-14	
GEI-29_5-6_093014	10-019-53	Soil	9-30-14	10-2-14	
GEI-29_8-9_093014	10-019-54	Soil	9-30-14	10-2-14	
GEI-29_9-10_093014	10-019-55	Soil	9-30-14	10-2-14	
GEI-30_7-8_093014	10-019-58	Soil	9-30-14	10-2-14	
GEI-30_9-10_093014	10-019-59	Soil	9-30-14	10-2-14	

Date of Report: February 18, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019D
Project: 5147-006-10

TOTAL METALS
EPA 6010C/6020A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-019-16					
Client ID:	**GEI-16_8-9_093014**					
Arsenic	**ND**	5.8	6010C	2-9-15	2-9-15	
Nickel	**15**	2.9	6010C	2-9-15	2-9-15	
Lab ID:	10-019-30					
Client ID:	**GEI-20_4-5_093014**					
Arsenic	**6.5**	5.6	6010C	2-9-15	2-9-15	
Lab ID:	10-019-32					
Client ID:	**GEI-20_8-9_093014**					
Arsenic	**ND**	5.6	6020A	2-9-15	2-17-15	
Lab ID:	10-019-52					
Client ID:	**GEI-29_2-3_093014**					
Arsenic	**ND**	5.5	6010C	2-9-15	2-9-15	
Lab ID:	10-019-53					
Client ID:	**GEI-29_5-6_093014**					
Arsenic	**6.4**	5.7	6010C	2-9-15	2-9-15	
Lab ID:	10-019-54					
Client ID:	**GEI-29_8-9_093014**					
Arsenic	**ND**	3.6	6020A	2-9-15	2-17-15	

Date of Report: February 18, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019D
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil

Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-019-55					
Client ID:	**GEI-29_9-10_093014**					
Arsenic	**ND**	6.0	6010C	2-9-15	2-9-15	
Lab ID:	10-019-58					
Client ID:	**GEI-30_7-8_093014**					
Arsenic	**ND**	5.7	6010C	2-9-15	2-9-15	
Lab ID:	10-019-59					
Client ID:	**GEI-30_9-10_093014**					
Arsenic	**ND**	6.0	6010C	2-9-15	2-9-15	

Date of Report: February 18, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019D
Project: 5147-006-10

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	2-9-15
Date Analyzed:	2-9-15
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0209SM1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	5.0
Nickel	6010C	**ND**	2.5

Date of Report: February 18, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019D
Project: 5147-006-10

TOTAL ARSENIC
EPA 6020A
METHOD BLANK QUALITY CONTROL

Date Extracted:	2-9-15
Date Analyzed:	2-17-15
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0209SM1

Analyte	Method	Result	PQL
Arsenic	6020A	**ND**	2.5

Date of Report: February 18, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019D
Project: 5147-006-10
TOTAL ARSENIC

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 2-9-15
Date Analyzed: 2-9-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-19-58

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	5.0	
Nickel	**8.55**	**8.05**	6	2.5	

Date of Report: February 18, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019D
Project: 5147-006-10

TOTAL METALS
EPA 6020A
DUPLICATE QUALITY CONTROL

Date Extracted: 2-9-15
Date Analyzed: 2-17-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-019-58

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	2.5	

Date of Report: February 18, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019D
Project: 5147-006-10

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 2-9-15
Date Analyzed: 2-9-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-19-58

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**104**	104	**101**	101	3	
Nickel	100	**108**	99	**105**	96	3	

Date of Report: February 18, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019D
Project: 5147-006-10

TOTAL ARSENIC
EPA 6020A
MS/MSD QUALITY CONTROL

Date Extracted: 2-9-15
Date Analyzed: 2-17-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-019-58

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**94.3**	94	**94.3**	94	0	

Date of Report: February 18, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019D
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV020915P	1.00	1.03	-3.0	+/- 10%
Nickel	ICV020915P	1.00	1.07	-7.0	+/- 10%
Arsenic	LLICV020915P	0.100	0.109	-9.0	+/- 30%
Nickel	LLICV020915P	0.0200	0.0209	-4.5	+/- 30%
Arsenic	CCV1020915P	10.0	10.3	-3.0	+/- 10%
Nickel	CCV1020915P	2.00	2.09	-4.5	+/- 10%
Arsenic	CCV2020915P	10.0	10.5	-5.0	+/- 10%
Nickel	CCV2020915P	2.00	2.10	-5.0	+/- 10%
Arsenic	CCV3020915P	10.0	10.4	-4.0	+/- 10%
Nickel	CCV3020915P	2.00	2.08	-4.0	+/- 10%
Arsenic	LLCCV3020915P	0.100	0.108	-8.0	+/- 30%
Nickel	LLCCV3020915P	0.0200	0.0207	-3.5	+/- 30%
Arsenic	CCV4020915P	10.0	10.5	-5.0	+/- 10%
Nickel	CCV4020915P	2.00	2.11	-5.5	+/- 10%
Arsenic	LLCCV4020915P	0.100	0.120	-20	+/- 30%
Nickel	LLCCV4020915P	0.0200	0.0220	-10	+/- 30%
Arsenic	CCV5020915P	10.0	10.4	-4.0	+/- 10%
Nickel	CCV5020915P	2.00	2.08	-4.0	+/- 10%
Arsenic	LLCCV5020915P	0.100	0.0946	5.4	+/- 30%
Nickel	LLCCV5020915P	0.0200	0.0226	-13	+/- 30%

Date of Report: February 18, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019D
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV6020915P	10.0	10.5	-5.0	+/- 10%
Nickel	CCV6020915P	2.00	2.06	-3.0	+/- 10%
Arsenic	LLCCV6020915P	0.100	0.101	-1.0	+/- 30%
Nickel	LLCCV6020915P	0.0200	0.0207	-3.5	+/- 30%
Arsenic	CCV7020915P	10.0	10.4	-4.0	+/- 10%
Nickel	CCV7020915P	2.00	2.06	-3.0	+/- 10%
Arsenic	LLCCV7020915P	0.100	0.120	-20	+/- 30%
Nickel	LLCCV7020915P	0.0200	0.0210	-5.0	+/- 30%
Arsenic	CCV8020915P	10.0	10.5	-5.0	+/- 10%
Nickel	CCV8020915P	2.00	2.05	-2.5	+/- 10%
Arsenic	LLCCV8020915P	0.100	0.113	-13	+/- 30%
Nickel	LLCCV8020915P	0.0200	0.0202	-1.0	+/- 30%
Arsenic	CCV9020915P	10.0	10.6	-6.0	+/- 10%
Nickel	CCV9020915P	2.00	2.07	-3.5	+/- 10%
Arsenic	LLCCV9020915P	0.100	0.122	-22	+/- 30%
Nickel	LLCCV9020915P	0.0200	0.0223	-12	+/- 30%
Arsenic	CCV10020915P	10.0	10.7	-7.0	+/- 10%
Nickel	CCV10020915P	2.00	2.10	-5.0	+/- 10%
Arsenic	LLCCV10020915P	0.100	0.123	-23	+/- 30%
Nickel	LLCCV10020915P	0.0200	0.0221	-11	+/- 30%

Date of Report: February 18, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019D
Project: 5147-006-10

TOTAL METALS
EPA 6020A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference
Arsenic	ICV021715X	0.0500	0.0499	0.20
Arsenic	LLICV3021715X	0.000500	0.000584	-17
Arsenic	CCV1021715X	0.0400	0.0396	1.0
Arsenic	CCV2021715X	0.0400	0.0397	0.75
Arsenic	LLCCV2021715X	0.000500	0.000560	-12
Arsenic	CCV3021715X	0.0400	0.0397	0.75
Arsenic	LLCCV3021715X	0.000500	0.000483	3.4

Date of Report: February 18, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019D
Project: 5147-006-10

TOTAL METALS
EPA 6020A
CONTINUING CALIBRATION SUMMARY

Control Limits	Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
+/- 10%	Arsenic	CCV2	10.0		100.0	+/- 10%
+/- 30%	Arsenic	CCV3	10.0		100.0	+/- 10%
+/- 10%	Arsenic	LLCCV3	0.100		100.0	+/- 30%
+/- 10%	Arsenic	LLCCV4	0.100		100.0	+/- 30%
+/- 30%	Arsenic	CCV3	10.0		100.0	+/- 10%
+/- 10%	Arsenic	LLCCV3	0.100		100.0	+/- 30%
+/- 30%	Arsenic	CCV3	10.0		100.0	+/- 10%
	Arsenic	LLCCV3	0.100		100.0	+/- 30%

Date of Report: February 18, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-019D
Project: 5147-006-10

% MOISTURE

Date Analyzed: 2-9-15

Client ID	Lab ID	% Moisture
GEI-29_5-6_093014	10-019-53	13
GEI-29_8-9_093014	10-019-54	31
GEI-29_9-10_093014	10-019-55	17

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

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Chain of Custody

Page 1 of 6

Laboratory Number: 10-019

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracy
Sampled by: Robert Trahan // Nat Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
1	GEI-13_2-3_093014	9/30/14	1100	S	1																	●	X				X
2	GEI-13_5-6_093014		1105																			●	●				●
3	GEI-13_7-8_093014		1110																			●	●				●
4	GEI-13_9-10_093014		1115																								
5	GEI-14_2-3_093014		1150																			●	X				X
6	GEI-14_3.5-4.5_093014		1155																			●	●				●
7	GEI-14_7-8_093014		1200																			●	●				●
8	GEI-14_9-10_093014		1205																				○				○
9	GEI-15_2-3_093014		1335																				●				●
10	GEI-15_5.5-6.5_093014	↓	1340	↓	5								⊗									●	○				⊗

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	10/2/14	0950
Received	[signature]	GEI	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

⊗ Added 10/10/14 STA
● Added 11/17/14. DB (STA)
○ - added 1/7/15. DB (STA)
⊖ Added 2/4/15. DB (STA)

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

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Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DLI
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nate Stoman

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Dissolved Arsenic					% Moisture
11	GEI-15_10-11_093014	9/30/14	1345	S	1																	●					●
12	GEI-15_12-13_093014		1350																								
13	GEI-16_2-3_093014		1125																			●	●				●
14	GEI-16_4-5_093014		1130																								
15	GEI-16_6-7_093014		1135																			●	●				●
16	GEI-16_8-9_093014		1140																			⊖	⊖				⊖
17	GEI-17_1-2_093014		1245																			●					●
18	GEI-17_4-5_093014		1255																				●				●
19	GEI-17_7-8_093014		1250																			X	●				X
20	GEI-17_9-10_093014	↓	1300	↓	↓																	○	○				○

	Signature	Company	Date	Time
Relinquished		GEI 10/2/14	~~9/2/14~~	950
Received		OSE	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				

Comments/Special Instructions

Reviewed/Date

Reviewed/Date

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐

Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

OnSite Environmental Inc.
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Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DC1
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nat Solomon

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
21	GEI-18-1-2-093014	9/30/14	1305	S	1																	●	●				●
22	GEI-18-4-5-093014		1310																			●	●				●
23	GEI-18-8-9-093014		1315																			X	X				X
24	GEI-18-9-10-093014		1320																			●	●				●
25	GEI-19-2-3-093014		1215																			○					○
26	GEI-19-4-5-093014		1220																				○				○
27	GEI-19-7-8-093014		1225																				○				○
28	GEI-19-9-10-093014		1230																			○					○
29	GEI-20-2-3-093014		1400																			○					○
30	GEI-20-4-5-093014	↓	1405	↓	↓																		⊖				⊖

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10/2/14	950	
Received		CORE	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

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Chain of Custody

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Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DLI
Project Manager: Brian Tracey
Sampled by: Robert Trahan / Nate Sloman

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Diesel	Arsenic				% Moisture
31	GEI-20_6-7_09301814	9/30/14	1410	S	1								X														X
32	GEI-20_8-9_09301814	"	1415	"	"																		○				○
33	GEI-21_1-2_09301814	"	1500	"	"																	○					○
34	GEI-21_5-6_09301814	"	1505	"	"								X									X	X				X
35	GEI-21_7.5-8.5_09301814	"	1510	"	"								X										○				X
36	GEI-21_9-10_09301814	"	1515	"	"																						
37	GEI-23_1-2_09301814	"	1520	"	"																	●	●				●
38	GEI-23_2.5-3.5_09301814	"	1525	"	"																						
39	GEI-23_5-6_09301814	"	1530	"	"																		●				●
40	GEI-23_7.5-8.5_09301814	"	1535	"	"								X										○				X

	Signature	Company	Date	Time
Relinquished		GEI	10/2/14	0950
Received		GEI	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

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Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DLI
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nate Stamm

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
41	GEI-24-2-3-093014	9/30/14	1605	S	1																	●	●				●
42	GEI-24-4-5-093014		1610																				●				●
43	GEI-24-6-7-093014		1615																				○				○
44	GEI-24-9-10-093014		1620																				○				○
45	GEI-25-1-2-093014		1800																			●	○				●
46	GEI-25-4-5-093014		1805																			●	●				●
47	GEI-25-7-8-093014		1810																			X	X				X
48	GEI-25-9-10-093014		1815																			●					●
49	GEI-26-2-3-093014		1700																			○	○				○
50	GEI-26-4-5-093014	↓	1705	↓	↓																						

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10/2/14	950	
Received		GEI	10/2/14	950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GEO Engineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nat Solomon

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☑ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 10-019

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Dissolved Nickel	Dissolved Arsenic				% Moisture
51	GEI-26-6-7_TO 093014	9/30/14	1710	S	1																	X	X				X
52	GEI-29_2-3_093014		1625																			○	⊖				○
53	GEI-29_5-6_093014		1630																				⊖				⊖
54	GEI-29_8-9_093014		1635																				⊖				⊖
55	GEI-29_9-10_093014		1640																				⊖				⊖
56	GEI-30_3-4_093014		1710																			●	○				●
57	GEI-30_5-6_093014		1745																								
58	GEI-30_7-8_093014		1750																			●	⊖				●
59	GEI-30_9-10_093014		1755																			○	⊖				○

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10/2/14	950	
Received		GEO	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Sample/Cooler Receipt and Acceptance Checklist

Client: GE

Client Project Name/Number: 5147-006-10

OnSite Project Number: 10-019

Initiated by: MV

Date Initiated: 10/2/14

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	N/A	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	N/A	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	Yes	No		1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	Yes	No	Temperature: 1.2		
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	N/A			
1.7 How were the samples delivered?	Client	Courier	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	Yes	No	1 2 3 4	
2.2 Was the COC legible and written in permanent ink?	Yes	No	1 2 3 4	
2.3 Have samples been relinquished and accepted by each custodian?	Yes	No	1 2 3 4	
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	No	1 2 3 4	
2.5 Were all of the samples listed on the COC submitted?	Yes	No	1 2 3 4	
2.6 Were any of the samples submitted omitted from the COC?	Yes	No	1 2 3 4	

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	No	1 2 3 4	
3.2 Were any sample labels missing or illegible?	Yes	No	1 2 3 4	
3.3 Have the correct containers been used for each analysis requested?	Yes	No	1 2 3 4	
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	N/A	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	Yes	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	No		1 2 3 4
3.8 Was method 5035A used?	Yes	No	N/A	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		N/A	1 2 3 4

Explain any discrepancies:

24) Sample 52) GEI-29-2-3_093014 9/30/14 1625 on COC
1640 on label

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

RAW DATA

- Total Metals EPA 6010C Data

Total Metals Data

P150209F1C. Mean Only Report 2/13/2015, 12:25:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
Blank	As 188.980	0.000	ppb	2/9/2015, 8:07:03 AM
	Ni 231.604	0.000	ppb	
Standard 5	As 188.980	100.00	ppb	2/9/2015, 8:57:40 AM
	Ni 231.604	20.000	ppb	
Standard 4	As 188.980	1000.0	ppb	2/9/2015, 8:17:14 AM
	Ni 231.604	200.00	ppb	
Standard 3	As 188.980	10000	ppb	2/9/2015, 8:22:21 AM
	Ni 231.604	2000.0	ppb	
Standard 2	As 188.980	25000	ppb	2/9/2015, 8:27:25 AM
	Ni 231.604	5000.0	ppb	
Standard 1	Ni 231.604	10000	ppb	2/9/2015, 8:32:30 AM
Initial Calib Verif	As 188.980	1028.2	ppb	2/9/2015, 9:06:26 AM
	Ni 231.604	1065.5	ppb	
LLICV	As 188.980	109.07	ppb	2/9/2015, 9:15:40 AM
	Ni 231.604	20.892	ppb	
Initial Calib Blank	As 188.980	2.466uv	ppb	2/9/2015, 9:22:48 AM
	Ni 231.604	2.390uv	ppb	
Cont Calib Verif	As 188.980	10336	ppb	2/9/2015, 9:27:53 AM
	Ni 231.604	2085.2	ppb	
Cont Calib Blank	As 188.980	20.128	ppb	2/9/2015, 9:34:53 AM
	Ni 231.604	3.282uv	ppb	
ICSA	As 188.980	23.622	ppb	2/9/2015, 9:39:56 AM
	Ni 231.604	8.254	ppb	
ICSAB	As 188.980	2531.4	ppb	2/9/2015, 9:44:59 AM
	Ni 231.604	879.59	ppb	
MB0209WH2	As 188.980	5.357uv	ppb	2/9/2015, 9:59:59 AM
	Ni 231.604	2.391	ppb	
SB0209WH2	As 188.980	2202.6	ppb	2/9/2015, 10:07:16 AM
	Ni 231.604	2172.5	ppb	
02-021-01a	As 188.980	25.060	ppb	2/9/2015, 10:12:23 AM
	Ni 231.604	5.078	ppb	
02-021-01a D	As 188.980	6.170uv	ppb	2/9/2015, 10:17:28 AM
	Ni 231.604	1.640uv	ppb	
02-021-01a L	As 188.980	9.087uv	ppb	2/9/2015, 10:22:33 AM
	Ni 231.604	0.189uv	ppb	

P150209F1C. Mean Only Report 2/13/2015, 12:25:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
02-021-01a MS	As 188.980	2182.0	ppb	2/9/2015, 10:27:38 AM
	Ni 231.604	2114.1	ppb	
02-021-01a MSD	As 188.980	2149.6	ppb	2/9/2015, 10:32:44 AM
	Ni 231.604	2095.2	ppb	
02-056-01c	As 188.980	10.353uv	ppb	2/9/2015, 10:37:50 AM
	Ni 231.604	8.374	ppb	
Cont Calib Verif	As 188.980	10472	ppb	2/9/2015, 10:42:57 AM
	Ni 231.604	2103.1	ppb	
Cont Calib Blank	As 188.980	-5.784uv	ppb	2/9/2015, 10:49:54 AM
	Ni 231.604	-1.318uv	ppb	
MB0206SM2	As 188.980	9.974	ppb	2/9/2015, 11:03:40 AM
	Ni 231.604	0.014uv	ppb	
SB0206SM2	As 188.980	2009.7	ppb	2/9/2015, 11:08:46 AM
	Ni 231.604	2088.0	ppb	
02-013-04a	As 188.980	153.44	ppb	2/9/2015, 11:13:49 AM
	Ni 231.604	592.91	ppb	
02-013-04a D	As 188.980	157.88	ppb	2/9/2015, 11:18:55 AM
	Ni 231.604	630.39	ppb	
02-013-04a L	As 188.980	32.951	ppb	2/9/2015, 11:23:57 AM
	Ni 231.604	127.77	ppb	
02-013-04a MS	As 188.980	2041.0	ppb	2/9/2015, 11:29:00 AM
	Ni 231.604	2434.1	ppb	
02-013-04a MSD	As 188.980	2064.8	ppb	2/9/2015, 11:34:06 AM
	Ni 231.604	2525.6	ppb	
02-013-01a	As 188.980	1987.4	ppb	2/9/2015, 11:39:11 AM
	Ni 231.604	581.12	ppb	
02-013-02a	As 188.980	1931.5	ppb	2/9/2015, 11:44:15 AM
	Ni 231.604	1308.4	ppb	
02-013-03a	As 188.980	71.072	ppb	2/9/2015, 11:49:20 AM
	Ni 231.604	473.32	ppb	
Cont Calib Verif	As 188.980	10406	ppb	2/9/2015, 11:54:24 AM
	Ni 231.604	2078.1	ppb	
Cont Calib Blank	As 188.980	12.510	ppb	2/9/2015, 12:00:05 PM
	Ni 231.604	1.062uv	ppb	
LLCCV	As 188.980	108.36	ppb	2/9/2015, 12:05:09 PM

P150209F1C. Mean Only Report 2/13/2015, 12:25:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	20.681	ppb	
02-013-05a	As 188.980	1199.3	ppb	2/9/2015, 12:13:14 PM
	Ni 231.604	1503.2	ppb	
02-013-06a	As 188.980	153.00	ppb	2/9/2015, 12:18:20 PM
	Ni 231.604	259.31	ppb	
02-013-07a	As 188.980	66.261	ppb	2/9/2015, 12:23:26 PM
	Ni 231.604	715.26	ppb	
02-013-09a	As 188.980	56.773	ppb	2/9/2015, 12:28:32 PM
	Ni 231.604	675.99	ppb	
02-013-10a	As 188.980	86.894	ppb	2/9/2015, 12:33:37 PM
	Ni 231.604	590.09	ppb	
02-013-11a	As 188.980	208.38	ppb	2/9/2015, 12:38:43 PM
	Ni 231.604	362.72	ppb	
02-013-12a	As 188.980	89.418	ppb	2/9/2015, 12:43:50 PM
	Ni 231.604	742.85	ppb	
02-013-13a	As 188.980	75.346	ppb	2/9/2015, 12:48:55 PM
	Ni 231.604	914.29	ppb	
02-013-14a	As 188.980	119.12	ppb	2/9/2015, 12:54:00 PM
	Ni 231.604	460.80	ppb	
02-013-15a	As 188.980	60.563	ppb	2/9/2015, 12:59:05 PM
	Ni 231.604	217.36	ppb	
Cont Calib Verif	As 188.980	10526	ppb	2/9/2015, 1:11:52 PM
	Ni 231.604	2109.3	ppb	
Cont Calib Blank	As 188.980	38.393	ppb	2/9/2015, 1:16:56 PM
	Ni 231.604	-1.180uv	ppb	
LLCCV	As 188.980	119.86	ppb	2/9/2015, 1:30:14 PM
	Ni 231.604	22.042	ppb	
02-013-17a	As 188.980	117.95	ppb	2/9/2015, 1:42:13 PM
	Ni 231.604	453.78	ppb	
02-013-18a	As 188.980	90.174	ppb	2/9/2015, 1:47:22 PM
	Ni 231.604	358.99	ppb	
02-013-19a	As 188.980	47.868	ppb	2/9/2015, 1:52:27 PM
	Ni 231.604	811.87	ppb	
02-013-20a	As 188.980	269.92	ppb	2/9/2015, 1:57:33 PM
	Ni 231.604	387.23	ppb	

P150209F1C. Mean Only Report 2/13/2015, 12:25:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
02-013-21a	As 188.980	83.708	ppb	2/9/2015, 2:02:39 PM
	Ni 231.604	196.39	ppb	
02-013-22a	As 188.980	115.68	ppb	2/9/2015, 2:07:45 PM
	Ni 231.604	220.76	ppb	
MB0209SM1	As 188.980	9.558uv	ppb	2/9/2015, 2:12:50 PM
	Ni 231.604	2.063uv	ppb	
SB0209SM1	As 188.980	2063.1	ppb	2/9/2015, 2:17:54 PM
	Ni 231.604	2111.6	ppb	
10-019-58	As 188.980	31.790	ppb	2/9/2015, 2:23:00 PM
	Ni 231.604	170.72	ppb	
10-019-58 D	As 188.980	41.415	ppb	2/9/2015, 2:28:09 PM
	Ni 231.604	161.34	ppb	
Cont Calib Verif	As 188.980	10435	ppb	2/9/2015, 2:33:17 PM
	Ni 231.604	2076.4	ppb	
Cont Calib Blank	As 188.980	18.712	ppb	2/9/2015, 2:44:34 PM
	Ni 231.604	3.231uv	ppb	
LLCCV	As 188.980	94.566	ppb	2/9/2015, 2:49:39 PM
	Ni 231.604	22.582	ppb	
10-019-58 L	As 188.980	12.246	ppb	2/9/2015, 2:55:34 PM
	Ni 231.604	36.108	ppb	
10-019-58 MS	As 188.980	2074.6	ppb	2/9/2015, 3:00:38 PM
	Ni 231.604	2153.0	ppb	
10-019-58 MSD	As 188.980	2019.3	ppb	2/9/2015, 3:05:41 PM
	Ni 231.604	2099.2	ppb	
02-073-01c	As 188.980	4.859uv	ppb	2/9/2015, 3:10:47 PM
	Ni 231.604	5.314uv	ppb	
blk	As 188.980	6.278uv	ppb	2/9/2015, 3:15:51 PM
	Ni 231.604	-0.444uv	ppb	
MB0209SM2	As 188.980	22.614	ppb	2/9/2015, 3:20:55 PM
	Ni 231.604	5.562	ppb	
SB0209SM2	As 188.980	2084.7	ppb	2/9/2015, 3:26:00 PM
	Ni 231.604	2099.6	ppb	
01-156-05	As 188.980	322.04	ppb	2/9/2015, 3:31:03 PM
	Ni 231.604	571.35	ppb	

P150209F1C. Mean Only Report 2/13/2015, 12:25:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
01-156-05 D	As 188.980	306.98	ppb	2/9/2015, 3:36:06 PM
	Ni 231.604	564.00	ppb	
01-156-05 L	As 188.980	65.114	ppb	2/9/2015, 3:41:11 PM
	Ni 231.604	120.83	ppb	
Cont Calib Verif	As 188.980	10520	ppb	2/9/2015, 4:19:56 PM
	Ni 231.604	2064.8	ppb	
Cont Calib Blank	As 188.980	15.425	ppb	2/9/2015, 4:27:38 PM
	Ni 231.604	2.276	ppb	
LLCCV	As 188.980	100.54	ppb	2/9/2015, 4:42:00 PM
	Ni 231.604	20.653	ppb	
02-073-01c(0209WH2)	As 188.980	22.267	ppb	2/9/2015, 4:48:09 PM
	Ni 231.604	5.237	ppb	
01-156-05 MS	As 188.980	2265.3	ppb	2/9/2015, 4:53:13 PM
	Ni 231.604	2492.3	ppb	
01-156-05 MSD	As 188.980	2309.4	ppb	2/9/2015, 4:58:17 PM
	Ni 231.604	2513.9	ppb	
01-156-02	As 188.980	229.09	ppb	2/9/2015, 5:03:22 PM
	Ni 231.604	659.84	ppb	
01-226-01a	As 188.980	190.39	ppb	2/9/2015, 5:08:27 PM
	Ni 231.604	534.99	ppb	
01-226-02a	As 188.980	135.52	ppb	2/9/2015, 5:13:33 PM
	Ni 231.604	523.68	ppb	
01-226-03a	As 188.980	151.90	ppb	2/9/2015, 5:18:36 PM
	Ni 231.604	474.53	ppb	
01-226-04a	As 188.980	104.09	ppb	2/9/2015, 5:23:42 PM
	Ni 231.604	553.31	ppb	
01-239-05	As 188.980	138.59	ppb	2/9/2015, 5:28:48 PM
	Ni 231.604	539.48	ppb	
01-239-11	As 188.980	155.31	ppb	2/9/2015, 5:33:53 PM
	Ni 231.604	753.34	ppb	
Cont Calib Verif	As 188.980	10417	ppb	2/9/2015, 5:38:57 PM
	Ni 231.604	2055.7	ppb	
Cont Calib Blank	As 188.980	15.323	ppb	2/9/2015, 5:48:42 PM
	Ni 231.604	0.480uv	ppb	
LLCCV	As 188.980	119.96	ppb	2/9/2015, 5:53:46 PM

P150209F1C. Mean Only Report 2/13/2015, 12:25:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	21.035	ppb	
01-239-18	As 188.980	100.03	ppb	2/9/2015, 6:03:41 PM
	Ni 231.604	566.64	ppb	
01-239-23	As 188.980	158.17	ppb	2/9/2015, 6:08:48 PM
	Ni 231.604	950.30	ppb	
01-239-27	As 188.980	110.36	ppb	2/9/2015, 6:13:53 PM
	Ni 231.604	610.42	ppb	
01-239-34	As 188.980	130.73	ppb	2/9/2015, 6:19:00 PM
	Ni 231.604	623.43	ppb	
02-030-01a	As 188.980	62.431	ppb	2/9/2015, 6:24:07 PM
	Ni 231.604	255.11	ppb	
02-040-01a	As 188.980	38.577	ppb	2/9/2015, 6:29:14 PM
	Ni 231.604	516.47	ppb	
02-040-02a	As 188.980	31.512	ppb	2/9/2015, 6:34:20 PM
	Ni 231.604	519.27	ppb	
02-013-23	As 188.980	173.06	ppb	2/9/2015, 6:39:26 PM
	Ni 231.604	696.42	ppb	
02-013-24	As 188.980	82.059	ppb	2/9/2015, 6:44:31 PM
	Ni 231.604	384.05	ppb	
02-013-25	As 188.980	299.47	ppb	2/9/2015, 6:49:38 PM
	Ni 231.604	541.39	ppb	
Cont Calib Verif	As 188.980	10463	ppb	2/9/2015, 6:54:44 PM
	Ni 231.604	2052.1	ppb	
Cont Calib Blank	As 188.980	12.283uv	ppb	2/9/2015, 7:00:06 PM
	Ni 231.604	6.813	ppb	
LLCCV	As 188.980	113.33	ppb	2/9/2015, 7:13:37 PM
	Ni 231.604	20.234	ppb	
10-019-16(0209SM1)	As 188.980	66.759	ppb	2/9/2015, 7:28:54 PM
	Ni 231.604	259.58	ppb	
10-019-30	As 188.980	116.23	ppb	2/9/2015, 7:34:02 PM
	Ni 231.604	654.07	ppb	
10-019-32	As 188.980	32.812	ppb	2/9/2015, 7:39:10 PM
	Ni 231.604	283.64	ppb	
10-019-52	As 188.980	54.827	ppb	2/9/2015, 7:44:18 PM
	Ni 231.604	452.28	ppb	

P150209F1C. Mean Only Report 2/13/2015, 12:25:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
10-019-53	As 188.980	111.68	ppb	2/9/2015, 7:49:24 PM
	Ni 231.604	758.80	ppb	
10-019-54	As 188.980	57.520	ppb	2/9/2015, 7:54:29 PM
	Ni 231.604	313.99	ppb	
10-019-55	As 188.980	54.780	ppb	2/9/2015, 7:59:34 PM
	Ni 231.604	139.11	ppb	
10-019-59	As 188.980	12.243uv	ppb	2/9/2015, 8:04:40 PM
	Ni 231.604	171.40	ppb	
10-020-07	As 188.980	402.28	ppb	2/9/2015, 8:09:45 PM
	Ni 231.604	398.32	ppb	
BLK	As 188.980	3.803uv	ppb	2/9/2015, 8:14:51 PM
	Ni 231.604	3.318	ppb	
Cont Calib Verif	As 188.980	10645	ppb	2/9/2015, 8:19:57 PM
	Ni 231.604	2071.2	ppb	
Cont Calib Blank	As 188.980	26.813	ppb	2/9/2015, 8:25:02 PM
	Ni 231.604	2.940	ppb	
LLCCV	As 188.980	121.60	ppb	2/9/2015, 8:30:09 PM
	Ni 231.604	22.335	ppb	
10-020-08	As 188.980	42.763	ppb	2/9/2015, 8:35:15 PM
	Ni 231.604	132.98	ppb	
10-020-11	As 188.980	109.98	ppb	2/9/2015, 8:40:23 PM
	Ni 231.604	629.69	ppb	
10-020-19	As 188.980	30.699	ppb	2/9/2015, 8:45:31 PM
	Ni 231.604	253.83	ppb	
10-020-30	As 188.980	81.219	ppb	2/9/2015, 8:50:38 PM
	Ni 231.604	278.86	ppb	
10-020-35	As 188.980	90.879	ppb	2/9/2015, 8:55:44 PM
	Ni 231.604	793.22	ppb	
10-020-40	As 188.980	29.665	ppb	2/9/2015, 9:00:51 PM
	Ni 231.604	142.89	ppb	
10-021-44	As 188.980	94.842	ppb	2/9/2015, 9:05:59 PM
	Ni 231.604	606.58	ppb	
BLK	As 188.980	-14.978uv	ppb	2/9/2015, 9:11:07 PM
	Ni 231.604	4.777	ppb	

P150209F1C. Mean Only Report 2/13/2015, 12:25:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
Cont Calib Verif	As 188.980	10736	ppb	2/9/2015, 9:16:16 PM
	Ni 231.604	2096.3	ppb	
Cont Calib Blank	As 188.980	12.136uv	ppb	2/9/2015, 9:21:24 PM
	Ni 231.604	1.906uv	ppb	
LLCCV	As 188.980	123.30	ppb	2/9/2015, 9:26:31 PM
	Ni 231.604	22.136	ppb	

Dataset Report

User Name: kmckinney
Computer Name: ICPMS-2013
Dataset File Path: C:\NexION Data\DataSet\x150217b\
Report Date/Time: Tuesday, February 17, 2015 17:32:13

The Dataset

Batch ID	Sample ID	Date and Time	Read Type	Samp. File Name	Description
	Blank	15:03:28 Tue 17-F	Blank	C:\NexION Data\DataSet\x150217b\Blank.001	
	Standard 2	15:07:43 Tue 17-F	Standard #2	C:\NexION Data\DataSet\x150217b\Standard 2.002	
	Standard 3	15:11:59 Tue 17-F	Standard #3	C:\NexION Data\DataSet\x150217b\Standard 3.003	
	Standard 5	15:16:14 Tue 17-F	Standard #5	C:\NexION Data\DataSet\x150217b\Standard 5.004	
	Standard 6	15:20:29 Tue 17-F	Standard #6	C:\NexION Data\DataSet\x150217b\Standard 6.005	
	Standard 7	15:24:44 Tue 17-F	Standard #7	C:\NexION Data\DataSet\x150217b\Standard 7.006	
	QC Std 1	15:29:19 Tue 17-F	QC Std #1	C:\NexION Data\DataSet\x150217b\QC Std 1.007	
	QC Std 2	15:33:54 Tue 17-F	QC Std #2	C:\NexION Data\DataSet\x150217b\QC Std 2.008	
	QC Std 3	15:38:09 Tue 17-F	QC Std #3	C:\NexION Data\DataSet\x150217b\QC Std 3.009	
	QC Std 4	15:42:24 Tue 17-F	QC Std #4	C:\NexION Data\DataSet\x150217b\QC Std 4.010	
	QC Std 6	15:46:39 Tue 17-F	QC Std #6	C:\NexION Data\DataSet\x150217b\QC Std 6.011	
	QC Std 8	15:51:14 Tue 17-F	QC Std #8	C:\NexION Data\DataSet\x150217b\QC Std 8.012	
	ICSA	15:55:29 Tue 17-F	Sample	C:\NexION Data\DataSet\x150217b\ICSA.013	
	ICSAB	15:59:43 Tue 17-F	Sample	C:\NexION Data\DataSet\x150217b\ICSAB.014	
	MB0209SM1 50X	16:03:57 Tue 17-F	Sample	C:\NexION Data\DataSet\x150217b\MB0209SM1 50X.015	
	SB0209SM1 50X	16:08:10 Tue 17-F	Sample	C:\NexION Data\DataSet\x150217b\SB0209SM1 50X.016	
	10 02-019-58 50X	16:12:24 Tue 17-F	Sample	C:\NexION Data\DataSet\x150217b\02-019-58 50X.017	
	10 02-019-58D 50X	16:16:37 Tue 17-F	Sample	C:\NexION Data\DataSet\x150217b\02-019-58D 50X.018	
BL 2-17-15	10 02-019-58L 250X	16:20:51 Tue 17-F	Sample	C:\NexION Data\DataSet\x150217b\02-019-58L 250X.019	
	10 02-019-58MS 50X	16:25:06 Tue 17-F	Sample	C:\NexION Data\DataSet\x150217b\02-019-58MS 50X.020	
	10 02-019-58MSD 50X	16:29:21 Tue 17-F	Sample	C:\NexION Data\DataSet\x150217b\02-019-58MSD 50X.021	
	BL	16:33:36 Tue 17-F	Sample	C:\NexION Data\DataSet\x150217b\BL.022	
	QC Std 6	16:37:52 Tue 17-F	QC Std #6	C:\NexION Data\DataSet\x150217b\QC Std 6.023	
	QC Std 8	16:42:26 Tue 17-F	QC Std #8	C:\NexION Data\DataSet\x150217b\QC Std 8.024	
	QC Std 9	16:46:41 Tue 17-F	QC Std #9	C:\NexION Data\DataSet\x150217b\QC Std 9.025	
	QC Std 10	16:50:56 Tue 17-F	QC Std #10	C:\NexION Data\DataSet\x150217b\QC Std 10.026	
	10-019-58PS 50X	16:56:21 Tue 17-F	Sample	C:\NexION Data\DataSet\x150217b\10-019-58PS 50X.027	
	10-019-32 50X	17:00:37 Tue 17-F	Sample	C:\NexION Data\DataSet\x150217b\10-019-32 50X.028	
	10-019-54 50X	17:04:51 Tue 17-F	Sample	C:\NexION Data\DataSet\x150217b\10-019-54 50X.029	
	10-020-30 50X	17:09:06 Tue 17-F	Sample	C:\NexION Data\DataSet\x150217b\10-020-30 50X.030	
	BL	17:13:20 Tue 17-F	Sample	C:\NexION Data\DataSet\x150217b\BL.031	
	QC Std 6	17:17:35 Tue 17-F	QC Std #6	C:\NexION Data\DataSet\x150217b\QC Std 6.032	
	QC Std 8	17:22:11 Tue 17-F	QC Std #8	C:\NexION Data\DataSet\x150217b\QC Std 8.033	
	QC Std 9	17:26:26 Tue 17-F	QC Std #9	C:\NexION Data\DataSet\x150217b\QC Std 9.034	
	QC Std 10	17:30:41 Tue 17-F	QC Std #10	C:\NexION Data\DataSet\x150217b\QC Std 10.035	

Quantitative Analysis - Summary Report

Sample ID: Blank

Sample Date/Time: Tuesday, February 17, 2015 15:03:28
Report Date/Time: Tuesday, February 17, 2015 15:04:52
Solution Type: Blank
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	794809.1	4.5				ug/L		Standard
>	Ge	72	328950.7	3.8				ug/L		Standard
	As	75	7774.9	4.1				ug/L		Standard
	As-1	75	-37.7	178.2				ug/L		Standard
	Se	77	133.7	10.3				ug/L		Standard
	Se	78	8010.9	3.2				ug/L		Standard
	Br	79	588.3	7.2				ug/L		Standard
	Se	82	89.7	6.5				ug/L		Standard
	Kr	83	75.7	17.7				ug/L		Standard
	Y	89	804260.3	3.9				ug/L		Standard
	In	115	624548.7	2.7				ug/L		Standard
>	Ge-1	72	9406.8	0.6				ug/L		KED
	As-2	75	2.7	114.6				ug/L		KED
	Y-1	89	19321.4	0.3				mg/L		KED
	In-1	115	16521.7	1.4				ug/L		KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 2

Sample Date/Time: Tuesday, February 17, 2015 15:07:43
Report Date/Time: Tuesday, February 17, 2015 15:09:07
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	831428.6	1.1				ug/L	794809	Standard
>	Ge	72	335419.4	0.5				ug/L	328951	Standard
	As	75	9367.2	0.4	**0.5000**	0.003	0.6	ug/L	7775	Standard
	As-1	75	963.8	5.1	**0.5000**	0.026	5.2	ug/L	-38	Standard
	Se	77	187.3	3.6	**0.5000**	0.074	14.8	ug/L	134	Standard
	Se	78	8985.5	0.5				ug/L	8011	Standard
	Br	79	655.0	4.7				ug/L	588	Standard
	Se	82	241.7	8.7	**0.5000**	0.073	14.6	ug/L	90	Standard
	Kr	83	79.7	13.3				ug/L	76	Standard
	Y	89	897811.4	1.3				ug/L	804260	Standard
	In	115	643277.2	1.4				ug/L	624549	Standard
>	Ge-1	72	9105.2	3.4				ug/L	9407	KED
	As-2	75	31.7	27.2	**0.5000**	0.133	26.5	ug/L	3	KED
	Y-1	89	19895.2	1.9				mg/L	19321	KED
	In-1	115	16790.5	3.6				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 3

Sample Date/Time: Tuesday, February 17, 2015 15:11:59
Report Date/Time: Tuesday, February 17, 2015 15:13:23
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION\Data\Sample\X150217B.sam
Method File: C:\NexION\Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	857470.9	2.5				ug/L	794809	Standard
⌈>	Ge	72	345462.9	1.3				ug/L	328951	Standard
|	As	75	11937.4	1.9	**1.9349**	0.094	4.9	ug/L	7775	Standard
|	As-1	75	3683.1	6.4	**1.9872**	0.105	5.3	ug/L	-38	Standard
|	Se	77	379.0	8.5	**2.0139**	0.233	11.6	ug/L	134	Standard
|	Se	78	9757.7	0.4	**2.0000**	0.210	10.5	ug/L	8011	Standard
|	Br	79	640.7	7.4				ug/L	588	Standard
⌊	Se	82	604.3	4.7	**1.9751**	0.084	4.2	ug/L	90	Standard
	Kr	83	77.7	11.5				ug/L	76	Standard
	Y	89	910967.5	1.9				ug/L	804260	Standard
	In	115	650319.5	1.6				ug/L	624549	Standard
⌈>	Ge-1	72	9197.3	1.2				ug/L	9407	KED
⌊	As-2	75	119.7	4.6	**2.0001**	0.111	5.5	ug/L	3	KED
	Y-1	89	20097.5	1.5				mg/L	19321	KED
	In-1	115	17564.5	0.4				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 5

Sample Date/Time: Tuesday, February 17, 2015 15:16:14
Report Date/Time: Tuesday, February 17, 2015 15:17:38
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION\Data\Sample\X150217B.sam
Method File: C:\NexION\Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	846371.7	4.0				ug/L	794809	Standard
⌈>	Ge	72	342623.2	1.8				ug/L	328951	Standard
|	As	75	40165.7	1.5	**19.9568**	0.256	1.3	ug/L	7775	Standard
|	As-1	75	36351.0	1.9	**19.9956**	0.174	0.9	ug/L	-38	Standard
|	Se	77	2526.6	1.1	**20.0035**	0.488	2.4	ug/L	134	Standard
|	Se	78	17280.4	1.9	**19.9028**	0.487	2.4	ug/L	8011	Standard
|	Br	79	607.0	4.3				ug/L	588	Standard
⌊	Se	82	5309.3	3.0	**20.0038**	0.323	1.6	ug/L	90	Standard
	Kr	83	83.7	15.4				ug/L	76	Standard
	Y	89	917614.2	2.4				ug/L	804260	Standard
	In	115	644614.5	1.2				ug/L	624549	Standard
⌈>	Ge-1	72	9485.5	1.1				ug/L	9407	KED
⌊	As-2	75	1120.0	2.9	**19.9831**	0.716	3.6	ug/L	3	KED
	Y-1	89	20494.0	1.1				mg/L	19321	KED
	In-1	115	17819.1	1.0				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 6

Sample Date/Time: Tuesday, February 17, 2015 15:20:29
Report Date/Time: Tuesday, February 17, 2015 15:21:53
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	839957.3	1.1				ug/L	794809	Standard
⌈>	**Ge**	72	337284.2	0.3				ug/L	328951	Standard
|	**As**	75	71949.0	0.2	**40.0885**	0.194	0.5	ug/L	7775	Standard
|	**As-1**	75	73124.6	0.4	**40.1661**	0.039	0.1	ug/L	-38	Standard
|	**Se**	77	5071.2	2.7	**40.3852**	1.017	2.5	ug/L	134	Standard
|	**Se**	78	25792.3	0.7	**39.9526**	0.360	0.9	ug/L	8011	Standard
|	**Br**	79	615.3	7.1				ug/L	588	Standard
⌊	**Se**	82	10619.9	1.5	**40.2014**	0.476	1.2	ug/L	90	Standard
	Kr	83	81.0	17.0				ug/L	76	Standard
	Y	89	909970.5	1.2				ug/L	804260	Standard
	In	115	635651.8	1.1				ug/L	624549	Standard
⌈>	**Ge-1**	72	9097.9	1.6				ug/L	9407	KED
⌊	**As-2**	75	2235.8	3.4	**40.3177**	0.779	1.9	ug/L	3	KED
	Y-1	89	20197.6	0.6				mg/L	19321	KED
	In-1	115	17366.3	1.6				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 7
Sample Date/Time: Tuesday, February 17, 2015 15:24:44
Report Date/Time: Tuesday, February 17, 2015 15:26:08
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION\Data\Sample\X150217B.sam
Method File: C:\NexION\Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	856767.9	2.2				ug/L	794809	Standard
[>	Ge	72	342033.0	1.4				ug/L	328951	Standard
|	As	75	171983.3	0.4	**100.2123**	1.280	1.3	ug/L	7775	Standard
|	As-1	75	187850.0	0.3	**100.2849**	1.391	1.4	ug/L	-38	Standard
|	Se	77	12692.3	1.6	**100.2202**	1.880	1.9	ug/L	134	Standard
|	Se	78	52712.4	1.4	**99.9152**	2.755	2.8	ug/L	8011	Standard
|	Br	79	616.7	4.8				ug/L	588	Standard
L	Se	82	26987.5	1.4	**100.2137**	2.475	2.5	ug/L	90	Standard
	Kr	83	81.3	9.2				ug/L	76	Standard
	Y	89	929886.8	1.8				ug/L	804260	Standard
	In	115	643628.1	1.1				ug/L	624549	Standard
[>	Ge-1	72	9178.3	0.9				ug/L	9407	KED
L	As-2	75	5727.5	0.8	**100.4035**	0.056	0.1	ug/L	3	KED
	Y-1	89	20025.4	1.5				mg/L	19321	KED
	In-1	115	17526.2	0.7				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
[>	72	Ge		
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
L	82	Se		
	83	Kr		
	89	Y		
	115	In		
[>	72	Ge-1		
L	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Tuesday, February 17, 2015 15:29:19
Report Date/Time: Tuesday, February 17, 2015 15:30:43
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	876301.5	1.2				ug/L	794809	Standard
[>	Ge	72	349155.2	0.8				ug/L	328951	Standard
|	As	75	91313.4	0.5	**49.7455**	0.307	0.6	ug/L	7775	Standard
|	As-1	75	95497.4	1.1	**49.9474**	0.587	1.2	ug/L	-38	Standard
|	Se	77	6575.8	3.5	**50.3067**	1.440	2.9	ug/L	134	Standard
|	Se	78	31086.8	1.6	**49.7929**	0.840	1.7	ug/L	8011	Standard
|	Br	79	617.7	6.6				ug/L	588	Standard
[	Se	82	13885.7	1.5	**50.3277**	0.567	1.1	ug/L	90	Standard
	Kr	83	69.3	12.3				ug/L	76	Standard
	Y	89	952144.3	0.8				ug/L	804260	Standard
	In	115	652295.0	0.8				ug/L	624549	Standard
[>	Ge-1	72	9196.0	1.4				ug/L	9407	KED
[	As-2	75	2873.3	1.6	**50.2569**	1.116	2.2	ug/L	3	KED
	Y-1	89	20382.2	1.1				mg/L	19321	KED
	In-1	115	17651.5	1.3				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
[>	72	Ge		106.142
|	75	As	99.491	
|	75	As-1	99.895	
|	77	Se	100.613	
|	78	Se	99.586	
|	79	Br		
[	82	Se	100.655	
	83	Kr		
	89	Y		
	115	In		
[>	72	Ge-1		97.759
[	75	As-2	100.514	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 2
Sample Date/Time: Tuesday, February 17, 2015 15:33:54
Report Date/Time: Tuesday, February 17, 2015 15:35:18
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	773659.3	1.9				ug/L	794809	Standard
⌈>	Ge	72	317849.1	1.2				ug/L	328951	Standard
|	As	75	7923.6	0.8	**0.2706**	0.023	8.6	ug/L	7775	Standard
|	As-1	75	208.6	23.6	**0.1406**	0.028	19.9	ug/L	-38	Standard
|	Se	77	145.0	10.4	**0.1373**	0.145	105.4	ug/L	134	Standard
|	Se	78	8048.3	0.6	**0.7464**	0.151	20.3	ug/L	8011	Standard
|	Br	79	488.0	9.2				ug/L	588	Standard
⌊	Se	82	142.7	2.5	**0.2247**	0.019	8.5	ug/L	90	Standard
	Kr	83	81.3	5.1				ug/L	76	Standard
	Y	89	813526.4	0.7				ug/L	804260	Standard
	In	115	607689.2	0.9				ug/L	624549	Standard
⌈>	Ge-1	72	8827.7	1.6				ug/L	9407	KED
⌊	As-2	75	4.7	81.1	**0.0390**	0.068	174.4	ug/L	3	KED
	Y-1	89	18552.0	1.6				mg/L	19321	KED
	In-1	115	16045.8	2.4				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		96.625
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		93.844
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Tuesday, February 17, 2015 15:38:09
Report Date/Time: Tuesday, February 17, 2015 15:39:33
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	825700.6	2.0				ug/L	794809	Standard
⌈>	Ge	72	333116.6	2.2				ug/L	328951	Standard
|	As	75	11865.7	1.9	**2.5064**	0.038	1.5	ug/L	7775	Standard
|	As-1	75	3819.7	3.6	**2.1135**	0.029	1.4	ug/L	-38	Standard
|	Se	77	383.0	2.0	**2.0304**	0.068	3.4	ug/L	134	Standard
|	Se	78	9685.6	1.2	**3.6391**	0.244	6.7	ug/L	8011	Standard
|	Br	79	562.7	1.0				ug/L	588	Standard
⌊	Se	82	657.7	4.7	**2.1686**	0.110	5.1	ug/L	90	Standard
	Kr	83	75.3	14.7				ug/L	76	Standard
	Y	89	910849.5	0.8				ug/L	804260	Standard
	In	115	624200.9	1.0				ug/L	624549	Standard
⌈>	Ge-1	72	8867.8	2.9				ug/L	9407	KED
⌊	As-2	75	114.0	6.1	**2.0270**	0.184	9.1	ug/L	3	KED
	Y-1	89	19238.3	2.6				mg/L	19321	KED
	In-1	115	16743.2	0.9				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		101.266
|	75	As	125.322	
|	75	As-1	105.677	
|	77	Se	101.520	
|	78	Se	181.957	
|	79	Br		
⌊	82	Se	108.430	
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		94.270
⌊	75	As-2	101.352	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 4
Sample Date/Time: Tuesday, February 17, 2015 15:42:24
Report Date/Time: Tuesday, February 17, 2015 15:43:48
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	834751.0	1.5				ug/L	794809	Standard
⌈>	**Ge**	72	331748.2	0.6				ug/L	328951	Standard
|	**As**	75	9412.3	2.5	**0.9900**	0.123	12.4	ug/L	7775	Standard
|	**As-1**	75	1023.2	13.3	**0.5839**	0.074	12.8	ug/L	-38	Standard
|	**Se**	77	197.7	1.6	**0.5174**	0.027	5.2	ug/L	134	Standard
|	**Se**	78	8991.5	1.8	**2.1163**	0.258	12.2	ug/L	8011	Standard
|	**Br**	79	575.7	5.2				ug/L	588	Standard
⌊	**Se**	82	249.7	2.4	**0.6117**	0.026	4.3	ug/L	90	Standard
	Kr	83	82.0	4.2				ug/L	76	Standard
	Y	89	903896.4	1.6				ug/L	804260	Standard
	In	115	624294.8	0.6				ug/L	624549	Standard
⌈>	**Ge-1**	72	9012.2	1.6				ug/L	9407	KED
⌊	**As-2**	75	25.3	41.1	**0.4066**	0.186	45.7	ug/L	3	KED
	Y-1	89	19681.9	0.8				mg/L	19321	KED
	In-1	115	17348.2	2.1				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		100.850
|	75	As	198.008	
|	75	As-1	116.773	
|	77	Se	103.482	
|	78	Se	423.268	
|	79	Br		
⌊	82	Se	122.339	
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		95.805
⌊	75	As-2	81.318	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 6
Sample Date/Time: Tuesday, February 17, 2015 15:46:39
Report Date/Time: Tuesday, February 17, 2015 15:48:03
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	831336.8	1.6				ug/L	794809	Standard
⌈>	**Ge**	72	332010.0	0.9				ug/L	328951	Standard
|	**As**	75	71160.1	0.7	**39.8759**	0.185	0.5	ug/L	7775	Standard
|	**As-1**	75	71964.2	1.0	**39.5861**	0.198	0.5	ug/L	-38	Standard
|	**Se**	77	4977.5	2.8	**39.8212**	0.844	2.1	ug/L	134	Standard
|	**Se**	78	25843.0	1.4	**41.1743**	0.595	1.4	ug/L	8011	Standard
|	**Br**	79	558.7	1.3				ug/L	588	Standard
⌊	**Se**	82	10494.2	1.9	**39.9270**	0.552	1.4	ug/L	90	Standard
	Kr	83	71.0	10.2				ug/L	76	Standard
	Y	89	909119.6	1.8				ug/L	804260	Standard
	In	115	623396.8	0.9				ug/L	624549	Standard
⌈>	**Ge-1**	72	8854.1	0.9				ug/L	9407	KED
⌊	**As-2**	75	2195.2	3.6	**39.8738**	1.809	4.5	ug/L	3	KED
	Y-1	89	19578.7	0.6				mg/L	19321	KED
	In-1	115	17109.5	1.5				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		100.930
|	75	As	99.690	
|	75	As-1	98.965	
|	77	Se	99.553	
|	78	Se	102.936	
|	79	Br		
⌊	82	Se	99.818	
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		94.125
⌊	75	As-2	99.684	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Tuesday, February 17, 2015 15:51:14
Report Date/Time: Tuesday, February 17, 2015 15:52:38
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION\Data\Sample\X150217B.sam
Method File: C:\NexION\Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	778082.5	2.5				ug/L	794809	Standard
⌈>	Ge	72	325889.8	1.6				ug/L	328951	Standard
|	As	75	7807.3	2.9	0.0677	0.147	217.8	ug/L	7775	Standard
|	As-1	75	110.4	7.8	0.0828	0.005	6.6	ug/L	-38	Standard
|	Se	77	133.3	13.1	0.0082	0.150	1842.1	ug/L	134	Standard
|	Se	78	7992.2	2.6	0.1336	0.490	367.0	ug/L	8011	Standard
|	Br	79	467.3	1.6				ug/L	588	Standard
⌊	Se	82	127.7	5.3	0.1520	0.030	19.5	ug/L	90	Standard
	Kr	83	73.7	9.5				ug/L	76	Standard
	Y	89	827779.2	1.4				ug/L	804260	Standard
	In	115	606676.7	0.9				ug/L	624549	Standard
⌈>	Ge-1	72	8818.4	0.7				ug/L	9407	KED
⌊	As-2	75	5.0	20.0	0.0457	0.019	41.3	ug/L	3	KED
	Y-1	89	18231.0	1.3				mg/L	19321	KED
	In-1	115	16199.3	1.2				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		99.070
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		93.745
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: ICSA

Sample Date/Time: Tuesday, February 17, 2015 15:55:29
Report Date/Time: Tuesday, February 17, 2015 15:56:53
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	755130.5	1.6				ug/L	794809	Standard
>	Ge	72	285717.7	0.7				ug/L	328951	Standard
	As	75	7951.6	1.7	**0.8770**	0.069	7.8	ug/L	7775	Standard
	As-1	75	-51.2	240.2	**-0.0121**	0.079	651.6	ug/L	-38	Standard
	Se	77	696.0	3.3	**5.5423**	0.235	4.2	ug/L	134	Standard
	Se	78	8263.1	0.5	**3.5167**	0.170	4.8	ug/L	8011	Standard
	Br	79	3872.5	1.8				ug/L	588	Standard
	Se	82	114.3	14.9	**0.1626**	0.076	46.8	ug/L	90	Standard
	Kr	83	116.3	11.3				ug/L	76	Standard
	Y	89	814486.8	1.5				ug/L	804260	Standard
	In	115	550070.0	0.1				ug/L	624549	Standard
>	Ge-1	72	7638.4	0.3				ug/L	9407	KED
	As-2	75	3.0	33.3	**0.0176**	0.021	120.8	ug/L	3	KED
	Y-1	89	17341.9	0.3				mg/L	19321	KED
	In-1	115	14676.7	1.6				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		86.857
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		81.201
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Date/Time: Tuesday, February 17, 2015 15:59:43
Report Date/Time: Tuesday, February 17, 2015 16:01:07
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	779970.8	1.9				ug/L	794809	Standard
⌈>	**Ge**	72	294236.9	1.9				ug/L	328951	Standard
|	**As**	75	38061.2	2.4	**22.1060**	0.374	1.7	ug/L	7775	Standard
|	**As-1**	75	34939.0	2.1	**21.6965**	0.263	1.2	ug/L	-38	Standard
|	**Se**	77	3167.7	3.2	**28.2819**	0.562	2.0	ug/L	134	Standard
|	**Se**	78	17174.7	1.2	**26.1951**	0.768	2.9	ug/L	8011	Standard
|	**Br**	79	4420.4	1.3				ug/L	588	Standard
⌊	**Se**	82	5539.4	0.8	**23.6493**	0.619	2.6	ug/L	90	Standard
	Kr	83	129.7	1.9				ug/L	76	Standard
	Y	89	869718.3	1.4				ug/L	804260	Standard
	In	115	571467.4	0.9				ug/L	624549	Standard
⌈>	**Ge-1**	72	7675.1	1.4				ug/L	9407	KED
⌊	**As-2**	75	1039.0	2.8	**21.7539**	0.892	4.1	ug/L	3	KED
	Y-1	89	17843.1	1.2				mg/L	19321	KED
	In-1	115	15318.7	0.9				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		89.447
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		81.591
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: MB0209SM1 50X

Sample Date/Time: Tuesday, February 17, 2015 16:03:57
Report Date/Time: Tuesday, February 17, 2015 16:05:20
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	818639.6	1.1				ug/L	794809	Standard
>	Ge	72	324285.8	2.2				ug/L	328951	Standard
	As	75	8259.1	3.3	**0.3830**	0.108	28.2	ug/L	7775	Standard
	As-1	75	45.9	203.1	**0.0461**	0.052	112.1	ug/L	-38	Standard
	Se	77	673.3	3.8	**4.5618**	0.253	5.6	ug/L	134	Standard
	Se	78	8484.5	1.9	**1.3962**	0.306	21.9	ug/L	8011	Standard
	Br	79	1295.1	3.0				ug/L	588	Standard
	Se	82	119.0	3.9	**0.1207**	0.028	22.9	ug/L	90	Standard
	Kr	83	90.0	6.2				ug/L	76	Standard
	Y	89	915642.2	2.9				ug/L	804260	Standard
	In	115	638466.0	1.6				ug/L	624549	Standard
>	Ge-1	72	8914.4	1.4				ug/L	9407	KED
	As-2	75	6.3	24.1	**0.0690**	0.029	42.4	ug/L	3	KED
	Y-1	89	19618.1	0.3				mg/L	19321	KED
	In-1	115	17400.6	0.5				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		98.582
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		94.766
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: SB0209SM1 50X

Sample Date/Time: Tuesday, February 17, 2015 16:08:10
Report Date/Time: Tuesday, February 17, 2015 16:09:34
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	856931.7	1.9				ug/L	794809	Standard
[>	Ge	72	338213.9	2.1				ug/L	328951	Standard
|	As	75	70586.2	1.0	**38.7052**	0.512	1.3	ug/L	7775	Standard
|	As-1	75	72354.8	1.0	**39.0768**	0.434	1.1	ug/L	-38	Standard
|	Se	77	6160.3	1.0	**48.6361**	1.089	2.2	ug/L	134	Standard
|	Se	78	25752.9	0.7	**39.8848**	1.151	2.9	ug/L	8011	Standard
|	Br	79	1209.4	1.0				ug/L	588	Standard
L	Se	82	10837.1	0.8	**40.4908**	0.717	1.8	ug/L	90	Standard
	Kr	83	84.0	7.2				ug/L	76	Standard
	Y	89	938328.4	0.7				ug/L	804260	Standard
	In	115	666482.7	0.3				ug/L	624549	Standard
[>	Ge-1	72	9275.3	1.2				ug/L	9407	KED
L	As-2	75	2231.2	3.0	**38.6751**	1.048	2.7	ug/L	3	KED
	Y-1	89	20282.7	1.8				mg/L	19321	KED
	In-1	115	17880.9	1.8				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
[>	72	Ge		102.816
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
L	82	Se		
	83	Kr		
	89	Y		
	115	In		
[>	72	Ge-1		98.603
L	75	As-2		
	89	Y-1		
	115	In-1		

KDM 2-17-15

Quantitative Analysis - Summary Report

Sample ID: 02-019-58 50X (10)

Sample Date/Time: Tuesday, February 17, 2015 16:12:24
Report Date/Time: Tuesday, February 17, 2015 16:13:47
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	908805.1	2.2				ug/L	794809	Standard
>	Ge	72	350962.1	1.1				ug/L	328951	Standard
	As	75	9159.8	1.4	0.5160	0.127	24.7	ug/L	7775	Standard
	As-1	75	796.7	9.7	0.4353	0.040	9.2	ug/L	-38	Standard
	Se	77	741.7	1.3	4.6615	0.130	2.8	ug/L	134	Standard
	Se	78	8721.0	1.2	0.3849	0.432	112.3	ug/L	8011	Standard
	Br	79	1563.4	3.8				ug/L	588	Standard
	Se	82	153.3	2.6	0.2094	0.016	7.8	ug/L	90	Standard
	Kr	83	82.7	18.5				ug/L	76	Standard
	Y	89	983240.7	0.4				ug/L	804260	Standard
	In	115	675121.1	0.7				ug/L	624549	Standard
>	Ge-1	72	9534.2	1.4				ug/L	9407	KED
	As-2	75	34.3	28.6	0.5342	0.166	31.2	ug/L	3	KED
	Y-1	89	21309.9	2.2				mg/L	19321	KED
	In-1	115	17821.6	2.0				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		106.691
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		101.355
	75	As-2		
	89	Y-1		
	115	In-1		

KAM 2-17-15

Quantitative Analysis - Summary Report

10

Sample ID: ~~02~~-019-58D 50X

Sample Date/Time: Tuesday, February 17, 2015 16:16:37
Report Date/Time: Tuesday, February 17, 2015 16:18:00
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	908836.7	2.3				ug/L	794809	Standard
[>	Ge	72	351307.1	1.9				ug/L	328951	Standard
|	As	75	9194.2	3.3	**0.5304**	0.151	28.5	ug/L	7775	Standard
|	As-1	75	778.7	22.7	**0.4255**	0.090	21.3	ug/L	-38	Standard
|	Se	77	754.4	3.4	**4.7573**	0.310	6.5	ug/L	134	Standard
|	Se	78	8679.3	2.2	**0.2714**	0.156	57.5	ug/L	8011	Standard
|	Br	79	1524.1	1.7				ug/L	588	Standard
[	Se	82	116.3	13.2	**0.0740**	0.048	65.1	ug/L	90	Standard
	Kr	83	78.3	2.9				ug/L	76	Standard
	Y	89	970994.4	1.2				ug/L	804260	Standard
	In	115	674919.7	0.7				ug/L	624549	Standard
[>	Ge-1	72	9636.9	0.5				ug/L	9407	KED
[	As-2	75	33.3	47.1	**0.5102**	0.259	50.7	ug/L	3	KED
	Y-1	89	21406.7	1.1				mg/L	19321	KED
	In-1	115	18046.9	0.6				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
[>	72	Ge		106.796
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
[	82	Se		
	83	Kr		
	89	Y		
	115	In		
[>	72	Ge-1		102.447
[	75	As-2		
	89	Y-1		
	115	In-1		

KDm 2-17-15

Quantitative Analysis - Summary Report

Sample ID: 10 ~~02~~-019-58L 250X

Sample Date/Time: Tuesday, February 17, 2015 16:20:51
Report Date/Time: Tuesday, February 17, 2015 16:22:15
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	836529.4	2.5				ug/L	794809	Standard
⌈>	Ge	72	338906.1	1.4				ug/L	328951	Standard
|	As	75	8388.8	1.5	**0.2336**	0.030	12.6	ug/L	7775	Standard
|	As-1	75	130.1	69.5	**0.0907**	0.048	52.8	ug/L	-38	Standard
|	Se	77	264.7	10.4	**1.0212**	0.195	19.1	ug/L	134	Standard
|	Se	78	8462.2	1.0	**0.4751**	0.094	19.7	ug/L	8011	Standard
|	Br	79	701.7	4.9				ug/L	588	Standard
⌊	Se	82	92.3	20.9	**-0.0004**	0.070	17261.3	ug/L	90	Standard
	Kr	83	72.0	23.7				ug/L	76	Standard
	Y	89	909477.0	1.5				ug/L	804260	Standard
	In	115	636048.1	0.3				ug/L	624549	Standard
⌈>	Ge-1	72	8969.5	1.9				ug/L	9407	KED
⌊	As-2	75	8.0	12.5	**0.0978**	0.016	16.2	ug/L	3	KED
	Y-1	89	19495.0	1.3				mg/L	19321	KED
	In-1	115	16989.1	0.3				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		103.026
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		95.351
⌊	75	As-2		
	89	Y-1		
	115	In-1		

KDM 2-17-15

Quantitative Analysis - Summary Report

Sample ID: 02-019-58MS 50X
ID

Sample Date/Time: Tuesday, February 17, 2015 16:25:06
Report Date/Time: Tuesday, February 17, 2015 16:26:30
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION\Data\Sample\X150217B.sam
Method File: C:\NexION\Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	919998.9	1.3				ug/L	794809	Standard
[>	Ge	72	357307.7	1.7				ug/L	328951	Standard
|	As	75	71928.3	1.5	**37.1533**	0.259	0.7	ug/L	7775	Standard
|	As-1	75	73737.5	1.0	**37.6948**	0.450	1.2	ug/L	-38	Standard
|	Se	77	6017.9	1.9	**44.8817**	0.896	2.0	ug/L	134	Standard
|	Se	78	25460.0	1.5	**36.1093**	0.483	1.3	ug/L	8011	Standard
|	Br	79	1723.8	1.8				ug/L	588	Standard
[	Se	82	10737.7	0.5	**37.9547**	0.835	2.2	ug/L	90	Standard
	Kr	83	78.0	8.4				ug/L	76	Standard
	Y	89	969036.7	0.0				ug/L	804260	Standard
	In	115	685483.2	0.9				ug/L	624549	Standard
[>	Ge-1	72	9780.7	0.9				ug/L	9407	KED
[	As-2	75	2327.5	0.7	**38.2636**	0.576	1.5	ug/L	3	KED
	Y-1	89	21893.1	0.6				mg/L	19321	KED
	In-1	115	18369.1	1.5				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
[>	72	Ge		108.620
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
[	82	Se		
	83	Kr		
	89	Y		
	115	In		
[>	72	Ge-1		103.975
[	75	As-2		
	89	Y-1		
	115	In-1		

KDM 2-17-15

Quantitative Analysis - Summary Report

Sample ID: 10 ~~02~~-019-58MSD 50X

Sample Date/Time: Tuesday, February 17, 2015 16:29:21
Report Date/Time: Tuesday, February 17, 2015 16:30:45
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	927739.8	2.5				ug/L	794809	Standard
⌈>	Ge	72	355189.5	1.7				ug/L	328951	Standard
|	As	75	71732.7	2.2	**37.2852**	0.261	0.7	ug/L	7775	Standard
|	As-1	75	73335.4	1.7	**37.7100**	0.369	1.0	ug/L	-38	Standard
|	Se	77	6109.3	1.1	**45.8687**	1.333	2.9	ug/L	134	Standard
|	Se	78	25220.2	1.7	**35.9143**	0.115	0.3	ug/L	8011	Standard
|	Br	79	1544.1	4.0				ug/L	588	Standard
⌊	Se	82	10562.2	1.4	**37.5536**	0.954	2.5	ug/L	90	Standard
	Kr	83	86.0	11.2				ug/L	76	Standard
	Y	89	968890.9	0.8				ug/L	804260	Standard
	In	115	684429.0	1.0				ug/L	624549	Standard
⌈>	Ge-1	72	9639.9	1.4				ug/L	9407	KED
⌊	As-2	75	2300.5	0.7	**38.3719**	0.354	0.9	ug/L	3	KED
	Y-1	89	21984.9	1.2				mg/L	19321	KED
	In-1	115	18219.3	2.6				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		107.977
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		102.479
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: BL

Sample Date/Time: Tuesday, February 17, 2015 16:33:36
Report Date/Time: Tuesday, February 17, 2015 16:35:00
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	861417.3	1.9				ug/L	794809	Standard
⌈>	Ge	72	345434.1	1.5				ug/L	328951	Standard
|	As	75	8504.6	0.7	**0.2066**	0.084	40.5	ug/L	7775	Standard
|	As-1	75	196.2	39.7	**0.1243**	0.040	32.5	ug/L	-38	Standard
|	Se	77	151.0	5.3	**0.0840**	0.058	69.6	ug/L	134	Standard
|	Se	78	8651.3	0.5	**0.5364**	0.388	72.4	ug/L	8011	Standard
|	Br	79	565.3	3.9				ug/L	588	Standard
⌊	Se	82	147.3	3.3	**0.1961**	0.014	7.0	ug/L	90	Standard
	Kr	83	65.7	8.8				ug/L	76	Standard
	Y	89	948485.7	0.9				ug/L	804260	Standard
	In	115	654572.9	0.2				ug/L	624549	Standard
⌈>	Ge-1	72	9258.0	0.5				ug/L	9407	KED
⌊	As-2	75	7.7	15.1	**0.0876**	0.020	22.4	ug/L	3	KED
	Y-1	89	20486.3	0.7				mg/L	19321	KED
	In-1	115	17841.7	0.5				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		105.011
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		98.419
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 17, 2015 16:37:52
Report Date/Time: Tuesday, February 17, 2015 16:39:15
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	801679.5	3.2				ug/L	794809	Standard
>	Ge	72	321170.2	3.0				ug/L	328951	Standard
	As	75	68473.1	3.5	**39.6346**	0.297	0.7	ug/L	7775	Standard
	As-1	75	69848.6	3.5	**39.7148**	0.208	0.5	ug/L	-38	Standard
	Se	77	4773.1	2.6	**39.4724**	0.190	0.5	ug/L	134	Standard
	Se	78	24823.2	3.0	**40.7607**	1.236	3.0	ug/L	8011	Standard
	Br	79	494.3	4.2				ug/L	588	Standard
	Se	82	10316.7	2.7	**40.5869**	0.266	0.7	ug/L	90	Standard
	Kr	83	80.3	21.9				ug/L	76	Standard
	Y	89	905604.6	2.2				ug/L	804260	Standard
	In	115	616787.6	1.4				ug/L	624549	Standard
>	Ge-1	72	8728.0	1.1				ug/L	9407	KED
	As-2	75	2142.8	2.4	**39.4830**	1.321	3.3	ug/L	3	KED
	Y-1	89	19605.1	1.4				mg/L	19321	KED
	In-1	115	16945.8	1.7				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		97.635
	75	As	99.086	
	75	As-1	99.287	
	77	Se	98.681	
	78	Se	101.902	
	79	Br		
	82	Se	101.467	
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		92.784
	75	As-2	98.707	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 8
Sample Date/Time: Tuesday, February 17, 2015 16:42:26
Report Date/Time: Tuesday, February 17, 2015 16:43:50
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION\Data\Sample\X150217B.sam
Method File: C:\NexION\Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	761210.0	2.5				ug/L	794809	Standard
⌈>	Ge	72	315488.8	1.9				ug/L	328951	Standard
|	As	75	7737.1	2.4	**0.1856**	0.035	19.1	ug/L	7775	Standard
|	As-1	75	85.1	75.5	**0.0705**	0.038	53.8	ug/L	-38	Standard
|	Se	77	138.0	8.2	**0.0858**	0.110	128.7	ug/L	134	Standard
|	Se	78	7908.5	2.5	**0.5487**	0.111	20.2	ug/L	8011	Standard
|	Br	79	359.0	3.4				ug/L	588	Standard
⌊	Se	82	112.3	10.5	**0.1071**	0.057	53.4	ug/L	90	Standard
	Kr	83	80.0	12.7				ug/L	76	Standard
	Y	89	827452.9	1.1				ug/L	804260	Standard
	In	115	601939.4	1.0				ug/L	624549	Standard
⌈>	Ge-1	72	8697.3	0.3				ug/L	9407	KED
⌊	As-2	75	4.3	81.0	**0.0344**	0.065	188.1	ug/L	3	KED
	Y-1	89	18292.7	0.4				mg/L	19321	KED
	In-1	115	16280.1	0.5				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
⌈>	72Ge		95.908
|	75As		
|	75As-1		
|	77Se		
|	78Se		
|	79Br		
⌊	82Se		
	83Kr		
	89Y		
	115In		
⌈>	72Ge-1		92.458
⌊	75As-2		
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Tuesday, February 17, 2015 16:46:41
Report Date/Time: Tuesday, February 17, 2015 16:48:05
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	815680.2	1.6				ug/L	794809	Standard
>	**Ge**	72	325331.5	2.5				ug/L	328951	Standard
	As	75	11546.4	1.0	**2.4809**	0.109	4.4	ug/L	7775	Standard
	As-1	75	3560.1	5.3	**2.0178**	0.073	3.6	ug/L	-38	Standard
	Se	77	369.7	4.2	**1.9954**	0.182	9.1	ug/L	134	Standard
	Se	78	9541.5	0.7	**3.8410**	0.657	17.1	ug/L	8011	Standard
	Br	79	457.0	2.1				ug/L	588	Standard
	Se	82	624.3	2.2	**2.0991**	0.084	4.0	ug/L	90	Standard
	Kr	83	71.3	17.9				ug/L	76	Standard
	Y	89	891436.8	0.9				ug/L	804260	Standard
	In	115	617806.4	0.2				ug/L	624549	Standard
>	**Ge-1**	72	8681.3	1.2				ug/L	9407	KED
	As-2	75	116.0	2.6	**2.1053**	0.051	2.4	ug/L	3	KED
	Y-1	89	19410.2	1.1				mg/L	19321	KED
	In-1	115	16925.7	1.1				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		98.900
	75	As	124.043	
	75	As-1	100.890	
	77	Se	99.768	
	78	Se	192.051	
	79	Br		
	82	Se	104.955	
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		92.288
	75	As-2	105.263	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 10
Sample Date/Time: Tuesday, February 17, 2015 16:50:56
Report Date/Time: Tuesday, February 17, 2015 16:52:21
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION\Data\Sample\X150217B.sam
Method File: C:\NexION\Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	817599.3	2.0				ug/L	794809	Standard
>	Ge	72	325568.5	1.4				ug/L	328951	Standard
	As	75	9301.7	1.2	**1.0334**	0.156	15.1	ug/L	7775	Standard
	As-1	75	960.9	2.3	**0.5598**	0.017	3.1	ug/L	-38	Standard
	Se	77	190.3	11.0	**0.4877**	0.186	38.1	ug/L	134	Standard
	Se	78	8928.1	0.7	**2.3677**	0.441	18.6	ug/L	8011	Standard
	Br	79	446.7	5.6				ug/L	588	Standard
	Se	82	243.7	7.9	**0.6059**	0.065	10.7	ug/L	90	Standard
	Kr	83	83.3	4.5				ug/L	76	Standard
	Y	89	904509.6	0.2				ug/L	804260	Standard
	In	115	618779.6	1.0				ug/L	624549	Standard
>	Ge-1	72	8844.7	1.7				ug/L	9407	KED
	As-2	75	34.3	38.0	**0.5770**	0.226	39.2	ug/L	3	KED
	Y-1	89	19444.9	1.7				mg/L	19321	KED
	In-1	115	17080.9	1.3				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		98.972
	75	As	206.684	
	75	As-1	111.960	
	77	Se	97.540	
	78	Se	473.535	
	79	Br		
	82	Se	121.182	
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		94.025
	75	As-2	115.390	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-019-32 50X

Sample Date/Time: Tuesday, February 17, 2015 17:00:37
Report Date/Time: Tuesday, February 17, 2015 17:02:00
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	953642.0	2.8				ug/L	794809	Standard
⌈>	Ge	72	353091.8	1.7				ug/L	328951	Standard
|	As	75	9819.8	1.6	**0.8736**	0.086	9.8	ug/L	7775	Standard
|	As-1	75	1664.5	7.5	**0.8821**	0.076	8.6	ug/L	-38	Standard
|	Se	77	1172.0	5.4	**7.9500**	0.332	4.2	ug/L	134	Standard
|	Se	78	8745.0	1.7	**0.3192**	0.169	53.1	ug/L	8011	Standard
|	Br	79	16805.9	1.4				ug/L	588	Standard
⌊	Se	82	244.3	10.5	**0.5354**	0.104	19.5	ug/L	90	Standard
	Kr	83	85.3	8.0				ug/L	76	Standard
	Y	89	1014549.0	1.3				ug/L	804260	Standard
	In	115	683305.1	0.7				ug/L	624549	Standard
⌈>	Ge-1	72	9719.3	0.9				ug/L	9407	KED
⌊	As-2	75	56.7	21.3	**0.8922**	0.194	21.7	ug/L	3	KED
	Y-1	89	22940.7	0.7				mg/L	19321	KED
	In-1	115	18339.9	0.4				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		107.339
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		103.323
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-019-54 50X

Sample Date/Time: Tuesday, February 17, 2015 17:04:51
Report Date/Time: Tuesday, February 17, 2015 17:06:15
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION\Data\Sample\X150217B.sam
Method File: C:\NexION\Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	905765.9	4.5				ug/L	794809	Standard
>	Ge	72	336661.1	2.8				ug/L	328951	Standard
	As	75	9424.4	2.0	0.9124	0.071	7.8	ug/L	7775	Standard
	As-1	75	1218.5	9.2	0.6808	0.042	6.1	ug/L	-38	Standard
	Se	77	954.7	3.5	6.6423	0.481	7.2	ug/L	134	Standard
	Se	78	8614.3	0.9	0.9584	0.457	47.6	ug/L	8011	Standard
	Br	79	8564.9	1.1				ug/L	588	Standard
	Se	82	173.0	3.1	0.3081	0.035	11.5	ug/L	90	Standard
	Kr	83	98.7	7.5				ug/L	76	Standard
	Y	89	1004325.6	1.9				ug/L	804260	Standard
	In	115	642902.6	1.6				ug/L	624549	Standard
>	Ge-1	72	9409.1	1.6				ug/L	9407	KED
	As-2	75	52.7	10.5	0.8565	0.109	12.7	ug/L	3	KED
	Y-1	89	22283.4	1.8				mg/L	19321	KED
	In-1	115	17990.4	1.1				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		102.344
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		100.025
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-020-30 50X

Sample Date/Time: Tuesday, February 17, 2015 17:09:06
Report Date/Time: Tuesday, February 17, 2015 17:10:30
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	938411.7	2.0				ug/L	794809	Standard
⌈>	Ge	72	358031.3	0.2				ug/L	328951	Standard
|	As	75	10451.4	2.1	**1.1619**	0.136	11.7	ug/L	7775	Standard
|	As-1	75	1915.1	11.0	**0.9974**	0.108	10.9	ug/L	-38	Standard
|	Se	77	1216.7	2.0	**8.1692**	0.173	2.1	ug/L	134	Standard
|	Se	78	8886.8	0.4	**0.3606**	0.094	26.0	ug/L	8011	Standard
|	Br	79	6208.0	1.4				ug/L	588	Standard
⌊	Se	82	150.7	7.7	**0.1889**	0.041	21.9	ug/L	90	Standard
	Kr	83	86.3	8.8				ug/L	76	Standard
	Y	89	996343.8	1.4				ug/L	804260	Standard
	In	115	686383.8	0.2				ug/L	624549	Standard
⌈>	Ge-1	72	9697.0	0.5				ug/L	9407	KED
⌊	As-2	75	83.7	7.6	**1.3432**	0.105	7.8	ug/L	3	KED
	Y-1	89	22098.1	0.3				mg/L	19321	KED
	In-1	115	18323.4	1.4				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		108.840
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		103.085
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: BL
Sample Date/Time: Tuesday, February 17, 2015 17:13:20
Report Date/Time: Tuesday, February 17, 2015 17:14:44
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	845603.0	3.3				ug/L	794809	Standard
>	Ge	72	342432.5	2.5				ug/L	328951	Standard
	As	75	8494.4	2.0	0.2461	0.120	48.9	ug/L	7775	Standard
	As-1	75	4.8	970.8	0.0231	0.025	107.6	ug/L	-38	Standard
	Se	77	120.3	3.1	-0.1501	0.009	6.0	ug/L	134	Standard
	Se	78	8699.0	1.7	0.8144	0.449	55.1	ug/L	8011	Standard
	Br	79	774.7	4.3				ug/L	588	Standard
	Se	82	95.0	9.4	0.0059	0.027	454.2	ug/L	90	Standard
	Kr	83	78.0	5.9				ug/L	76	Standard
	Y	89	932614.6	1.4				ug/L	804260	Standard
	In	115	646654.1	0.8				ug/L	624549	Standard
>	Ge-1	72	9318.4	1.0				ug/L	9407	KED
	As-2	75	4.0	43.3	0.0233	0.029	125.0	ug/L	3	KED
	Y-1	89	20181.6	1.0				mg/L	19321	KED
	In-1	115	17968.5	1.2				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		104.098
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		99.060
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, February 17, 2015 17:17:35
Report Date/Time: Tuesday, February 17, 2015 17:18:59
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	829121.2	1.2				ug/L	794809	Standard
⌈>	Ge	72	328554.8	0.9				ug/L	328951	Standard
|	As	75	70376.0	1.0	**39.8482**	0.363	0.9	ug/L	7775	Standard
|	As-1	75	71374.8	1.8	**39.6726**	0.354	0.9	ug/L	-38	Standard
|	Se	77	4912.2	1.2	**39.7117**	0.222	0.6	ug/L	134	Standard
|	Se	78	25760.9	1.0	**41.6172**	1.003	2.4	ug/L	8011	Standard
|	Br	79	651.7	3.3				ug/L	588	Standard
⌊	Se	82	10538.2	2.7	**40.5190**	0.769	1.9	ug/L	90	Standard
	Kr	83	78.3	6.6				ug/L	76	Standard
	Y	89	918415.8	1.3				ug/L	804260	Standard
	In	115	623716.1	0.7				ug/L	624549	Standard
⌈>	Ge-1	72	8957.1	0.5				ug/L	9407	KED
⌊	As-2	75	2168.2	2.7	**38.9176**	0.970	2.5	ug/L	3	KED
	Y-1	89	19580.1	0.9				mg/L	19321	KED
	In-1	115	17292.6	0.9				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
⌈>	72Ge		99.880
|	75As	99.620	
|	75As-1	99.181	
|	77Se	99.279	
|	78Se	104.043	
|	79Br		
⌊	82Se	101.298	
	83Kr		
	89Y		
	115In		
⌈>	72Ge-1		95.220
⌊	75As-2	97.294	
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Tuesday, February 17, 2015 17:22:11
Report Date/Time: Tuesday, February 17, 2015 17:23:35
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	771683.0	3.4				ug/L	794809	Standard
>	Ge	72	317286.5	1.7				ug/L	328951	Standard
	As	75	7875.0	1.4	**0.2490**	0.133	53.4	ug/L	7775	Standard
	As-1	75	136.9	12.1	**0.0996**	0.009	8.7	ug/L	-38	Standard
	Se	77	131.7	6.1	**0.0235**	0.065	277.2	ug/L	134	Standard
	Se	78	8055.3	1.3	**0.8018**	0.492	61.4	ug/L	8011	Standard
	Br	79	444.3	1.5				ug/L	588	Standard
	Se	82	136.3	6.0	**0.2000**	0.027	13.4	ug/L	90	Standard
	Kr	83	74.0	16.9				ug/L	76	Standard
	Y	89	830910.5	1.6				ug/L	804260	Standard
	In	115	604275.5	0.7				ug/L	624549	Standard
>	Ge-1	72	8752.7	1.0				ug/L	9407	KED
	As-2	75	4.0	25.0	**0.0281**	0.019	68.1	ug/L	3	KED
	Y-1	89	18624.8	1.7				mg/L	19321	KED
	In-1	115	16396.1	0.4				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		96.454
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		93.047
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Tuesday, February 17, 2015 17:26:26
Report Date/Time: Tuesday, February 17, 2015 17:27:50
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION\Data\Sample\X150217B.sam
Method File: C:\NexION\Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	818188.1	1.8				ug/L	794809	Standard
>	Ge	72	326013.7	0.3				ug/L	328951	Standard
	As	75	11876.4	0.8	**2.6751**	0.041	1.5	ug/L	7775	Standard
	As-1	75	3717.2	2.0	**2.1021**	0.034	1.6	ug/L	-38	Standard
	Se	77	377.0	0.7	**2.0480**	0.027	1.3	ug/L	134	Standard
	Se	78	9784.0	0.7	**4.3557**	0.111	2.5	ug/L	8011	Standard
	Br	79	519.0	1.0				ug/L	588	Standard
	Se	82	652.0	2.0	**2.2010**	0.044	2.0	ug/L	90	Standard
	Kr	83	75.3	11.6				ug/L	76	Standard
	Y	89	908767.6	1.4				ug/L	804260	Standard
	In	115	612633.9	0.5				ug/L	624549	Standard
>	Ge-1	72	8842.1	0.7				ug/L	9407	KED
	As-2	75	108.7	11.5	**1.9332**	0.234	12.1	ug/L	3	KED
	Y-1	89	19329.7	0.3				mg/L	19321	KED
	In-1	115	17027.8	0.1				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
>	72Ge		99.107
	75As	133.756	
	75As-1	105.104	
	77Se	102.400	
	78Se	217.783	
	79Br		
	82Se	110.049	
	83Kr		
	89Y		
	115In		
>	72Ge-1		93.997
	75As-2	96.662	
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 10

Sample Date/Time: Tuesday, February 17, 2015 17:30:41
Report Date/Time: Tuesday, February 17, 2015 17:32:05
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X150217B.sam
Method File: C:\NexION Data\Method\X150217B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	832172.0	2.3				ug/L	794809	Standard
>	Ge	72	327878.6	2.4				ug/L	328951	Standard
	As	75	9381.8	1.9	**1.0414**	0.027	2.6	ug/L	7775	Standard
	As-1	75	830.9	11.1	**0.4829**	0.041	8.5	ug/L	-38	Standard
	Se	77	182.0	3.8	**0.4058**	0.028	6.8	ug/L	134	Standard
	Se	78	9045.2	1.6	**2.4923**	0.185	7.4	ug/L	8011	Standard
	Br	79	471.3	3.9				ug/L	588	Standard
	Se	82	207.3	9.5	**0.4576**	0.057	12.5	ug/L	90	Standard
	Kr	83	67.0	14.4				ug/L	76	Standard
	Y	89	898737.9	0.6				ug/L	804260	Standard
	In	115	612637.1	0.7				ug/L	624549	Standard
>	Ge-1	72	8774.0	1.3				ug/L	9407	KED
	As-2	75	29.0	34.5	**0.4865**	0.185	38.0	ug/L	3	KED
	Y-1	89	19422.9	0.8				mg/L	19321	KED
	In-1	115	17153.3	1.1				ug/L	16522	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		99.674
	75	As	208.270	
	75	As-1	96.582	
	77	Se	81.167	
	78	Se	498.455	
	79	Br		
	82	Se	91.513	
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		93.274
	75	As-2	97.295	
	89	Y-1		
	115	In-1		

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

October 14, 2014

Brian Tracy
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-10
Laboratory Reference No. 1410-020

Dear Brian:

Enclosed are the analytical results and associated quality control data for samples submitted on October 2, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: October 14, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020
Project: 5147-006-10

Case Narrative

Samples were collected on October 1, 2014 and received by the laboratory on October 2, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: October 14, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020
Project: 5147-006-10

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
GEI-22_5-6_100114	10-020-02	Soil	10-1-14	10-2-14	
GEI-28_5-6_100114	10-020-10	Soil	10-1-14	10-2-14	
GEI-128_5-6_100114	10-020-12	Soil	10-1-14	10-2-14	
GEI-36_5-6_100114	10-020-35	Soil	10-1-14	10-2-14	
GEI-136_5-6_100114	10-020-37	Soil	10-1-14	10-2-14	
GEI-37_6-7_100114	10-020-40	Soil	10-1-14	10-2-14	
GEI-42_6-7_100114	10-020-60	Soil	10-1-14	10-2-14	

Date of Report: October 14, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-020-02					
Client ID:	**GEI-22_5-6_100114**					
Arsenic	**ND**	5.4	6010C	10-10-14	10-10-14	
Nickel	**30**	2.7	6010C	10-10-14	10-10-14	
Lab ID:	10-020-10					
Client ID:	**GEI-28_5-6_100114**					
Arsenic	**ND**	5.8	6010C	10-10-14	10-10-14	
Nickel	**50**	2.9	6010C	10-10-14	10-10-14	
Lab ID:	10-020-12					
Client ID:	**GEI-128_5-6_100114**					
Arsenic	**6.5**	6.2	6010C	10-10-14	10-10-14	
Nickel	**50**	3.1	6010C	10-10-14	10-10-14	
Lab ID:	10-020-35					
Client ID:	**GEI-36_5-6_100114**					
Arsenic	**6.9**	6.3	6010C	10-10-14	10-10-14	
Lab ID:	10-020-37					
Client ID:	**GEI-136_5-6_100114**					
Arsenic	**ND**	7.0	6010C	10-10-14	10-10-14	
Lab ID:	10-020-40					
Client ID:	**GEI-37_6-7_100114**					
Arsenic	**ND**	5.7	6010C	10-10-14	10-10-14	

Date of Report: October 14, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-020-43					
Client ID:	**GEI-38_6-7_100114**					
Arsenic	**ND**	5.8	6010C	10-10-14	10-10-14	
Lab ID:	10-020-60					
Client ID:	**GEI-42_6-7_100114**					
Arsenic	**ND**	6.0	6010C	10-10-14	10-10-14	

Date of Report: October 14, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020
Project: 5147-006-10

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-22_5-6_100114**					
Laboratory ID:	10-020-02					
Naphthalene	**0.040**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
2-Methylnaphthalene	**0.035**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
1-Methylnaphthalene	**0.032**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
Acenaphthylene	**ND**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
Acenaphthene	**0.0084**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
Fluorene	**0.0097**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
Phenanthrene	**0.025**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
Anthracene	**ND**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
Fluoranthene	**0.028**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
Pyrene	**0.036**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
Benzo[a]anthracene	**0.016**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
Chrysene	**0.026**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
Benzo[b]fluoranthene	**0.015**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
Benzo(j,k)fluoranthene	**0.011**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
Benzo[a]pyrene	**0.016**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
Indeno(1,2,3-c,d)pyrene	**0.0091**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
Dibenz[a,h]anthracene	**ND**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
Benzo[g,h,i]perylene	**0.014**	0.0072	EPA 8270D/SIM	10-7-14	10-9-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*97*	*43 - 116*				
Pyrene-d10	*80*	*33 - 124*				
Terphenyl-d14	*89*	*38 - 125*				

Date of Report: October 14, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020
Project: 5147-006-10

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-28_5-6_100114**					
Laboratory ID:	10-020-10					
Naphthalene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
2-Methylnaphthalene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
1-Methylnaphthalene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
Acenaphthylene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
Acenaphthene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
Fluorene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
Phenanthrene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
Anthracene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
Fluoranthene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
Pyrene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[a]anthracene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
Chrysene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[b]fluoranthene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo(j,k)fluoranthene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[a]pyrene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
Dibenz[a,h]anthracene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[g,h,i]perylene	**ND**	0.0077	EPA 8270D/SIM	10-7-14	10-7-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*58*	*43 - 116*				
Pyrene-d10	*69*	*33 - 124*				
Terphenyl-d14	*71*	*38 - 125*				

Date of Report: October 14, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020
Project: 5147-006-10

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-128_5-6_100114**					
Laboratory ID:	10-020-12					
Naphthalene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
2-Methylnaphthalene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
1-Methylnaphthalene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
Acenaphthylene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
Acenaphthene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
Fluorene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
Phenanthrene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
Anthracene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
Fluoranthene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
Pyrene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[a]anthracene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
Chrysene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[b]fluoranthene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo(j,k)fluoranthene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[a]pyrene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
Dibenz[a,h]anthracene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[g,h,i]perylene	**ND**	0.0082	EPA 8270D/SIM	10-7-14	10-7-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*50*	*43 - 116*				
Pyrene-d10	*58*	*33 - 124*				
Terphenyl-d14	*59*	*38 - 125*				

Date of Report: October 14, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020
Project: 5147-006-10

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	10-10-14
Date Analyzed:	10-10-14
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1010SM3

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	10
Nickel	6010C	**ND**	2.5

Date of Report: October 14, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020
Project: 5147-006-10

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 10-10-14
Date Analyzed: 10-10-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-020-40

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	10	
Nickel	**7.65**	**7.85**	3	2.5	

Date of Report: October 14, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020
Project: 5147-006-10

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 10-10-14
Date Analyzed: 10-10-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-020-40

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**93.3**	93	**93.3**	93	0	
Nickel	100	**103**	95	**105**	97	2	

Date of Report: October 14, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV101014P	1.00	0.976	2.4	+/- 10%
Nickel	ICV101014P	1.00	1.05	-5.0	+/- 10%
Arsenic	LLICV101014P	0.100	0.106	-6.0	+/- 30%
Nickel	LLICV101014P	0.0200	0.0201	-0.50	+/- 30%
Arsenic	CCV1101014P	10.0	9.82	1.8	+/- 10%
Nickel	CCV1101014P	2.00	2.05	-2.5	+/- 10%
Arsenic	CCV201014P	10.0	9.65	3.5	+/- 10%
Nickel	CCV201014P	2.00	2.03	-1.5	+/- 10%
Arsenic	LLCCV1101014P	0.100	0.110	-10	+/- 30%
Nickel	LLCCV1101014P	0.0200	0.0213	-6.5	+/- 30%
Arsenic	CCV3101014P	10.0	9.61	3.9	+/- 10%
Nickel	CCV3101014P	2.00	2.03	-1.5	+/- 10%
Arsenic	LLCCV2101014P	0.100	0.0935	6.5	+/- 30%
Nickel	LLCCV2101014P	0.0200	0.0224	-12	+/- 30%
Arsenic	CCV4101014P	10.0	9.75	2.5	+/- 10%
Nickel	CCV4101014P	2.00	2.04	-2.0	+/- 10%
Arsenic	LLCCV3101014P	0.100	0.108	-8.0	+/- 30%
Nickel	LLCCV3101014P	0.0200	0.0212	-6.0	+/- 30%
Arsenic	CCV5101014P	10.0	9.68	3.2	+/- 10%
Nickel	CCV5101014P	2.00	2.04	-2.0	+/- 10%
Arsenic	LLCCV4101014P	0.100	0.110	-10	+/- 30%
Nickel	LLCCV4101014P	0.0200	0.0194	3.0	+/- 30%

Date of Report: October 14, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020
Project: 5147-006-10

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB1007S1					
Naphthalene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
2-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
1-Methylnaphthalene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Acenaphthylene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Acenaphthene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Fluorene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Phenanthrene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Anthracene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Pyrene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Benzo[g,h,i]perylene	**ND**	0.0067	EPA 8270D/SIM	10-7-14	10-7-14	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*89*	*43 - 116*				
Pyrene-d10	*92*	*33 - 124*				
Terphenyl-d14	*96*	*38 - 125*				

Date of Report: October 14, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020
Project: 5147-006-10

PAHs EPA 8270D/SIM
SB/SBD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
SPIKE BLANKS										
Laboratory ID:	SB1007S1									
	SB	SBD	SB	SBD	SB	SBD				
Naphthalene	**0.0692**	**0.0589**	0.0833	0.0833	83	71	45 - 109	16	29	
Acenaphthylene	**0.0754**	**0.0660**	0.0833	0.0833	91	79	54 - 118	13	18	
Acenaphthene	**0.0727**	**0.0653**	0.0833	0.0833	87	78	60 - 108	11	14	
Fluorene	**0.0746**	**0.0711**	0.0833	0.0833	90	85	61 - 113	5	13	
Phenanthrene	**0.0623**	**0.0594**	0.0833	0.0833	75	71	63 - 106	5	13	
Anthracene	**0.0926**	**0.0855**	0.0833	0.0833	111	103	55 - 135	8	13	
Fluoranthene	**0.0758**	**0.0719**	0.0833	0.0833	91	86	66 - 118	5	13	
Pyrene	**0.0743**	**0.0705**	0.0833	0.0833	89	85	69 - 112	5	12	
Benzo[a]anthracene	**0.0781**	**0.0742**	0.0833	0.0833	94	89	58 - 118	5	13	
Chrysene	**0.0762**	**0.0728**	0.0833	0.0833	91	87	64 - 114	5	11	
Benzo[b]fluoranthene	**0.0681**	**0.0698**	0.0833	0.0833	82	84	52 - 125	2	19	
Benzo(j,k)fluoranthene	**0.0729**	**0.0649**	0.0833	0.0833	88	78	50 - 126	12	22	
Benzo[a]pyrene	**0.0738**	**0.0706**	0.0833	0.0833	89	85	43 - 123	4	16	
Indeno(1,2,3-c,d)pyrene	**0.0729**	**0.0703**	0.0833	0.0833	88	84	55 - 118	4	16	
Dibenz[a,h]anthracene	**0.0721**	**0.0699**	0.0833	0.0833	87	84	57 - 120	3	15	
Benzo[g,h,i]perylene	**0.0716**	**0.0692**	0.0833	0.0833	86	83	58 - 113	3	18	
Surrogate:										
2-Fluorobiphenyl					*87*	*68*	*43 - 116*			
Pyrene-d10					*91*	*86*	*33 - 124*			
Terphenyl-d14					*93*	*88*	*38 - 125*			

Date of Report: October 14, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020
Project: 5147-006-10

% MOISTURE

Date Analyzed: 10-7&10-14

Client ID	Lab ID	% Moisture
GEI-22_5-6_100114	10-020-02	7
GEI-28_5-6_100114	10-020-10	13
GEI-128_5-6_100114	10-020-12	19
GEI-36_5-6_100114	10-020-35	20
GEI-136_5-6_100114	10-020-37	28
GEI-37_6-7_100114	10-020-40	12
GEI-38_6-7_100114	10-020-43	14
GEI-42_6-7_100114	10-020-60	16

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

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OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracey
Sampled by: Robert Trahan / Nate Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
1	GEI-22-2-3-100114	10/1/14	1135	S	1																						
2	GEI-22-5-6-100114	"	1140	"	"								X									X	X				X
3	GEI-22-7.5-8.5-100114	"	1145	"	"																						
4	GEI-22-9-10-100114	"	1150	"	"																						
5	GEI-27-1-2-100114	"	1110	"	"																						
6	GEI-27-4-5-100114	"	1115	"	"																						
7	GEI-27-5-6-100114	"	1120	"	"																						
8	GEI-27-9-10-100114	"	1125	"	"																						
9	GEI-28-2-3-100114	"	1220	"	"																						
10	GEI-28-5-6-100114	"	1225	"	"								X									X	X				X

	Signature	Company	Date	Time
Relinquished	[signature]	GEI	10/2/14	950
Received	[signature]	OSE	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Geo Engineers
Project Number: 5147-008-10
Project Name: DCI
Project Manager: Brian Tracy
Sampled by: Robert Trohen / Nate Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
11	GE1-28_10-11_100114	10/1/14	1130	S	1																						
12	GE1-128_5-6_100114		1125										X									X	X				X
13	GE1-31_1-2_100114		1015																								
14	GE1-31_4-5_100114		1050																								
15	GE1-31_6-7_100114		1035																								
16	GE1-31_9-10_100114		1100																								
17	GE1-32_1-2_100114		1510																								
18	GE1-32_4-5_100114		1515																								
19	GE1-32_6-7_100114		1520																								
20	GE1-32_8-9_100114		1525																								

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10/2/14	0950	
Received			10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracy
Sampled by: Robert Trohen / Nik Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
21	GEI-33_12_100114	10/1/14	1310	S	1																	
22	GEI-33_4-5_100114		1315																			
23	GEI-33_8-9_100114		1320																			
24	GEI-33_9-10_100114		1325																			
25	GEI-34_2.5-3.5_100114		1215																			
26	GEI-34_4-5_100114		1220																			
27	GEI-34_6-7_100114		1225																			
28	GEI-34_9-10_100114		1230																			
29	GEI-35_3-4_100114		1330																			
30	GEI-35_4-5_100114		1335																			

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10/2/14	950	
Received		OSE	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GEOENGINEERS
Project Number: 5147-006-10
Project Name: DCI
Project Manager: TRACY BRIAN TRAHAN
Sampled by: NATE SOLOMON / ROBERT TRAHAN

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	ARSENIC						% Moisture
31	GEI-35-8-9-100114	10/1/14	1340	SOIL	1																						
32	GEI-35-9-10-100114		1345																								
33	GEI-36-1-2-100114		1400																								
34	GEI-36-4-5-100114		1410																								
35	GEI-36-5-6-100114		1415																		X						X
36	GEI-$36-10-11-100114		1420																								
37	GEI-136-5-6-100114		1418																		X						X
38	GEI-37-1-2-100114		1535																								
39	GEI-37-4-5-100114		1540																								
40	GEI-37-6-7-100114		1545																		X						X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10/2/14	0950	
Received		OSE	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

OnSite Environmental Inc.
Analytical Laboratory Testing Services
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Phone: (425) 883-3881 • www.onsite-env.com

Chain of Custody

21

Company: GEO ENGINEERS
Project Number: 5147-006-16
Project Name: DCI
Project Manager: BRIAN TRACY
Sampled by: ROBERT TRAHAN / NATE SOLOMON

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	ARSENIC					% Moisture
41	GEI-37-8-9-100114	10.1.14	1550 ~~1610~~	SOIL	1																					
42	GEI-38-1-2-100114		1600																							
43	GEI-38-6-7-100114		1605																		X					X
44	GEI-38-8-9-100114		1610																							
45	GEI-39-1.5-2.5-100114		1755											*												
46	GEI-39-4-5-100114		1800																							
47	GEI-39-6-7-100114		1805																							
48	GEI-39-9-10-100114		1810																							
49	GEI-40-2-3-100114		1730																							
50	GEI-40-4-5-100114		1735																							

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10.2.14	0950	
Received		CORE	10/2/14	095	
Relinquished					
Received					
Relinquished					
Received					

Reviewed/Date | Reviewed/Date | Chromatograms with final report ☐

Data Package: Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☑ _____

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GEOENGINEERS
Project Number: 5147-006-10
Project Name: DCI
Project Manager: BRIAN TRACY
Sampled by: NATE SOLOMON / ROGERS TRAUTMAN

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	ARSENIC					% Moisture
51	GEI-40_7-8_100114	10/1/14	1740	SOIL	1																					
52	GEI-40_9-10_100114		1745																							
53	GEI-40_4-5_100114		1738																							
54	GEI-41_1-2_100114		1715																							
55	GEI-41_4-5_100114		1720																							
56	GEI-41_6-7_100114		1725																							
57	GEI-41_8-9_100114		1730																							
58	GEI-42_1-2_100114		1620																							
59	GEI-42_4-5_100114		1625																							
60	GEI-42_6-7_100114		1630																		X					X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10.2.14	0950	
Received			10/2/14	095	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) _____

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GEOENGINEERS INC
Project Number: 5147-006-10
Project Name: DC1
Project Manager: BRIAN TRACY
Sampled by: NATE SOLOMON / ROBERT TRAHAN

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	ARSENIC	% Moisture
61	GE1-42-9-10-100114	10.01.14	1635	SOIL	1																	
62	GE1-142-6-7-100114	1	1633	1	1																	
63	GE1-43-1-2-100114		1630																			
64	GE1-43-4-5-100114																					
65	GE1-43-6-7-100114																					
66	GE1-43-8-9-100114																					

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GE1	10.2.14	950	
Received			10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Sample/Cooler Receipt and Acceptance Checklist

Client: GE

Client Project Name/Number: 5147-006-10

OnSite Project Number: 10-020

Initiated by: MV

Date Initiated: 10/2/14

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	N/A	1 2 3 4
1.2 Were the custody seals intact?	Yes	No	N/A	1 2 3 4
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	N/A	1 2 3 4
1.4 Were the samples delivered on ice or blue ice?	Yes	No		1 2 3 4
1.5 Were samples received between 0-6 degrees Celsius?	Yes	No	Temperature: 4.2	
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	N/A		
1.7 How were the samples delivered?	Client	Courier	UPS/FedEx	OSE Pickup Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	Yes	No		1 2 3 4
2.2 Was the COC legible and written in permanent ink?	Yes	No		1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	Yes	No		1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	No		1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	Yes	No		1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	No		1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	No		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	No		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	Yes	No		1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	N/A	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	Yes	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	No		1 2 3 4
3.8 Was method 5035A used?	Yes	No	N/A	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		N/A	1 2 3 4

Explain any discrepancies:

2.4) Sample 9) GE1-28-2-3_100114 10/1/14 1220 on COC 1120 on Label
Sample 10) GE1-28_5-6_100114 10/1/14 1225 on COC, 1125 on Label
Sample 46) GE1-39_4-5_100114 10/1/14 1800 on COC
" " " 100115 " " on Label
2.6) Sample GE1-43_1-2_100114 10/1/14 1630 not on COC Add
Sample GE1-43_4-5_100114 " - not on COC Add

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

Sample/Cooler Receipt and Acceptance Checklist

Client: GE

Client Project Name/Number: 5147-006-10

OnSite Project Number: 10-020

Initiated by: JMW

Date Initiated: 10/2/14

Explain any discrepancies:

26) Sample GE1-43-6-7_100114 10/1/14 - not on COC Add
Sample GE1-43-8-9_100114 10/1/14 - not on COC Add

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

RAW DATA

- PAHs EPA 8270D/SIM Data
- Total Metals EPA 6010C Data

PAHs Data

Data Path : C:\MSDCHEM\1\DATA\C141009\
Data File : C1009011.D
Acq On : 9 Oct 2014 1:21 pm
Operator :
Sample : 10-020-02
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 09 13:36:29 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration

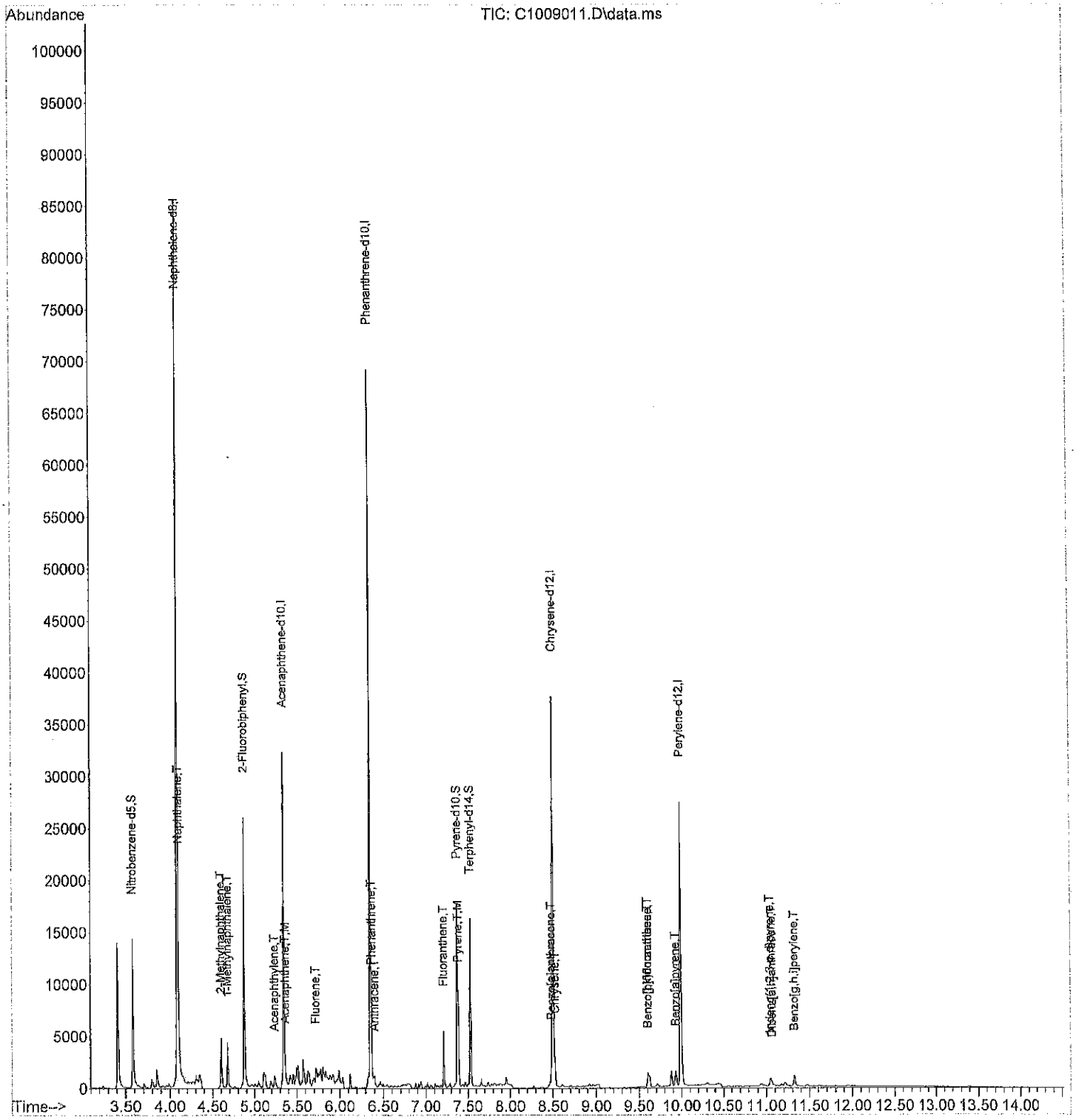
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.087	136	66411	2000.00	ppb	-0.02
6) Acenaphthene-d10	5.340	164	30603	2000.00	ppb	-0.02
10) Phenanthrene-d10	6.353	188	48850	2000.00	ppb	-0.01
17) Chrysene-d12	8.502	240	36560	2000.00	ppb	0.00
21) Perylene-d12	9.993	264	30841	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.577	82	10181	863.32	ppb	-0.02
Spiked Amount 1000.000	Range 24 - 92		Recovery = 86.33%			
7) 2-Fluorobiphenyl	4.875	172	20833	969.57	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 96.96%#			
11) Pyrene-d10	7.376	212	14369	796.06	ppb	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 79.61%			
18) Terphenyl-d14	7.532	244	11681	890.53	ppb	-0.02
Spiked Amount 1000.000	Range 39 - 92		Recovery = 89.05%			
Target Compounds						Qvalue
3) Naphthalene	4.099	128	8040	223.49	ppb	100
4) 2-Methylnaphthalene	4.598	142	4773	193.24	ppb	100
5) 1-Methylnaphthalene	4.676	142	4096	179.03	ppb	100
8) Acenaphthylene	5.232	152	1052	34.67	ppb	100
9) Acenaphthene	5.363	153	959	46.82	ppb	100
12) Fluorene	5.718	166	1112	54.51	ppb	100
13) Phenanthrene	6.369	178	4182	142.07	ppb	100
14) Anthracene	6.400	178	746	33.85	ppb	100
15) Fluoranthene	7.213	202	4024	154.92	ppb	100
16) Pyrene	7.387	202	5425	199.09	ppb	100
19) Benzo[a]anthracene	8.482	228	1855	90.78	ppb	100
20) Chrysene	8.525	228	2871	143.17	ppb	100
22) Benzo[b]fluoranthene	9.602	252	2828	~~138.06~~	ppb	85.09 100
23) Benzo(j,k)fluoranthene	9.602	252	2828	~~147.37~~	ppb	60.19 100
24) Benzo[a]pyrene	9.930	252	1721	91.99	ppb	100
25) Indeno(1,2,3-c,d)pyrene	11.047	276	1099	50.94	ppb	100
26) Dibenz[a,h]anthracene	11.067	278	498	27.75	ppb	100
27) Benzo[g,h,i]perylene	11.324	276	1483	80.85	ppb	100

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

10/9/14
SM

Data Path : C:\MSDCHEM\1\DATA\C141009\
Data File : C1009011.D
Acq On : 9 Oct 2014 1:21 pm
Operator :
Sample : 10-020-02
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Oct 09 13:36:29 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007029.D
Acq On : 7 Oct 2014 11:17 pm
Operator :
Sample : 10-020-10
Misc :
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Oct 07 23:33:05 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration

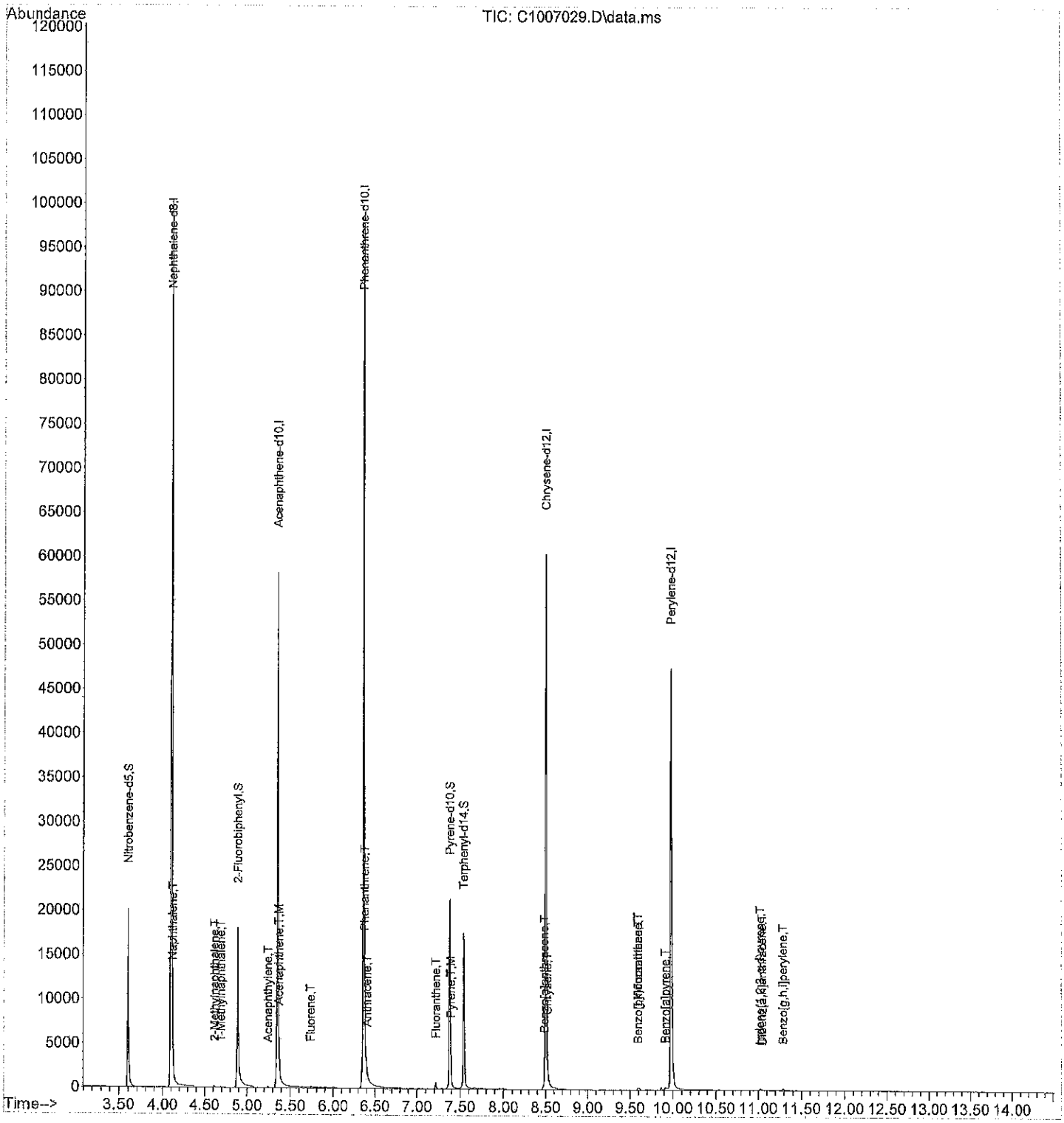
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.100	136	99556	2000.00	ppb	0.00
6) Acenaphthene-d10	5.356	164	51861	2000.00	ppb	0.00
10) Phenanthrene-d10	6.364	188	86669	2000.00	ppb	0.00
17) Chrysene-d12	8.502	240	63001	2000.00	ppb	0.00
21) Perylene-d12	9.981	264	57029	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.600	82	12905	729.98	ppb	0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery = 73.00%			
7) 2-Fluorobiphenyl	4.892	172	21200	582.22	ppb	0.00
Spiked Amount 1000.000	Range 25 - 89		Recovery = 58.22%			
11) Pyrene-d10	7.382	212	22042	688.29	ppb	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 68.83%			
18) Terphenyl-d14	7.538	244	16068	710.87	ppb	-0.01
Spiked Amount 1000.000	Range 39 - 92		Recovery = 71.09%			
Target Compounds						Qvalue
3) Naphthalene	4.117	128	564	10.46	ppb	100
4) 2-Methylnaphthalene	4.615	142	205	5.54	ppb	100
5) 1-Methylnaphthalene	4.689	142	134	3.91	ppb	100
8) Acenaphthylene	5.248	152	153	2.98	ppb	100
9) Acenaphthene	5.371	153	104	3.00	ppb	100
12) Fluorene	5.733	166	96	2.65	ppb	100
13) Phenanthrene	6.375	178	718	13.75	ppb	100
14) Anthracene	6.407	178	108	2.76	ppb	100
15) Fluoranthene	7.219	202	579	12.56	ppb	100
16) Pyrene	7.393	202	687	14.21	ppb	100
19) Benzo[a]anthracene	8.482	228	217	~~6.16~~	ppb 12.24	100
20) Chrysene	8.521	228	368	10.65	ppb	100
22) Benzo[b]fluoranthene	9.595	252	272	7.18	ppb	100
23) Benzo(j,k)fluoranthene	9.595	252	272	~~7.67~~	ppb ϕ	100
24) Benzo[a]pyrene	9.915	252	261	7.54	ppb	100
25) Indeno(1,2,3-c,d)pyrene	11.024	276	226	5.67	ppb	100
26) Dibenz[a,h]anthracene	11.044	278	57	1.72	ppb	100
27) Benzo[g,h,i]perylene	11.290	276	286	8.43	ppb	100

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

10/8/14 JM

Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007029.D
Acq On : 7 Oct 2014 11:17 pm
Operator :
Sample : 10-020-10
Misc :
ALS Vial : 28 Sample Multiplier: 1

Quant Time: Oct 07 23:33:05 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007028.D
Acq On : 7 Oct 2014 10:55 pm
Operator : 620
Sample : 10-002-12
Misc :
ALS Vial : 27 Sample Multiplier: 1

8/18

Quant Time: Oct 07 23:10:57 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration

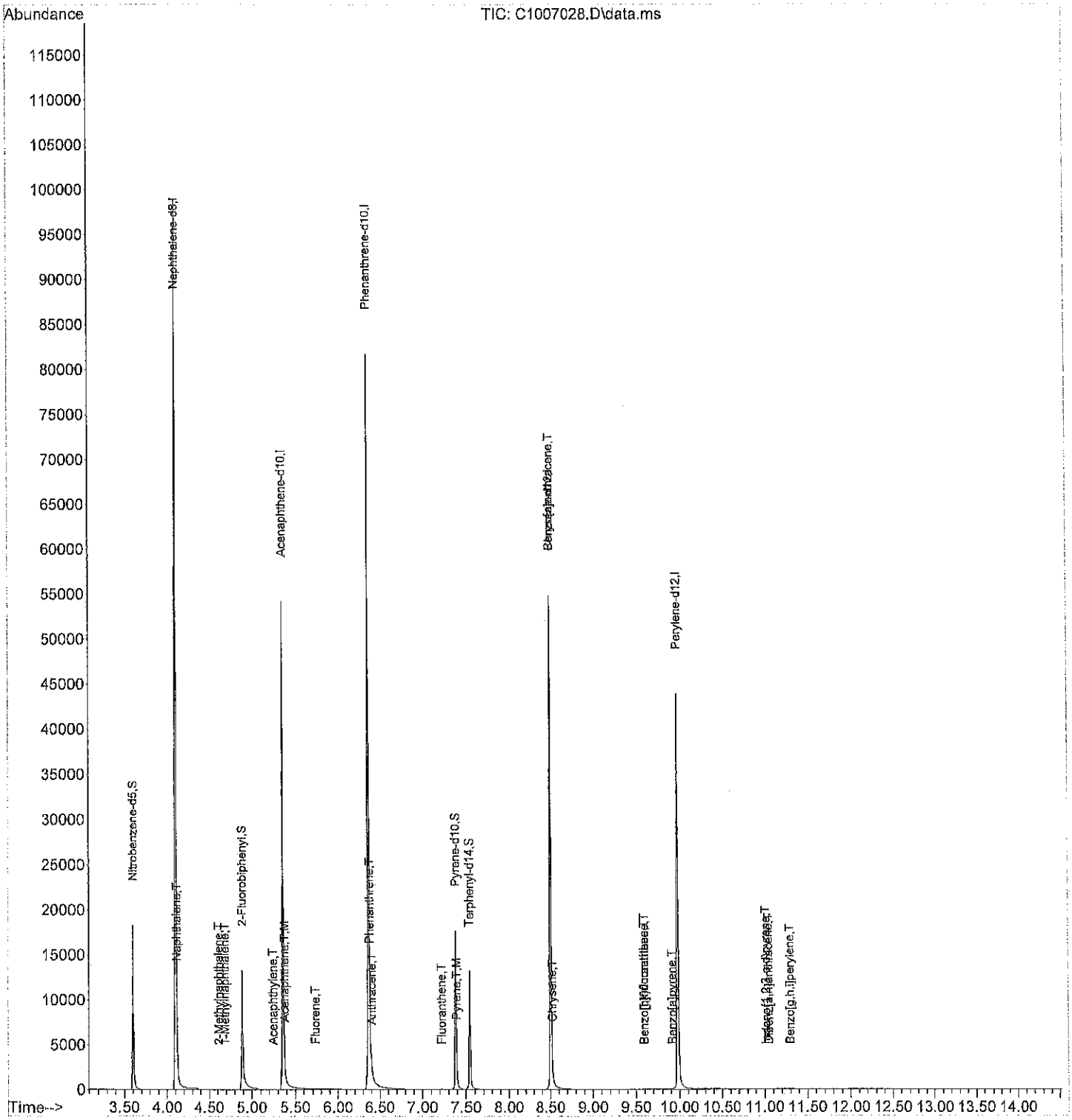
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.105	136	94273	2000.00	ppb	0.00
6) Acenaphthene-d10	5.356	164	48824	2000.00	ppb	0.00
10) Phenanthrene-d10	6.364	188	81863	2000.00	ppb	0.00
17) Chrysene-d12	8.502	240	60155	2000.00	ppb	0.00
21) Perylene-d12	9.982	264	54598	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.600	82	10798	645.02	ppb	0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery = 64.50%			
7) 2-Fluorobiphenyl	4.891	172	17073	498.04	ppb	0.00
Spiked Amount 1000.000	Range 25 - 89		Recovery = 49.80%			
11) Pyrene-d10	7.382	212	17499	578.51	ppb	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 57.85%			
18) Terphenyl-d14	7.544	244	12736	590.11	ppb	0.00
Spiked Amount 1000.000	Range 39 - 92		Recovery = 59.01%			
Target Compounds						Qvalue
3) Naphthalene	4.117	128	137	2.68	ppb	100
4) 2-Methylnaphthalene	4.614	142	71	2.02	ppb	100
5) 1-Methylnaphthalene	4.688	142	44	1.35	ppb	100
8) Acenaphthylene	5.249	152	50	1.03	ppb	100
9) Acenaphthene	5.380	153	60	1.84	ppb	100
12) Fluorene	5.734	166	76	2.22	ppb	100
13) Phenanthrene	6.379	178	321	6.51	ppb	100
14) Anthracene	6.406	178	31	0.84	ppb	100
15) Fluoranthene	7.219	202	111	2.55	ppb	100
16) Pyrene	7.393	202	175	3.83	ppb	100
19) Benzo[a]anthracene	8.502	228	233	6.93	ppb	100
20) Chrysene	8.525	228	63	1.91	ppb	100
22) Benzo[b]fluoranthene	9.595	252	43	1.19	ppb	100
23) Benzo(j,k)fluoranthene	9.595	252	43	1.27	ppb	100
24) Benzo[a]pyrene	9.915	252	51	1.54	ppb	100
25) Indeno(1,2,3-c,d)pyrene	11.020	276	17	0.45	ppb	100
26) Dibenz[a,h]anthracene	11.051	278	14	0.44	ppb	100
27) Benzo[g,h,i]perylene	11.297	276	62	1.91	ppb	100

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

10/8/14 SM

Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007028.D
Acq On : 7 Oct 2014 10:55 pm
Operator :
Sample : 10-002-12
Misc :
ALS Vial : 27 Sample Multiplier: 1

Quant Time: Oct 07 23:10:57 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration



Onsite Environmental Inc. Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007018.D
Acq On : 7 Oct 2014 7:19 pm
Operator :
Sample : MB1007S1
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 07 19:34:33 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration

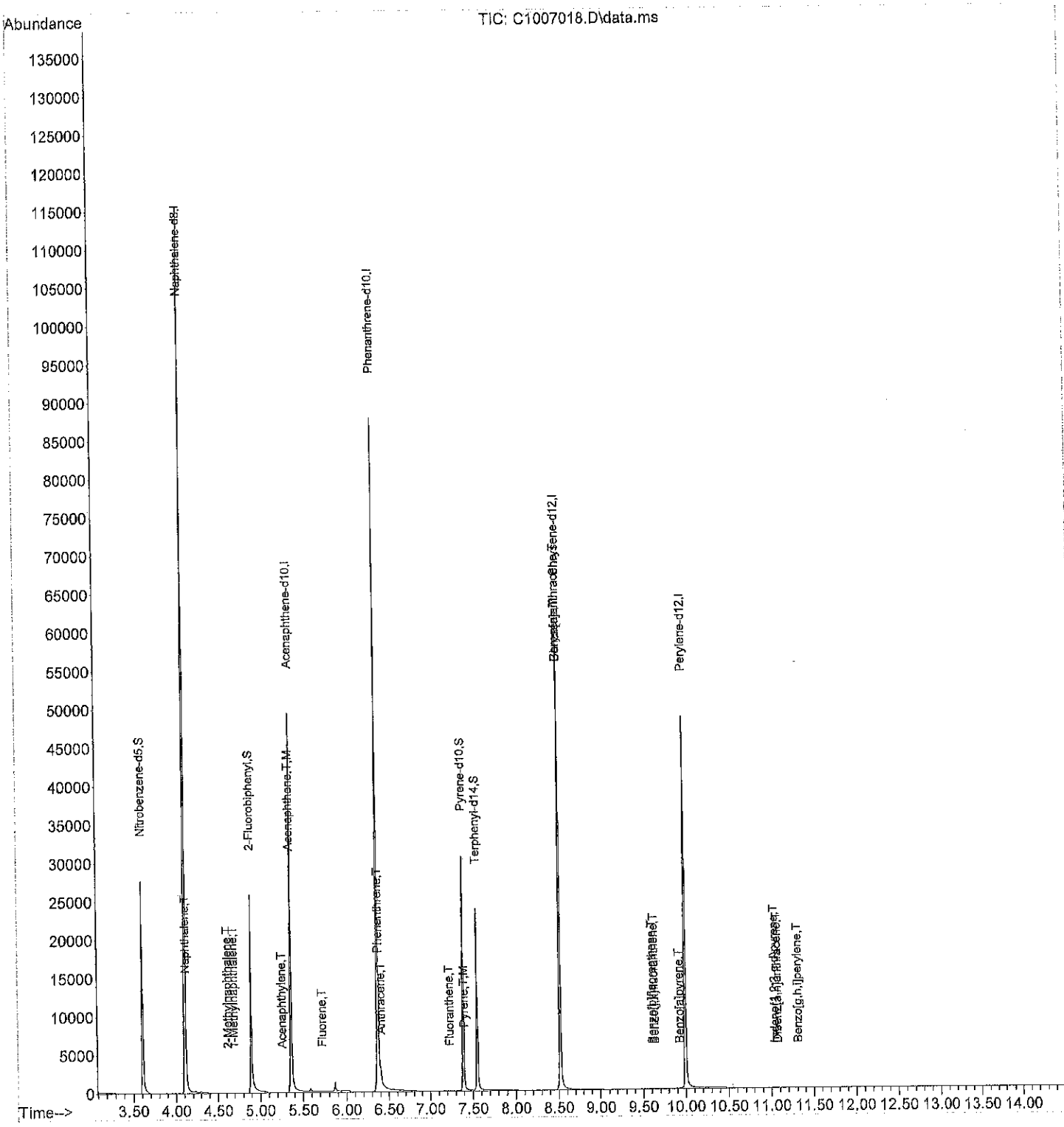
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.109	136	94126	2000.00	ppb	0.00
6) Acenaphthene-d10	5.364	164	46185	2000.00	ppb	0.00
10) Phenanthrene-d10	6.372	188	78539	2000.00	ppb	0.00
17) Chrysene-d12	8.518	240	60461	2000.00	ppb	0.00
21) Perylene-d12	9.997	264	54887	2000.00	ppb	0.01
System Monitoring Compounds						
2) Nitrobenzene-d5	3.604	82	16314	976.05	ppb	0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery = 97.61%#			
7) 2-Fluorobiphenyl	4.896	172	28893	891.01	ppb	0.00
Spiked Amount 1000.000	Range 25 - 89		Recovery = 89.10%#			
11) Pyrene-d10	7.392	212	26746	921.63	ppb	0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 92.16%			
18) Terphenyl-d14	7.555	244	20781	958.00	ppb	0.00
Spiked Amount 1000.000	Range 39 - 92		Recovery = 95.80%#			
Target Compounds						Qvalue
3) Naphthalene	4.121	128	84	1.65	ppb	100
4) 2-Methylnaphthalene	4.619	142	61	1.74	ppb	100
5) 1-Methylnaphthalene	4.693	142	37	1.14	ppb	100
8) Acenaphthylene	5.257	152	34	0.74	ppb	100
9) Acenaphthene	5.357	153	16	0.52	ppb	100
12) Fluorene	5.727	166	48	1.46	ppb	100
13) Phenanthrene	6.384	178	141	2.98	ppb	100
14) Anthracene	6.415	178	22	0.62	ppb	100
15) Fluoranthene	7.230	202	46	1.10	ppb	100
16) Pyrene	7.404	202	102	2.33	ppb	100
19) Benzo[a]anthracene	8.514	228	200	5.92	ppb	100
20) Chrysene	8.514	228	200	~~6.03~~	ppb ϕ	100
22) Benzo[b]fluoranthene	9.611	252	32	0.88	ppb	100
23) Benzo(j,k)fluoranthene	9.634	252	35	1.02	ppb	100
24) Benzo[a]pyrene	9.931	252	35	1.05	ppb	100
25) Indeno(1,2,3-c,d)pyrene	11.044	276	46	1.20	ppb	100
26) Dibenz[a,h]anthracene	11.075	278	41	1.28	ppb	100
27) Benzo[g,h,i]perylene	11.313	276	52	1.59	ppb	100

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

10/8/14 sm

Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007018.D
Acq On : 7 Oct 2014 7:19 pm
Operator :
Sample : MB1007S1
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Oct 07 19:34:33 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007019.D
Acq On : 7 Oct 2014 7:41 pm
Operator :
Sample : SB1007S1
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Oct 07 19:56:10 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration

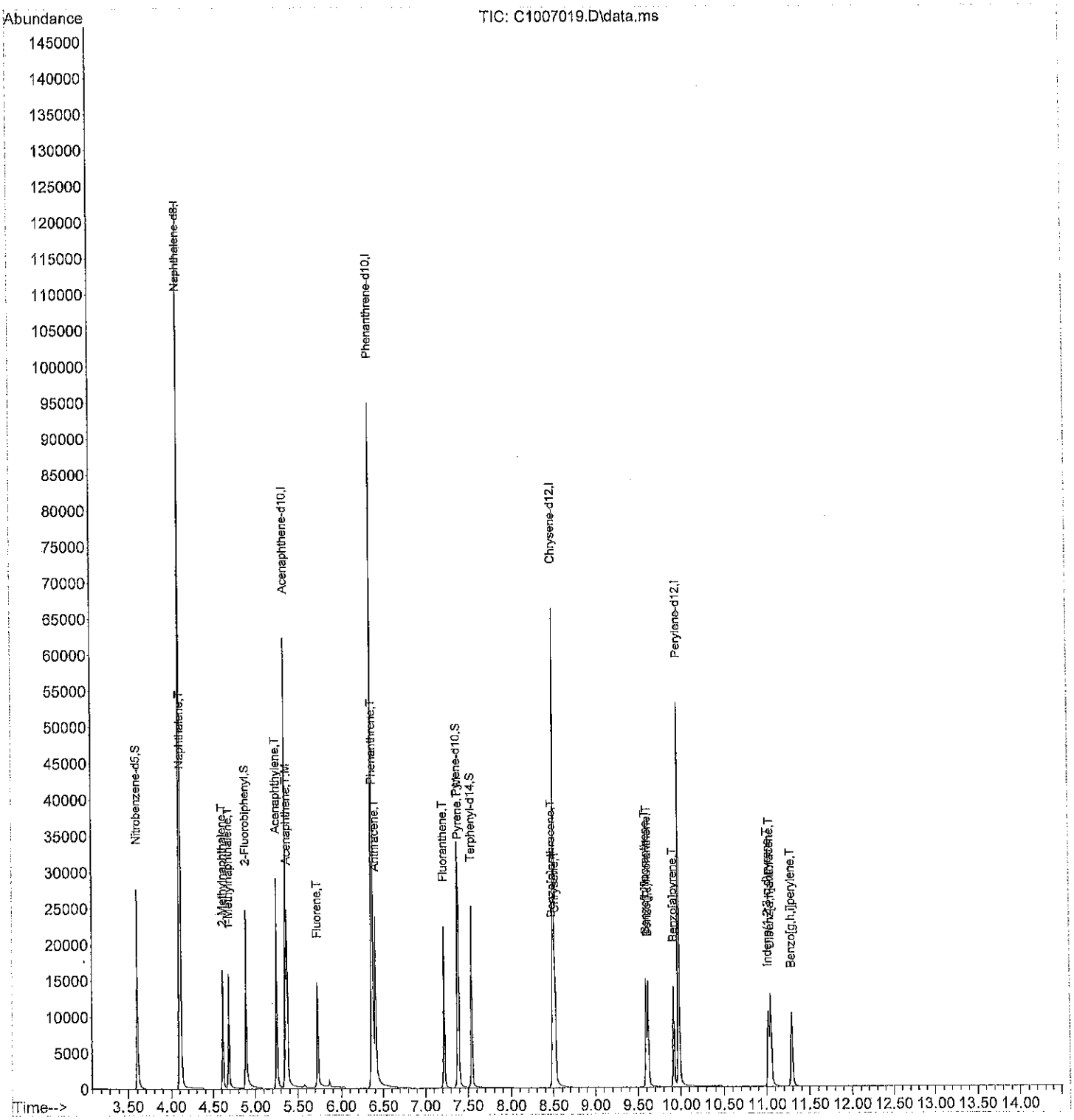
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.106	136	100022	2000.00	ppb	0.00
6) Acenaphthene-d10	5.358	164	48512	2000.00	ppb	0.00
10) Phenanthrene-d10	6.365	188	81656	2000.00	ppb	0.00
17) Chrysene-d12	8.506	240	63076	2000.00	ppb	0.00
21) Perylene-d12	9.981	264	58577	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.601	82	16963	955.05	ppb	0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery = 95.50%#			
7) 2-Fluorobiphenyl	4.891	172	29523	866.76	ppb	0.00
Spiked Amount 1000.000	Range 25 - 89		Recovery = 86.68%			
11) Pyrene-d10	7.381	212	27358	906.73	ppb	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 90.67%			
18) Terphenyl-d14	7.544	244	21100	932.38	ppb	0.00
Spiked Amount 1000.000	Range 39 - 92		Recovery = 93.24%#			
Target Compounds						Qvalue
3) Naphthalene	4.118	128	22505	415.37	ppb	100
4) 2-Methylnaphthalene	4.614	142	14217	382.17	ppb	100
5) 1-Methylnaphthalene	4.688	142	14326	415.75	ppb	100
8) Acenaphthylene	5.250	152	21762	452.46	ppb	100
9) Acenaphthene	5.373	153	14164	436.27	ppb	100
12) Fluorene	5.728	166	15258	447.44	ppb	100
13) Phenanthrene	6.377	178	18382	373.59	ppb	100
14) Anthracene	6.408	178	20455	555.32	ppb	100
15) Fluoranthene	7.219	202	19746	454.77	ppb	100
16) Pyrene	7.393	202	20315	446.02	ppb	100
19) Benzo[a]anthracene	8.486	228	16520	468.58	ppb	100
20) Chrysene	8.525	228	15827	457.46	ppb	100
22) Benzo[b]fluoranthene	9.595	252	15900	408.68	ppb	100
23) Benzo(j,k)fluoranthene	9.618	252	15945	437.48	ppb	100
24) Benzo[a]pyrene	9.918	252	15734	442.78	ppb	100
25) Indeno(1,2,3-c,d)pyrene	11.020	276	17925	437.46	ppb	100
26) Dibenz[a,h]anthracene	11.048	278	14740	432.46	ppb	100
27) Benzo[g,h,i]perylene	11.290	276	14959	429.37	ppb	100

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

10/8/14 SM

Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007019.D
Acq On : 7 Oct 2014 7:41 pm
Operator :
Sample : SB1007S1
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Oct 07 19:56:10 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration



Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007020.D
Acq On : 7 Oct 2014 8:02 pm
Operator :
Sample : SB1007S1 DUP
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Oct 07 20:17:50 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration

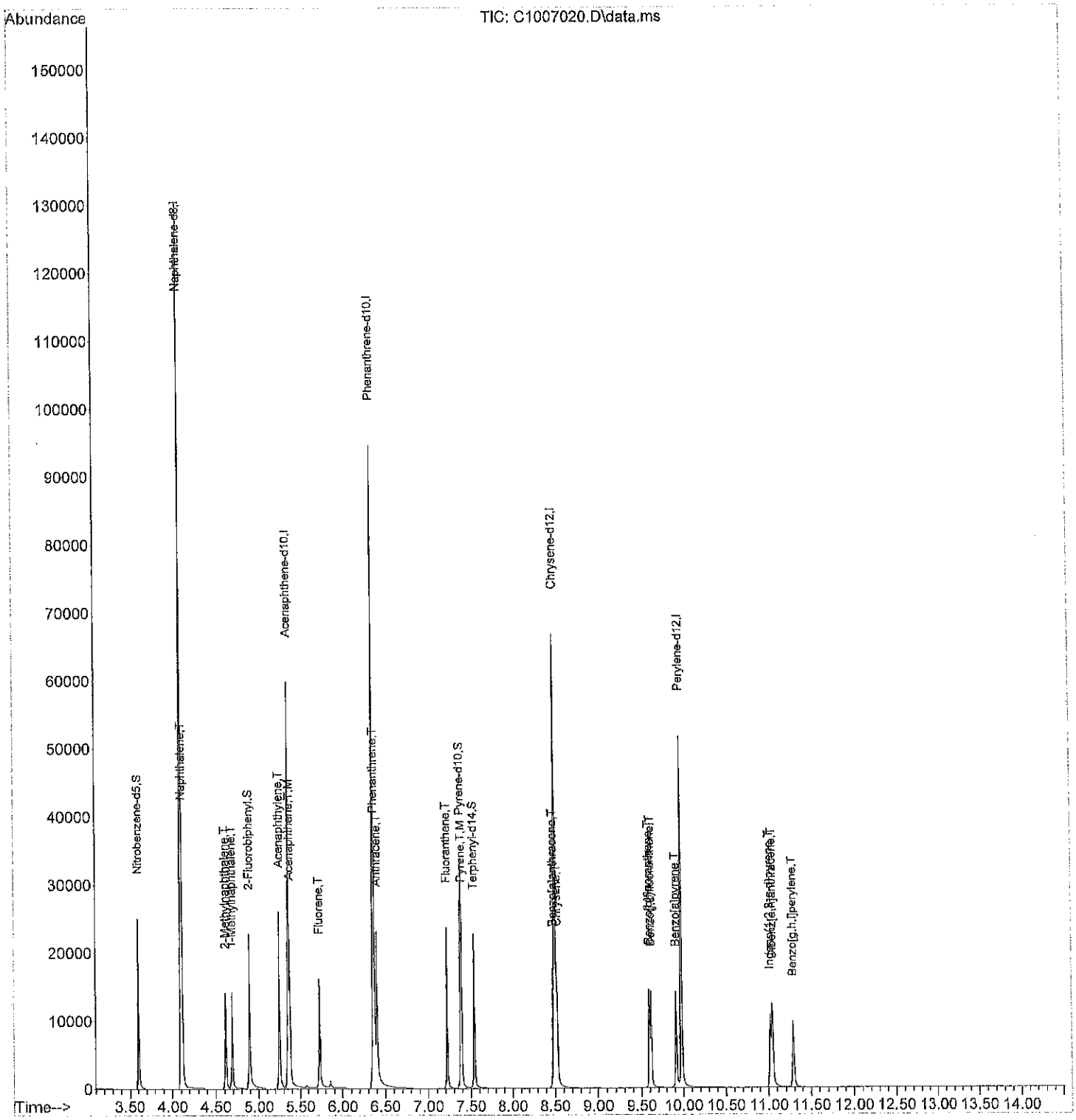
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.105	136	104728	2000.00	ppb	0.00
6) Acenaphthene-d10	5.358	164	51313	2000.00	ppb	0.00
10) Phenanthrene-d10	6.365	188	86458	2000.00	ppb	0.00
17) Chrysene-d12	8.502	240	66173	2000.00	ppb	0.00
21) Perylene-d12	9.977	264	61293	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.600	82	14737	792.44	ppb	0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery = 79.24%			
7) 2-Fluorobiphenyl	4.891	172	24413	677.62	ppb	0.00
Spiked Amount 1000.000	Range 25 - 89		Recovery = 67.76%			
11) Pyrene-d10	7.382	212	27369	856.72	ppb	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 85.67%			
18) Terphenyl-d14	7.538	244	20790	875.68	ppb	-0.01
Spiked Amount 1000.000	Range 39 - 92		Recovery = 87.57%			
Target Compounds						Qvalue
3) Naphthalene	4.117	128	20062	353.64	ppb	100
4) 2-Methylnaphthalene	4.614	142	12751	327.36	ppb	100
5) 1-Methylnaphthalene	4.688	142	13165	364.89	ppb	100
8) Acenaphthylene	5.250	152	20150	396.07	ppb	100
9) Acenaphthene	5.373	153	13452	391.72	ppb	100
12) Fluorene	5.727	166	15404	426.64	ppb	100
13) Phenanthrene	6.377	178	18580	356.64	ppb	100
14) Anthracene	6.408	178	20013	513.15	ppb	100
15) Fluoranthene	7.219	202	19820	431.12	ppb	100
16) Pyrene	7.393	202	20392	422.84	ppb	100
19) Benzo[a]anthracene	8.482	228	16464	445.14	ppb	100
20) Chrysene	8.525	228	15855	436.82	ppb	100
22) Benzo[b]fluoranthene	9.595	252	17061	419.09	ppb	100
23) Benzo(j,k)fluoranthene	9.618	252	14854	389.49	ppb	100
24) Benzo[a]pyrene	9.915	252	15753	423.67	ppb	100
25) Indeno(1,2,3-c,d)pyrene	11.020	276	18079	421.67	ppb	100
26) Dibenz[a,h]anthracene	11.047	278	14950	419.18	ppb	100
27) Benzo[g,h,i]perylene	11.285	276	15136	415.20	ppb	100

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

10/8/14 gm

Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007020.D
Acq On : 7 Oct 2014 8:02 pm
Operator :
Sample : SB1007S1 DUP
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Oct 07 20:17:50 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : X:\SEMIVOLS\COREY\DATA\C141007\
Data File : C1007013.D
Acq On : 7 Oct 2014 5:30 pm
Operator :
Sample : ICVPAH1007
Misc : SV4-39-06
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 07 17:45:49 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	2000.000	2000.000	0.0	101	0.00
2	S	Nitrobenzene-d5	500.000	486.310	2.7	108	0.00
3	T	Naphthalene	500.000	497.621	0.5	109	0.00
4	T	2-Methylnaphthalene	500.000	492.697	1.5	110	0.00
5	T	1-Methylnaphthalene	500.000	513.443	-2.7	111	0.00
6	I	Acenaphthene-d10	2000.000	2000.000	0.0	101	0.00
7	S	2-Fluorobiphenyl	500.000	532.019	-6.4	111	0.00
8	T	Acenaphthylene	500.000	496.175	0.8	112	0.00
9	T,M	Acenaphthene	500.000	495.131	1.0	109	0.00
10	I	Phenanthrene-d10	2000.000	2000.000	0.0	101	0.00
11	S	Pyrene-d10	500.000	509.760	-2.0	113	0.00
12	T	Fluorene	500.000	512.771	-2.6	112	0.00
13	T	Phenanthrene	500.000	475.367	4.9	114	0.00
14	T	Anthracene	500.000	506.977	-1.4	106	0.00
15	T	Fluoranthene	500.000	506.059	-1.2	111	0.00
16	T,M	Pyrene	500.000	504.612	-0.9	112	0.00
17	I	Chrysene-d12	2000.000	2000.000	0.0	101	0.00
18	S	Terphenyl-d14	500.000	543.632	-8.7	83	0.00
19	T	Benzo[a]anthracene	500.000	530.698	-6.1	111	0.00
20	T	Chrysene	500.000	517.468	-3.5	113	0.00
21	I	Perylene-d12	2000.000	2000.000	0.0	100	0.00
22	T	Benzo[b]fluoranthene	500.000	523.336	-4.7	115	0.00
23	T	Benzo(j,k)fluoranthene	500.000	513.793	-2.8	107	0.00
24	T	Benzo[a]pyrene	500.000	514.381	-2.9	112	0.00
25	T	Indeno(1,2,3-c,d)pyrene	500.000	513.416	-2.7	110	0.00
26	T	Dibenz[a,h]anthracene	500.000	502.985	-0.6	111	0.00
27	T	Benzo[g,h,i]perylene	500.000	506.341	-1.3	109	0.00

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

Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007013.D
Acq On : 7 Oct 2014 5:30 pm
Operator :
Sample : ICVPAH1007
Misc : SV4-39-06
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 07 17:45:49 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration

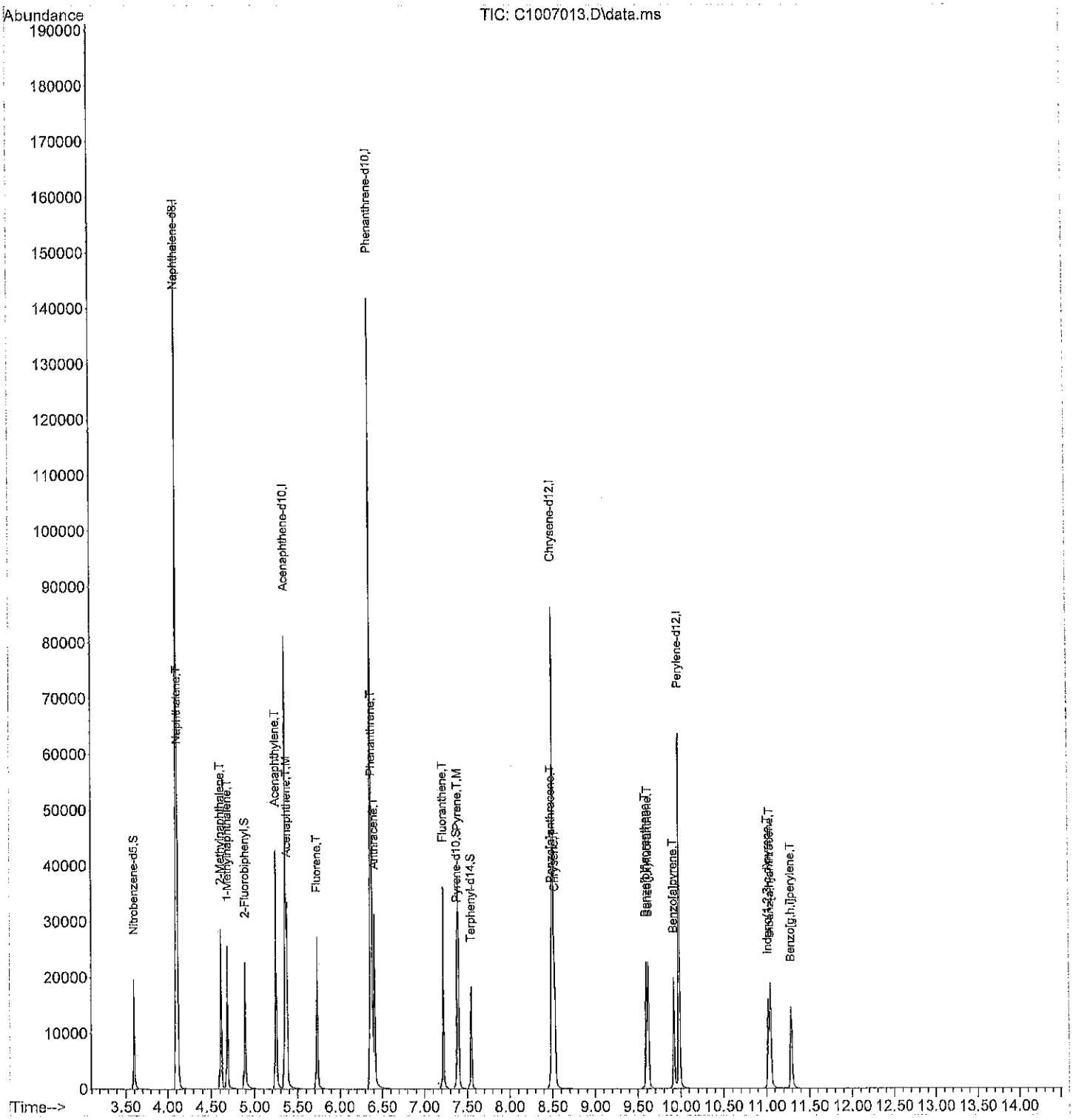
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.106	136	133760	2000.00	ppb	0.00
6) Acenaphthene-d10	5.357	164	67832	2000.00	ppb	0.00
10) Phenanthrene-d10	6.365	188	115902	2000.00	ppb	0.00
17) Chrysene-d12	8.507	240	85863	2000.00	ppb	0.00
21) Perylene-d12	9.985	264	73256	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.601	82	11551	486.31	ppb	0.00
Spiked Amount 1000.000	Range 24 - 92		Recovery = 48.63%			
7) 2-Fluorobiphenyl	4.895	172	25338	532.02	ppb	0.00
Spiked Amount 1000.000	Range 25 - 89		Recovery = 53.20%			
11) Pyrene-d10	7.381	212	21831	509.76	ppb	0.00
Spiked Amount 1000.000	Range 40 - 110		Recovery = 50.98%			
18) Terphenyl-d14	7.550	244	16747	543.63	ppb	0.00
Spiked Amount 1000.000	Range 39 - 92		Recovery = 54.36%			
Target Compounds						Qvalue
3) Naphthalene	4.118	128	36056	497.62	ppb	100
4) 2-Methylnaphthalene	4.614	142	24511	492.70	ppb	100
5) 1-Methylnaphthalene	4.692	142	23660	513.44	ppb	100
8) Acenaphthylene	5.249	152	33369	496.17	ppb	100
9) Acenaphthene	5.380	153	22477	495.13	ppb	100
12) Fluorene	5.735	166	24819	512.77	ppb	100
13) Phenanthrene	6.380	178	33199	475.37	ppb	100
14) Anthracene	6.411	178	26506	506.98	ppb	100
15) Fluoranthene	7.225	202	31188	506.06	ppb	100
16) Pyrene	7.393	202	32623	504.61	ppb	100
19) Benzo[a]anthracene	8.491	228	25469	530.70	ppb	100
20) Chrysene	8.530	228	24371	517.47	ppb	100
22) Benzo[b]fluoranthene	9.599	252	25463	523.34	ppb	100
23) Benzo(j,k)fluoranthene	9.622	252	23419	513.79	ppb	100
24) Benzo[a]pyrene	9.919	252	22859	514.38	ppb	100
25) Indeno(1,2,3-c,d)pyrene	11.024	276	26309	513.42	ppb	100
26) Dibenz[a,h]anthracene	11.051	278	21440	502.99	ppb	100
27) Benzo[g,h,i]perylene	11.289	276	22061	506.34	ppb	100

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

10/7/14

Data Path : C:\MSDCHEM\1\DATA\C141007\
Data File : C1007013.D
Acq On : 7 Oct 2014 5:30 pm
Operator :
Sample : ICVPAH1007
Misc : SV4-39-06
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Oct 07 17:45:49 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : X:\SEMIVOLS\COREY\DATA\C141009\
Data File : C1009003.D
Acq On : 9 Oct 2014 10:27 am
Operator :
Sample : PAHCCV1009
Misc : SV4-39-07
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 09 10:42:10 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	2000.000	2000.000	0.0	54	-0.02
2	S	Nitrobenzene-d5	500.000	589.816	-18.0	70	-0.03
3	T	Naphthalene	500.000	490.734	1.9	58	-0.02
4	T	2-Methylnaphthalene	500.000	474.612	5.1	57	-0.02
5	T	1-Methylnaphthalene	500.000	536.501	-7.3	62	-0.02
6	I	Acenaphthene-d10	2000.000	2000.000	0.0	58	-0.02
7	S	2-Fluorobiphenyl	500.000	499.811	0.0	60	-0.02
8	T	Acenaphthylene	500.000	508.468	-1.7	66	-0.02
9	T,M	Acenaphthene	500.000	485.392	2.9	62	-0.02
10	I	Phenanthrene-d10	2000.000	2000.000	0.0	59	-0.03
11	S	Pyrene-d10	500.000	522.898	-4.6	68	-0.02
12	T	Fluorene	500.000	482.496	3.5	62	-0.02
13	T	Phenanthrene	500.000	440.967	11.8	62	-0.02
14	T	Anthracene	500.000	511.747	-2.3	63	-0.02
15	T	Fluoranthene	500.000	521.593	-4.3	67	-0.03
16	T,M	Pyrene	500.000	513.207	-2.6	67	-0.03
17	I	Chrysene-d12	2000.000	2000.000	0.0	61	-0.03
18	S	Terphenyl-d14	500.000	533.836	-6.8	50	-0.03
19	T	Benzo[a]anthracene	500.000	516.366	-3.3	65	-0.03
20	T	Chrysene	500.000	502.674	-0.5	66	-0.03
21	I	Perylene-d12	2000.000	2000.000	0.0	56	-0.03
22	T	Benzo[b]fluoranthene	500.000	498.604	0.3	62	-0.03
23	T	Benzo(j,k)fluoranthene	500.000	520.562	-4.1	61	-0.03
24	T	Benzo[a]pyrene	500.000	506.826	-1.4	62	-0.03
25	T	Indeno(1,2,3-c,d)pyrene	500.000	494.502	1.1	60	-0.03
26	T	Dibenz[a,h]anthracene	500.000	478.384	4.3	59	-0.03
27	T	Benzo[g,h,i]perylene	500.000	487.966	2.4	59	-0.03

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

CSIM1007.M Thu Oct 09 10:45:05 2014

Data Path : C:\MSDCHEM\1\DATA\C141009\
Data File : C1009003.D
Acq On : 9 Oct 2014 10:27 am
Operator :
Sample : PAHCCV1009
Misc : SV4-39-07
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Oct 09 10:42:10 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration

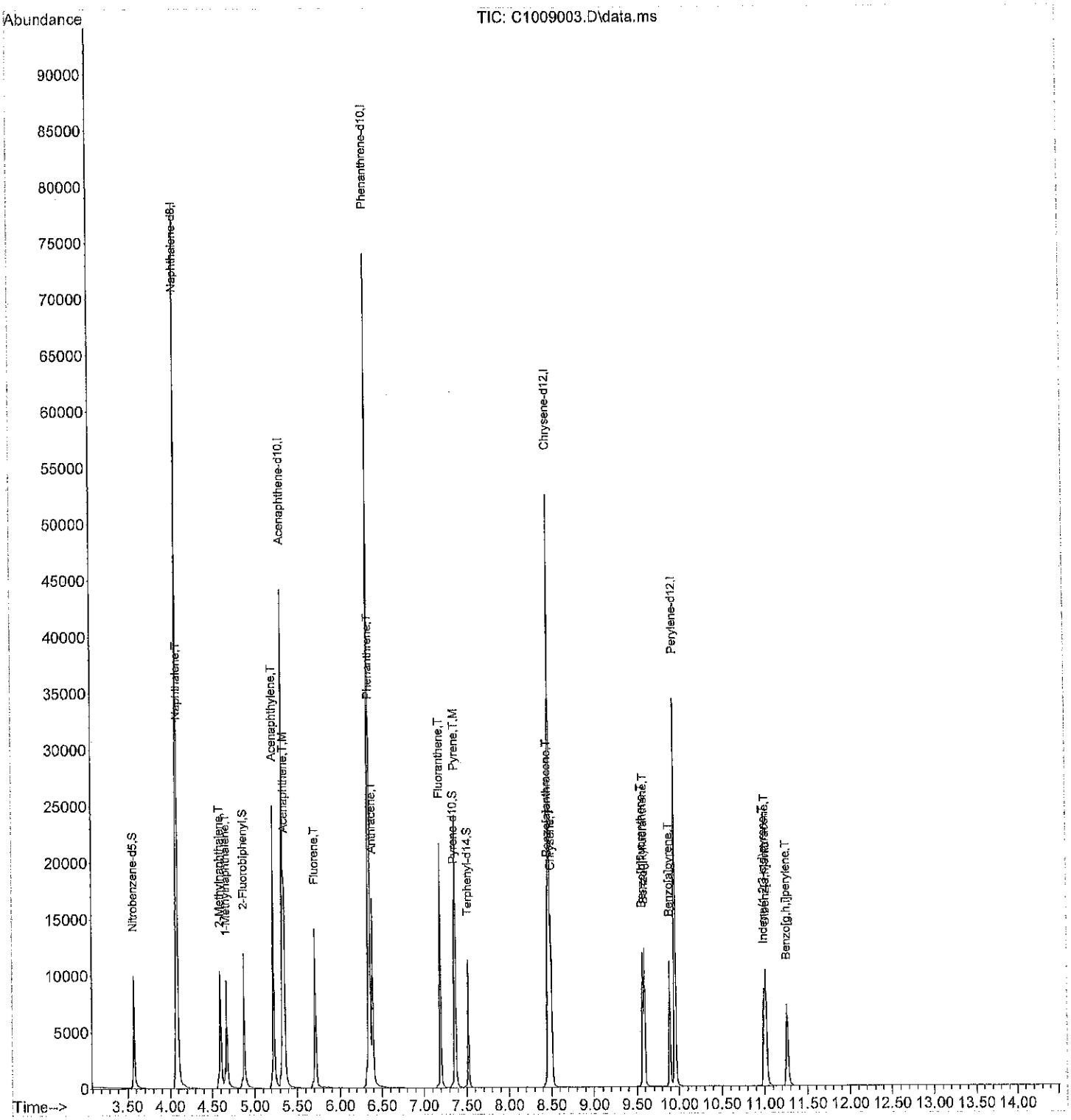
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.082	136	71618	2000.00	ppb	-0.02
6) Acenaphthene-d10	5.334	164	38917	2000.00	ppb	-0.02
10) Phenanthrene-d10	6.342	188	67972	2000.00	ppb	-0.03
17) Chrysene-d12	8.476	240	51893	2000.00	ppb	-0.03
21) Perylene-d12	9.954	264	41303	2000.00	ppb	-0.03
System Monitoring Compounds						
2) Nitrobenzene-d5	3.571	82	7501	589.82	ppb	-0.03
Spiked Amount 1000.000	Range 24 - 92		Recovery = 58.98%			
7) 2-Fluorobiphenyl	4.875	172	13657	499.81	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 49.98%			
11) Pyrene-d10	7.358	212	13133	522.90	ppb	-0.02
Spiked Amount 1000.000	Range 40 - 110		Recovery = 52.29%			
18) Terphenyl-d14	7.521	244	9939	533.84	ppb	-0.03
Spiked Amount 1000.000	Range 39 - 92		Recovery = 53.38%			
Target Compounds						Qvalue
3) Naphthalene	4.093	128	19038	490.73	ppb	100
4) 2-Methylnaphthalene	4.594	142	12642	474.61	ppb	100
5) 1-Methylnaphthalene	4.668	142	13237	536.50	ppb	100
8) Acenaphthylene	5.227	152	19619	508.47	ppb	100
9) Acenaphthene	5.358	153	12642	485.39	ppb	100
12) Fluorene	5.712	166	13696	482.50	ppb	100
13) Phenanthrene	6.357	178	18061	440.97	ppb	100
14) Anthracene	6.388	178	15691	511.75	ppb	100
15) Fluoranthene	7.196	202	18852	521.59	ppb	100
16) Pyrene	7.370	202	19458	513.21	ppb	100
19) Benzo[a]anthracene	8.460	228	14977	516.37	ppb	100
20) Chrysene	8.499	228	14308	502.67	ppb	100
22) Benzo[b]fluoranthene	9.567	252	13678	498.60	ppb	100
23) Benzo(j,k)fluoranthene	9.591	252	13378	520.56	ppb	100
24) Benzo[a]pyrene	9.891	252	12699	506.83	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.997	276	14287	494.50	ppb	100
26) Dibenz[a,h]anthracene	11.020	278	11497	478.38	ppb	100
27) Benzo[g,h,i]perylene	11.262	276	11987	487.97	ppb	100

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

10/9/14 JM

Data Path : C:\MSDCHEM\1\DATA\C141009\
Data File : C1009003.D
Acq On : 9 Oct 2014 10:27 am
Operator :
Sample : PAHCCV1009
Misc : SV4-39-07
ALS Vial : 3 Sample Multiplier: 1

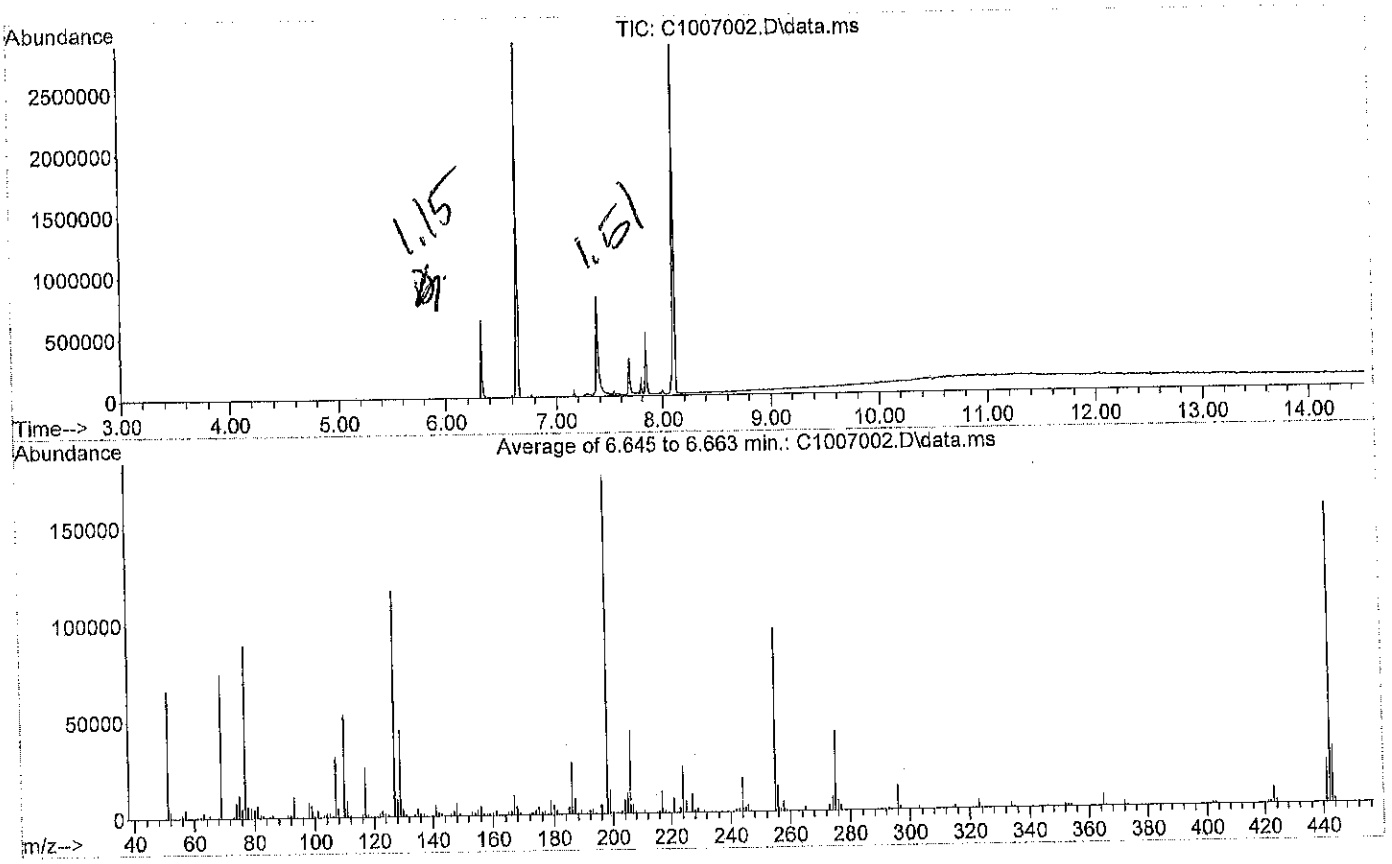
Quant Time: Oct 09 10:42:10 2014
Quant Method : C:\MSDCHEM\1\METHODS\CSIM1007.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Oct 07 17:28:36 2014
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\COREY\DATA\C141007\
Data File : C1007002.D
Acq On : 7 Oct 2014 12:41 pm
Operator :
Sample : DFTPP
Misc : SV4-39-01
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : X:\SEMIVOLS\COREY\DATA\C141006\C1006016.D\CSIM1002.M
Title : PAH'S BY SIMS
Last Update : Thu Oct 02 17:23:20 2014



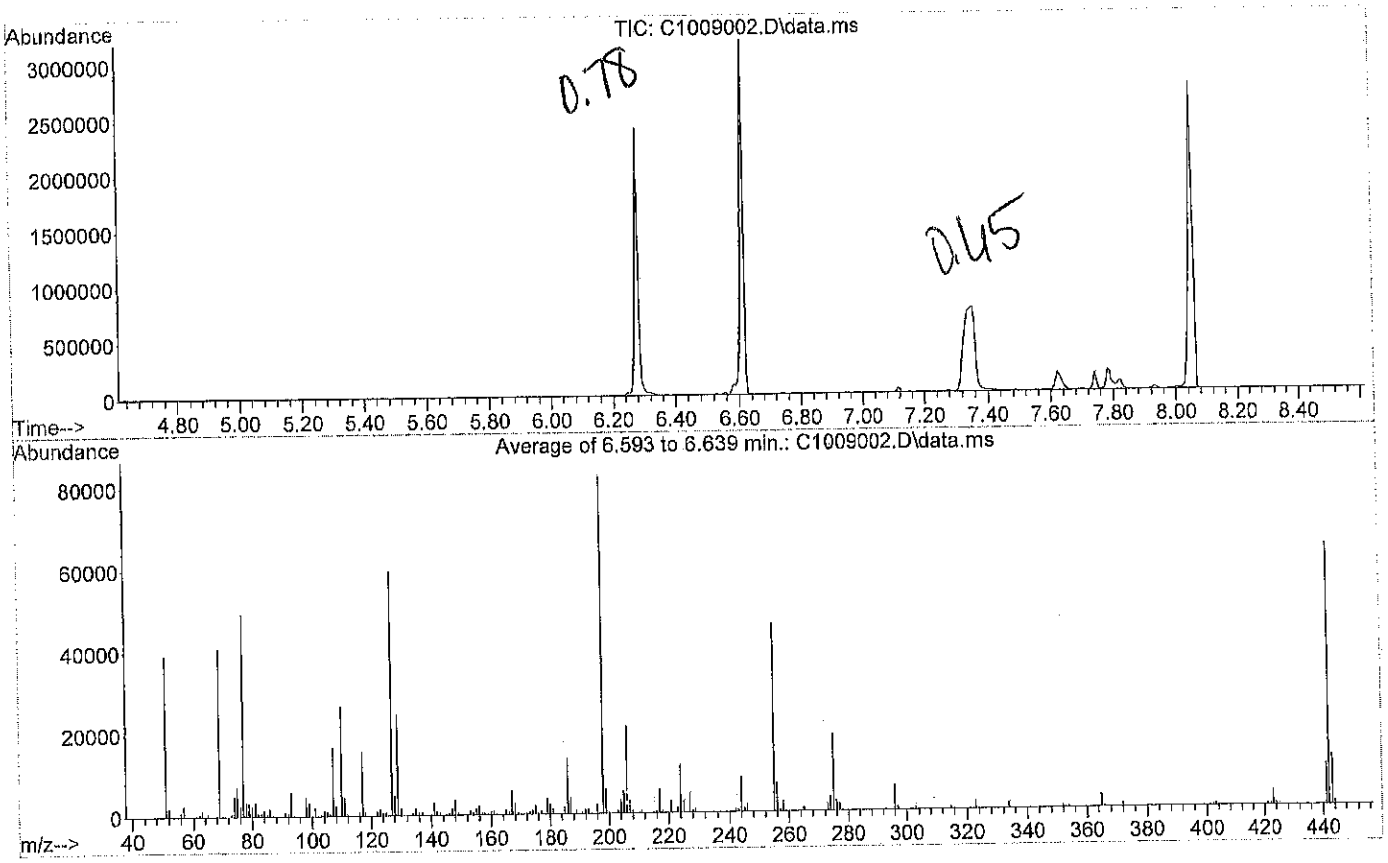
Spectrum Information: Average of 6.645 to 6.663 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	37.8	66257	PASS
68	69	0.00	2	1.0	740	PASS
69	198	0.00	100	42.4	74402	PASS
70	69	0.00	2	0.5	370	PASS
127	198	25	75	66.8	117042	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	175290	PASS
199	198	5	9	7.1	12394	PASS
275	198	10	30	23.4	41081	PASS
365	198	0.75	100	3.5	6214	PASS
441	443	0.01	100	76.3	22561	PASS
442	198	40	110	88.6	155338	PASS
443	442	15	24	19.0	29569	PASS

Data Path : X:\SEMIVOLS\COREY\DATA\C141009\
Data File : C1009002.D
Acq On : 9 Oct 2014 10:05 am
Operator :
Sample : DFTPP
Misc : SV4-39-01
ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\CSIM1007.M
Title : PAH'S BY SIMS
Last Update : Tue Oct 07 17:28:36 2014



Spectrum Information: Average of 6.593 to 6.639 min.

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	47.6	39301	PASS
68	69	0.00	2	0.8	327	PASS
69	198	0.00	100	49.7	41075	PASS
70	69	0.00	2	0.4	177	PASS
127	198	25	75	72.2	59663	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	82616	PASS
199	198	5	9	7.3	6060	PASS
275	198	10	30	22.6	18647	PASS
365	198	0.75	100	4.0	3304	PASS
441	443	0.01	100	82.4	10108	PASS
442	198	40	110	77.4	63977	PASS
443	442	15	24	19.2	12263	PASS

Total Metals Data

P141010F1. Mean Only Report 10/13/2014, 1:40:19 PM

Sample	Label	Calc Conc.	Units	Date/Time
Blank	As 188.980	0.000	ppb	10/10/2014, 9:28:40 AM
	Ni 231.604	0.000	ppb	
Standard 5	As 188.980	100.00	ppb	10/10/2014, 9:32:44 AM
	Ni 231.604	20.000	ppb	
Standard 4	As 188.980	1000.0	ppb	10/10/2014, 9:36:46 AM
	Ni 231.604	200.00	ppb	
Standard 3	As 188.980	10000	ppb	10/10/2014, 9:40:51 AM
	Ni 231.604	2000.0	ppb	
Standard 2	As 188.980	25000	ppb	10/10/2014, 9:44:55 AM
	Ni 231.604	5000.0	ppb	
Standard 1	Ni 231.604	10000	ppb	10/10/2014, 9:48:59 AM
Initial Calib Verif	As 188.980	975.99	ppb	10/10/2014, 9:55:38 AM
	Ni 231.604	1048.0	ppb	
LLICV	As 188.980	106.12	ppb	10/10/2014, 10:09:31 AM
	Ni 231.604	20.060	ppb	
Initial Calib Blank	As 188.980	8.129uv	ppb	10/10/2014, 10:14:46 AM
	Ni 231.604	-2.013uv	ppb	
Cont Calib Verif	As 188.980	9823.4	ppb	10/10/2014, 10:18:52 AM
	Ni 231.604	2049.0	ppb	
Cont Calib Blank	As 188.980	6.561uv	ppb	10/10/2014, 10:27:31 AM
	Ni 231.604	0.488uv	ppb	
ICSA	As 188.980	27.572	ppb	10/10/2014, 10:31:35 AM
	Ni 231.604	2.083uv	ppb	
ICSAB	As 188.980	2455.6	ppb	10/10/2014, 10:35:40 AM
	Ni 231.604	885.32	ppb	
BLK	As 188.980	16.956	ppb	10/10/2014, 10:39:45 AM
	Ni 231.604	0.521uv	ppb	
MB1010TM1	As 188.980	9.463uv	ppb	10/10/2014, 10:46:30 AM
	Ni 231.604	-0.239uv	ppb	
SB1010TM1	As 188.980	1997.7	ppb	10/10/2014, 10:50:35 AM
	Ni 231.604	2003.7	ppb	
09-321-01	As 188.980	16.518uv	ppb	10/10/2014, 10:54:40 AM
	Ni 231.604	8.076	ppb	
09-321-01 D	As 188.980	3.429uv	ppb	10/10/2014, 10:58:45 AM
	Ni 231.604	1.337	ppb	

P141010F1. Mean Only Report 10/13/2014, 1:40:19 PM

Sample	Label	Calc Conc.	Units	Date/Time
09-321-01 L	As 188.980	16.561	ppb	10/10/2014, 11:02:50 AM
	Ni 231.604	-1.093uv	ppb	
09-321-01 MS	As 188.980	2022.4	ppb	10/10/2014, 11:06:55 AM
	Ni 231.604	2005.4	ppb	
09-321-01 MSD	As 188.980	2021.3	ppb	10/10/2014, 11:11:00 AM
	Ni 231.604	2011.5	ppb	
Cont Calib Verif	As 188.980	9653.8	ppb	10/10/2014, 11:15:06 AM
	Ni 231.604	2030.1	ppb	
Cont Calib Blank	As 188.980	20.498	ppb	10/10/2014, 11:20:48 AM
	Ni 231.604	0.647uv	ppb	
LLCCV	As 188.980	109.96	ppb	10/10/2014, 11:24:51 AM
	Ni 231.604	21.273	ppb	
MB1010SM3	As 188.980	-4.627uv	ppb	10/10/2014, 12:46:41 PM
	Ni 231.604	-1.734uv	ppb	
SB1010SM3	As 188.980	1854.4	ppb	10/10/2014, 12:50:44 PM
	Ni 231.604	2007.5	ppb	
10-020-40	As 188.980	30.430	ppb	10/10/2014, 12:54:47 PM
	Ni 231.604	152.58	ppb	
10-020-40 D	As 188.980	23.633	ppb	10/10/2014, 12:58:52 PM
	Ni 231.604	157.08	ppb	
10-020-40 L	As 188.980	24.173	ppb	10/10/2014, 1:02:56 PM
	Ni 231.604	29.371	ppb	
10-020-40 MS	As 188.980	1865.3	ppb	10/10/2014, 1:07:00 PM
	Ni 231.604	2056.2	ppb	
10-020-40 MSD	As 188.980	1866.0	ppb	10/10/2014, 1:11:04 PM
	Ni 231.604	2095.7	ppb	
10-019-01	As 188.980	1617.0	ppb	10/10/2014, 1:15:07 PM
	Ni 231.604	2109.2	ppb	
10-019-05	As 188.980	1746.5	ppb	10/10/2014, 1:19:11 PM
	Ni 231.604	818.11	ppb	
10-019-19	As 188.980	558.23	ppb	10/10/2014, 1:23:15 PM
	Ni 231.604	719.75	ppb	
Cont Calib Verif	As 188.980	9610.9	ppb	10/10/2014, 1:27:19 PM
	Ni 231.604	2028.3	ppb	
Cont Calib Blank	As 188.980	9.575	ppb	10/10/2014, 1:32:17 PM

P141010F1. Mean Only Report 10/13/2014, 1:40:19 PM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	1.460	ppb	
LLCCV	As 188.980	93.503	ppb	10/10/2014, 1:36:21 PM
	Ni 231.604	22.351	ppb	
10-019-23	As 188.980	192.28	ppb	10/10/2014, 1:43:13 PM
	Ni 231.604	3687.4	ppb	
10-019-34	As 188.980	58.754	ppb	10/10/2014, 1:47:17 PM
	Ni 231.604	481.08	ppb	
10-019-47	As 188.980	89.475	ppb	10/10/2014, 1:51:21 PM
	Ni 231.604	2172.7	ppb	
10-019-51	As 188.980	56.119	ppb	10/10/2014, 1:55:25 PM
	Ni 231.604	575.98	ppb	
10-020-02	As 188.980	74.113	ppb	10/10/2014, 1:59:31 PM
	Ni 231.604	551.10	ppb	
10-020-10	As 188.980	64.743	ppb	10/10/2014, 2:03:36 PM
	Ni 231.604	868.54	ppb	
10-020-12	As 188.980	104.58	ppb	10/10/2014, 2:07:41 PM
	Ni 231.604	816.37	ppb	
10-020-35	As 188.980	110.34	ppb	10/10/2014, 2:11:46 PM
	Ni 231.604	913.94	ppb	
10-020-37	As 188.980	48.431	ppb	10/10/2014, 2:15:51 PM
	Ni 231.604	298.01	ppb	
10-020-43	As 188.980	9.740	ppb	10/10/2014, 2:19:53 PM
	Ni 231.604	107.38	ppb	
Cont Calib Verif	As 188.980	9749.1	ppb	10/10/2014, 2:23:55 PM
	Ni 231.604	2043.8	ppb	
Cont Calib Blank	As 188.980	2.016uv	ppb	10/10/2014, 3:36:40 PM
	Ni 231.604	0.068uv	ppb	
LLCCV	As 188.980	108.39	ppb	10/10/2014, 3:41:17 PM
	Ni 231.604	21.247	ppb	
10-020-60	As 188.980	59.191	ppb	10/10/2014, 3:47:16 PM
	Ni 231.604	459.80	ppb	
09-311-01	As 188.980	32.721	ppb	10/10/2014, 3:51:21 PM
	Ni 231.604	5203.4	ppb	
09-311-01 X 5	As 188.980	9.931uv	ppb	10/10/2014, 4:01:54 PM
	Ni 231.604	1231.5	ppb	

P141010F1. Mean Only Report 10/13/2014, 1:40:19 PM

Sample	Label	Calc Conc.	Units	Date/Time
BLK	As 188.980	9.558	ppb	10/10/2014, 4:10:28 PM
	Ni 231.604	0.613uv	ppb	
MB1010SM5	As 188.980	7.819uv	ppb	10/10/2014, 4:14:33 PM
	Ni 231.604	-2.162uv	ppb	
SB1010SM5	As 188.980	1953.7	ppb	10/10/2014, 4:18:36 PM
	Ni 231.604	2132.9	ppb	
09-324-01	As 188.980	1164.4	ppb	10/10/2014, 4:22:41 PM
	Ni 231.604	566.08	ppb	
09-324-01 D	As 188.980	1062.6	ppb	10/10/2014, 4:26:47 PM
	Ni 231.604	555.68	ppb	
09-324-01 L	As 188.980	262.28	ppb	10/10/2014, 4:30:53 PM
	Ni 231.604	129.10	ppb	
09-324-01 MS	As 188.980	2936.5	ppb	10/10/2014, 4:34:58 PM
	Ni 231.604	2464.2	ppb	
Cont Calib Verif	As 188.980	9684.5	ppb	10/10/2014, 4:39:03 PM
	Ni 231.604	2039.1	ppb	
Cont Calib Blank	As 188.980	9.625uv	ppb	10/10/2014, 4:43:41 PM
	Ni 231.604	-0.092uv	ppb	
LLCCV	As 188.980	109.52	ppb	10/10/2014, 4:47:45 PM
	Ni 231.604	19.444	ppb	

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

December 1, 2014

Brian Tracy
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-10
Laboratory Reference No. 1410-020B

Dear Brian:

Enclosed are the analytical results and associated quality control data for samples submitted on October 2, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: December 1, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020B
Project: 5147-006-10

Case Narrative

Samples were collected on October 1, 2014 and received by the laboratory on October 2, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: December 1, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020B
Project: 5147-006-10

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
GEI-22_2-3_100114	10-020-01	Soil	10-1-14	10-2-14	
GEI-27_1-2_100114	10-020-05	Soil	10-1-14	10-2-14	
GEI-27_5-6_100114	10-020-07	Soil	10-1-14	10-2-14	
GEI-28_2-3_100114	10-020-09	Soil	10-1-14	10-2-14	
GEI-28_10-11_100114	10-020-11	Soil	10-1-14	10-2-14	
GEI-34_2.5-3.5_100114	10-020-25	Soil	10-1-14	10-2-14	
GEI-34_6-7_100114	10-020-27	Soil	10-1-14	10-2-14	
GEI-35_3-4_100114	10-020-29	Soil	10-1-14	10-2-14	
GEI-36_1-2_100114	10-020-33	Soil	10-1-14	10-2-14	
GEI-38_1-2_100114	10-020-42	Soil	10-1-14	10-2-14	
GEI-39_1.5-2.5_100114	10-020-45	Soil	10-1-14	10-2-14	
GEI-39_6-7_100114	10-020-47	Soil	10-1-14	10-2-14	
GEI-40_2-3_100114	10-020-49	Soil	10-1-14	10-2-14	
GEI-41_1-2_100114	10-020-54	Soil	10-1-14	10-2-14	
GEI-41_4-5_100114	10-020-55	Soil	10-1-14	10-2-14	
GEI-41_6-7_100114	10-020-56	Soil	10-1-14	10-2-14	
GEI-42_1-2_100114	10-020-58	Soil	10-1-14	10-2-14	
GEI-43_1-2_100114	10-020-63	Soil	10-1-14	10-2-14	
GEI-43_6-7_100114	10-020-65	Soil	10-1-14	10-2-14	

Date of Report: December 1, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020B
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-020-01					
Client ID:	**GEI-22_2-3_100114**					
Arsenic	**ND**	5.3	6010C	11-24-14	11-25-14	
Nickel	**35**	2.7	6010C	11-24-14	11-25-14	
Lab ID:	10-020-05					
Client ID:	**GEI-27_1-2_100114**					
Nickel	**28**	3.0	6010C	11-24-14	11-25-14	
Lab ID:	10-020-07					
Client ID:	**GEI-27_5-6_100114**					
Nickel	**20**	2.7	6010C	11-24-14	11-25-14	
Lab ID:	10-020-09					
Client ID:	**GEI-28_2-3_100114**					
Arsenic	**ND**	5.9	6010C	11-24-14	11-25-14	
Nickel	**34**	2.9	6010C	11-24-14	11-25-14	
Lab ID:	10-020-11					
Client ID:	**GEI-28_10-11_100114**					
Nickel	**37**	3.1	6010C	11-24-14	11-25-14	
Lab ID:	10-020-25					
Client ID:	**GEI-34_2.5-3.5_100114**					
Arsenic	**ND**	5.3	6010C	11-24-14	11-25-14	

Date of Report: December 1, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020B
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-020-27					
Client ID:	**GEI-34_6-7_100114**					
Nickel	**38**	3.0	6010C	11-24-14	11-25-14	
Lab ID:	10-020-29					
Client ID:	**GEI-35_3-4_100114**					
Arsenic	**ND**	6.2	6010C	11-24-14	11-25-14	
Nickel	**35**	3.1	6010C	11-24-14	11-25-14	
Lab ID:	10-020-33					
Client ID:	**GEI-36_1-2_100114**					
Arsenic	**5.7**	5.2	6010C	11-24-14	11-25-14	
Lab ID:	10-020-42					
Client ID:	**GEI-38_1-2_100114**					
Arsenic	**ND**	5.6	6010C	11-24-14	11-25-14	
Lab ID:	10-020-45					
Client ID:	**GEI-39_1.5-2.5_100114**					
Arsenic	**ND**	6.0	6010C	11-24-14	11-25-14	
Nickel	**38**	3.0	6010C	11-24-14	11-25-14	
Lab ID:	10-020-47					
Client ID:	**GEI-39_6-7_100114**					
Arsenic	**ND**	6.5	6010C	11-24-14	11-25-14	

Date of Report: December 1, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020B
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-020-49					
Client ID:	**GEI-40_2-3_100114**					
Arsenic	**6.2**	5.7	6010C	11-24-14	11-25-14	
Lab ID:	10-020-54					
Client ID:	**GEI-41_1-2_100114**					
Arsenic	**ND**	6.2	6010C	11-24-14	11-25-14	
Lab ID:	10-020-55					
Client ID:	**GEI-41_4-5_100114**					
Arsenic	**ND**	5.8	6010C	11-24-14	11-25-14	

Date of Report: December 1, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020B
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-020-56					
Client ID:	**GEI-41_6-7_100114**					
Nickel	**43**	3.0	6010C	11-24-14	11-25-14	
Lab ID:	10-020-58					
Client ID:	**GEI-42_1-2_100114**					
Arsenic	**5.5**	5.2	6010C	11-24-14	11-25-14	
Lab ID:	10-020-63					
Client ID:	**GEI-43_1-2_100114**					
Arsenic	**6.6**	6.2	6010C	11-24-14	11-25-14	
Nickel	**52**	3.1	6010C	11-24-14	11-25-14	
Lab ID:	10-020-65					
Client ID:	**GEI-43_6-7_100114**					
Nickel	**37**	3.6	6010C	11-24-14	11-25-14	

Date of Report: December 1, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	11-24-14
Date Analyzed:	11-25-14
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1124SM1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	5.0
Nickel	6010C	**ND**	2.5

Date of Report: December 1, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 11-24-14
Date Analyzed: 11-25-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-020-05

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	5.0	
Nickel	**23.0**	**23.7**	3	2.5	

Date of Report: December 1, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 11-24-14
Date Analyzed: 11-25-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-020-05

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**95.2**	95	**94.8**	95	0	
Nickel	100	**118**	95	**120**	97	1	

Date of Report: December 1, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV112514P	1.00	0.992	0.80	+/- 10%
Nickel	ICV112514P	1.00	1.03	-3.0	+/- 10%
Arsenic	LLICV1112514P	0.100	0.125	-25	+/- 30%
Nickel	LLICV1112514P	0.0200	0.0204	-2.0	+/- 30%
Arsenic	CCV1112514P	10.0	9.93	0.70	+/- 10%
Nickel	CCV1112514P	2.00	1.97	1.5	+/- 10%
Arsenic	CCV2112514P	10.0	9.96	0.40	+/- 10%
Nickel	CCV2112514P	2.00	1.97	1.5	+/- 10%
Arsenic	LLCCV2112514P	0.100	0.106	-6.0	+/- 30%
Nickel	LLCCV2112514P	0.0200	0.0227	-14	+/- 30%
Arsenic	CCV3112514P	10.0	9.95	0.50	+/- 10%
Nickel	CCV3112514P	2.00	1.98	1.0	+/- 10%
Arsenic	LLCCV3112514P	0.100	0.105	-5.0	+/- 30%
Nickel	LLCCV3112514P	0.0200	0.0225	-13	+/- 30%
Arsenic	CCV4112514P	10.0	10.1	-1.0	+/- 10%
Nickel	CCV4112514P	2.00	1.99	0.50	+/- 10%
Arsenic	LLCCV4112514P	0.100	0.109	-9.0	+/- 30%
Nickel	LLCCV4112514P	0.0200	0.0189	5.5	+/- 30%
Arsenic	CCV5112514P	10.0	10.0	0	+/- 10%
Nickel	CCV5112514P	2.00	1.99	0.50	+/- 10%
Arsenic	LLCCV5112514P	0.100	0.107	-7.0	+/- 30%
Nickel	LLCCV5112514P	0.0200	0.0207	-3.5	+/- 30%
Arsenic	CCV6112514P	10.0	10.0	0	+/- 10%
Nickel	CCV6112514P	2.00	1.98	1.0	+/- 10%
Arsenic	LLCCV6112514P	0.100	0.111	-11	+/- 30%
Nickel	LLCCV6112514P	0.0200	0.0218	-9.0	+/- 30%

Date of Report: December 1, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV7112514P	10.0	10.1	-1.0	+/- 10%
Nickel	CCV7112514P	2.00	1.99	0.50	+/- 10%
Arsenic	LLCCV7112514P	0.100	0.108	-8.0	+/- 30%
Nickel	LLCCV7112514P	0.0200	0.0223	-12	+/- 30%

Date of Report: December 1, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020B
Project: 5147-006-10

% MOISTURE

Date Analyzed: 11-24-14

Client ID	Lab ID	% Moisture
GEI-22_2-3_100114	10-020-01	6
GEI-27_1-2_100114	10-020-05	17
GEI-27_5-6_100114	10-020-07	9
GEI-28_2-3_100114	10-020-09	15
GEI-28_10-11_100114	10-020-11	18
GEI-34_2.5-3.5_100114	10-020-25	6
GEI-34_6-7_100114	10-020-27	16
GEI-35_3-4_100114	10-020-29	20
GEI-36_1-2_100114	10-020-33	4
GEI-38_1-2_100114	10-020-42	11
GEI-38_6-7_100114	10-020-43	14
GEI-39_1.5-2.5_100114	10-020-45	17
GEI-39_6-7_100114	10-020-47	23
GEI-40_2-3_100114	10-020-49	12
GEI-41_1-2_100114	10-020-54	20
GEI-41_4-5_100114	10-020-55	13
GEI-41_6-7_100114	10-020-56	17
GEI-42_1-2_100114	10-020-58	4
GEI-43_1-2_100114	10-020-63	19
GEI-43_6-7_100114	10-020-65	30

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 7

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracey
Sampled by: Robert Trahan / Nate Solomon

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic			% Moisture
1	GEI-22-2-3-100114	10/1/14	1135	S	1																	X	X			X
2	GEI-22-5-6-100114		1140										X									X	X			X
3	GEI-22-7.5-8.5-100114		1145																							
4	GEI-22-9-10-100114		1150																							
5	GEI-27-1-2-100114		1110																		X					X
6	GEI-27-4-5-100114		1115																							
7	GEI-27-5-6-100114		1120																		X					X
8	GEI-27-9-10-100114		1125																							
9	GEI-28-2-3-100114		1220																		X	X				X
10	GEI-28-5-6-100114		1225										X									X	X			X

	Signature	Company	Date	Time
Relinquished		GEI	10.2.14	950
Received		OSE	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

X Added 11/17/14. DB (STA)

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐

Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: Geo Engineers
Project Number: 5147-008-10
Project Name: DLI
Project Manager: Brian Tracy
Sampled by: Robert Trohen / Nate Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
11	GE1-28_10-11_100114	10/1/14	1130	S	1																	X					X
12	GE1-128_5-6_100114		1125										X									X	X				X
13	GE1-31_1-2_100114		1015																								
14	GE1-31_4-5_100114		1050																								
15	GE1-31_6-7_100114		1035																								
16	GE1-31_9-10_100114		1100																								
17	GE1-[illegible]_1-2_100114		1510																								
18	GE1-32_4-5_100114		1515																								
19	GE1-32_6-7_100114		1520																								
20	GE1-32_8-9_100114		1525																								

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	[signature]	GEI	10/2/14	0950	
Received	[signature]	GEI	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

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OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracy
Sampled by: Robert Trohen / Nate Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A		Nickel	Arsenic			% Moisture
21	GEI-33_12_100114	10/1/14	1310	S	1																						
22	GEI-33_4-5_100114		1315																								
23	GEI-33_8-9_100114		1320																								
24	GEI-33_9-10_100114		1325																								
25	GEI-34_2.5-3.5_100114		1215																					X			X
26	GEI-34_4-5_100114		1220																								
27	GEI-34_6-7_100114		1225																				X				X
28	GEI-34_9-10_100114		1230																								
29	GEI-35_~~3-4~~_100114		1330																				X	X			X
30	GEI-35_4-5_100114		1335																								

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10/2/14	950	
Received		OSE	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GEOENGINEERS
Project Number: 5147-006-10
Project Name: DCI
Project Manager: TRACY BRIAN TRAHAN
Sampled by: NATE SOLOMON / ROBERT TRAHAN

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	ARSENIC						% Moisture
31	GEI-35-8-9-100114	10/1/14	1340	SOIL	1																						
32	GEI-35-9-10-100114		1345																								
33	GEI-36-1-2-100114		1400																		X						X
34	GEI-36-4-5-100114		1410																								
35	GEI-36-5-6-100114		1415																		X						X
36	GEI-136-10-11-100114		1420																								
37	GEI-136-5-6-100114		1418																		X						X
38	GEI-37-1-2-100114		1535																								
39	GEI-37-4-5-100114		1540																								
40	GEI-37-6-7-100114		1545																		X						X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10/2/14	0950	
Received		GEI	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GEO ENGINEERS
Project Number: 5147-006-16
Project Name: DCI
Project Manager: BRIAN TRACY
Sampled by: ROBERT TRAHAN / NATE SOLOMON

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	Arsenic	Nickel				% Moisture
41	GEI-37-8-9-100114	10.1.14	1550 ~~1610~~	SOIL	1															X						X
42	GEI-38-1-2-100114		1600																	X						X
43	GEI-38-6-7-100114		1605																	X						X
44	GEI-38-8-9-100114		1610																							
45	GEI-39-1.5-2.5-100114		1755																	X		X				X
46	GEI-39-4-5-100114		1800																							
47	GEI-39-6-7-100114		1805																	X						X
48	GEI-39-9-10-100114		1810																							
49	GEI-40-2-3-100114		1730																	X						X
50	GEI-40-4-5-100114		1735																							

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10.2.14	0950	
Received		ONE	10/2/14	095	
Relinquished					
Received					
Relinquished					
Received					

Reviewed/Date | Reviewed/Date | Chromatograms with final report ☐

Data Package: Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☑ _____

OnSite Environmental Inc.
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Chain of Custody

20

Company: GEOENGINEERS
Project Number: 5147-006-10
Project Name: DCI
Project Manager: BRIAN TRACY
Sampled by: NATE SOLOMON / ROGERS TRAUTMAN

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	ARSENIC	Nickel	% Moisture
51	GEI-40_7-8_100114	10/1/14	1740	SOIL	1																X		X
52	GEI-40_9-10_100114		1745																				
53	GEI-40_4-5_100114		1738																		X		X
54	GEI-41_1-2_100114		1715																		X		X
55	GEI-41_4-5_100114		1720																			X	X
56	GEI-41_6-7_100114		1725																				
57	GEI-41_8-9_100114		1730																		X		X
58	GEI-42_1-2_100114		1620																				
59	GEI-42_4-5_100114		1625																		X		X
60	GEI-42_6-7_100114		1630																				

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10.2.14	0950	
Received			10/2/14	095	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) _____

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
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Chain of Custody

21

Company: GEOENGINEERS INC
Project Number: 5147-006-10
Project Name: DCI
Project Manager: BRIAN TRACY
Sampled by: NATE SOLOMON / ROBERT TRAHAN

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	ARSENIC		Nickel				% Moisture
61	GEI-42-9-10-100114	10.01.14	1635	SOIL	1																						
62	GEI-142-6-7-100114	1	1633	1	1																						
63	GEI-43-1-2-100114		1630																	X			X				X
64	GEI-43-4-5-100114																										
65	GEI-43-6-7-100114																						X				X
66	GEI-43-8-9-100114																										

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10.2.14	950	
Received			10/2/14	095	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Sample/Cooler Receipt and Acceptance Checklist

Client: GE

Client Project Name/Number: 5147-006-10

OnSite Project Number: 10-020

Initiated by: MV

Date Initiated: 10/2/14

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	N/A	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	N/A	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	Yes	No		1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	Yes	No	Temperature: 4.2		
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	N/A			
1.7 How were the samples delivered?	Client	Courier	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	Yes	No	1 2 3 4	
2.2 Was the COC legible and written in permanent ink?	Yes	No	1 2 3 4	
2.3 Have samples been relinquished and accepted by each custodian?	Yes	No	1 2 3 4	
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	No	1 2 3 4	
2.5 Were all of the samples listed on the COC submitted?	Yes	No	1 2 3 4	
2.6 Were any of the samples submitted omitted from the COC?	Yes	No	1 2 3 4	

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	No	1 2 3 4	
3.2 Were any sample labels missing or illegible?	Yes	No	1 2 3 4	
3.3 Have the correct containers been used for each analysis requested?	Yes	No	1 2 3 4	
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	N/A	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	Yes	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	No		1 2 3 4
3.8 Was method 5035A used?	Yes	No	N/A	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		N/A	1 2 3 4

Explain any discrepancies:

2.4) Sample 9) GE1-28-2-3_100114 10/1/14 1220 on COC 1120 on Label *
Sample 10) GE1-28_5-6_100114 10/1/14 1225 on COC, 1125 on Label
Sample 46) GE1-39_4-5_100114 10/1/14 1800 on COC *
" " " 100115 " " on Label
2.6) Sample GE1-43_1-2_100114 10/1/14 1630 not on COC Add
Sample GE1-43_4-5_100114 " - not on COC Add

1 - Discuss issue in Case Narrative
2 - Process Sample As-is
3 - Client contacted to discuss problem
4 - Sample cannot be analyzed or client does not wish to proceed

Sample/Cooler Receipt and Acceptance Checklist

Client: GE

Client Project Name/Number: 5147-006-10

OnSite Project Number: 10-020

Initiated by: JMV

Date Initiated: 10/2/14

Explain any discrepancies:

26) Sample GE1-43-6-7_100114 10/1/14 - not on COC Add
Sample GE1-43-8-9_100114 10/1/14 - not on COC Add

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

RAW DATA

- Total Metals EPA 6010C Data

Total Metals Data

P141125F1. Mean Only Report 11/25/2014, 5:19:03 PM

Sample	Label	Calc Conc.	Units	Date/Time
Blank	As 188.980	0.000	ppb	11/25/2014, 9:54:04 AM
	Ni 231.604	0.000	ppb	
Standard 5	As 188.980	100.00	ppb	11/25/2014, 9:58:10 AM
	Ni 231.604	20.000	ppb	
Standard 4	As 188.980	1000.0	ppb	11/25/2014, 10:02:16 AM
	Ni 231.604	200.00	ppb	
Standard 3	As 188.980	10000	ppb	11/25/2014, 10:06:20 AM
	Ni 231.604	2000.0	ppb	
Standard 2	As 188.980	25000	ppb	11/25/2014, 10:10:26 AM
	Ni 231.604	5000.0	ppb	
Standard 1	Ni 231.604	10000	ppb	11/25/2014, 10:14:32 AM
Initial Calib Verif	As 188.980	992.15	ppb	11/25/2014, 10:35:54 AM
	Ni 231.604	1027.9	ppb	
LLICV	As 188.980	124.87	ppb	11/25/2014, 10:42:54 AM
	Ni 231.604	20.438	ppb	
Initial Calib Blank	As 188.980	2.418uv	ppb	11/25/2014, 10:48:22 AM
	Ni 231.604	3.311uv	ppb	
Cont Calib Verif	As 188.980	9925.6	ppb	11/25/2014, 10:52:26 AM
	Ni 231.604	1969.9	ppb	
Cont Calib Blank	As 188.980	11.190	ppb	11/25/2014, 11:00:01 AM
	Ni 231.604	0.318uv	ppb	
ICSA	As 188.980	6.598uv	ppb	11/25/2014, 11:04:05 AM
	Ni 231.604	2.635uv	ppb	
ICSAB	As 188.980	2468.8	ppb	11/25/2014, 11:08:08 AM
	Ni 231.604	812.15	ppb	
MB1125WH2	As 188.980	2.441uv	ppb	11/25/2014, 11:15:17 AM
	Ni 231.604	-0.624uv	ppb	
SB1125WH2	As 188.980	10.915	ppb	11/25/2014, 11:19:25 AM
	Ni 231.604	-0.783uv	ppb	
11-243-01	As 188.980	57.199	ppb	11/25/2014, 11:23:30 AM
	Ni 231.604	0.938	ppb	
11-243-01 D	As 188.980	62.055	ppb	11/25/2014, 11:27:34 AM
	Ni 231.604	2.137uv	ppb	
11-243-01 L	As 188.980	30.332	ppb	11/25/2014, 11:31:40 AM
	Ni 231.604	-2.470uv	ppb	

P141125F1. Mean Only Report 11/25/2014, 5:19:03 PM

Sample	Label	Calc Conc.	Units	Date/Time
11-243-01 MS	As 188.980	63.966	ppb	11/25/2014, 11:35:43 AM
	Ni 231.604	0.748uv	ppb	
11-243-01 MSD	As 188.980	70.299	ppb	11/25/2014, 11:39:46 AM
	Ni 231.604	2.515	ppb	
MRI ICP1(T.V=50)	As 188.980	101.98	ppb	11/25/2014, 11:50:17 AM
	Ni 231.604	19.072	ppb	
Cont Calib Verif	As 188.980	9954.9	ppb	11/25/2014, 11:56:32 AM
	Ni 231.604	1974.9	ppb	
Cont Calib Blank	As 188.980	21.928	ppb	11/25/2014, 12:02:56 PM
	Ni 231.604	-0.711uv	ppb	
LLCCV	As 188.980	106.21	ppb	11/25/2014, 12:07:00 PM
	Ni 231.604	22.662	ppb	
MRI ICP1(T.V=50)	As 188.980	104.20	ppb	11/25/2014, 12:12:12 PM
	Ni 231.604	18.348	ppb	
MRI ICP1(T.V=125)	As 188.980	239.56	ppb	11/25/2014, 12:17:49 PM
	Ni 231.604	50.344	ppb	
MB1124SM3	As 188.980	4.177uv	ppb	11/25/2014, 12:25:21 PM
	Ni 231.604	-0.714uv	ppb	
SB1124SM3	As 188.980	1858.2	ppb	11/25/2014, 12:29:26 PM
	Ni 231.604	1925.6	ppb	
10-021-23	As 188.980	37.061	ppb	11/25/2014, 12:33:29 PM
	Ni 231.604	203.92	ppb	
10-021-23 D	As 188.980	51.177	ppb	11/25/2014, 12:37:33 PM
	Ni 231.604	232.80	ppb	
10-021-23 L	As 188.980	19.140	ppb	11/25/2014, 12:41:39 PM
	Ni 231.604	42.105	ppb	
10-021-23 MS	As 188.980	1930.4	ppb	11/25/2014, 12:45:44 PM
	Ni 231.604	2031.1	ppb	
10-021-23 MSD	As 188.980	2073.3	ppb	11/25/2014, 12:49:49 PM
	Ni 231.604	2066.8	ppb	
11-230-01a X 10	As 188.980	14.534	ppb	11/25/2014, 12:53:55 PM
	Ni 231.604	3.650	ppb	
Cont Calib Verif	As 188.980	9951.3	ppb	11/25/2014, 12:57:59 PM
	Ni 231.604	1978.0	ppb	
Cont Calib Blank	As 188.980	11.894	ppb	11/25/2014, 1:04:07 PM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	-0.503uv	ppb	
LLCCV	As 188.980	104.77	ppb	11/25/2014, 1:08:12 PM
	Ni 231.604	22.503	ppb	
10-019-056	As 188.980	32.383	ppb	11/25/2014, 1:28:22 PM
	Ni 231.604	136.34	ppb	
10-019-058	As 188.980	31.659	ppb	11/25/2014, 1:32:25 PM
	Ni 231.604	157.39	ppb	
10-021-06	As 188.980	97.258	ppb	11/25/2014, 1:36:31 PM
	Ni 231.604	647.03	ppb	
10-021-08	As 188.980	45.622	ppb	11/25/2014, 1:40:36 PM
	Ni 231.604	151.68	ppb	
10-021-10	As 188.980	139.50	ppb	11/25/2014, 1:44:39 PM
	Ni 231.604	451.94	ppb	
10-021-14	As 188.980	67.196	ppb	11/25/2014, 1:48:43 PM
	Ni 231.604	595.36	ppb	
10-021-23	As 188.980	227.04	ppb	11/25/2014, 1:52:46 PM
	Ni 231.604	843.66	ppb	
10-021-30	As 188.980	44.971	ppb	11/25/2014, 1:56:50 PM
	Ni 231.604	969.39	ppb	
10-021-31	As 188.980	50.289	ppb	11/25/2014, 2:00:53 PM
	Ni 231.604	988.66	ppb	
10-021-35	As 188.980	35.337	ppb	11/25/2014, 2:04:56 PM
	Ni 231.604	760.71	ppb	
Cont Calib Verif	As 188.980	10084	ppb	11/25/2014, 2:09:00 PM
	Ni 231.604	1987.6	ppb	
Cont Calib Blank	As 188.980	3.633uv	ppb	11/25/2014, 2:16:44 PM
	Ni 231.604	-0.558uv	ppb	
LLCCV	As 188.980	109.21	ppb	11/25/2014, 2:20:48 PM
	Ni 231.604	18.935	ppb	
10-021-42	As 188.980	113.39	ppb	11/25/2014, 2:30:26 PM
	Ni 231.604	500.16	ppb	
10-021-46	As 188.980	340.45	ppb	11/25/2014, 2:34:33 PM
	Ni 231.604	567.39	ppb	
BLK	As 188.980	5.578uv	ppb	11/25/2014, 2:38:38 PM
	Ni 231.604	2.619	ppb	

Sample	Label	Calc Conc.	Units	Date/Time
MB1124SM	As 188.980	1.360uv	ppb	11/25/2014, 2:42:44 PM
	Ni 231.604	3.754	ppb	
SB1124SM	As 188.980	1913.1	ppb	11/25/2014, 2:46:49 PM
	Ni 231.604	1987.2	ppb	
10-020-05	As 188.980	79.460	ppb	11/25/2014, 2:50:55 PM
	Ni 231.604	459.05	ppb	
10-020-05 D	As 188.980	65.834	ppb	11/25/2014, 2:55:00 PM
	Ni 231.604	473.74	ppb	
10-020-05 L	As 188.980	21.070	ppb	11/25/2014, 2:59:04 PM
	Ni 231.604	98.228	ppb	
10-020-05 MS	As 188.980	1904.1	ppb	11/25/2014, 3:03:08 PM
	Ni 231.604	2359.6	ppb	
10-020-05 MSD	As 188.980	1896.3	ppb	11/25/2014, 3:07:13 PM
	Ni 231.604	2394.0	ppb	
Cont Calib Verif	As 188.980	10004	ppb	11/25/2014, 3:11:18 PM
	Ni 231.604	1993.0	ppb	
Cont Calib Blank	As 188.980	20.434	ppb	11/25/2014, 3:17:36 PM
	Ni 231.604	3.812	ppb	
LLCCV	As 188.980	107.03	ppb	11/25/2014, 3:21:41 PM
	Ni 231.604	20.697	ppb	
10-020-01	As 188.980	71.464	ppb	11/25/2014, 3:27:45 PM
	Ni 231.604	649.98	ppb	
10-020-07	As 188.980	412.84	ppb	11/25/2014, 3:31:49 PM
	Ni 231.604	356.32	ppb	
10-020-09	As 188.980	53.392	ppb	11/25/2014, 3:35:52 PM
	Ni 231.604	578.83	ppb	
10-020-11	As 188.980	76.965	ppb	11/25/2014, 3:39:57 PM
	Ni 231.604	611.30	ppb	
10-020-25	As 188.980	36.559	ppb	11/25/2014, 3:44:03 PM
	Ni 231.604	533.68	ppb	
10-020-27	As 188.980	63.734	ppb	11/25/2014, 3:48:07 PM
	Ni 231.604	640.04	ppb	
10-020-29	As 188.980	75.545	ppb	11/25/2014, 3:52:12 PM
	Ni 231.604	563.15	ppb	

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Sample	Label	Calc Conc.	Units	Date/Time
10-020-33	As 188.980	110.27	ppb	11/25/2014, 3:56:17 PM
	Ni 231.604	654.80	ppb	
10-020-42	As 188.980	94.360	ppb	11/25/2014, 4:00:22 PM
	Ni 231.604	1225.1	ppb	
BLK	As 188.980	19.671	ppb	11/25/2014, 4:04:27 PM
	Ni 231.604	-0.620uv	ppb	
Cont Calib Verif	As 188.980	9996.4	ppb	11/25/2014, 4:08:35 PM
	Ni 231.604	1982.0	ppb	
Cont Calib Blank	As 188.980	9.591	ppb	11/25/2014, 4:13:48 PM
	Ni 231.604	-1.355uv	ppb	
LLCCV	As 188.980	111.39	ppb	11/25/2014, 4:17:53 PM
	Ni 231.604	21.811	ppb	
10-020-45	As 188.980	82.371	ppb	11/25/2014, 4:23:53 PM
	Ni 231.604	626.04	ppb	
10-020-47	As 188.980	98.239	ppb	11/25/2014, 4:27:59 PM
	Ni 231.604	653.17	ppb	
10-020-49	As 188.980	109.18	ppb	11/25/2014, 4:32:04 PM
	Ni 231.604	585.41	ppb	
10-020-54	As 188.980	96.152	ppb	11/25/2014, 4:36:09 PM
	Ni 231.604	778.95	ppb	
10-020-55	As 188.980	54.747	ppb	11/25/2014, 4:40:15 PM
	Ni 231.604	575.13	ppb	
10-020-56	As 188.980	83.112	ppb	11/25/2014, 4:44:20 PM
	Ni 231.604	715.71	ppb	
10-020-58	As 188.980	106.48	ppb	11/25/2014, 4:48:24 PM
	Ni 231.604	699.06	ppb	
10-020-63	As 188.980	49.568	ppb	11/25/2014, 4:52:30 PM
	Ni 231.604	844.44	ppb	
10-020-65	As 188.980	88.705	ppb	11/25/2014, 4:56:35 PM
	Ni 231.604	521.81	ppb	
BLK	As 188.980	-12.247uv	ppb	11/25/2014, 5:00:41 PM
	Ni 231.604	2.626	ppb	
Cont Calib Verif	As 188.980	10051	ppb	11/25/2014, 5:04:46 PM
	Ni 231.604	1986.0	ppb	
Cont Calib Blank	As 188.980	18.030uv	ppb	11/25/2014, 5:11:26 PM

P141125F1. Mean Only Report 11/25/2014, 5:19:03 PM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	0.411uv	ppb	
LLCCV	As 188.980	108.36	ppb	11/25/2014, 5:15:30 PM
	Ni 231.604	22.279	ppb	

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

January 15, 2015

Brian Tracy
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-10
Laboratory Reference No. 1410-020C

Dear Brian:

Enclosed are the analytical results and associated quality control data for samples submitted on October 2, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020C
Project: 5147-006-10

Case Narrative

Samples were collected on October 1, 2014 and received by the laboratory on October 2, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020C
Project: 5147-006-10

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
GEI-22_7.5-8.5_100114	10-020-03	Soil	10-1-14	10-2-14	
GEI-31_1-2_100114	10-020-13	Soil	10-1-14	10-2-14	
GEI-31_4-5_100114	10-020-14	Soil	10-1-14	10-2-14	
GEI-31_6-7_100114	10-020-15	Soil	10-1-14	10-2-14	
GEI-31_9-10_100114	10-020-16	Soil	10-1-14	10-2-14	
GEI-32_1-2_100114	10-020-17	Soil	10-1-14	10-2-14	
GEI-33_1-2_100114	10-020-21	Soil	10-1-14	10-2-14	
GEI-34_9-10_100114	10-020-28	Soil	10-1-14	10-2-14	
GEI-35_8-9_100114	10-020-31	Soil	10-1-14	10-2-14	
GEI-35_9-10_100114	10-020-32	Soil	10-1-14	10-2-14	
GEI-37_1-2_100114	10-020-38	Soil	10-1-14	10-2-14	
GEI-39_4-5_100114	10-020-46	Soil	10-1-14	10-2-14	
GEI-39_6-7_100114	10-020-47	Soil	10-1-14	10-2-14	
GEI-41_1-2_100114	10-020-54	Soil	10-1-14	10-2-14	
GEI-41_8-9_100114	10-020-57	Soil	10-1-14	10-2-14	
GEI-42_1-2_100114	10-020-58	Soil	10-1-14	10-2-14	
GEI-42_4-5_100114	10-020-59	Soil	10-1-14	10-2-14	
GEI-42_6-7_100114	10-020-60	Soil	10-1-14	10-2-14	

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020C
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-020-03					
Client ID:	**GEI-22_7.5-8.5_100114**					
Arsenic	**92**	13	6010C	1-13-15	1-14-15	
Lab ID:	10-020-13					
Client ID:	**GEI-31_1-2_100114**					
Arsenic	**7.6**	5.9	6010C	1-13-15	1-14-15	
Nickel	**110**	2.9	6010C	1-13-15	1-14-15	
Lab ID:	10-020-14					
Client ID:	**GEI-31_4-5_100114**					
Nickel	**40**	2.6	6010C	1-13-15	1-14-15	
Lab ID:	10-020-15					
Client ID:	**GEI-31_6-7_100114**					
Nickel	**86**	3.1	6010C	1-13-15	1-14-15	
Lab ID:	10-020-16					
Client ID:	**GEI-31_9-10_100114**					
Nickel	**48**	3.1	6010C	1-13-15	1-14-15	
Lab ID:	10-020-17					
Client ID:	**GEI-32_1-2_100114**					
Arsenic	**ND**	5.3	6010C	1-13-15	1-14-15	
Nickel	**64**	2.7	6010C	1-13-15	1-14-15	

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020C
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-020-21					
Client ID:	**GEI-33_1-2_100114**					
Arsenic	**ND**	5.2	6010C	1-13-15	1-14-15	
Lab ID:	10-020-28					
Client ID:	**GEI-34_9-10_100114**					
Nickel	**38**	2.9	6010C	1-13-15	1-14-15	
Lab ID:	10-020-31					
Client ID:	**GEI-35_8-9_100114**					
Nickel	**40**	3.1	6010C	1-13-15	1-14-15	
Lab ID:	10-020-32					
Client ID:	**GEI-35_9-10_100114**					
Nickel	**28**	3.7	6010C	1-13-15	1-14-15	
Lab ID:	10-020-38					
Client ID:	**GEI-37_1-2_100114**					
Arsenic	**ND**	5.2	6010C	1-13-15	1-14-15	
Lab ID:	10-020-46					
Client ID:	**GEI-39_4-5_100114**					
Nickel	**45**	3.2	6010C	1-13-15	1-14-15	

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020C
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-020-47					
Client ID:	**GEI-39_6-7_100114**					
Nickel	**40**	3.2	6010C	1-13-15	1-14-15	
Lab ID:	10-020-54					
Client ID:	**GEI-41_1-2_100114**					
Nickel	**46**	3.1	6010C	1-13-15	1-14-15	
Lab ID:	10-020-57					
Client ID:	**GEI-41_8-9_100114**					
Nickel	**30**	2.8	6010C	1-13-15	1-14-15	
Lab ID:	10-020-58					
Client ID:	**GEI-42_1-2_100114**					
Nickel	**34**	2.6	6010C	1-13-15	1-14-15	
Lab ID:	10-020-59					
Client ID:	**GEI-42_4-5_100114**					
Nickel	**24**	3.1	6010C	1-13-15	1-14-15	
Lab ID:	10-020-60					
Client ID:	**GEI-42_6-7_100114**					
Nickel	**31**	3.0	6010C	1-13-15	1-14-15	

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020C
Project: 5147-006-10

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	1-13-15
Date Analyzed:	1-14-15
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0113SM2

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	5
Nickel	6010C	**ND**	2.5

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020C
Project: 5147-006-10

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 1-13-15
Date Analyzed: 1-14-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 01-047-01

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	5	
Nickel	**25.6**	**29.2**	13	2.5	

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020C
Project: 5147-006-10

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 1-13-15
Date Analyzed: 1-14-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 01-047-01

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**111**	111	**104**	104	6	
Nickel	100	**122**	96	**116**	90	5	

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020C
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV011415P	1.00	1.01	-1.0	+/- 10%
Nickel	ICV011415P	1.00	1.06	-6.0	+/- 10%
Arsenic	LLICV1011415P	0.100	0.129	-29	+/- 30%
Nickel	LLICV1011415P	0.0200	0.0212	-6.0	+/- 30%
Arsenic	CCV1011415P	10.0	10.1	-1.0	+/- 10%
Nickel	CCV1011415P	2.00	2.05	-2.5	+/- 10%
Arsenic	CCV2011415P	10.0	10.3	-3.0	+/- 10%
Nickel	CCV2011415P	2.00	2.08	-4.0	+/- 10%
Arsenic	LLCCV2011415P	0.100	0.101	-1.0	+/- 30%
Nickel	LLCCV2011415P	0.0200	0.0222	-11	+/- 30%
Arsenic	CCV3011415P	10.0	10.0	0	+/- 10%
Nickel	CCV3011415P	2.00	2.09	-4.5	+/- 10%
Arsenic	LLCCV3011415P	0.100	0.0986	1.4	+/- 30%
Nickel	LLCCV3011415P	0.0200	0.0241	-21	+/- 30%
Arsenic	CCV4011415P	10.0	10.2	-2.0	+/- 10%
Nickel	CCV4011415P	2.00	2.08	-4.0	+/- 10%
Arsenic	LLCCV4011415P	0.100	0.101	-1.0	+/- 30%
Nickel	LLCCV4011415P	0.0200	0.0239	-20	+/- 30%
Arsenic	CCV5011415P	10.0	10.3	-3.0	+/- 10%
Nickel	CCV5011415P	2.00	2.09	-4.5	+/- 10%
Arsenic	LLCCV5011415P	0.100	0.113	-13	+/- 30%
Nickel	LLCCV5011415P	0.0200	0.0251	-26	+/- 30%
Arsenic	CCV6011415P	10.0	10.4	-4.0	+/- 10%
Nickel	CCV6011415P	2.00	2.04	-2.0	+/- 10%
Arsenic	LLCCV6011415P	0.100	0.113	-13	+/- 30%
Nickel	LLCCV6011415P	0.0200	0.0237	-19	+/- 30%

Date of Report: January 15, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-020C
Project: 5147-006-10

% MOISTURE

Date Analyzed: 1-13-15

Client ID	Lab ID	% Moisture
GEI-22_7.5-8.5_100114	10-020-03	62
GEI-31_1-2_100114	10-020-13	15
GEI-31_4-5_100114	10-020-14	4
GEI-31_6-7_100114	10-020-15	19
GEI-31_9-10_100114	10-020-16	18
GEI-32_1-2_100114	10-020-17	6
GEI-33_1-2_100114	10-020-21	4
GEI-34_9-10_100114	10-020-28	13
GEI-35_8-9_100114	10-020-31	19
GEI-35_9-10_100114	10-020-32	33
GEI-37_1-2_100114	10-020-38	4
GEI-39_4-5_100114	10-020-46	22
GEI-41_8-9_100114	10-020-57	12
GEI-42_4-5_100114	10-020-59	18

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

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13

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracey
Sampled by: Robert Trahan / Nate Solomon

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Days ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic			% Moisture
1	WEI-22-2-3-100114	10/1/14	1135	S	1																	X	X			X
2	WEI-22-5-6-100114	"	1140	"	"								X									X	X			X
3	WEI-22-7.5-8.5-100114	"	1145	"	"																		O			O
4	WEI-22-9-10-100114	"	1150	"	"																					
5	WEI-27-1-2-100114	"	1110	"	"																X					X
6	WEI-27-4-5-100114	"	1115	"	"																					
7	WEI-27-5-6-100114	"	1120	"	"																X					X
8	WEI-27-9-10-100114	"	1125	"	"																					
9	WEI-28-2-3-100114	"	1220	"	"																X	X				X
10	WEI-28-5-6-100114	"	1225	"	"								X									X	X			X

	Signature	Company	Date	Time
Relinquished		GEI	10.2.14	950
Received		OSE	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

X Added 11/17/14. DB (STA)
O Added 1/7/15. DB (STA)

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐

Electronic Data Deliverables (EDDs) ☒

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Chain of Custody

14

Laboratory Number: 10-020

Company: Geo Engineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracey
Sampled by: Robert Trohan / Kate Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
11	GE1-28_10-11_100114	10/1/14	1130	S	1																	X					X
12	GE1-128_5-6_100114		1125										X									X	X				X
13	GE1-31_1-2_100114		1015																			O	O				O
14	GE1-31_4-5_100114		1050																			O					O
15	GE1-31_6-7_100114		1055																			O					O
16	GE1-31_9-10_100114		1100																			O					O
17	GE1-B2_1-2_100114		1510																			O	O				O
18	GE1-32_4-5_100114		1515																								
19	GE1-32_6-7_100114		1520																								
20	GE1-32_8-9_100114		1525																								

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10/2/14	0950	
Received			10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒

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Chain of Custody

15

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracy
Sampled by: Robert Trohen / Nate Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic			% Moisture
21	GEI-33-12-100114	10/1/14	1310	S	1																		O			O
22	GEI-33-4-5-100114		1315																							
23	GEI-33-8-9-100114		1320																							
24	GEI-33-9-10-100114		1325																							
25	GEI-34-2.5-3.5-100114		1215																				X			X
26	GEI-34-4-5-100114		1220																							
27	GEI-34-6-7-100114		1225																			X				X
28	GEI-34-9-10-100114		1230																			O				O
29	GEI-35-~~3-5~~ 3-4-100114		1330																			X	X			X
30	GEI-35-4-5-100114		1335																							

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10/2/14	950	
Received		OSE	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

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Chain of Custody

16

Company: GEOENGINEERS
Project Number: 5147-006-10
Project Name: DCI
Project Manager: BRIAN TRAHAN TRACY TRAHAN
Sampled by: NATE SOLOMON / ROBERT TRAHAN

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	ARSENIC		Nickel				% Moisture
31	GEI-35-8-9-100114	10/1/14	1340	SOIL	1																		O				O
32	GEI-35-9-10-100114		1345																				O				O
33	GEI-36-1-2-100114		1400																		X						X
34	GEI-36-4-5-100114		1410																								
35	GEI-36-5-6-100114		1415																		X						X
36	GEI-36-10-11-100114		1420																								
37	GEI-136-5-6-100114		1418																		X						X
38	GEI-37-1-2-100114		1535																		O						O
39	GEI-37-4-5-100114		1540																								
40	GEI-37-6-7-100114		1545																		X						X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10/2/14	0950	
Received		OSE	10/2/14	095	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

17

OnSite Environmental Inc.
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Company: GEO ENGINEERS
Project Number: 5147-006-10
Project Name: DCI
Project Manager: BRIAN TRACY
Sampled by: ROBERT TRAHAN / NATE SOLOMON

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	Arsenic	Nickel				% Moisture
41	GEI-37-8-9-100114	10.1.14	1550 ~~1610~~	SOIL	1																					
42	GEI-38-1-2-100114		1600																		X					X
43	GEI-38-6-7-100114		1605																		X					X
44	GEI-38-8-9-100114		1610																							
45	GEI-39-1.5-2.5-100114		1755																		X	X				X
46	GEI-39-4-5-100114		1800																			O				O
47	GEI-39-6-7-100114		1805																		X	O				X
48	GEI-39-9-10-100114		1810																							
49	GEI-40-2-3-100114		1730																		X					X
50	GEI-40-4-5-100114		1735																							

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10.2.14	0950	
Received		CORE	10/2/14	095	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☑ _____

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
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Phone: (425) 883-3881 • www.onsite-env.com

Company: GEOENGINEERS
Project Number: 5147-006-10
Project Name: DCI
Project Manager: BRIAN TRACY
Sampled by: NATE SOLOMON / ROBERTS TRAHAN

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	ARSENIC		Nickel				% Moisture
51	GEI-40_7-8_100114	10/1/14	1740	SOIL	1																						
52	GEI-40_9-10_100114		1745																								
53	GEI-40_4-5_100114		1738																								
54	GEI-41_1-2_100114		1715																		X		O				X
55	GEI-41_4-5_100114		1720																		X		·				X
56	GEI-41_6-7_100114		1725																				X				X
57	GEI-41_8-9_100114		1730																				O				O
58	GEI-42_1-2_100114		1620																		X		O				X
59	GEI-42_4-5_100114		1625																				O				O
60	GEI-42_6-7_100114	↓	1630	↓	↓																X		O				X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10.2.14	0950	
Received			10/2/14	095	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
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Phone: (425) 883-3881 • www.onsite-env.com

Company: GEOENGINEERS INC
Project Number: 5147-006-10
Project Name: DC1
Project Manager: BRIAN TRACY
Sampled by: NATE SOLOMON / ROBERT TRAHAN

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-020

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals/ MTCA Metals (circle one)	TCLP Metals	HEM (oil and grease) 1664A	ARSENIC	Nickel				% Moisture
61	GE1-42=9-10_100114	10.01.14	1635	SOIL	1																					
62	GE1-42_6-7_100114	1	1633	1	1																					
63	GE1-43_1-2_100114		1630																	X	X	X				X
64	GE1-43_4-5_100114																									
65	GE1_43_6-7_100114																					X				X
66	GE1_43_8-9_100114																									

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10.2.14	950	
Received		OSE	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Sample/Cooler Receipt and Acceptance Checklist

Client: GE

Client Project Name/Number: 5147-006-10

OnSite Project Number: 10-020

Initiated by: MV

Date Initiated: 10/2/14

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	N/A	1 2 3 4
1.2 Were the custody seals intact?	Yes	No	N/A	1 2 3 4
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	N/A	1 2 3 4
1.4 Were the samples delivered on ice or blue ice?	Yes	No		1 2 3 4
1.5 Were samples received between 0-6 degrees Celsius?	Yes	No	Temperature: 4.2	
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	N/A		
1.7 How were the samples delivered?	Client	Courier	UPS/FedEx	OSE Pickup Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	Yes	No	1 2 3 4
2.2 Was the COC legible and written in permanent ink?	Yes	No	1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	Yes	No	1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	No	1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	Yes	No	1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	No	1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	No		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	No		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	Yes	No		1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	N/A	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	Yes	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	No		1 2 3 4
3.8 Was method 5035A used?	Yes	No	N/A	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		N/A	1 2 3 4

Explain any discrepancies:

2.4) Sample 9) GEI-28-2-3_100114 10/1/14 1220 on COC 1120 on Label ★
Sample 10) GEI-28_5-6_100114 10/1/14 1225 on COC, 1125 on Label
Sample 46) GEI-39_4-5_100114 10/1/14 1800 on COC ★
" " " 100115 " " on label

2.6) Sample GEI-43_1-2_100114 10/1/14 1630 not on COC Add
Sample GEI-43_4-5_100114 " - not on COC Add

1 - Discuss issue in Case Narrative
2 - Process Sample As-is
3 - Client contacted to discuss problem
4 - Sample cannot be analyzed or client does not wish to proceed

RAW DATA

- Total Metals Data

Total Metals Data

P150114F1B. Mean Only Report 1/15/2015, 9:11:41 AM

Sample	Label	Calc Conc.	Units	Date/Time
Blank	As 188.980	0.000	ppb	1/14/2015, 9:24:56 AM
	Ni 231.604	0.000	ppb	
Standard 5	As 188.980	100.00	ppb	1/14/2015, 9:31:53 AM
	Ni 231.604	20.000	ppb	
Standard 4	As 188.980	1000.0	ppb	1/14/2015, 9:36:28 AM
	Ni 231.604	200.00	ppb	
Standard 3	As 188.980	10000	ppb	1/14/2015, 9:41:04 AM
	Ni 231.604	2000.0	ppb	
Standard 2	As 188.980	25000	ppb	1/14/2015, 9:45:39 AM
	Ni 231.604	5000.0	ppb	
Standard 1	Ni 231.604	10000	ppb	1/14/2015, 9:50:14 AM
Initial Calib Verif	As 188.980	1007.4	ppb	1/14/2015, 9:57:13 AM
	Ni 231.604	1056.8	ppb	
LLICV	As 188.980	129.07	ppb	1/14/2015, 10:04:37 AM
	Ni 231.604	21.232	ppb	
Initial Calib Blank	As 188.980	12.181	ppb	1/14/2015, 10:10:47 AM
	Ni 231.604	1.943uv	ppb	
Cont Calib Verif	As 188.980	10097	ppb	1/14/2015, 10:15:22 AM
	Ni 231.604	2048.4	ppb	
Cont Calib Blank	As 188.980	16.804	ppb	1/14/2015, 10:19:58 AM
	Ni 231.604	2.524	ppb	
ICSA	As 188.980	20.743	ppb	1/14/2015, 10:24:32 AM
	Ni 231.604	7.029	ppb	
ICSAB	As 188.980	2403.7	ppb	1/14/2015, 10:29:08 AM
	Ni 231.604	858.47	ppb	
01-047-01a MSD	As 188.980	2080.6	ppb	1/14/2015, 10:44:44 AM
	Ni 231.604	2279.4	ppb	
MB0113TM1	As 188.980	-3.111uv	ppb	1/14/2015, 10:56:05 AM
	Ni 231.604	0.818uv	ppb	
SB0113TM1	As 188.980	1823.0	ppb	1/14/2015, 11:06:51 AM
	Ni 231.604	1806.0	ppb	
01-007-03a	As 188.980	-6.484uv	ppb	1/14/2015, 11:11:25 AM
	Ni 231.604	24.354	ppb	
01-007-03a D	As 188.980	11.677uv	ppb	1/14/2015, 11:15:56 AM
	Ni 231.604	24.723	ppb	

P150114F1B. Mean Only Report 1/15/2015, 9:11:41 AM

Sample	Label	Calc Conc.	Units	Date/Time
01-007-03a L	As 188.980	8.825	ppb	1/14/2015, 11:20:29 AM
	Ni 231.604	6.107	ppb	
01-007-03a MS	As 188.980	1929.9	ppb	1/14/2015, 11:25:02 AM
	Ni 231.604	1892.0	ppb	
01-007-03a MSD	As 188.980	1929.1	ppb	1/14/2015, 11:29:35 AM
	Ni 231.604	1897.1	ppb	
Cont Calib Verif	As 188.980	10257	ppb	1/14/2015, 11:34:10 AM
	Ni 231.604	2083.5	ppb	
Cont Calib Blank	As 188.980	-11.722uv	ppb	1/14/2015, 11:40:32 AM
	Ni 231.604	1.783uv	ppb	
LLCCV	As 188.980	101.07	ppb	1/14/2015, 11:45:07 AM
	Ni 231.604	22.213	ppb	
MB0113SM2	As 188.980	-5.338uv	ppb	1/14/2015, 11:55:07 AM
	Ni 231.604	3.324	ppb	
SB0113SM2	As 188.980	2005.3	ppb	1/14/2015, 11:59:43 AM
	Ni 231.604	2111.2	ppb	
01-047-01a	As 188.980	140.91	ppb	1/14/2015, 12:04:18 PM
	Ni 231.604	512.14	ppb	
01-047-01a D	As 188.980	127.05	ppb	1/14/2015, 12:08:56 PM
	Ni 231.604	584.02	ppb	
01-047-01a L	As 188.980	29.518	ppb	1/14/2015, 12:13:32 PM
	Ni 231.604	111.74	ppb	
01-047-01a MS	As 188.980	2220.0	ppb	1/14/2015, 12:18:08 PM
	Ni 231.604	2440.6	ppb	
01-047-01a MSD	As 188.980	2082.3	ppb	1/14/2015, 12:22:43 PM
	Ni 231.604	2320.0	ppb	
01-047-01a D	As 188.980	137.29	ppb	1/14/2015, 12:38:38 PM
	Ni 231.604	582.69	ppb	
01-047-01a	As 188.980	125.80	ppb	1/14/2015, 12:48:20 PM
	Ni 231.604	523.03	ppb	
Cont Calib Verif	As 188.980	10034	ppb	1/14/2015, 1:02:13 PM
	Ni 231.604	2093.4	ppb	
Cont Calib Blank	As 188.980	16.702uv	ppb	1/14/2015, 1:07:33 PM
	Ni 231.604	1.921uv	ppb	
LLCCV	As 188.980	98.613	ppb	1/14/2015, 1:15:20 PM

P150114F1B. Mean Only Report 1/15/2015, 9:11:41 AM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	24.060	ppb	
MB0113SM1	As 188.980	1.673uv	ppb	1/14/2015, 3:18:50 PM
	Ni 231.604	-1.250uv	ppb	
SB0113SM1	As 188.980	1910.7	ppb	1/14/2015, 3:23:23 PM
	Ni 231.604	2021.9	ppb	
01-047-01a	As 188.980	84.272	ppb	1/14/2015, 3:27:56 PM
	Ni 231.604	372.94	ppb	
01-047-01a D	As 188.980	98.167	ppb	1/14/2015, 3:32:30 PM
	Ni 231.604	444.06	ppb	
01-047-01a L	As 188.980	22.321	ppb	1/14/2015, 3:37:05 PM
	Ni 231.604	79.841	ppb	
01-047-01a MS	As 188.980	2057.5	ppb	1/14/2015, 3:41:38 PM
	Ni 231.604	2355.1	ppb	
01-047-01a MSD	As 188.980	2140.0	ppb	1/14/2015, 3:46:12 PM
	Ni 231.604	2377.1	ppb	
10-021-02	As 188.980	71.230	ppb	1/14/2015, 3:50:47 PM
	Ni 231.604	654.64	ppb	
10-021-07	As 188.980	44.219	ppb	1/14/2015, 3:55:22 PM
	Ni 231.604	304.54	ppb	
10-021-47	As 188.980	15.491	ppb	1/14/2015, 3:59:55 PM
	Ni 231.604	232.97	ppb	
Cont Calib Verif	As 188.980	10176	ppb	1/14/2015, 4:04:29 PM
	Ni 231.604	2078.7	ppb	
Cont Calib Blank	As 188.980	10.545uv	ppb	1/14/2015, 4:10:33 PM
	Ni 231.604	4.958	ppb	
LLCCV	As 188.980	100.89	ppb	1/14/2015, 4:21:13 PM
	Ni 231.604	23.903	ppb	
10-068-01a	As 188.980	58.292	ppb	1/14/2015, 4:29:49 PM
	Ni 231.604	182.44	ppb	
10-068-02a	As 188.980	63.227	ppb	1/14/2015, 4:34:23 PM
	Ni 231.604	281.51	ppb	
10-020-03(0113SM2)	As 188.980	700.75	ppb	1/14/2015, 4:38:57 PM
	Ni 231.604	351.25	ppb	
10-020-13	As 188.980	129.41	ppb	1/14/2015, 4:43:31 PM
	Ni 231.604	1919.0	ppb	

P150114F1B. Mean Only Report 1/15/2015, 9:11:41 AM

Sample	Label	Calc Conc.	Units	Date/Time
10-020-14	As 188.980	92.741	ppb	1/14/2015, 4:48:04 PM
	Ni 231.604	761.38	ppb	
10-020-15	As 188.980	88.215	ppb	1/14/2015, 4:52:37 PM
	Ni 231.604	1396.2	ppb	
10-020-16	As 188.980	101.56	ppb	1/14/2015, 4:57:11 PM
	Ni 231.604	779.57	ppb	
10-020-17	As 188.980	34.489	ppb	1/14/2015, 5:01:44 PM
	Ni 231.604	1197.7	ppb	
10-020-21	As 188.980	81.466	ppb	1/14/2015, 5:06:19 PM
	Ni 231.604	1093.8	ppb	
10-020-28	As 188.980	25.525	ppb	1/14/2015, 5:10:54 PM
	Ni 231.604	668.94	ppb	
Cont Calib Verif	As 188.980	10318	ppb	1/14/2015, 5:15:29 PM
	Ni 231.604	2088.6	ppb	
Cont Calib Blank	As 188.980	1.275uv	ppb	1/14/2015, 5:21:09 PM
	Ni 231.604	2.612	ppb	
LLCCV	As 188.980	112.66	ppb	1/14/2015, 5:25:43 PM
	Ni 231.604	25.155	ppb	
10-020-31	As 188.980	66.849	ppb	1/14/2015, 5:34:52 PM
	Ni 231.604	644.55	ppb	
10-020-32	As 188.980	83.509	ppb	1/14/2015, 5:39:29 PM
	Ni 231.604	382.10	ppb	
10-020-38	As 188.980	46.966	ppb	1/14/2015, 5:44:05 PM
	Ni 231.604	667.69	ppb	
10-020-46	As 188.980	83.233	ppb	1/14/2015, 5:48:42 PM
	Ni 231.604	692.46	ppb	
10-020-47	As 188.980	88.864	ppb	1/14/2015, 5:53:18 PM
	Ni 231.604	621.32	ppb	
10-020-54	As 188.980	93.221	ppb	1/14/2015, 5:57:54 PM
	Ni 231.604	742.97	ppb	
10-020-57	As 188.980	85.340	ppb	1/14/2015, 6:02:30 PM
	Ni 231.604	529.35	ppb	
10-020-58	As 188.980	73.022	ppb	1/14/2015, 6:07:06 PM
	Ni 231.604	658.04	ppb	

P150114F1B. Mean Only Report 1/15/2015, 9:11:41 AM

Sample	Label	Calc Conc.	Units	Date/Time
10-020-59	As 188.980	43.712	ppb	1/14/2015, 6:11:41 PM
	Ni 231.604	390.37	ppb	
10-020-60	As 188.980	52.116	ppb	1/14/2015, 6:16:14 PM
	Ni 231.604	519.63	ppb	
Cont Calib Verif	As 188.980	10359	ppb	1/14/2015, 6:20:50 PM
	Ni 231.604	2043.4	ppb	
Cont Calib Blank	As 188.980	41.318	ppb	1/14/2015, 6:25:26 PM
	Ni 231.604	2.736	ppb	
LLCCV	As 188.980	113.49	ppb	1/14/2015, 6:29:59 PM
	Ni 231.604	23.691	ppb	

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

October 15, 2014

Brian Tracy
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-10
Laboratory Reference No. 1410-021

Dear Brian:

Enclosed are the analytical results and associated quality control data for samples submitted on October 2, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: October 15, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021
Project: 5147-006-10

Case Narrative

Samples were collected on September 29, 2014 and received by the laboratory on October 2, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: October 15, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021
Project: 5147-006-10

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
GEI-03_7-8_092914	10-021-12	Soil	9-29-14	10-2-14	
GEI-04_6-7_092914	10-021-16	Soil	9-29-14	10-2-14	
GEI-05_7-8_092914	10-021-19	Soil	9-29-14	10-2-14	
GEI-06_1.5-2.5_092914	10-021-22	Soil	9-29-14	10-2-14	
GEI-06_7-8_092914	10-021-24	Soil	9-29-14	10-2-14	
GEI-07_1.5-2.5_092914	10-021-26	Soil	9-29-14	10-2-14	
GEI-07_7-8_092914	10-021-28	Soil	9-29-14	10-2-14	
GEI-08_7-8_092914	10-021-32	Soil	9-29-14	10-2-14	
GEI-09_0.5-1.5_092914	10-021-34	Soil	9-29-14	10-2-14	
GEI-09_6-7_092914	10-021-36	Soil	9-29-14	10-2-14	
GEI-10_2-3_092914	10-021-38	Soil	9-29-14	10-2-14	
GEI-10_7-8_092914	10-021-40	Soil	9-29-14	10-2-14	
GEI-11_7-8_092914	10-021-43	Soil	9-29-14	10-2-14	
GEI-12_2-3_092914	10-021-45	Soil	9-29-14	10-2-14	
GEI-103_7-8_092914	10-021-49	Soil	9-29-14	10-2-14	

Date of Report: October 15, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-021-12					
Client ID:	**GEI-03_7-8_092914**					
Arsenic	**ND**	5.7	6010C	10-10-14	10-13-14	
Nickel	**21**	2.9	6010C	10-10-14	10-13-14	
Lab ID:	10-021-16					
Client ID:	**GEI-04_6-7_092914**					
Arsenic	**33**	5.6	6010C	10-10-14	10-13-14	
Nickel	**43**	2.8	6010C	10-10-14	10-13-14	
Lab ID:	10-021-19					
Client ID:	**GEI-05_7-8_092914**					
Nickel	**88**	3.0	6010C	10-10-14	10-13-14	
Lab ID:	10-021-22					
Client ID:	**GEI-06_1.5-2.5_092914**					
Arsenic	**23**	5.3	6010C	10-10-14	10-13-14	
Nickel	**58**	2.6	6010C	10-10-14	10-13-14	
Lab ID:	10-021-24					
Client ID:	**GEI-06_7-8_092914**					
Arsenic	**ND**	5.6	6010C	10-10-14	10-13-14	
Nickel	**29**	2.8	6010C	10-10-14	10-13-14	
Lab ID:	10-021-26					
Client ID:	**GEI-07_1.5-2.5_092914**					
Arsenic	**27**	5.3	6010C	10-10-14	10-13-14	
Nickel	**52**	2.6	6010C	10-10-14	10-13-14	

Date of Report: October 15, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021
Project: 5147-006-10

TOTAL METALS
EPA 6010C/6020A

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-021-28					
Client ID:	**GEI-07_7-8_092914**					
Arsenic	**4.4**	3.7	6020A	10-10-14	10-14-14	
Nickel	**38**	3.7	6010C	10-10-14	10-13-14	
Lab ID:	10-021-32					
Client ID:	**GEI-08_7-8_092914**					
Arsenic	**ND**	6.3	6010C	10-10-14	10-13-14	
Nickel	**27**	3.1	6010C	10-10-14	10-13-14	
Lab ID:	10-021-34					
Client ID:	**GEI-09_0.5-1.5_092914**					
Arsenic	**62**	5.2	6010C	10-10-14	10-13-14	
Lab ID:	10-021-36					
Client ID:	**GEI-09_6-7_092914**					
Arsenic	**4.6**	3.8	6020A	10-10-14	10-14-14	
Lab ID:	10-021-38					
Client ID:	**GEI-10_2-3_092914**					
Arsenic	**33**	5.3	6010C	10-10-14	10-13-14	
Nickel	**150**	2.6	6010C	10-10-14	10-13-14	
Lab ID:	10-021-40					
Client ID:	**GEI-10_7-8_092914**					
Arsenic	**ND**	6.1	6010C	10-10-14	10-13-14	
Nickel	**8.3**	3.0	6010C	10-10-14	10-13-14	

Date of Report: October 15, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-021-43					
Client ID:	**GEI-11_7-8_092914**					
Nickel	**38**	2.7	6010C	10-10-14	10-13-14	
Lab ID:	10-021-45					
Client ID:	**GEI-12_2-3_092914**					
Arsenic	**ND**	5.2	6010C	10-10-14	10-13-14	
Lab ID:	10-021-49					
Client ID:	**GEI-103_7-8_092914**					
Arsenic	**ND**	5.9	6010C	10-10-14	10-13-14	
Nickel	**3.4**	3.0	6010C	10-10-14	10-13-14	

Date of Report: October 15, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021
Project: 5147-006-10

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	10-10-14
Date Analyzed:	10-13-14
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1010SM4

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	5.0
Nickel	6010C	**ND**	2.5

Date of Report: October 15, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021
Project: 5147-006-10

TOTAL METALS
EPA 6020A
METHOD BLANK QUALITY CONTROL

Date Extracted:	10-10-14
Date Analyzed:	10-14-14
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1010SM4

Analyte	Method	Result	PQL
Arsenic	6020A	**ND**	2.5

Date of Report: October 15, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021
Project: 5147-006-10

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 10-10-14
Date Analyzed: 10-13-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-021-40

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	5.0	
Nickel	**6.80**	**8.95**	27	2.5	

Date of Report: October 15, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021
Project: 5147-006-10

TOTAL ARSENIC
EPA 6020A
DUPLICATE QUALITY CONTROL

Date Extracted: 10-10-14
Date Analyzed: 10-14-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-021-40

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	2.5	

Date of Report: October 15, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021
Project: 5147-006-10

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 10-10-14
Date Analyzed: 10-13-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-021-40

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**95.3**	95	**95.3**	95	0	
Nickel	100	**104**	97	**107**	100	3	

Date of Report: October 15, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021
Project: 5147-006-10

TOTAL ARSENIC
EPA 6020A
MS/MSD QUALITY CONTROL

Date Extracted: 10-10-14
Date Analyzed: 10-14-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-021-40

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**98.6**	99	**98.4**	98	0	

Date of Report: October 15, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV101314P	1.00	0.978	2.2	+/- 10%
Nickel	ICV101314P	1.00	1.07	-7.0	+/- 10%
Arsenic	LLICV101314P	0.100	0.0899	10.1	+/- 30%
Nickel	LLICV101314P	0.0200	0.0214	-7.0	+/- 30%
Arsenic	CCV1101314P	10.0	10.0	0	+/- 10%
Nickel	CCV1101314P	2.00	2.05	-2.5	+/- 10%
Arsenic	CCV201314P	10.0	9.97	0.30	+/- 10%
Nickel	CCV201314P	2.00	2.06	-3.0	+/- 10%
Arsenic	LLCCV1101314P	0.100	0.104	-4.0	+/- 30%
Nickel	LLCCV1101314P	0.0200	0.0237	-19	+/- 30%
Arsenic	CCV3101314P	10.0	9.61	3.9	+/- 10%
Nickel	CCV3101314P	2.00	2.00	0.0	+/- 10%
Arsenic	LLCCV2101314P	0.100	0.0969	3.1	+/- 30%
Nickel	LLCCV2101314P	0.0200	0.0228	-14	+/- 30%
Arsenic	CCV4101314P	10.0	9.38	6.2	+/- 10%
Nickel	CCV4101314P	2.00	1.95	2.5	+/- 10%
Arsenic	LLCCV3101314P	0.100	0.095	4.8	+/- 30%
Nickel	LLCCV3101314P	0.0200	0.0223	-12	+/- 30%

Date of Report: October 15, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021
Project: 5147-006-10

TOTAL ARSENIC
EPA 6020A
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV101414X	0.0500	0.0511	-2.2	+/- 10%
Arsenic	LLICV101414X	0.000500	0.000459	8.2	+/- 30%
Arsenic	CCV1101414X	0.0400	0.0405	-1.3	+/- 10%
Arsenic	CCV2101414X	0.0400	0.0414	-3.5	+/- 10%
Arsenic	LLCCV2101414X	0.000500	0.000458	8.4	+/- 30%
Arsenic	CCV3101414X	0.0400	0.0396	1.0	+/- 10%
Arsenic	LLCCV3101414X	0.000500	0.000426	15	+/- 30%

Date of Report: October 15, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021
Project: 5147-006-10

% MOISTURE

Date Analyzed: 10-7-14

Client ID	Lab ID	% Moisture
GEI-03_7-8_092914	10-021-12	13
GEI-04_6-7_092914	10-021-16	10
GEI-05_7-8_092914	10-021-19	16
GEI-06_1.5-2.5_092914	10-021-22	5
GEI-06_7-8_092914	10-021-24	11
GEI-07_1.5-2.5_092914	10-021-26	5
GEI-07_7-8_092914	10-021-28	32
GEI-08_7-8_092914	10-021-32	20
GEI-09_0.5-1.5_092914	10-021-34	4
GEI-09_6-7_092914	10-021-36	33
GEI-10_2-3_092914	10-021-38	5
GEI-10_7-8_092914	10-021-40	18
GEI-11_7-8_092914	10-021-43	9
GEI-12_2-3_092914	10-021-45	4
GEI-103_7-8_092914	10-021-49	16

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

17

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracy
Sampled by: Robert Tichen / Nate Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-021

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	% Moisture
1	GE1-01_1-2_092914	9/29/14	11:40	S	1																	
2	GE1-01_3-4_092914		11:45																			
3	GE1-01_5.5-6.5_092914		1150																			
4	GE1-01_7.5-8.5_092914		1155																			
5	GE1-01_9-10_092914		1200																			
6	GE1-02_1-2_092914		1500																			
7	GE1-02_4-5_092914		1505																			
8	GE1-02_7-8_092914		1510																			
9	GE1-02_9.10_092914		1515																			
10	GE1-03_2.5-3.5_092914	↓	1400	↓	↓																	

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10.3.14	0950	
Received		ORE	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

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OnSite Environmental Inc.
Analytical Laboratory Testing Services
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Company: GEO Engineers
Project Number: 5147-006-10
Project Name: DC4
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nate Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-021

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
11	GEI-03_5-6_092914	9/29/14	1405	S	1																						
12	GEI-03_7-8_092914		1410																			X	X				X
13	GEI-03_9-10_092914		1415																								
14	GEI-04_1-2_092914		1240																								
15	GEI-04_3-4_092914		1245																								
16	GEI-04_6-7_092914		1250																			X	X				X
17	GEI-05_1-2_092914		1715																								
18	GEI-05_4-5_092914		1720																								
19	GEI-05_7-8_092914		1725																			X					X
20	GEI-05_8.5-9_092914	↓	1730	↓	↓																						

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	[signature]	GEI	10.2.14	0950	
Received		CDG	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
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Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DLI
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nolan Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-021

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
21	GEI-05_12-13_092914	9/29/14	17:35	S	1																						
22	GEI-06_1.5-2.5_092914		1550																			X	X				X
23	GEI-06_4-5_092914		1555																								
24	GEI-06_7-8_092914		1600																			X	X				X
25	GEI-06_9-10_092914		1605																								
26	GEI-07_1.5-2.5_092914		1615																			X	X				X
27	GEI-07_3.5-4.5_092914		1620																								
28	GEI-07_7-8_092914		1625																			X	X				X
29	GEI-07_9-10_092914		1630																								
30	GEI-08_1.5-2.5_092914	↓	15:30	↓	↓																						

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10.2.14	0950	
Received		OAC	10/2/14	095	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

OnSite Environmental Inc.
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Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DLI
Project Manager: Brian Tracy
Sampled by: Robert Trachen / Nate Sulavan

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-021

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
31	GEI-08_4-5_092914	9/29/14	1535	S	1																						
32	GEI-08_7-8_092914		1540																			X	X				X
33	GEI-08_9-10_092914		1545																								
34	GEI-09_0.5-1.5_092914		1210																				X				X
35	GEI-09_3-4_092914		1215																								
36	GEI-09_6-7_092914		1220																				X				X
37	GEI-09_8-9_092914		1230																								
38	GEI-10_2-3_092914		1330																			X	X				X
39	GEI-10_3.5-4.5_092914		1335																								
40	GEI-10_7-8_092914		1340																			X	X				X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10.2.14	0950	
Received		CORE	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒

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Chain of Custody

21

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracey
Sampled by: Robert Trahan / Nate Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-021

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
41	GEI-10-9-10_092914	9/29/14	1345	S	1																						
42	GEI-11_2-3_092914		1700																								
43	GEI-11_7-8_092914		1705																			X					X
44	GEI-11_9-10_092914		1710																								
~~45~~	~~GEI-11_~~																										
46 (45)	GEI-12_2-3_092914		1310																				X				X
47 (46)	GEI-12_4-5_092914		1315																								
47	GEI-12_7-8_092914		1320																								
48	GEI-12_9-10_092914		1325																								
49	GEI-103_7-8_092914		1413																			X	X				X

	Signature	Company	Date	Time
Relinquished		GEI	10.2.14	0950
Received		ORE	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Sample/Cooler Receipt and Acceptance Checklist

Client: GeoTr

Client Project Name/Number: 5147-006-10

OnSite Project Number: 10-021

Initiated by: Blair Goodson

Date Initiated: 10/2/14

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	N/A	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	N/A	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	Yes	No		1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	Yes	No	Temperature: 0,		
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	N/A			
1.7 How were the samples delivered?	Client	Courier	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	Yes	No	1 2 3 4	
2.2 Was the COC legible and written in permanent ink?	Yes	No	1 2 3 4	
2.3 Have samples been relinquished and accepted by each custodian?	Yes	No	1 2 3 4	
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	No	1 2 3 4	
2.5 Were all of the samples listed on the COC submitted?	Yes	No	1 2 3 4	
2.6 Were any of the samples submitted omitted from the COC?	Yes	No	1 2 3 4	

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	No		1 2 3 4	
3.2 Were any sample labels missing or illegible?	Yes	No		1 2 3 4	
3.3 Have the correct containers been used for each analysis requested?	Yes	No		1 2 3 4	
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1 2 3 4	
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	N/A	1 2 3 4	
3.6 Is there sufficient sample submitted to perform requested analyses?	Yes	No		1 2 3 4	
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	No		1 2 3 4	
3.8 Was method 5035A used?	Yes	No	N/A	1 2 3 4	
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		N/A	1 2 3 4	

Explain any discrepancies:

2.4) Sample 27) GEI-07_3.5-4.5_092914 9/29/14 1620 on COC
GEI-07_3-4_092914 " 1615 on label
Sample 29) GEI-07_9-10_1092914 9/29/14 1630 on COC 1615 on label

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

RAW DATA

- Total Metals EPA 6010C Data

Total Metals Data

P141013F2. Mean Only Report 10/14/2014, 8:50:55 AM

Sample	Label	Calc Conc.	Units	Date/Time
Blank	As 188.980	0.000	ppb	10/13/2014, 4:27:17 PM
	Ni 231.604	0.000	ppb	
Standard 5	As 188.980	100.00	ppb	10/13/2014, 4:31:56 PM
	Ni 231.604	20.000	ppb	
Standard 4	As 188.980	1000.0	ppb	10/13/2014, 3:58:04 PM
	Ni 231.604	200.00	ppb	
Standard 3	As 188.980	10000	ppb	10/13/2014, 4:02:09 PM
	Ni 231.604	2000.0	ppb	
Standard 2	As 188.980	25000	ppb	10/13/2014, 4:06:13 PM
	Ni 231.604	5000.0	ppb	
Standard 1	Ni 231.604	10000	ppb	10/13/2014, 4:11:31 PM
Initial Calib Verif	As 188.980	997.76	ppb	10/13/2014, 4:38:04 PM
	Ni 231.604	1067.2	ppb	
LLICV	As 188.980	89.931	ppb	10/13/2014, 4:58:18 PM
	Ni 231.604	21.406	ppb	
Initial Calib Blank	As 188.980	-15.245uv	ppb	10/13/2014, 5:03:00 PM
	Ni 231.604	-2.764uv	ppb	
Cont Calib Verif	As 188.980	10031	ppb	10/13/2014, 5:07:05 PM
	Ni 231.604	2052.6	ppb	
Cont Calib Blank	As 188.980	-6.832uv	ppb	10/13/2014, 5:12:13 PM
	Ni 231.604	2.753uv	ppb	
ICSA	As 188.980	-3.962uv	ppb	10/13/2014, 5:16:18 PM
	Ni 231.604	4.605	ppb	
ICSAB	As 188.980	2480.8	ppb	10/13/2014, 5:20:23 PM
	Ni 231.604	887.96	ppb	
MB1010SM4	As 188.980	-6.699uv	ppb	10/13/2014, 5:30:42 PM
	Ni 231.604	0.207uv	ppb	
SB1010SM4	As 188.980	1928.7	ppb	10/13/2014, 5:34:49 PM
	Ni 231.604	2071.9	ppb	
10-021-40	As 188.980	24.945	ppb	10/13/2014, 5:38:55 PM
	Ni 231.604	135.64	ppb	
10-021-40 D	As 188.980	17.411uv	ppb	10/13/2014, 5:42:57 PM
	Ni 231.604	179.14	ppb	
10-021-40 L	As 188.980	-11.392uv	ppb	10/13/2014, 5:47:04 PM
	Ni 231.604	27.317	ppb	

P141013F2. Mean Only Report 10/14/2014, 8:50:55 AM

Sample	Label	Calc Conc.	Units	Date/Time
10-021-40 MS	As 188.980	1905.9	ppb	10/13/2014, 5:51:09 PM
	Ni 231.604	2080.1	ppb	
10-021-40 MSD	As 188.980	1905.0	ppb	10/13/2014, 5:55:15 PM
	Ni 231.604	2138.5	ppb	
10-021-12	As 188.980	77.823	ppb	10/13/2014, 5:59:22 PM
	Ni 231.604	366.10	ppb	
Cont Calib Verif	As 188.980	9971.8	ppb	10/13/2014, 6:03:26 PM
	Ni 231.604	2062.4	ppb	
Cont Calib Blank	As 188.980	4.861uv	ppb	10/13/2014, 6:08:36 PM
	Ni 231.604	-2.876uv	ppb	
LLCCV	As 188.980	104.37	ppb	10/13/2014, 6:12:41 PM
	Ni 231.604	23.695	ppb	
10-021-16	As 188.980	583.75	ppb	10/13/2014, 6:19:37 PM
	Ni 231.604	766.03	ppb	
10-021-19	As 188.980	62.779	ppb	10/13/2014, 6:23:42 PM
	Ni 231.604	1477.6	ppb	
10-021-22	As 188.980	431.28	ppb	10/13/2014, 6:27:48 PM
	Ni 231.604	1093.0	ppb	
10-021-24	As 188.980	97.387	ppb	10/13/2014, 6:31:52 PM
	Ni 231.604	524.37	ppb	
10-021-26	As 188.980	519.51	ppb	10/13/2014, 6:35:55 PM
	Ni 231.604	991.36	ppb	
10-021-28	As 188.980	48.242	ppb	10/13/2014, 6:40:00 PM
	Ni 231.604	517.41	ppb	
10-021-32	As 188.980	90.368	ppb	10/13/2014, 6:44:04 PM
	Ni 231.604	424.88	ppb	
10-021-34	As 188.980	1197.1	ppb	10/13/2014, 6:48:08 PM
	Ni 231.604	1094.1	ppb	
10-021-36	As 188.980	47.005	ppb	10/13/2014, 6:52:13 PM
	Ni 231.604	538.08	ppb	
BLK	As 188.980	-4.558uv	ppb	10/13/2014, 6:56:20 PM
	Ni 231.604	0.912uv	ppb	
Cont Calib Verif	As 188.980	9605.0	ppb	10/13/2014, 7:00:26 PM
	Ni 231.604	1997.1	ppb	
Cont Calib Blank	As 188.980	2.019uv	ppb	10/13/2014, 7:05:47 PM

P141013F2. Mean Only Report 10/14/2014, 8:50:55 AM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	-1.610uv	ppb	
LLCCV	As 188.980	96.935	ppb	10/13/2014, 7:09:52 PM
	Ni 231.604	22.819	ppb	
10-021-38	As 188.980	621.24	ppb	10/13/2014, 7:33:38 PM
	Ni 231.604	2864.0	ppb	
10-021-43	As 188.980	59.402	ppb	10/13/2014, 7:37:41 PM
	Ni 231.604	686.22	ppb	
10-021-45	As 188.980	75.302	ppb	10/13/2014, 7:42:57 PM
	Ni 231.604	628.44	ppb	
10-021-49	As 188.980	8.672	ppb	10/13/2014, 7:47:01 PM
	Ni 231.604	58.008	ppb	
10-042-01a(1013SM1)	As 188.980	155.61	ppb	10/13/2014, 7:51:07 PM
	Ni 231.604	451.51	ppb	
10-042-03a	As 188.980	78.036	ppb	10/13/2014, 7:55:12 PM
	Ni 231.604	410.32	ppb	
10-042-05a	As 188.980	79.047	ppb	10/13/2014, 7:59:18 PM
	Ni 231.604	488.69	ppb	
10-042-06a	As 188.980	56.448	ppb	10/13/2014, 8:03:22 PM
	Ni 231.604	632.88	ppb	
10-042-07a	As 188.980	38.186	ppb	10/13/2014, 8:07:27 PM
	Ni 231.604	220.05	ppb	
BLK	As 188.980	0.891uv	ppb	10/13/2014, 8:11:31 PM
	Ni 231.604	1.735uv	ppb	
Cont Calib Verif	As 188.980	9381.4	ppb	10/13/2014, 8:15:37 PM
	Ni 231.604	1945.2	ppb	
Cont Calib Blank	As 188.980	0.903uv	ppb	10/13/2014, 8:19:41 PM
	Ni 231.604	1.711	ppb	
LLCCV	As 188.980	95.246	ppb	10/13/2014, 8:23:45 PM
	Ni 231.604	22.291	ppb	

P141013F2. Mean Only Report 10/14/2014, 8:49:28 AM

Sample	Label	Calc Conc.	Units	Date/Time
Blank	As 188.980	0.000	ppb	10/13/2014, 4:27:17 PM
	Ni 231.604	0.000	ppb	
Standard 5	As 188.980	100.00	ppb	10/13/2014, 4:31:56 PM
	Ni 231.604	20.000	ppb	
Standard 4	As 188.980	1000.0	ppb	10/13/2014, 3:58:04 PM
	Ni 231.604	200.00	ppb	
Standard 3	As 188.980	10000	ppb	10/13/2014, 4:02:09 PM
	Ni 231.604	2000.0	ppb	
Standard 2	As 188.980	25000	ppb	10/13/2014, 4:06:13 PM
	Ni 231.604	5000.0	ppb	
Standard 1	Ni 231.604	10000	ppb	10/13/2014, 4:11:31 PM
Initial Calib Verif	As 188.980	997.76	ppb	10/13/2014, 4:38:04 PM
	Ni 231.604	1067.2	ppb	
LLICV	As 188.980	89.931	ppb	10/13/2014, 4:58:18 PM
	Ni 231.604	21.406	ppb	
Initial Calib Blank	As 188.980	-15.245uv	ppb	10/13/2014, 5:03:00 PM
	Ni 231.604	-2.764uv	ppb	
Cont Calib Verif	As 188.980	10031	ppb	10/13/2014, 5:07:05 PM
	Ni 231.604	2052.6	ppb	
Cont Calib Blank	As 188.980	-6.832uv	ppb	10/13/2014, 5:12:13 PM
	Ni 231.604	2.753uv	ppb	
ICSA	As 188.980	-3.962uv	ppb	10/13/2014, 5:16:18 PM
	Ni 231.604	4.605	ppb	
ICSAB	As 188.980	2480.8	ppb	10/13/2014, 5:20:23 PM
	Ni 231.604	887.96	ppb	
MB1010SM4	As 188.980	-6.699uv	ppb	10/13/2014, 5:30:42 PM
	Ni 231.604	0.207uv	ppb	
SB1010SM4	As 188.980	1928.7	ppb	10/13/2014, 5:34:49 PM
	Ni 231.604	2071.9	ppb	
10-021-40	As 188.980	24.945	ppb	10/13/2014, 5:38:55 PM
	Ni 231.604	135.64	ppb	
10-021-40 D	As 188.980	17.411uv	ppb	10/13/2014, 5:42:57 PM
	Ni 231.604	179.14	ppb	
10-021-40 L	As 188.980	-11.392uv	ppb	10/13/2014, 5:47:04 PM
	Ni 231.604	27.317	ppb	

P141013F2. Mean Only Report 10/14/2014, 8:49:28 AM

Sample	Label	Calc Conc.	Units	Date/Time
10-021-40 MS	As 188.980	1905.9	ppb	10/13/2014, 5:51:09 PM
	Ni 231.604	2080.1	ppb	
10-021-40 MSD	As 188.980	1905.0	ppb	10/13/2014, 5:55:15 PM
	Ni 231.604	2138.5	ppb	
10-021-12	As 188.980	77.823	ppb	10/13/2014, 5:59:22 PM
	Ni 231.604	366.10	ppb	
Cont Calib Verif	As 188.980	9971.8	ppb	10/13/2014, 6:03:26 PM
	Ni 231.604	2062.4	ppb	
Cont Calib Blank	As 188.980	4.861uv	ppb	10/13/2014, 6:08:36 PM
	Ni 231.604	-2.876uv	ppb	
LLCCV	As 188.980	104.37	ppb	10/13/2014, 6:12:41 PM
	Ni 231.604	23.695	ppb	
10-021-16	As 188.980	583.75	ppb	10/13/2014, 6:19:37 PM
	Ni 231.604	766.03	ppb	
10-021-19	As 188.980	62.779	ppb	10/13/2014, 6:23:42 PM
	Ni 231.604	1477.6	ppb	
10-021-22	As 188.980	431.28	ppb	10/13/2014, 6:27:48 PM
	Ni 231.604	1093.0	ppb	
10-021-24	As 188.980	97.387	ppb	10/13/2014, 6:31:52 PM
	Ni 231.604	524.37	ppb	
10-021-26	As 188.980	519.51	ppb	10/13/2014, 6:35:55 PM
	Ni 231.604	991.36	ppb	
10-021-28	As 188.980	48.242	ppb	10/13/2014, 6:40:00 PM
	Ni 231.604	517.41	ppb	
10-021-32	As 188.980	90.368	ppb	10/13/2014, 6:44:04 PM
	Ni 231.604	424.88	ppb	
10-021-34	As 188.980	1197.1	ppb	10/13/2014, 6:48:08 PM
	Ni 231.604	1094.1	ppb	
10-021-36	As 188.980	47.005	ppb	10/13/2014, 6:52:13 PM
	Ni 231.604	538.08	ppb	
BLK	As 188.980	-4.558uv	ppb	10/13/2014, 6:56:20 PM
	Ni 231.604	0.912uv	ppb	
Cont Calib Verif	As 188.980	9605.0	ppb	10/13/2014, 7:00:26 PM
	Ni 231.604	1997.1	ppb	
Cont Calib Blank	As 188.980	2.019uv	ppb	10/13/2014, 7:05:47 PM

P141013F2. Mean Only Report 10/14/2014, 8:49:28 AM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	-1.610uv	ppb	
LLCCV	As 188.980	96.935	ppb	10/13/2014, 7:09:52 PM
	Ni 231.604	22.819	ppb	
10-021-38	As 188.980	621.24	ppb	10/13/2014, 7:33:38 PM
	Ni 231.604	2864.0	ppb	
10-021-43	As 188.980	59.402	ppb	10/13/2014, 7:37:41 PM
	Ni 231.604	686.22	ppb	
10-021-45	As 188.980	75.302	ppb	10/13/2014, 7:42:57 PM
	Ni 231.604	628.44	ppb	
10-021-49	As 188.980	8.672	ppb	10/13/2014, 7:47:01 PM
	Ni 231.604	58.008	ppb	
10-042-01a(1013SM1)	As 188.980	155.61	ppb	10/13/2014, 7:51:07 PM
	Ni 231.604	451.51	ppb	
10-042-03a	As 188.980	78.036	ppb	10/13/2014, 7:55:12 PM
	Ni 231.604	410.32	ppb	
10-042-05a	As 188.980	79.047	ppb	10/13/2014, 7:59:18 PM
	Ni 231.604	488.69	ppb	
10-042-06a	As 188.980	56.448	ppb	10/13/2014, 8:03:22 PM
	Ni 231.604	632.88	ppb	
10-042-07a	As 188.980	38.186	ppb	10/13/2014, 8:07:27 PM
	Ni 231.604	220.05	ppb	
BLK	As 188.980	0.891uv	ppb	10/13/2014, 8:11:31 PM
	Ni 231.604	1.735uv	ppb	
Cont Calib Verif	As 188.980	9381.4	ppb	10/13/2014, 8:15:37 PM
	Ni 231.604	1945.2	ppb	
Cont Calib Blank	As 188.980	0.903uv	ppb	10/13/2014, 8:19:41 PM
	Ni 231.604	1.711	ppb	
LLCCV	As 188.980	95.246	ppb	10/13/2014, 8:23:45 PM
	Ni 231.604	22.291	ppb	

Dataset Report

User Name: kmckinney
Computer Name: ICPMS-2013
Dataset File Path: C:\NexIONData\DataSet\X141014B\
Report Date/Time: Tuesday, October 14, 2014 15:47:48

The Dataset

Batch ID	Sample ID	Date and Time	Read Type	Samp. File Name	Description
	Blank	12:56:26 Tue 14-O	Blank	C:\NexIONData\DataSet\X141014B\Blank.001	
	Standard 1	13:00:43 Tue 14-O	Standard #1	C:\NexIONData\DataSet\X141014B\Standard 1.002	
	Standard 2	13:04:59 Tue 14-O	Standard #2	C:\NexIONData\DataSet\X141014B\Standard 2.003	
	Standard 3	13:09:15 Tue 14-O	Standard #3	C:\NexIONData\DataSet\X141014B\Standard 3.004	
	Standard 4	13:13:32 Tue 14-O	Standard #4	C:\NexIONData\DataSet\X141014B\Standard 4.005	
	Standard 5	13:17:48 Tue 14-O	Standard #5	C:\NexIONData\DataSet\X141014B\Standard 5.006	
	Standard 6	13:22:04 Tue 14-O	Standard #6	C:\NexIONData\DataSet\X141014B\Standard 6.007	
	Standard 7	13:26:20 Tue 14-O	Standard #7	C:\NexIONData\DataSet\X141014B\Standard 7.008	
	QC Std 1	13:34:06 Tue 14-O	QC Std #1	C:\NexIONData\DataSet\X141014B\QC Std 1.009	
	QC Std 2	13:41:52 Tue 14-O	QC Std #2	C:\NexIONData\DataSet\X141014B\QC Std 2.010	
	QC Std 3	13:46:08 Tue 14-O	QC Std #3	C:\NexIONData\DataSet\X141014B\QC Std 3.011	
	QC Std 4	13:50:25 Tue 14-O	QC Std #4	C:\NexIONData\DataSet\X141014B\QC Std 4.012	
	QC Std 6	13:54:42 Tue 14-O	QC Std #6	C:\NexIONData\DataSet\X141014B\QC Std 6.013	
	QC Std 8	14:01:08 Tue 14-O	QC Std #8	C:\NexIONData\DataSet\X141014B\QC Std 8.014	
	ICSA	14:05:24 Tue 14-O	Sample	C:\NexIONData\DataSet\X141014B\ICSA.015	
	ICSAB	14:09:39 Tue 14-O	Sample	C:\NexIONData\DataSet\X141014B\ICSAB.016	
	MB1010SM4 50X	14:13:54 Tue 14-O	Sample	C:\NexIONData\DataSet\X141014B\MB1010SM4 50X.017	
	SB1010SM4 50X	14:18:09 Tue 14-O	Sample	C:\NexIONData\DataSet\X141014B\SB1010SM4 50X.018	
	10-021-40 50X	14:22:24 Tue 14-O	Sample	C:\NexIONData\DataSet\X141014B\10-021-40 50X.019	
	10-021-40D 50X	14:26:38 Tue 14-O	Sample	C:\NexIONData\DataSet\X141014B\10-021-40D 50X.020	
	10-021-40L 250X	14:30:54 Tue 14-O	Sample	C:\NexIONData\DataSet\X141014B\10-021-40L 250X.021	
	10-021-40MS 50X	14:35:10 Tue 14-O	Sample	C:\NexIONData\DataSet\X141014B\10-021-40MS 50X.022	
	10-021-40MSD 50X	14:39:26 Tue 14-O	Sample	C:\NexIONData\DataSet\X141014B\10-021-40MSD 50X.023	
	BL	14:43:42 Tue 14-O	Sample	C:\NexIONData\DataSet\X141014B\BL.024	
	QC Std 6	14:47:58 Tue 14-O	QC Std #6	C:\NexIONData\DataSet\X141014B\QC Std 6.025	
	QC Std 8	14:54:24 Tue 14-O	QC Std #8	C:\NexIONData\DataSet\X141014B\QC Std 8.026	
	QC Std 9	14:58:40 Tue 14-O	QC Std #9	C:\NexIONData\DataSet\X141014B\QC Std 9.027	
	QC Std 10	15:02:56 Tue 14-O	QC Std #10	C:\NexIONData\DataSet\X141014B\QC Std 10.028	
	10-021-40PS 50X	15:07:12 Tue 14-O	Sample	C:\NexIONData\DataSet\X141014B\10-021-40PS 50X.029	
	10-021-28 50X	15:11:27 Tue 14-O	Sample	C:\NexIONData\DataSet\X141014B\10-021-28 50X.030	
	10-021-36 50X	15:15:42 Tue 14-O	Sample	C:\NexIONData\DataSet\X141014B\10-021-36 50X.031	
	BL	15:19:58 Tue 14-O	Sample	C:\NexIONData\DataSet\X141014B\BL.032	
	QC Std 6	15:24:14 Tue 14-O	QC Std #6	C:\NexIONData\DataSet\X141014B\QC Std 6.033	
	QC Std 8	15:30:41 Tue 14-O	QC Std #8	C:\NexIONData\DataSet\X141014B\QC Std 8.034	
	QC Std 9	15:34:57 Tue 14-O	QC Std #9	C:\NexIONData\DataSet\X141014B\QC Std 9.035	
	QC Std 10	15:39:13 Tue 14-O	QC Std #10	C:\NexIONData\DataSet\X141014B\QC Std 10.036	

Quantitative Analysis - Summary Report

Sample ID: Blank

Sample Date/Time: Tuesday, October 14, 2014 12:56:26
Report Date/Time: Tuesday, October 14, 2014 12:57:51
Solution Type: Blank
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1242339.8	2.1				ug/L		Standard
>	**Ge**	72	471105.4	1.0				ug/L		Standard
	As	75	10724.3	1.7				ug/L		Standard
	As-1	75	-47.3	93.8				ug/L		Standard
	Se	77	176.3	7.6				ug/L		Standard
	Se	78	10979.2	1.1				ug/L		Standard
	Br	79	755.4	4.9				ug/L		Standard
	Se	82	97.7	11.3				ug/L		Standard
	Kr	83	54.0	11.3				ug/L		Standard
	Y	89	995907.6	0.7				ug/L		Standard
	In	115	787581.6	0.8				ug/L		Standard
>	**Ge-1**	72	11045.9	0.2				ug/L		KED
	As-2	75	6.7	22.9				ug/L		KED
	Y-1	89	22637.3	0.5				ug/L		KED
	In-1	115	21258.7	0.5				ug/L		KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyte	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 1

Sample Date/Time: Tuesday, October 14, 2014 13:00:43
Report Date/Time: Tuesday, October 14, 2014 13:02:08
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1254401.8	1.9				ug/L	1242340	Standard
⌈>	**Ge**	72	470799.1	1.2				ug/L	471105	Standard
|	**As**	75	10965.2	1.0				ug/L	10724	Standard
|	**As-1**	75	347.2	3.4	**0.2000**	0.007	3.6	ug/L	-47	Standard
|	**Se**	77	190.3	5.6				ug/L	176	Standard
|	**Se**	78	10908.2	1.2				ug/L	10979	Standard
|	**Br**	79	681.7	0.5				ug/L	755	Standard
⌊	**Se**	82	130.0	2.0				ug/L	98	Standard
	Kr	83	58.7	17.5				ug/L	54	Standard
	Y	89	1004655.0	0.6				ug/L	995908	Standard
	In	115	795840.5	0.4				ug/L	787582	Standard
⌈>	**Ge-1**	72	11065.3	0.3				ug/L	11046	KED
⌊	**As-2**	75	20.0	18.0	**0.2000**	0.054	26.9	ug/L	7	KED
	Y-1	89	22715.0	0.6				ug/L	22637	KED
	In-1	115	21241.1	1.3				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 2

Sample Date/Time: Tuesday, October 14, 2014 13:04:59
Report Date/Time: Tuesday, October 14, 2014 13:06:24
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1218761.1	1.8				ug/L	1242340	Standard
>	**Ge**	72	460577.5	0.9				ug/L	471105	Standard
	As	75	11607.5	0.6	**0.5000**	0.075	14.9	ug/L	10724	Standard
	As-1	75	1097.6	4.4	**0.5110**	0.017	3.4	ug/L	-47	Standard
	Se	77	254.7	6.9	**0.5000**	0.118	23.5	ug/L	176	Standard
	Se	78	11014.6	0.8				ug/L	10979	Standard
	Br	79	649.7	5.7				ug/L	755	Standard
	Se	82	214.3	3.5	**0.5000**	0.023	4.7	ug/L	98	Standard
	Kr	83	54.3	11.1				ug/L	54	Standard
	Y	89	963579.8	0.6				ug/L	995908	Standard
	In	115	765665.8	0.6				ug/L	787582	Standard
>	**Ge-1**	72	10730.7	0.7				ug/L	11046	KED
	As-2	75	45.7	14.1	**0.5125**	0.088	17.2	ug/L	7	KED
	Y-1	89	22087.4	0.5				ug/L	22637	KED
	In-1	115	20450.2	2.3				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 3

Sample Date/Time: Tuesday, October 14, 2014 13:09:15
Report Date/Time: Tuesday, October 14, 2014 13:10:40
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1237292.4	1.1				ug/L	1242340	Standard
⌈>	**Ge**	72	462266.8	0.3				ug/L	471105	Standard
|	**As**	75	15201.0	2.0	**2.0042**	0.124	6.2	ug/L	10724	Standard
|	**As-1**	75	4695.7	1.3	**2.0071**	0.023	1.1	ug/L	-47	Standard
|	**Se**	77	529.7	6.7	**2.0086**	0.203	10.1	ug/L	176	Standard
|	**Se**	78	12140.8	2.1	**2.0000**	0.357	17.9	ug/L	10979	Standard
|	**Br**	79	657.7	4.8				ug/L	755	Standard
⌊	**Se**	82	659.7	3.5	**2.0183**	0.076	3.7	ug/L	98	Standard
	Kr	83	65.3	7.6				ug/L	54	Standard
	Y	89	974866.0	0.9				ug/L	995908	Standard
	In	115	780898.0	0.7				ug/L	787582	Standard
⌈>	**Ge-1**	72	11005.6	0.3				ug/L	11046	KED
⌊	**As-2**	75	161.7	2.2	**1.9983**	0.039	1.9	ug/L	7	KED
	Y-1	89	22539.1	0.8				ug/L	22637	KED
	In-1	115	21192.8	0.2				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
⌈>	72Ge		
|	75As		
|	75As-1		
|	77Se		
|	78Se		
|	79Br		
⌊	82Se		
	83Kr		
	89Y		
	115In		
⌈>	72Ge-1		
⌊	75As-2		
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 4

Sample Date/Time: Tuesday, October 14, 2014 13:13:32
Report Date/Time: Tuesday, October 14, 2014 13:14:56
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1244190.5	1.0				ug/L	1242340	Standard
⌈>	**Ge**	72	468195.4	0.7				ug/L	471105	Standard
|	**As**	75	22038.2	1.2	**4.9722**	0.165	3.3	ug/L	10724	Standard
|	**As-1**	75	12334.8	2.1	**5.0248**	0.119	2.4	ug/L	-47	Standard
|	**Se**	77	1052.7	4.1	**4.9819**	0.215	4.3	ug/L	176	Standard
|	**Se**	78	13677.9	0.5	**4.8324**	0.180	3.7	ug/L	10979	Standard
|	**Br**	79	615.3	7.3				ug/L	755	Standard
⌊	**Se**	82	1579.8	3.0	**5.0335**	0.125	2.5	ug/L	98	Standard
	Kr	83	60.0	17.6				ug/L	54	Standard
	Y	89	1005745.4	1.6				ug/L	995908	Standard
	In	115	789311.5	0.5				ug/L	787582	Standard
⌈>	**Ge-1**	72	10936.2	0.8				ug/L	11046	KED
⌊	**As-2**	75	387.3	4.5	**4.9912**	0.263	5.3	ug/L	7	KED
	Y-1	89	22474.3	1.3				ug/L	22637	KED
	In-1	115	21084.1	0.1				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
⌈>	72Ge		
|	75As		
|	75As-1		
|	77Se		
|	78Se		
|	79Br		
⌊	82Se		
	83Kr		
	89Y		
	115In		
⌈>	72Ge-1		
⌊	75As-2		
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 5

Sample Date/Time: Tuesday, October 14, 2014 13:17:48
Report Date/Time: Tuesday, October 14, 2014 13:19:12
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1196743.4	1.9				ug/L	1242340	Standard
>	**Ge**	72	453040.3	0.6				ug/L	471105	Standard
	As	75	53904.8	1.1	**19.9780**	0.308	1.5	ug/L	10724	Standard
	As-1	75	46690.6	0.8	**19.9723**	0.281	1.4	ug/L	-47	Standard
	Se	77	3559.8	0.4	**19.9928**	0.118	0.6	ug/L	176	Standard
	Se	78	21820.3	1.5	**20.0218**	0.459	2.3	ug/L	10979	Standard
	Br	79	636.0	5.2				ug/L	755	Standard
	Se	82	5763.5	1.5	**19.9928**	0.394	2.0	ug/L	98	Standard
	Kr	83	53.3	15.9				ug/L	54	Standard
	Y	89	971538.1	0.8				ug/L	995908	Standard
	In	115	768205.6	0.3				ug/L	787582	Standard
>	**Ge-1**	72	10610.6	0.8				ug/L	11046	KED
	As-2	75	1513.4	1.4	**20.0240**	0.318	1.6	ug/L	7	KED
	Y-1	89	22000.9	0.1				ug/L	22637	KED
	In-1	115	20556.6	1.4				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
>	72Ge		
	75As		
	75As-1		
	77Se		
	78Se		
	79Br		
	82Se		
	83Kr		
	89Y		
	115In		
>	72Ge-1		
	75As-2		
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 6

Sample Date/Time: Tuesday, October 14, 2014 13:22:04
Report Date/Time: Tuesday, October 14, 2014 13:23:28
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1211864.1	0.9				ug/L	1242340	Standard
⌈>	**Ge**	72	453636.9	0.7				ug/L	471105	Standard
|	**As**	75	98475.7	1.7	**40.0719**	0.484	1.2	ug/L	10724	Standard
|	**As-1**	75	95206.3	1.5	**40.1353**	0.305	0.8	ug/L	-47	Standard
|	**Se**	77	7011.1	2.7	**40.0603**	0.803	2.0	ug/L	176	Standard
|	**Se**	78	33176.5	0.6	**40.0285**	0.130	0.3	ug/L	10979	Standard
|	**Br**	79	650.7	1.2				ug/L	755	Standard
⌊	**Se**	82	11784.2	1.4	**40.2414**	0.605	1.5	ug/L	98	Standard
	Kr	83	59.7	11.2				ug/L	54	Standard
	Y	89	984062.8	0.9				ug/L	995908	Standard
	In	115	774084.9	0.4				ug/L	787582	Standard
⌈>	**Ge-1**	72	10768.7	1.4				ug/L	11046	KED
⌊	**As-2**	75	3050.7	1.5	**39.9690**	0.362	0.9	ug/L	7	KED
	Y-1	89	22140.8	0.6				ug/L	22637	KED
	In-1	115	20655.7	0.9				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: Standard 7

Sample Date/Time: Tuesday, October 14, 2014 13:26:20
Report Date/Time: Tuesday, October 14, 2014 13:27:44
Solution Type: Standard
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1232361.5	0.2				ug/L	1242340	Standard
⌈>	**Ge**	72	467600.0	0.6				ug/L	471105	Standard
|	**As**	75	236583.0	1.8	**99.9395**	1.275	1.3	ug/L	10724	Standard
|	**As-1**	75	243759.9	1.6	**99.9429**	1.053	1.1	ug/L	-47	Standard
|	**Se**	77	17648.6	1.9	**99.8759**	1.308	1.3	ug/L	176	Standard
|	**Se**	78	67793.2	1.2	**99.6115**	0.799	0.8	ug/L	10979	Standard
|	**Br**	79	618.3	5.0				ug/L	755	Standard
⌊	**Se**	82	29517.5	0.8	**99.7001**	0.267	0.3	ug/L	98	Standard
	Kr	83	62.7	20.6				ug/L	54	Standard
	Y	89	1003322.2	0.9				ug/L	995908	Standard
	In	115	791720.9	0.7				ug/L	787582	Standard
⌈>	**Ge-1**	72	10919.5	1.2				ug/L	11046	KED
⌊	**As-2**	75	7642.7	1.4	**99.8090**	1.369	1.4	ug/L	7	KED
	Y-1	89	22263.7	0.9				ug/L	22637	KED
	In-1	115	21202.9	1.3				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 1

Sample Date/Time: Tuesday, October 14, 2014 13:34:06
Report Date/Time: Tuesday, October 14, 2014 13:35:30
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1233906.4	2.2				ug/L	1242340	Standard
>	**Ge**	72	466070.6	2.6				ug/L	471105	Standard
	As	75	122590.9	1.0	**49.7299**	1.886	3.8	ug/L	10724	Standard
	As-1	75	120825.8	0.9	**49.7424**	1.697	3.4	ug/L	-47	Standard
	Se	77	8577.2	1.5	**48.2189**	1.823	3.8	ug/L	176	Standard
	Se	78	38575.7	1.7	**48.7303**	2.869	5.9	ug/L	10979	Standard
	Br	79	626.3	6.5				ug/L	755	Standard
	Se	82	14501.0	1.5	**49.0083**	2.002	4.1	ug/L	98	Standard
	Kr	83	67.0	13.4				ug/L	54	Standard
	Y	89	979699.8	1.3				ug/L	995908	Standard
	In	115	773541.1	0.5				ug/L	787582	Standard
>	**Ge-1**	72	10678.7	1.9				ug/L	11046	KED
	As-2	75	3825.2	0.4	**51.0507**	1.139	2.2	ug/L	7	KED
	Y-1	89	22117.8	1.2				ug/L	22637	KED
	In-1	115	20819.6	1.6				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		98.931
	75	As	99.460	
	75	As-1	99.485	
	77	Se	96.438	
	78	Se	97.461	
	79	Br		
	82	Se	98.017	
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		96.675
	75	As-2	102.101	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 2

Sample Date/Time: Tuesday, October 14, 2014 13:41:52
Report Date/Time: Tuesday, October 14, 2014 13:43:16
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1221396.2	0.8				ug/L	1242340	Standard
>	**Ge**	72	456357.8	1.1				ug/L	471105	Standard
	As	75	10518.3	1.3	**0.0587**	0.013	22.4	ug/L	10724	Standard
	As-1	75	-42.8	116.4	**0.0011**	0.021	1858.3	ug/L	-47	Standard
	Se	77	189.7	6.7	**0.1101**	0.066	59.9	ug/L	176	Standard
	Se	78	10751.7	0.8	**0.2089**	0.093	44.4	ug/L	10979	Standard
	Br	79	607.7	2.6				ug/L	755	Standard
	Se	82	90.7	7.8	**-0.0136**	0.026	193.1	ug/L	98	Standard
	Kr	83	53.3	20.7				ug/L	54	Standard
	Y	89	971692.9	0.7				ug/L	995908	Standard
	In	115	768337.5	0.9				ug/L	787582	Standard
>	**Ge-1**	72	10616.3	1.2				ug/L	11046	KED
	As-2	75	7.7	32.8	**0.0172**	0.035	203.4	ug/L	7	KED
	Y-1	89	21972.9	0.8				ug/L	22637	KED
	In-1	115	20585.7	0.5				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		96.870
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		96.110
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 3

Sample Date/Time: Tuesday, October 14, 2014 13:46:08
Report Date/Time: Tuesday, October 14, 2014 13:47:33
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1210807.8	1.7				ug/L	1242340	Standard
>	**Ge**	72	452624.4	1.6				ug/L	471105	Standard
	As	75	14794.6	0.2	**2.0536**	0.122	6.0	ug/L	10724	Standard
	As-1	75	4746.5	3.7	**2.0301**	0.094	4.6	ug/L	-47	Standard
	Se	77	525.0	1.8	**2.1006**	0.088	4.2	ug/L	176	Standard
	Se	78	11698.8	0.6	**2.0836**	0.302	14.5	ug/L	10979	Standard
	Br	79	597.0	2.5				ug/L	755	Standard
	Se	82	665.0	5.6	**2.0002**	0.139	7.0	ug/L	98	Standard
	Kr	83	53.0	5.7				ug/L	54	Standard
	Y	89	962030.5	0.2				ug/L	995908	Standard
	In	115	764017.4	1.1				ug/L	787582	Standard
>	**Ge-1**	72	10602.3	1.2				ug/L	11046	KED
	As-2	75	159.3	6.0	**2.0579**	0.105	5.1	ug/L	7	KED
	Y-1	89	21874.7	2.0				ug/L	22637	KED
	In-1	115	20685.5	1.3				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		96.077
	75	As	102.681	
	75	As-1	101.506	
	77	Se	105.030	
	78	Se	104.179	
	79	Br		
	82	Se	100.010	
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		95.983
	75	As-2	102.893	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 4

Sample Date/Time: Tuesday, October 14, 2014 13:50:25
Report Date/Time: Tuesday, October 14, 2014 13:51:50
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1175659.9	0.5				ug/L	1242340	Standard
>	**Ge**	72	444069.1	1.3				ug/L	471105	Standard
	As	75	11522.2	0.5	**0.6589**	0.067	10.2	ug/L	10724	Standard
	As-1	75	1140.5	4.3	**0.5116**	0.020	4.0	ug/L	-47	Standard
	Se	77	252.7	1.4	**0.5204**	0.017	3.2	ug/L	176	Standard
	Se	78	10903.8	0.4	**1.0257**	0.346	33.7	ug/L	10979	Standard
	Br	79	579.7	2.2				ug/L	755	Standard
	Se	82	221.0	8.9	**0.4608**	0.080	17.4	ug/L	98	Standard
	Kr	83	62.7	22.4				ug/L	54	Standard
	Y	89	952510.2	1.2				ug/L	995908	Standard
	In	115	749124.6	0.6				ug/L	787582	Standard
>	**Ge-1**	72	10297.7	0.3				ug/L	11046	KED
	As-2	75	39.3	12.0	**0.4590**	0.066	14.4	ug/L	7	KED
	Y-1	89	21416.0	0.7				ug/L	22637	KED
	In-1	115	20233.0	0.8				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
>	72Ge		94.261
	75As	131.772	
	75As-1	102.315	
	77Se	104.085	
	78Se	205.144	
	79Br		
	82Se	92.157	
	83Kr		
	89Y		
	115In		
>	72Ge-1		93.226
	75As-2	91.808	
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, October 14, 2014 13:54:42
Report Date/Time: Tuesday, October 14, 2014 13:56:06
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1189773.0	1.6				ug/L	1242340	Standard
>	**Ge**	72	451224.8	0.6				ug/L	471105	Standard
	As	75	97589.4	1.3	**40.0259**	0.364	0.9	ug/L	10724	Standard
	As-1	75	93946.7	2.0	**39.9278**	0.579	1.4	ug/L	-47	Standard
	Se	77	6830.3	2.2	**39.4573**	0.692	1.8	ug/L	176	Standard
	Se	78	32728.5	1.2	**40.3018**	0.647	1.6	ug/L	10979	Standard
	Br	79	585.0	3.1				ug/L	755	Standard
	Se	82	11461.3	2.7	**39.9180**	0.884	2.2	ug/L	98	Standard
	Kr	83	68.3	6.1				ug/L	54	Standard
	Y	89	961473.6	0.3				ug/L	995908	Standard
	In	115	760877.7	0.8				ug/L	787582	Standard
>	**Ge-1**	72	10530.5	1.5				ug/L	11046	KED
	As-2	75	2996.0	1.7	**40.5195**	0.577	1.4	ug/L	7	KED
	Y-1	89	21984.2	1.8				ug/L	22637	KED
	In-1	115	20660.4	0.9				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		95.780
	75	As	100.065	
	75	As-1	99.819	
	77	Se	98.643	
	78	Se	100.754	
	79	Br		
	82	Se	99.795	
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		95.334
	75	As-2	101.299	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Tuesday, October 14, 2014 14:01:08
Report Date/Time: Tuesday, October 14, 2014 14:02:32
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1212850.9	1.7				ug/L	1242340	Standard
>	**Ge**	72	456926.1	0.5				ug/L	471105	Standard
	As	75	10377.8	0.4	**-0.0107**	0.027	255.0	ug/L	10724	Standard
	As-1	75	-29.7	296.4	**0.0068**	0.037	545.8	ug/L	-47	Standard
	Se	77	162.3	8.4	**-0.0507**	0.081	160.5	ug/L	176	Standard
	Se	78	10607.9	0.2	**-0.0727**	0.129	177.8	ug/L	10979	Standard
	Br	79	556.7	2.6				ug/L	755	Standard
	Se	82	94.3	15.3	**-0.0014**	0.050	3625.5	ug/L	98	Standard
	Kr	83	56.3	4.1				ug/L	54	Standard
	Y	89	960749.2	1.3				ug/L	995908	Standard
	In	115	765500.2	0.4				ug/L	787582	Standard
>	**Ge-1**	72	10565.9	1.6				ug/L	11046	KED
	As-2	75	5.0	34.6	**-0.0185**	0.024	127.2	ug/L	7	KED
	Y-1	89	21900.8	1.3				ug/L	22637	KED
	In-1	115	20726.3	2.0				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
>	72Ge		96.990
	75As		
	75As-1		
	77Se		
	78Se		
	79Br		
	82Se		
	83Kr		
	89Y		
	115In		
>	72Ge-1		95.654
	75As-2		
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: ICSA

Sample Date/Time: Tuesday, October 14, 2014 14:05:24
Report Date/Time: Tuesday, October 14, 2014 14:06:48
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1222061.6	1.7				ug/L	1242340	Standard
⌈>	**Ge**	72	429849.3	0.6				ug/L	471105	Standard
|	**As**	75	10888.3	1.7	**0.5313**	0.121	22.7	ug/L	10724	Standard
|	**As-1**	75	-162.3	94.8	**-0.0528**	0.068	128.6	ug/L	-47	Standard
|	**Se**	77	1228.1	2.0	**6.6363**	0.186	2.8	ug/L	176	Standard
|	**Se**	78	11280.8	0.2	**2.4062**	0.167	6.9	ug/L	10979	Standard
|	**Br**	79	4315.3	2.3				ug/L	755	Standard
⌊	**Se**	82	107.0	9.2	**0.0659**	0.035	53.2	ug/L	98	Standard
	Kr	83	100.3	17.0				ug/L	54	Standard
	Y	89	913418.3	1.4				ug/L	995908	Standard
	In	115	729722.4	1.2				ug/L	787582	Standard
⌈>	**Ge-1**	72	10015.8	0.9				ug/L	11046	KED
⌊	**As-2**	75	5.3	57.3	**-0.0100**	0.044	439.2	ug/L	7	KED
	Y-1	89	21782.9	1.0				ug/L	22637	KED
	In-1	115	19629.9	1.3				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		91.243
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		90.674
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: ICSAB

Sample Date/Time: Tuesday, October 14, 2014 14:09:39
Report Date/Time: Tuesday, October 14, 2014 14:11:03
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1237024.4	0.9				ug/L	1242340	Standard
>	**Ge**	72	437691.6	0.1				ug/L	471105	Standard
	As	75	54513.9	0.4	**21.0534**	0.082	0.4	ug/L	10724	Standard
	As-1	75	46514.7	1.5	**20.3904**	0.278	1.4	ug/L	-47	Standard
	Se	77	4558.4	3.2	**26.8358**	0.877	3.3	ug/L	176	Standard
	Se	78	21969.9	1.1	**22.0144**	0.465	2.1	ug/L	10979	Standard
	Br	79	4343.3	2.0				ug/L	755	Standard
	Se	82	5514.4	2.3	**19.6354**	0.432	2.2	ug/L	98	Standard
	Kr	83	112.3	5.2				ug/L	54	Standard
	Y	89	980518.8	1.6				ug/L	995908	Standard
	In	115	763256.9	1.0				ug/L	787582	Standard
>	**Ge-1**	72	10275.0	0.8				ug/L	11046	KED
	As-2	75	1498.7	4.1	**20.7352**	0.969	4.7	ug/L	7	KED
	Y-1	89	22051.7	2.5				ug/L	22637	KED
	In-1	115	20464.7	0.7				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
>	72Ge		92.907
	75As		
	75As-1		
	77Se		
	78Se		
	79Br		
	82Se		
	83Kr		
	89Y		
	115In		
>	72Ge-1		93.021
	75As-2		
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: MB1010SM4 50X

Sample Date/Time: Tuesday, October 14, 2014 14:13:54
Report Date/Time: Tuesday, October 14, 2014 14:15:18
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1411872.0	1.6				ug/L	1242340	Standard
>	**Ge**	72	503881.2	1.2				ug/L	471105	Standard
	As	75	11308.3	3.1	**-0.0652**	0.191	293.0	ug/L	10724	Standard
	As-1	75	-48.0	564.0	**0.0017**	0.103	5919.9	ug/L	-47	Standard
	Se	77	2753.6	2.2	**13.6054**	0.187	1.4	ug/L	176	Standard
	Se	78	11577.7	1.0	**-0.2659**	0.368	138.3	ug/L	10979	Standard
	Br	79	2687.6	2.5				ug/L	755	Standard
	Se	82	104.0	11.3	**-0.0011**	0.041	3633.8	ug/L	98	Standard
	Kr	83	59.7	7.9				ug/L	54	Standard
	Y	89	1057955.6	0.9				ug/L	995908	Standard
	In	115	888383.0	0.5				ug/L	787582	Standard
>	**Ge-1**	72	11904.3	1.0				ug/L	11046	KED
	As-2	75	7.3	43.8	**0.0019**	0.039	2044.5	ug/L	7	KED
	Y-1	89	24805.2	0.7				ug/L	22637	KED
	In-1	115	23475.7	0.6				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		106.957
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		107.771
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: SB1010SM4 50X

Sample Date/Time: Tuesday, October 14, 2014 14:18:09
Report Date/Time: Tuesday, October 14, 2014 14:19:33
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1289852.4	1.0				ug/L	1242340	Standard
⌈>	**Ge**	72	489150.7	1.6				ug/L	471105	Standard
|	**As**	75	104520.2	1.4	**39.4916**	0.492	1.2	ug/L	10724	Standard
|	**As-1**	75	100534.1	1.0	**39.4202**	0.439	1.1	ug/L	-47	Standard
|	**Se**	77	7221.8	0.8	**38.4675**	0.644	1.7	ug/L	176	Standard
|	**Se**	78	34807.0	1.4	**39.1788**	0.514	1.3	ug/L	10979	Standard
|	**Br**	79	838.4	4.0				ug/L	755	Standard
⌊	**Se**	82	12145.2	1.8	**39.0215**	0.909	2.3	ug/L	98	Standard
	Kr	83	63.7	5.0				ug/L	54	Standard
	Y	89	1043679.8	1.2				ug/L	995908	Standard
	In	115	799372.6	0.6				ug/L	787582	Standard
⌈>	**Ge-1**	72	11131.7	2.7				ug/L	11046	KED
⌊	**As-2**	75	3137.7	1.5	**40.1579**	1.082	2.7	ug/L	7	KED
	Y-1	89	23331.4	0.5				ug/L	22637	KED
	In-1	115	21988.2	1.8				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		103.830
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		100.776
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-021-40 50X

Sample Date/Time: Tuesday, October 14, 2014 14:22:24
Report Date/Time: Tuesday, October 14, 2014 14:23:48
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1367912.5	1.0				ug/L	1242340	Standard
>	**Ge**	72	488403.6	0.4				ug/L	471105	Standard
	As	75	12080.5	3.1	**0.4072**	0.138	34.0	ug/L	10724	Standard
	As-1	75	929.5	32.5	**0.3838**	0.117	30.5	ug/L	-47	Standard
	Se	77	2588.9	1.4	**13.1676**	0.186	1.4	ug/L	176	Standard
	Se	78	11461.3	0.9	**0.1321**	0.095	71.8	ug/L	10979	Standard
	Br	79	3670.1	1.4				ug/L	755	Standard
	Se	82	138.7	3.6	**0.1214**	0.018	14.8	ug/L	98	Standard
	Kr	83	71.7	7.2				ug/L	54	Standard
	Y	89	1050978.1	1.6				ug/L	995908	Standard
	In	115	852031.6	0.9				ug/L	787582	Standard
>	**Ge-1**	72	11517.0	0.9				ug/L	11046	KED
	As-2	75	43.0	8.4	**0.4469**	0.048	10.6	ug/L	7	KED
	Y-1	89	24729.7	0.9				ug/L	22637	KED
	In-1	115	22388.2	1.7				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
>	72Ge		103.672
	75As		
	75As-1		
	77Se		
	78Se		
	79Br		
	82Se		
	83Kr		
	89Y		
	115In		
>	72Ge-1		104.264
	75As-2		
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-021-40D 50X

Sample Date/Time: Tuesday, October 14, 2014 14:26:38
Report Date/Time: Tuesday, October 14, 2014 14:28:02
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1397052.6	1.9				ug/L	1242340	Standard
⌈>	**Ge**	72	494090.4	2.3				ug/L	471105	Standard
|	**As**	75	12212.2	2.2	**0.4040**	0.039	9.7	ug/L	10724	Standard
|	**As-1**	75	1083.8	21.1	**0.4390**	0.084	19.1	ug/L	-47	Standard
|	**Se**	77	2494.2	3.1	**12.4976**	0.536	4.3	ug/L	176	Standard
|	**Se**	78	11382.9	1.3	**-0.2148**	0.297	138.1	ug/L	10979	Standard
|	**Br**	79	3286.0	0.7				ug/L	755	Standard
⌊	**Se**	82	116.7	1.8	**0.0457**	0.006	14.1	ug/L	98	Standard
	Kr	83	61.3	19.5				ug/L	54	Standard
	Y	89	1090889.9	0.4				ug/L	995908	Standard
	In	115	859748.5	1.1				ug/L	787582	Standard
⌈>	**Ge-1**	72	11929.0	1.7				ug/L	11046	KED
⌊	**As-2**	75	46.7	18.2	**0.4715**	0.097	20.5	ug/L	7	KED
	Y-1	89	25259.6	1.1				ug/L	22637	KED
	In-1	115	22699.2	1.3				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		104.879
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		107.994
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-021-40L 250X

Sample Date/Time: Tuesday, October 14, 2014 14:30:54
Report Date/Time: Tuesday, October 14, 2014 14:32:19
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1302778.5	1.9				ug/L	1242340	Standard
>	**Ge**	72	482871.7	1.5				ug/L	471105	Standard
	As	75	11162.5	0.8	**0.0741**	0.113	152.0	ug/L	10724	Standard
	As-1	75	68.2	191.2	**0.0469**	0.052	111.1	ug/L	-47	Standard
	Se	77	685.7	7.3	**2.7931**	0.228	8.2	ug/L	176	Standard
	Se	78	11257.4	0.3	**0.0097**	0.288	2971.2	ug/L	10979	Standard
	Br	79	1551.4	2.1				ug/L	755	Standard
	Se	82	80.7	14.9	**-0.0633**	0.044	68.8	ug/L	98	Standard
	Kr	83	61.0	10.0				ug/L	54	Standard
	Y	89	1036508.7	1.5				ug/L	995908	Standard
	In	115	812056.3	1.9				ug/L	787582	Standard
>	**Ge-1**	72	11185.0	1.5				ug/L	11046	KED
	As-2	75	11.7	27.6	**0.0631**	0.043	67.9	ug/L	7	KED
	Y-1	89	23606.5	0.3				ug/L	22637	KED
	In-1	115	21899.6	1.6				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
>	72Ge		102.498
	75As		
	75As-1		
	77Se		
	78Se		
	79Br		
	82Se		
	83Kr		
	89Y		
	115In		
>	72Ge-1		101.259
	75As-2		
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-021-40MS 50X

Sample Date/Time: Tuesday, October 14, 2014 14:35:10
Report Date/Time: Tuesday, October 14, 2014 14:36:34
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1424002.2	1.8				ug/L	1242340	Standard
>	**Ge**	72	502278.3	1.7				ug/L	471105	Standard
	As	75	103778.8	0.9	**38.0348**	0.637	1.7	ug/L	10724	Standard
	As-1	75	100033.3	0.4	**38.2015**	0.497	1.3	ug/L	-47	Standard
	Se	77	9743.0	1.8	**50.8485**	0.639	1.3	ug/L	176	Standard
	Se	78	34358.9	1.1	**36.9335**	1.081	2.9	ug/L	10979	Standard
	Br	79	2989.0	4.2				ug/L	755	Standard
	Se	82	12063.1	1.1	**37.7359**	0.776	2.1	ug/L	98	Standard
	Kr	83	71.7	19.0				ug/L	54	Standard
	Y	89	1085342.1	1.2				ug/L	995908	Standard
	In	115	869670.4	0.8				ug/L	787582	Standard
>	**Ge-1**	72	11863.3	1.2				ug/L	11046	KED
	As-2	75	3286.0	0.8	**39.4511**	0.698	1.8	ug/L	7	KED
	Y-1	89	25468.7	0.8				ug/L	22637	KED
	In-1	115	22982.0	1.5				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
>	72Ge	106.617	
	75As		
	75As-1		
	77Se		
	78Se		
	79Br		
	82Se		
	83Kr		
	89Y		
	115In		
>	72Ge-1	107.399	
	75As-2		
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-021-40MSD 50X

Sample Date/Time: Tuesday, October 14, 2014 14:39:26
Report Date/Time: Tuesday, October 14, 2014 14:40:50
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1427555.4	1.3				ug/L	1242340	Standard
>	**Ge**	72	502715.2	1.0				ug/L	471105	Standard
	As	75	106700.0	0.3	**39.1964**	0.472	1.2	ug/L	10724	Standard
	As-1	75	103144.3	0.8	**39.3526**	0.617	1.6	ug/L	-47	Standard
	Se	77	9950.5	1.2	**51.9039**	0.153	0.3	ug/L	176	Standard
	Se	78	34962.7	1.3	**37.8636**	1.065	2.8	ug/L	10979	Standard
	Br	79	3260.4	2.1				ug/L	755	Standard
	Se	82	12375.4	2.7	**38.6871**	1.347	3.5	ug/L	98	Standard
	Kr	83	74.7	17.0				ug/L	54	Standard
	Y	89	1095675.9	0.5				ug/L	995908	Standard
	In	115	886794.3	0.5				ug/L	787582	Standard
>	**Ge-1**	72	12149.8	0.5				ug/L	11046	KED
	As-2	75	3356.7	1.9	**39.3460**	0.897	2.3	ug/L	7	KED
	Y-1	89	25436.6	0.8				ug/L	22637	KED
	In-1	115	23012.4	0.6				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyte	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		106.710
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		109.994
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: BL

Sample Date/Time: Tuesday, October 14, 2014 14:43:42
Report Date/Time: Tuesday, October 14, 2014 14:45:06
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1254274.0	1.1				ug/L	1242340	Standard
>	**Ge**	72	482918.1	0.9				ug/L	471105	Standard
	As	75	11087.9	0.7	**0.0406**	0.014	33.7	ug/L	10724	Standard
	As-1	75	158.3	20.7	**0.0820**	0.013	15.4	ug/L	-47	Standard
	Se	77	215.0	2.8	**0.1894**	0.025	13.4	ug/L	176	Standard
	Se	78	11234.7	0.4	**-0.0329**	0.103	314.7	ug/L	10979	Standard
	Br	79	729.7	2.3				ug/L	755	Standard
	Se	82	136.3	3.4	**0.1189**	0.018	15.5	ug/L	98	Standard
	Kr	83	54.3	25.9				ug/L	54	Standard
	Y	89	1034539.4	1.6				ug/L	995908	Standard
	In	115	792925.7	0.1				ug/L	787582	Standard
>	**Ge-1**	72	10990.6	0.7				ug/L	11046	KED
	As-2	75	7.3	15.7	**0.0091**	0.015	168.8	ug/L	7	KED
	Y-1	89	23259.3	1.2				ug/L	22637	KED
	In-1	115	21836.5	1.0				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		102.507
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		99.499
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, October 14, 2014 14:47:58
Report Date/Time: Tuesday, October 14, 2014 14:49:22
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1256553.6	0.5				ug/L	1242340	Standard
>	**Ge**	72	479421.3	0.5				ug/L	471105	Standard
	As	75	104132.6	1.1	**40.2191**	0.478	1.2	ug/L	10724	Standard
	As-1	75	100393.1	1.7	**40.1601**	0.694	1.7	ug/L	-47	Standard
	Se	77	7510.3	0.6	**40.8723**	0.462	1.1	ug/L	176	Standard
	Se	78	35182.3	0.6	**41.0001**	0.394	1.0	ug/L	10979	Standard
	Br	79	571.3	9.6				ug/L	755	Standard
	Se	82	12389.7	1.4	**40.6229**	0.568	1.4	ug/L	98	Standard
	Kr	83	62.3	16.2				ug/L	54	Standard
	Y	89	1027571.1	0.3				ug/L	995908	Standard
	In	115	792155.5	0.7				ug/L	787582	Standard
>	**Ge-1**	72	10866.1	0.8				ug/L	11046	KED
	As-2	75	3161.3	1.7	**41.4411**	1.032	2.5	ug/L	7	KED
	Y-1	89	22945.4	1.6				ug/L	22637	KED
	In-1	115	21619.1	1.0				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		101.765
	75	As	100.548	
	75	As-1	100.400	
	77	Se	102.181	
	78	Se	102.500	
	79	Br		
	82	Se	101.557	
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		98.372
	75	As-2	103.603	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Tuesday, October 14, 2014 14:54:24
Report Date/Time: Tuesday, October 14, 2014 14:55:48
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1264159.3	1.2				ug/L	1242340	Standard
>	**Ge**	72	481262.8	1.1				ug/L	471105	Standard
	As	75	10767.4	1.0	**-0.0807**	0.051	63.2	ug/L	10724	Standard
	As-1	75	-77.5	25.1	**-0.0116**	0.008	68.2	ug/L	-47	Standard
	Se	77	186.3	3.0	**0.0347**	0.042	120.2	ug/L	176	Standard
	Se	78	11049.6	1.1	**-0.2823**	0.203	71.8	ug/L	10979	Standard
	Br	79	531.3	4.3				ug/L	755	Standard
	Se	82	96.7	14.5	**-0.0104**	0.044	424.5	ug/L	98	Standard
	Kr	83	51.3	13.7				ug/L	54	Standard
	Y	89	1027296.4	0.6				ug/L	995908	Standard
	In	115	798386.9	0.5				ug/L	787582	Standard
>	**Ge-1**	72	11000.6	1.3				ug/L	11046	KED
	As-2	75	5.0	52.9	**-0.0214**	0.034	159.7	ug/L	7	KED
	Y-1	89	23010.9	1.1				ug/L	22637	KED
	In-1	115	21512.1	2.8				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyte	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		102.156
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		99.589
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Tuesday, October 14, 2014 14:58:40
Report Date/Time: Tuesday, October 14, 2014 15:00:04
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1258926.2	0.3				ug/L	1242340	Standard
>	**Ge**	72	474203.9	1.1				ug/L	471105	Standard
	As	75	15509.3	0.7	**2.0567**	0.045	2.2	ug/L	10724	Standard
	As-1	75	4909.6	0.6	**2.0041**	0.027	1.4	ug/L	-47	Standard
	Se	77	535.0	6.1	**2.0145**	0.163	8.1	ug/L	176	Standard
	Se	78	12325.3	0.6	**2.2002**	0.119	5.4	ug/L	10979	Standard
	Br	79	490.7	2.8				ug/L	755	Standard
	Se	82	695.4	1.4	**1.9955**	0.058	2.9	ug/L	98	Standard
	Kr	83	73.0	9.6				ug/L	54	Standard
	Y	89	1014105.7	1.1				ug/L	995908	Standard
	In	115	784210.8	0.5				ug/L	787582	Standard
>	**Ge-1**	72	10817.1	1.0				ug/L	11046	KED
	As-2	75	158.0	3.5	**1.9991**	0.094	4.7	ug/L	7	KED
	Y-1	89	22798.8	0.8				ug/L	22637	KED
	In-1	115	21569.4	1.3				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		100.658
	75	As	102.833	
	75	As-1	100.204	
	77	Se	100.725	
	78	Se	110.009	
	79	Br		
	82	Se	99.776	
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		97.928
	75	As-2	99.956	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 10

Sample Date/Time: Tuesday, October 14, 2014 15:02:56
Report Date/Time: Tuesday, October 14, 2014 15:04:20
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1239031.1	1.9				ug/L	1242340	Standard
>	**Ge**	72	465940.0	1.7				ug/L	471105	Standard
	As	75	11634.8	0.5	**0.4577**	0.114	24.9	ug/L	10724	Standard
	As-1	75	1126.0	7.4	**0.4822**	0.027	5.7	ug/L	-47	Standard
	Se	77	244.7	1.7	**0.4036**	0.047	11.7	ug/L	176	Standard
	Se	78	11075.3	1.1	**0.3863**	0.530	137.2	ug/L	10979	Standard
	Br	79	434.7	3.6				ug/L	755	Standard
	Se	82	238.7	7.8	**0.4830**	0.059	12.2	ug/L	98	Standard
	Kr	83	47.3	15.3				ug/L	54	Standard
	Y	89	1007013.3	1.1				ug/L	995908	Standard
	In	115	776358.6	1.8				ug/L	787582	Standard
>	**Ge-1**	72	10674.3	0.7				ug/L	11046	KED
	As-2	75	40.7	15.0	**0.4577**	0.083	18.2	ug/L	7	KED
	Y-1	89	22218.9	0.3				ug/L	22637	KED
	In-1	115	21125.5	1.3				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		98.904
	75	As	91.531	
	75	As-1	96.448	
	77	Se	80.725	
	78	Se	77.266	
	79	Br		
	82	Se	96.605	
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		96.636
	75	As-2	91.543	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-021-40PS 50X

Sample Date/Time: Tuesday, October 14, 2014 15:07:12
Report Date/Time: Tuesday, October 14, 2014 15:08:36
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1424897.3	1.2				ug/L	1242340	Standard
⌈>	**Ge**	72	494746.0	0.3				ug/L	471105	Standard
|	**As**	75	105325.4	1.1	**39.3253**	0.347	0.9	ug/L	10724	Standard
|	**As-1**	75	101899.9	1.0	**39.4998**	0.293	0.7	ug/L	-47	Standard
|	**Se**	77	9841.1	1.4	**52.1649**	0.663	1.3	ug/L	176	Standard
|	**Se**	78	34661.0	1.2	**38.2752**	0.537	1.4	ug/L	10979	Standard
|	**Br**	79	3170.0	1.0				ug/L	755	Standard
⌊	**Se**	82	12307.6	2.3	**39.0907**	0.852	2.2	ug/L	98	Standard
	Kr	83	64.3	3.2				ug/L	54	Standard
	Y	89	1092108.8	1.2				ug/L	995908	Standard
	In	115	877561.8	1.2				ug/L	787582	Standard
⌈>	**Ge-1**	72	11910.0	0.9				ug/L	11046	KED
⌊	**As-2**	75	3355.7	1.5	**40.1281**	0.706	1.8	ug/L	7	KED
	Y-1	89	25685.4	1.6				ug/L	22637	KED
	In-1	115	23345.4	0.6				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge		105.018
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1		107.822
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-021-28 50X

Sample Date/Time: Tuesday, October 14, 2014 15:11:27
Report Date/Time: Tuesday, October 14, 2014 15:12:51
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION\Data\Sample\X141014B.sam
Method File: C:\NexION\Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1545989.9	1.3				ug/L	1242340	Standard
⌈>	**Ge**	72	503900.4	1.8				ug/L	471105	Standard
|	**As**	75	13137.5	1.2	**0.6852**	0.115	16.8	ug/L	10724	Standard
|	**As-1**	75	2394.4	8.1	**0.9310**	0.086	9.3	ug/L	-47	Standard
|	**Se**	77	2841.3	1.2	**14.0753**	0.419	3.0	ug/L	176	Standard
|	**Se**	78	11224.1	1.4	**-0.8430**	0.104	12.3	ug/L	10979	Standard
|	**Br**	79	11585.0	1.2				ug/L	755	Standard
⌊	**Se**	82	205.3	0.7	**0.3173**	0.012	3.8	ug/L	98	Standard
	Kr	83	86.3	9.7				ug/L	54	Standard
	Y	89	1179232.0	2.2				ug/L	995908	Standard
	In	115	886028.5	1.3				ug/L	787582	Standard
⌈>	**Ge-1**	72	11996.0	1.0				ug/L	11046	KED
⌊	**As-2**	75	106.3	4.8	**1.1789**	0.058	4.9	ug/L	7	KED
	Y-1	89	28473.3	0.7				ug/L	22637	KED
	In-1	115	23353.8	0.7				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyte	QC Std % Recov	Int Std % Recovery
	45	Sc		
⌈>	72	Ge	106.961	
|	75	As		
|	75	As-1		
|	77	Se		
|	78	Se		
|	79	Br		
⌊	82	Se		
	83	Kr		
	89	Y		
	115	In		
⌈>	72	Ge-1	108.601	
⌊	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: 10-021-36 50X

Sample Date/Time: Tuesday, October 14, 2014 15:15:42
Report Date/Time: Tuesday, October 14, 2014 15:17:07
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1506177.5	1.5				ug/L	1242340	Standard
>	Ge	72	508217.9	1.0				ug/L	471105	Standard
	As	75	13771.4	0.8	**0.8965**	0.041	4.6	ug/L	10724	Standard
	As-1	75	2856.6	2.5	**1.0966**	0.017	1.6	ug/L	-47	Standard
	Se	77	3000.6	1.7	**14.7811**	0.251	1.7	ug/L	176	Standard
	Se	78	11248.8	0.8	**-0.9580**	0.217	22.6	ug/L	10979	Standard
	Br	79	11105.6	0.9				ug/L	755	Standard
	Se	82	147.7	3.1	**0.1319**	0.012	9.3	ug/L	98	Standard
	Kr	83	79.0	12.1				ug/L	54	Standard
	Y	89	1147556.8	1.0				ug/L	995908	Standard
	In	115	900774.1	0.9				ug/L	787582	Standard
>	Ge-1	72	12296.6	0.5				ug/L	11046	KED
	As-2	75	112.3	1.9	**1.2177**	0.030	2.5	ug/L	7	KED
	Y-1	89	27260.3	0.9				ug/L	22637	KED
	In-1	115	23538.7	0.6				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass Analyt	QC Std % Recov	Int Std % Recovery
	45Sc		
>	72Ge		107.878
	75As		
	75As-1		
	77Se		
	78Se		
	79Br		
	82Se		
	83Kr		
	89Y		
	115In		
>	72Ge-1		111.323
	75As-2		
	89Y-1		
	115In-1		

Quantitative Analysis - Summary Report

Sample ID: BL

Sample Date/Time: Tuesday, October 14, 2014 15:19:58
Report Date/Time: Tuesday, October 14, 2014 15:21:23
Solution Type: Sample
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1284393.9	1.2				ug/L	1242340	Standard
>	Ge	72	493730.4	0.4				ug/L	471105	Standard
	As	75	10721.9	0.6	-0.2168	0.008	3.9	ug/L	10724	Standard
	As-1	75	-13.1	184.6	0.0141	0.009	66.6	ug/L	-47	Standard
	Se	77	187.0	6.6	0.0120	0.070	577.8	ug/L	176	Standard
	Se	78	10892.8	0.4	-1.0176	0.008	0.8	ug/L	10979	Standard
	Br	79	912.4	6.4				ug/L	755	Standard
	Se	82	78.0	9.7	-0.0782	0.024	30.3	ug/L	98	Standard
	Kr	83	56.7	14.3				ug/L	54	Standard
	Y	89	1051227.4	0.6				ug/L	995908	Standard
	In	115	797377.7	1.1				ug/L	787582	Standard
>	Ge-1	72	11078.6	1.4				ug/L	11046	KED
	As-2	75	4.7	65.5	-0.0260	0.040	153.2	ug/L	7	KED
	Y-1	89	23368.1	1.8				ug/L	22637	KED
	In-1	115	22147.8	0.9				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		104.803
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		100.296
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 6

Sample Date/Time: Tuesday, October 14, 2014 15:24:14
Report Date/Time: Tuesday, October 14, 2014 15:25:39
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1277184.8	2.8				ug/L	1242340	Standard
>	**Ge**	72	483301.2	2.1				ug/L	471105	Standard
	As	75	103269.2	2.7	**39.4869**	0.637	1.6	ug/L	10724	Standard
	As-1	75	100247.1	3.1	**39.7759**	0.602	1.5	ug/L	-47	Standard
	Se	77	7244.8	2.2	**39.0663**	0.286	0.7	ug/L	176	Standard
	Se	78	34326.9	1.8	**39.0947**	2.063	5.3	ug/L	10979	Standard
	Br	79	654.3	3.9				ug/L	755	Standard
	Se	82	12334.3	1.0	**40.1254**	1.038	2.6	ug/L	98	Standard
	Kr	83	65.3	7.9				ug/L	54	Standard
	Y	89	1023886.3	0.2				ug/L	995908	Standard
	In	115	797712.8	1.7				ug/L	787582	Standard
>	**Ge-1**	72	11184.7	0.9				ug/L	11046	KED
	As-2	75	3108.0	3.4	**39.5814**	1.657	4.2	ug/L	7	KED
	Y-1	89	23258.3	0.7				ug/L	22637	KED
	In-1	115	22066.4	0.8				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		102.589
	75	As	98.717	
	75	As-1	99.440	
	77	Se	97.666	
	78	Se	97.737	
	79	Br		
	82	Se	100.314	
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		101.256
	75	As-2	98.954	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 8

Sample Date/Time: Tuesday, October 14, 2014 15:30:41
Report Date/Time: Tuesday, October 14, 2014 15:32:05
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1309884.5	1.6				ug/L	1242340	Standard
>	**Ge**	72	493624.6	1.5				ug/L	471105	Standard
	As	75	11168.8	0.6	**-0.0280**	0.061	218.9	ug/L	10724	Standard
	As-1	75	-80.1	32.8	**-0.0118**	0.010	87.0	ug/L	-47	Standard
	Se	77	171.3	9.4	**-0.0718**	0.099	138.6	ug/L	176	Standard
	Se	78	11440.2	0.3	**-0.1036**	0.224	215.8	ug/L	10979	Standard
	Br	79	526.3	3.7				ug/L	755	Standard
	Se	82	92.0	3.9	**-0.0332**	0.009	27.9	ug/L	98	Standard
	Kr	83	62.3	16.1				ug/L	54	Standard
	Y	89	1049334.7	0.5				ug/L	995908	Standard
	In	115	808856.6	1.0				ug/L	787582	Standard
>	**Ge-1**	72	11334.2	1.0				ug/L	11046	KED
	As-2	75	4.3	48.0	**-0.0316**	0.026	82.9	ug/L	7	KED
	Y-1	89	23915.7	0.4				ug/L	22637	KED
	In-1	115	22361.1	0.7				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		104.780
	75	As		
	75	As-1		
	77	Se		
	78	Se		
	79	Br		
	82	Se		
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		102.609
	75	As-2		
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 9

Sample Date/Time: Tuesday, October 14, 2014 15:34:57
Report Date/Time: Tuesday, October 14, 2014 15:36:21
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1306377.4	0.4				ug/L	1242340	Standard
>	**Ge**	72	500540.8	0.6				ug/L	471105	Standard
	As	75	16023.6	0.0	**1.9131**	0.042	2.2	ug/L	10724	Standard
	As-1	75	5124.7	2.6	**1.9820**	0.059	3.0	ug/L	-47	Standard
	Se	77	558.0	2.0	**1.9791**	0.044	2.2	ug/L	176	Standard
	Se	78	12655.6	0.8	**1.6205**	0.233	14.4	ug/L	10979	Standard
	Br	79	502.3	8.1				ug/L	755	Standard
	Se	82	708.0	5.6	**1.9135**	0.140	7.3	ug/L	98	Standard
	Kr	83	66.7	1.7				ug/L	54	Standard
	Y	89	1064911.3	1.2				ug/L	995908	Standard
	In	115	814078.7	0.7				ug/L	787582	Standard
>	**Ge-1**	72	10948.9	0.8				ug/L	11046	KED
	As-2	75	153.3	3.8	**1.9131**	0.093	4.9	ug/L	7	KED
	Y-1	89	23644.2	0.9				ug/L	22637	KED
	In-1	115	22343.9	1.4				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		106.248
	75	As	95.656	
	75	As-1	99.100	
	77	Se	98.957	
	78	Se	81.026	
	79	Br		
	82	Se	95.674	
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		99.121
	75	As-2	95.654	
	89	Y-1		
	115	In-1		

Quantitative Analysis - Summary Report

Sample ID: QC Std 10

Sample Date/Time: Tuesday, October 14, 2014 15:39:13
Report Date/Time: Tuesday, October 14, 2014 15:40:38
Solution Type: QC Std
Sample Type: Sample
Sample Description:
Batch ID:
Sample File: C:\NexION Data\Sample\X141014B.sam
Method File: C:\NexION Data\Method\X141014B.mth

Results (Mean Data)

IS	Analyte	Mass	Intensity	RSD	Conc.	SD	RSD	Units	Blank Intens.	Mode
	Sc	45	1290975.3	1.0				ug/L	1242340	Standard
>	Ge	72	495103.5	1.2				ug/L	471105	Standard
	As	75	12176.1	1.8	**0.3796**	0.156	41.2	ug/L	10724	Standard
	As-1	75	1049.3	11.5	**0.4259**	0.052	12.3	ug/L	-47	Standard
	Se	77	278.3	4.2	**0.5020**	0.052	10.3	ug/L	176	Standard
	Se	78	11661.4	0.8	**0.2065**	0.395	191.6	ug/L	10979	Standard
	Br	79	491.0	3.2				ug/L	755	Standard
	Se	82	227.0	4.3	**0.3980**	0.029	7.4	ug/L	98	Standard
	Kr	83	64.7	17.0				ug/L	54	Standard
	Y	89	1064879.7	0.7				ug/L	995908	Standard
	In	115	797177.0	1.2				ug/L	787582	Standard
>	Ge-1	72	11126.3	1.6				ug/L	11046	KED
	As-2	75	40.0	31.3	**0.4256**	0.154	36.3	ug/L	7	KED
	Y-1	89	23505.7	1.2				ug/L	22637	KED
	In-1	115	22053.0	0.8				ug/L	21259	KED

QC Calculated Values

Internal Standard Symbol	Mass	Analyt	QC Std % Recov	Int Std % Recovery
	45	Sc		
>	72	Ge		105.094
	75	As	75.914	
	75	As-1	85.188	
	77	Se	100.391	
	78	Se	41.291	
	79	Br		
	82	Se	79.601	
	83	Kr		
	89	Y		
	115	In		
>	72	Ge-1		100.728
	75	As-2	85.119	
	89	Y-1		
	115	In-1		

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

November 26, 2014

Brian Tracy
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-10
Laboratory Reference No. 1410-021B

Dear Brian:

Enclosed are the analytical results and associated quality control data for samples submitted on October 2, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021B
Project: 5147-006-10

Case Narrative

Samples were collected on September 29, 2014 and received by the laboratory on October 2, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021B
Project: 5147-006-10

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
GEI-02_1-2_092914	10-021-06	Soil	9-29-14	10-2-14	
GEI-02_7-8_092914	10-021-08	Soil	9-29-14	10-2-14	
GEI-03_2.5-3.5_092914	10-021-10	Soil	9-29-14	10-2-14	
GEI-04_1-2_092914	10-021-14	Soil	9-29-14	10-2-14	
GEI-04_3-4_092914	10-021-15	Soil	9-29-14	10-2-14	
GEI-05_7-8_092914	10-021-19	Soil	9-29-14	10-2-14	
GEI-06_4-5_092914	10-021-23	Soil	9-29-14	10-2-14	
GEI-08_1.5-2.5_092914	10-021-30	Soil	9-29-14	10-2-14	
GEI-08_4-5_092914	10-021-31	Soil	9-29-14	10-2-14	
GEI-09_0.5-1.5_092914	10-021-34	Soil	9-29-14	10-2-14	
GEI-09_3-4_092914	10-021-35	Soil	9-29-14	10-2-14	
GEI-09_6-7_092914	10-021-36	Soil	9-29-14	10-2-14	
GEI-11_2-3_092914	10-021-42	Soil	9-29-14	10-2-14	
GEI-11_7-8_092914	10-021-43	Soil	9-29-14	10-2-14	
GEI-12_4-5_092914	10-021-46	Soil	9-29-14	10-2-14	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021B
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-021-06					
Client ID:	**GEI-02_1-2_092914**					
Arsenic	**ND**	5.2	6010C	11-24-14	11-25-14	
Nickel	**34**	2.6	6010C	11-24-14	11-25-14	
Lab ID:	10-021-08					
Client ID:	**GEI-02_7-8_092914**					
Arsenic	**ND**	5.3	6010C	11-24-14	11-25-14	
Nickel	**8.0**	2.6	6010C	11-24-14	11-25-14	
Lab ID:	10-021-10					
Client ID:	**GEI-03_2.5-3.5_092914**					
Arsenic	**7.8**	5.6	6010C	11-24-14	11-25-14	
Nickel	**25**	2.8	6010C	11-24-14	11-25-14	
Lab ID:	10-021-14					
Client ID:	**GEI-04_1-2_092914**					
Arsenic	**ND**	5.2	6010C	11-24-14	11-25-14	
Nickel	**31**	2.6	6010C	11-24-14	11-25-14	
Lab ID:	10-021-15					
Client ID:	**GEI-04_3-4_092914**					
Arsenic	**13**	5.6	6010C	11-24-14	11-25-14	
Lab ID:	10-021-19					
Client ID:	**GEI-05_7-8_092914**					
Arsenic	**ND**	6.0	6010C	10-10-14	10-13-14	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021B
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-021-23					
Client ID:	**GEI-06_4-5_092914**					
Arsenic	**ND**	5.2	6010C	11-24-14	11-25-14	
Lab ID:	10-021-30					
Client ID:	**GEI-08_1.5-2.5_092914**					
Arsenic	**ND**	5.2	6010C	11-24-14	11-25-14	
Nickel	**50**	2.6	6010C	11-24-14	11-25-14	
Lab ID:	10-021-31					
Client ID:	**GEI-08_4-5_092914**					
Arsenic	**ND**	5.3	6010C	11-24-14	11-25-14	
Lab ID:	10-021-34					
Client ID:	**GEI-09_0.5-1.5_092914**					
Nickel	**57**	2.6	6010C	10-10-14	10-13-14	
Lab ID:	10-021-35					
Client ID:	**GEI-09_3-4_092914**					
Arsenic	**ND**	5.4	6010C	11-24-14	11-25-14	
Lab ID:	10-021-36					
Client ID:	**GEI-09_6-7_092914**					
Nickel	**40**	3.8	6010C	10-10-14	10-13-14	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021B
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-021-42					
Client ID:	**GEI-11_2-3_092914**					
Arsenic	**5.9**	5.2	6010C	11-24-14	11-25-14	
Nickel	**26**	2.6	6010C	11-24-14	11-25-14	
Lab ID:	10-021-43					
Client ID:	**GEI-11_7-8_092914**					
Arsenic	**ND**	5.5	6010C	10-10-14	10-13-14	
Lab ID:	10-021-46					
Client ID:	**GEI-12_4-5_092914**					
Arsenic	**19**	5.5	6010C	11-24-14	11-25-14	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	10-10-14
Date Analyzed:	10-13-14
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1010SM4

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	5.0
Nickel	6010C	**ND**	2.5

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	11-24-14
Date Analyzed:	11-25-14
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB1124SM3

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	5.0
Nickel	6010C	**ND**	2.5

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 10-10-14
Date Analyzed: 10-13-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-021-40

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	5.0	
Nickel	**6.80**	**8.95**	27	2.5	C

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 11-24-14
Date Analyzed: 11-25-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-021-23

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	5.0	
Nickel	**10.2**	**11.7**	13	2.5	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 10-10-14
Date Analyzed: 10-13-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-021-40

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**95.3**	95	**95.3**	95	0	
Nickel	100	**104**	97	**107**	100	3	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 11-24-14
Date Analyzed: 11-25-14

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-021-23

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**96.5**	97	**104**	104	7	
Nickel	100	**102**	91	**103**	93	2	

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV101314P	1.00	1.00	0.20	+/- 10%
Nickel	ICV101314P	1.00	1.07	-7.0	+/- 10%
Arsenic	LLICV101314P	0.100	0.0899	10	+/- 30%
Nickel	LLICV101314P	0.0200	0.0214	-7.0	+/- 30%
Arsenic	CCV1101314P	10.0	10.0	0	+/- 10%
Nickel	CCV1101314P	2.00	2.05	-2.5	+/- 10%
Arsenic	CCV2101314P	10.0	9.97	0.30	+/- 10%
Nickel	CCV2101314P	2.00	2.06	-3.0	+/- 10%
Arsenic	LLCCV2101314P	0.100	0.104	-4.0	+/- 30%
Nickel	LLCCV2101314P	0.0200	0.0237	-19	+/- 30%
Arsenic	CCV3101314P	10.0	9.61	3.9	+/- 10%
Nickel	CCV3101314P	2.00	2.00	0	+/- 10%
Arsenic	LLCCV3101314P	0.100	0.0969	3.1	+/- 30%
Nickel	LLCCV3101314P	0.0200	0.0228	-14	+/- 30%
Arsenic	CCV4101314P	10.0	9.38	6.2	+/- 10%
Nickel	CCV4101314P	2.00	1.95	2.5	+/- 10%
Arsenic	LLCCV4101314P	0.100	0.0952	4.8	+/- 30%
Nickel	LLCCV4101314P	0.0200	0.0223	-12	+/- 30%

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021B
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV112514P	1.00	0.992	0.80	+/- 10%
Nickel	ICV112514P	1.00	1.03	-3.0	+/- 10%
Arsenic	LLICV112514P	0.100	0.125	-25	+/- 30%
Nickel	LLICV112514P	0.0200	0.0204	-2.0	+/- 30%
Arsenic	CCV1112514P	10.0	9.93	0.70	+/- 10%
Nickel	CCV1112514P	2.00	1.97	1.5	+/- 10%
Arsenic	CCV2112514P	10.0	9.95	0.50	+/- 10%
Nickel	CCV2112514P	2.00	1.97	1.5	+/- 10%
Arsenic	LLCCV2112514P	0.100	0.106	-6.0	+/- 30%
Nickel	LLCCV2112514P	0.0200	0.0227	-14	+/- 30%
Arsenic	CCV3112514P	10.0	9.95	0.50	+/- 10%
Nickel	CCV3112514P	2.00	1.98	1.0	+/- 10%
Arsenic	LLCCV3112514P	0.100	0.105	-5.0	+/- 30%
Nickel	LLCCV3112514P	0.0200	0.0225	-13	+/- 30%
Arsenic	CCV4112514P	10.0	10.1	-1.0	+/- 10%
Nickel	CCV4112514P	2.00	1.99	0.50	+/- 10%
Arsenic	LLCCV4112514P	0.100	0.109	-9.0	+/- 30%
Nickel	LLCCV4112514P	0.0200	0.0189	5.5	+/- 30%
Arsenic	CCV5112514P	10.0	10.0	0	+/- 10%
Nickel	CCV5112514P	2.00	1.99	0.50	+/- 10%
Arsenic	LLCCV5112514P	0.100	0.107	-7.0	+/- 30%
Nickel	LLCCV5112514P	0.0200	0.0207	-3.5	+/- 30%

Date of Report: November 26, 2014
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021B
Project: 5147-006-10

% MOISTURE

Date Analyzed: 11-24-14

Client ID	Lab ID	% Moisture
GEI-02_1-2_092914	10-021-06	4
GEI-02_7-8_092914	10-021-08	5
GEI-03_2.5-3.5_092914	10-021-10	10
GEI-04_1-2_092914	10-021-14	4
GEI-04_3-4_092914	10-021-15	11
GEI-06_4-5_092914	10-021-23	3
GEI-08_1.5-2.5_092914	10-021-30	4
GEI-08_4-5_092914	10-021-31	6
GEI-09_3-4_092914	10-021-35	7
GEI-11_2-3_092914	10-021-42	4
GEI-12_4-5_092914	10-021-46	9

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

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Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracy
Sampled by: Robert Trehen / Nate Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-021

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A		Nickel		Arsenic		% Moisture
1	GEI-01_1-2_092914	9/29/14	11:40	S	1																						
2	GEI-01_3-4_092914		11:45																								
3	GEI-01_5.5-6.5_092914		1150																								
4	GEI-01_7.5-8.5_092914		1155																								
5	GEI-01_9-10_092914		1200																								
6	GEI-02_1-2_092914		1500																				X		X		X
7	GEI-02_4-5_092914		1505																								
8	GEI-02_7-8_092914		1510																				X		X		X
9	GEI-02_9.10_092914		1515																								
10	GEI-03_2.5-3.5_092914		1400																				X		X		X

	Signature	Company	Date	Time
Relinquished		GEI	10.3.14	0950
Received		OSE	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				

Comments/Special Instructions
X Added 11/17/14. DB (STA)

Reviewed/Date
Reviewed/Date
Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐
Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
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Phone: (425) 883-3881 • www.onsite-env.com

Company: GEO Engineers
Project Number: 5147-006-10
Project Name: DC
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nate Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-021

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
11	GEI-03_5-6_092914	9/29/14	1405	S	1																						
12	GEI-03_7-8_092914		1410																			X	X				X
13	GEI-03_9-10_092914		1415																								
14	GEI-04_1-2_092914		1240																			X	X				X
15	GEI-04_3-4_092914		1245																				X				X
16	GEI-04_6-7_092914		1250																			X	X				X
17	GEI-05_1-2_092914		1715																								
18	GEI-05_4-5_092914		1720																								
19	GEI-05_7-8_092914		1725																			X	X				X
20	GEI-05_8.5-9_092914	↓	1730	↓	↓																						

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished	[signature]	GEI	10.2.14	0950	
Received		COGC	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

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Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracy
Sampled by: Robert Trahen / Nathan Solomon

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Days ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 10-021

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
21	GEI-05_12-13_092914	9/29/14	17:35	S	1																						
22	GEI-06_1.5-2.5_092914		1550																			X	X				X
23	GEI-06_4-5_092914		1555																				X				X
24	GEI-06_7-8_092914		1600																			X	X				X
25	GEI-06_9-10_092914		1605																								
26	GEI-07_1.5-2.5_092914		1615																			X	X				X
27	GEI-07_3.5-4.5_092914		1620																								
28	GEI-07_7-8_092914		1625																			X	X				X
29	GEI-07_9-10_092914		1630																								
30	GEI-08_1.5-2.5_092914		15:30																			X	X				X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10.2.14	0950	
Received		OAC	10/2/14	095	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

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Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DL
Project Manager: Brian Tracy
Sampled by: Robert Trachen / Nate Sulaman

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 10-0211

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic			% Moisture
31	GEI-08_4-5_092914	9/29/14	1535	S	1																		X			X
32	GEI-08_7-8_092914		1540																			X	X			X
33	GEI-08_9-10_092914		1545																							
34	GEI-09_0.5-1.5_092914		1210																		X	X				X
35	GEI-09_3-4_092914		1215																			X				X
36	GEI-09_6-7_092914		1220																		X	X				X
37	GEI-09_8-9_092914		1230																							
38	GEI-10_2-3_092914		1330																			X	X			X
39	GEI-10_3.5-4.5_092914		1335																							
40	GEI-10_7-8_092914		1340																			X	X			X

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10.2.14	0950	
Received		COE	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					
Reviewed/Date		Reviewed/Date			Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracey
Sampled by: Robert Trahan / Nate Solomon

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 10-021

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
41	GEI-10-9-10_092914	9/29/14	1345	S	1																						
42	GEI-11_2-3_092914		1700																			X	X				X
43	GEI-11_7-8_092914		1705																			X	X				X
44	GEI-11_9-10_092914		1710																								
~~45~~	~~GEI-11~~																										
~~46~~ 45	GEI-12_2-3_092914		1310																				X				X
46	GEI-12_4-5_092914		1315																				X				X
47	GEI-12_7-8_092914		1320																								
48	GEI-12_9-10_092914	↓	1325	↓	↓																						
49	GEI-103_7-8_092914	↓	1413	↓	↓																	X	X				X

	Signature	Company	Date	Time
Relinquished		GEI	10.2.14	0950
Received		OSE	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				

Comments/Special Instructions

Reviewed/Date

Reviewed/Date

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐

Electronic Data Deliverables (EDDs) ☒ _____

Sample/Cooler Receipt and Acceptance Checklist

Client: GeoTr

Client Project Name/Number: 5147-006-10

OnSite Project Number: 10-021

Initiated by: Blair Goodson

Date Initiated: 10/2/14

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	No	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	N/A	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	N/A	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	Yes	No		1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	Yes	No	Temperature: 0,		
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	N/A			
1.7 How were the samples delivered?	Client	Courier	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	Yes	No		1 2 3 4
2.2 Was the COC legible and written in permanent ink?	Yes	No		1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	Yes	No		1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	No		1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	Yes	No		1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	No		1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	No		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	No		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	Yes	No		1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	No	N/A	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	N/A	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	Yes	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	No		1 2 3 4
3.8 Was method 5035A used?	Yes	No	N/A	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		N/A	1 2 3 4

Explain any discrepancies:

2.4) Sample 27) GEI-07_3.5-4.5_092914 9/29/14 1620 on COC
GEI-07_3-4_092914 " 1615 on label
Sample 29) GEI-07_9-10_092914 9/29/14 1630 on COC 1615 on label

1 - Discuss issue in Case Narrative
2 - Process Sample As-is
3 - Client contacted to discuss problem
4 - Sample cannot be analyzed or client does not wish to proceed

RAW DATA

- Total Metals EPA 6010C Data

Total Metals Data

P141125F1B. Mean Only Report 11/26/2014, 12:05:38 PM

Sample	Label	Calc Conc.	Units	Date/Time
Blank	As 188.980	0.000	ppb	11/25/2014, 9:54:04 AM
	Ni 231.604	0.000	ppb	
Standard 5	As 188.980	100.00	ppb	11/25/2014, 9:58:10 AM
	Ni 231.604	20.000	ppb	
Standard 4	As 188.980	1000.0	ppb	11/25/2014, 10:02:16 AM
	Ni 231.604	200.00	ppb	
Standard 3	As 188.980	10000	ppb	11/25/2014, 10:06:20 AM
	Ni 231.604	2000.0	ppb	
Standard 2	As 188.980	25000	ppb	11/25/2014, 10:10:26 AM
	Ni 231.604	5000.0	ppb	
Standard 1	Ni 231.604	10000	ppb	11/25/2014, 10:14:32 AM
Initial Calib Verif	As 188.980	992.15	ppb	11/25/2014, 10:35:54 AM
	Ni 231.604	1027.9	ppb	
LLICV	As 188.980	124.87	ppb	11/25/2014, 10:42:54 AM
	Ni 231.604	20.438	ppb	
Initial Calib Blank	As 188.980	2.418uv	ppb	11/25/2014, 10:48:22 AM
	Ni 231.604	3.311uv	ppb	
Cont Calib Verif	As 188.980	9925.6	ppb	11/25/2014, 10:52:26 AM
	Ni 231.604	1969.9	ppb	
Cont Calib Blank	As 188.980	11.190	ppb	11/25/2014, 11:00:01 AM
	Ni 231.604	0.318uv	ppb	
ICSA	As 188.980	6.598uv	ppb	11/25/2014, 11:04:05 AM
	Ni 231.604	2.635uv	ppb	
ICSAB	As 188.980	2468.8	ppb	11/25/2014, 11:08:08 AM
	Ni 231.604	812.15	ppb	
MB1125WH2	As 188.980	2.441uv	ppb	11/25/2014, 11:15:17 AM
	Ni 231.604	-0.624uv	ppb	
SB1125WH2	As 188.980	10.915	ppb	11/25/2014, 11:19:25 AM
	Ni 231.604	-0.783uv	ppb	
11-243-01	As 188.980	57.199	ppb	11/25/2014, 11:23:30 AM
	Ni 231.604	0.938	ppb	
11-243-01 D	As 188.980	62.055	ppb	11/25/2014, 11:27:34 AM
	Ni 231.604	2.137uv	ppb	
11-243-01 L	As 188.980	30.332	ppb	11/25/2014, 11:31:40 AM
	Ni 231.604	-2.470uv	ppb	

P141125F1B. Mean Only Report 11/26/2014, 12:05:38 PM

Sample	Label	Calc Conc.	Units	Date/Time
11-243-01 MS	As 188.980	63.966	ppb	11/25/2014, 11:35:43 AM
	Ni 231.604	0.748uv	ppb	
11-243-01 MSD	As 188.980	70.299	ppb	11/25/2014, 11:39:46 AM
	Ni 231.604	2.515	ppb	
MRI ICP1(T.V=50)	As 188.980	101.98	ppb	11/25/2014, 11:50:17 AM
	Ni 231.604	19.072	ppb	
Cont Calib Verif	As 188.980	9954.9	ppb	11/25/2014, 11:56:32 AM
	Ni 231.604	1974.9	ppb	
Cont Calib Blank	As 188.980	21.928	ppb	11/25/2014, 12:02:56 PM
	Ni 231.604	-0.711uv	ppb	
LLCCV	As 188.980	106.21	ppb	11/25/2014, 12:07:00 PM
	Ni 231.604	22.662	ppb	
MRI ICP1(T.V=50)	As 188.980	104.20	ppb	11/25/2014, 12:12:12 PM
	Ni 231.604	18.348	ppb	
MRI ICP1(T.V=125)	As 188.980	239.56	ppb	11/25/2014, 12:17:49 PM
	Ni 231.604	50.344	ppb	
MB1124SM3	As 188.980	4.177uv	ppb	11/25/2014, 12:25:21 PM
	Ni 231.604	-0.714uv	ppb	
SB1124SM3	As 188.980	1858.2	ppb	11/25/2014, 12:29:26 PM
	Ni 231.604	1925.6	ppb	
10-021-23	As 188.980	37.061	ppb	11/25/2014, 12:33:29 PM
	Ni 231.604	203.92	ppb	
10-021-23 D	As 188.980	51.177	ppb	11/25/2014, 12:37:33 PM
	Ni 231.604	232.80	ppb	
10-021-23 L	As 188.980	19.140	ppb	11/25/2014, 12:41:39 PM
	Ni 231.604	42.105	ppb	
10-021-23 MS	As 188.980	1930.4	ppb	11/25/2014, 12:45:44 PM
	Ni 231.604	2031.1	ppb	
10-021-23 MSD	As 188.980	2073.3	ppb	11/25/2014, 12:49:49 PM
	Ni 231.604	2066.8	ppb	
11-230-01a X 10	As 188.980	14.534	ppb	11/25/2014, 12:53:55 PM
	Ni 231.604	3.650	ppb	
Cont Calib Verif	As 188.980	9951.3	ppb	11/25/2014, 12:57:59 PM
	Ni 231.604	1978.0	ppb	
Cont Calib Blank	As 188.980	11.894	ppb	11/25/2014, 1:04:07 PM

P141125F1B. Mean Only Report 11/26/2014, 12:05:38 PM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	-0.503uv	ppb	
LLCCV	As 188.980	104.77	ppb	11/25/2014, 1:08:12 PM
	Ni 231.604	22.503	ppb	
10-019-056	As 188.980	32.383	ppb	11/25/2014, 1:28:22 PM
	Ni 231.604	136.34	ppb	
10-019-058	As 188.980	31.659	ppb	11/25/2014, 1:32:25 PM
	Ni 231.604	157.39	ppb	
10-021-06	As 188.980	97.258	ppb	11/25/2014, 1:36:31 PM
	Ni 231.604	647.03	ppb	
10-021-08	As 188.980	45.622	ppb	11/25/2014, 1:40:36 PM
	Ni 231.604	151.68	ppb	
10-021-10	As 188.980	139.50	ppb	11/25/2014, 1:44:39 PM
	Ni 231.604	451.94	ppb	
10-021-14	As 188.980	67.196	ppb	11/25/2014, 1:48:43 PM
	Ni 231.604	595.36	ppb	
10-021-15	As 188.980	227.04	ppb	11/25/2014, 1:52:46 PM
	Ni 231.604	843.66	ppb	
10-021-30	As 188.980	44.971	ppb	11/25/2014, 1:56:50 PM
	Ni 231.604	969.39	ppb	
10-021-31	As 188.980	50.289	ppb	11/25/2014, 2:00:53 PM
	Ni 231.604	988.66	ppb	
10-021-35	As 188.980	35.337	ppb	11/25/2014, 2:04:56 PM
	Ni 231.604	760.71	ppb	
Cont Calib Verif	As 188.980	10084	ppb	11/25/2014, 2:09:00 PM
	Ni 231.604	1987.6	ppb	
Cont Calib Blank	As 188.980	3.633uv	ppb	11/25/2014, 2:16:44 PM
	Ni 231.604	-0.558uv	ppb	
LLCCV	As 188.980	109.21	ppb	11/25/2014, 2:20:48 PM
	Ni 231.604	18.935	ppb	
10-021-42	As 188.980	113.39	ppb	11/25/2014, 2:30:26 PM
	Ni 231.604	500.16	ppb	
10-021-46	As 188.980	340.45	ppb	11/25/2014, 2:34:33 PM
	Ni 231.604	567.39	ppb	
BLK	As 188.980	5.578uv	ppb	11/25/2014, 2:38:38 PM
	Ni 231.604	2.619	ppb	

P141125F1B. Mean Only Report 11/26/2014, 12:05:38 PM

Sample	Label	Calc Conc.	Units	Date/Time
MB1124SM	As 188.980	1.360uv	ppb	11/25/2014, 2:42:44 PM
	Ni 231.604	3.754	ppb	
SB1124SM	As 188.980	1913.1	ppb	11/25/2014, 2:46:49 PM
	Ni 231.604	1987.2	ppb	
10-020-05	As 188.980	79.460	ppb	11/25/2014, 2:50:55 PM
	Ni 231.604	459.05	ppb	
10-020-05 D	As 188.980	65.834	ppb	11/25/2014, 2:55:00 PM
	Ni 231.604	473.74	ppb	
10-020-05 L	As 188.980	21.070	ppb	11/25/2014, 2:59:04 PM
	Ni 231.604	98.228	ppb	
10-020-05 MS	As 188.980	1904.1	ppb	11/25/2014, 3:03:08 PM
	Ni 231.604	2359.6	ppb	
10-020-05 MSD	As 188.980	1896.3	ppb	11/25/2014, 3:07:13 PM
	Ni 231.604	2394.0	ppb	
Cont Calib Verif	As 188.980	10004	ppb	11/25/2014, 3:11:18 PM
	Ni 231.604	1993.0	ppb	
Cont Calib Blank	As 188.980	20.434	ppb	11/25/2014, 3:17:36 PM
	Ni 231.604	3.812	ppb	
LLCCV	As 188.980	107.03	ppb	11/25/2014, 3:21:41 PM
	Ni 231.604	20.697	ppb	

P141013F2. Mean Only Report 11/25/2014, 4:39:50 PM

Sample	Label	Calc Conc.	Units	Date/Time
Blank	As 188.980	0.000	ppb	10/13/2014, 4:27:17 PM
	Ni 231.604	0.000	ppb	
Standard 5	As 188.980	100.00	ppb	10/13/2014, 4:31:56 PM
	Ni 231.604	20.000	ppb	
Standard 4	As 188.980	1000.0	ppb	10/13/2014, 3:58:04 PM
	Ni 231.604	200.00	ppb	
Standard 3	As 188.980	10000	ppb	10/13/2014, 4:02:09 PM
	Ni 231.604	2000.0	ppb	
Standard 2	As 188.980	25000	ppb	10/13/2014, 4:06:13 PM
	Ni 231.604	5000.0	ppb	
Standard 1	Ni 231.604	10000	ppb	10/13/2014, 4:11:31 PM
Initial Calib Verif	As 188.980	997.76	ppb	10/13/2014, 4:38:04 PM
	Ni 231.604	1067.2	ppb	
LLICV	As 188.980	89.931	ppb	10/13/2014, 4:58:18 PM
	Ni 231.604	21.406	ppb	
Initial Calib Blank	As 188.980	-15.245uv	ppb	10/13/2014, 5:03:00 PM
	Ni 231.604	-2.764uv	ppb	
Cont Calib Verif	As 188.980	10031	ppb	10/13/2014, 5:07:05 PM
	Ni 231.604	2052.6	ppb	
Cont Calib Blank	As 188.980	-6.832uv	ppb	10/13/2014, 5:12:13 PM
	Ni 231.604	2.753uv	ppb	
ICSA	As 188.980	-3.962uv	ppb	10/13/2014, 5:16:18 PM
	Ni 231.604	4.605	ppb	
ICSAB	As 188.980	2480.8	ppb	10/13/2014, 5:20:23 PM
	Ni 231.604	887.96	ppb	
MB1010SM4	As 188.980	-6.699uv	ppb	10/13/2014, 5:30:42 PM
	Ni 231.604	0.207uv	ppb	
SB1010SM4	As 188.980	1928.7	ppb	10/13/2014, 5:34:49 PM
	Ni 231.604	2071.9	ppb	
10-021-40	As 188.980	24.945	ppb	10/13/2014, 5:38:55 PM
	Ni 231.604	135.64	ppb	
10-021-40 D	As 188.980	17.411uv	ppb	10/13/2014, 5:42:57 PM
	Ni 231.604	179.14	ppb	
10-021-40 L	As 188.980	-11.392uv	ppb	10/13/2014, 5:47:04 PM
	Ni 231.604	27.317	ppb	

P141013F2. Mean Only Report 11/25/2014, 4:39:50 PM

Sample	Label	Calc Conc.	Units	Date/Time
10-021-40 MS	As 188.980	1905.9	ppb	10/13/2014, 5:51:09 PM
	Ni 231.604	2080.1	ppb	
10-021-40 MSD	As 188.980	1905.0	ppb	10/13/2014, 5:55:15 PM
	Ni 231.604	2138.5	ppb	
10-021-12	As 188.980	77.823	ppb	10/13/2014, 5:59:22 PM
	Ni 231.604	366.10	ppb	
Cont Calib Verif	As 188.980	9971.8	ppb	10/13/2014, 6:03:26 PM
	Ni 231.604	2062.4	ppb	
Cont Calib Blank	As 188.980	4.861uv	ppb	10/13/2014, 6:08:36 PM
	Ni 231.604	-2.876uv	ppb	
LLCCV	As 188.980	104.37	ppb	10/13/2014, 6:12:41 PM
	Ni 231.604	23.695	ppb	
10-021-16	As 188.980	583.75	ppb	10/13/2014, 6:19:37 PM
	Ni 231.604	766.03	ppb	
10-021-19	As 188.980	62.779	ppb	10/13/2014, 6:23:42 PM
	Ni 231.604	1477.6	ppb	
10-021-22	As 188.980	431.28	ppb	10/13/2014, 6:27:48 PM
	Ni 231.604	1093.0	ppb	
10-021-24	As 188.980	97.387	ppb	10/13/2014, 6:31:52 PM
	Ni 231.604	524.37	ppb	
10-021-26	As 188.980	519.51	ppb	10/13/2014, 6:35:55 PM
	Ni 231.604	991.36	ppb	
10-021-28	As 188.980	48.242	ppb	10/13/2014, 6:40:00 PM
	Ni 231.604	517.41	ppb	
10-021-32	As 188.980	90.368	ppb	10/13/2014, 6:44:04 PM
	Ni 231.604	424.88	ppb	
10-021-34	As 188.980	1197.1	ppb	10/13/2014, 6:48:08 PM
	Ni 231.604	1094.1	ppb	
10-021-36	As 188.980	47.005	ppb	10/13/2014, 6:52:13 PM
	Ni 231.604	538.08	ppb	
BLK	As 188.980	-4.558uv	ppb	10/13/2014, 6:56:20 PM
	Ni 231.604	0.912uv	ppb	
Cont Calib Verif	As 188.980	9605.0	ppb	10/13/2014, 7:00:26 PM
	Ni 231.604	1997.1	ppb	
Cont Calib Blank	As 188.980	2.019uv	ppb	10/13/2014, 7:05:47 PM

P141013F2. Mean Only Report 11/25/2014, 4:39:50 PM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	-1.610uv	ppb	
LLCCV	As 188.980	96.935	ppb	10/13/2014, 7:09:52 PM
	Ni 231.604	22.819	ppb	
10-021-38	As 188.980	621.24	ppb	10/13/2014, 7:33:38 PM
	Ni 231.604	2864.0	ppb	
10-021-43	As 188.980	59.402	ppb	10/13/2014, 7:37:41 PM
	Ni 231.604	686.22	ppb	
10-021-45	As 188.980	75.302	ppb	10/13/2014, 7:42:57 PM
	Ni 231.604	628.44	ppb	
10-021-49	As 188.980	8.672	ppb	10/13/2014, 7:47:01 PM
	Ni 231.604	58.008	ppb	
10-042-01a(1013SM1)	As 188.980	155.61	ppb	10/13/2014, 7:51:07 PM
	Ni 231.604	451.51	ppb	
10-042-03a	As 188.980	78.036	ppb	10/13/2014, 7:55:12 PM
	Ni 231.604	410.32	ppb	
10-042-05a	As 188.980	79.047	ppb	10/13/2014, 7:59:18 PM
	Ni 231.604	488.69	ppb	
10-042-06a	As 188.980	56.448	ppb	10/13/2014, 8:03:22 PM
	Ni 231.604	632.88	ppb	
10-042-07a	As 188.980	38.186	ppb	10/13/2014, 8:07:27 PM
	Ni 231.604	220.05	ppb	
BLK	As 188.980	0.891uv	ppb	10/13/2014, 8:11:31 PM
	Ni 231.604	1.735uv	ppb	
Cont Calib Verif	As 188.980	9381.4	ppb	10/13/2014, 8:15:37 PM
	Ni 231.604	1945.2	ppb	
Cont Calib Blank	As 188.980	0.903uv	ppb	10/13/2014, 8:19:41 PM
	Ni 231.604	1.711	ppb	
LLCCV	As 188.980	95.246	ppb	10/13/2014, 8:23:45 PM
	Ni 231.604	22.291	ppb	

OnSite Environmental Inc.

14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

February 17, 2015

Brian Tracy
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-10
Laboratory Reference No. 1410-021D

Dear Brian:

Enclosed are the analytical results and associated quality control data for samples submitted on October 2, 2014.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: February 17, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021D
Project: 5147-006-10

Case Narrative

Samples were collected on September 29, 2014 and received by the laboratory on October 2, 2014. They were maintained at the laboratory at a temperature of 2°C to 6°C.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: February 17, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021D
Project: 5147-006-10

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
GEI-11_9-10_092914	10-021-44	Soil	9-29-14	10-2-14	

Date of Report: February 17, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021D
Project: 5147-006-10

TOTAL METALS
EPA 6010C

Matrix: Soil
Units: mg/kg (ppm)

Analyte	Result	PQL	EPA Method	Date Prepared	Date Analyzed	Flags
Lab ID:	10-021-44					
Client ID:	**GEI-11_9-10_092914**					
Arsenic	**ND**	5.6	6010C	2-9-15	2-9-15	
Nickel	**34**	2.8	6010C	2-9-15	2-9-15	

Date of Report: February 17, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021D
Project: 5147-006-10

TOTAL METALS
EPA 6010C
METHOD BLANK QUALITY CONTROL

Date Extracted:	2-9-15
Date Analyzed:	2-9-15
Matrix:	Soil
Units:	mg/kg (ppm)
Lab ID:	MB0209SM1

Analyte	Method	Result	PQL
Arsenic	6010C	**ND**	5.0
Nickel	6010C	**ND**	2.5

Date of Report: February 17, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021D
Project: 5147-006-10

TOTAL METALS
EPA 6010C
DUPLICATE QUALITY CONTROL

Date Extracted: 2-9-15
Date Analyzed: 2-9-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-19-58

Analyte	Sample Result	Duplicate Result	RPD	PQL	Flags
Arsenic	**ND**	**ND**	NA	5.0	
Nickel	**8.55**	**8.05**	6	2.5	

Date of Report: February 17, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021D
Project: 5147-006-10

TOTAL METALS
EPA 6010C
MS/MSD QUALITY CONTROL

Date Extracted: 2-9-15
Date Analyzed: 2-9-15

Matrix: Soil
Units: mg/kg (ppm)

Lab ID: 10-19-58

Analyte	Spike Level	MS	Percent Recovery	MSD	Percent Recovery	RPD	Flags
Arsenic	100	**104**	104	**101**	101	3	
Nickel	100	**108**	99	**105**	96	3	

Date of Report: February 17, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021D
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	ICV020915P	1.00	1.03	-3.0	+/- 10%
Nickel	ICV020915P	1.00	1.07	-7.0	+/- 10%
Arsenic	LLICV020915P	0.100	0.109	-9.0	+/- 30%
Nickel	LLICV020915P	0.0200	0.0209	-4.5	+/- 30%
Arsenic	CCV1020915P	10.0	10.3	-3.0	+/- 10%
Nickel	CCV1020915P	2.00	2.09	-4.5	+/- 10%
Arsenic	CCV2020915P	10.0	10.5	-5.0	+/- 10%
Nickel	CCV2020915P	2.00	2.10	-5.0	+/- 10%
Arsenic	CCV3020915P	10.0	10.4	-4.0	+/- 10%
Nickel	CCV3020915P	2.00	2.08	-4.0	+/- 10%
Arsenic	LLCCV3020915P	0.100	0.108	-8.0	+/- 30%
Nickel	LLCCV3020915P	0.0200	0.0207	-3.5	+/- 30%
Arsenic	CCV4020915P	10.0	10.5	-5.0	+/- 10%
Nickel	CCV4020915P	2.00	2.11	-5.5	+/- 10%
Arsenic	LLCCV4020915P	0.100	0.120	-20	+/- 30%
Nickel	LLCCV4020915P	0.0200	0.0220	-10	+/- 30%
Arsenic	CCV5020915P	10.0	10.4	-4.0	+/- 10%
Nickel	CCV5020915P	2.00	2.08	-4.0	+/- 10%
Arsenic	LLCCV5020915P	0.100	0.0946	5.4	+/- 30%
Nickel	LLCCV5020915P	0.0200	0.0226	-13	+/- 30%

Date of Report: February 17, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021D
Project: 5147-006-10

TOTAL METALS
EPA 6010C
CONTINUING CALIBRATION SUMMARY

Analyte	Lab ID	True Value (ppm)	Calc. Value	Percent Difference	Control Limits
Arsenic	CCV6020915P	10.0	10.5	-5.0	+/- 10%
Nickel	CCV6020915P	2.00	2.06	-3.0	+/- 10%
Arsenic	LLCCV6020915P	0.100	0.101	-1.0	+/- 30%
Nickel	LLCCV6020915P	0.0200	0.0207	-3.5	+/- 30%
Arsenic	CCV7020915P	10.0	10.4	-4.0	+/- 10%
Nickel	CCV7020915P	2.00	2.06	-3.0	+/- 10%
Arsenic	LLCCV7020915P	0.100	0.120	-20	+/- 30%
Nickel	LLCCV7020915P	0.0200	0.0210	-5.0	+/- 30%
Arsenic	CCV8020915P	10.0	10.5	-5.0	+/- 10%
Nickel	CCV8020915P	2.00	2.05	-2.5	+/- 10%
Arsenic	LLCCV8020915P	0.100	0.113	-13	+/- 30%
Nickel	LLCCV8020915P	0.0200	0.0202	-1.0	+/- 30%
Arsenic	CCV9020915P	10.0	10.6	-6.0	+/- 10%
Nickel	CCV9020915P	2.00	2.07	-3.5	+/- 10%
Arsenic	LLCCV9020915P	0.100	0.122	-22	+/- 30%
Nickel	LLCCV9020915P	0.0200	0.0223	-12	+/- 30%
Arsenic	CCV10020915P	10.0	10.7	-7.0	+/- 10%
Nickel	CCV10020915P	2.00	2.10	-5.0	+/- 10%
Arsenic	LLCCV10020915P	0.100	0.123	-23	+/- 30%
Nickel	LLCCV10020915P	0.0200	0.0221	-11	+/- 30%

Date of Report: February 17, 2015
Samples Submitted: October 2, 2014
Laboratory Reference: 1410-021D
Project: 5147-006-10

% MOISTURE

Date Analyzed: 2-9-15

Client ID	Lab ID	% Moisture
GEI-11_9-10_092914	10-021-44	10

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-napthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a Sulfuric acid/Silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

Page 1 of 5

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracy
Sampled by: Robert Trohen / Nate Stamm

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-021

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A		Nickel		Arsenic		% Moisture
1	GEI-01_1-2_092914	9/29/14	11:40	S	1																						
2	GEI-01_3-4_092914		11:45																						O		O
3	GEI-01_5.5-6.5_092914		1150																								
4	GEI-01_7.5-8.5_092914		1155																								
5	GEI-01_9-10_092914		1200																								
6	GEI-02_1-2_092914		1500																				X		X		X
7	GEI-02_4-5_092914		1505																						O		O
8	GEI-02_7-8_092914		1510																				X		X		X
9	GEI-02_9.5-10_092914		1515																								
10	GEI-03_2.5-3.5_092914		1400																				X		X		X

	Signature	Company	Date	Time
Relinquished		GEI	10.3.14	0950
Received		OSE	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

X Added 11/17/14. DB (STA)
O Added 1/7/15. DB (STA)
⊖ Added 2/4/15. DB (STA)

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GEO Engineers
Project Number: 5147-006-10
Project Name: DU
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nate Solomon

Turnaround Request (in working days)

(Check One)

- ☐ Same Day
- ☐ 1 Day
- ☐ 2 Days
- ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 10-021

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
11	GEI-03_5-6_092914	9/29/14	1405	S	1																						
12	GEI-03_7-8_092914		1410																			X	X				X
13	GEI-03_9-10_092914		1415																								
14	GEI-04_1-2_092914		1240																			(X)	(X)				(X)
15	GEI-04_3-4_092914		1245																				(X)				(X)
16	GEI-04_6-7_092914		1250																			X	X				X
17	GEI-05_1-2_092914		1715																								
18	GEI-05_4-5_092914		1720																								
19	GEI-05_7-8_092914		1725																			X	(X)				X
20	GEI-05_8.5-9_092914		1730																								

	Signature	Company	Date	Time	Comments/Special Instructions
Relinquished		GEI	10.2.14	0950	
Received		COC	10/2/14	0950	
Relinquished					
Received					
Relinquished					
Received					

Reviewed/Date | Reviewed/Date | Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DC1
Project Manager: Brian Tracy
Sampled by: Robert Trahan / Nelton Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-021

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
21	GEI-05_12-13_092914	9/29/14	17:35	S	1																						
22	GEI-06_1.5-2.5_092914		1550																			X	X				X
23	GEI-06_4-5_092914		1555																				X				X
24	GEI-06_7-8_092914		1600																			X	X				X
25	GEI-06_9-10_092914		1605																								
26	GEI-07_1.5-2.5_092914		1615																			X	X				X
27	GEI-07_3.5-4.5_092914		1620																								
28	GEI-07_7-8_092914		1625																			X	X				X
29	GEI-07_9-10_092914		1630																								
30	GEI-08_1.5-2.5_092914	↓	15:30	↓	↓																	X	X				X

	Signature	Company	Date	Time
Relinquished		GEI	10.2.14	0950
Received		OSE	10/2/14	095
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐ Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

Page 4 of 5

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DLI
Project Manager: Brian Trey
Sampled by: Robert Trehen / Nate Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-021

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
31	GEI-08_4-5_092914	9/29/14	1535	S	1																		X				X
32	GEI-08_7-8_092914		1540																			X	X				X
33	GEI-08_9-10_092914		1545																								
34	GEI-09_0.5-1.5_092914		1210																			X	X				X
35	GEI-09_3-4_092914		1215																				X				X
36	GEI-09_6-7_092914		1220																			X	X				X
37	GEI-09_8-9_092914		1230																								
38	GEI-10_2-3_092914		1330																			X	X				X
39	GEI-10_3.5-4.5_092914		1335																								
40	GEI-10_7-8_092914	↓	1340	↓	↓																	X	X				X

	Signature	Company	Date	Time
Relinquished		GEI	10.2.14	0950
Received		COC	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐

Electronic Data Deliverables (EDDs) ☒ _____

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-10
Project Name: DCI
Project Manager: Brian Tracey
Sampled by: Robert Trahan / Nate Solomon

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☑ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 10-021

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx	Volatiles 8260C	Halogenated Volatiles 8260C	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level)	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total MTCA Metals	TCLP Metals	HEM (oil and grease) 1664A	Nickel	Arsenic				% Moisture
41	GEI-10-9-10_092914	9/29/14	1345	S	1																		X				X
42	GEI-11_2-3_092914		1700																			X	X				X
43	GEI-11_7-8_092914		1705																			X	X				X
44	GEI-11_9-10_092914		1710																			X	X				X
~~45~~	~~GEI-11_~~																										
46 (45)	GEI-12_2-3_092914		1310																				X				X
47 (46)	GEI-12_4-5_092914		1315																				X				X
47	GEI-12_7-8_092914		1320																				O				O
48	GEI-12_9-10_092914	↓	1325	↓	↓																						
49	GEI-103_7-8_092914	↓	1413	↓	↓																	X	X				X

	Signature	Company	Date	Time
Relinquished	N R S	GEI	10.2.14	0950
Received		ONE	10/2/14	0950
Relinquished				
Received				
Relinquished				
Received				

Comments/Special Instructions

Reviewed/Date

Reviewed/Date

Chromatograms with final report ☐

Data Package: Standard ☐ Level III ☒ Level IV ☐

Electronic Data Deliverables (EDDs) ☒ _____

Sample/Cooler Receipt and Acceptance Checklist

Client: CoETR

Client Project Name/Number: 5147-000-10

OnSite Project Number: 10-021

Initiated by: Blair Goodfellow

Date Initiated: 1/2/14

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	(No)	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	(N/A)	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	(N/A)	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	(Yes)	No		1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	(Yes)	No	Temperature: 0,		
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	(N/A)			
1.7 How were the samples delivered?	(Client)	Courier	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	(Yes)	No		1 2 3 4
2.2 Was the COC legible and written in permanent ink?	(Yes)	No		1 2 3 4
2.3 Have samples been relinquished and accepted by each custodian?	(Yes)	No		1 2 3 4
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	(No)		1 2 3 4
2.5 Were all of the samples listed on the COC submitted?	(Yes)	No		1 2 3 4
2.6 Were any of the samples submitted omitted from the COC?	Yes	(No)		1 2 3 4

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	(No)		1 2 3 4
3.2 Were any sample labels missing or illegible?	Yes	(No)		1 2 3 4
3.3 Have the correct containers been used for each analysis requested?	(Yes)	No		1 2 3 4
3.4 Have the samples been correctly preserved?	Yes	No	(N/A)	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	(N/A)	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	(Yes)	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	(No)		1 2 3 4
3.8 Was method 5035A used?	Yes	No	(N/A)	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		(N/A)	1 2 3 4

Explain any discrepancies:

2.4) Sample 27) GE1-07_3.5-4.5-092914 9/29/14 1620 on COC
GE1-07_3-4_092914 " 1615 on label
Sample 29) GE1-07_9-10_1092914 9/29/14 1630 on COC 1615 on label

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

RAW DATA

- Total Metals EPA 6010C Data

Total Metals Data

P150209F1C. Mean Only Report 2/13/2015, 12:25:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
Blank	As 188.980	0.000	ppb	2/9/2015, 8:07:03 AM
	Ni 231.604	0.000	ppb	
Standard 5	As 188.980	100.00	ppb	2/9/2015, 8:57:40 AM
	Ni 231.604	20.000	ppb	
Standard 4	As 188.980	1000.0	ppb	2/9/2015, 8:17:14 AM
	Ni 231.604	200.00	ppb	
Standard 3	As 188.980	10000	ppb	2/9/2015, 8:22:21 AM
	Ni 231.604	2000.0	ppb	
Standard 2	As 188.980	25000	ppb	2/9/2015, 8:27:25 AM
	Ni 231.604	5000.0	ppb	
Standard 1	Ni 231.604	10000	ppb	2/9/2015, 8:32:30 AM
Initial Calib Verif	As 188.980	1028.2	ppb	2/9/2015, 9:06:26 AM
	Ni 231.604	1065.5	ppb	
LLICV	As 188.980	109.07	ppb	2/9/2015, 9:15:40 AM
	Ni 231.604	20.892	ppb	
Initial Calib Blank	As 188.980	2.466uv	ppb	2/9/2015, 9:22:48 AM
	Ni 231.604	2.390uv	ppb	
Cont Calib Verif	As 188.980	10336	ppb	2/9/2015, 9:27:53 AM
	Ni 231.604	2085.2	ppb	
Cont Calib Blank	As 188.980	20.128	ppb	2/9/2015, 9:34:53 AM
	Ni 231.604	3.282uv	ppb	
ICSA	As 188.980	23.622	ppb	2/9/2015, 9:39:56 AM
	Ni 231.604	8.254	ppb	
ICSAB	As 188.980	2531.4	ppb	2/9/2015, 9:44:59 AM
	Ni 231.604	879.59	ppb	
MB0209WH2	As 188.980	5.357uv	ppb	2/9/2015, 9:59:59 AM
	Ni 231.604	2.391	ppb	
SB0209WH2	As 188.980	2202.6	ppb	2/9/2015, 10:07:16 AM
	Ni 231.604	2172.5	ppb	
02-021-01a	As 188.980	25.060	ppb	2/9/2015, 10:12:23 AM
	Ni 231.604	5.078	ppb	
02-021-01a D	As 188.980	6.170uv	ppb	2/9/2015, 10:17:28 AM
	Ni 231.604	1.640uv	ppb	
02-021-01a L	As 188.980	9.087uv	ppb	2/9/2015, 10:22:33 AM
	Ni 231.604	0.189uv	ppb	

P150209F1C. Mean Only Report 2/13/2015, 12:25:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
02-021-01a MS	As 188.980	2182.0	ppb	2/9/2015, 10:27:38 AM
	Ni 231.604	2114.1	ppb	
02-021-01a MSD	As 188.980	2149.6	ppb	2/9/2015, 10:32:44 AM
	Ni 231.604	2095.2	ppb	
02-056-01c	As 188.980	10.353uv	ppb	2/9/2015, 10:37:50 AM
	Ni 231.604	8.374	ppb	
Cont Calib Verif	As 188.980	10472	ppb	2/9/2015, 10:42:57 AM
	Ni 231.604	2103.1	ppb	
Cont Calib Blank	As 188.980	-5.784uv	ppb	2/9/2015, 10:49:54 AM
	Ni 231.604	-1.318uv	ppb	
MB0206SM2	As 188.980	9.974	ppb	2/9/2015, 11:03:40 AM
	Ni 231.604	0.014uv	ppb	
SB0206SM2	As 188.980	2009.7	ppb	2/9/2015, 11:08:46 AM
	Ni 231.604	2088.0	ppb	
02-013-04a	As 188.980	153.44	ppb	2/9/2015, 11:13:49 AM
	Ni 231.604	592.91	ppb	
02-013-04a D	As 188.980	157.88	ppb	2/9/2015, 11:18:55 AM
	Ni 231.604	630.39	ppb	
02-013-04a L	As 188.980	32.951	ppb	2/9/2015, 11:23:57 AM
	Ni 231.604	127.77	ppb	
02-013-04a MS	As 188.980	2041.0	ppb	2/9/2015, 11:29:00 AM
	Ni 231.604	2434.1	ppb	
02-013-04a MSD	As 188.980	2064.8	ppb	2/9/2015, 11:34:06 AM
	Ni 231.604	2525.6	ppb	
02-013-01a	As 188.980	1987.4	ppb	2/9/2015, 11:39:11 AM
	Ni 231.604	581.12	ppb	
02-013-02a	As 188.980	1931.5	ppb	2/9/2015, 11:44:15 AM
	Ni 231.604	1308.4	ppb	
02-013-03a	As 188.980	71.072	ppb	2/9/2015, 11:49:20 AM
	Ni 231.604	473.32	ppb	
Cont Calib Verif	As 188.980	10406	ppb	2/9/2015, 11:54:24 AM
	Ni 231.604	2078.1	ppb	
Cont Calib Blank	As 188.980	12.510	ppb	2/9/2015, 12:00:05 PM
	Ni 231.604	1.062uv	ppb	
LLCCV	As 188.980	108.36	ppb	2/9/2015, 12:05:09 PM

P150209F1C. Mean Only Report 2/13/2015, 12:25:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	20.681	ppb	
02-013-05a	As 188.980	1199.3	ppb	2/9/2015, 12:13:14 PM
	Ni 231.604	1503.2	ppb	
02-013-06a	As 188.980	153.00	ppb	2/9/2015, 12:18:20 PM
	Ni 231.604	259.31	ppb	
02-013-07a	As 188.980	66.261	ppb	2/9/2015, 12:23:26 PM
	Ni 231.604	715.26	ppb	
02-013-09a	As 188.980	56.773	ppb	2/9/2015, 12:28:32 PM
	Ni 231.604	675.99	ppb	
02-013-10a	As 188.980	86.894	ppb	2/9/2015, 12:33:37 PM
	Ni 231.604	590.09	ppb	
02-013-11a	As 188.980	208.38	ppb	2/9/2015, 12:38:43 PM
	Ni 231.604	362.72	ppb	
02-013-12a	As 188.980	89.418	ppb	2/9/2015, 12:43:50 PM
	Ni 231.604	742.85	ppb	
02-013-13a	As 188.980	75.346	ppb	2/9/2015, 12:48:55 PM
	Ni 231.604	914.29	ppb	
02-013-14a	As 188.980	119.12	ppb	2/9/2015, 12:54:00 PM
	Ni 231.604	460.80	ppb	
02-013-15a	As 188.980	60.563	ppb	2/9/2015, 12:59:05 PM
	Ni 231.604	217.36	ppb	
Cont Calib Verif	As 188.980	10526	ppb	2/9/2015, 1:11:52 PM
	Ni 231.604	2109.3	ppb	
Cont Calib Blank	As 188.980	38.393	ppb	2/9/2015, 1:16:56 PM
	Ni 231.604	-1.180uv	ppb	
LLCCV	As 188.980	119.86	ppb	2/9/2015, 1:30:14 PM
	Ni 231.604	22.042	ppb	
02-013-17a	As 188.980	117.95	ppb	2/9/2015, 1:42:13 PM
	Ni 231.604	453.78	ppb	
02-013-18a	As 188.980	90.174	ppb	2/9/2015, 1:47:22 PM
	Ni 231.604	358.99	ppb	
02-013-19a	As 188.980	47.868	ppb	2/9/2015, 1:52:27 PM
	Ni 231.604	811.87	ppb	
02-013-20a	As 188.980	269.92	ppb	2/9/2015, 1:57:33 PM
	Ni 231.604	387.23	ppb	

P150209F1C. Mean Only Report 2/13/2015, 12:25:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
02-013-21a	As 188.980	83.708	ppb	2/9/2015, 2:02:39 PM
	Ni 231.604	196.39	ppb	
02-013-22a	As 188.980	115.68	ppb	2/9/2015, 2:07:45 PM
	Ni 231.604	220.76	ppb	
MB0209SM1	As 188.980	9.558uv	ppb	2/9/2015, 2:12:50 PM
	Ni 231.604	2.063uv	ppb	
SB0209SM1	As 188.980	2063.1	ppb	2/9/2015, 2:17:54 PM
	Ni 231.604	2111.6	ppb	
10-019-58	As 188.980	31.790	ppb	2/9/2015, 2:23:00 PM
	Ni 231.604	170.72	ppb	
10-019-58 D	As 188.980	41.415	ppb	2/9/2015, 2:28:09 PM
	Ni 231.604	161.34	ppb	
Cont Calib Verif	As 188.980	10435	ppb	2/9/2015, 2:33:17 PM
	Ni 231.604	2076.4	ppb	
Cont Calib Blank	As 188.980	18.712	ppb	2/9/2015, 2:44:34 PM
	Ni 231.604	3.231uv	ppb	
LLCCV	As 188.980	94.566	ppb	2/9/2015, 2:49:39 PM
	Ni 231.604	22.582	ppb	
10-019-58 L	As 188.980	12.246	ppb	2/9/2015, 2:55:34 PM
	Ni 231.604	36.108	ppb	
10-019-58 MS	As 188.980	2074.6	ppb	2/9/2015, 3:00:38 PM
	Ni 231.604	2153.0	ppb	
10-019-58 MSD	As 188.980	2019.3	ppb	2/9/2015, 3:05:41 PM
	Ni 231.604	2099.2	ppb	
02-073-01c	As 188.980	4.859uv	ppb	2/9/2015, 3:10:47 PM
	Ni 231.604	5.314uv	ppb	
blk	As 188.980	6.278uv	ppb	2/9/2015, 3:15:51 PM
	Ni 231.604	-0.444uv	ppb	
MB0209SM2	As 188.980	22.614	ppb	2/9/2015, 3:20:55 PM
	Ni 231.604	5.562	ppb	
SB0209SM2	As 188.980	2084.7	ppb	2/9/2015, 3:26:00 PM
	Ni 231.604	2099.6	ppb	
01-156-05	As 188.980	322.04	ppb	2/9/2015, 3:31:03 PM
	Ni 231.604	571.35	ppb	

P150209F1C. Mean Only Report 2/13/2015, 12:25:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
01-156-05 D	As 188.980	306.98	ppb	2/9/2015, 3:36:06 PM
	Ni 231.604	564.00	ppb	
01-156-05 L	As 188.980	65.114	ppb	2/9/2015, 3:41:11 PM
	Ni 231.604	120.83	ppb	
Cont Calib Verif	As 188.980	10520	ppb	2/9/2015, 4:19:56 PM
	Ni 231.604	2064.8	ppb	
Cont Calib Blank	As 188.980	15.425	ppb	2/9/2015, 4:27:38 PM
	Ni 231.604	2.276	ppb	
LLCCV	As 188.980	100.54	ppb	2/9/2015, 4:42:00 PM
	Ni 231.604	20.653	ppb	
02-073-01c(0209WH2)	As 188.980	22.267	ppb	2/9/2015, 4:48:09 PM
	Ni 231.604	5.237	ppb	
01-156-05 MS	As 188.980	2265.3	ppb	2/9/2015, 4:53:13 PM
	Ni 231.604	2492.3	ppb	
01-156-05 MSD	As 188.980	2309.4	ppb	2/9/2015, 4:58:17 PM
	Ni 231.604	2513.9	ppb	
01-156-02	As 188.980	229.09	ppb	2/9/2015, 5:03:22 PM
	Ni 231.604	659.84	ppb	
01-226-01a	As 188.980	190.39	ppb	2/9/2015, 5:08:27 PM
	Ni 231.604	534.99	ppb	
01-226-02a	As 188.980	135.52	ppb	2/9/2015, 5:13:33 PM
	Ni 231.604	523.68	ppb	
01-226-03a	As 188.980	151.90	ppb	2/9/2015, 5:18:36 PM
	Ni 231.604	474.53	ppb	
01-226-04a	As 188.980	104.09	ppb	2/9/2015, 5:23:42 PM
	Ni 231.604	553.31	ppb	
01-239-05	As 188.980	138.59	ppb	2/9/2015, 5:28:48 PM
	Ni 231.604	539.48	ppb	
01-239-11	As 188.980	155.31	ppb	2/9/2015, 5:33:53 PM
	Ni 231.604	753.34	ppb	
Cont Calib Verif	As 188.980	10417	ppb	2/9/2015, 5:38:57 PM
	Ni 231.604	2055.7	ppb	
Cont Calib Blank	As 188.980	15.323	ppb	2/9/2015, 5:48:42 PM
	Ni 231.604	0.480uv	ppb	
LLCCV	As 188.980	119.96	ppb	2/9/2015, 5:53:46 PM

P150209F1C. Mean Only Report 2/13/2015, 12:25:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
	Ni 231.604	21.035	ppb	
01-239-18	As 188.980	100.03	ppb	2/9/2015, 6:03:41 PM
	Ni 231.604	566.64	ppb	
01-239-23	As 188.980	158.17	ppb	2/9/2015, 6:08:48 PM
	Ni 231.604	950.30	ppb	
01-239-27	As 188.980	110.36	ppb	2/9/2015, 6:13:53 PM
	Ni 231.604	610.42	ppb	
01-239-34	As 188.980	130.73	ppb	2/9/2015, 6:19:00 PM
	Ni 231.604	623.43	ppb	
02-030-01a	As 188.980	62.431	ppb	2/9/2015, 6:24:07 PM
	Ni 231.604	255.11	ppb	
02-040-01a	As 188.980	38.577	ppb	2/9/2015, 6:29:14 PM
	Ni 231.604	516.47	ppb	
02-040-02a	As 188.980	31.512	ppb	2/9/2015, 6:34:20 PM
	Ni 231.604	519.27	ppb	
02-013-23	As 188.980	173.06	ppb	2/9/2015, 6:39:26 PM
	Ni 231.604	696.42	ppb	
02-013-24	As 188.980	82.059	ppb	2/9/2015, 6:44:31 PM
	Ni 231.604	384.05	ppb	
02-013-25	As 188.980	299.47	ppb	2/9/2015, 6:49:38 PM
	Ni 231.604	541.39	ppb	
Cont Calib Verif	As 188.980	10463	ppb	2/9/2015, 6:54:44 PM
	Ni 231.604	2052.1	ppb	
Cont Calib Blank	As 188.980	12.283uv	ppb	2/9/2015, 7:00:06 PM
	Ni 231.604	6.813	ppb	
LLCCV	As 188.980	113.33	ppb	2/9/2015, 7:13:37 PM
	Ni 231.604	20.234	ppb	
10-019-16(0209SM1)	As 188.980	66.759	ppb	2/9/2015, 7:28:54 PM
	Ni 231.604	259.58	ppb	
10-019-30	As 188.980	116.23	ppb	2/9/2015, 7:34:02 PM
	Ni 231.604	654.07	ppb	
10-019-32	As 188.980	32.812	ppb	2/9/2015, 7:39:10 PM
	Ni 231.604	283.64	ppb	
10-019-52	As 188.980	54.827	ppb	2/9/2015, 7:44:18 PM
	Ni 231.604	452.28	ppb	

P150209F1C. Mean Only Report 2/13/2015, 12:25:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
10-019-53	As 188.980	111.68	ppb	2/9/2015, 7:49:24 PM
	Ni 231.604	758.80	ppb	
10-019-54	As 188.980	57.520	ppb	2/9/2015, 7:54:29 PM
	Ni 231.604	313.99	ppb	
10-019-55	As 188.980	54.780	ppb	2/9/2015, 7:59:34 PM
	Ni 231.604	139.11	ppb	
10-019-59	As 188.980	12.243uv	ppb	2/9/2015, 8:04:40 PM
	Ni 231.604	171.40	ppb	
10-020-07	As 188.980	402.28	ppb	2/9/2015, 8:09:45 PM
	Ni 231.604	398.32	ppb	
BLK	As 188.980	3.803uv	ppb	2/9/2015, 8:14:51 PM
	Ni 231.604	3.318	ppb	
Cont Calib Verif	As 188.980	10645	ppb	2/9/2015, 8:19:57 PM
	Ni 231.604	2071.2	ppb	
Cont Calib Blank	As 188.980	26.813	ppb	2/9/2015, 8:25:02 PM
	Ni 231.604	2.940	ppb	
LLCCV	As 188.980	121.60	ppb	2/9/2015, 8:30:09 PM
	Ni 231.604	22.335	ppb	
10-020-08	As 188.980	42.763	ppb	2/9/2015, 8:35:15 PM
	Ni 231.604	132.98	ppb	
10-020-11	As 188.980	109.98	ppb	2/9/2015, 8:40:23 PM
	Ni 231.604	629.69	ppb	
10-020-19	As 188.980	30.699	ppb	2/9/2015, 8:45:31 PM
	Ni 231.604	253.83	ppb	
10-020-30	As 188.980	81.219	ppb	2/9/2015, 8:50:38 PM
	Ni 231.604	278.86	ppb	
10-020-35	As 188.980	90.879	ppb	2/9/2015, 8:55:44 PM
	Ni 231.604	793.22	ppb	
10-020-40	As 188.980	29.665	ppb	2/9/2015, 9:00:51 PM
	Ni 231.604	142.89	ppb	
10-021-44	As 188.980	94.842	ppb	2/9/2015, 9:05:59 PM
	Ni 231.604	606.58	ppb	
BLK	As 188.980	-14.978uv	ppb	2/9/2015, 9:11:07 PM
	Ni 231.604	4.777	ppb	

P150209F1C. Mean Only Report 2/13/2015, 12:25:20 PM

Sample	Label	Calc Conc.	Units	Date/Time
Cont Calib Verif	As 188.980	10736	ppb	2/9/2015, 9:16:16 PM
	Ni 231.604	2096.3	ppb	
Cont Calib Blank	As 188.980	12.136uv	ppb	2/9/2015, 9:21:24 PM
	Ni 231.604	1.906uv	ppb	
LLCCV	As 188.980	123.30	ppb	2/9/2015, 9:26:31 PM
	Ni 231.604	22.136	ppb	

OnSite Environmental Inc.
14648 NE 95th Street, Redmond, WA 98052 • (425) 883-3881

August 3, 2018

Robert Trahan
GeoEngineers, Inc.
600 Stewart, Suite 1700
Seattle, WA 98101-1233

Re: Analytical Data for Project 5147-006-11
Laboratory Reference No. 1807-159

Dear Robert:

Enclosed are the analytical results and associated quality control data for samples submitted on July 24, 2018.

The standard policy of OnSite Environmental, Inc. is to store your samples for 30 days from the date of receipt. If you require longer storage, please contact the laboratory.

We appreciate the opportunity to be of service to you on this project. If you have any questions concerning the data, or need additional information, please feel free to call me.

Sincerely,

David Baumeister
Project Manager

Enclosures

Date of Report: August 3, 2018
Samples Submitted: July 24, 2018
Laboratory Reference: 1807-159
Project: 5147-006-11

Case Narrative

Samples were collected on July 23, 2018 and received by the laboratory on July 24, 2018. They were maintained at the laboratory at a temperature of 2°C to 6°C.

Please note that any and all soil sample results are reported on a dry-weight basis, unless otherwise noted below.

General QA/QC issues associated with the analytical data enclosed in this laboratory report will be indicated with a reference to a comment or explanation on the Data Qualifier page. More complex and involved QA/QC issues will be discussed in detail below.

Date of Report: August 3, 2018
Samples Submitted: July 24, 2018
Laboratory Reference: 1807-159
Project: 5147-006-11

ANALYTICAL REPORT FOR SAMPLES

Client ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
GEI-46-7-8.5	07-159-03	Soil	7-23-18	7-24-18	
DUP 1-7-8.5	07-159-04	Soil	7-23-18	7-24-18	
GEI-46-13.5-15	07-159-08	Soil	7-23-18	7-24-18	
GEI-44-1.5-2	07-159-16	Soil	7-23-18	7-24-18	
GEI-44-7.5-10	07-159-20	Soil	7-23-18	7-24-18	
GEI-44-16-17.5	07-159-24	Soil	7-23-18	7-24-18	
GEI-45-1-3	07-159-28	Soil	7-23-18	7-24-18	
GEI-45-9-10	07-159-30	Soil	7-23-18	7-24-18	
GEI-45-17-20	07-159-35	Soil	7-23-18	7-24-18	

Date of Report: August 3, 2018
Samples Submitted: July 24, 2018
Laboratory Reference: 1807-159
Project: 5147-006-11

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-46-7-8.5**					
Laboratory ID:	07-159-03					
Benzo[a]anthracene	**ND**	0.0075	EPA 8270D/SIM	7-31-18	7-31-18	
Chrysene	**ND**	0.0075	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[b]fluoranthene	**ND**	0.0075	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo(j,k)fluoranthene	**ND**	0.0075	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[a]pyrene	**ND**	0.0075	EPA 8270D/SIM	7-31-18	7-31-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0075	EPA 8270D/SIM	7-31-18	7-31-18	
Dibenz[a,h]anthracene	**ND**	0.0075	EPA 8270D/SIM	7-31-18	7-31-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*74*	*40 - 117*				
Pyrene-d10	*85*	*38 - 119*				
Terphenyl-d14	*86*	*47 - 135*				

Date of Report: August 3, 2018
Samples Submitted: July 24, 2018
Laboratory Reference: 1807-159
Project: 5147-006-11

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**DUP 1-7-8.5**					
Laboratory ID:	07-159-04					
Benzo[a]anthracene	**ND**	0.0079	EPA 8270D/SIM	7-31-18	7-31-18	
Chrysene	**ND**	0.0079	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[b]fluoranthene	**ND**	0.0079	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo(j,k)fluoranthene	**ND**	0.0079	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[a]pyrene	**ND**	0.0079	EPA 8270D/SIM	7-31-18	7-31-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0079	EPA 8270D/SIM	7-31-18	7-31-18	
Dibenz[a,h]anthracene	**ND**	0.0079	EPA 8270D/SIM	7-31-18	7-31-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*71*	*40 - 117*				
Pyrene-d10	*84*	*38 - 119*				
Terphenyl-d14	*84*	*47 - 135*				

Date of Report: August 3, 2018
Samples Submitted: July 24, 2018
Laboratory Reference: 1807-159
Project: 5147-006-11

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-46-13.5-15**					
Laboratory ID:	07-159-08					
Benzo[a]anthracene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Chrysene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[b]fluoranthene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo(j,k)fluoranthene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[a]pyrene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Dibenz[a,h]anthracene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*75*	*40 - 117*				
Pyrene-d10	*84*	*38 - 119*				
Terphenyl-d14	*86*	*47 - 135*				

Date of Report: August 3, 2018
Samples Submitted: July 24, 2018
Laboratory Reference: 1807-159
Project: 5147-006-11

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-44-1.5-2**					
Laboratory ID:	07-159-16					
Benzo[a]anthracene	**0.027**	0.0072	EPA 8270D/SIM	7-31-18	7-31-18	
Chrysene	**0.032**	0.0072	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[b]fluoranthene	**0.042**	0.0072	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo(j,k)fluoranthene	**0.014**	0.0072	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[a]pyrene	**0.037**	0.0072	EPA 8270D/SIM	7-31-18	7-31-18	
Indeno(1,2,3-c,d)pyrene	**0.031**	0.0072	EPA 8270D/SIM	7-31-18	7-31-18	
Dibenz[a,h]anthracene	**ND**	0.0072	EPA 8270D/SIM	7-31-18	7-31-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*67*	*40 - 117*				
Pyrene-d10	*77*	*38 - 119*				
Terphenyl-d14	*77*	*47 - 135*				

Date of Report: August 3, 2018
Samples Submitted: July 24, 2018
Laboratory Reference: 1807-159
Project: 5147-006-11

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-44-7.5-10**					
Laboratory ID:	07-159-20					
Benzo[a]anthracene	**ND**	0.0075	EPA 8270D/SIM	7-31-18	7-31-18	
Chrysene	**ND**	0.0075	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[b]fluoranthene	**ND**	0.0075	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo(j,k)fluoranthene	**ND**	0.0075	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[a]pyrene	**ND**	0.0075	EPA 8270D/SIM	7-31-18	7-31-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0075	EPA 8270D/SIM	7-31-18	7-31-18	
Dibenz[a,h]anthracene	**ND**	0.0075	EPA 8270D/SIM	7-31-18	7-31-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*79*	*40 - 117*				
Pyrene-d10	*86*	*38 - 119*				
Terphenyl-d14	*86*	*47 - 135*				

Date of Report: August 3, 2018
Samples Submitted: July 24, 2018
Laboratory Reference: 1807-159
Project: 5147-006-11

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-44-16-17.5**					
Laboratory ID:	07-159-24					
Benzo[a]anthracene	**ND**	0.0072	EPA 8270D/SIM	7-31-18	7-31-18	
Chrysene	**ND**	0.0072	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[b]fluoranthene	**ND**	0.0072	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo(j,k)fluoranthene	**ND**	0.0072	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[a]pyrene	**ND**	0.0072	EPA 8270D/SIM	7-31-18	7-31-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0072	EPA 8270D/SIM	7-31-18	7-31-18	
Dibenz[a,h]anthracene	**ND**	0.0072	EPA 8270D/SIM	7-31-18	7-31-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*75*	*40 - 117*				
Pyrene-d10	*85*	*38 - 119*				
Terphenyl-d14	*85*	*47 - 135*				

Date of Report: August 3, 2018
Samples Submitted: July 24, 2018
Laboratory Reference: 1807-159
Project: 5147-006-11

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-45-1-3**					
Laboratory ID:	07-159-28					
Benzo[a]anthracene	**ND**	0.0070	EPA 8270D/SIM	7-31-18	7-31-18	
Chrysene	**ND**	0.0070	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[b]fluoranthene	**ND**	0.0070	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo(j,k)fluoranthene	**ND**	0.0070	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[a]pyrene	**ND**	0.0070	EPA 8270D/SIM	7-31-18	7-31-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0070	EPA 8270D/SIM	7-31-18	7-31-18	
Dibenz[a,h]anthracene	**ND**	0.0070	EPA 8270D/SIM	7-31-18	7-31-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*80*	*40 - 117*				
Pyrene-d10	*85*	*38 - 119*				
Terphenyl-d14	*85*	*47 - 135*				

Date of Report: August 3, 2018
Samples Submitted: July 24, 2018
Laboratory Reference: 1807-159
Project: 5147-006-11

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-45-9-10**					
Laboratory ID:	07-159-30					
Benzo[a]anthracene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Chrysene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[b]fluoranthene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo(j,k)fluoranthene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[a]pyrene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Dibenz[a,h]anthracene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*84*	*40 - 117*				
Pyrene-d10	*85*	*38 - 119*				
Terphenyl-d14	*85*	*47 - 135*				

Date of Report: August 3, 2018
Samples Submitted: July 24, 2018
Laboratory Reference: 1807-159
Project: 5147-006-11

PAHs EPA 8270D/SIM

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-45-17-20**					
Laboratory ID:	07-159-35					
Benzo[a]anthracene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Chrysene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[b]fluoranthene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo(j,k)fluoranthene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[a]pyrene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Dibenz[a,h]anthracene	**ND**	0.0074	EPA 8270D/SIM	7-31-18	7-31-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*74*	*40 - 117*				
Pyrene-d10	*81*	*38 - 119*				
Terphenyl-d14	*85*	*47 - 135*				

Date of Report: August 3, 2018
Samples Submitted: July 24, 2018
Laboratory Reference: 1807-159
Project: 5147-006-11

TOTAL ARSENIC
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-46-7-8.5**					
Laboratory ID:	07-159-03					
Arsenic	**ND**	5.7	EPA 6010D	7-30-18	7-30-18	
Client ID:	**DUP 1-7-8.5**					
Laboratory ID:	07-159-04					
Arsenic	**ND**	6.0	EPA 6010D	7-30-18	7-30-18	
Client ID:	**GEI-46-13.5-15**					
Laboratory ID:	07-159-08					
Arsenic	**ND**	5.5	EPA 6010D	7-30-18	7-30-18	
Client ID:	**GEI-44-1.5-2**					
Laboratory ID:	07-159-16					
Arsenic	**9.5**	5.4	EPA 6010D	7-30-18	7-30-18	
Client ID:	**GEI-44-7.5-10**					
Laboratory ID:	07-159-20					
Arsenic	**ND**	5.6	EPA 6010D	7-30-18	7-30-18	
Client ID:	**GEI-44-16-17.5**					
Laboratory ID:	07-159-24					
Arsenic	**ND**	5.4	EPA 6010D	7-30-18	7-30-18	
Client ID:	**GEI-45-1-3**					
Laboratory ID:	07-159-28					
Arsenic	**ND**	5.3	EPA 6010D	7-30-18	7-30-18	
Client ID:	**GEI-45-9-10**					
Laboratory ID:	07-159-30					
Arsenic	**ND**	5.5	EPA 6010D	7-30-18	7-30-18	

Date of Report: August 3, 2018
Samples Submitted: July 24, 2018
Laboratory Reference: 1807-159
Project: 5147-006-11

TOTAL ARSENIC
EPA 6010D

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Client ID:	**GEI-45-17-20**					
Laboratory ID:	07-159-35					
Arsenic	**ND**	5.6	EPA 6010D	7-30-18	7-30-18	

Date of Report: August 3, 2018
Samples Submitted: July 24, 2018
Laboratory Reference: 1807-159
Project: 5147-006-11

PAHs EPA 8270D/SIM
METHOD BLANK QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
Laboratory ID:	MB0731S1					
Benzo[a]anthracene	**ND**	0.0067	EPA 8270D/SIM	7-31-18	7-31-18	
Chrysene	**ND**	0.0067	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[b]fluoranthene	**ND**	0.0067	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo(j,k)fluoranthene	**ND**	0.0067	EPA 8270D/SIM	7-31-18	7-31-18	
Benzo[a]pyrene	**ND**	0.0067	EPA 8270D/SIM	7-31-18	7-31-18	
Indeno(1,2,3-c,d)pyrene	**ND**	0.0067	EPA 8270D/SIM	7-31-18	7-31-18	
Dibenz[a,h]anthracene	**ND**	0.0067	EPA 8270D/SIM	7-31-18	7-31-18	
Surrogate:	*Percent Recovery*	*Control Limits*				
2-Fluorobiphenyl	*93*	*40 - 117*				
Pyrene-d10	*99*	*38 - 119*				
Terphenyl-d14	*101*	*47 - 135*				

Date of Report: August 3, 2018
Samples Submitted: July 24, 2018
Laboratory Reference: 1807-159
Project: 5147-006-11

PAHs EPA 8270D/SIM
MS/MSD QUALITY CONTROL

Matrix: Soil
Units: mg/Kg

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
MATRIX SPIKES											
Laboratory ID:	07-159-03										
	MS	MSD	MS	MSD		MS	MSD				
Benzo[a]anthracene	**0.0952**	**0.0882**	0.0833	0.0833	ND	114	106	55 - 132	8	20	
Chrysene	**0.0660**	**0.0733**	0.0833	0.0833	ND	79	88	51 - 126	10	20	
Benzo[b]fluoranthene	**0.0915**	**0.0852**	0.0833	0.0833	ND	110	102	45 - 133	7	21	
Benzo(j,k)fluoranthene	**0.0642**	**0.0711**	0.0833	0.0833	ND	77	85	49 - 131	10	24	
Benzo[a]pyrene	**0.0784**	**0.0785**	0.0833	0.0833	ND	94	94	50 - 127	0	21	
Indeno(1,2,3-c,d)pyrene	**0.0810**	**0.0805**	0.0833	0.0833	ND	97	97	45 - 133	1	22	
Dibenz[a,h]anthracene	**0.0795**	**0.0803**	0.0833	0.0833	ND	95	96	46 - 132	1	20	
Surrogate:											
2-Fluorobiphenyl						*73*	*75*	*40 - 117*			
Pyrene-d10						*83*	*86*	*38 - 119*			
Terphenyl-d14						*85*	*86*	*47 - 135*			

Date of Report: August 3, 2018
Samples Submitted: July 24, 2018
Laboratory Reference: 1807-159
Project: 5147-006-11

TOTAL ARSENIC
EPA 6010D
QUALITY CONTROL

Matrix: Soil
Units: mg/Kg (ppm)

Analyte	Result	PQL	Method	Date Prepared	Date Analyzed	Flags
METHOD BLANK						
Laboratory ID:	MB0730SM3					
Arsenic	**ND**	5.0	EPA 6010D	7-30-18	7-30-18	

Analyte	Result		Spike Level		Source Result	Percent Recovery		Recovery Limits	RPD	RPD Limit	Flags
DUPLICATE											
Laboratory ID:	07-159-03										
	ORIG	DUP									
Arsenic	**ND**	**ND**	NA	NA		NA		NA	NA	20	
MATRIX SPIKES											
Laboratory ID:	07-159-03										
	MS	MSD	MS	MSD		MS	MSD				
Arsenic	**101**	**105**	100	100	ND	**101**	**105**	75-125	4	20	

Date of Report: August 3, 2018
Samples Submitted: July 24, 2018
Laboratory Reference: 1807-159
Project: 5147-006-11

% MOISTURE

Date Analyzed: 7-31-18

Client ID	Lab ID	% Moisture
GEI-46-7-8.5	07-159-03	12
DUP 1-7-8.5	07-159-04	16
GEI-46-13.5-15	07-159-08	9
GEI-44-1.5-2	07-159-16	8
GEI-44-7.5-10	07-159-20	11
GEI-44-16-17.5	07-159-24	7
GEI-45-1-3	07-159-28	5
GEI-45-9-10	07-159-30	10
GEI-45-17-20	07-159-35	10

OnSite Environmental Inc.

Data Qualifiers and Abbreviations

A - Due to a high sample concentration, the amount spiked is insufficient for meaningful MS/MSD recovery data.

B - The analyte indicated was also found in the blank sample.

C - The duplicate RPD is outside control limits due to high result variability when analyte concentrations are within five times the quantitation limit.

E - The value reported exceeds the quantitation range and is an estimate.

F - Surrogate recovery data is not available due to the high concentration of coeluting target compounds.

H - The analyte indicated is a common laboratory solvent and may have been introduced during sample preparation, and be impacting the sample result.

I - Compound recovery is outside of the control limits.

J - The value reported was below the practical quantitation limit. The value is an estimate.

K - Sample duplicate RPD is outside control limits due to sample inhomogeneity. The sample was re-extracted and re-analyzed with similar results.

L - The RPD is outside of the control limits.

M - Hydrocarbons in the gasoline range are impacting the diesel range result.

M1 - Hydrocarbons in the gasoline range (toluene-naphthalene) are present in the sample.

N - Hydrocarbons in the lube oil range are impacting the diesel range result.

N1 - Hydrocarbons in diesel range are impacting lube oil range results.

O - Hydrocarbons indicative of heavier fuels are present in the sample and are impacting the gasoline result.

P - The RPD of the detected concentrations between the two columns is greater than 40.

Q - Surrogate recovery is outside of the control limits.

S - Surrogate recovery data is not available due to the necessary dilution of the sample.

T - The sample chromatogram is not similar to a typical _____.

U - The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

U1 - The practical quantitation limit is elevated due to interferences present in the sample.

V - Matrix Spike/Matrix Spike Duplicate recoveries are outside control limits due to matrix effects.

W - Matrix Spike/Matrix Spike Duplicate RPD are outside control limits due to matrix effects.

X - Sample extract treated with a mercury cleanup procedure.

X1- Sample extract treated with a sulfuric acid/silica gel cleanup procedure.

Y - The calibration verification for this analyte exceeded the 20% drift specified in method 8260C, and therefore the reported result should be considered an estimate. The overall performance of the calibration verification standard met the acceptance criteria of the method.

Z -

ND - Not Detected at PQL
PQL - Practical Quantitation Limit
RPD - Relative Percent Difference

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
Phone: (425) 883-3881 • www.onsite-env.com

Company: GeoEngineers
Project Number: 5147-006-11
Project Name: DCI Anacortes
Project Manager: Robert Trahan
Sampled by: Katy Ataktürk

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 07-159

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level) cPAHs	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total ~~MTCA~~ Metals Arsenic	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
1	GEI-46-0-5	7/23/18	15:45	soil	1																		X				
2	GEI-46-5-7		16:00																								
3	GEI-46-7-8.5		16:00											⊗						⊗							⊗
4	Dup-1-7-8.5		16:00											⊗						⊗							⊗
5	GEI-46-8.5-10		16:00																								
6	GEI-46-10-12		16:15																								
7	GEI-46-12-13.5		16:15																								
8	GEI-46-13.5-15		16:15											⊗						⊗							⊗
9	GEI-46-15.-17		16:15																								
10	GEI-46-17-18.5		16:15																								

	Signature	Company	Date	Time
Relinquished	Katy Ata...	GeoEngineers	7/24/18	8:55
Received		OGIK EE	7/24/18	855
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Trahan will call on 7/24 to designate which samples to run.

⊗ ~~Added~~ 7/27/18.DB (STA)

Data Package: Standard ☐ Level III ☒ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☒

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Chain of Custody

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Company: GeoEngineers
Project Number: 5147-006-11
Project Name: DCI Anacortes
Project Manager: Robert Trahan
Sampled by: Katy Ataktürk

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 07-159

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers
11	GEI-46-18.5-20	7/23/18	16:15	Soil	1
12	GEI-46-20-22		16:20		
13	GEI-46-22-23.5		16:20		
14	GEI-46-23.5-25		16:20		
15	GEI-44-0-1.5		10:40		
16	GEI-44-1.5-2		11:30		
17	GEI-44-2-4		11:20		
18	GEI-44-4-5.5		11:20		
19	GEI-44-5.5-7.5		11:45		
20	GEI-44-7.5-10		11:45		

Analysis	11	12	13	14	15	16	17	18	19	20
NWTPH-HCID										
NWTPH-Gx/BTEX										
NWTPH-Gx										
NWTPH-Dx (☐ Acid / SG Clean-up)										
Volatiles 8260C										
Halogenated Volatiles 8260C										
EDB EPA 8011 (Waters Only)										
Semivolatiles 8270D/SIM (with low-level PAHs)						X				X
PAHs 8270D/SIM (low-level) cPAHs						X				X
PCBs 8082A										
Organochlorine Pesticides 8081B										
Organophosphorus Pesticides 8270D/SIM										
Chlorinated Acid Herbicides 8151A										
Total RCRA Metals										
Total ~~MTCA~~ Metals Arsenic						X				X
TCLP Metals										
HEM (oil and grease) 1664A										
HOLD										
% Moisture						X				X

	Signature	Company	Date	Time
Relinquished		GeoEngineers	7/24/18	8:55
Received		OnSite ES	7/24/18	855
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

OnSite Environmental Inc.
Analytical Laboratory Testing Services
14648 NE 95th Street • Redmond, WA 98052
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Company: GeoEngineers
Project Number: 5147-006-11
Project Name: DC1, Anacortes
Project Manager: Robert Trahan
Sampled by: Katy Ataktürk

Turnaround Request (in working days)
(Check One)
☐ Same Day ☐ 1 Day
☐ 2 Days ☐ 3 Days
☒ Standard (7 Days) (TPH analysis 5 Days)
☐ _____ (other)

Laboratory Number: 07-159

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level) cPAHs	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total ~~MTCA~~ Metals ARSENIC	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
21	GE1-44-10-12	7/23/18	12:15	Soil	1																		X				
22	GE1-44-12-14		12:15																								
23	GE1-44-14-16		12:15																								
24	GE1-44-16-17.5		12:45											X						X			—				X
25	GE1-44-17.5-19.5		12:45																								
26	GE1-44-20-22		13:30																								
27	GE1-44-22-25		13:30																								
28	GE1-45-~~1-3 3-5~~ D3		14:05											X						X			—				X
29	GE1-45-6-8		14:40																								
30	GE1-45-9-10		14:40											X						X			↓				X

	Signature	Company	Date	Time
Relinquished	Katy Atat	GeoEngineers	7/24/18	8:55
Received		OnSite Env	7/24/18	855
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Chain of Custody

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Company: GeoEngineers
Project Number: 5147-006-11
Project Name: DCI, Anacortes
Project Manager: Robert Trahan
Sampled by: Katy Atakturk

Turnaround Request (in working days)

(Check One)

- ☐ Same Day ☐ 1 Day
- ☐ 2 Days ☐ 3 Days
- ☒ Standard (7 Days) (TPH analysis 5 Days)
- ☐ _____ (other)

Laboratory Number: 07-159

Lab ID	Sample Identification	Date Sampled	Time Sampled	Matrix	Number of Containers	NWTPH-HCID	NWTPH-Gx/BTEX	NWTPH-Gx	NWTPH-Dx (☐ Acid / SG Clean-up)	Volatiles 8260C	Halogenated Volatiles 8260C	EDB EPA 8011 (Waters Only)	Semivolatiles 8270D/SIM (with low-level PAHs)	PAHs 8270D/SIM (low-level) cPAHs	PCBs 8082A	Organochlorine Pesticides 8081B	Organophosphorus Pesticides 8270D/SIM	Chlorinated Acid Herbicides 8151A	Total RCRA Metals	Total ~~MTCA~~ Metals ARSENIC	TCLP Metals	HEM (oil and grease) 1664A	HOLD				% Moisture
31	GEI-45-10-12	7/23	15:00	Soil	1																		X				
32	GEI-45-12-14		15:00																								
33	GEI-45-14-15		15:00																								
34	GEI-45-15-17		15:10																								
35	GEI-45-17-20		15:10											⊗						⊗							⊗
36	GEI-46-20-22		15:20																								
37	GEI-45-22-25		15:20																								
38	GEI-45-25-27		15:30																								
39	GEI-45-27-28.5		15:30																								
40	GEI-45-28.5-30		15:30																								

	Signature	Company	Date	Time
Relinquished	Katy Atakturk	GeoEngineers	7/24/18	8:55
Received	[signature]	OnSite Env	7/24/18	855
Relinquished				
Received				
Relinquished				
Received				
Reviewed/Date		Reviewed/Date		

Comments/Special Instructions

Data Package: Standard ☐ Level III ☐ Level IV ☐

Chromatograms with final report ☐ Electronic Data Deliverables (EDDs) ☐

Sample/Cooler Receipt and Acceptance Checklist

Client: GES

Client Project Name/Number: 5147-006-11

Initiated by: BG/MV

OnSite Project Number: 07-159

Date Initiated: 7/24/18

1.0 Cooler Verification

1.1 Were there custody seals on the outside of the cooler?	Yes	(No)	N/A	1 2 3 4	
1.2 Were the custody seals intact?	Yes	No	(N/A)	1 2 3 4	
1.3 Were the custody seals signed and dated by last custodian?	Yes	No	(N/A)	1 2 3 4	
1.4 Were the samples delivered on ice or blue ice?	(Yes)	No		1 2 3 4	
1.5 Were samples received between 0-6 degrees Celsius?	Yes	(No)	Temperature: 10°, 12° C		
1.6 Have shipping bills (if any) been attached to the back of this form?	Yes	(N/A)			
1.7 How were the samples delivered?	(Client)	Courier	UPS/FedEx	OSE Pickup	Other

2.0 Chain of Custody Verification

2.1 Was a Chain of Custody submitted with the samples?	(Yes)	No	1 2 3 4	
2.2 Was the COC legible and written in permanent ink?	(Yes)	No	1 2 3 4	
2.3 Have samples been relinquished and accepted by each custodian?	(Yes)	No	1 2 3 4	
2.4 Did the sample labels (ID, date, time, preservative) agree with COC?	Yes	(No)	1 2 3 4	
2.5 Were all of the samples listed on the COC submitted?	(Yes)	No	1 2 3 4	
2.6 Were any of the samples submitted omitted from the COC?	Yes	(No)	1 2 3 4	

3.0 Sample Verification

3.1 Were any sample containers broken or compromised?	Yes	(No)	1 2 3 4	
3.2 Were any sample labels missing or illegible?	Yes	(No)	1 2 3 4	
3.3 Have the correct containers been used for each analysis requested?	(Yes)	No	1 2 3 4	
3.4 Have the samples been correctly preserved?	Yes	No	(N/A)	1 2 3 4
3.5 Are volatiles samples free from headspace and bubbles greater than 6mm?	Yes	No	(N/A)	1 2 3 4
3.6 Is there sufficient sample submitted to perform requested analyses?	(Yes)	No		1 2 3 4
3.7 Have any holding times already expired or will expire in 24 hours?	Yes	(No)		1 2 3 4
3.8 Was method 5035A used?	Yes	No	(N/A)	1 2 3 4
3.9 If 5035A was used, which sampling option was used (#1, 2, or 3).	#		(N/A)	1 2 3 4

Explain any discrepancies:

2,4) Sample 1-40) GE1- on COC, GE1 on labels
Sample 1) -5 on COC, -5 comp on label

1 - Discuss issue in Case Narrative

2 - Process Sample As-is

3 - Client contacted to discuss problem

4 - Sample cannot be analyzed or client does not wish to proceed

RAW DATA

- cPAHs EPA 8270D/SIM Data
- Total Arsenic EPA 6010DData

cPAHs Data

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731010.D
Acq On : 31 Jul 2018 4:03 pm
Operator :
Sample : 07-159-03
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 31 16:17:54 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration

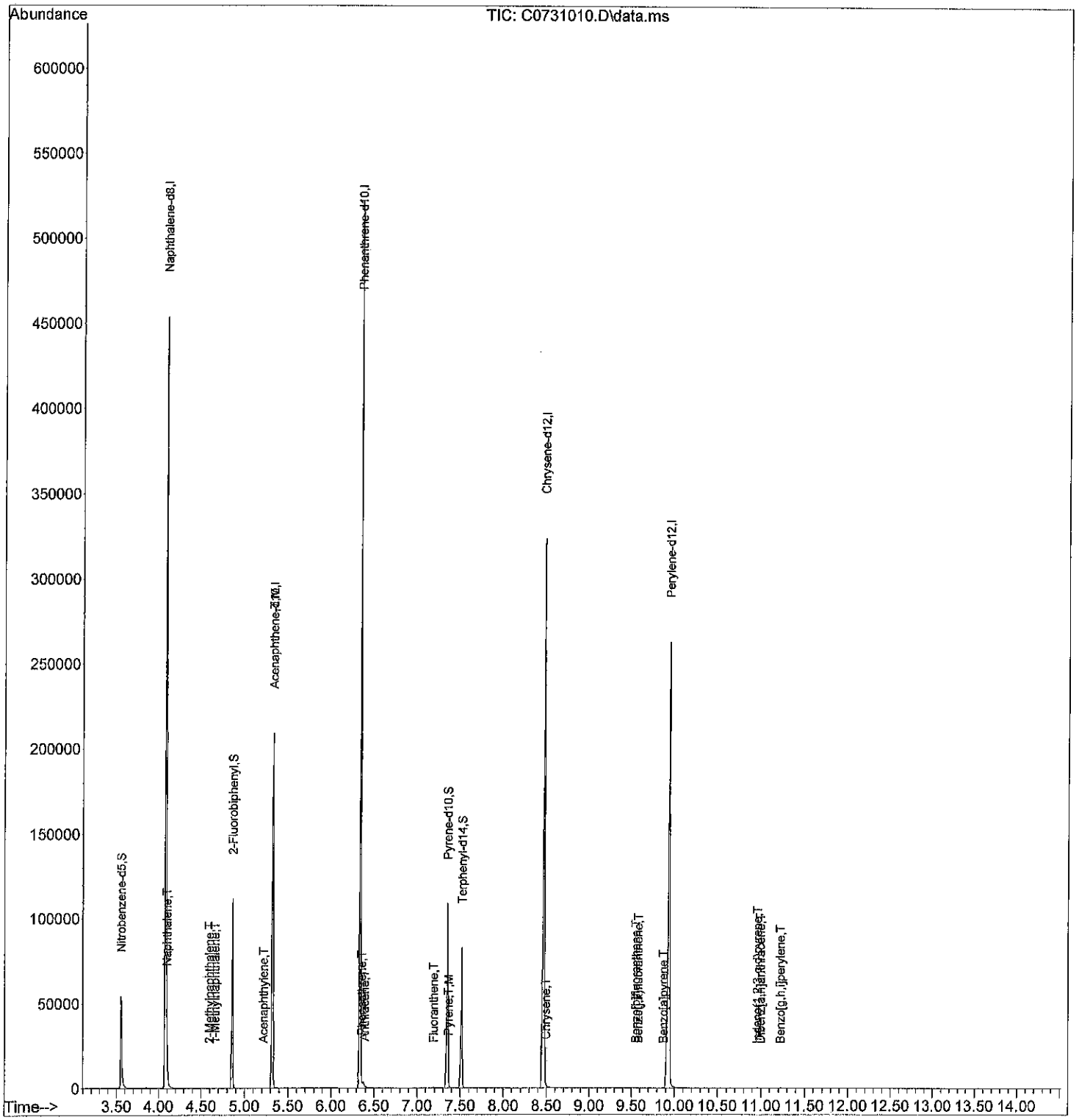
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.083	136	450602	2000.00	ppb	-0.02
6) Acenaphthene-d10	5.327	164	214492	2000.00	ppb	-0.02
10) Phenanthrene-d10	6.339	188	398490	2000.00	ppb	-0.02
17) Chrysene-d12	8.473	240	364197	2000.00	ppb	-0.01
21) Perylene-d12	9.938	264	346884	2000.00	ppb	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5	3.555	82	34874	759.67	ppb	-0.03
Spiked Amount 1000.000	Range 24 - 92		Recovery = 75.97%			
7) 2-Fluorobiphenyl	4.862	172	89284	744.83	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 74.48%			
11) Pyrene-d10	7.352	212	95888	847.35	ppb	-0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 84.73%			
18) Terphenyl-d14	7.521	244	81011	861.05	ppb	-0.01
Spiked Amount 1000.000	Range 39 - 92		Recovery = 86.11%			
Target Compounds						Qvalue
3) Naphthalene	4.095	128	246	1.57	ppb	100
4) 2-Methylnaphthalene	4.593	142	133	1.27	ppb	100
5) 1-Methylnaphthalene	4.659	142	62	0.65	ppb	100
8) Acenaphthylene	5.219	152	64	0.40	ppb	100
9) Acenaphthene	5.327	153	90	0.89	ppb	100
12) Fluorene	0.000		0	N.D.		
13) Phenanthrene	6.355	178	261	1.56	ppb	100
14) Anthracene	6.390	178	73	0.45	ppb	100
15) Fluoranthene	7.190	202	368	2.14	ppb	100
16) Pyrene	7.364	202	547	3.06	ppb	100
19) Benzo[a]anthracene	8.469	228	1413	Below Cal		100
20) Chrysene	8.493	228	190	1.24	ppb	100
22) Benzo[b]fluoranthene	9.548	252	345	2.28	ppb	100
23) Benzo(j,k)fluoranthene	9.579	252	140	0.94	ppb	100
24) Benzo[a]pyrene	9.872	252	203	1.42	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.957	276	247	1.86	ppb	100
26) Dibenz[a,h]anthracene	10.992	278	103	0.78	ppb	100
27) Benzo[g,h,i]perylene	11.223	276	283	1.98	ppb	100

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

ZT
8-1-18

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731010.D
Acq On : 31 Jul 2018 4:03 pm
Operator :
Sample : 07-159-03
Misc :
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 31 16:17:54 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731013.D
Acq On : 31 Jul 2018 5:09 pm
Operator :
Sample : 07-159-04
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 31 17:24:06 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.077	136	451029	2000.00	ppb	-0.03
6) Acenaphthene-d10	5.321	164	209152	2000.00	ppb	-0.02
10) Phenanthrene-d10	6.340	188	394022	2000.00	ppb	-0.02
17) Chrysene-d12	8.469	240	360448	2000.00	ppb	-0.02
21) Perylene-d12	9.933	264	342725	2000.00	ppb	-0.02
System Monitoring Compounds						
2) Nitrobenzene-d5	3.555	82	32510	707.50	ppb	-0.03
Spiked Amount 1000.000	Range 24 - 92		Recovery = 70.75%			
7) 2-Fluorobiphenyl	4.862	172	82775	708.16	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 70.82%			
11) Pyrene-d10	7.352	212	93501	835.63	ppb	-0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 83.56%			
18) Terphenyl-d14	7.520	244	78474	842.76	ppb	-0.01
Spiked Amount 1000.000	Range 39 - 92		Recovery = 84.28%			
Target Compounds						Qvalue
3) Naphthalene	4.095	128	219	1.40	ppb	100
4) 2-Methylnaphthalene	4.593	142	90	0.86	ppb	100
5) 1-Methylnaphthalene	4.660	142	52	0.55	ppb	100
8) Acenaphthylene	5.321	152	41	~~0.26~~	ppb 0.17	100
9) Acenaphthene	5.321	153	83	0.85	ppb	100
12) Fluorene	5.706	166	66	0.60	ppb	100
13) Phenanthrene	6.352	178	270	1.63	ppb	100
14) Anthracene	6.387	178	58	0.36	ppb	100
15) Fluoranthene	7.189	202	340	2.00	ppb	100
16) Pyrene	7.363	202	698	3.96	ppb	100
19) Benzo[a]anthracene	8.469	228	1427	Below Cal		100
20) Chrysene	8.492	228	160	1.06	ppb	100
22) Benzo[b]fluoranthene	9.551	252	354	2.37	ppb	100
23) Benzo(j,k)fluoranthene	9.551	252	354	~~2.41~~	ppb 0.93	100
24) Benzo[a]pyrene	9.871	252	160	1.13	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.957	276	251	1.91	ppb	100
26) Dibenz[a,h]anthracene	10.992	278	145	1.11	ppb	100
27) Benzo[g,h,i]perylene	11.226	276	257	1.82	ppb	100

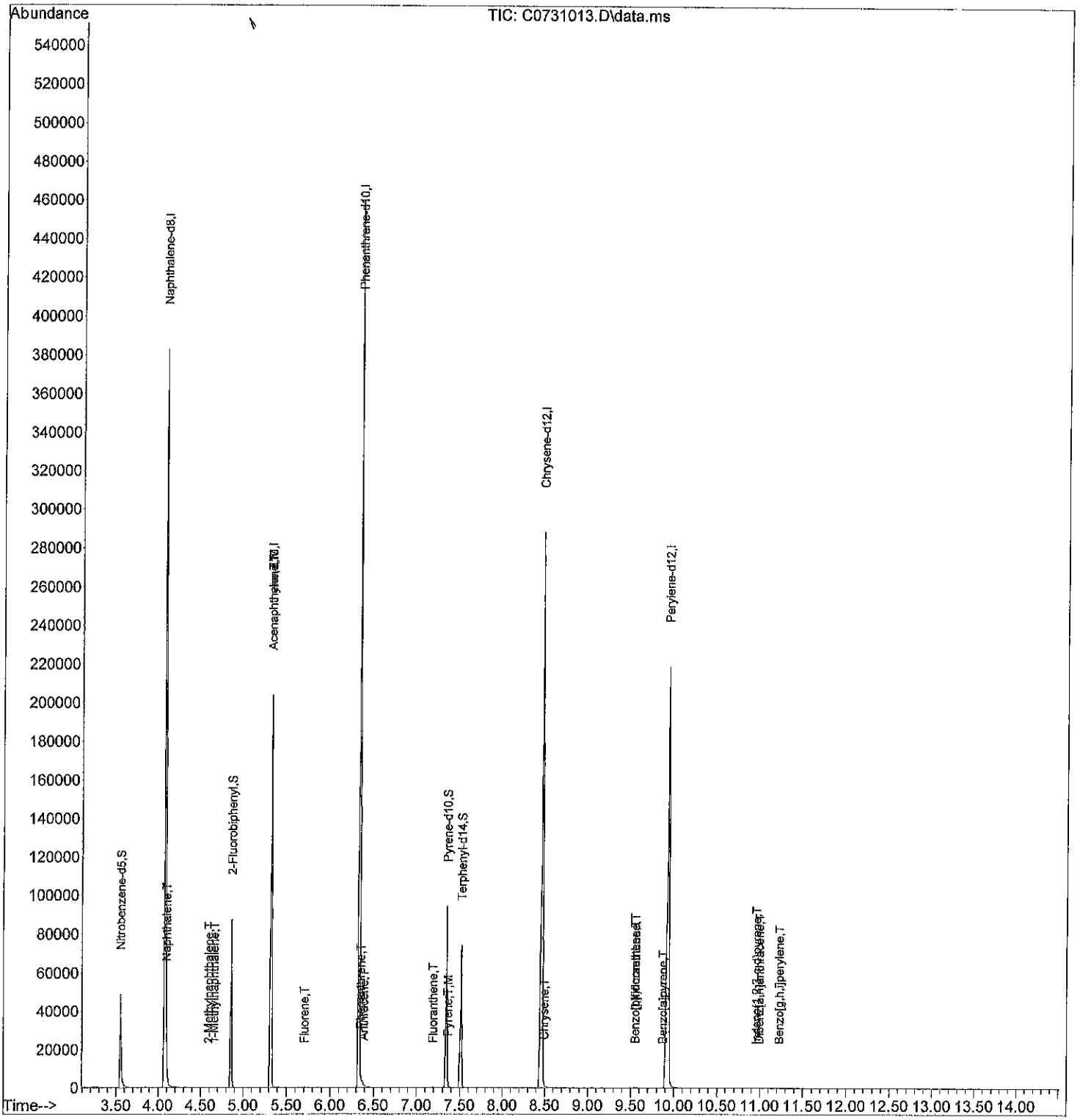
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
8-1-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731013.D
Acq On : 31 Jul 2018 5:09 pm
Operator :
Sample : 07-159-04
Misc :
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 31 17:24:06 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731014.D
Acq On : 31 Jul 2018 5:31 pm
Operator :
Sample : 07-159-08
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 31 17:46:25 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration

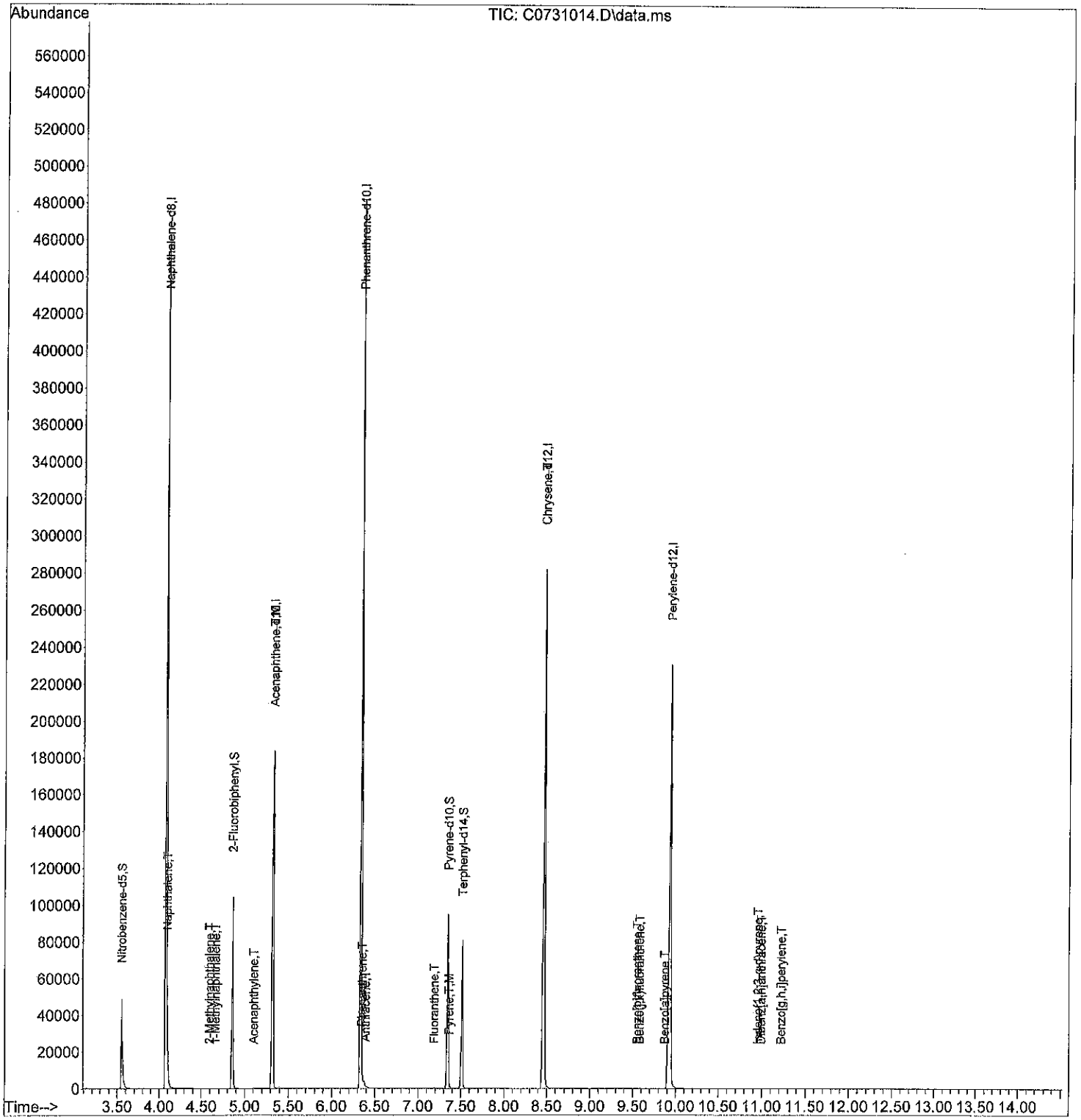
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.080	136	433848	2000.00	ppb	-0.03
6) Acenaphthene-d10	5.327	164	206412	2000.00	ppb	-0.02
10) Phenanthrene-d10	6.339	188	386949	2000.00	ppb	-0.02
17) Chrysene-d12	8.469	240	349430	2000.00	ppb	-0.02
21) Perylene-d12	9.934	264	331980	2000.00	ppb	-0.02
System Monitoring Compounds						
2) Nitrobenzene-d5	3.552	82	33475	757.35	ppb	-0.04
Spiked Amount 1000.000	Range 24 - 92		Recovery = 75.73%			
7) 2-Fluorobiphenyl	4.861	172	87045	754.58	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 75.46%			
11) Pyrene-d10	7.350	212	92536	842.12	ppb	-0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 84.21%			
18) Terphenyl-d14	7.519	244	77776	861.60	ppb	-0.01
Spiked Amount 1000.000	Range 39 - 92		Recovery = 86.16%			
Target Compounds						Qvalue
3) Naphthalene	4.092	128	184	1.22	ppb	100
4) 2-Methylnaphthalene	4.592	142	95	0.94	ppb	100
5) 1-Methylnaphthalene	4.662	142	43	0.47	ppb	100
8) Acenaphthylene	5.103	152	175	1.14	ppb	100
9) Acenaphthene	5.327	153	86	0.89	ppb	100
12) Fluorene	0.000		0	N.D.		
13) Phenanthrene	6.351	178	279	1.71	ppb	100
14) Anthracene	6.390	178	65	0.41	ppb	100
15) Fluoranthene	7.188	202	255	1.53	ppb	100
16) Pyrene	7.362	202	439	2.53	ppb	100
19) Benzo[a]anthracene	8.469	228	1331	Below Cal		100
20) Chrysene	8.469	228	1331	~~9.08~~ 1.10	ppb	100
22) Benzo[b]fluoranthene	9.548	252	263	1.82	ppb	100
23) Benzo(j,k)fluoranthene	9.579	252	109	0.77	ppb	100
24) Benzo[a]pyrene	9.872	252	131	0.96	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.958	276	165	1.30	ppb	100
26) Dibenz[a,h]anthracene	10.993	278	75	0.59	ppb	100
27) Benzo[g,h,i]perylene	11.223	276	172	1.26	ppb	100

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

ZT
8-1-18

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731014.D
Acq On : 31 Jul 2018 5:31 pm
Operator :
Sample : 07-159-08
Misc :
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 31 17:46:25 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731020.D
Acq On : 31 Jul 2018 7:44 pm
Operator :
Sample : 07-159-16
Misc :
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 31 19:58:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.082	136	417927	2000.00	ppb	-0.02
6) Acenaphthene-d10	5.326	164	194608	2000.00	ppb	-0.02
10) Phenanthrene-d10	6.339	188	360562	2000.00	ppb	-0.02
17) Chrysene-d12	8.469	240	336597	2000.00	ppb	-0.02
21) Perylene-d12	9.937	264	323555	2000.00	ppb	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5	3.560	82	27359	642.56	ppb	-0.03
Spiked Amount 1000.000	Range 24 - 92		Recovery = 64.26%			
7) 2-Fluorobiphenyl	4.859	172	73083	671.97	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 67.20%			
11) Pyrene-d10	7.352	212	78835	769.94	ppb	-0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 76.99%			
18) Terphenyl-d14	7.515	244	67244	773.33	ppb	-0.02
Spiked Amount 1000.000	Range 39 - 92		Recovery = 77.33%			
Target Compounds						Qvalue
3) Naphthalene	4.094	128	11848	81.53	ppb	100
4) 2-Methylnaphthalene	4.593	142	8123	83.81	ppb	100
5) 1-Methylnaphthalene	4.660	142	7741	88.09	ppb	100
8) Acenaphthylene	5.219	152	6506	45.02	ppb	100
9) Acenaphthene	5.342	153	633	6.94	ppb	100
12) Fluorene	5.704	166	1766	17.68	ppb	100
13) Phenanthrene	6.354	178	17176	113.28	ppb	100
14) Anthracene	6.389	178	6091	41.67	ppb	100
15) Fluoranthene	7.190	202	35633	229.25	ppb	100
16) Pyrene	7.364	202	44666	276.60	ppb	100
19) Benzo[a]anthracene	8.457	228	21569	151.18	ppb	100
20) Chrysene	8.492	228	24795	175.66	ppb	100
22) Benzo[b]fluoranthene	9.555	252	33044	234.40	ppb	100
23) Benzo(j,k)fluoranthene	9.555	252	33044	~~238.61~~	ppb	100
24) Benzo[a]pyrene	9.875	252	27013	202.69	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.962	276	21133	170.24	ppb	100
26) Dibenz[a,h]anthracene	10.997	278	4131	33.48	ppb	100
27) Benzo[g,h,i]perylene	11.231	276	24694	185.43	ppb	100

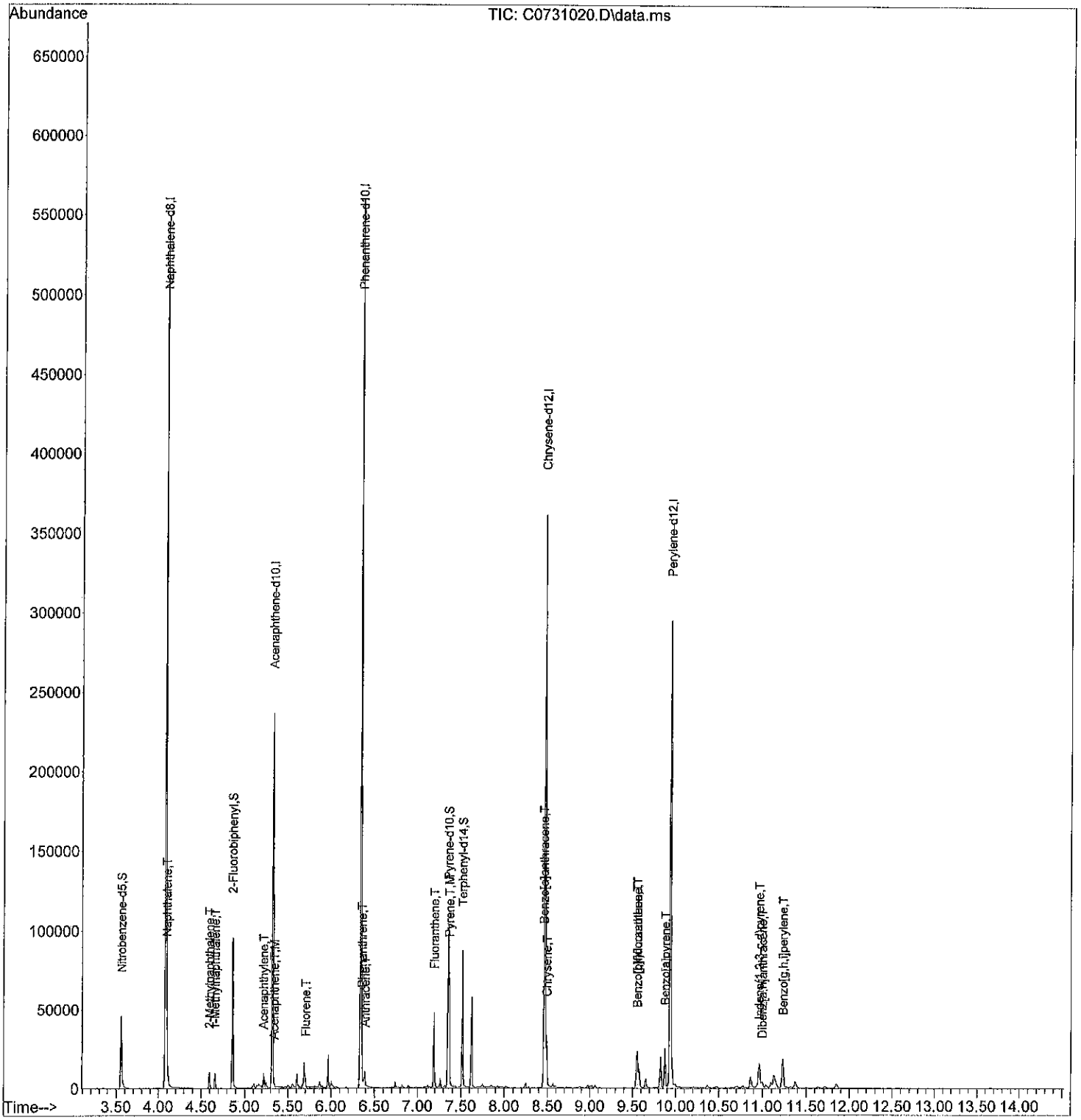
ZT 8-1-18

75.82

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

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731020.D
Acq On : 31 Jul 2018 7:44 pm
Operator :
Sample : 07-159-16
Misc :
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Jul 31 19:58:48 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731015.D
Acq On : 31 Jul 2018 5:53 pm
Operator :
Sample : 07-159-20
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 31 18:08:38 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.082	136	434465	2000.00	ppb	-0.02
6) Acenaphthene-d10	5.320	164	202822	2000.00	ppb	-0.02
10) Phenanthrene-d10	6.340	188	379289	2000.00	ppb	-0.02
17) Chrysene-d12	8.469	240	345651	2000.00	ppb	-0.02
21) Perylene-d12	9.937	264	329335	2000.00	ppb	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5	3.553	82	34331	775.62	ppb	-0.04
Spiked Amount 1000.000	Range 24 - 92		Recovery = 77.56%			
7) 2-Fluorobiphenyl	4.862	172	89529	789.85	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 78.98%			
11) Pyrene-d10	7.352	212	92362	857.51	ppb	-0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 85.75%			
18) Terphenyl-d14	7.514	244	77101	863.46	ppb	-0.02
Spiked Amount 1000.000	Range 39 - 92		Recovery = 86.35%			
Target Compounds						Qvalue
3) Naphthalene	4.093	128	283	1.87	ppb	100
4) 2-Methylnaphthalene	4.593	142	165	1.64	ppb	100
5) 1-Methylnaphthalene	4.659	142	79	0.86	ppb	100
8) Acenaphthylene	5.104	152	176	1.17	ppb	100
9) Acenaphthene	5.328	153	104	1.09	ppb	100
12) Fluorene	5.705	166	70	0.67	ppb	100
13) Phenanthrene	6.352	178	209	1.31	ppb	100
14) Anthracene	6.352	178	209	~~1.36~~	ppb	0.34 100
15) Fluoranthene	7.189	202	95	0.58	ppb	100
16) Pyrene	7.346	202	272	1.60	ppb	100
19) Benzo[a]anthracene	8.469	228	1132	Below Cal		100
20) Chrysene	8.469	228	1132	~~7.81~~	ppb	0.80 100
22) Benzo[b]fluoranthene	0.000		0	~~N.D.~~		0.61
23) Benzo(j,k)fluoranthene	0.000		0	N.D.		
24) Benzo[a]pyrene	9.933	252	1446	10.66	ppb	100
25) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.		
26) Dibenz[a,h]anthracene	0.000		0	N.D.		
27) Benzo[g,h,i]perylene	11.226	276	99	0.73	ppb	100

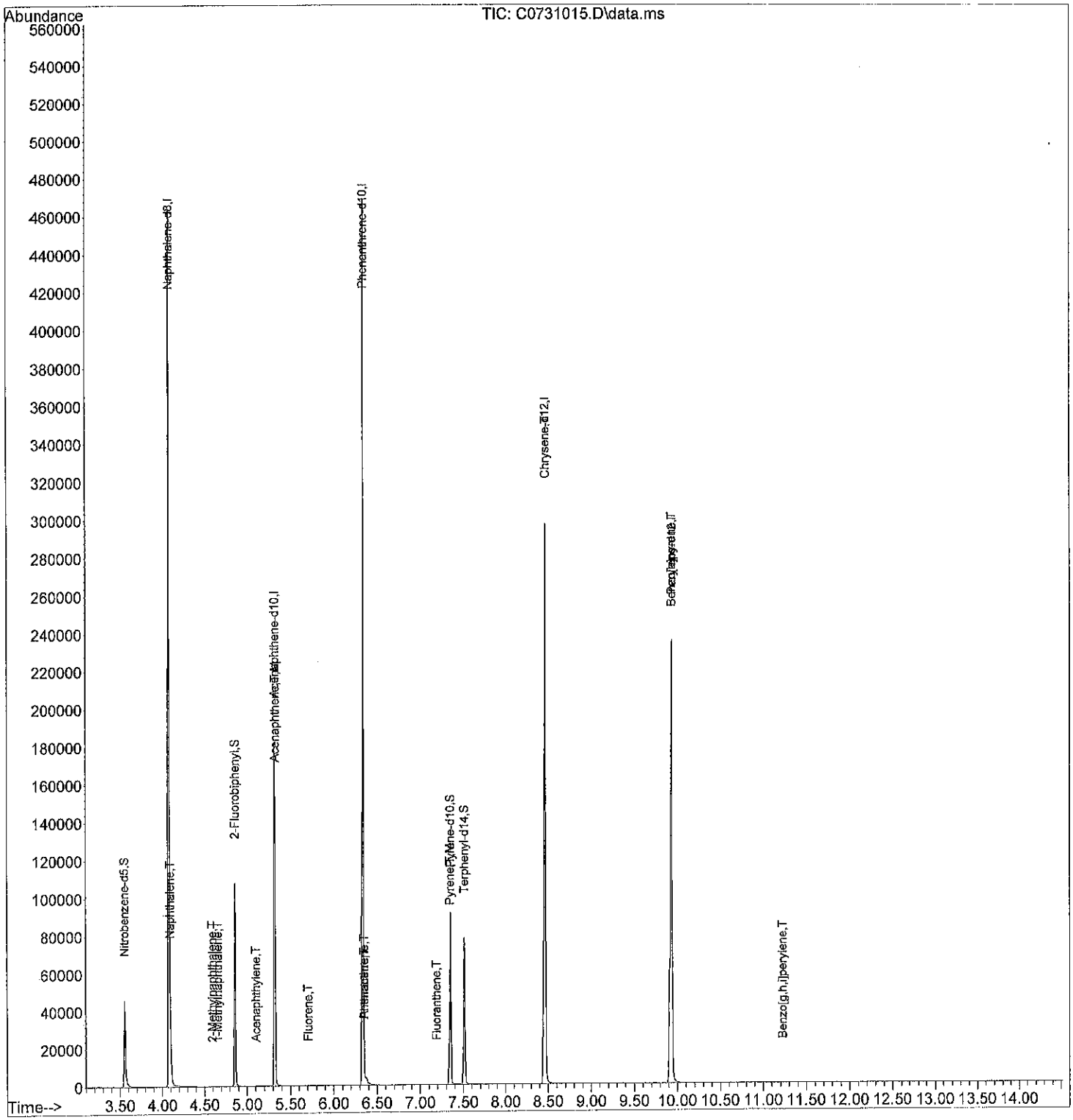
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
8-1-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731015.D
Acq On : 31 Jul 2018 5:53 pm
Operator :
Sample : 07-159-20
Misc :
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 31 18:08:38 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731016.D
Acq On : 31 Jul 2018 6:16 pm
Operator :
Sample : 07-159-24
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 31 18:30:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.082	136	444665	2000.00	ppb	-0.02
6) Acenaphthene-d10	5.327	164	209669	2000.00	ppb	-0.02
10) Phenanthrene-d10	6.339	188	377306	2000.00	ppb	-0.02
17) Chrysene-d12	8.473	240	348843	2000.00	ppb	-0.01
21) Perylene-d12	9.938	264	333270	2000.00	ppb	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5	3.560	82	30870	681.43	ppb	-0.03
Spiked Amount 1000.000	Range 24 - 92		Recovery = 68.14%			
7) 2-Fluorobiphenyl	4.859	172	87767	749.02	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 74.90%			
11) Pyrene-d10	7.352	212	91360	852.66	ppb	-0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 85.27%			
18) Terphenyl-d14	7.514	244	76455	848.39	ppb	-0.02
Spiked Amount 1000.000	Range 39 - 92		Recovery = 84.84%			
Target Compounds						Qvalue
3) Naphthalene	4.094	128	418	2.70	ppb	100
4) 2-Methylnaphthalene	4.594	142	159	1.54	ppb	100
5) 1-Methylnaphthalene	4.660	142	100	1.07	ppb	100
8) Acenaphthylene	5.219	152	217	1.39	ppb	100
9) Acenaphthene	5.327	153	97	0.99	ppb	100
12) Fluorene	5.704	166	159	1.52	ppb	100
13) Phenanthrene	6.354	178	1534	9.67	ppb	100
14) Anthracene	6.389	178	376	2.46	ppb	100
15) Fluoranthene	7.189	202	1633	10.04	ppb	100
16) Pyrene	7.363	202	2026	11.99	ppb	100
19) Benzo[a]anthracene	8.469	228	1946	2.96	ppb	100
20) Chrysene	8.492	228	836	5.71	ppb	100
22) Benzo[b]fluoranthene	9.555	252	899	6.19	ppb	100
23) Benzo(j,k)fluoranthene	9.555	252	899	~~6.30~~ 2.69	ppb	100
24) Benzo[a]pyrene	9.872	252	695	5.06	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.961	276	629	4.92	ppb	100
26) Dibenz[a,h]anthracene	10.996	278	115	0.90	ppb	100
27) Benzo[g,h,i]perylene	11.226	276	771	5.62	ppb	100

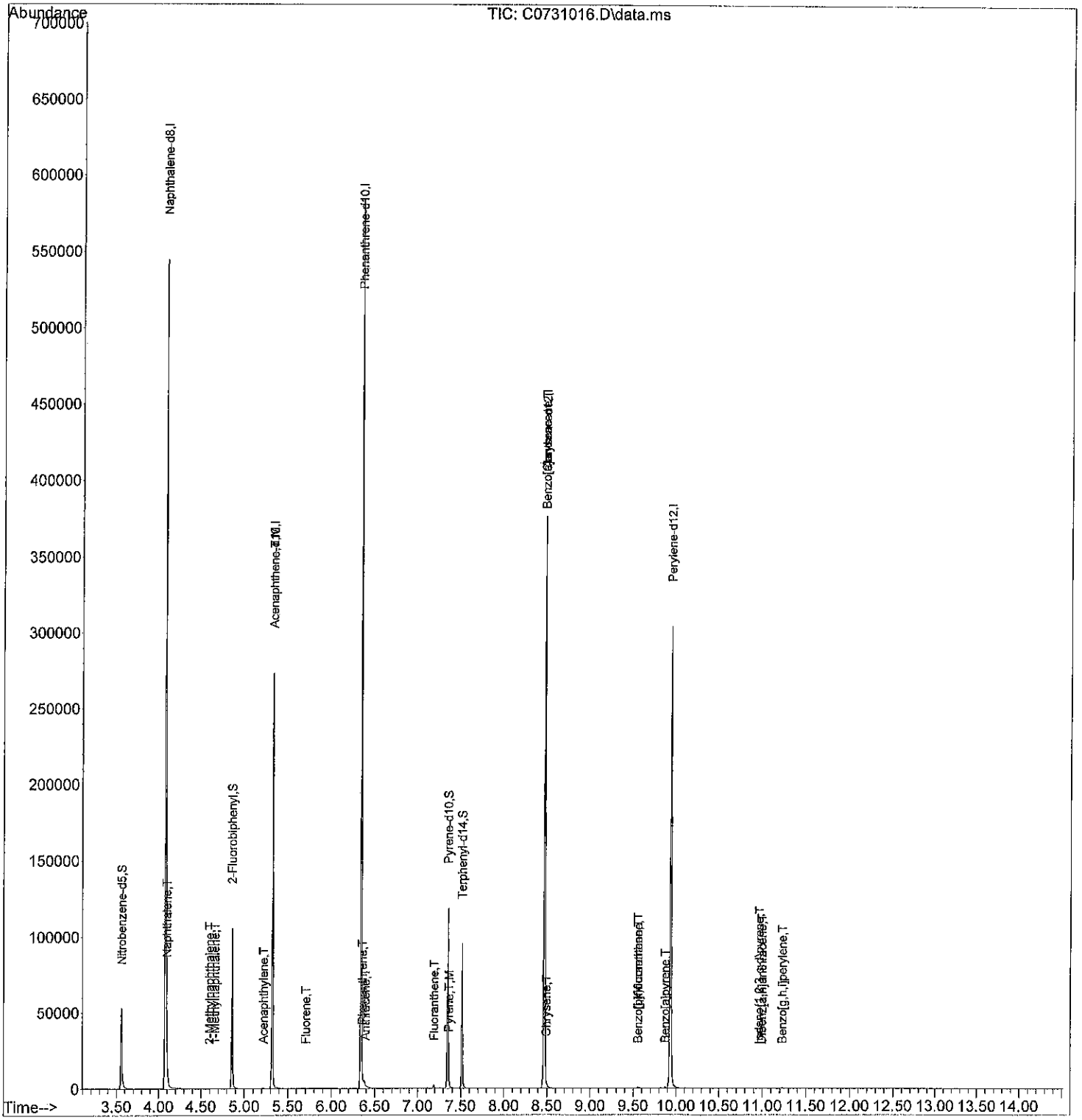
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
8-1-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731016.D
Acq On : 31 Jul 2018 6:16 pm
Operator :
Sample : 07-159-24
Misc :
ALS Vial : 16 Sample Multiplier: 1

Quant Time: Jul 31 18:30:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731017.D
Acq On : 31 Jul 2018 6:38 pm
Operator :
Sample : 07-159-28
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jul 31 18:52:54 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.082	136	458373	2000.00	ppb	-0.02
6) Acenaphthene-d10	5.327	164	212467	2000.00	ppb	-0.02
10) Phenanthrene-d10	6.339	188	387415	2000.00	ppb	-0.02
17) Chrysene-d12	8.469	240	358953	2000.00	ppb	-0.02
21) Perylene-d12	9.938	264	341612	2000.00	ppb	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5	3.560	82	33682	721.26	ppb	-0.03
Spiked Amount 1000.000	Range 24 - 92		Recovery = 72.13%			
7) 2-Fluorobiphenyl	4.859	172	94733	797.82	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 79.78%			
11) Pyrene-d10	7.352	212	92993	845.26	ppb	-0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 84.53%			
18) Terphenyl-d14	7.515	244	78696	848.66	ppb	-0.02
Spiked Amount 1000.000	Range 39 - 92		Recovery = 84.87%			
Target Compounds						Qvalue
3) Naphthalene	4.094	128	319	2.00	ppb	100
4) 2-Methylnaphthalene	4.594	142	134	1.26	ppb	100
5) 1-Methylnaphthalene	4.660	142	66	0.68	ppb	100
8) Acenaphthylene	5.111	152	252	1.60	ppb	100
9) Acenaphthene	5.327	153	74	0.74	ppb	100
12) Fluorene	0.000		0	N.D.		
13) Phenanthrene	6.354	178	216	1.33	ppb	100
14) Anthracene	6.386	178	35	0.22	ppb	100
15) Fluoranthene	7.189	202	122	0.73	ppb	100
16) Pyrene	7.364	202	285	1.64	ppb	100
19) Benzo[a]anthracene	8.469	228	1262	Below Cal		100
20) Chrysene	8.469	228	1262	~~6.38~~	ppb 0.72	100
22) Benzo[b]fluoranthene	9.552	252	85	0.57	ppb	100
23) Benzo(j,k)fluoranthene	9.552	252	85	~~0.58~~	ppb 0.27	100
24) Benzo[a]pyrene	9.872	252	49	0.35	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.962	276	60	0.46	ppb	100
26) Dibenz[a,h]anthracene	0.000		0	N.D.		
27) Benzo[g,h,i]perylene	11.227	276	81	0.58	ppb	100

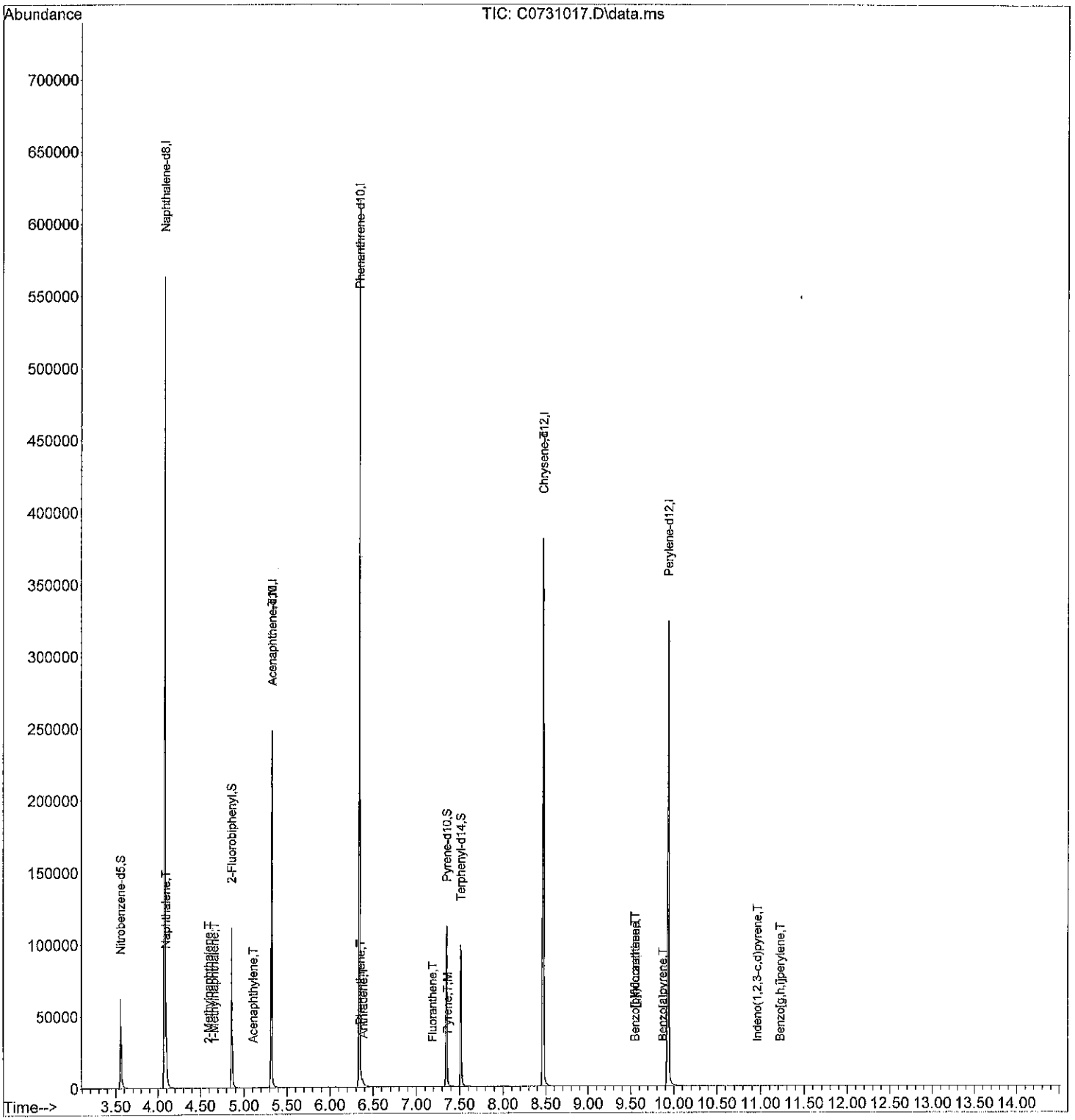
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
8-1-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731017.D
Acq On : 31 Jul 2018 6:38 pm
Operator :
Sample : 07-159-28
Misc :
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Jul 31 18:52:54 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731018.D
Acq On : 31 Jul 2018 7:00 pm
Operator :
Sample : 07-159-30
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 31 19:14:54 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.083	136	450644	2000.00	ppb	-0.02
6) Acenaphthene-d10	5.326	164	210373	2000.00	ppb	-0.02
10) Phenanthrene-d10	6.339	188	389031	2000.00	ppb	-0.02
17) Chrysene-d12	8.468	240	357964	2000.00	ppb	-0.02
21) Perylene-d12	9.938	264	343761	2000.00	ppb	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5	3.555	82	34400	749.27	ppb	-0.03
Spiked Amount 1000.000	Range 24 - 92		Recovery = 74.93%			
7) 2-Fluorobiphenyl	4.862	172	98550	838.23	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 83.82%			
11) Pyrene-d10	7.352	212	93974	850.63	ppb	-0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 85.06%			
18) Terphenyl-d14	7.514	244	78935	853.59	ppb	-0.02
Spiked Amount 1000.000	Range 39 - 92		Recovery = 85.36%			
Target Compounds						Qvalue
3) Naphthalene	4.095	128	289	1.84	ppb	100
4) 2-Methylnaphthalene	4.593	142	110	1.05	ppb	100
5) 1-Methylnaphthalene	4.659	142	52	0.55	ppb	100
8) Acenaphthylene	5.103	152	180	1.15	ppb	100
9) Acenaphthene	5.326	153	92	0.93	ppb	100
12) Fluorene	0.000		0	N.D.		
13) Phenanthrene	6.350	178	213	1.30	ppb	100
14) Anthracene	6.350	178	213	~~1.35~~ 0.20	ppb	100
15) Fluoranthene	7.189	202	103	0.61	ppb	100
16) Pyrene	7.352	202	253	1.45	ppb	100
19) Benzo[a]anthracene	8.468	228	1232	Below Cal		100
20) Chrysene	8.468	228	1232	~~8.21~~ 0.49	ppb	100
22) Benzo[b]fluoranthene	9.555	252	64	0.43	ppb	100
23) Benzo(j,k)fluoranthene	9.555	252	64	~~0.44~~ 0.25	ppb	100
24) Benzo[a]pyrene	9.934	252	1461	10.32	ppb	100
25) Indeno(1,2,3-c,d)pyrene	0.000		0	N.D.		
26) Dibenz[a,h]anthracene	0.000		0	N.D.		
27) Benzo[g,h,i]perylene	11.223	276	52	0.37	ppb	100

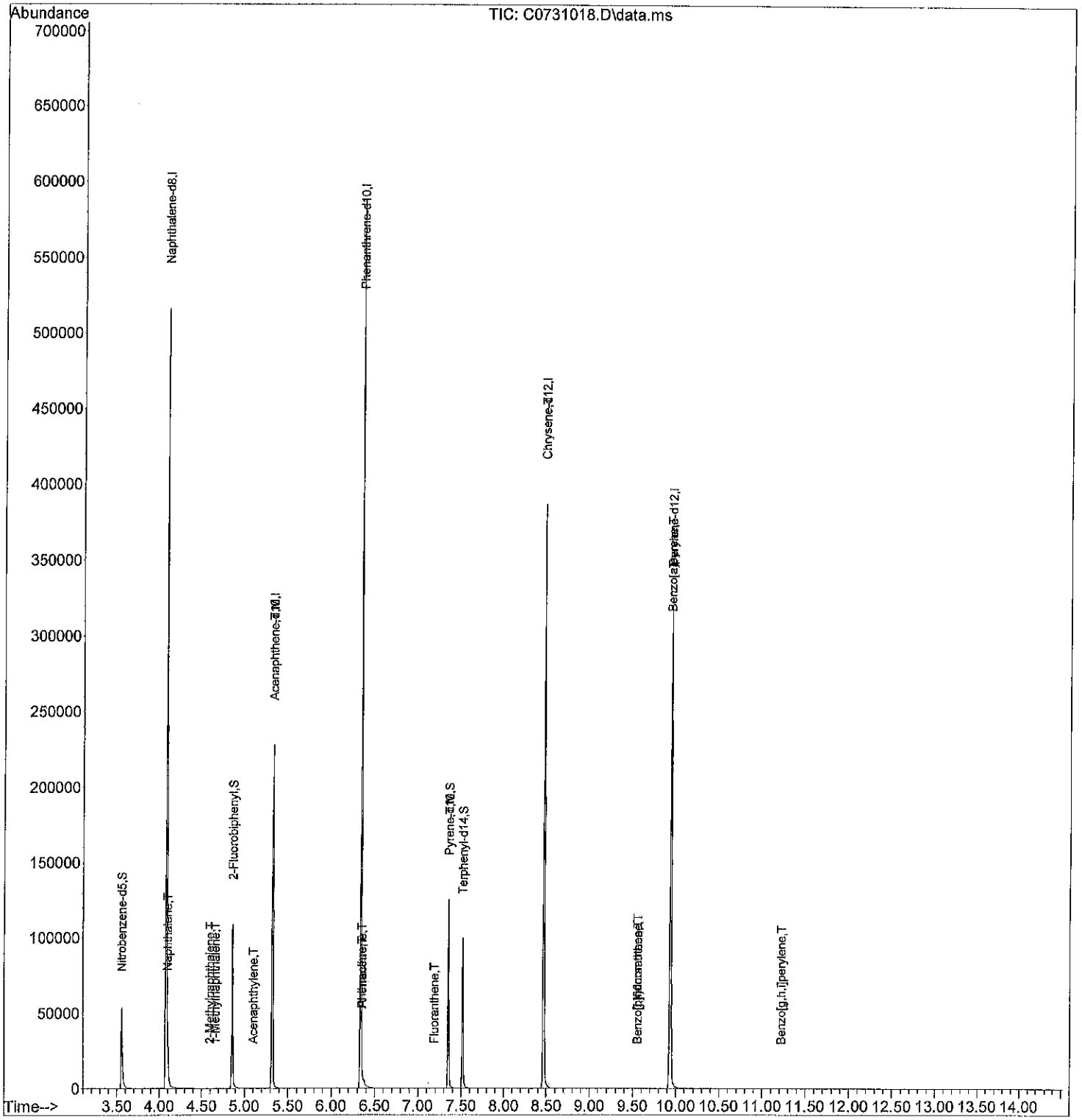
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
8-1-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731018.D
Acq On : 31 Jul 2018 7:00 pm
Operator :
Sample : 07-159-30
Misc :
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Jul 31 19:14:54 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731019.D
Acq On : 31 Jul 2018 7:22 pm
Operator :
Sample : 07-159-35
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 31 19:36:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.083	136	454787	2000.00	ppb	-0.02
6) Acenaphthene-d10	5.326	164	210677	2000.00	ppb	-0.02
10) Phenanthrene-d10	6.339	188	392154	2000.00	ppb	-0.02
17) Chrysene-d12	8.469	240	353874	2000.00	ppb	-0.02
21) Perylene-d12	9.934	264	337076	2000.00	ppb	-0.02
System Monitoring Compounds						
2) Nitrobenzene-d5	3.555	82	32960	711.37	ppb	-0.03
Spiked Amount 1000.000	Range 24 - 92		Recovery = 71.14%			
7) 2-Fluorobiphenyl	4.862	172	87188	740.52	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 74.05%			
11) Pyrene-d10	7.346	212	90215	810.10	ppb	-0.02
Spiked Amount 1000.000	Range 40 - 110		Recovery = 81.01%			
18) Terphenyl-d14	7.515	244	77343	846.04	ppb	-0.02
Spiked Amount 1000.000	Range 39 - 92		Recovery = 84.60%			
Target Compounds						Qvalue
3) Naphthalene	4.095	128	329	2.08	ppb	100
4) 2-Methylnaphthalene	4.593	142	187	1.77	ppb	100
5) 1-Methylnaphthalene	4.663	142	155	1.62	ppb	100
8) Acenaphthylene	5.218	152	77	0.49	ppb	100
9) Acenaphthene	5.342	153	180	1.82	ppb	100
12) Fluorene	5.704	166	251	2.31	ppb	100
13) Phenanthrene	6.354	178	1942	11.78	ppb	100
14) Anthracene	6.389	178	379	2.38	ppb	100
15) Fluoranthene	7.190	202	1467	8.68	ppb	100
16) Pyrene	7.364	202	1740	9.91	ppb	100
19) Benzo[a]anthracene	8.466	228	1977	2.98	ppb	100
20) Chrysene	8.489	228	1023	6.89	ppb	100
22) Benzo[b]fluoranthene	9.552	252	975	6.64	ppb	100
23) Benzo(j,k)fluoranthene	9.579	252	674	4.67	ppb	100
24) Benzo[a]pyrene	9.868	252	600	4.32	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.961	276	705	5.45	ppb	100
26) Dibenz[a,h]anthracene	10.996	278	426	3.31	ppb	100
27) Benzo[g,h,i]perylene	11.223	276	683	4.92	ppb	100

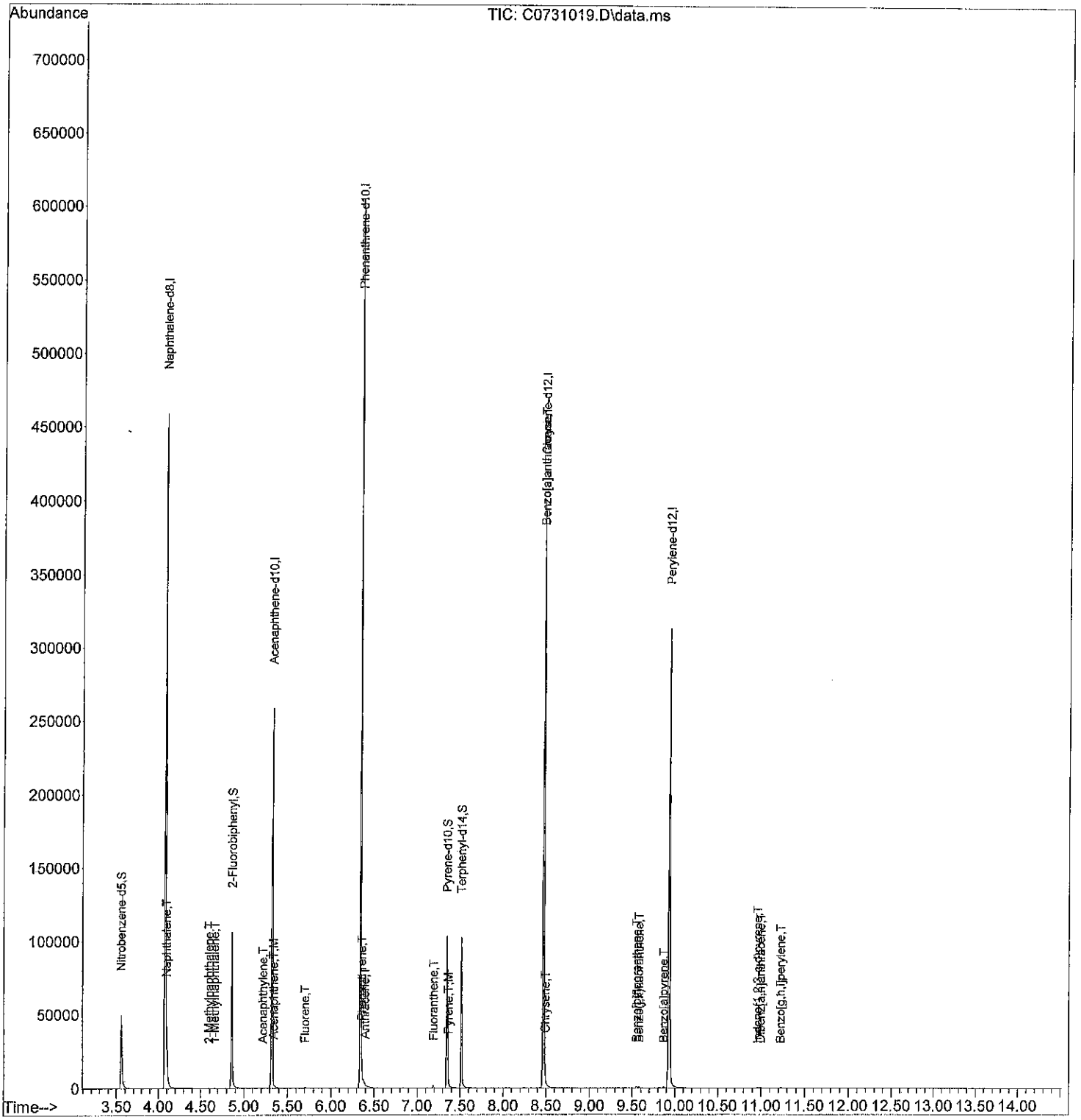
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
8-1-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731019.D
Acq On : 31 Jul 2018 7:22 pm
Operator :
Sample : 07-159-35
Misc :
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Jul 31 19:36:46 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731007.D
Acq On : 31 Jul 2018 2:57 pm
Operator :
Sample : MB0731S1 RR
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 31 15:12:03 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.083	136	400131	2000.00	ppb	-0.02
6) Acenaphthene-d10	5.320	164	185960	2000.00	ppb	-0.02
10) Phenanthrene-d10	6.340	188	351202	2000.00	ppb	-0.02
17) Chrysene-d12	8.474	240	321641	2000.00	ppb	-0.01
21) Perylene-d12	9.941	264	307931	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.560	82	38095	934.50	ppb	-0.03
Spiked Amount 1000.000	Range 24 - 92		Recovery = 93.45%#			
7) 2-Fluorobiphenyl	4.862	172	96651	930.00	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 93.00%#			
11) Pyrene-d10	7.351	212	98570	988.33	ppb	-0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 98.83%			
18) Terphenyl-d14	7.520	244	83747	1007.90	ppb	-0.01
Spiked Amount 1000.000	Range 39 - 92		Recovery = 100.79%#			
Target Compounds						Qvalue
3) Naphthalene	4.094	128	151	1.09	ppb	100
4) 2-Methylnaphthalene	4.592	142	74	0.80	ppb	100
5) 1-Methylnaphthalene	4.663	142	34	0.40	ppb	100
8) Acenaphthylene	5.104	152	214	1.55	ppb	100
9) Acenaphthene	5.328	153	76	0.87	ppb	100
12) Fluorene	5.536	166	538	5.53	ppb	100
13) Phenanthrene	6.355	178	111	0.75	ppb	100
14) Anthracene	6.355	178	111	~~0.78~~	ppb 0.11	100
15) Fluoranthene	7.189	202	80	0.53	ppb	100
16) Pyrene	7.351	202	239	1.52	ppb	100
19) Benzo[a]anthracene	8.470	228	1110	Below Cal		100
20) Chrysene	8.470	228	1110	~~8.23~~	ppb 0.73	100
22) Benzo[b]fluoranthene	9.555	252	53	0.40	ppb	100
23) Benzo(j,k)fluoranthene	9.555	252	53	~~0.40~~	ppb 0.36	100
24) Benzo[a]pyrene	9.875	252	43	0.34	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.961	276	32	0.27	ppb	100
26) Dibenz[a,h]anthracene	0.000		0	N.D.		
27) Benzo[g,h,i]perylene	11.226	276	66	0.52	ppb	100

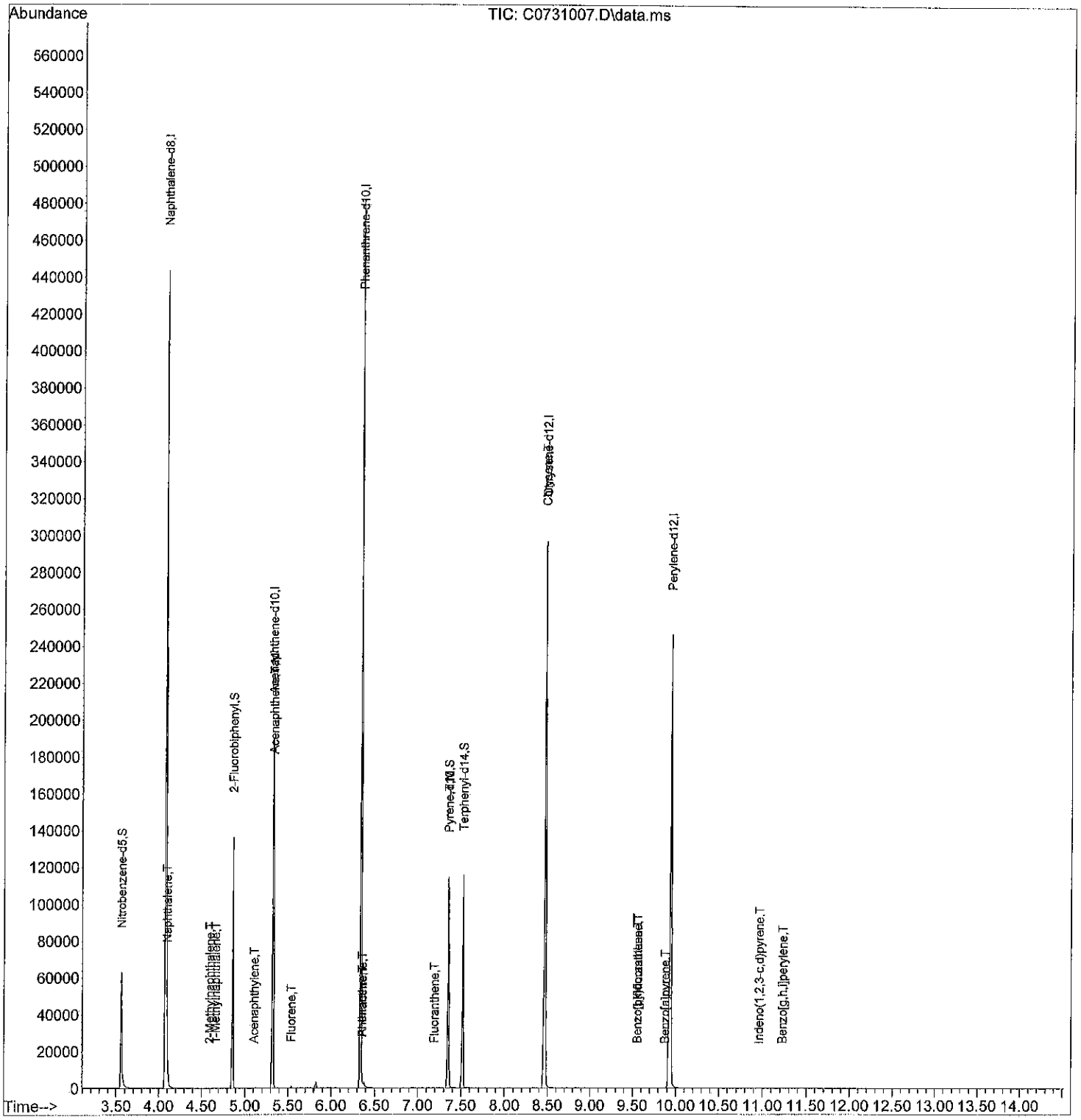
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ZT
7-31-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731007.D
Acq On : 31 Jul 2018 2:57 pm
Operator :
Sample : MB0731S1 RR
Misc :
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 31 15:12:03 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731011.D
Acq On : 31 Jul 2018 4:25 pm
Operator :
Sample : 07-159-03 MS
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 31 16:39:52 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.082	136	455445	2000.00	ppb	-0.02
6) Acenaphthene-d10	5.320	164	214616	2000.00	ppb	-0.02
10) Phenanthrene-d10	6.340	188	401600	2000.00	ppb	-0.02
17) Chrysene-d12	8.469	240	367903	2000.00	ppb	-0.02
21) Perylene-d12	9.937	264	349422	2000.00	ppb	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5	3.554	82	33974	732.19	ppb	-0.04
Spiked Amount 1000.000	Range 24 - 92		Recovery = 73.22%			
7) 2-Fluorobiphenyl	4.862	172	87220	727.19	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 72.72%			
11) Pyrene-d10	7.351	212	94276	826.65	ppb	-0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 82.67%			
18) Terphenyl-d14	7.519	244	80704	849.15	ppb	-0.01
Spiked Amount 1000.000	Range 39 - 92		Recovery = 84.91%			
Target Compounds						Qvalue
3) Naphthalene	4.094	128	62237	393.01	ppb	100
4) 2-Methylnaphthalene	4.592	142	43300	409.93	ppb	100
5) 1-Methylnaphthalene	4.663	142	39376	411.15	ppb	100
8) Acenaphthylene	5.220	152	66902	419.78	ppb	100
9) Acenaphthene	5.343	153	42752	424.85	ppb	100
12) Fluorene	5.705	166	49698	446.60	ppb	100
13) Phenanthrene	6.351	178	70128	415.24	ppb	100
14) Anthracene	6.386	178	70043	430.22	ppb	100
15) Fluoranthene	7.188	202	76858	443.95	ppb	100
16) Pyrene	7.363	202	80231	446.07	ppb	100
19) Benzo[a]anthracene	8.462	228	84568	571.22	ppb	100
20) Chrysene	8.493	228	61110	396.10	ppb	100
22) Benzo[b]fluoranthene	9.551	252	83553	548.81	ppb	100
23) Benzo(j,k)fluoranthene	9.578	252	57598	385.18	ppb	100
24) Benzo[a]pyrene	9.875	252	67726	470.55	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.957	276	65151	485.97	ppb	100
26) Dibenz[a,h]anthracene	10.996	278	63551	476.92	ppb	100
27) Benzo[g,h,i]perylene	11.226	276	65256	453.74	ppb	100

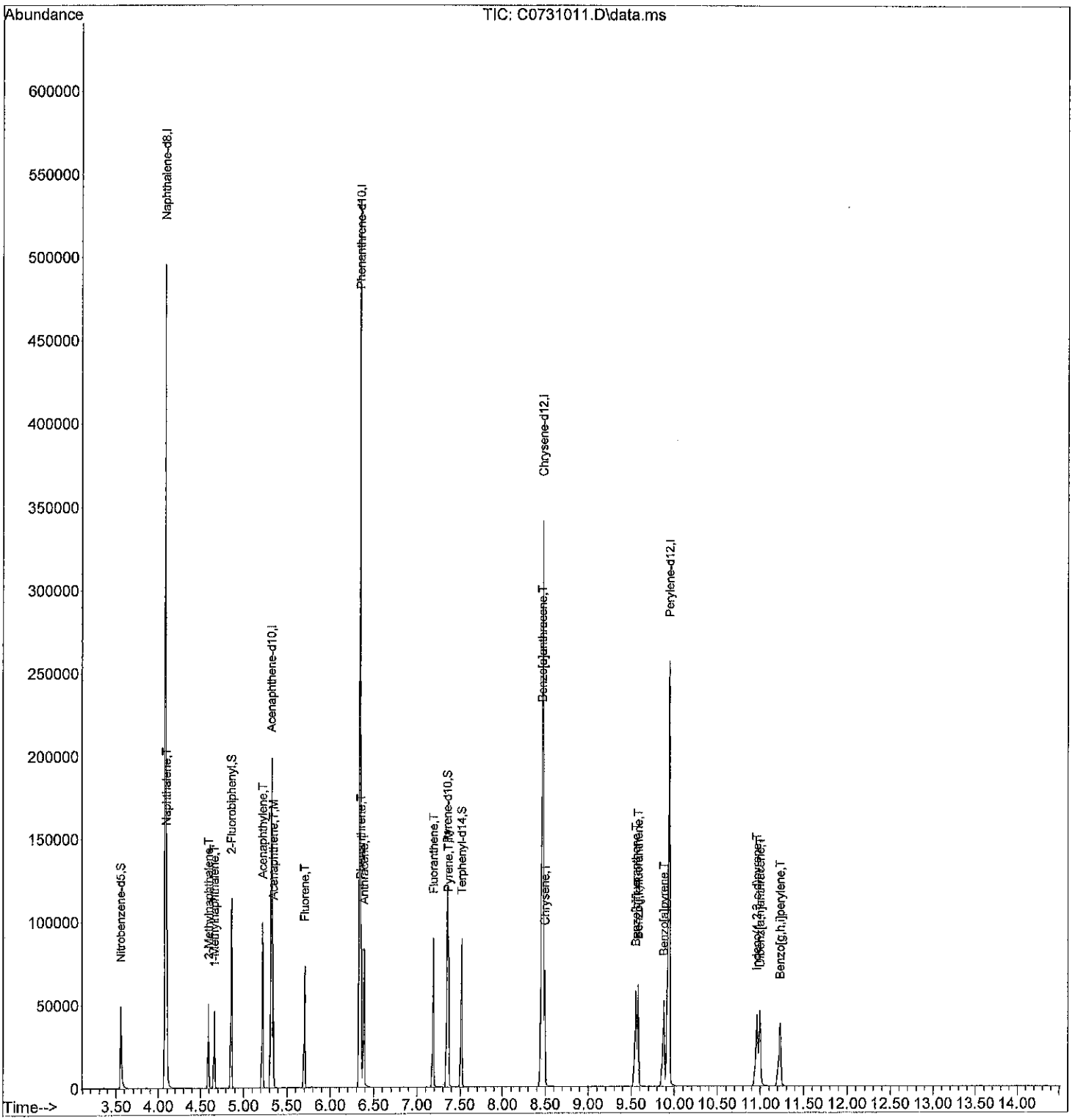
ZT
8-1-18

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

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731011.D
Acq On : 31 Jul 2018 4:25 pm
Operator :
Sample : 07-159-03 MS
Misc :
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 31 16:39:52 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731012.D
Acq On : 31 Jul 2018 4:47 pm
Operator :
Sample : 07-159-03 MSD
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 31 17:01:57 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration

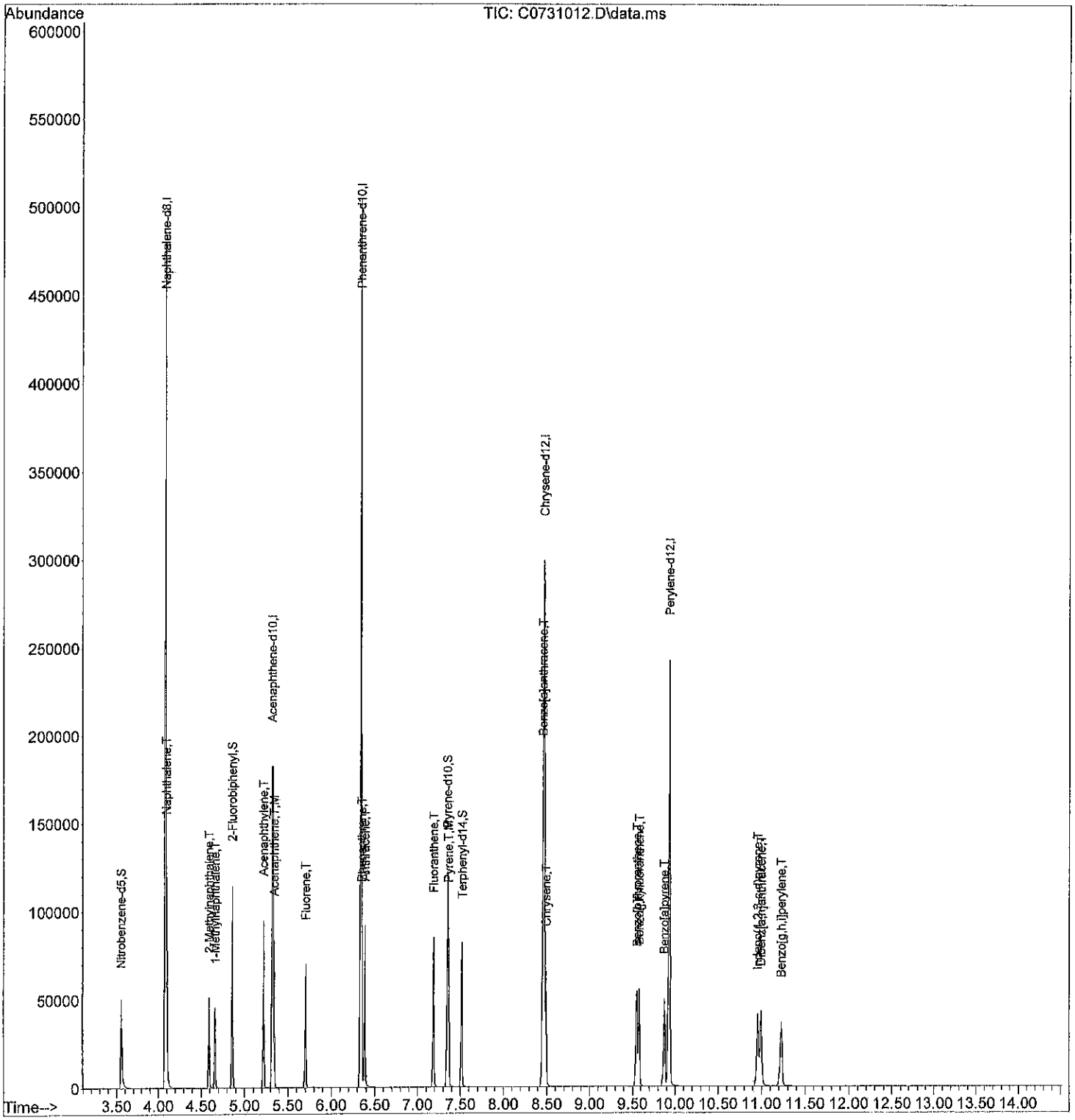
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.081	136	409352	2000.00	ppb	-0.02
6) Acenaphthene-d10	5.320	164	191964	2000.00	ppb	-0.02
10) Phenanthrene-d10	6.339	188	358346	2000.00	ppb	-0.02
17) Chrysene-d12	8.470	240	329654	2000.00	ppb	-0.01
21) Perylene-d12	9.934	264	312504	2000.00	ppb	-0.02
System Monitoring Compounds						
2) Nitrobenzene-d5	3.553	82	32233	772.89	ppb	-0.04
Spiked Amount 1000.000	Range 24 - 92		Recovery = 77.29%			
7) 2-Fluorobiphenyl	4.861	172	80908	754.16	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 75.42%			
11) Pyrene-d10	7.351	212	87201	856.91	ppb	-0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 85.69%			
18) Terphenyl-d14	7.519	244	73411	862.03	ppb	-0.01
Spiked Amount 1000.000	Range 39 - 92		Recovery = 86.20%			
Target Compounds						Qvalue
3) Naphthalene	4.093	128	58846	413.43	ppb	100
4) 2-Methylnaphthalene	4.592	142	40635	428.02	ppb	100
5) 1-Methylnaphthalene	4.662	142	37064	430.59	ppb	100
8) Acenaphthylene	5.219	152	62071	435.42	ppb	100
9) Acenaphthene	5.343	153	38945	432.68	ppb	100
12) Fluorene	5.705	166	44606	449.22	ppb	100
13) Phenanthrene	6.351	178	63362	420.46	ppb	100
14) Anthracene	6.386	178	64351	442.97	ppb	100
15) Fluoranthene	7.189	202	70124	453.94	ppb	100
16) Pyrene	7.363	202	73489	457.90	ppb	100
19) Benzo[a]anthracene	8.458	228	70329	529.36	ppb	100
20) Chrysene	8.493	228	60770	439.60	ppb	100
22) Benzo[b]fluoranthene	9.552	252	69600	511.17	ppb	100
23) Benzo(j,k)fluoranthene	9.579	252	57087	426.86	ppb	100
24) Benzo[a]pyrene	9.872	252	60643	471.11	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.956	276	57881	482.75	ppb	100
26) Dibenz[a,h]anthracene	10.995	278	57445	482.03	ppb	100
27) Benzo[g,h,i]perylene	11.226	276	59205	460.30	ppb	100

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

ZT
8-1-18

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731012.D
Acq On : 31 Jul 2018 4:47 pm
Operator :
Sample : 07-159-03 MSD
Misc :
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 31 17:01:57 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : X:\SEMIVOLS\COREY\DATA\C180731\
Data File : C0731006.D
Acq On : 31 Jul 2018 2:35 pm
Operator :
Sample : PAH CCV0731-3
Misc : SV5-049-01
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 31 14:50:26 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	2000.000	2000.000	0.0	97	-0.02
2	S	Nitrobenzene-d5	500.000	503.161	-0.6	102	-0.03
3	T	Naphthalene	500.000	488.965	2.2	96	-0.02
4	T	2-Methylnaphthalene	500.000	495.262	0.9	98	-0.02
5	T	1-Methylnaphthalene	500.000	496.194	0.8	98	-0.02
6	I	Acenaphthene-d10	2000.000	2000.000	0.0	102	-0.02
7	S	2-Fluorobiphenyl	500.000	470.045	6.0	98	-0.02
8	T	Acenaphthylene	500.000	477.741	4.5	100	-0.02
9	T,M	Acenaphthene	500.000	467.248	6.6	98	-0.02
10	I	Phenanthrene-d10	2000.000	2000.000	0.0	99	-0.02
11	S	Pyrene-d10	500.000	487.554	2.5	97	-0.01
12	T	Fluorene	500.000	498.910	0.2	100	-0.02
13	T	Phenanthrene	500.000	472.001	5.6	97	-0.02
14	T	Anthracene	500.000	494.473	1.1	98	-0.02
15	T	Fluoranthene	500.000	489.324	2.1	98	-0.01
16	T,M	Pyrene	500.000	484.817	3.0	97	-0.01
17	I	Chrysene-d12	2000.000	2000.000	0.0	98	0.00
18	S	Terphenyl-d14	500.000	488.796	2.2	96	-0.01
19	T	Benzo[a]anthracene	500.000	586.770	-17.4	107	-0.01
20	T	Chrysene	500.000	438.789	12.2	86	-0.01
21	I	Perylene-d12	2000.000	2000.000	0.0	97	0.00
22	T	Benzo[b]fluoranthene	500.000	543.557	-8.7	106	0.00
23	T	Benzo(j,k)fluoranthene	500.000	446.825	10.6	86	0.00
24	T	Benzo[a]pyrene	500.000	497.948	0.4	97	0.00
25	T	Indeno(1,2,3-c,d)pyrene	500.000	509.404	-1.9	99	0.00
26	T	Dibenz[a,h]anthracene	500.000	504.127	-0.8	98	0.00
27	T	Benzo[g,h,i]perylene	500.000	482.045	3.6	95	0.00

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

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731006.D
Acq On : 31 Jul 2018 2:35 pm
Operator :
Sample : PAH CCV0731-3
Misc : SV5-049-01
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 31 14:50:26 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	4.083	136	471582	2000.00	ppb	-0.02
6) Acenaphthene-d10	5.327	164	226681	2000.00	ppb	-0.02
10) Phenanthrene-d10	6.339	188	424515	2000.00	ppb	-0.02
17) Chrysene-d12	8.477	240	390118	2000.00	ppb	0.00
21) Perylene-d12	9.942	264	371157	2000.00	ppb	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5	3.555	82	24174	503.16	ppb	-0.03
Spiked Amount 1000.000	Range 24 - 92		Recovery = 50.32%			
7) 2-Fluorobiphenyl	4.859	172	59547	470.04	ppb	-0.02
Spiked Amount 1000.000	Range 25 - 89		Recovery = 47.00%			
11) Pyrene-d10	7.353	212	58776	487.55	ppb	-0.01
Spiked Amount 1000.000	Range 40 - 110		Recovery = 48.76%			
18) Terphenyl-d14	7.521	244	49261	488.80	ppb	-0.01
Spiked Amount 1000.000	Range 39 - 92		Recovery = 48.88%			
Target Compounds						Qvalue
3) Naphthalene	4.095	128	80177	488.97	ppb	100
4) 2-Methylnaphthalene	4.593	142	54167	495.26	ppb	100
5) 1-Methylnaphthalene	4.660	142	49204	496.19	ppb	100
8) Acenaphthylene	5.219	152	80420	477.74	ppb	100
9) Acenaphthene	5.342	153	49662	467.25	ppb	100
12) Fluorene	5.704	166	58687	498.91	ppb	100
13) Phenanthrene	6.355	178	84263	472.00	ppb	100
14) Anthracene	6.390	178	85097	494.47	ppb	100
15) Fluoranthene	7.190	202	89547	489.32	ppb	100
16) Pyrene	7.364	202	92176	484.82	ppb	100
19) Benzo[a]anthracene	8.461	228	92069	586.77	ppb	100
20) Chrysene	8.496	228	71784	438.79	ppb	100
22) Benzo[b]fluoranthene	9.556	252	87900	543.56	ppb	100
23) Benzo(j,k)fluoranthene	9.583	252	70973	446.83	ppb	100
24) Benzo[a]pyrene	9.876	252	76128	497.95	ppb	100
25) Indeno(1,2,3-c,d)pyrene	10.965	276	72540	509.40	ppb	100
26) Dibenz[a,h]anthracene	11.000	278	71355	504.13	ppb	100
27) Benzo[g,h,i]perylene	11.234	276	73639	482.04	ppb	100

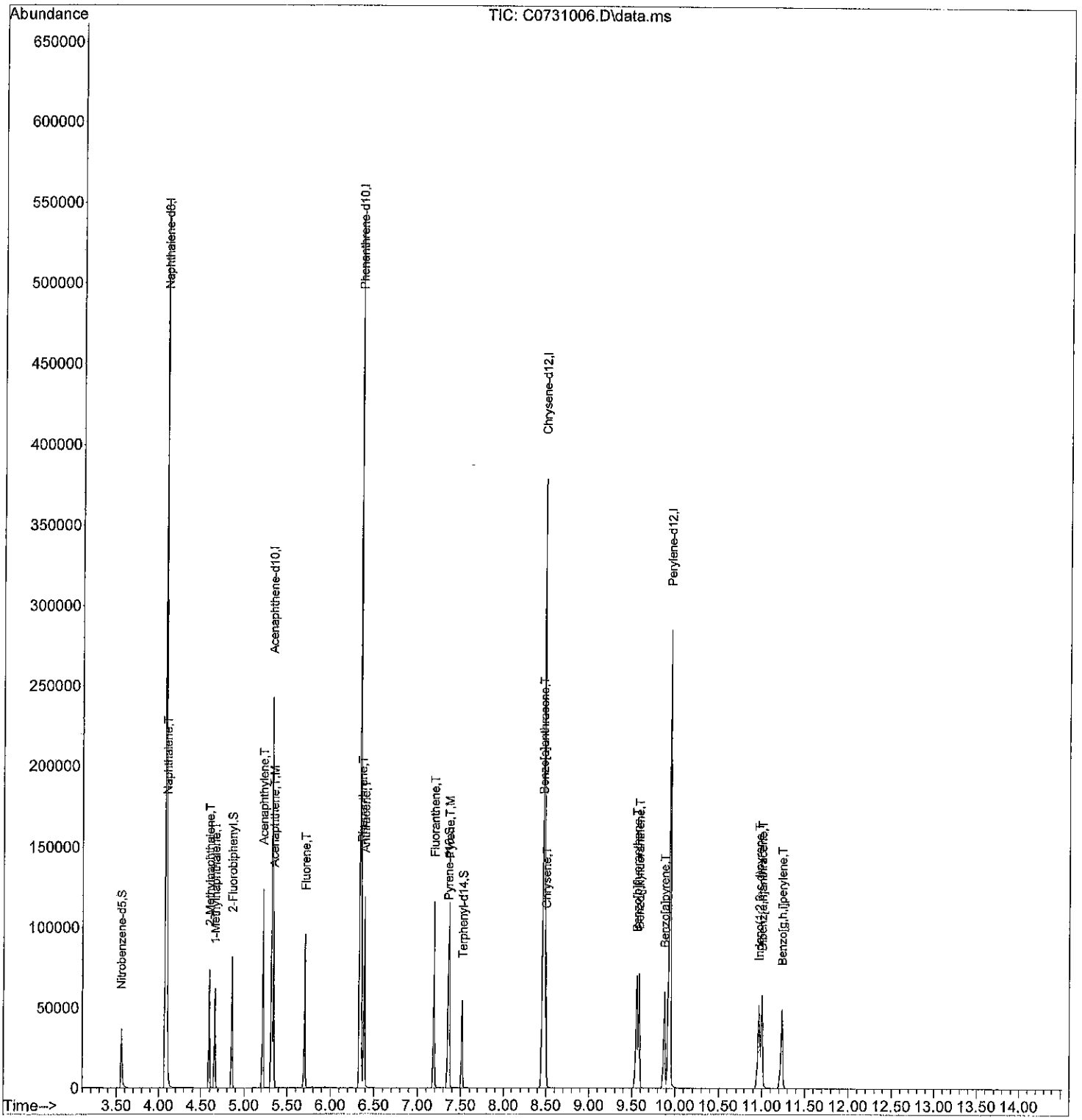
(#) = qualifier out of range (m) = manual integration (+) = signals summed

ET 7-31-18

Quantitation Report (Not Reviewed)

Data Path : C:\MSDCHEM\1\DATA\C180731\
Data File : C0731006.D
Acq On : 31 Jul 2018 2:35 pm
Operator :
Sample : PAH CCV0731-3
Misc : SV5-049-01
ALS Vial : 6 Sample Multiplier: 1

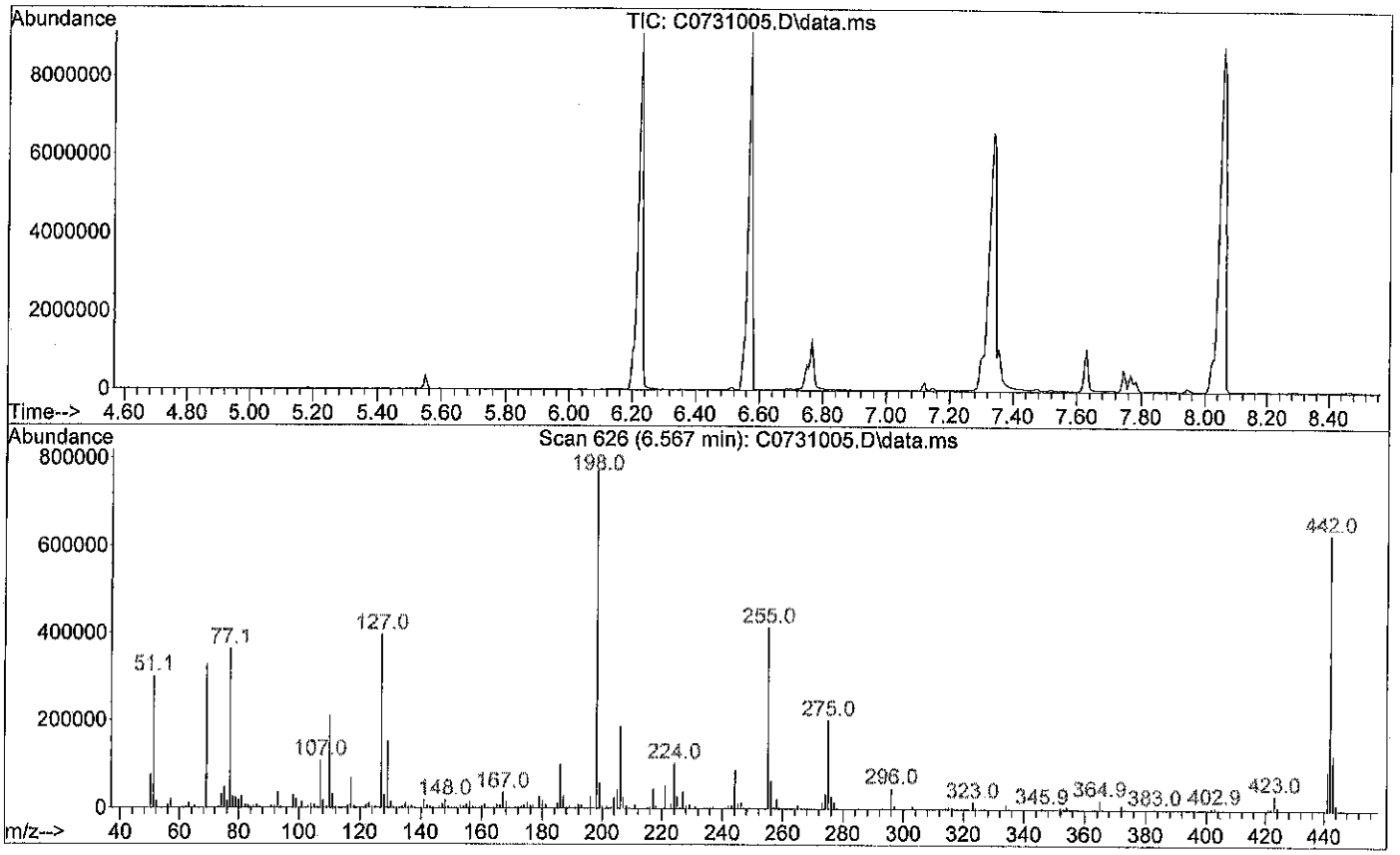
Quant Time: Jul 31 14:50:26 2018
Quant Method : C:\MSDCHEM\1\METHODS\CSIM0724.M
Quant Title : PAH'S BY SIMS
QLast Update : Tue Jul 24 15:09:29 2018
Response via : Initial Calibration



Data Path : X:\SEMIVOLS\COREY\DATA\C180731\
Data File : C0731005.D
Acq On : 31 Jul 2018 2:14 pm
Operator :
Sample : DFTPP
Misc : SV5-047-17
ALS Vial : 5 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\MSDCHEM\1\METHODS\SIMSCAN.M
Title : PAH'S BY SIMS
Last Update : Wed May 02 13:33:26 2012



Spectrum Information: Scan 626

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	80	38.6	300736	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	42.4	330112	PASS
70	69	0.00	2	0.7	2295	PASS
127	198	25	75	50.9	396544	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	778752	PASS
199	198	5	9	7.5	58104	PASS
275	198	10	30	26.0	202816	PASS
365	198	0.75	100	2.8	21720	PASS
441	443	0.01	100	69.8	89520	PASS
442	198	40	110	81.1	631872	PASS
443	442	15	24	20.3	128256	PASS

GC/MS QA-QC Check Report

Tune File : X:\SEMIVOLS\COREY\DATA\C180731\C0731005.D
Tune Time : 31 Jul 2018 2:14 pm

Daily Calibration File : X:\SEMIVOLS\COREY\DATA\C180731\C0731006.D

			(PRY)			(NPT)	(ACE)	(PHN)	
						471582	226681	424515	
						(CRY)	(PRY)		
						390118	371157		
File	Sample	Surrogate Recovery %				Internal Standard Responses			
C0731007.D									
	MB0731S1 R	93*	93*	99	101*	400131	185960	351202	
			321641		307931				
C0731008.D									
	SB0731S1	82	79	87	89	445406	214432	392759	
			359693		343211				
C0731009.D									
	SB0731S1 D	84	83	90	91	448038	209329	394686	
			363029		347015				
C0731010.D									
	07-159-03	76	74	85	86	450602	214492	398490	
			364197		346884				
C0731011.D									
	07-159-03	73	73	83	85	455445	214616	401600	
			367903		349422				
C0731012.D									
	07-159-03	77	75	86	86	409352	191964	358346	
			329654		312504				
C0731013.D									
	07-159-04	71	71	84	84	451029	209152	394022	
			360448		342725				
C0731014.D									
	07-159-08	76	75	84	86	433848	206412	386949	
			349430		331980				
C0731015.D									
	07-159-20	78	79	86	86	434465	202822	379289	
			345651		329335				
C0731016.D									
	07-159-24	68	75	85	85	444665	209669	377306	
			348843		333270				
C0731017.D									
	07-159-28	72	80	85	85	458373	212467	387415	
			358953		341612				
C0731018.D									
	07-159-30	75	84	85	85	450644	210373	389031	
			357964		343761				
C0731019.D									
	07-159-35	71	74	81	85	454787	210677	392154	
			353874		337076				
C0731020.D									

07-159-16	64	67	77	77	417927	194608	360562
			336597		323555		

(fails) - fails 12hr time check * - fails criteria

Created: Wed Aug 01 10:36:34 2018 Corey

Total Arsenic Data

KH 8/3/18

Sample	Label	Calc Conc.	Units	Date/Time
Blank	As 188.980	0.000	ppb	7/30/2018, 11:10:22 AM
Standard 5	As 188.980	100.00	ppb	7/30/2018, 11:14:49 AM
Standard 4	As 188.980	1000.0	ppb	7/30/2018, 11:19:15 AM
Standard 3	As 188.980	10000	ppb	7/30/2018, 11:23:41 AM
Standard 2	As 188.980	25000	ppb	7/30/2018, 11:28:07 AM
Initial Calib Verif	As 188.980	1071.9	ppb	7/30/2018, 11:39:14 AM
Intial Calib Blank	As 188.980	6.700uv	ppb	7/30/2018, 11:59:39 AM
LLV	As 188.980	106.23	ppb	7/30/2018, 1:27:43 PM
Cont Calib Verif	As 188.980	9816.6	ppb	7/30/2018, 1:33:03 PM
Cont Calib Blank	As 188.980	9.862uv	ppb	7/30/2018, 1:37:28 PM
ICSA	As 188.980	37.034	ppb	7/30/2018, 1:41:54 PM
ICSAB	As 188.980	2598.9	ppb	7/30/2018, 1:46:22 PM
MB0730SH1	As 188.980	28.796	ppb	7/30/2018, 1:52:23 PM
SB0730SH1	As 188.980	2104.8	ppb	7/30/2018, 1:56:50 PM
07-198-03a	As 188.980	116.79	ppb	7/30/2018, 2:01:17 PM
07-198-03a D	As 188.980	124.66	ppb	7/30/2018, 2:05:43 PM
07-198-03a L	As 188.980	35.113	ppb	7/30/2018, 2:10:09 PM
07-198-03a MS	As 188.980	2118.6	ppb	7/30/2018, 2:14:35 PM
07-198-03a MSD	As 188.980	2169.2	ppb	7/30/2018, 2:19:00 PM
07-211-02b	As 188.980	2176.1	ppb	7/30/2018, 2:23:25 PM
Cont Calib Verif	As 188.980	10302	ppb	7/30/2018, 2:27:51 PM
Cont Calib Blank	As 188.980	39.130	ppb	7/30/2018, 2:32:16 PM
MB0730SM1	As 188.980	11.758uv	ppb	7/30/2018, 2:40:50 PM
SB0730SM1	As 188.980	2159.9	ppb	7/30/2018, 2:45:17 PM
07-179-08a	As 188.980	103.04	ppb	7/30/2018, 2:49:43 PM
07-179-08a D	As 188.980	89.854	ppb	7/30/2018, 2:54:09 PM
07-179-08a L	As 188.980	17.993	ppb	7/30/2018, 2:58:35 PM
07-179-08a MS	As 188.980	2043.0	ppb	7/30/2018, 3:03:00 PM
07-179-08a MSD	As 188.980	2055.3	ppb	7/30/2018, 3:07:26 PM
07-210-01a	As 188.980	126.66	ppb	7/30/2018, 3:11:53 PM
07-210-02a	As 188.980	259.17	ppb	7/30/2018, 3:16:19 PM
Cont Calib Verif	As 188.980	10349	ppb	7/30/2018, 3:20:46 PM
Cont Calib Blank	As 188.980	14.571uv	ppb	7/30/2018, 3:25:13 PM
07-195-01a	As 188.980	69.135	ppb	7/30/2018, 3:30:31 PM
MB0730SM3	As 188.980	21.377uv	ppb	7/30/2018, 3:36:35 PM
SB0730SM3	As 188.980	2132.9	ppb	7/30/2018, 3:41:01 PM
07-159-03	As 188.980	36.040	ppb	7/30/2018, 3:45:26 PM
07-159-03 D	As 188.980	59.518	ppb	7/30/2018, 3:49:51 PM
07-159-03 L	As 188.980	17.021	ppb	7/30/2018, 3:54:17 PM
07-159-03 MS	As 188.980	2027.3	ppb	7/30/2018, 3:58:44 PM
07-159-03 MSD	As 188.980	2105.9	ppb	7/30/2018, 4:03:09 PM
07-197-02b	As 188.980	141.14	ppb	7/30/2018, 4:07:36 PM
07-197-04b	As 188.980	140.87	ppb	7/30/2018, 4:12:02 PM
Cont Calib Verif	As 188.980	10151	ppb	7/30/2018, 4:16:28 PM
Cont Calib Blank	As 188.980	23.986	ppb	7/30/2018, 4:20:55 PM
07-159-04	As 188.980	16.467	ppb	7/30/2018, 4:30:19 PM
07-159-08	As 188.980	31.609	ppb	7/30/2018, 4:34:45 PM
07-159-16	As 188.980	175.74	ppb	7/30/2018, 4:39:10 PM
07-159-20	As 188.980	37.151uv	ppb	7/30/2018, 4:43:36 PM
07-159-24	As 188.980	64.280	ppb	7/30/2018, 4:48:03 PM
07-159-28	As 188.980	43.450	ppb	7/30/2018, 4:52:30 PM
07-159-30	As 188.980	57.335	ppb	7/30/2018, 4:56:56 PM

P180730F1. Mean Only Report 8/3/2018, 9:16:54 AM

Sample	Label	Calc Conc.	Units	Date/Time
07-159-35	As 188.980	39.371	ppb	7/30/2018, 5:01:24 PM
07-204-06a	As 188.980	43.202uv	ppb	7/30/2018, 5:05:49 PM
Cont Calib Verif	As 188.980	10080	ppb	7/30/2018, 5:10:13 PM
Cont Calib Blank	As 188.980	10.949	ppb	7/30/2018, 5:14:37 PM