

ANALYTICAL RESULTS SHEET

EP-072

**Volatile Scan for Unknowns
(20 Largest Peaks > LOR)**

Batch No.: EM1201357

Units : ug/L

Sample I.D. : 7

Analyst GW

Client I.D. : DUP1-1016/6807

Initials:

Matrix : Water

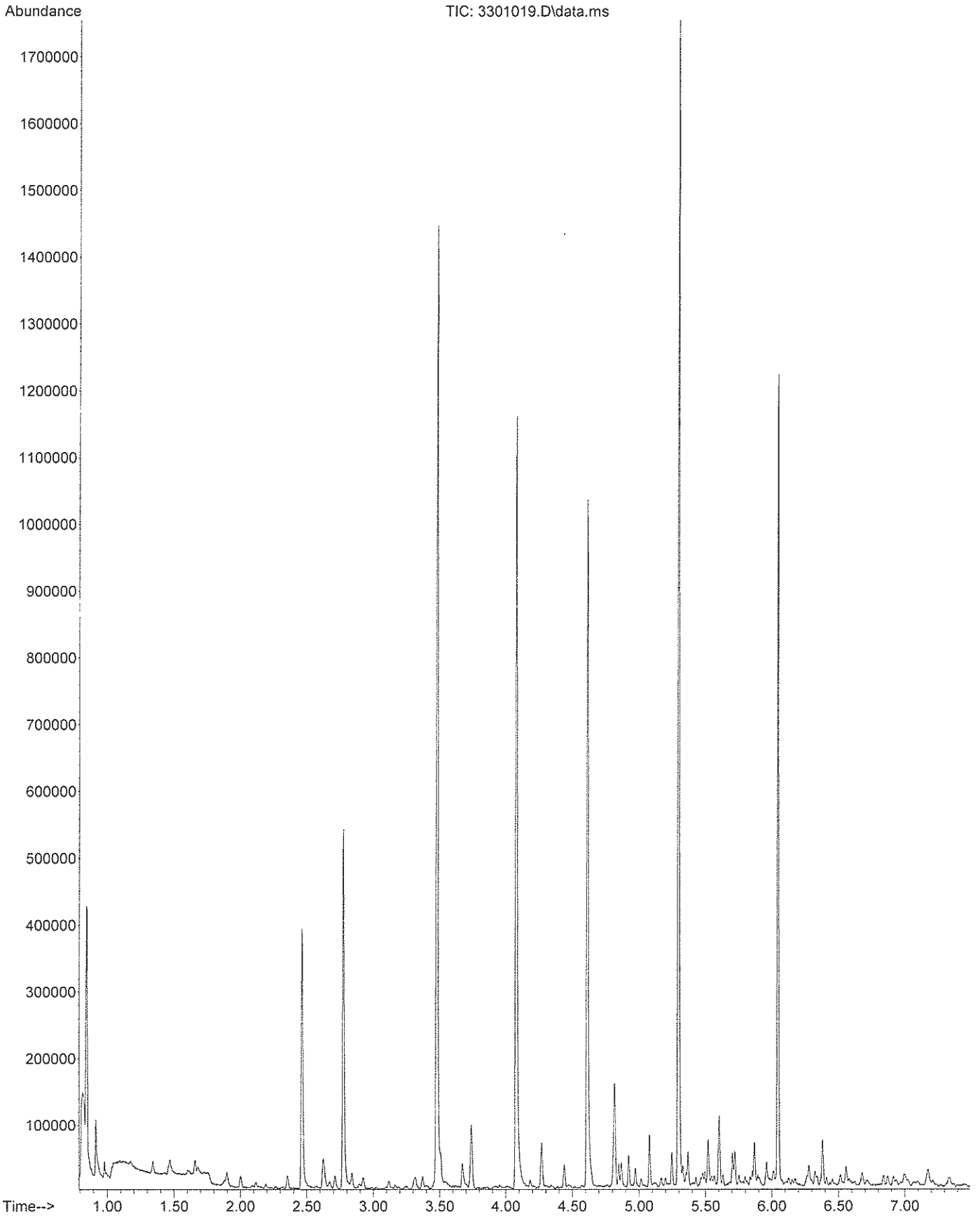
Extract Dilution : 1: 1

Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #	
1	2.63	76	Cyclohexane	57471	6.03	1

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 5 ug/L.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	2.77	1,4-Difluorobenzene	476278	50
2	4.08	Chlorobenzene-d5	1082621	50
3	5.30	1,4-Dichlorobenzene-d4	1351042	50
4	6.05	Napthalene-d8	855403	50

File : C:\msdchem\1\DATA\2566506\3301019.D
Operator : GW
Acquired : 14 Feb 2012 8:30 pm using AcqMethod FASTVOC.M
Instrument : VO5
Sample Name: 2566506_12
Misc Info : EM1201357-007
Vial Number: 33



ANALYTICAL RESULTS SHEET

EP-072

**Volatile Scan for Unknowns
(20 Largest Peaks > LOR)**

Batch No.: EM1201357
 Sample I.D. : 8
 Client I.D. : TRIP1-1016/6708
 Matrix : Water

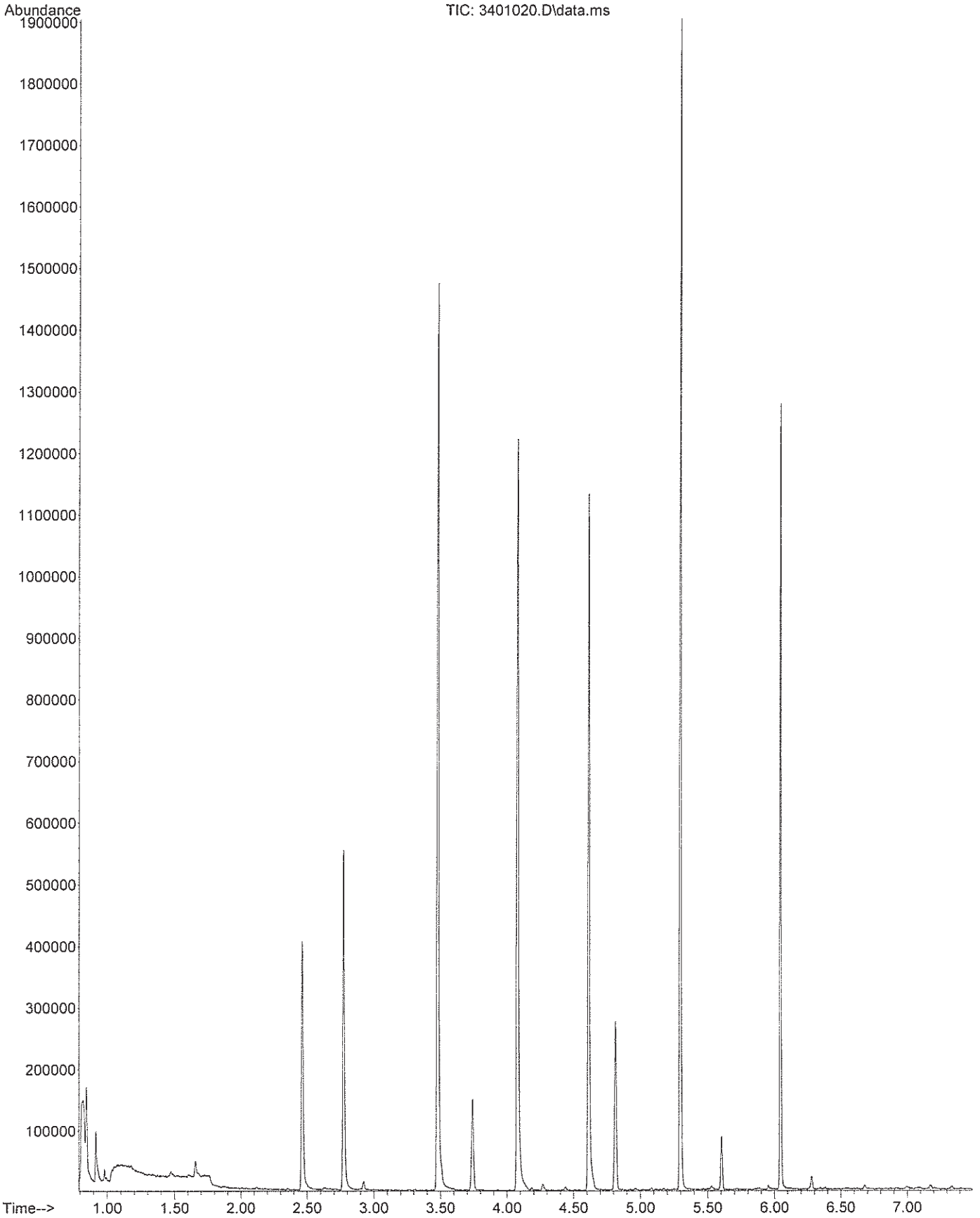
Units : ug/L
 Analyst GW
 Initials:
 Extract Dilution : 1: 1

Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
NO VOC COMPOUNDS DETECTED ABOVE LOR					

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 5 ug/L.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	2.77	1,4-Difluorobenzene	501522	50
2	4.08	Chlorobenzene-d5	1119389	50
3	5.30	1,4-Dichlorobenzene-d4	1411243	50
4	6.05	Napthalene-d8	860588	50

File :C:\msdchem\1\DATA\2566506\3401020.D
Operator : GW
Acquired : 14 Feb 2012 8:47 pm using AcqMethod FASTVOC.M
Instrument : VO5
Sample Name: 2566506_13
Misc Info : EM1201357-008
Vial Number: 34



ANALYTICAL RESULTS SHEET

EP-072

**Volatile Scan for Unknowns
(20 Largest Peaks > LOR)**

Batch No.: EM1201357

Units : ug/L

Sample I.D. : 10

Analyst GW

Client I.D. : TRIP2-1016/67010

Initials:

Matrix : Water

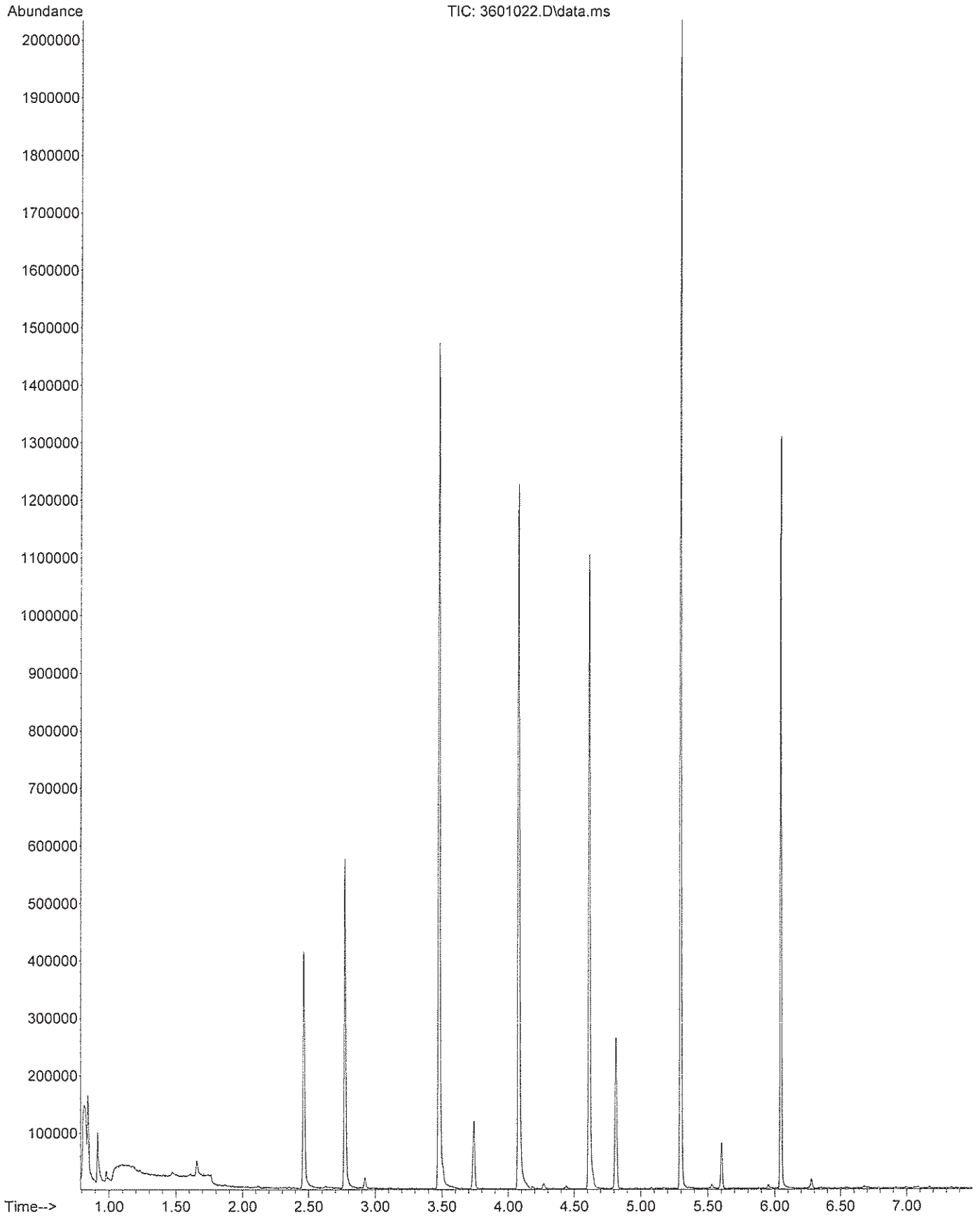
Extract Dilution : 1: 1

Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
NO VOC COMPOUNDS DETECTED ABOVE LOR					

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 5 ug/L.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	2.77	1,4-Difluorobenzene	503154	50
2	4.08	Chlorobenzene-d5	1136653	50
3	5.30	1,4-Dichlorobenzene-d4	1457184	50
4	6.05	Napthalene-d8	923439	50

File :C:\msdchem\1\DATA\2566506\3601022.D
Operator : GW
Acquired : 14 Feb 2012 9:22 pm using AcqMethod FASTVOC.M
Instrument : VO5
Sample Name: 2566506_15
Misc Info : EM1201357-010
Vial Number: 36



ANALYTICAL RESULTS SHEET

EP-072

**Volatile Scan for Unknowns
(20 Largest Peaks > LOR)**

Batch No.: EM1201357

Units : ug/L

Sample I.D. : 12

Analyst GW

Client I.D. : TRIP3-10110/6712

Initials:

Matrix : Water

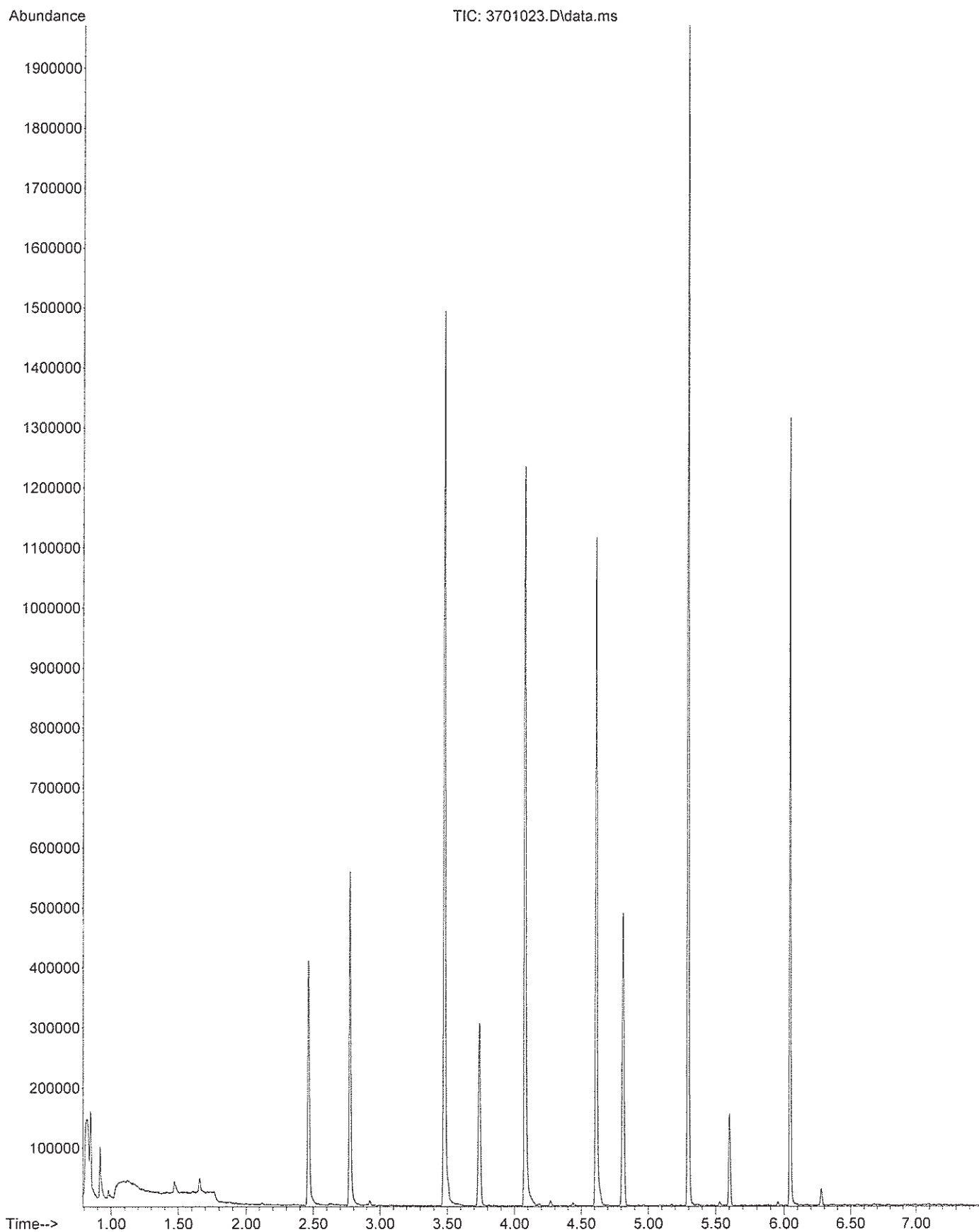
Extract Dilution : 1: 1

Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
NO VOC COMPOUNDS DETECTED ABOVE LOR					

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 5 ug/L.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	2.77	1,4-Difluorobenzene	513009	50
2	4.08	Chlorobenzene-d5	1129506	50
3	5.30	1,4-Dichlorobenzene-d4	1434262	50
4	6.05	Napthalene-d8	877714	50

File :C:\msdchem\1\DATA\2566506\3701023.D
Operator : GW
Acquired : 14 Feb 2012 9:39 pm using AcqMethod FASTVOC.M
Instrument : VO5
Sample Name: 2566506_16
Misc Info : EM1201357-012
Vial Number: 37



ANALYTICAL RESULTS SHEET

EP-073

Semivolatile Scan for Unknowns

SHEET414/0

(20 Largest Peaks > LOR)

Batch No.: EM1201357

Matrix : Water

Sample I.D. : 1

Units : ug/L

Analyst : PTN

Client I.D. : SW1-1051/6001

Sample Amt (mL) : 106.53

Final Volume (mL): 1.0

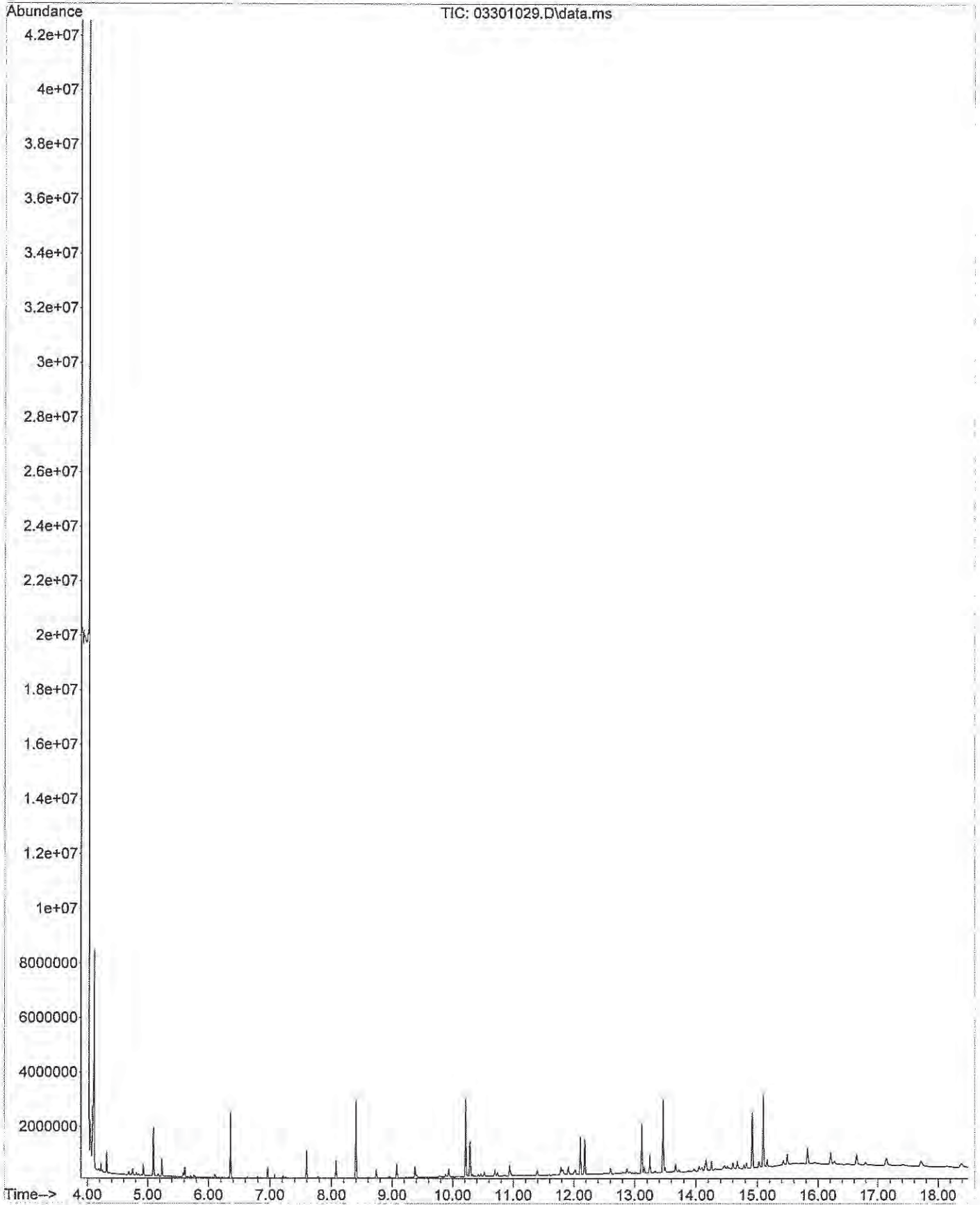
Extract Dilution : 1: 1

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	4.12	94	Ethyl-cyclohexane	6552132	809	1
2	4.32	95	Bicyclo[4.2.0]octa-1,3,5-triene	563790	70	1
3	4.75	92	Benzaldehyde	296119	37	1
4	8.74	97	Dodecanoic acid	356560	26	3
5	10.94	95	Tetradecanoic acid	493791	34	4
6	11.78	96	(Z,Z)-9,12-Octadecadienoic acid	323066	22	4
7	11.90	96	Octadecanoic acid	381224	26	4
8	15.16	95	Substituted alkane	284871	20	6
9	15.49	95	Substituted alkane	481944	33	6
10	15.83	96	Substituted alkane	763286	53	6
11	16.21	94	Substituted alkane	548154	38	6
12	16.64	95	Substituted alkane	764381	53	6
13	17.14	95	Substituted alkane	494914	34	6

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 2 ug/L.

IS #	R.T.	Internal Standard	Area	Amount
1	5.10	1,4-Dichlorobenzene-d4	1520774	20
2	6.36	Naphthalene-d8	2025553	20
3	8.40	Acenaphthene-d10	2546777	20
4	10.22	Phenanthrene-d10	2735495	20
5	13.47	Chrysene-d12	2928389	20
6	15.10	Perylene-d12	2702562	20

File :D:\DATA\2566306\03301029.D
Operator : AW SV14
Acquired : 15 Feb 2012 1:48 am using AcqMethod SVOCLVI.M
Instrument : SV14
Sample Name: 2566306_1
Misc Info : SW1-1051/6001
Vial Number: 33



ANALYTICAL RESULTS SHEET

EP-073

Semivolatile Scan for Unknowns

(20 Largest Peaks > LOR)

SHEET414/0

Batch No.: EM1201357

Matrix : Water

Sample I.D. : 2

Units : ug/L

Analyst : PTN

Client I.D. : SW2-1052/6002

Sample Amt (mL) : 106.44

Final Volume (mL): 1.0

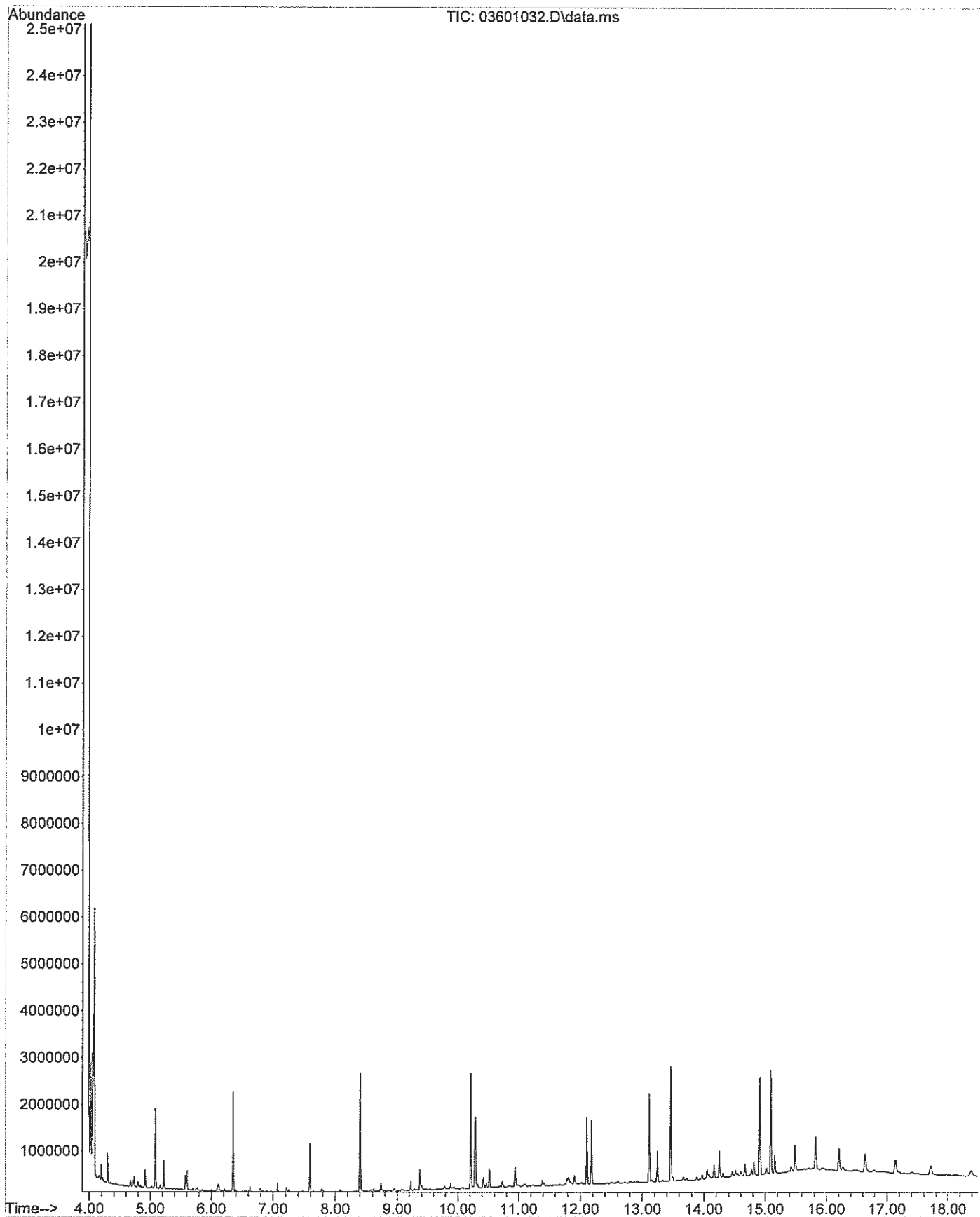
Extract Dilution : 1: 1

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	4.08	94	Ethyl-cyclohexane	5785040	793	1
2	4.29	90	Bicyclo[4.2.0]octa-1,3,5-triene	492474	67	1
3	4.73	92	Benzaldehyde	282079	39	1
4	10.94	94	Hexadecanoic acid	518012	39	4
5	14.82	90	Substituted alkane	365267	25	5
6	15.15	95	Substituted alkane	440248	34	6
7	15.49	97	Substituted alkane	712321	55	6
8	15.82	96	Substituted alkane	999576	77	6
9	16.21	97	Substituted alkane	741867	57	6
10	16.64	95	Substituted alkane	738132	57	6
11	17.13	96	Substituted alkane	493797	38	6

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 2 ug/L.

IS #	R.T.	Internal Standard	Area	Amount
1	5.08	1,4-Dichlorobenzene-d4	1371177	20
2	6.35	Naphthalene-d8	1799276	20
3	8.40	Acenaphthene-d10	2347378	20
4	10.22	Phenanthrene-d10	2488888	20
5	13.46	Chrysene-d12	2708590	20
6	15.09	Perylene-d12	2440952	20

File :D:\DATA\2566306\03601032.D
Operator : AW SV14
Acquired : 15 Feb 2012 3:09 am using AcqMethod SVOCLVI.M
Instrument : SV14
Sample Name: 2566306_2
Misc Info : SW2-1052/6002
Vial Number: 36



ANALYTICAL RESULTS SHEET

EP-073

Semivolatile Scan for Unknowns

(20 Largest Peaks > LOR)

SHEET414/0

Batch No.: EM1201357

Matrix : Water

Sample I.D. : 3

Units : ug/L

Analyst : PTN

Client I.D. : SW3-1043/6003

Sample Amt (mL) : 106.62

Final Volume (mL): 1.0

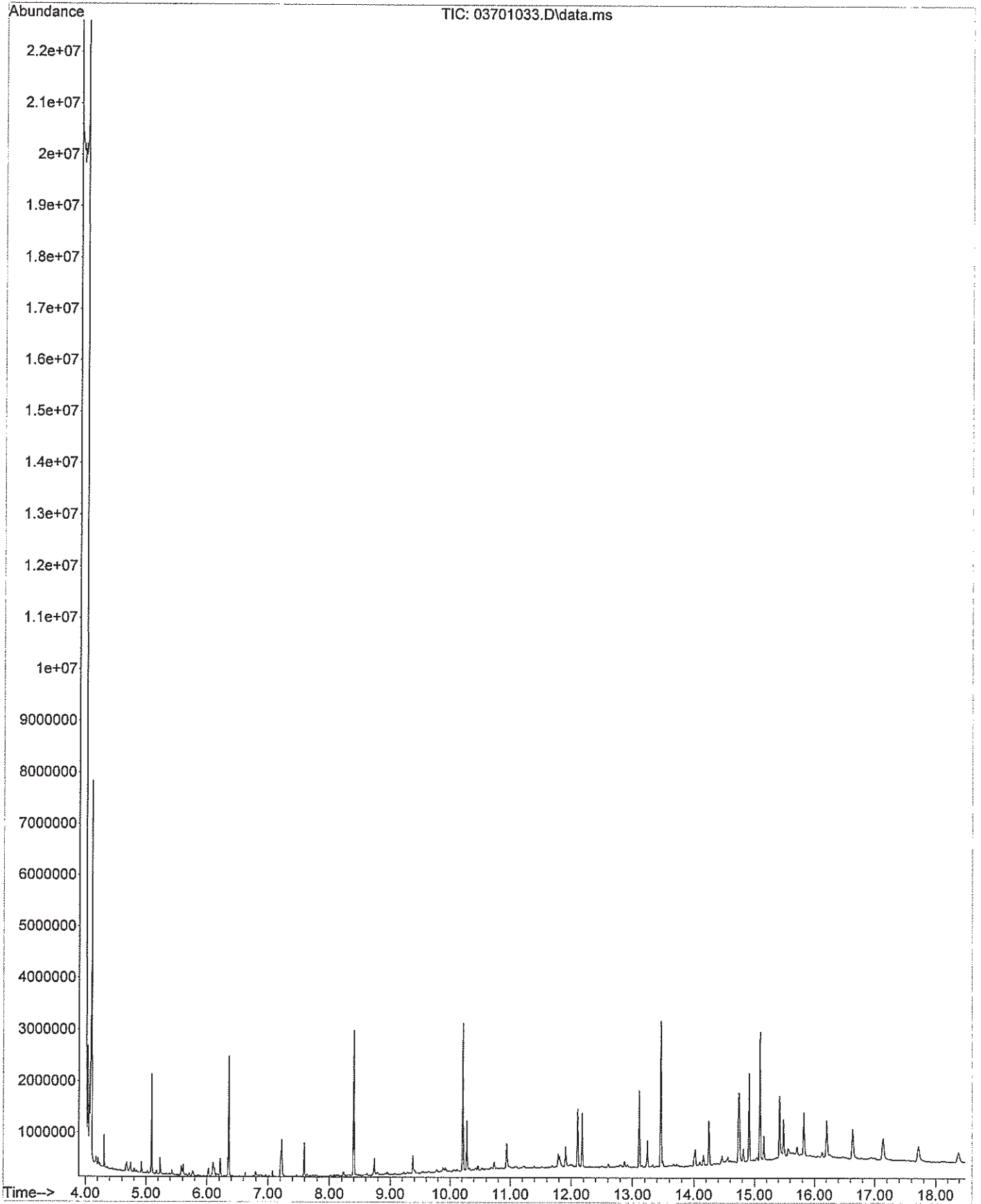
Extract Dilution : 1: 1

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	4.04	93	1,4-Dimethyl-cyclohexane	1392446	166	1
2	4.10	94	Ethyl-cyclohexane	6362357	759	1
3	8.74	97	Dodecanoic acid	457160	33	3
4	10.94	96	Hexadecanoic acid	631340	43	4
5	11.78	96	(Z,Z)-9,12-Octadecadienoic acid	285758	19	4
6	11.91	96	Octadecanoic acid	466781	32	4
7	15.15	95	Substituted alkane	555520	38	6
8	15.49	96	Substituted alkane	817171	55	6
9	15.82	97	Substituted alkane	1177822	80	6
10	16.21	97	Substituted alkane	1040362	70	6
11	16.64	96	Substituted alkane	1119758	76	6
12	17.14	95	Substituted alkane	942554	64	6
13	17.71	96	Substituted alkane	821531	56	6

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- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 2 ug/L.

IS #	R.T.	Internal Standard	Area	Amount
1	5.09	1,4-Dichlorobenzene-d4	1571674	20
2	6.36	Naphthalene-d8	1988160	20
3	8.40	Acenaphthene-d10	2568183	20
4	10.22	Phenanthrene-d10	2767804	20
5	13.46	Chrysene-d12	3007189	20
6	15.10	Perylene-d12	2774803	20

File :D:\DATA\2566306\03701033.D
Operator : AW SV14
Acquired : 15 Feb 2012 3:35 am using AcqMethod SVOCLVI.M
Instrument : SV14
Sample Name: 2566306_3
Misc Info : SW3-1043/6003
Vial Number: 37



ANALYTICAL RESULTS SHEET

EP-073

Semivolatile Scan for Unknowns
(20 Largest Peaks > LOR)

SHEET414/0

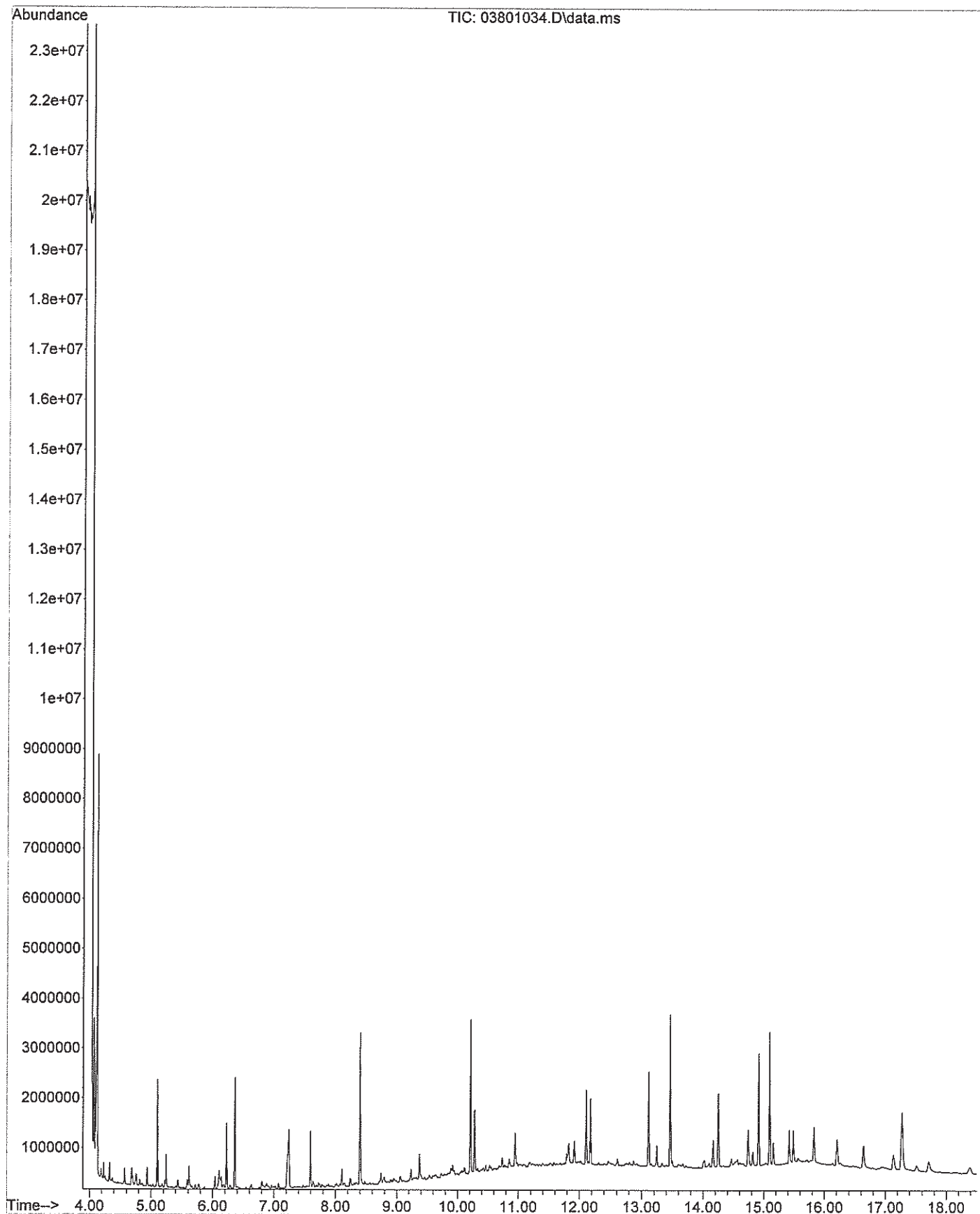
Batch No.: EM1201357
Sample I.D.: 4
Analyst: PTN
Sample Amt (mL): 106.35Matrix: Water
Units: ug/L
Client I.D.: SW4-1034/6004
Final Volume (mL): 1.0
Extract Dilution: 1: 1

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	4.07	95	1,4-Dimethyl-cyclohexane	1538635	180	1
2	4.13	94	Ethyl-cyclohexane	6383628	746	1
3	4.33	91	Bicyclo[4.2.0]octa-1,3,5-triene	290800	34	1
4	4.76	95	[1aR-(1a.alpha.,4a.alpha.,7.alpha.,7a.beta.,7b.alpha.)]-decahydro-1,1,7-trimethyl-4-methylene-1H-Cycloprop[e]azulene	315960	37	1
5	6.14	95	Benzoic acid	255706	30	1
6	10.95	95	Hexadecanoic acid	799560	52	4
7	11.92	95	Octadecanoic acid	591171	39	4
8	14.74	90	2-Hydroxy-cyclopentadecanone	1060036	64	5
9	15.16	95	Substituted alkane	522897	35	6
10	15.49	96	Substituted alkane	806569	54	6
11	15.83	97	Substituted alkane	1077487	72	6
12	16.21	97	Substituted alkane	817868	55	6
13	16.64	95	Substituted alkane	935170	63	6
14	17.13	95	Substituted alkane	626270	42	6
15	17.71	84	3-Methyl-heneicosane	510130	34	6

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 2 ug/L.

IS #	R.T.	Internal Standard	Area	Amount
1	5.11	1,4-Dichlorobenzene-d4	1608524	20
2	6.36	Naphthalene-d8	2027878	20
3	8.40	Acenaphthene-d10	2788448	20
4	10.22	Phenanthrene-d10	2879122	20
5	13.47	Chrysene-d12	3097562	20
6	15.10	Perylene-d12	2802746	20

File :D:\DATA\2566306\03801034.D
Operator : AW SV14
Acquired : 15 Feb 2012 4:02 am using AcqMethod SVOCLVI.M
Instrument : SV14
Sample Name: 2566306_4
Misc Info : SW4-1034/6004
Vial Number: 38



ANALYTICAL RESULTS SHEET

EP-073

Semivolatile Scan for Unknowns
(20 Largest Peaks > LOR)

SHEET414/0

Batch No.: EM1201357

Sample I.D. : 5

Analyst : PTN

Sample Amt (mL) : 106.22

Matrix : Water

Units : ug/L

Client I.D. : SW5-1025/6005

Final Volume (mL): 1.0

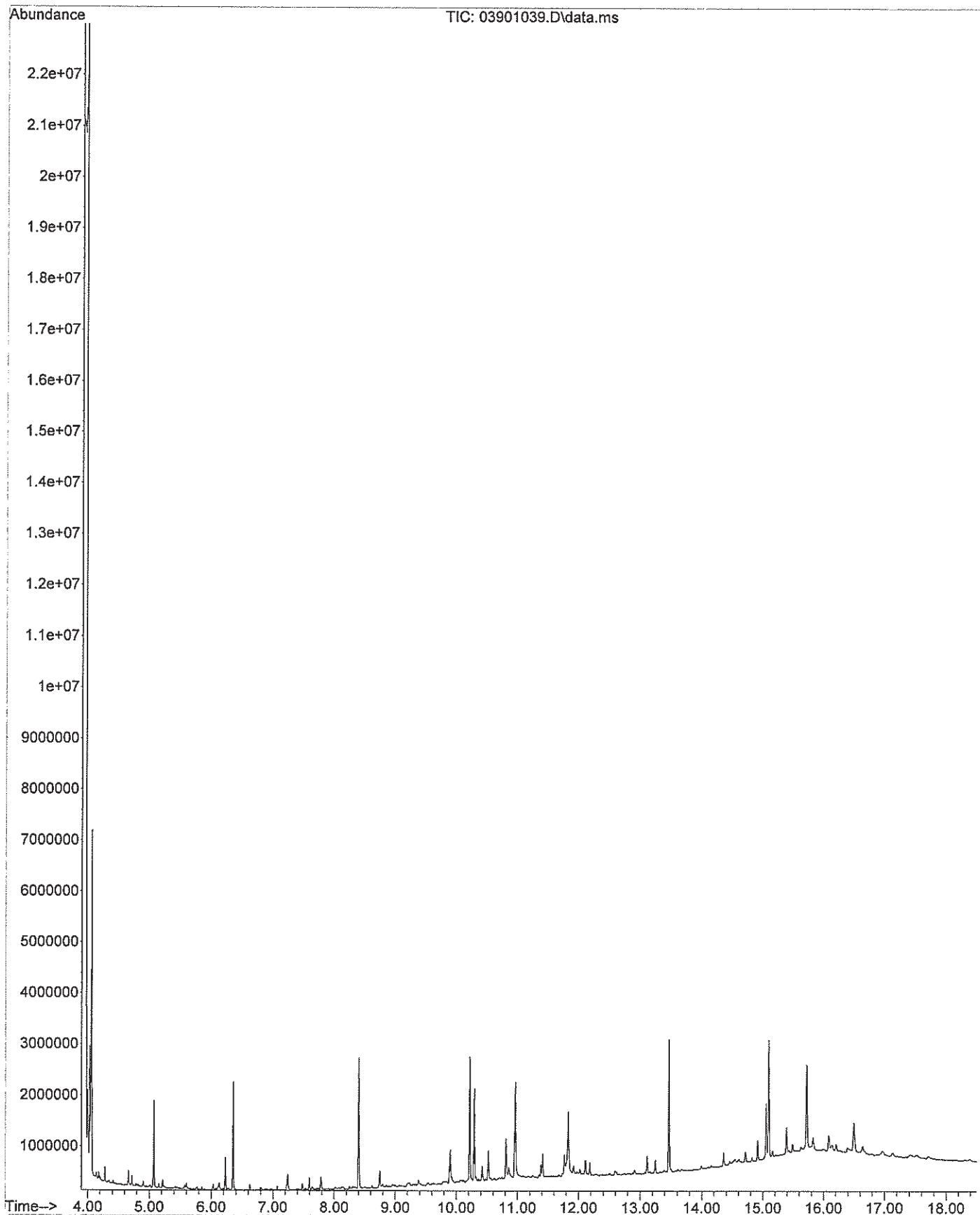
Extract Dilution : 1: 5

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	3.99	81	1,4-Dimethyl-cyclohexane	1160804	803	1
2	4.06	94	Ethyl-cyclohexane	5708942	3951	1
3	8.75	96	Dodecanoic acid	449001	183	3
4	9.90	96	Tetradecanoic acid	978452	399	3
5	10.97	95	Hexadecanoic acid	2598468	989	4
6	11.84	94	Methyl ester Hexadecatrienoic acid	1957638	745	4
7	15.06	93	Octadecanoic acid	1106222	367	5
8	15.72	91	Hexadecyl ester tetradecanoic acid	2010871	754	6

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 2 ug/L.

IS #	R.T.	Internal Standard	Area	Amount
1	5.07	1,4-Dichlorobenzene-d4	1360274	20
2	6.35	Naphthalene-d8	1763097	20
3	8.40	Acenaphthene-d10	2306414	20
4	10.22	Phenanthrene-d10	2473464	20
5	13.47	Chrysene-d12	2837554	20
6	15.10	Perylene-d12	2509351	20

File :D:\DATA\2566306\03901039.D
Operator : AW SV14
Acquired : 15 Feb 2012 6:17 am using AcqMethod SVOCLVI.M
Instrument : SV14
Sample Name: 2566306_5 x5
Misc Info : SW5-1025/6005
Vial Number: 39



ANALYTICAL RESULTS SHEET

EP-073

Semivolatile Scan for Unknowns

SHEET414/0

(20 Largest Peaks > LOR)

Batch No.: EM1201357

Matrix : Water

Sample I.D. : 6

Units : ug/L

Analyst : PTN

Client I.D. : SW6-1016/6006

Sample Amt (mL) : 105.7

Final Volume (mL): 1.0

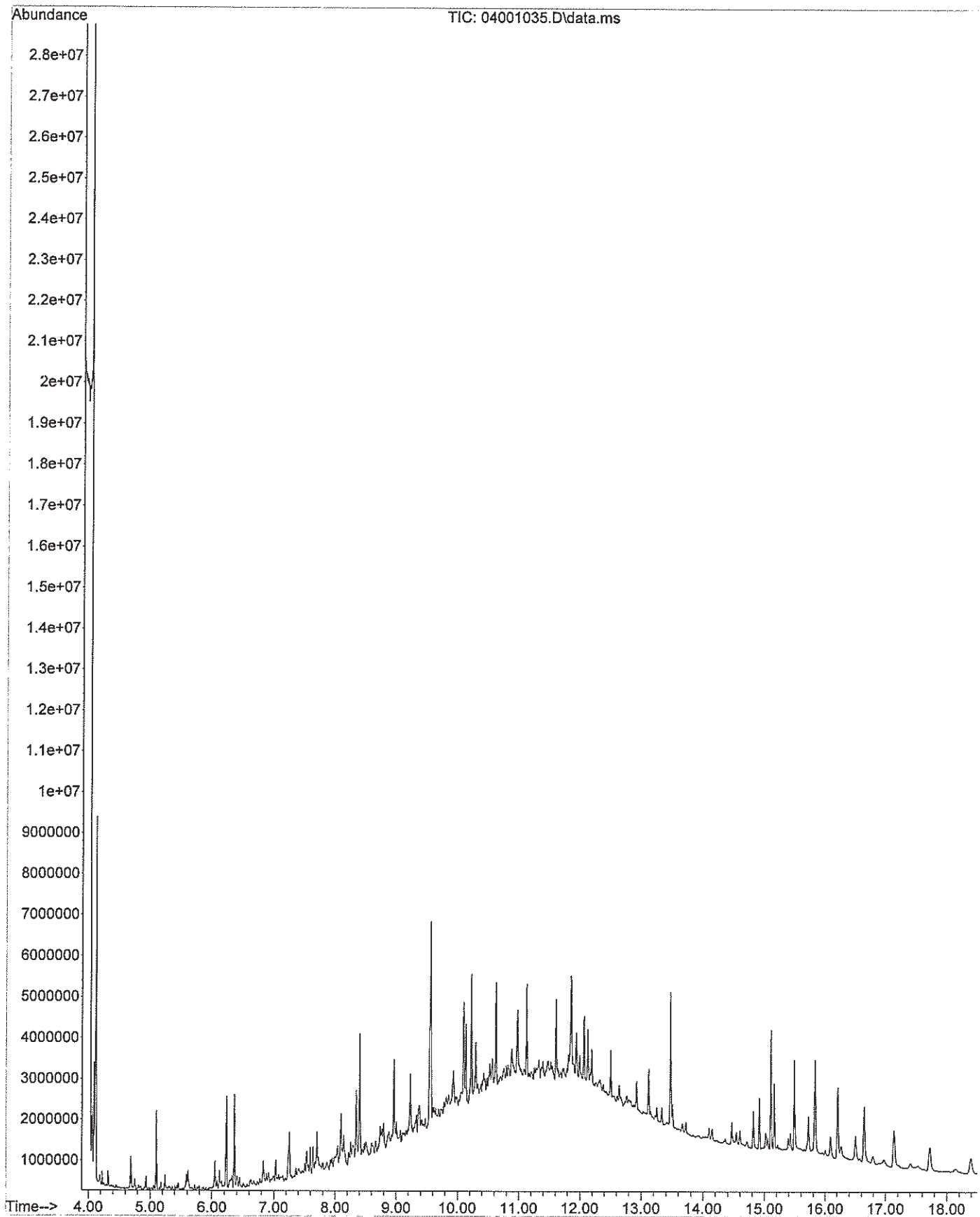
Extract Dilution : 1: 1

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	4.12	94	Ethyl-cyclohexane	6442774	781	1
2	8.35	91	Substituted alkane	1574139	140	2
3	8.96	93	Substituted alkane	1816879	110	3
4	9.23	92	2,6,11-Trimethyl-dodecane	1788928	108	3
5	9.56	97	2,6,10,14-Tetramethyl-pentadecane	7464004	451	3
6	10.10	96	Substituted alkane	2193994	132	3
7	10.14	95	2,6,10-Trimethyl-dodecane	2075468	125	3
8	10.63	95	Substituted alkane	2386198	148	4
9	10.98	95	Substituted alkane	1981579	123	4
10	11.13	97	Substituted alkane	2349288	146	4
11	11.61	94	Substituted alkane	2107170	131	4
12	11.86	94	Methyl ester hexadecatrienoic acid	3575565	222	4
13	12.07	93	3-Methyl-heneicosane	1543588	96	4
14	15.16	96	Substituted alkane	1711513	109	6
15	15.49	99	Substituted alkane	2654074	169	6
16	15.83	97	Substituted alkane	3524699	225	6
17	16.21	96	Substituted alkane	2545077	162	6
18	16.65	96	Substituted alkane	2725769	174	6
19	17.14	97	Substituted alkane	2152477	137	6
20	17.72	95	Substituted alkane	1648002	105	6

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- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 2 ug/L.

IS #	R.T.	Internal Standard	Area	Amount
1	5.10	1,4-Dichlorobenzene-d4	1561246	20
2	6.36	Naphthalene-d8	2131620	20
3	8.41	Acenaphthene-d10	3134193	20
4	10.23	Phenanthrene-d10	3042775	20
5	13.48	Chrysene-d12	3226861	20
6	15.11	Perylene-d12	2966034	20

File :D:\DATA\2566306\04001035.D
Operator : AW SV14
Acquired : 15 Feb 2012 4:29 am using AcqMethod SVOCLVI.M
Instrument : SV14
Sample Name: 2566306_6
Misc Info : SW6-1016/6006
Vial Number: 40



ANALYTICAL RESULTS SHEET

EP-073

Semivolatile Scan for Unknowns

SHEET414/0

(20 Largest Peaks > LOR)

Batch No.: EM1201357

Matrix : Water

Sample I.D. : 7

Units : ug/L

Analyst : PTN

Client I.D. : DUP1_1016/6807

Sample Amt (mL) : 105.37

Final Volume (mL): 1.0

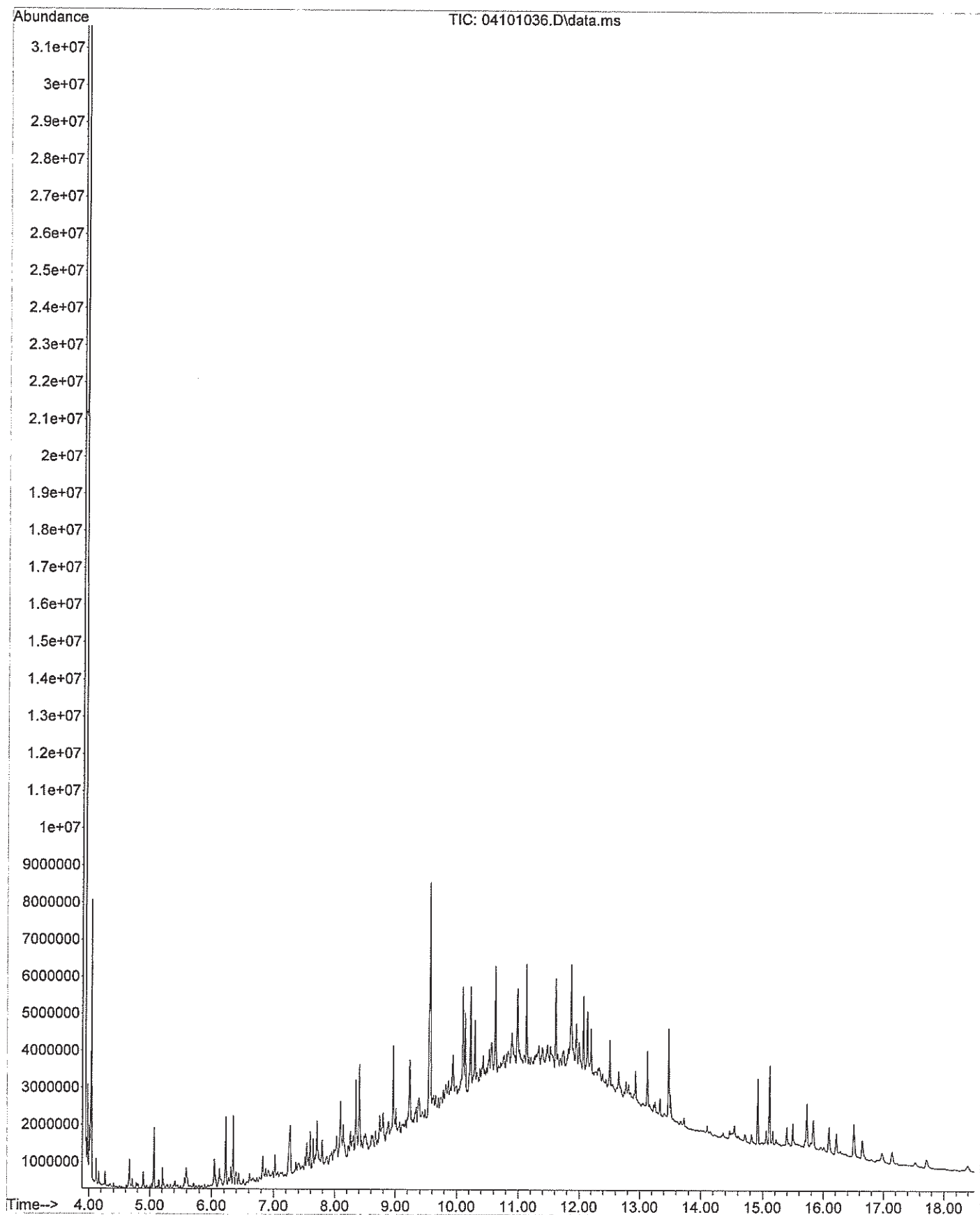
Extract Dilution : 1: 1

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	3.98	93	1,4-Dimethyl-cyclohexane	1251800	184	1
2	4.04	94	Ethyl-cyclohexane	5867934	863	1
3	7.70	91	Substituted alkane	1919437	219	2
4	8.35	91	Substituted alkane	1922761	220	2
5	8.96	94	Substituted alkane	2115795	153	3
6	9.23	91	2,6,11-Trimethyl-dodecane	2145689	155	3
7	9.57	97	2,6,10,14-Tetramethyl-pentadecane	9236605	669	3
8	10.10	93	Substituted alkane	2498157	181	3
9	10.14	95	2,6,10-Trimethyl-dodecane	2457009	178	3
10	10.63	95	Substituted alkane	2770297	213	4
11	11.13	97	Substituted alkane	2647565	204	4
12	11.61	93	Substituted alkane	2493339	192	4
13	11.87	94	Methyl ester hexadecatrienoic acid	2767020	213	4
14	12.07	93	3-Methyl-heneicosane	1796869	138	4
15	12.50	97	Substituted alkane	1194655	92	4
16	15.49	93	Substituted alkane	598524	47	6
17	15.83	91	Substituted alkane	1176927	93	6
18	16.21	95	Substituted alkane	760613	60	6
19	16.64	94	Substituted alkane	1072502	84	6
20	17.15	93	Substituted alkane	565011	44	6

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 2 ug/L.

IS #	R.T.	Internal Standard	Area	Amount
1	5.07	1,4-Dichlorobenzene-d4	1291064	20
2	6.35	Naphthalene-d8	1661781	20
3	8.41	Acenaphthene-d10	2619993	20
4	10.23	Phenanthrene-d10	2466197	20
5	13.48	Chrysene-d12	2704676	20
6	15.11	Perylene-d12	2413054	20

File :D:\DATA\2566306\04101036.D
Operator : AW SV14
Acquired : 15 Feb 2012 4:56 am using AcqMethod SVOCLVI.M
Instrument : SV14
Sample Name: 2566306_7
Misc Info : DUP1_1016/6807
Vial Number: 41



Environmental Division

CERTIFICATE OF ANALYSIS

Work Order : **EM1201357**
 Client : **GOLDER ASSOCIATES**
 Contact : Niamh McCormack
 Address : P O BOX 6079
 Building 7, 570-588 Swan St, Richmond, VIC. 3121
 HAWTHORN WEST VIC, AUSTRALIA 3122
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 Telephone : +61 03 8862 3500
 Facsimile : +61 03 8862 3501
 Project : 117613201
 Order number : GA-MELB 332509
 C-O-C number : ----
 Sampler : NM
 Site : F-VIC
 Quote number : ME/054/12

Page : 1 of 22
 Laboratory : Environmental Division Melbourne
 Contact : Samantha Smith
 Address : 4 Westall Rd Springvale VIC Australia 3171
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 Telephone : +61-3-8549 9644
 Facsimile : +61-3-8549 9601
 QC Level : NEPM 1999 Schedule B(3) and ALS QCS3 requirement
 Date Samples Received : 09-FEB-2012
 Issue Date : 21-FEB-2012
 No. of samples received : 10
 No. of samples analysed : 10

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



NATA Accredited Laboratory 825
 Accredited for compliance with
 ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics
Nancy Wang	Senior Semivolatile Instrument Chemist	Melbourne Organics
Phalak Inthaksono	Laboratory Manager - Organics	Sydney Organics
Xingbin Lin	Senior Organic Chemist	Melbourne Organics



Page : 2 of 22
Work Order : EM1201357
Client : GOLDER ASSOCIATES
Project : 117613201

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

- EG020F: Results for EM1201357-006 and 007 have been confirmed by re-preparation and re-analysis.
- EP066/068/075: EM1201357-005 Particular sample required dilution prior to analysis due to matrix interferences. LOR values have been adjusted accordingly.
- EP071: Particular samples EM1201357-002,003,004 have LOR raised due to laboratory background.
- EP076: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
- EP231: PFOA & PFOS results are reported as an aggregate of linear and branched isomers. Matrix spike recoveries for PFOA, PFOS and 62FTS not determined due to high background levels of target analytes.
- Perchlorates conducted by ALS Sydney, NATA accreditation no. 825, site no 10911.



Analytical Results

Sub-Matrix: SURFACE WATER

Compound	CAS Number	LOR	Client sampling data / time		SW1-1051/6001 08-FEB-2012 15:00 EM1201357-001	SW2-1052/6002 08-FEB-2012 15:00 EM1201357-002	SW3-1043/6003 08-FEB-2012 15:00 EM1201357-003	SW4-1034/6004 08-FEB-2012 15:00 EM1201357-004	SW5-1025/6005 08-FEB-2012 15:00 EM1201357-005
			Unit	Unit					
EG020F: Dissolved Metals by ICP-MS									
Arsenic	7440-38-2	0.001	mg/L	0.001	0.001	0.002	0.002	0.001	0.002
Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	7440-50-8	0.001	mg/L	0.002	0.003	0.004	0.003	<0.001	<0.001
Nickel	7440-02-0	0.001	mg/L	0.003	0.004	0.002	0.002	<0.001	0.003
Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Zinc	7440-66-6	0.005	mg/L	0.006	0.013	0.010	<0.005	<0.005	0.006
EG035F: Dissolved Mercury by FIMS									
Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	1	µg/L	<1	<1	<1	<1	<1	<5
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
beta-BHC	319-85-7	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
gamma-BHC	58-89-9	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
delta-BHC	319-86-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
Heptachlor	76-44-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
Aldrin	309-00-2	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
Dieldrin	60-57-1	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
4,4'-DDE	72-55-9	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
Endrin	72-20-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
4,4'-DDD	72-54-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
4,4'-DDT	50-29-3	2	µg/L	<2	<2	<2	<2	<2	<10
Endrin ketone	53494-70-5	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
Methoxychlor	72-43-5	2	µg/L	<2	<2	<2	<2	<2	<10
EP068B: Organophosphorus Pesticides (OP)									
Dichlorvos	62-73-7	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5
Monocrotophos	6923-22-4	2	µg/L	<2	<2	<2	<2	<2	<10
Dimethoate	60-51-5	0.5	µg/L	<0.5	<0.5	<0.5	<0.5	<0.5	<2.5



Analytical Results

Sub-Matrix: SURFACE WATER

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID	
			SW1-1051/6001	SW2-1052/6002	SW3-1043/6003	SW4-1034/6004	SW5-1025/6005
EP068B: Organophosphorus Pesticides (OP) - Continued						
Diazinon	333-41-5	0.5	<0.5	<0.5	<0.5	<2.5
Chlorpyrifos-methyl	5598-13-0	0.5	<0.5	<0.5	<0.5	<2.5
Parathion-methyl	298-00-0	2	<2	<2	<2	<10
Malathion	121-75-5	0.5	<0.5	<0.5	<0.5	<2.5
Fenthion	55-38-9	0.5	<0.5	<0.5	<0.5	<2.5
Chlorpyrifos	2921-88-2	0.5	<0.5	<0.5	<0.5	<2.5
Parathion	56-38-2	2	<2	<2	<2	<10
Pirimphos-ethyl	23505-41-1	0.5	<0.5	<0.5	<0.5	<2.5
Chlorfenvinphos	470-90-6	0.5	<0.5	<0.5	<0.5	<2.5
Bromophos-ethyl	4824-78-6	0.5	<0.5	<0.5	<0.5	<2.5
Fenamiphos	22224-92-6	0.5	<0.5	<0.5	<0.5	<2.5
Prothiofos	34643-46-4	0.5	<0.5	<0.5	<0.5	<2.5
Ethion	563-12-2	0.5	<0.5	<0.5	<0.5	<2.5
Carbophenothion	786-19-6	0.5	<0.5	<0.5	<0.5	<2.5
Azinphos Methyl	86-50-0	0.5	<0.5	<0.5	<0.5	<2.5
EP074A: Monocyclic Aromatic Hydrocarbons						
Benzene	71-43-2	1	<1	<1	<1	<1
Toluene	108-88-3	2	<2	<2	<2	<2
Ethylbenzene	100-41-4	2	<2	<2	<2	<2
meta- & para-Xylene	108-38-3	2	<2	<2	<2	<2
Styrene	100-42-5	5	<5	<5	<5	<5
ortho-Xylene	95-47-6	2	<2	<2	<2	<2
Isopropylbenzene	98-82-8	5	<5	<5	<5	<5
n-Propylbenzene	103-65-1	5	<5	<5	<5	<5
1,3,5-Trimethylbenzene	108-67-8	5	<5	<5	<5	<5
sec-Butylbenzene	135-98-8	5	<5	<5	<5	<5
1,2,4-Trimethylbenzene	95-63-6	5	<5	<5	<5	<5
tert-Butylbenzene	98-06-6	5	<5	<5	<5	<5
p-Isopropyltoluene	99-87-6	5	<5	<5	<5	<5
n-Butylbenzene	104-51-8	5	<5	<5	<5	<5
EP074B: Oxygenated Compounds						
Vinyl Acetate	108-05-4	50	<50	<50	<50	<50
2-Butanone (MEK)	78-93-3	50	<50	<50	<50	<50
4-Methyl-2-pentanone (MIBK)	108-10-1	50	<50	<50	<50	<50
2-Hexanone (MBK)	591-78-6	50	<50	<50	<50	<50
EP074C: Sulfonated Compounds						
Carbon disulfide	75-15-0	5	<5	<5	<5	<5
EP074D: Fumigants						



Analytical Results

Sub-Matrix: SURFACE WATER

Compound	CAS Number	LOR	Client sampling date / time		SW1-1051/6001 08-FEB-2012 15:00 EM1201357-001	SW2-1052/6002 08-FEB-2012 15:00 EM1201357-002	SW3-1043/6003 08-FEB-2012 15:00 EM1201357-003	SW4-1034/6004 08-FEB-2012 15:00 EM1201357-004	SW5-1025/6005 08-FEB-2012 15:00 EM1201357-005
			Unit	Unit					
EP074D: Fumigants - Continued									
2,2-Dichloropropane	594-20-7	5	µg/L	<5	<5	<5	<5	<5	<5
1,2-Dichloropropane	78-87-5	5	µg/L	<5	<5	<5	<5	<5	<5
cis-1,3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	<5	<5	<5	<5
trans-1,3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	<5	<5	<5	<5
1,2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	<5	<5	<5	<5
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	<50	<50	<50	<50
Chloromethane	74-87-3	50	µg/L	<50	<50	<50	<50	<50	<50
Vinyl chloride	75-01-4	50	µg/L	<50	<50	<50	<50	<50	<50
Bromomethane	74-83-9	50	µg/L	<50	<50	<50	<50	<50	<50
Chloroethane	75-00-3	50	µg/L	<50	<50	<50	<50	<50	<50
Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	<50	<50	<50	<50
1,1-Dichloroethene	75-35-4	5	µg/L	<5	<5	<5	<5	<5	<5
Iodomethane	74-88-4	5	µg/L	<5	<5	<5	<5	<5	<5
trans-1,2-Dichloroethene	156-60-5	5	µg/L	<5	<5	<5	<5	<5	<5
1,1-Dichloroethane	75-34-3	5	µg/L	<5	<5	<5	<5	<5	<5
cis-1,2-Dichloroethane	156-59-2	5	µg/L	<5	<5	<5	<5	<5	<5
1,1,1-Trichloroethane	71-55-6	5	µg/L	<5	<5	<5	<5	<5	<5
1,1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	<5	<5	<5	<5
Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	<5	<5	<5	<5
1,2-Dichloroethane	107-06-2	5	µg/L	<5	<5	<5	<5	<5	<5
Trichloroethene	79-01-6	5	µg/L	<5	<5	<5	<5	<5	<5
Dibromomethane	74-95-3	5	µg/L	<5	<5	<5	<5	<5	<5
1,1,2-Trichloroethane	79-00-5	5	µg/L	<5	<5	<5	<5	<5	<5
1,3-Dichloropropane	142-28-9	5	µg/L	<5	<5	<5	<5	<5	<5
Tetrachloroethene	127-18-4	5	µg/L	<5	<5	<5	<5	<5	<5
1,1,1,2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	<5	<5	<5	<5
trans-1,4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	<5	<5	<5	<5
cis-1,4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	<5	<5	<5	<5
1,1,2,2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	<5	<5	<5	<5
1,2,3-Trichloropropane	96-18-4	5	µg/L	<5	<5	<5	<5	<5	<5
Pentachloroethane	76-01-7	5	µg/L	<5	<5	<5	<5	<5	<5
1,2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	<5	<5	<5	<5
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	5	µg/L	<5	<5	<5	<5	<5	<5
Bromobenzene	108-86-1	5	µg/L	<5	<5	<5	<5	<5	<5
2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	<5	<5	<5	<5
4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	<5	<5	<5	<5



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 Work Order : EM1201357
 Client : GOLDR ASSOCIATES
 Project : 117613201

Analytical Results

Sub-Matrix: SURFACE WATER

Compound	CAS Number	LOR	Client sampling date / time	Client sample ID	SW1-1051/6001 08-FEB-2012 15:00 EM1201357-001	SW2-1052/6002 08-FEB-2012 15:00 EM1201357-002	SW3-1043/6003 08-FEB-2012 15:00 EM1201357-003	SW4-1034/6004 08-FEB-2012 15:00 EM1201357-004	SW5-1025/6005 08-FEB-2012 15:00 EM1201357-005
EP074F: Halogenated Aromatic Compounds - Continued									
1,2,3-Trichlorobenzene	87-61-6	5			<5	<5	<5	<5	<5
EP074G: Trihalomethanes									
Chloroform	67-66-3	5			<5	<5	<5	<5	<5
Bromodichloromethane	75-27-4	5			<5	<5	<5	<5	<5
Dibromochloromethane	124-48-1	5			<5	<5	<5	<5	<5
Bromoform	75-25-2	5			<5	<5	<5	<5	<5
EP075A: Phenolic Compounds									
Phenol	108-95-2	2			<2	<2	<2	<2	<10
2-Chlorophenol	95-57-8	2			<2	<2	<2	<2	<10
2-Methylphenol	95-48-7	2			<2	<2	<2	<2	<10
3- & 4-Methylphenol	1319-77-3	4			<4	<4	<4	<4	<20
2-Nitrophenol	88-75-5	2			<2	<2	<2	<2	<10
2,4-Dimethylphenol	105-67-9	2			<2	<2	<2	<2	<10
2,4-Dichlorophenol	120-83-2	2			<2	<2	<2	<2	<10
2,6-Dichlorophenol	87-65-0	2			<2	<2	<2	<2	<10
4-Chloro-3-Methylphenol	59-50-7	2			<2	<2	<2	<2	<10
2,4,6-Trichlorophenol	88-06-2	2			<2	<2	<2	<2	<10
2,4,5-Trichlorophenol	95-95-4	2			<2	<2	<2	<2	<10
Pentachlorophenol	87-86-5	4			<4	<4	<4	<4	<20
EP075B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	2			<2	<2	<2	<2	<10
2-Methylnaphthalene	91-57-6	2			<2	<2	<2	<2	<10
2-Chloronaphthalene	91-58-7	2			<2	<2	<2	<2	<10
Acenaphthylene	208-96-8	2			<2	<2	<2	<2	<10
Acenaphthene	83-32-9	2			<2	<2	<2	<2	<10
Fluorene	86-73-7	2			<2	<2	<2	<2	<10
Phenanthrene	85-01-8	2			<2	<2	<2	<2	<10
Anthracene	120-12-7	2			<2	<2	<2	<2	<10
Fluoranthene	206-44-0	2			<2	<2	<2	<2	<10
Pyrene	129-00-0	2			<2	<2	<2	<2	<10
N-2-Fluorenyl Acetamide	53-96-3	2			<2	<2	<2	<2	<10
Benz(a)anthracene	56-55-3	2			<2	<2	<2	<2	<10
Chrysene	218-01-9	2			<2	<2	<2	<2	<10
Benzo(b) & Benzo(k)fluoranthene	205-99-2	4			<4	<4	<4	<4	<20
7,12-Dimethylbenz(a)anthracene	57-97-6	2			<2	<2	<2	<2	<10
Benzo(a)pyrene	50-32-8	2			<2	<2	<2	<2	<10
3-Methylcholanthrene	56-49-5	2			<2	<2	<2	<2	<10



Analytical Results

Sub-Matrix: SURFACE WATER	Client sample ID		Client sampling date / time		Client sampling date / time		Client sampling date / time		Client sampling date / time				
Compound	CAS Number	LOR	Unit	SW1-1051/6001	SW2-1052/6002	SW3-1043/6003	SW4-1034/6004	SW5-1025/6005	EM1201357-001	EM1201357-002	EM1201357-003	EM1201357-004	EM1201357-005
EP075B: Polynuclear Aromatic Hydrocarbons - Continued													
Indeno(1,2,3-cd)pyrene	193-39-5	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
Dibenz(a,h)anthracene	53-70-3	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
Benzo(g,h,i)perylene	191-24-2	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
^ Sum of PAHs	----	2	µg/L	<5	<5	<5	<5	<24	<5	<5	<5	<5	<24
EP075C: Phthalate Esters													
Dimethyl phthalate	131-11-3	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
Diethyl phthalate	84-66-2	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
Di-n-butyl phthalate	84-74-2	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
Butyl benzyl phthalate	85-68-7	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
bis(2-ethylhexyl) phthalate	117-81-7	5	µg/L	<10	<10	<10	<10	<50	<10	<10	<10	<10	<50
Di-n-octylphthalate	117-84-0	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
EP075D: Nitrosamines													
N-Nitrosomethylethylamine	10595-95-6	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
N-Nitrosodiethylamine	55-18-5	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
N-Nitrosopyrrolidine	930-55-2	4	µg/L	<4	<4	<4	<4	<20	<4	<4	<4	<4	<20
N-Nitrosomorpholine	59-89-2	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
N-Nitrosodi-n-propylamine	621-64-7	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
N-Nitrosopiperidine	100-75-4	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
N-Nitrosodibutylamine	924-16-3	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	4	µg/L	<4	<4	<4	<4	<20	<4	<4	<4	<4	<20
Methacrylene	91-80-5	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
EP075E: Nitroaromatics and Ketones													
2-Picoline	109-06-8	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
Acetophenone	98-86-2	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
Nitrobenzene	98-95-3	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
Isophorone	78-59-1	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
2,6-Dinitrotoluene	606-20-2	4	µg/L	<4	<4	<4	<4	<20	<4	<4	<4	<4	<20
2,4-Dinitrotoluene	121-14-2	4	µg/L	<4	<4	<4	<4	<20	<4	<4	<4	<4	<20
1-Naphthylamine	134-32-7	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
4-Nitroquinoline-N-oxide	56-57-5	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
5-Nitro-o-toluidine	99-55-8	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
Azobenzene	103-33-3	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
1,3,5-Trinitrobenzene	99-35-4	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
Phenacetin	62-44-2	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
4-Aminobiphenyl	92-67-1	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
Pentachloronitrobenzene	82-68-8	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10
Pronamide	23950-58-5	2	µg/L	<2	<2	<2	<2	<10	<2	<2	<2	<2	<10



Analytical Results

Sub-Matrix: SURFACE WATER

Compound	CAS Number	LOR	Unit	Client sampling date / time	SW1-1051/6001 08-FEB-2012 15:00 EM1201357-001	SW2-1052/6002 08-FEB-2012 15:00 EM1201357-002	SW3-1043/6003 08-FEB-2012 15:00 EM1201357-003	SW4-1034/6004 08-FEB-2012 15:00 EM1201357-004	SW5-1025/6005 08-FEB-2012 15:00 EM1201357-005
EP075E: Nitroaromatics and Ketones - Continued									
Dimethylaminoazobenzene	60-11-7	2	µg/L		<2	<2	<2	<2	<10
Chlorobenzilate	510-15-6	2	µg/L		<2	<2	<2	<2	<10
EP075F: Haloethers									
Bis(2-chloroethyl) ether	111-44-4	2	µg/L		<2	<2	<2	<2	<10
Bis(2-chloroethoxy) methane	111-91-1	2	µg/L		<2	<2	<2	<2	<10
4-Chlorophenyl phenyl ether	7005-72-3	2	µg/L		<2	<2	<2	<2	<10
4-Bromophenyl phenyl ether	101-55-3	2	µg/L		<2	<2	<2	<2	<10
EP075G: Chlorinated Hydrocarbons									
1,3-Dichlorobenzene	541-73-1	2	µg/L		<2	<2	<2	<2	<10
1,4-Dichlorobenzene	106-46-7	2	µg/L		<2	<2	<2	<2	<10
1,2-Dichlorobenzene	95-50-1	2	µg/L		<2	<2	<2	<2	<10
Hexachloroethane	67-72-1	2	µg/L		<2	<2	<2	<2	<10
1,2,4-Trichlorobenzene	120-82-1	2	µg/L		<2	<2	<2	<2	<10
Hexachloropropylene	1888-71-7	2	µg/L		<2	<2	<2	<2	<10
Hexachlorobutadiene	87-68-3	2	µg/L		<2	<2	<2	<2	<10
Hexachlorocyclopentadiene	77-47-4	10	µg/L		<10	<10	<10	<10	<50
Pentachlorobenzene	608-93-5	2	µg/L		<2	<2	<2	<2	<10
Hexachlorobenzene (HCB)	118-74-1	4	µg/L		<4	<4	<4	<4	<20
EP075H: Anilines and Benzidines									
Aniline	62-53-3	2	µg/L		<2	<2	<2	<2	<10
4-Chloroaniline	106-47-8	2	µg/L		<2	<2	<2	<2	<10
2-Nitroaniline	88-74-4	4	µg/L		<4	<4	<4	<4	<20
3-Nitroaniline	99-09-2	4	µg/L		<4	<4	<4	<4	<20
Dibenzofuran	132-64-9	2	µg/L		<2	<2	<2	<2	<10
4-Nitroaniline	100-01-6	2	µg/L		<2	<2	<2	<2	<10
Carbazole	86-74-8	2	µg/L		<2	<2	<2	<2	<10
3,3'-Dichlorobenzidine	91-94-1	2	µg/L		<2	<2	<2	<2	<10
EP075I: Organochlorine Pesticides									
alpha-BHC	319-84-6	2	µg/L		<2	<2	<2	<2	<10
beta-BHC	319-85-7	2	µg/L		<2	<2	<2	<2	<10
gamma-BHC	58-89-9	2	µg/L		<2	<2	<2	<2	<10
delta-BHC	319-86-8	2	µg/L		<2	<2	<2	<2	<10
Heptachlor	76-44-8	2	µg/L		<2	<2	<2	<2	<10
Aldrin	309-00-2	2	µg/L		<2	<2	<2	<2	<10
Heptachlor epoxide	1024-57-3	2	µg/L		<2	<2	<2	<2	<10
alpha-Endosulfan	959-98-8	2	µg/L		<2	<2	<2	<2	<10
4,4'-DDE	72-55-9	2	µg/L		<2	<2	<2	<2	<10
Dieldrin	60-57-1	2	µg/L		<2	<2	<2	<2	<10



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 Work Order : EM1201357
 Client : GOLDR ASSOCIATES
 Project : 117613201

Analytical Results

Sub-Matrix: SURFACE WATER

Compound	CAS Number	LOR	Unit	Client sampling date / time	SW1-1051/6001 08-FEB-2012 15:00 EM1201357-001	SW2-1052/6002 08-FEB-2012 15:00 EM1201357-002	SW3-1043/6003 08-FEB-2012 15:00 EM1201357-003	SW4-1034/6004 08-FEB-2012 15:00 EM1201357-004	SW5-1025/6005 08-FEB-2012 15:00 EM1201357-005
EP075J: Organochlorine Pesticides - Continued									
Endrin	72-20-8	2	µg/L		<2	<2	<2	<2	<10
beta-Endosulfan	33213-65-9	2	µg/L		<2	<2	<2	<2	<10
4,4'-DDD	72-54-8	2	µg/L		<2	<2	<2	<2	<10
Endosulfan sulfate	1031-07-8	2	µg/L		<2	<2	<2	<2	<10
4,4'-DDT	50-29-3	4	µg/L		<4	<4	<4	<4	<20
EP075J: Organophosphorus Pesticides									
Dichlorvos	62-73-7	2	µg/L		<2	<2	<2	<2	<10
Dimethoate	60-51-5	2	µg/L		<2	<2	<2	<2	<10
Diazinon	333-41-5	2	µg/L		<2	<2	<2	<2	<10
Chlorpyrifos-methyl	5598-13-0	2	µg/L		<2	<2	<2	<2	<10
Malathion	121-75-5	2	µg/L		<2	<2	<2	<2	<10
Fenthion	55-38-9	2	µg/L		<2	<2	<2	<2	<10
Chlorpyrifos	2921-88-2	2	µg/L		<2	<2	<2	<2	<10
Pirimphos-ethyl	23505-41-1	2	µg/L		<2	<2	<2	<2	<10
Chlorfenvinphos	470-90-6	2	µg/L		<2	<2	<2	<2	<10
Prothiofos	34643-46-4	2	µg/L		<2	<2	<2	<2	<10
Ethion	563-12-2	2	µg/L		<2	<2	<2	<2	<10
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	20	µg/L		<20	<20	<20	<20	<20
C10 - C14 Fraction	----	50	µg/L		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	µg/L		<100	<100	<100	290	1190
C29 - C36 Fraction	----	50	µg/L		<50	<70	<60	<80	330
^ C10 - C36 Fraction (sum)	----	50	µg/L		<50	<50	<50	290	1520
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	20	µg/L		<20	<20	<20	<20	<20
^ C6 - C10 Fraction minus BTEX (F1)	----	20	µg/L		<20	<20	<20	<20	<20
>C10 - C16 Fraction	----	100	µg/L		<100	<100	<100	<100	110
>C16 - C34 Fraction	----	100	µg/L		130	<140	<130	320	1360
>C34 - C40 Fraction	----	100	µg/L		<100	<100	<100	<100	150
^ >C10 - C40 Fraction (sum)	----	100	µg/L		130	<100	<100	320	1620
EP080: BTEXN									
Benzene	71-43-2	1	µg/L		<1	<1	<1	<1	<1
Toluene	108-88-3	2	µg/L		<2	<2	<2	<2	<2
Ethylbenzene	100-41-4	2	µg/L		<2	<2	<2	<2	<2
meta- & para-Xylene	108-38-3	2	µg/L		<2	<2	<2	<2	<2
ortho-Xylene	95-47-6	2	µg/L		<2	<2	<2	<2	<2
^ Total Xylenes	1330-20-7	2	µg/L		<2	<2	<2	<2	<2
^ Sum of BTEX	----	1	µg/L		<1	<1	<1	<1	<1



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 Work Order : EM1201357
 Client : GOLDER ASSOCIATES
 Project : 117613201

Analytical Results

Sub-Matrix: SURFACE WATER	Client sample ID		Client sampling date / time		Client sampling date / time		Client sampling date / time		Client sampling date / time		Client sampling date / time		
Compound	CAS Number	LOR	Unit	SW1-1051/6001	SW2-1052/6002	SW3-1043/6003	SW4-1034/6004	SW5-1025/6005	EM1201357-001	EM1201357-002	EM1201357-003	EM1201357-004	EM1201357-005
EP080: BTEXN - Continued													
Naphthalene	91-20-3	5	µg/L	<5	<5	<5	<5	<5					
EP216: Perchlorate by LC/MS													
Perchlorate	7601-90-3	0.2	µg/L	<0.2	<0.2	<0.2	<0.2	<0.2					
EP231: Perfluorooctyl Acids and Sulfonates.													
PFOA	1763-23-1	0.02	µg/L	27.2	35.0	115	153	202					
PFOA	335-67-1	0.02	µg/L	1.35	1.46	8.20	8.88	13.2					
6:2 Fluorotelomer Sulfonate (6:2 FIS)	27619-97-2	0.1	µg/L	24.6	23.6	214	222	274					
EP066S: PCB Surrogate													
Decachlorobiphenyl	2051-24-3	0.1	%	97.8	82.4	79.8	97.2	115					
EP068S: Organochlorine Pesticide Surrogate													
Dibromo-DDE	21655-73-2	0.1	%	90.4	95.1	70.0	88.2	90.5					
EP068T: Organophosphorus Pesticide Surrogate													
DEF	78-48-8	0.1	%	108	124	91.7	121	88.2					
EP074S: VOC Surrogates													
1,2-Dichloroethane-D4	17060-07-0	0.1	%	106	109	108	110	108					
Toluene-D8	2037-26-5	0.1	%	103	105	102	104	104					
4-Bromofluorobenzene	460-00-4	0.1	%	107	108	106	107	106					
EP075S: Acid Extractable Surrogates													
2-Fluorophenol	367-12-4	0.1	%	40.8	49.6	22.6	37.7	Not Determined					
Phenol-d6	13127-88-3	0.1	%	25.5	32.0	19.2	27.9	Not Determined					
2-Chlorophenol-D4	93951-73-6	0.1	%	60.1	71.1	34.7	57.0	Not Determined					
2,4,6-Tribromophenol	118-79-6	0.1	%	82.2	89.5	61.2	81.7	Not Determined					
EP075T: Base/Neutral Extractable Surrogates													
Nitrobenzene-D5	4165-60-0	0.1	%	63.4	72.3	37.2	61.6	Not Determined					
1,2-Dichlorobenzene-D4	2199-69-1	0.1	%	56.5	64.8	29.3	56.6	Not Determined					
2-Fluorobiphenyl	321-60-8	0.1	%	68.1	79.2	42.2	70.9	Not Determined					
Anthracene-d10	1719-06-8	0.1	%	86.6	97.1	72.6	89.9	Not Determined					
4-Terphenyl-d14	1718-51-0	0.1	%	90.5	102	76.3	93.3	Not Determined					
EP080S: TPH(V)/BTEX Surrogates													
1,2-Dichloroethane-D4	17060-07-0	0.1	%	98.1	102	102	103	100					
Toluene-D8	2037-26-5	0.1	%	101	102	100	102	102					
4-Bromofluorobenzene	460-00-4	0.1	%	106	109	106	107	108					



Analytical Results

Sub-Matrix: SURFACE WATER

Compound	CAS Number	Client sampling data / time		Unit	LOR	SW6-1016/6006 08-FEB-2012 15:00 EM1201357-006	DUPI_1016/6807 08-FEB-2012 15:00 EM1201357-007	.....	.....	.....
		LOR	Unit							
EG020F: Dissolved Metals by ICP-MS										
Arsenic	7440-38-2	0.001	mg/L			0.001	<0.001	.....	.....	.....
Cadmium	7440-43-9	0.0001	mg/L			0.0004	0.0003	.....	.....	.....
Chromium	7440-47-3	0.001	mg/L			<0.001	<0.001	.....	.....	.....
Copper	7440-50-8	0.001	mg/L			0.002	<0.001	.....	.....	.....
Nickel	7440-02-0	0.001	mg/L			0.004	0.004	.....	.....	.....
Lead	7439-92-1	0.001	mg/L			<0.001	<0.001	.....	.....	.....
Zinc	7440-66-6	0.005	mg/L			0.026	0.012	.....	.....	.....
EG035F: Dissolved Mercury by FIMS										
Mercury	7439-97-6	0.0001	mg/L			<0.0001	<0.0001	.....	.....	.....
EP066: Polychlorinated Biphenyls (PCB)										
Total Polychlorinated biphenyls	.....	1	µg/L			<1	<1	.....	.....	.....
EP068A: Organochlorine Pesticides (OC)										
alpha-BHC	319-84-6	0.5	µg/L			<0.5	<0.5	.....	.....	.....
Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L			<0.5	<0.5	.....	.....	.....
beta-BHC	319-85-7	0.5	µg/L			<0.5	<0.5	.....	.....	.....
gamma-BHC	58-89-9	0.5	µg/L			<0.5	<0.5	.....	.....	.....
delta-BHC	319-86-8	0.5	µg/L			<0.5	<0.5	.....	.....	.....
Heptachlor	76-44-8	0.5	µg/L			<0.5	<0.5	.....	.....	.....
Aldrin	309-00-2	0.5	µg/L			<0.5	<0.5	.....	.....	.....
Heptachlor epoxide	1024-57-3	0.5	µg/L			<0.5	<0.5	.....	.....	.....
trans-Chlordane	5103-74-2	0.5	µg/L			<0.5	<0.5	.....	.....	.....
alpha-Endosulfan	959-98-8	0.5	µg/L			<0.5	<0.5	.....	.....	.....
cis-Chlordane	5103-71-9	0.5	µg/L			<0.5	<0.5	.....	.....	.....
Dieldrin	60-57-1	0.5	µg/L			<0.5	<0.5	.....	.....	.....
4,4'-DDE	72-55-9	0.5	µg/L			<0.5	<0.5	.....	.....	.....
Endrin	72-20-8	0.5	µg/L			<0.5	<0.5	.....	.....	.....
beta-Endosulfan	33213-65-9	0.5	µg/L			<0.5	<0.5	.....	.....	.....
4,4'-DDD	72-54-8	0.5	µg/L			<0.5	<0.5	.....	.....	.....
Endrin aldehyde	7421-93-4	0.5	µg/L			<0.5	<0.5	.....	.....	.....
Endosulfan sulfate	1031-07-8	0.5	µg/L			<0.5	<0.5	.....	.....	.....
4,4'-DDT	50-29-3	2	µg/L			<2	<2	.....	.....	.....
Endrin ketone	53494-70-5	0.5	µg/L			<0.5	<0.5	.....	.....	.....
Methoxychlor	72-43-5	2	µg/L			<2	<2	.....	.....	.....
EP068B: Organophosphorus Pesticides (OP)										
Dichlorvos	62-73-7	0.5	µg/L			<0.5	<0.5	.....	.....	.....
Demeton-S-methyl	919-86-8	0.5	µg/L			<0.5	<0.5	.....	.....	.....
Monocrotophos	6923-22-4	2	µg/L			<2	<2	.....	.....	.....
Dimethoate	60-51-5	0.5	µg/L			<0.5	<0.5	.....	.....	.....



Analytical Results

Sub-Matrix: SURFACE WATER

Compound	Client sampling date / time		Unit	Client sample ID	
	CAS Number	LOR		SW6-1016/6006	DUP1_1016/6807
EP068B: Organophosphorus Pesticides (OP) - Continued					
Diazinon	333-41-5	0.5	µg/L	<0.5	<0.5
Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	<0.5
Parathion-methyl	298-00-0	2	µg/L	<2	<2
Malathion	121-75-5	0.5	µg/L	<0.5	<0.5
Fenthion	55-38-9	0.5	µg/L	<0.5	<0.5
Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	<0.5
Parathion	56-38-2	2	µg/L	<2	<2
Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5	<0.5
Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	<0.5
Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	<0.5
Fenamiphos	22224-92-6	0.5	µg/L	<0.5	<0.5
Prothiofos	34643-46-4	0.5	µg/L	<0.5	<0.5
Ethion	563-12-2	0.5	µg/L	<0.5	<0.5
Carbophenothion	786-19-6	0.5	µg/L	<0.5	<0.5
Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	<0.5
EP074A: Monocyclic Aromatic Hydrocarbons					
Benzene	71-43-2	1	µg/L	<1	<1
Toluene	108-88-3	2	µg/L	<2	<2
Ethylbenzene	100-41-4	2	µg/L	<2	<2
meta- & para-Xylene	108-38-3	2	µg/L	2	2
Styrene	100-42-5	5	µg/L	<5	<5
ortho-Xylene	95-47-6	2	µg/L	<2	<2
Isopropylbenzene	98-82-8	5	µg/L	<5	<5
n-Propylbenzene	103-65-1	5	µg/L	<5	<5
1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5
sec-Butylbenzene	135-98-8	5	µg/L	<5	<5
1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5
tert-Butylbenzene	98-06-6	5	µg/L	<5	<5
p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5
n-Butylbenzene	104-51-8	5	µg/L	<5	<5
EP074B: Oxygenated Compounds					
Vinyl Acetate	108-05-4	50	µg/L	<50	<50
2-Butanone (MEK)	78-93-3	50	µg/L	<50	<50
4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	<50
2-Hexanone (MBK)	591-78-6	50	µg/L	<50	<50
EP074C: Sulfonated Compounds					
Carbon disulfide	75-15-0	5	µg/L	<5	<5
EP074D: Fumigants					



Analytical Results

Sub-Matrix: SURFACE WATER

Compound	CAS Number	Client sampling date / time		Unit	LOR	SW6-1016/6006 08-FEB-2012 15:00 EM1201357-006	DUPI_1016/6807 08-FEB-2012 15:00 EM1201357-007	.....	.....	.....
		Client sampling date / time	Unit							
EP074D: Fumigants - Continued										
2,2-Dichloropropane	594-20-7	5		µg/L	5	<5	<5	.....	.....	.....
1,2-Dichloropropane	78-87-5	5		µg/L	5	<5	<5	.....	.....	.....
cis-1,3-Dichloropropylene	10061-01-5	5		µg/L	5	<5	<5	.....	.....	.....
trans-1,3-Dichloropropylene	10061-02-6	5		µg/L	5	<5	<5	.....	.....	.....
1,2-Dibromoethane (EDB)	106-93-4	5		µg/L	5	<5	<5	.....	.....	.....
EP074E: Halogenated Aliphatic Compounds										
Dichlorodifluoromethane	75-71-8	50		µg/L	50	<50	<50	.....	.....	.....
Chloromethane	74-87-3	50		µg/L	50	<50	<50	.....	.....	.....
Vinyl chloride	75-01-4	50		µg/L	50	<50	<50	.....	.....	.....
Bromomethane	74-83-9	50		µg/L	50	<50	<50	.....	.....	.....
Chloroethane	75-00-3	50		µg/L	50	<50	<50	.....	.....	.....
Trichlorofluoromethane	75-69-4	50		µg/L	50	<50	<50	.....	.....	.....
1,1-Dichloroethene	75-35-4	5		µg/L	5	<5	<5	.....	.....	.....
Iodomethane	74-88-4	5		µg/L	5	<5	<5	.....	.....	.....
trans-1,2-Dichloroethene	156-60-5	5		µg/L	5	<5	<5	.....	.....	.....
1,1-Dichloroethane	75-34-3	5		µg/L	5	<5	<5	.....	.....	.....
cis-1,2-Dichloroethane	156-59-2	5		µg/L	5	<5	<5	.....	.....	.....
1,1,1-Trichloroethane	71-55-6	5		µg/L	5	<5	<5	.....	.....	.....
1,1-Dichloropropylene	563-58-6	5		µg/L	5	<5	<5	.....	.....	.....
Carbon Tetrachloride	56-23-5	5		µg/L	5	<5	<5	.....	.....	.....
1,2-Dichloroethane	107-06-2	5		µg/L	5	<5	<5	.....	.....	.....
Trichloroethene	79-01-6	5		µg/L	5	<5	<5	.....	.....	.....
Dibromomethane	74-95-3	5		µg/L	5	<5	<5	.....	.....	.....
1,1,2-Trichloroethane	79-00-5	5		µg/L	5	<5	<5	.....	.....	.....
1,3-Dichloropropane	142-28-9	5		µg/L	5	<5	<5	.....	.....	.....
Tetrachloroethene	127-18-4	5		µg/L	5	<5	<5	.....	.....	.....
1,1,1,2-Tetrachloroethane	630-20-6	5		µg/L	5	<5	<5	.....	.....	.....
trans-1,4-Dichloro-2-butene	110-57-6	5		µg/L	5	<5	<5	.....	.....	.....
cis-1,4-Dichloro-2-butene	1476-11-5	5		µg/L	5	<5	<5	.....	.....	.....
1,1,2,2-Tetrachloroethane	79-34-5	5		µg/L	5	<5	<5	.....	.....	.....
1,2,3-Trichloropropane	96-18-4	5		µg/L	5	<5	<5	.....	.....	.....
Pentachloroethane	76-01-7	5		µg/L	5	<5	<5	.....	.....	.....
1,2-Dibromo-3-chloropropane	96-12-8	5		µg/L	5	<5	<5	.....	.....	.....
EP074F: Halogenated Aromatic Compounds										
Chlorobenzene	108-90-7	5		µg/L	5	<5	<5	.....	.....	.....
Bromobenzene	108-86-1	5		µg/L	5	<5	<5	.....	.....	.....
2-Chlorotoluene	95-49-8	5		µg/L	5	<5	<5	.....	.....	.....
4-Chlorotoluene	106-43-4	5		µg/L	5	<5	<5	.....	.....	.....



Analytical Results

Sub-Matrix: SURFACE WATER

Compound	CAS Number	LOR	Unit	Client sampling date / time	SW6-1016/6006 08-FEB-2012 15:00 EM1201357-006	DUP1_1016/6807 08-FEB-2012 15:00 EM1201357-007
EP074F: Halogenated Aromatic Compounds - Continued						
1,2,3-Trichlorobenzene	87-61-6	5	µg/L		<5	<5
EP074G: Trihalomethanes						
Chloroform	67-66-3	5	µg/L		<5	<5
Bromodichloromethane	75-27-4	5	µg/L		<5	<5
Dibromochloromethane	124-48-1	5	µg/L		<5	<5
Bromoform	75-25-2	5	µg/L		<5	<5
EP075A: Phenolic Compounds						
Phenol	108-95-2	2	µg/L		<2	<2
2-Chlorophenol	95-57-8	2	µg/L		<2	<2
2-Methylphenol	95-48-7	2	µg/L		<2	<2
3- & 4-Methylphenol	1319-77-3	4	µg/L		<4	<4
2-Nitrophenol	88-75-5	2	µg/L		<2	<2
2,4-Dimethylphenol	105-67-9	2	µg/L		<2	<2
2,4-Dichlorophenol	120-83-2	2	µg/L		<2	<2
2,6-Dichlorophenol	87-65-0	2	µg/L		<2	<2
4-Chloro-3-Methylphenol	59-50-7	2	µg/L		<2	<2
2,4,6-Trichlorophenol	88-06-2	2	µg/L		<2	<2
2,4,5-Trichlorophenol	95-95-4	2	µg/L		<2	<2
Pentachlorophenol	87-86-5	4	µg/L		<4	<4
EP075B: Polynuclear Aromatic Hydrocarbons						
Naphthalene	91-20-3	2	µg/L		<2	<2
2-Methylnaphthalene	91-57-6	2	µg/L		<2	<2
2-Chloronaphthalene	91-58-7	2	µg/L		<2	<2
Acenaphthylene	208-96-8	2	µg/L		<2	<2
Acenaphthene	83-32-9	2	µg/L		<2	<2
Fluorene	86-73-7	2	µg/L		<2	<2
Phenanthrene	85-01-8	2	µg/L		<2	<2
Anthracene	120-12-7	2	µg/L		<2	<2
Fluoranthene	206-44-0	2	µg/L		<2	<2
Pyrene	129-00-0	2	µg/L		<2	<2
N-2-Fluorenyl Acetamide	53-96-3	2	µg/L		<2	<2
Benz(a)anthracene	56-55-3	2	µg/L		<2	<2
Chrysene	218-01-9	2	µg/L		<2	<2
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L		<4	<4
7,12-Dimethylbenz(a)anthracene	57-97-6	2	µg/L		<2	<2
Benzo(a)pyrene	50-32-8	2	µg/L		<2	<2
3-Methylcholanthrene	56-49-5	2	µg/L		<2	<2



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Sub-Matrix: SURFACE WATER

Compound	CAS Number	LOR	Client sample ID	
			Client sampling date / time	Unit
EP075B: Polynuclear Aromatic Hydrocarbons - Continued				
Indeno(1,2,3-cd)pyrene	193-39-5	2	<2	<2
Dibenz(a,h)anthracene	53-70-3	2	<2	<2
Benzo(g,h,i)perylene	191-24-2	2	<2	<2
^ Sum of PAHs	****	2	<5	<5
EP075C: Phthalate Esters				
Dimethyl phthalate	131-11-3	2	<2	<2
Diethyl phthalate	84-66-2	2	<2	<2
Di-n-butyl phthalate	84-74-2	2	<2	<2
Butyl benzyl phthalate	85-68-7	2	<2	<2
bis(2-ethylhexyl) phthalate	117-81-7	5	<10	<10
Di-n-octylphthalate	117-84-0	2	<2	<2
EP075D: Nitrosamines				
N-Nitrosomethylethylamine	10695-95-6	2	<2	<2
N-Nitrosodiethylamine	55-18-5	2	<2	<2
N-Nitrosopyrrolidine	930-55-2	4	<4	<4
N-Nitrosomorpholine	59-89-2	2	<2	<2
N-Nitrosodi-n-propylamine	621-64-7	2	<2	<2
N-Nitrosopiperidine	100-75-4	2	<2	<2
N-Nitrosodibutylamine	924-16-3	2	<2	<2
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	4	<4	<4
Methacrylene	91-80-5	2	<2	<2
EP075E: Nitroaromatics and Ketones				
2-Picoline	109-06-8	2	<2	<2
Acetophenone	98-86-2	2	<2	<2
Nitrobenzene	98-95-3	2	<2	<2
Isophorone	78-59-1	2	<2	<2
2,6-Dinitrotoluene	606-20-2	4	<4	<4
2,4-Dinitrotoluene	121-14-2	4	<4	<4
1-Naphthylamine	134-32-7	2	<2	<2
4-Nitroquinoline-N-oxide	56-57-5	2	<2	<2
5-Nitro-o-toluidine	99-55-8	2	<2	<2
Azobenzene	103-33-3	2	<2	<2
1,3,5-Trinitrobenzene	99-35-4	2	<2	<2
Phenacetin	62-44-2	2	<2	<2
4-Aminobiphenyl	92-67-1	2	<2	<2
Pentachloronitrobenzene	82-68-8	2	<2	<2
Pronamide	23950-58-5	2	<2	<2



Analytical Results

Sub-Matrix: SURFACE WATER

Compound	CAS Number	LOR	Unit	Client sampling date / time		Client sample ID
				SW6-1016/6006	DUP1_1016/6807	
EP075E: Nitroaromatics and Ketones - Continued						
Dimethylaminoazobenzene	60-11-7	2	µg/L	<2	<2	
Chlorobenzilate	510-15-6	2	µg/L	<2	<2	
EP075F: Haloethers						
Bis(2-chloroethyl) ether	111-44-4	2	µg/L	<2	<2	
Bis(2-chloroethoxy) methane	111-91-1	2	µg/L	<2	<2	
4-Chlorophenyl phenyl ether	7005-72-3	2	µg/L	<2	<2	
4-Bromophenyl phenyl ether	101-55-3	2	µg/L	<2	<2	
EP075G: Chlorinated Hydrocarbons						
1,3-Dichlorobenzene	541-73-1	2	µg/L	<2	<2	
1,4-Dichlorobenzene	106-46-7	2	µg/L	<2	<2	
1,2-Dichlorobenzene	95-50-1	2	µg/L	<2	<2	
Hexachloroethane	67-72-1	2	µg/L	<2	<2	
1,2,4-Trichlorobenzene	120-82-1	2	µg/L	<2	<2	
Hexachloropropylene	1888-71-7	2	µg/L	<2	<2	
Hexachlorobutadiene	87-68-3	2	µg/L	<2	<2	
Hexachlorocyclopentadiene	77-47-4	10	µg/L	<10	<10	
Pentachlorobenzene	608-93-5	2	µg/L	<2	<2	
Hexachlorobenzene (HCB)	118-74-1	4	µg/L	<4	<4	
EP075H: Anilines and Benzidines						
Aniline	62-53-3	2	µg/L	<2	<2	
4-Chloroaniline	106-47-8	2	µg/L	<2	<2	
2-Nitroaniline	88-74-4	4	µg/L	<4	<4	
3-Nitroaniline	99-09-2	4	µg/L	<4	<4	
Dibenzofuran	132-64-9	2	µg/L	<2	<2	
4-Nitroaniline	100-01-6	2	µg/L	<2	<2	
Carbazole	86-74-8	2	µg/L	<2	<2	
3,3'-Dichlorobenzidine	91-94-1	2	µg/L	<2	<2	
EP075I: Organochlorine Pesticides						
alpha-BHC	319-84-6	2	µg/L	<2	<2	
beta-BHC	319-85-7	2	µg/L	<2	<2	
gamma-BHC	58-89-9	2	µg/L	<2	<2	
delta-BHC	319-86-8	2	µg/L	<2	<2	
Heptachlor	76-44-8	2	µg/L	<2	<2	
Aldrin	309-00-2	2	µg/L	<2	<2	
Heptachlor epoxide	1024-57-3	2	µg/L	<2	<2	
alpha-Endosulfan	959-98-8	2	µg/L	<2	<2	
4,4'-DDE	72-55-9	2	µg/L	<2	<2	
Dieldrin	60-57-1	2	µg/L	<2	<2	



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Sub-Matrix: SURFACE WATER

Compound	CAS Number	Client sampling date / time		Unit	SW6-1016/6006	DUP1_1016/6807	Client sample ID
		LOR	Unit				
EP075J: Organochlorine Pesticides - Continued							
Endrin	72-20-8	2	µg/L	<2	<2		
beta-Endosulfan	33213-65-9	2	µg/L	<2	<2		
4,4'-DDD	72-54-8	2	µg/L	<2	<2		
Endosulfan sulfate	1031-07-8	2	µg/L	<2	<2		
4,4'-DDT	50-29-3	4	µg/L	<4	<4		
EP075J: Organophosphorus Pesticides							
Dichlorvos	62-73-7	2	µg/L	<2	<2		
Dimethoate	60-51-5	2	µg/L	<2	<2		
Diazinon	333-41-5	2	µg/L	<2	<2		
Chlorpyrifos-methyl	5598-13-0	2	µg/L	<2	<2		
Malathion	121-75-5	2	µg/L	<2	<2		
Fenthion	55-38-9	2	µg/L	<2	<2		
Chlorpyrifos	2921-88-2	2	µg/L	<2	<2		
Pirimphos-ethyl	23505-41-1	2	µg/L	<2	<2		
Chlorfenvinphos	470-90-6	2	µg/L	<2	<2		
Prothiofos	34643-46-4	2	µg/L	<2	<2		
Ethion	563-12-2	2	µg/L	<2	<2		
EP080/071: Total Petroleum Hydrocarbons							
C6 - C9 Fraction		20	µg/L	30	<20		
C10 - C14 Fraction		50	µg/L	160	240		
C15 - C28 Fraction		100	µg/L	2100	2650		
C29 - C36 Fraction		50	µg/L	260	250		
^ C10 - C36 Fraction (sum)		50	µg/L	2520	3140		
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft							
C6 - C10 Fraction		20	µg/L	40	20		
^ C6 - C10 Fraction minus BTEX (F1)		20	µg/L	40	<20		
>C10 - C16 Fraction		100	µg/L	470	620		
>C16 - C34 Fraction		100	µg/L	2000	2450		
>C34 - C40 Fraction		100	µg/L	110	110		
^ >C10 - C40 Fraction (sum)		100	µg/L	2580	3180		
EP080: BTEXN							
Benzene	71-43-2	1	µg/L	<1	<1		
Toluene	108-88-3	2	µg/L	<2	<2		
Ethylbenzene	100-41-4	2	µg/L	<2	<2		
meta- & para-Xylene	108-38-3	2	µg/L	2	3		
ortho-Xylene	95-47-6	2	µg/L	<2	<2		
^ Total Xylenes	1330-20-7	2	µg/L	2	3		
^ Sum of BTEX		1	µg/L	2	3		



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Analytical Results

Sub-Matrix: SURFACE WATER		Client sample ID		Client sampling date / time	
Compound	CAS Number	LOR	Unit	SW6-1016/6006	DUP1_1016/6807
EP080: BTEXN - Continued					
Naphthalene	91-20-3	5	µg/L	<5	<5
EP216: Perchlorate by LC/MS					
Perchlorate	7601-90-3	0.2	µg/L	<0.2	<0.2
EP231: Perfluorooctyl Acids and Sulfonates.					
PFOA	1763-23-1	0.02	µg/L	122	94.6
	335-67-1	0.02	µg/L	11.3	12.1
6:2 Fluorotelomer Sulfonate (6:2 FIS)	27619-97-2	0.1	µg/L	192	206
EP066S: PCB Surrogate					
Decachlorobiphenyl	2051-24-3	0.1	%	54.6	88.0
EP068S: Organochlorine Pesticide Surrogate					
Dibromo-DDE	21655-73-2	0.1	%	48.0	82.4
EP068T: Organophosphorus Pesticide Surrogate					
DEF	78-48-8	0.1	%	51.0	67.3
EP074S: VOC Surrogates					
1,2-Dichloroethane-D4	17060-07-0	0.1	%	97.1	107
Toluene-D8	2037-26-5	0.1	%	94.0	104
4-Bromofluorobenzene	460-00-4	0.1	%	94.7	108
EP075S: Acid Extractable Surrogates					
2-Fluorophenol	367-12-4	0.1	%	32.9	46.2
Phenol-d6	13127-88-3	0.1	%	24.4	34.0
2-Chlorophenol-D4	93951-73-6	0.1	%	42.2	68.2
2,4,6-Tribromophenol	118-79-6	0.1	%	53.8	86.8
EP075T: Base/Neutral Extractable Surrogates					
Nitrobenzene-D5	4165-60-0	0.1	%	42.3	76.8
1,2-Dichlorobenzene-D4	2199-69-1	0.1	%	35.8	61.8
2-Fluorobiphenyl	321-60-8	0.1	%	45.1	78.8
Anthracene-d10	1719-06-8	0.1	%	67.3	100
4-Terphenyl-d14	1718-51-0	0.1	%	60.8	90.0
EP080S: TPH(V)/BTEX Surrogates					
1,2-Dichloroethane-D4	17060-07-0	0.1	%	92.1	99.2
Toluene-D8	2037-26-5	0.1	%	92.0	103
4-Bromofluorobenzene	460-00-4	0.1	%	95.9	108



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Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		Unit	Client sample ID		
			TRIP 1-1016/6708	RINSE 1-1016/6509		TRIP 2-1016/67010	08-FEB-2012 15:00	08-FEB-2012 15:00
EG020F: Dissolved Metals by ICP-MS								
Arsenic	7440-38-2	0.001			mg/L		<0.001	
Cadmium	7440-43-9	0.0001			mg/L		<0.0001	
Chromium	7440-47-3	0.001			mg/L		<0.001	
Copper	7440-50-8	0.001			mg/L		<0.001	
Nickel	7440-02-0	0.001			mg/L		<0.001	
Lead	7439-92-1	0.001			mg/L		<0.001	
Zinc	7440-66-6	0.005			mg/L		<0.005	
EG035F: Dissolved Mercury by FIMS								
Mercury	7439-97-6	0.0001			mg/L		<0.0001	
EP074A: Monocyclic Aromatic Hydrocarbons								
Benzene	71-43-2	1			µg/L	<1		<1
Toluene	108-88-3	2			µg/L	<2		<2
Ethylbenzene	100-41-4	2			µg/L	<2		<2
meta- & para-Xylene	108-38-3	2			µg/L	<2		<2
Styrene	100-42-5	5			µg/L	<5		<5
ortho-Xylene	95-47-6	2			µg/L	<2		<2
Isopropylbenzene	98-82-8	5			µg/L	<5		<5
n-Propylbenzene	103-65-1	5			µg/L	<5		<5
1,3,5-Trimethylbenzene	108-67-8	5			µg/L	<5		<5
sec-Butylbenzene	135-98-8	5			µg/L	<5		<5
1,2,4-Trimethylbenzene	95-63-6	5			µg/L	<5		<5
tert-Butylbenzene	98-06-6	5			µg/L	<5		<5
p-Isopropyltoluene	99-87-6	5			µg/L	<5		<5
n-Butylbenzene	104-51-8	5			µg/L	<5		<5
EP074B: Oxygenated Compounds								
Vinyl Acetate	108-05-4	50			µg/L	<50		<50
2-Butanone (MEK)	78-93-3	50			µg/L	<50		<50
4-Methyl-2-pentanone (MIBK)	108-10-1	50			µg/L	<50		<50
2-Hexanone (MIBK)	591-78-6	50			µg/L	<50		<50
EP074C: Sulfonated Compounds								
Carbon disulfide	75-15-0	5			µg/L	<5		<5
EP074D: Fumigants								
2,2-Dichloropropane	594-20-7	5			µg/L	<5		<5
1,2-Dichloropropane	78-87-5	5			µg/L	<5		<5
cis-1,3-Dichloropropylene	10061-01-5	5			µg/L	<5		<5
trans-1,3-Dichloropropylene	10061-02-6	5			µg/L	<5		<5
1,2-Dibromoethane (EDB)	106-93-4	5			µg/L	<5		<5



Analytical Results

Sub-Matrix: WATER

Compound	CAS Number	LOR	Unit	Client sample ID		
				Client sampling date / time	TRIP 1-1016/6708	RINSE 1-1016/6509	TRIP 2-1016/67010
EP074E: Halogenated Aliphatic Compounds						
Dichlorodifluoromethane	75-71-8	50	µg/L			
Chloromethane	74-87-3	50	µg/L	<50		<50
Vinyl chloride	75-01-4	50	µg/L	<50		<50
Bromomethane	74-83-9	50	µg/L	<50		<50
Chloroethane	75-00-3	50	µg/L	<50		<50
Trichlorofluoromethane	75-69-4	50	µg/L	<50		<50
1,1-Dichloroethene	75-35-4	5	µg/L	<5		<5
Iodomethane	74-88-4	5	µg/L	<5		<5
trans-1,2-Dichloroethene	156-60-5	5	µg/L	<5		<5
1,1-Dichloroethane	75-34-3	5	µg/L	<5		<5
cis-1,2-Dichloroethene	156-59-2	5	µg/L	<5		<5
1,1,1-Trichloroethane	71-55-6	5	µg/L	<5		<5
1,1-Dichloropropylene	563-58-6	5	µg/L	<5		<5
Carbon Tetrachloride	56-23-5	5	µg/L	<5		<5
1,2-Dichloroethane	107-06-2	5	µg/L	<5		<5
Trichloroethene	79-01-6	5	µg/L	<5		<5
Dibromomethane	74-95-3	5	µg/L	<5		<5
1,1,2-Trichloroethane	79-00-5	5	µg/L	<5		<5
1,3-Dichloropropane	142-28-9	5	µg/L	<5		<5
Tetrachloroethene	127-18-4	5	µg/L	<5		<5
1,1,1,2-Tetrachloroethane	630-20-6	5	µg/L	<5		<5
trans-1,4-Dichloro-2-butene	110-57-6	5	µg/L	<5		<5
cis-1,4-Dichloro-2-butene	1476-11-5	5	µg/L	<5		<5
1,1,2,2-Tetrachloroethane	79-34-5	5	µg/L	<5		<5
1,2,3-Trichloropropane	96-18-4	5	µg/L	<5		<5
Pentachloroethane	76-01-7	5	µg/L	<5		<5
1,2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5		<5
Hexachlorobutadiene	87-68-3	5	µg/L	<5		<5
EP074F: Halogenated Aromatic Compounds						
Chlorobenzene	108-90-7	5	µg/L	<5		<5
Bromobenzene	108-86-1	5	µg/L	<5		<5
2-Chlorotoluene	95-49-8	5	µg/L	<5		<5
4-Chlorotoluene	106-43-4	5	µg/L	<5		<5
1,3-Dichlorobenzene	541-73-1	5	µg/L	<5		<5
1,4-Dichlorobenzene	106-46-7	5	µg/L	<5		<5
1,2-Dichlorobenzene	95-50-1	5	µg/L	<5		<5
1,2,4-Trichlorobenzene	120-82-1	5	µg/L	<5		<5
1,2,3-Trichlorobenzene	87-61-6	5	µg/L	<5		<5



Analytical Results

Compound	CAS Number	LOR	Client sampling date / time		TRIP 1-1016/6708 08-FEB-2012 15:00 EM1201357-008	RINSE 1-1016/6509 08-FEB-2012 15:00 EM1201357-009	TRIP 2-1016/67010 08-FEB-2012 15:00 EM1201357-010
			Unit	Unit			
EP074G: Trihalomethanes							
Chloroform	67-66-3	5	µg/L		<5		<5
Bromodichloromethane	75-27-4	5	µg/L		<5		<5
Dibromochloromethane	124-48-1	5	µg/L		<5		<5
Bromoform	75-25-2	5	µg/L		<5		<5
EP074H: Naphthalene							
Naphthalene	91-20-3	7	µg/L		<7		<7
EP080/071: Total Petroleum Hydrocarbons							
C6 - C9 Fraction		20	µg/L		<20		<20
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft							
C6 - C10 Fraction		20	µg/L		<20		<20
^ C6 - C10 Fraction minus BTEX (F1)		20	µg/L		<20		<20
EP080: BTEXN							
Benzene	71-43-2	1	µg/L		<1		<1
Toluene	108-88-3	2	µg/L		<2		<2
Ethylbenzene	100-41-4	2	µg/L		<2		<2
meta- & para-Xylene	108-38-3	2	µg/L		<2		<2
ortho-Xylene	95-47-6	2	µg/L		<2		<2
^ Total Xylenes	1330-20-7	2	µg/L		<2		<2
^ Sum of BTEX		1	µg/L		<1		<1
Naphthalene	91-20-3	5	µg/L		<5		<5
EP074S: VOC Surrogates							
1,2-Dichloroethane-D4	17060-07-0	0.1	%		113		112
Toluene-D8	2037-26-5	0.1	%		104		104
4-Bromofluorobenzene	460-00-4	0.1	%		108		108
EP080S: TPH(V)/BTEX Surrogates							
1,2-Dichloroethane-D4	17060-07-0	0.1	%				93.4
Toluene-D8	2037-26-5	0.1	%				92.7
4-Bromofluorobenzene	460-00-4	0.1	%				98.3



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 Client : GOLDR ASSOCIATES
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Surrogate Control Limits

Sub-Matrix: SURFACE WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	27.8	134
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	35	129
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	35	135
EP074S: VOC Surrogates			
1,2-Dichloroethane-D4	17060-07-0	72	132
Toluene-D8	2037-26-5	74	128
4-Bromofluorobenzene	460-00-4	70	132
EP075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	10	83
Phenol-d6	13127-88-3	10	49
2-Chlorophenol-D4	93951-73-6	20.3	101
2,4,6-Tribromophenol	118-79-6	19.5	134
EP075T: Base/Neutral Extractable Surrogates			
Nitrobenzene-D5	4165-60-0	18.2	114
1,2-Dichlorobenzene-D4	2199-69-1	18.8	100
2-Fluorobiphenyl	321-60-8	25.3	122
Anthracene-d10	1719-06-8	35	137
4-Terphenyl-d14	1718-51-0	32	136
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	73	131
Toluene-D8	2037-26-5	72	124
4-Bromofluorobenzene	460-00-4	70	126
Sub-Matrix: WATER			
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1,2-Dichloroethane-D4	17060-07-0	72	132
Toluene-D8	2037-26-5	74	128
4-Bromofluorobenzene	460-00-4	70	132
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	73	131
Toluene-D8	2037-26-5	72	124
4-Bromofluorobenzene	460-00-4	70	126

Environmental Division

QUALITY CONTROL REPORT

Work Order : **EM1201357** Page : 1 of 20

Client : **GOLDER ASSOCIATES** Laboratory : Environmental Division Melbourne
 Contact : Niamh McCormack Contact : Samantha Smith
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 Building 7, 570-588 Swan St, Richmond, VIC. 3121
 HAWTHORN WEST VIC, AUSTRALIA 3122

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 Facsimile : +61 03 8862 3501 Facsimile : +61-3-8549 9601

Project : 117613201 QC Level : NEPM 1999 Schedule B(3) and ALS QCS3 requirement
 Site : F-VIC
 C-O-C number : ---- Date Samples Received : 09-FEB-2012
 Sampler : NM Issue Date : 21-FEB-2012
 Order number : GA-MELB 332509
 Quote number : ME/054/12
 No. of samples received : 10
 No. of samples analysed : 10

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD), and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits



NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

WORLD RECOGNISED ACCREDITATION

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics
Nancy Wang	Senior Semivolatle Instrument Chemist	Melbourne Organics
Phalak Inthaksone	Laboratory Manager - Organics	Sydney Organics
Xingbin Lin	Senior Organic Chemist	Melbourne Organics



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Client : GOLDR ASSOCIATES
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General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC



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Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR: No Limit; Result between 10 and 20 times LOR: 0% - 50%; Result > 20 times LOR: 0% - 20%.

Sub-Matrix: WATER		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EG020F: Dissolved Metals by ICP-MS (QC Lot: 2173147)											
EM1201357-001	SW1-1051/6001	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit		
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	0.001	0.001	0.0	No Limit		
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit		
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.002	0.002	0.0	No Limit		
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit		
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	0.003	0.003	0.0	No Limit		
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.006	0.006	0.0	No Limit		
EM1201477-001	Anonymous	EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit		
		EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit		
		EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit		
		EG020A-F: Copper	7440-50-8	0.001	mg/L	0.013	0.012	0.0	0% - 50%		
		EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit		
		EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit		
		EG020A-F: Zinc	7440-66-6	0.005	mg/L	0.055	0.050	10.2	0% - 50%		
EG035F: Dissolved Mercury by FIMS (QC Lot: 2173146)											
EM1201357-001	SW1-1051/6001	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit		
EM1201477-001	Anonymous	EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit		
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 2165824)											
EM1201357-001	SW1-1051/6001	EP066: Total Polychlorinated biphenyls	----	1	µg/L	<1	<1	0.0	No Limit		
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2165823)											
EM1201357-001	SW1-1051/6001	EP068: alpha-BHC	319-84-6	0.5	µg/L	<0.5	<0.5	0.0	No Limit		
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	<0.5	0.0	No Limit		
		EP068: beta-BHC	319-85-7	0.5	µg/L	<0.5	<0.5	0.0	No Limit		
		EP068: gamma-BHC	58-89-9	0.5	µg/L	<0.5	<0.5	0.0	No Limit		
		EP068: delta-BHC	319-86-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit		
		EP068: Heptachlor	76-44-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit		
		EP068: Aldrin	309-00-2	0.5	µg/L	<0.5	<0.5	0.0	No Limit		
		EP068: Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	<0.5	0.0	No Limit		
		EP068: trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	<0.5	0.0	No Limit		
		EP068: alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit		
		EP068: cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	<0.5	0.0	No Limit		
		EP068: Dieldrin	60-57-1	0.5	µg/L	<0.5	<0.5	0.0	No Limit		
		EP068: 4,4'-DDE	72-55-9	0.5	µg/L	<0.5	<0.5	0.0	No Limit		
		EP068: Endrin	72-20-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit		
		EP068: beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	<0.5	0.0	No Limit		



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 Client : GOLDR ASSOCIATES
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Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2165823) - continued									
EM1201357-001	SW1-1051/6001	EP068: 4,4'-DDD	72-54-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: 4,4'-DDT	50-29-3	2	µg/L	<2	<2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	2	µg/L	<2	<2	0.0	No Limit
EP068B: Organophosphorus Pesticides (OP) (QC Lot: 2165823)									
EM1201357-001	SW1-1051/6001	EP068: Dichlorvos	62-73-7	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Diazinon	333-41-5	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Malathion	121-75-5	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Fenthion	55-38-9	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Pirimiphos-ethyl	23505-41-1	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Ethion	563-12-2	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.5	µg/L	<0.5	<0.5	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	2	µg/L	<2	<2	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	2	µg/L	<2	<2	0.0	No Limit
		EP068: Parathion	56-38-2	2	µg/L	<2	<2	0.0	No Limit
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 2166956)									
EM1201357-001	SW1-1051/6001	EP074: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP074: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP074: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP074: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit
			106-42-3						
		EP074: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP074: Styrene	100-42-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5	0.0	No Limit



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Sub-Matrix: WATER									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 2166956) - continued									
EM1201357-001	SW1-1051/6001	EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	<5	0.0	No Limit
EP074B: Oxygenated Compounds (QC Lot: 2166956)									
EM1201357-001	SW1-1051/6001	EP074: Vinyl Acetate	108-05-4	50	µg/L	<50	<50	0.0	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	<50	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	50	µg/L	<50	<50	0.0	No Limit
EP074C: Sulfonated Compounds (QC Lot: 2166956)									
EM1201357-001	SW1-1051/6001	EP074: Carbon disulfide	75-15-0	5	µg/L	<5	<5	0.0	No Limit
EP074D: Fumigants (QC Lot: 2166956)									
EM1201357-001	SW1-1051/6001	EP074: 2,2-Dichloropropane	594-20-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2-Dichloropropane	78-87-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1,3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1,3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 2166956)									
EM1201357-001	SW1-1051/6001	EP074: 1,1-Dichloroethene	75-35-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Iodomethane	74-88-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1,2-Dichloroethene	156-60-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1-Dichloroethane	75-34-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1,2-Dichloroethene	156-59-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1,1-Trichloroethane	71-55-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2-Dichloroethane	107-06-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: Trichloroethene	79-01-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dibromomethane	74-95-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1,2-Trichloroethane	79-00-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,3-Dichloropropane	142-28-9	5	µg/L	<5	<5	0.0	No Limit
		EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1,1,2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1,4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1,4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1,2,2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2,3-Trichloropropane	96-18-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Pentachloroethane	76-01-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	<5	0.0	No Limit



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 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: WATER		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EP074E: Halogenated Aliphatic Compounds (QC Lot: 2166956) - continued											
EM1201357-001	SW1-1051/6001	EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	0.0	No Limit		
		EP074: Chloromethane	74-87-3	50	µg/L	<50	<50	0.0	No Limit		
		EP074: Vinyl chloride	75-01-4	50	µg/L	<50	<50	0.0	No Limit		
		EP074: Bromomethane	74-83-9	50	µg/L	<50	<50	0.0	No Limit		
		EP074: Chloroethane	75-00-3	50	µg/L	<50	<50	0.0	No Limit		
		EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	0.0	No Limit		
EP074F: Halogenated Aromatic Compounds (QC Lot: 2166956)											
EM1201357-001	SW1-1051/6001	EP074: Chlorobenzene	108-90-7	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Bromobenzene	108-86-1	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,3-Dichlorobenzene	541-73-1	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,4-Dichlorobenzene	106-46-7	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,2-Dichlorobenzene	95-50-1	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,2,4-Trichlorobenzene	120-82-1	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,2,3-Trichlorobenzene	87-61-6	5	µg/L	<5	<5	0.0	No Limit		
EP074G: Trihalomethanes (QC Lot: 2166956)											
EM1201357-001	SW1-1051/6001	EP074: Chloroform	67-66-3	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Bromoform	75-25-2	5	µg/L	<5	<5	0.0	No Limit		
EP074H: Naphthalene (QC Lot: 2166956)											
EM1201357-001	SW1-1051/6001	EP074: Naphthalene	91-20-3	7	µg/L	<7	<7	0.0	No Limit		
EP075A: Phenolic Compounds (QC Lot: 2165822)											
EM1201357-001	SW1-1051/6001	EP075: Phenol	108-95-2	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 2-Chlorophenol	95-57-8	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 2-Methylphenol	95-48-7	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 2-Nitrophenol	88-75-5	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 2,4-Dimethylphenol	105-67-9	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 2,4-Dichlorophenol	120-83-2	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 2,6-Dichlorophenol	87-65-0	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 4-Chloro-3-Methylphenol	59-50-7	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 2,4,6-Trichlorophenol	88-06-2	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 2,4,5-Trichlorophenol	95-95-4	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 3- & 4-Methylphenol	1319-77-3	4	µg/L	<4	<4	0.0	No Limit		
		EP075: Pentachlorophenol	87-86-5	4	µg/L	<4	<4	0.0	No Limit		
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2165822)											
EM1201357-001	SW1-1051/6001	EP075: Naphthalene	91-20-3	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 2-Methylnaphthalene	91-57-6	2	µg/L	<2	<2	0.0	No Limit		



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Sub-Matrix: WATER		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2165822) - continued											
EM1201357-001	SW1-1051/6001	EP075: 2-Chloronaphthalene	91-58-7	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Acenaphthylene	208-96-8	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Acenaphthene	83-32-9	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Fluorene	86-73-7	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Phenanthrene	85-01-8	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Anthracene	120-12-7	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Fluoranthene	206-44-0	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Pyrene	129-00-0	2	µg/L	<2	<2	0.0	No Limit		
		EP075: N-2-Fluorenyl Acetamide	53-96-3	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Benz(a)anthracene	56-55-3	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Chrysene	218-01-9	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 7,12-Dimethylbenz(a)anthracene	57-97-6	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Benzo(a)pyrene	50-32-8	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 3-Methylcholanthrene	56-49-5	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Indeno(1,2,3-cd)pyrene	193-39-5	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Dibenz(a,h)anthracene	53-70-3	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Benzo(g,h,i)perylene	191-24-2	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	4	µg/L	<4	<4	0.0	No Limit		
EP075C: Phthalate Esters (QC Lot: 2165822)											
EM1201357-001	SW1-1051/6001	EP075: Dimethyl phthalate	131-11-3	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Diethyl phthalate	84-66-2	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Di-n-butyl phthalate	84-74-2	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Butyl benzyl phthalate	85-68-7	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Di-n-octylphthalate	117-84-0	2	µg/L	<2	<2	0.0	No Limit		
		EP075: bis(2-ethylhexyl) phthalate	117-81-7	5	µg/L	<10	<10	0.0	No Limit		
EP075D: Nitrosamines (QC Lot: 2165822)											
EM1201357-001	SW1-1051/6001	EP075: N-Nitrosomethylethylamine	10595-95-6	2	µg/L	<2	<2	0.0	No Limit		
		EP075: N-Nitrosodimethylamine	55-18-5	2	µg/L	<2	<2	0.0	No Limit		
		EP075: N-Nitrosomorpholine	59-89-2	2	µg/L	<2	<2	0.0	No Limit		
		EP075: N-Nitrosodi-n-propylamine	621-64-7	2	µg/L	<2	<2	0.0	No Limit		
		EP075: N-Nitrosopiperidine	100-75-4	2	µg/L	<2	<2	0.0	No Limit		
		EP075: N-Nitrosodibutylamine	924-16-3	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Methapyrilene	91-80-5	2	µg/L	<2	<2	0.0	No Limit		
		EP075: N-Nitrosopyrrolidine	930-55-2	4	µg/L	<4	<4	0.0	No Limit		
		EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	4	µg/L	<4	<4	0.0	No Limit		
EP075E: Nitroaromatics and Ketones (QC Lot: 2165822)											
EM1201357-001	SW1-1051/6001	EP075: 2-Picoline	109-06-8	2	µg/L	<2	<2	0.0	No Limit		



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Sub-Matrix: WATER		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EP075E: Nitroaromatics and Ketones (QC Lot: 2165822) - continued											
EM1201357-001	SW1-1051/6001	EP075: Acetophenone	98-86-2	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Nitrobenzene	98-95-3	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Isophorone	78-59-1	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 1-Naphthylamine	134-32-7	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 4-Nitroquinoline-N-oxide	56-57-5	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 5-Nitro-o-toluidine	99-55-8	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Azobenzene	103-33-3	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 1,3,5-Trinitrobenzene	99-35-4	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Phenacetin	62-44-2	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 4-Aminobiphenyl	92-67-1	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Pentachloronitrobenzene	82-68-8	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Pronamide	23950-58-5	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Dimethylaminoazobenzene	60-11-7	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Chlorbenzilate	510-15-6	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 2,6-Dinitrotoluene	606-20-2	4	µg/L	<4	<4	0.0	No Limit		
		EP075: 2,4-Dinitrotoluene	121-14-2	4	µg/L	<4	<4	0.0	No Limit		
EP075F: Haloethers (QC Lot: 2165822)											
EM1201357-001	SW1-1051/6001	EP075: Bis(2-chloroethyl) ether	111-44-4	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Bis(2-chloroethoxy) methane	111-91-1	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 4-Bromophenyl phenyl ether	101-55-3	2	µg/L	<2	<2	0.0	No Limit		
EP075G: Chlorinated Hydrocarbons (QC Lot: 2165822)											
EM1201357-001	SW1-1051/6001	EP075: Hexachlorocyclopentadiene	77-47-4	10	µg/L	<10	<10	0.0	No Limit		
		EP075: 1,4-Dichlorobenzene	106-46-7	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 1,3-Dichlorobenzene	541-73-1	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 1,2-Dichlorobenzene	95-50-1	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Hexachloroethane	67-72-1	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 1,2,4-Trichlorobenzene	120-82-1	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Hexachloropropylene	1888-71-7	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Hexachlorobutadiene	87-68-3	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Pentachlorobenzene	608-93-5	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Hexachlorobenzene (HCB)	118-74-1	4	µg/L	<4	<4	0.0	No Limit		
EP075H: Anilines and Benzidines (QC Lot: 2165822)											
EM1201357-001	SW1-1051/6001	EP075: Aniline	62-53-3	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 4-Chloroaniline	106-47-8	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Dibenzofuran	132-64-9	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 4-Nitroaniline	100-01-6	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Carbazole	86-74-8	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 3,3'-Dichlorobenzidine	91-94-1	2	µg/L	<2	<2	0.0	No Limit		



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Sub-Matrix: WATER		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EP075H: Anilines and Benzidines (QC Lot: 2165822) - continued											
EM1201357-001	SW1-1051/6001	EP075: 2-Nitroaniline	88-74-4	4	µg/L	<4	<4	0.0	No Limit		
		EP075: 3-Nitroaniline	99-09-2	4	µg/L	<4	<4	0.0	No Limit		
EP075I: Organochlorine Pesticides (QC Lot: 2165822)											
EM1201357-001	SW1-1051/6001	EP075: alpha-BHC	319-84-6	2	µg/L	<2	<2	0.0	No Limit		
		EP075: beta-BHC	319-85-7	2	µg/L	<2	<2	0.0	No Limit		
		EP075: gamma-BHC	58-89-9	2	µg/L	<2	<2	0.0	No Limit		
		EP075: delta-BHC	319-86-8	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Heptachlor	76-44-8	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Aldrin	309-00-2	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Heptachlor epoxide	1024-57-3	2	µg/L	<2	<2	0.0	No Limit		
		EP075: alpha-Endosulfan	959-98-8	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 4,4'-DDE	72-55-9	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Dieldrin	60-57-1	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Endrin	72-20-8	2	µg/L	<2	<2	0.0	No Limit		
		EP075: beta-Endosulfan	33213-65-9	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 4,4'-DDD	72-54-8	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Endosulfan sulfate	1031-07-8	2	µg/L	<2	<2	0.0	No Limit		
		EP075: 4,4'-DDT	50-29-3	4	µg/L	<4	<4	0.0	No Limit		
EP075J: Organophosphorus Pesticides (QC Lot: 2165822)											
EM1201357-001	SW1-1051/6001	EP075: Dichlorvos	62-73-7	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Dimethoate	60-51-5	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Diazinon	333-41-5	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Chlorpyrifos-methyl	5598-13-0	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Malathion	121-75-5	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Fenthion	55-38-9	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Chlorpyrifos	2921-88-2	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Pirimphos-ethyl	23505-41-1	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Chlorfenvinphos	470-90-6	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Prothiofos	34643-46-4	2	µg/L	<2	<2	0.0	No Limit		
		EP075: Ethion	563-12-2	2	µg/L	<2	<2	0.0	No Limit		
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2165825)											
EM1201357-001	SW1-1051/6001	EP071: C15 - C28 Fraction	----	100	µg/L	<100	<100	0.0	No Limit		
		EP071: C10 - C14 Fraction	----	50	µg/L	<50	<50	0.0	No Limit		
		EP071: C29 - C36 Fraction	----	50	µg/L	<50	<50	0.0	No Limit		
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2166957)											
EM1201357-001	SW1-1051/6001	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit		
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2165825)											
EM1201357-001	SW1-1051/6001	EP071: >C10 - C16 Fraction	----	100	µg/L	<100	<100	0.0	No Limit		
		EP071: >C16 - C34 Fraction	----	100	µg/L	130	110	16.3	No Limit		



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Sub-Matrix: WATER									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2165825) - continued									
EM1201357-001	SW1-1051/6001	EP071: >C34 - C40 Fraction	----	100	µg/L	<100	<100	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2166957)									
EM1201357-001	SW1-1051/6001	EP080: C6 - C10 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EP080: BTEXN (QC Lot: 2166957)									
EM1201357-001	SW1-1051/6001	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
EP216: Perchlorate by LC/MS (QC Lot: 2171178)									
EM1201357-001	SW1-1051/6001	EP216: Perchlorate	7601-90-3	0.2	µg/L	<0.2	<0.2	0.0	No Limit
EP231: Perfluorooctyl Acids and Sulfonates. (QC Lot: 2168884)									
EM1201357-001	SW1-1051/6001	EP231: PFOS	1763-23-1	0.02	µg/L	27.2	26.2	3.7	0% - 20%
		EP231: PFOA	335-67-1	0.02	µg/L	1.35	1.37	1.6	0% - 20%
		EP231: 6:2 Fluorotelomer Sulfonate (6:2 FtS)	27619-97-2	0.1	µg/L	24.6	23.6	4.1	0% - 20%



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Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
EG020F: Dissolved Metals by ICP-MS (QCLot: 2173147)									
EG020A-F: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	102		87	109
EG020A-F: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	98.8		88	110
EG020A-F: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	99.1		86	112
EG020A-F: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	96.7		86	108
EG020A-F: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	102		90	110
EG020A-F: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	96.5		86	112
EG020A-F: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	98.9		86	120
EG035F: Dissolved Mercury by FIMS (QCLot: 2173146)									
EG035F: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.0100 mg/L	110		71	125
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 2165824)									
EP066: Total Polychlorinated biphenyls	----	1	µg/L	<1	10.9 µg/L	93.6		45	137
EP068A: Organochlorine Pesticides (OC) (QCLot: 2165823)									
EP068: alpha-BHC	319-84-6	0.5	µg/L	<0.5	5 µg/L	84.8		59	129
EP068: Hexachlorobenzene (HCB)	118-74-1	0.5	µg/L	<0.5	5 µg/L	80.0		53	125
EP068: beta-BHC	319-85-7	0.5	µg/L	<0.5	5 µg/L	85.4		58	132
EP068: gamma-BHC	58-89-9	0.5	µg/L	<0.5	5 µg/L	94.0		59	131
EP068: delta-BHC	319-86-8	0.5	µg/L	<0.5	5 µg/L	86.5		58	133
EP068: Heptachlor	76-44-8	0.5	µg/L	<0.5	5 µg/L	96.7		55	125
EP068: Aldrin	309-00-2	0.5	µg/L	<0.5	5 µg/L	99.3		60	131
EP068: Heptachlor epoxide	1024-57-3	0.5	µg/L	<0.5	5 µg/L	89.6		58	135
EP068: trans-Chlordane	5103-74-2	0.5	µg/L	<0.5	5 µg/L	90.6		59	136
EP068: alpha-Endosulfan	959-98-8	0.5	µg/L	<0.5	5 µg/L	118		55	143
EP068: cis-Chlordane	5103-71-9	0.5	µg/L	<0.5	5 µg/L	88.3		60	138
EP068: Dieldrin	60-57-1	0.5	µg/L	<0.5	5 µg/L	84.7		59	140
EP068: 4,4'-DDE	72-55-9	0.5	µg/L	<0.5	5 µg/L	102		61	139
EP068: Endrin	72-20-8	0.5	µg/L	<0.5	5 µg/L	97.7		62	138
EP068: beta-Endosulfan	33213-65-9	0.5	µg/L	<0.5	5 µg/L	69.9		63	144
EP068: 4,4'-DDD	72-54-8	0.5	µg/L	<0.5	5 µg/L	71.8		61	145
EP068: Endrin aldehyde	7421-93-4	0.5	µg/L	<0.5	5 µg/L	105		50	136
EP068: Endosulfan sulfate	1031-07-8	0.5	µg/L	<0.5	5 µg/L	103		55	134
EP068: 4,4'-DDT	50-29-3	2.0	µg/L	<2	5 µg/L	92.7		39	136
EP068: Endrin ketone	53494-70-5	0.5	µg/L	<0.5	5 µg/L	94.8		58	134
EP068: Methoxychlor	72-43-5	2.0	µg/L	<2	5 µg/L	107		42	142
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2165823)									



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 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: WATER

Method: Compound	CAS Number	LOR	Unit	Result	Method Blank (MB) Report			Laboratory Control Spike (LCS) Report		
					Concentration	Spike	Spike Recovery (%)	LCS	Low	High
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2166823) - continued										
EP068: Dichlorvos	62-73-7	0.5	µg/L	<0.5			5 µg/L	70.1	52	122
EP068: Demeton-S-methyl	919-86-8	0.5	µg/L	<0.5			5 µg/L	88.3	52	127
EP068: Monocrotophos	6923-22-4	2.0	µg/L	<2			5 µg/L	14.6	10	31
EP068: Dimethoate	60-51-5	0.5	µg/L	<0.5			5 µg/L	86.4	49	115
EP068: Diazinon	333-41-5	0.5	µg/L	<0.5			5 µg/L	92.6	61	129
EP068: Chlorpyrifos-methyl	5598-13-0	0.5	µg/L	<0.5			5 µg/L	87.8	63	125
EP068: Parathion-methyl	298-00-0	2.0	µg/L	<2			5 µg/L	84.8	47	124
EP068: Malathion	121-75-5	0.5	µg/L	<0.5			5 µg/L	92.2	58	133
EP068: Fenthion	55-38-9	0.5	µg/L	<0.5			5 µg/L	84.2	60	133
EP068: Chlorpyrifos	2921-88-2	0.5	µg/L	<0.5			5 µg/L	87.6	55	136
EP068: Parathion	56-38-2	2.0	µg/L	<2			5 µg/L	104	55	132
EP068: Pirimphos-ethyl	23505-41-1	0.5	µg/L	<0.5			5 µg/L	88.4	59	138
EP068: Chlorfenvinphos	470-90-6	0.5	µg/L	<0.5			5 µg/L	85.1	61	137
EP068: Bromophos-ethyl	4824-78-6	0.5	µg/L	<0.5			5 µg/L	86.2	61	134
EP068: Fenamiphos	22224-92-6	0.5	µg/L	<0.5			5 µg/L	85.8	59	140
EP068: Prothiofos	34643-46-4	0.5	µg/L	<0.5			5 µg/L	84.2	55	141
EP068: Ethion	563-12-2	0.5	µg/L	<0.5			5 µg/L	73.6	60	139
EP068: Carbophenothion	786-19-6	0.5	µg/L	<0.5			5 µg/L	99.2	56	132
EP068: Azinphos Methyl	86-50-0	0.5	µg/L	<0.5			5 µg/L	100	10	158
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 2166956)										
EP074: Benzene	71-43-2	1	µg/L	<1			20 µg/L	91.5	79	121
EP074: Toluene	108-88-3	2	µg/L	<2			20 µg/L	90.8	80	124
EP074: Ethylbenzene	100-41-4	2	µg/L	<2			20 µg/L	92.3	79	121
EP074: meta- & para-Xylene	108-38-3	2	µg/L	<2			40 µg/L	92.7	80	122
	106-42-3									
EP074: Styrene	100-42-5	5	µg/L	<5			20 µg/L	93.1	74	122
EP074: ortho-Xylene	95-47-6	2	µg/L	<2			20 µg/L	93.6	81	123
EP074: Isopropylbenzene	98-82-8	5	µg/L	<5			20 µg/L	91.4	80	120
EP074: n-Propylbenzene	103-65-1	5	µg/L	<5			20 µg/L	86.4	70	120
EP074: 1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5			20 µg/L	88.2	71	119
EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5			20 µg/L	87.4	72	120
EP074: 1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5			20 µg/L	88.9	73	119
EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5			20 µg/L	87.2	73	119
EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5			20 µg/L	88.1	71	121
EP074: n-Butylbenzene	104-51-8	5	µg/L	<5			20 µg/L	87.0	65	121
EP074B: Oxygenated Compounds (QCLot: 2166956)										
EP074: Vinyl Acetate	108-05-4	50	µg/L	<50			200 µg/L	98.8	57	131
EP074: 2-Butanone (MEK)	78-93-3	50	µg/L	<50			200 µg/L	101	69	135
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50			200 µg/L	101	68	136



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Sub-Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	LCS	Low	High
EP074B: Oxygenated Compounds (QCLot: 2166956) - continued									
EP074: 2-Hexanone (MBK)	591-78-6	50	µg/L	<50	200 µg/L	103	68	138	
EP074C: Sulfonated Compounds (QCLot: 2166956)									
EP074: Carbon disulfide	75-15-0	5	µg/L	<5	20 µg/L	85.6	67	127	
EP074D: Fumigants (QCLot: 2166956)									
EP074: 2,2-Dichloropropane	594-20-7	5	µg/L	<5	20 µg/L	92.3	59	128	
EP074: 1,2-Dichloropropane	78-87-5	5	µg/L	<5	20 µg/L	96.7	77	121	
EP074: cis-1,3-Dichloropropylene	10061-01-5	5	µg/L	<5	20 µg/L	92.3	70	118	
EP074: trans-1,3-Dichloropropylene	10061-02-6	5	µg/L	<5	20 µg/L	95.3	66	120	
EP074: 1,2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	20 µg/L	97.0	78	124	
EP074E: Halogenated Aliphatic Compounds (QCLot: 2166956)									
EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	200 µg/L	89.4	58	148	
EP074: Chloromethane	74-87-3	50	µg/L	<50	200 µg/L	93.6	62	142	
EP074: Vinyl chloride	75-01-4	50	µg/L	<50	200 µg/L	83.2	61	141	
EP074: Bromomethane	74-83-9	50	µg/L	<50	200 µg/L	83.2	57	131	
EP074: Chloroethane	75-00-3	50	µg/L	<50	200 µg/L	89.5	64	138	
EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	200 µg/L	88.9	67	131	
EP074: 1,1-Dichloroethene	75-35-4	5	µg/L	<5	20 µg/L	87.6	71	125	
EP074: Iodomethane	74-88-4	5	µg/L	<5	20 µg/L	82.8	61	135	
EP074: trans-1,2-Dichloroethene	156-60-5	5	µg/L	<5	20 µg/L	90.1	75	121	
EP074: 1,1-Dichloroethane	75-34-3	5	µg/L	<5	20 µg/L	93.0	77	121	
EP074: cis-1,2-Dichloroethene	156-59-2	5	µg/L	<5	20 µg/L	92.2	78	122	
EP074: 1,1,1-Trichloroethane	71-55-6	5	µg/L	<5	20 µg/L	88.8	70	120	
EP074: 1,1-Dichloropropylene	563-58-6	5	µg/L	<5	20 µg/L	89.7	74	122	
EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	20 µg/L	83.0	57	123	
EP074: 1,2-Dichloroethane	107-06-2	5	µg/L	<5	20 µg/L	94.7	75	125	
EP074: Trichloroethene	79-01-6	5	µg/L	<5	20 µg/L	91.5	77	121	
EP074: Dibromomethane	74-95-3	5	µg/L	<5	20 µg/L	96.3	76	122	
EP074: 1,1,2-Trichloroethane	79-00-5	5	µg/L	<5	20 µg/L	92.8	78	126	
EP074: 1,3-Dichloropropane	142-28-9	5	µg/L	<5	20 µg/L	97.2	79	125	
EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	20 µg/L	89.2	76	122	
EP074: 1,1,1,2-Tetrachloroethane	630-20-6	5	µg/L	<5	20 µg/L	89.7	65	119	
EP074: trans-1,4-Dichloro-2-butene	110-57-6	5	µg/L	<5	20 µg/L	88.7	46	126	
EP074: cis-1,4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	20 µg/L	95.2	54	132	
EP074: 1,1,2,2-Tetrachloroethane	79-34-5	5	µg/L	<5	20 µg/L	100	75	131	
EP074: 1,2,3-Trichloropropane	96-18-4	5	µg/L	<5	20 µg/L	99.8	75	133	
EP074: Pentachloroethane	76-01-7	5	µg/L	<5	20 µg/L	83.2	46	118	
EP074: 1,2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	20 µg/L	98.5	54	124	
EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	20 µg/L	85.7	50	134	
EP074F: Halogenated Aromatic Compounds (QCLot: 2166956)									



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Method: Compound		CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
					Result	Concentration	Spike	Spike Recovery (%)	LCS	Low	High
EP074F: Halogenated Aromatic Compounds (QCLot: 2166956) - continued										
EP074: Chlorobenzene		108-90-7	5	µg/L	<5	20 µg/L	94.8	81	121	
EP074: Bromobenzene		108-86-1	5	µg/L	<5	20 µg/L	91.8	75	119	
EP074: 2-Chlorotoluene		95-49-8	5	µg/L	<5	20 µg/L	86.1	73	121	
EP074: 4-Chlorotoluene		106-43-4	5	µg/L	<5	20 µg/L	88.1	72	120	
EP074: 1,3-Dichlorobenzene		541-73-1	5	µg/L	<5	20 µg/L	91.3	73	119	
EP074: 1,4-Dichlorobenzene		106-46-7	5	µg/L	<5	20 µg/L	92.0	74	120	
EP074: 1,2-Dichlorobenzene		95-50-1	5	µg/L	<5	20 µg/L	92.6	78	118	
EP074: 1,2,4-Trichlorobenzene		120-82-1	5	µg/L	<5	20 µg/L	92.1	56	128	
EP074: 1,2,3-Trichlorobenzene		87-61-6	5	µg/L	<5	20 µg/L	95.9	69	123	
EP074G: Trihalomethanes (QCLot: 2166956)										
EP074: Chloroform		67-66-3	5	µg/L	<5	20 µg/L	93.5	77	121	
EP074: Bromodichloromethane		75-27-4	5	µg/L	<5	20 µg/L	90.0	69	117	
EP074: Dibromochloromethane		124-48-1	5	µg/L	<5	20 µg/L	87.5	59	119	
EP074: Bromoform		75-25-2	5	µg/L	<5	20 µg/L	83.5	49	121	
EP074H: Naphthalene (QCLot: 2166956)										
EP074: Naphthalene		91-20-3	7	µg/L	<7	20 µg/L	101	76	124	
EP075A: Phenolic Compounds (QCLot: 2165822)										
EP075: Phenol		108-95-2	2	µg/L	<2	10 µg/L	53.6	10	65	
EP075: 2-Chlorophenol		95-57-8	2	µg/L	<2	10 µg/L	95.9	29.8	108	
EP075: 2-Methylphenol		95-48-7	2	µg/L	<2	10 µg/L	84.4	21.9	110	
EP075: 3- & 4-Methylphenol		1319-77-3	2	µg/L	----	20 µg/L	81.6	10	108	
			4	µg/L	<4	----	----	----	----	
EP075: 2-Nitrophenol		88-75-5	2	µg/L	<2	10 µg/L	100	31.2	123	
EP075: 2,4-Dimethylphenol		105-67-9	2	µg/L	<2	10 µg/L	95.7	36	124	
EP075: 2,4-Dichlorophenol		120-83-2	2	µg/L	<2	10 µg/L	98.1	31.2	125	
EP075: 2,6-Dichlorophenol		87-65-0	2	µg/L	<2	10 µg/L	104	33	123	
EP075: 4-Chloro-3-Methylphenol		59-50-7	2	µg/L	<2	10 µg/L	107	39	125	
EP075: 2,4,6-Trichlorophenol		88-06-2	2	µg/L	<2	10 µg/L	108	23.9	134	
EP075: 2,4,5-Trichlorophenol		95-95-4	2	µg/L	<2	10 µg/L	110	31.6	136	
EP075: Pentachlorophenol		87-86-5	2	µg/L	----	10 µg/L	116	47	153	
			4	µg/L	<4	----	----	----	----	
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 2165822)										
EP075: Naphthalene		91-20-3	2	µg/L	<2	10 µg/L	106	33	117	
EP075: 2-Methylnaphthalene		91-57-6	2	µg/L	<2	10 µg/L	107	33	123	
EP075: 2-Chloronaphthalene		91-58-7	2	µg/L	<2	10 µg/L	108	22.6	133	
EP075: Acenaphthylene		208-96-8	2	µg/L	<2	10 µg/L	112	35	131	
EP075: Acenaphthene		83-32-9	2	µg/L	<2	10 µg/L	96.4	37	127	
EP075: Fluorene		86-73-7	2	µg/L	<2	10 µg/L	100	39	133	
EP075: Phenanthrene		85-01-8	2	µg/L	<2	10 µg/L	123	42	134	



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Sub-Matrix: WATER		Method Blank (MB) Report			Laboratory Control Spike (LCS) Report		
Method/Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)
					LCS	Low	High
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 2165822) - continued							
EP075: Anthracene	120-12-7	2	µg/L	<2	10 µg/L	122	41
EP075: Fluoranthene	206-44-0	2	µg/L	<2	10 µg/L	123	40
EP075: Pyrene	129-00-0	2	µg/L	<2	10 µg/L	124	42
EP075: N-2-Fluorenyl Acetamide	53-96-3	2	µg/L	<2	10 µg/L	134	40
EP075: Benz(a)anthracene	56-55-3	2	µg/L	<2	10 µg/L	124	41
EP075: Chrysene	218-01-9	2	µg/L	<2	10 µg/L	124	40
EP075: Benzo(b) & Benzo(k)fluoranthene	205-99-2	4	µg/L	<4	20 µg/L	47.5	21
	207-08-9						
EP075: 7,12-Dimethylbenz(a)anthracene	57-97-6	2	µg/L	<2	10 µg/L	104	39
EP075: Benzo(a)pyrene	50-32-8	2	µg/L	<2	10 µg/L	102	39
EP075: 3-Methylcholanthrene	56-49-5	2	µg/L	<2	10 µg/L	132	33
EP075: Indeno(1,2,3-cd)pyrene	193-39-5	2	µg/L	<2	10 µg/L	130	31.5
EP075: Dibenz(a,h)anthracene	53-70-3	2	µg/L	<2	10 µg/L	132	30.1
EP075: Benzo(g,h,i)perylene	191-24-2	2	µg/L	<2	10 µg/L	133	29.5
EP075C: Phthalate Esters (QCLot: 2165822)							
EP075: Dimethyl phthalate	131-11-3	2	µg/L	<2	10 µg/L	120	41
EP075: Diethyl phthalate	84-66-2	2	µg/L	<2	10 µg/L	106	45
EP075: Di-n-butyl phthalate	84-74-2	2	µg/L	<2	10 µg/L	127	42
EP075: Butyl benzyl phthalate	85-68-7	2	µg/L	<2	10 µg/L	128	36
EP075: bis(2-ethylhexyl) phthalate	117-81-7	10	µg/L	<10	---	---	---
		20	µg/L	---	10 µg/L	101	42
EP075: Di-n-octylphthalate	117-84-0	2	µg/L	<2	10 µg/L	100	43
EP075D: Nitrosamines (QCLot: 2165822)							
EP075: N-Nitrosomethylethylamine	10595-95-6	2	µg/L	<2	10 µg/L	93.0	10
EP075: N-Nitrosodiethylamine	55-18-5	2	µg/L	<2	10 µg/L	95.4	23.5
EP075: N-Nitrosopyrrolidine	930-55-2	4	µg/L	<4	10 µg/L	78.0	18.8
EP075: N-Nitrosomorpholine	59-89-2	2	µg/L	<2	10 µg/L	74.6	18.3
EP075: N-Nitrosodi-n-propylamine	621-64-7	2	µg/L	<2	10 µg/L	107	30.6
EP075: N-Nitrosopiperidine	100-75-4	2	µg/L	<2	10 µg/L	98.3	32
EP075: N-Nitrosodibutylamine	924-16-3	2	µg/L	<2	10 µg/L	116	29.1
EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6	4	µg/L	<4	10 µg/L	100	39
	122-39-4						
EP075: Methapyrilene	91-80-5	2	µg/L	<2	10 µg/L	39.1	28.1
EP075E: Nitroaromatics and Ketones (QCLot: 2165822)							
EP075: 2-Picoline	109-06-8	2	µg/L	<2	10 µg/L	# 23.5	28.4
EP075: Acetophenone	98-86-2	2	µg/L	<2	10 µg/L	100	34
EP075: Nitrobenzene	98-95-3	2	µg/L	<2	10 µg/L	104	36
EP075: Isophorone	78-59-1	2	µg/L	<2	10 µg/L	107	38
EP075: 2,6-Dinitrotoluene	606-20-2	4	µg/L	<4	10 µg/L	119	38



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 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report		
					Spike Concentration	Spike Recovery (%)	Recovery Limits (%)
				Result	LCS	Low	High
EP075E: Nitroaromatics and Ketones (QCLot: 2165822) - continued							
EP075: 2,4-Dinitrotoluene	121-14-2	4	µg/L	<4	100	44	138
EP075: 1-Naphthylamine	134-32-7	2	µg/L	<2	# 26.0	29.8	152
EP075: 4-Nitroquinoline-N-oxide	56-57-5	2	µg/L	<2	134	25.9	168
EP075: 5-Nitro-o-toluidine	99-55-8	2	µg/L	<2	78.8	26.2	138
EP075: Azobenzene	103-33-3	2	µg/L	<2	108	43	135
EP075: 1,3,5-Trinitrobenzene	99-35-4	2	µg/L	<2	103	10	158
EP075: Phenacetin	62-44-2	2	µg/L	<2	92.7	37	131
EP075: 4-Aminobiphenyl	92-67-1	2	µg/L	<2	114	10	150
EP075: Pentachloronitrobenzene	82-68-8	2	µg/L	<2	103	38	146
EP075: Pronamide	23950-58-5	2	µg/L	<2	125	45	139
EP075: Dimethylaminoazobenzene	60-11-7	2	µg/L	<2	122	37	147
EP075: Chlorobenzilate	510-15-6	2	µg/L	<2	123	42	148
EP075F: Haloethers (QCLot: 2165822)							
EP075: Bis(2-chloroethyl) ether	111-44-4	2	µg/L	<2	97.6	10	142
EP075: Bis(2-chloroethoxy) methane	111-91-1	2	µg/L	<2	104	34	126
EP075: 4-Chlorophenyl phenyl ether	7005-72-3	2	µg/L	<2	99.2	39	133
EP075: 4-Bromophenyl phenyl ether	101-55-3	2	µg/L	<2	100	39	137
EP075G: Chlorinated Hydrocarbons (QCLot: 2165822)							
EP075: 1,4-Dichlorobenzene	106-46-7	2	µg/L	<2	103	23	109
EP075: 1,3-Dichlorobenzene	541-73-1	2	µg/L	<2	97.7	19.8	112
EP075: 1,2-Dichlorobenzene	95-50-1	2	µg/L	<2	98.8	25.2	109
EP075: Hexachloroethane	67-72-1	2	µg/L	<2	95.5	17.4	115
EP075: 1,2,4-Trichlorobenzene	120-82-1	2	µg/L	<2	99.0	25.7	112
EP075: Hexachloropropylene	1888-71-7	2	µg/L	<2	92.9	19.1	115
EP075: Hexachlorobutadiene	87-68-3	2	µg/L	<2	102	21.1	117
EP075: Hexachlorocyclopentadiene	77-47-4	10	µg/L	<10	73.9	10	120
EP075: Pentachlorobenzene	608-93-5	2	µg/L	<2	93.4	36	130
EP075: Hexachlorobenzene (HCB)	118-74-1	4	µg/L	<4	96.7	11.1	135
EP075H: Anilines and Benzidines (QCLot: 2165822)							
EP075: Aniline	62-53-3	2	µg/L	<2	# 106	19.8	96
EP075: 4-Chloroaniline	106-47-8	2	µg/L	<2	46.6	16.4	130
EP075: 2-Nitroaniline	88-74-4	4	µg/L	<4	109	38	138
EP075: 3-Nitroaniline	99-09-2	4	µg/L	<4	46.2	10	135
EP075: Dibenzofuran	132-64-9	2	µg/L	<2	96.2	39	129
EP075: 4-Nitroaniline	100-01-6	2	µg/L	<2	84.8	22.8	133
EP075: Carbazole	86-74-8	2	µg/L	<2	115	44	138
EP075: 3,3'-Dichlorobenzididine	91-94-1	2	µg/L	<2	# 107	14.6	107
EP075I: Organochlorine Pesticides (QCLot: 2165822)							



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Sub-Matrix: WATER		Method Blank (MB) Report				Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	LCS	Low	High
EP075I: Organochlorine Pesticides (QCLot: 2165822) - continued									
EP075: alpha-BHC	319-84-6	2	µg/L	<2	10 µg/L	103	103	41	143
EP075: beta-BHC	319-85-7	2	µg/L	<2	10 µg/L	108	108	39	145
EP075: gamma-BHC	58-89-9	2	µg/L	<2	10 µg/L	104	104	39	143
EP075: delta-BHC	319-86-8	2	µg/L	<2	10 µg/L	125	125	42	142
EP075: Heptachlor	76-44-8	2	µg/L	<2	10 µg/L	117	117	39	139
EP075: Aldrin	309-00-2	2	µg/L	<2	10 µg/L	122	122	40	142
EP075: Heptachlor epoxide	1024-57-3	2	µg/L	<2	10 µg/L	112	112	37	147
EP075: alpha-Endosulfan	959-98-8	2	µg/L	<2	10 µg/L	93.0	93.0	42	146
EP075: 4,4'-DDE	72-55-9	2	µg/L	<2	10 µg/L	122	122	41	141
EP075: Dieldrin	60-57-1	2	µg/L	<2	10 µg/L	123	123	42	144
EP075: Endrin	72-20-8	2	µg/L	<2	10 µg/L	130	130	41	145
EP075: beta-Endosulfan	33213-65-9	2	µg/L	<2	10 µg/L	129	129	42	146
EP075: 4,4'-DDD	72-54-8	2	µg/L	<2	10 µg/L	124	124	40	148
EP075: Endosulfan sulfate	1031-07-8	2	µg/L	<2	10 µg/L	130	130	38	152
EP075: 4,4'-DDT	50-29-3	4	µg/L	<4	10 µg/L	120	120	33	145
EP075J: Organophosphorus Pesticides (QCLot: 2165822)									
EP075: Dichlorvos	62-73-7	2	µg/L	<2	10 µg/L	112	112	38	132
EP075: Dimethoate	60-51-5	2	µg/L	<2	10 µg/L	99.7	99.7	36	138
EP075: Diazinon	333-41-5	2	µg/L	<2	10 µg/L	127	127	43	141
EP075: Chlorpyrifos-methyl	5598-13-0	2	µg/L	<2	10 µg/L	120	120	43	141
EP075: Malathion	121-75-5	2	µg/L	<2	10 µg/L	128	128	44	148
EP075: Fenthion	55-38-9	2	µg/L	<2	10 µg/L	119	119	42	144
EP075: Chlorpyrifos	2921-88-2	2	µg/L	<2	10 µg/L	124	124	42	142
EP075: Pirimphos-ethyl	23505-41-1	2	µg/L	<2	10 µg/L	129	129	44	142
EP075: Chlorfenvinphos	470-90-6	2	µg/L	<2	10 µg/L	121	121	44	146
EP075: Prothiofos	34643-46-4	2	µg/L	<2	10 µg/L	127	127	40	142
EP075: Ethion	563-12-2	2	µg/L	<2	10 µg/L	120	120	42	146
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2165825)									
EP071: C10 - C14 Fraction	----	50	µg/L	<50	2585 µg/L	97.2	97.2	64	124
EP071: C15 - C28 Fraction	----	100	µg/L	<100	9720 µg/L	112	112	70	130
EP071: C29 - C36 Fraction	----	50	µg/L	<50	3340 µg/L	111	111	68	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2166957)									
EP080: C6 - C9 Fraction	----	20	µg/L	<20	320 µg/L	110	110	72	136
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2165825)									
EP071: >C10 - C16 Fraction	----	100	µg/L	<100	4055 µg/L	107	107	70	130
EP071: >C16 - C34 Fraction	----	100	µg/L	<100	10355 µg/L	117	117	70	130
EP071: >C34 - C40 Fraction	----	100	µg/L	<100	890 µg/L	110	110	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2166957)									



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Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report		
				Result	Concentration	Spike Recovery (%)	Recovery Limits (%)	Low	High
EP080/074: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2166957) - continued								
EP080: C6 - C10 Fraction	----	20	µg/L	<20	370 µg/L	110	70	130
EP080: BTEXN (QCLot: 2166957)								
EP080: Benzene	71-43-2	1	µg/L	<1	20 µg/L	101	73	127
EP080: Toluene	108-88-3	2	µg/L	<2	20 µg/L	108	74	128
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	20 µg/L	108	72	126
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	40 µg/L	109	69	133
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	20 µg/L	111	74	128
EP080: Naphthalene	91-20-3	5	µg/L	<5	5 µg/L	103	70	130
EP216: Perchlorate by LC/MS (QCLot: 2171178)								
EP216: Perchlorate	7601-90-3	0.2	µg/L	<0.2	5 µg/L	101	67	131
EP231: Perfluorooctyl Acids and Sulfonates. (QCLot: 2168884)								
EP231: PFOS	1763-23-1	0.02	µg/L	<0.02	0.25 µg/L	123	70	136
EP231: PFOA	335-67-1	0.02	µg/L	<0.02	0.25 µg/L	126	72	134
EP231: 6:2 Fluorotelomer Sulfonate (6:2 FS)	27619-97-2	0.1	µg/L	<0.1	1.25 µg/L	127	61	145



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Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **WATER**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report		
				Spike Concentration	Spike Recovery (%) MS	Recovery Limits (%) Low High
EG020F: Dissolved Metals by ICP-MS (QCLot: 2173147)						
EM1201357-001	SW1-1051/6001	EG020A-F: Arsenic	7440-38-2	0.2 mg/L	123	89 139
		EG020A-F: Cadmium	7440-43-9	0.05 mg/L	98.1	75 131
		EG020A-F: Chromium	7440-47-3	0.2 mg/L	99.4	70 130
		EG020A-F: Copper	7440-50-8	0.2 mg/L	96.8	71 127
		EG020A-F: Lead	7439-92-1	0.2 mg/L	98.2	71 123
		EG020A-F: Nickel	7440-02-0	0.2 mg/L	95.0	73 129
		EG020A-F: Zinc	7440-66-6	0.2 mg/L	98.1	68 136
EG035F: Dissolved Mercury by FIMS (QCLot: 2173146)						
EM1201357-002	SW2-1052/6002	EG035F: Mercury	7439-97-6	0.0100 mg/L	112	70 130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 2165824)						
EM1201357-003	SW3-1043/6003	EP066: Total Polychlorinated biphenyls	----	10.9 µg/L	91.7	73 130
EP068A: Organochlorine Pesticides (OC) (QCLot: 2165823)						
EM1201357-005	SW5-1025/6005	EP068: gamma-BHC	58-89-9	5 µg/L	77.4	38 154
		EP068: Heptachlor	76-44-8	5 µg/L	67.0	38 146
		EP068: Aldrin	309-00-2	5 µg/L	82.7	26.3 152
		EP068: Dieldrin	60-57-1	5 µg/L	75.9	30.8 151
		EP068: Endrin	72-20-8	5 µg/L	78.1	38 159
		EP068: 4,4'-DDT	50-29-3	5 µg/L	30.0	16.1 142
EP068B: Organophosphorus Pesticides (OP) (QCLot: 2165823)						
EM1201357-005	SW5-1025/6005	EP068: Diazinon	333-41-5	5 µg/L	82.7	26.4 194
		EP068: Chlorpyrifos-methyl	5598-13-0	5 µg/L	79.2	39 157
		EP068: Pirimphos-ethyl	23505-41-1	5 µg/L	79.7	13.2 163
		EP068: Bromophos-ethyl	4824-78-6	5.71 µg/L	59.7	33 118
		EP068: Prothiofos	34643-46-4	5 µg/L	73.7	45 149
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 2166956)						
EM1201357-002	SW2-1052/6002	EP074: Benzene	71-43-2	20 µg/L	101	64 121
		EP074: Toluene	108-88-3	20 µg/L	99.9	63 125
EP074E: Halogenated Aliphatic Compounds (QCLot: 2166956)						
EM1201357-002	SW2-1052/6002	EP074: 1,1-Dichloroethene	75-35-4	20 µg/L	91.9	52 104
		EP074: Trichloroethene	79-01-6	20 µg/L	94.7	59 120
EP074F: Halogenated Aromatic Compounds (QCLot: 2166956)						
EM1201357-002	SW2-1052/6002	EP074: Chlorobenzene	108-90-7	20 µg/L	106	63 132
EP075A: Phenolic Compounds (QCLot: 2165822)						



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Sub-Matrix: WATER		Matrix Spike (MS) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Spike Recovery (%)	
					MS	Low High
EP075A: Phenolic Compounds (QC Lot: 2165822) - continued						
EM1201357-002	SW2-1052/6002	EP075: Phenol	108-95-2	20 µg/L	20.3	10 51
		EP075: 2-Chlorophenol	95-57-8	20 µg/L	49.8	26.1 104
		EP075: 2-Nitrophenol	88-75-5	20 µg/L	52.7	34 118
		EP075: 4-Chloro-3-Methylphenol	59-50-7	20 µg/L	60.6	24.9 135
		EP075: Pentachlorophenol	87-86-5	20 µg/L	115	29.9 194
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2165822)						
EM1201357-002	SW2-1052/6002	EP075: Acenaphthene	83-32-9	20 µg/L	66.8	27 133
		EP075: Pyrene	129-00-0	20 µg/L	81.3	28.1 146
EP075D: Nitrosamines (QC Lot: 2165822)						
EM1201357-002	SW2-1052/6002	EP075: N-Nitrosodi-n-propylamine	621-64-7	10 µg/L	102	22.8 125
EP075E: Nitroaromatics and Ketones (QC Lot: 2165822)						
EM1201357-002	SW2-1052/6002	EP075: 2,4-Dinitrotoluene	121-14-2	20 µg/L	70.5	27.9 138
EP075G: Chlorinated Hydrocarbons (QC Lot: 2165822)						
EM1201357-002	SW2-1052/6002	EP075: 1,4-Dichlorobenzene	106-46-7	20 µg/L	52.8	22.1 112
		EP075: 1,2,4-Trichlorobenzene	120-82-1	20 µg/L	52.5	15.3 117
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2165825)						
EM1201357-004	SW4-1034/6004	EP071: C10 - C14 Fraction	----	2585 µg/L	98.4	64 124
		EP071: C15 - C28 Fraction	----	9720 µg/L	102	70 130
		EP071: C29 - C36 Fraction	----	3340 µg/L	105	68 128
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2166957)						
EM1201357-002	SW2-1052/6002	EP080: C6 - C9 Fraction	----	280 µg/L	85.2	51 125
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2165825)						
EM1201357-004	SW4-1034/6004	EP071: >C10 - C16 Fraction	----	4055 µg/L	101	70 130
		EP071: >C16 - C34 Fraction	----	10355 µg/L	107	70 130
		EP071: >C34 - C40 Fraction	----	890 µg/L	102	70 130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2166957)						
EM1201357-002	SW2-1052/6002	EP080: C6 - C10 Fraction	----	330 µg/L	84.5	70 130
EP080: BTEXN (QC Lot: 2166957)						
EM1201357-002	SW2-1052/6002	EP080: Benzene	71-43-2	20 µg/L	105	63 131
		EP080: Toluene	108-88-3	20 µg/L	110	65 133
EP216: Perchlorate by LC/MS (QC Lot: 2171178)						
EM1201357-001	SW1-1051/6001	EP216: Perchlorate	7601-90-3	5 µg/L	93.6	67 131
EP231: Perfluorooctyl Acids and Sulfonates. (QC Lot: 2168884)						
EM1201357-001	SW1-1051/6001	EP231: PFOS	1763-23-1	0.25 µg/L	# Not Determined	70 136
		EP231: PFOA	335-67-1	0.25 µg/L	# Not Determined	72 134
		EP231: 6:2 Fluorotelomer Sulfonate (6:2 FS)	27619-97-2	1.25 µg/L	# Not Determined	61 145

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EM1201357	Page	: 1 of 12
Client	: GOLDER ASSOCIATES	Laboratory	: Environmental Division Melbourne
Contact	: Niamh McCormack	Contact	: Samantha Smith
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Project	: 117613201	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: F-VIC	Date Samples Received	: 09-FEB-2012
C-O-C number	: ----	Issue Date	: 21-FEB-2012
Sampler	: NM	No. of samples received	: 10
Order number	: GA-MELB 332509	No. of samples analysed	: 10
Quote number	: ME/054/12		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers



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Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days), Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **WATER**

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Container / Client Sample ID(s)	Sample Date	Extraction / Preparation		Analysis	
			Date extracted	Due for extraction	Date analysed	Due for analysis
EG020F: Dissolved Metals by ICP-MS						
Clear Plastic Bottle - Nitric Acid; Filtered						
SW4-1034/6004,	RINSE 1-1016/6509	08-FEB-2012	---	06-AUG-2012	17-FEB-2012	06-AUG-2012 ✓
Clear Plastic Bottle - Nitric Acid; Unspecified						
SW1-1051/6001, SW3-1043/6003, SW6-1016/6006,	SW2-1052/6002, SW5-1025/6005, DUP1_1016/6807	08-FEB-2012	---	06-AUG-2012	17-FEB-2012	06-AUG-2012 ✓
EG035F: Dissolved Mercury by FIMS						
Clear Plastic Bottle - Natural						
SW1-1051/6001, SW3-1043/6003, SW6-1016/6006,	SW2-1052/6002, SW5-1025/6005, DUP1_1016/6807	08-FEB-2012	---	07-MAR-2012	20-FEB-2012	07-MAR-2012 ✓
Clear Plastic Bottle - Nitric Acid; Filtered						
SW4-1034/6004,	RINSE 1-1016/6509	08-FEB-2012	---	07-MAR-2012	20-FEB-2012	07-MAR-2012 ✓
EP066: Polychlorinated Biphenyls (PCB)						
Amber Glass Bottle - Unpreserved						
SW1-1051/6001, SW3-1043/6003, SW5-1025/6005, DUP1_1016/6807	SW2-1052/6002, SW4-1034/6004, SW6-1016/6006,	08-FEB-2012	13-FEB-2012	15-FEB-2012	14-FEB-2012	24-MAR-2012 ✓
EP068A: Organochlorine Pesticides (OC)						
Amber Glass Bottle - Unpreserved						
SW1-1051/6001, SW3-1043/6003, SW5-1025/6005, DUP1_1016/6807	SW2-1052/6002, SW4-1034/6004, SW6-1016/6006,	08-FEB-2012	13-FEB-2012	15-FEB-2012	14-FEB-2012	24-MAR-2012 ✓
EP068B: Organophosphorus Pesticides (OP)						
Amber Glass Bottle - Unpreserved						
SW1-1051/6001, SW3-1043/6003, SW5-1025/6005, DUP1_1016/6807	SW2-1052/6002, SW4-1034/6004, SW6-1016/6006,	08-FEB-2012	13-FEB-2012	15-FEB-2012	14-FEB-2012	24-MAR-2012 ✓



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Matrix: **WATER** Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Container / Client Sample ID(s)	Sample Date		Extraction / Preparation		Analysis		
		Date extracted	Due for extraction	Due for analysis	Evaluation	Date analysed	Due for analysis	
EP074A: Monocyclic Aromatic Hydrocarbons								
Amber VOC Vial- NaHSO4 or H2SO4								
	SW2-1052/6002, SW4-1034/6004, SW6-1016/6006, TRIP 1-1016/6708,	08-FEB-2012	14-FEB-2012	22-FEB-2012	✓	14-FEB-2012	22-FEB-2012	✓
EP074B: Oxygenated Compounds								
Amber VOC Vial- NaHSO4 or H2SO4								
	SW2-1052/6002, SW4-1034/6004, SW6-1016/6006, TRIP 1-1016/6708,	08-FEB-2012	14-FEB-2012	22-FEB-2012	✓	14-FEB-2012	22-FEB-2012	✓
EP074C: Sulfonated Compounds								
Amber VOC Vial- NaHSO4 or H2SO4								
	SW2-1052/6002, SW4-1034/6004, SW6-1016/6006, TRIP 1-1016/6708,	08-FEB-2012	14-FEB-2012	22-FEB-2012	✓	14-FEB-2012	22-FEB-2012	✓
EP074D: Fumigants								
Amber VOC Vial- NaHSO4 or H2SO4								
	SW2-1052/6002, SW4-1034/6004, SW6-1016/6006, TRIP 1-1016/6708,	08-FEB-2012	14-FEB-2012	22-FEB-2012	✓	14-FEB-2012	22-FEB-2012	✓
EP074E: Halogenated Aliphatic Compounds								
Amber VOC Vial- NaHSO4 or H2SO4								
	SW2-1052/6002, SW4-1034/6004, SW6-1016/6006, TRIP 1-1016/6708,	08-FEB-2012	14-FEB-2012	22-FEB-2012	✓	14-FEB-2012	22-FEB-2012	✓
EP074F: Halogenated Aromatic Compounds								
Amber VOC Vial- NaHSO4 or H2SO4								
	SW2-1052/6002, SW4-1034/6004, SW6-1016/6006, TRIP 1-1016/6708,	08-FEB-2012	14-FEB-2012	22-FEB-2012	✓	14-FEB-2012	22-FEB-2012	✓



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Matrix: **WATER** Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation		Analysis	
		Date extracted	Due for extraction	Date analysed	Due for analysis
EP074G: Trihalomethanes					
Amber VOC Vial- NaHSO4 or H2SO4 SW2-1052/6002, SW4-1034/6004, SW6-1016/6006, TRIP 1-1016/6708, DUP1_1016/6807, TRIP 2-1016/67010	08-FEB-2012	14-FEB-2012	22-FEB-2012	14-FEB-2012	22-FEB-2012
			✓	✓	✓
EP074H: Naphthalene					
Amber VOC Vial- NaHSO4 or H2SO4 TRIP 1-1016/6708, TRIP 2-1016/67010	08-FEB-2012	14-FEB-2012	22-FEB-2012	14-FEB-2012	22-FEB-2012
			✓	✓	✓
EP075A: Phenolic Compounds					
Amber Glass Bottle - Unpreserved SW1-1051/6001, SW3-1043/6003, SW5-1025/6005, DUP1_1016/6807	08-FEB-2012	13-FEB-2012	15-FEB-2012	14-FEB-2012	24-MAR-2012
			✓	✓	✓
EP075B: Polynuclear Aromatic Hydrocarbons					
Amber Glass Bottle - Unpreserved SW1-1051/6001, SW3-1043/6003, SW5-1025/6005, DUP1_1016/6807	08-FEB-2012	13-FEB-2012	15-FEB-2012	14-FEB-2012	24-MAR-2012
			✓	✓	✓
EP075C: Phthalate Esters					
Amber Glass Bottle - Unpreserved SW1-1051/6001, SW3-1043/6003, SW5-1025/6005, DUP1_1016/6807	08-FEB-2012	13-FEB-2012	15-FEB-2012	14-FEB-2012	24-MAR-2012
			✓	✓	✓
EP075D: Nitrosamines					
Amber Glass Bottle - Unpreserved SW1-1051/6001, SW3-1043/6003, SW5-1025/6005, DUP1_1016/6807	08-FEB-2012	13-FEB-2012	15-FEB-2012	14-FEB-2012	24-MAR-2012
			✓	✓	✓
EP075E: Nitroaromatics and Ketones					
Amber Glass Bottle - Unpreserved SW1-1051/6001, SW3-1043/6003, SW5-1025/6005, DUP1_1016/6807	08-FEB-2012	13-FEB-2012	15-FEB-2012	14-FEB-2012	24-MAR-2012
			✓	✓	✓



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Matrix: **WATER** Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Container / Client Sample ID(s)	Sample Date		Extraction / Preparation		Analysis	
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075F: Haloethers							
Amber Glass Bottle - Unpreserved	SW2-1052/6002, SW1-1051/6001, SW4-1034/6004, SW6-1016/6006, DUP1_1016/6807	08-FEB-2012	13-FEB-2012	15-FEB-2012	14-FEB-2012	24-MAR-2012	✓
EP075G: Chlorinated Hydrocarbons							
Amber Glass Bottle - Unpreserved	SW2-1052/6002, SW1-1051/6001, SW4-1034/6004, SW6-1016/6006, DUP1_1016/6807	08-FEB-2012	13-FEB-2012	15-FEB-2012	14-FEB-2012	24-MAR-2012	✓
EP075H: Anilines and Benzidines							
Amber Glass Bottle - Unpreserved	SW2-1052/6002, SW1-1051/6001, SW4-1034/6004, SW6-1016/6006, DUP1_1016/6807	08-FEB-2012	13-FEB-2012	15-FEB-2012	14-FEB-2012	24-MAR-2012	✓
EP075I: Organochlorine Pesticides							
Amber Glass Bottle - Unpreserved	SW2-1052/6002, SW1-1051/6001, SW4-1034/6004, SW6-1016/6006, DUP1_1016/6807	08-FEB-2012	13-FEB-2012	15-FEB-2012	14-FEB-2012	24-MAR-2012	✓
EP075J: Organophosphorus Pesticides							
Amber Glass Bottle - Unpreserved	SW2-1052/6002, SW1-1051/6001, SW4-1034/6004, SW6-1016/6006, DUP1_1016/6807	08-FEB-2012	13-FEB-2012	15-FEB-2012	14-FEB-2012	24-MAR-2012	✓
EP080/071: Total Petroleum Hydrocarbons							
Amber Glass Bottle - Unpreserved	SW2-1052/6002, SW1-1051/6001, SW4-1034/6004, SW6-1016/6006, DUP1_1016/6807	08-FEB-2012	13-FEB-2012	15-FEB-2012	14-FEB-2012	24-MAR-2012	✓
Amber VOC Vial: NaHSO4 or H2SO4	SW2-1052/6002, SW4-1034/6004, SW6-1016/6006, DUP1_1016/6807	08-FEB-2012	14-FEB-2012	22-FEB-2012	14-FEB-2012	22-FEB-2012	✓



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Matrix: **WATER** Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method		Sample Date			Extraction / Preparation		Analysis	
Container / Client Sample ID(s)		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
Amber Glass Bottle - Unpreserved								
SW2-1052/6002, SW1-1051/6001, SW3-1043/6003, SW5-1025/6005, DUP1_1016/6807	SW2-1052/6002, SW4-1034/6004, SW6-1016/6006, DUP1_1016/6807	13-FEB-2012	15-FEB-2012	✓	14-FEB-2012	24-MAR-2012	✓	
Amber VOC Vial- NaHSO4 or HZSO4								
SW2-1052/6002, SW1-1051/6001, SW3-1043/6003, SW5-1025/6005, DUP1_1016/6807,	SW2-1052/6002, SW4-1034/6004, SW6-1016/6006, RINSE 1-1016/6509	14-FEB-2012	22-FEB-2012	✓	14-FEB-2012	22-FEB-2012	✓	
EP080: BTEXN								
Amber VOC Vial- NaHSO4 or HZSO4								
SW2-1052/6002, SW1-1051/6001, SW3-1043/6003, SW5-1025/6005, DUP1_1016/6807,	SW2-1052/6002, SW4-1034/6004, SW6-1016/6006, RINSE 1-1016/6509	14-FEB-2012	22-FEB-2012	✓	14-FEB-2012	22-FEB-2012	✓	
EP216: Perchlorate by LC/MS								
Clear Plastic Bottle - Natural								
SW2-1052/6002, SW1-1051/6001, SW3-1043/6003, SW5-1025/6005, DUP1_1016/6807	SW2-1052/6002, SW4-1034/6004, SW6-1016/6006, DUP1_1016/6807	*****	*****	-----	17-FEB-2012	07-MAR-2012	✓	
EP231: Perfluorooctyl Acids and Sulfonates.								
Clear Plastic Bottle								
SW2-1052/6002, SW1-1051/6001, SW3-1043/6003, SW5-1025/6005	SW2-1052/6002, SW4-1034/6004, DUP1_1016/6807	*****	*****	-----	15-FEB-2012	06-AUG-2012	✓	
Clear Plastic Bottle - Natural								
SW6-1016/6006,	DUP1_1016/6807	*****	*****	-----	15-FEB-2012	06-AUG-2012	✓	



Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **WATER**

Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type Analytical Methods	Method	Count		Rate (%)		Evaluation	Quality Control Specification
		QC	Regular	Actual	Expected		
Laboratory Duplicates (DUP)							
Dissolved Mercury by FIMS	EG035F	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	2	20	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Perchlorate by LC/MS	EP216	1	7	14.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GC/MS	EP068	1	7	14.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PFOS and PFOA	EP231	1	7	14.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	7	14.3	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Semivolatile Organic Compounds	EP075	1	9	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	9	11.1	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	8	12.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	10	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Dissolved Mercury by FIMS	EG035F	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Perchlorate by LC/MS	EP216	1	7	14.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GC/MS	EP068	1	7	14.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PFOS and PFOA	EP231	1	7	14.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	7	14.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Semivolatile Organic Compounds	EP075	1	9	11.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	9	11.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	8	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	10	10.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Dissolved Mercury by FIMS	EG035F	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Perchlorate by LC/MS	EP216	1	7	14.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GC/MS	EP068	1	7	14.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PFOS and PFOA	EP231	1	7	14.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	7	14.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Semivolatile Organic Compounds	EP075	1	9	11.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	1	9	11.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	8	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	10	10.0	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Dissolved Mercury by FIMS	EG035F	1	20	5.0	5.0	✓	ALS QCS3 requirement
Dissolved Metals by ICP-MS - Suite A	EG020A-F	1	20	5.0	5.0	✓	ALS QCS3 requirement
Perchlorate by LC/MS	EP216	1	7	14.3	5.0	✓	ALS QCS3 requirement
Pesticides by GC/MS	EP068	1	7	14.3	5.0	✓	ALS QCS3 requirement
PFOS and PFOA	EP231	1	7	14.3	5.0	✓	ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	7	14.3	5.0	✓	ALS QCS3 requirement



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Matrix: **WATER** Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)		Quality Control Specification
Analytical Methods	Method	QC	Regular	Actual	Expected	Evaluation
Matrix Spikes (MS) - Continued						
Semivolatile Organic Compounds	EP075	1	9	11.1	5.0	✓
TPH - Semivolatile Fraction	EP071	1	9	11.1	5.0	✓
TPH Volatiles/BTEX	EP080	1	8	12.5	5.0	✓
Volatile Organic Compounds	EP074	1	10	10.0	5.0	✓



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Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Dissolved Metals by ICP-MS - Suite A	EG020A-F	WATER	(APHA 21st ed., 3125; USEPA SW846 - 6020, ALS QWI-EN/EG020): Samples are 0.45 um filtered prior to analysis. The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector.
Dissolved Mercury by FIMS	EG035F	WATER	AS 3550, APHA 21st ed. 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) Samples are 0.45 um filtered prior to analysis. FIM-AAS is an automated flameless atomic absorption technique. A bromate/bromide reagent is used to oxidise any organic mercury compounds in the filtered sample. The ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Polychlorinated Biphenyls (PCB)	EP066	WATER	USEPA SW 846 - 8270D Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Pesticides by GCMS	EP068	WATER	USEPA SW 846 - 8270D Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
TPH - Semivolatle Fraction	EP071	WATER	USEPA SW 846 - 8015A The sample extract is analysed by Capillary GC/FID and quantification is by comparison against an established 5 point calibration curve of n-Alkane standards. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Volatile Scan for Unknowns	EP072	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Semivolatle Scan for Unknowns	EP073	WATER	USEPA SW 846 - 8270D Sample extracts are analysed by Capillary GC/MS. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Volatile Organic Compounds	EP074	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Semivolatle Organic Compounds	EP075	WATER	USEPA SW 846 - 8270D Sample extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
TPH Volatiles/BTEX	EP080	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. Alternatively, a sample is equilibrated in a headspace vial and a portion of the headspace determined by GCMS analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Perchlorate by LC/MS	EP216	WATER	US EPA Method 6850: A sample is acidified with acetic acid and analysed by LC/MS in ESI (negative) mode.
PFOS and PFOA	EP231	WATER	In-house: Direct injection analysis of linear and branched perfluorooctyl sulfonates and acids by LC-Electrospray-MS-MS. Results are reported as aggregate determinations of all perfluorooctyl sulfonates and perfluorooctyl acids respectively.

Preparation Methods

Method Descriptions

Matrix

Method

Method Descriptions



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Preparation Methods	Method	Matrix	Method Descriptions
Separatory Funnel Extraction of Liquids	ORG14	WATER	USEPA SW 846 - 3510B 500 mL to 1L of sample is transferred to a separatory funnel and serially extracted three times using 60mL DCM for each extract. The resultant extracts are combined, dehydrated and concentrated for analysis. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2). ALS default excludes sediment which may be resident in the container.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for sparging.



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Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QW/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: WATER

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Laboratory Control Spike (LCS) Recoveries							
EP075E: Nitroaromatics and Ketones	2564169-001	----	2-Picoline	109-06-8	23.5 %	28.4-57%	Recovery less than lower control limit
EP075E: Nitroaromatics and Ketones	2564169-001	----	1-Naphthylamine	134-32-7	26.0 %	29.8-152%	Recovery less than lower control limit
EP075H: Anilines and Benzidines	2564169-001	----	Aniline	62-53-3	106 %	19.8-96%	Recovery greater than upper control limit
EP075H: Anilines and Benzidines	2564169-001	----	3,3'-Dichlorobenzidine	91-94-1	107 %	14.6-107%	Recovery greater than upper control limit
Matrix Spike (MS) Recoveries							
EP231: Perfluorooctyl Acids and Sulfonates.	EM1201357-001	SW1-1051/6001	PFOS	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231: Perfluorooctyl Acids and Sulfonates.	EM1201357-001	SW1-1051/6001	PFOA	335-67-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231: Perfluorooctyl Acids and Sulfonates.	EM1201357-001	SW1-1051/6001	6:2 Fluorotelomer Sulfonate (6:2 FtS)	27619-97-2	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.

Regular Sample Surrogates

Sub-Matrix: SURFACE WATER

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP075S: Acid Extractable Surrogates	EM1201357-005	SW5-1025/6005	2-Fluorophenol	367-12-4	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201357-005	SW5-1025/6005	Phenol-d6	13127-88-3	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201357-005	SW5-1025/6005	2-Chlorophenol-D4	93951-73-6	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201357-005	SW5-1025/6005	2,4,6-Tribromophenol	118-79-6	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201357-005	SW5-1025/6005	Nitrobenzene-D5	4165-60-0	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201357-005	SW5-1025/6005	1,2-Dichlorobenzene-D4	2199-69-1	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201357-005	SW5-1025/6005	2-Fluorobiphenyl	321-60-8	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences



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Sub-Matrix: **SURFACE WATER**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted - Continued							
EP075T: Base/Neutral Extractable Surrogates	EM1201357-005	SW5-1025/6005	Anthracene-d10	1719-06-8	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201357-005	SW5-1025/6005	4-Terphenyl-d14	1718-51-0	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

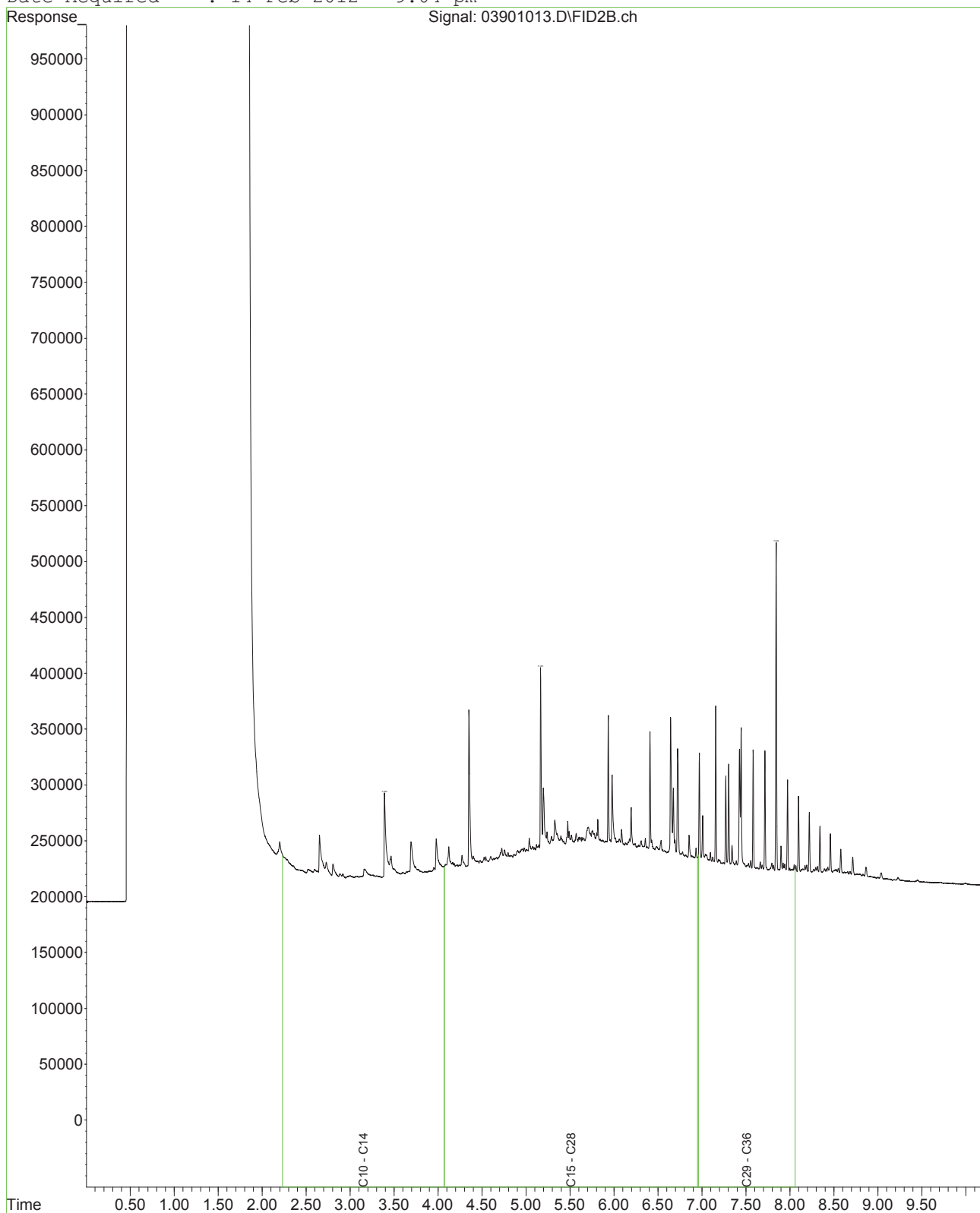
- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

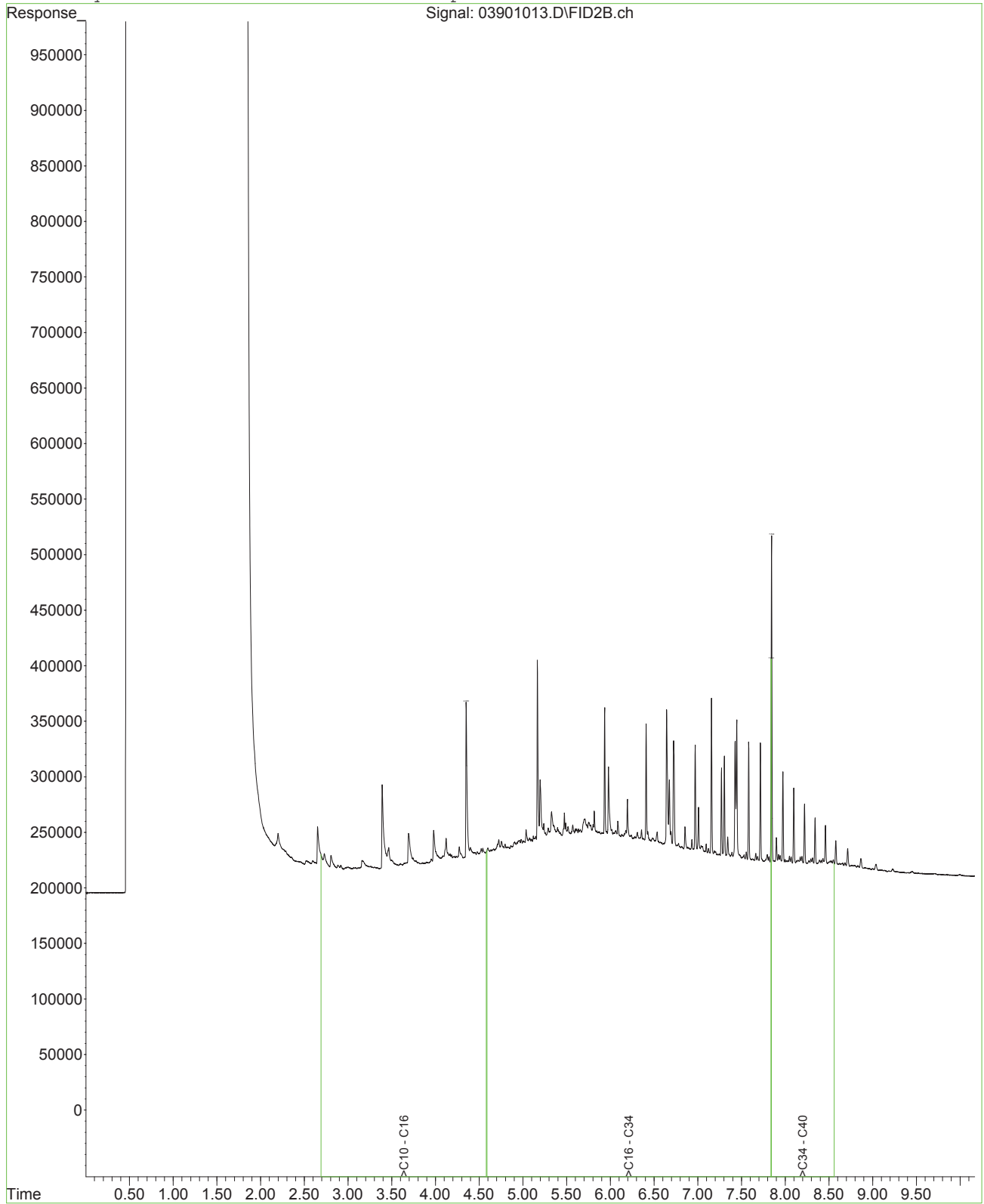
The following report highlights breaches in the Frequency of Quality Control Samples.

- No Quality Control Sample Frequency Outliers exist.

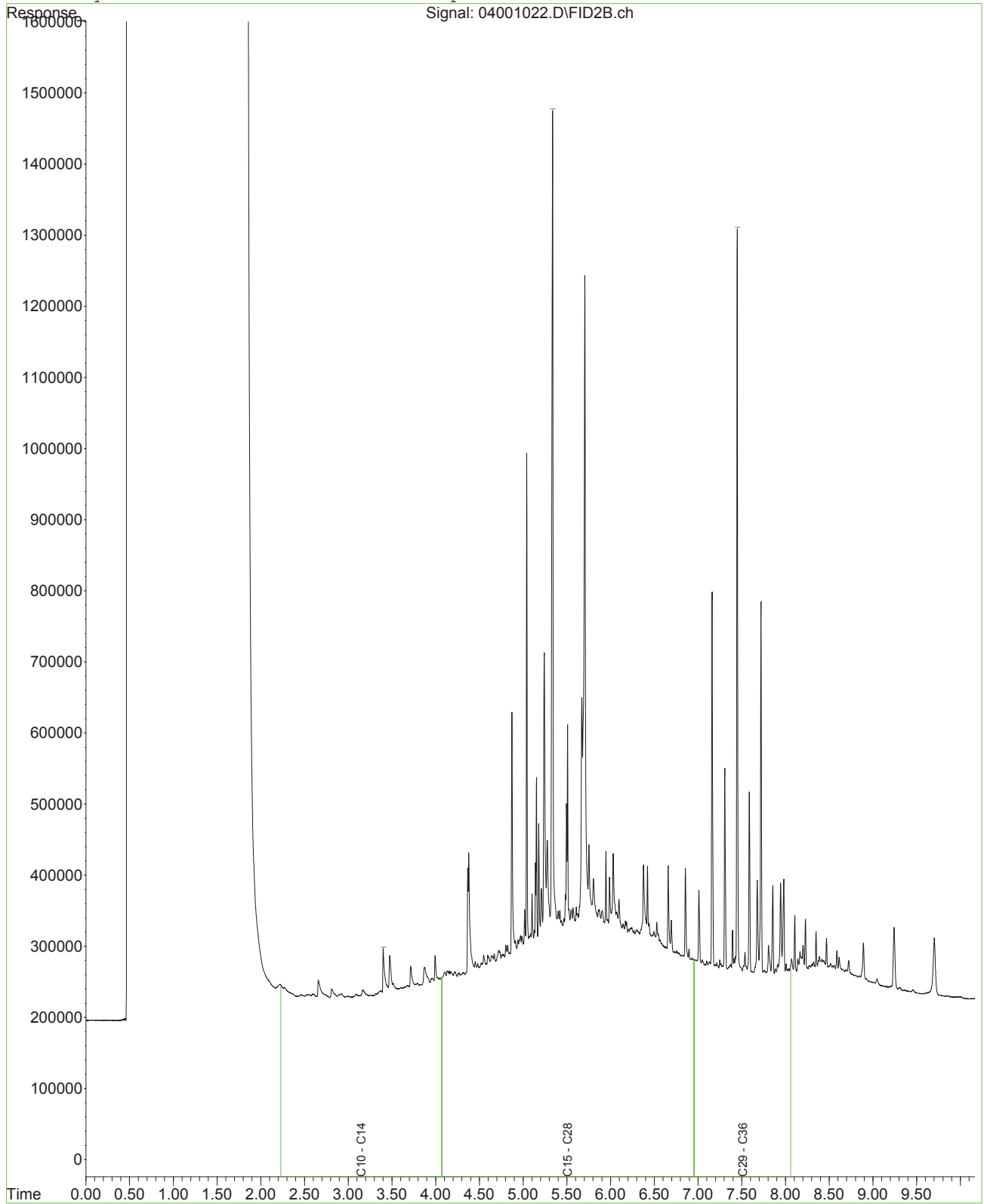
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Laboratory Number: EM1201357-004
Sample ID : SW4-1034/6004
Date Acquired : 14 Feb 2012 9:04 pm



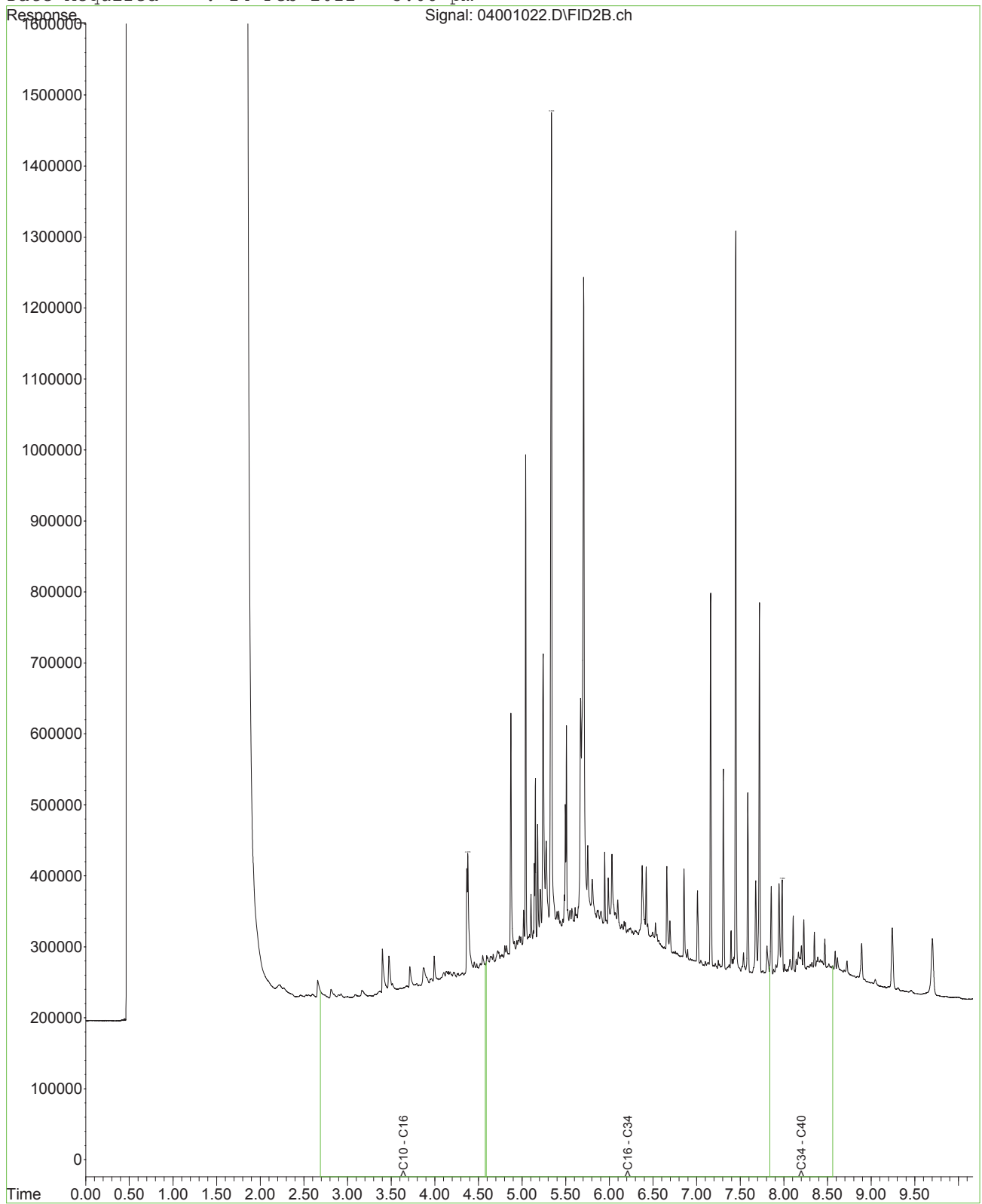
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Sample ID : SW4-1034/6004
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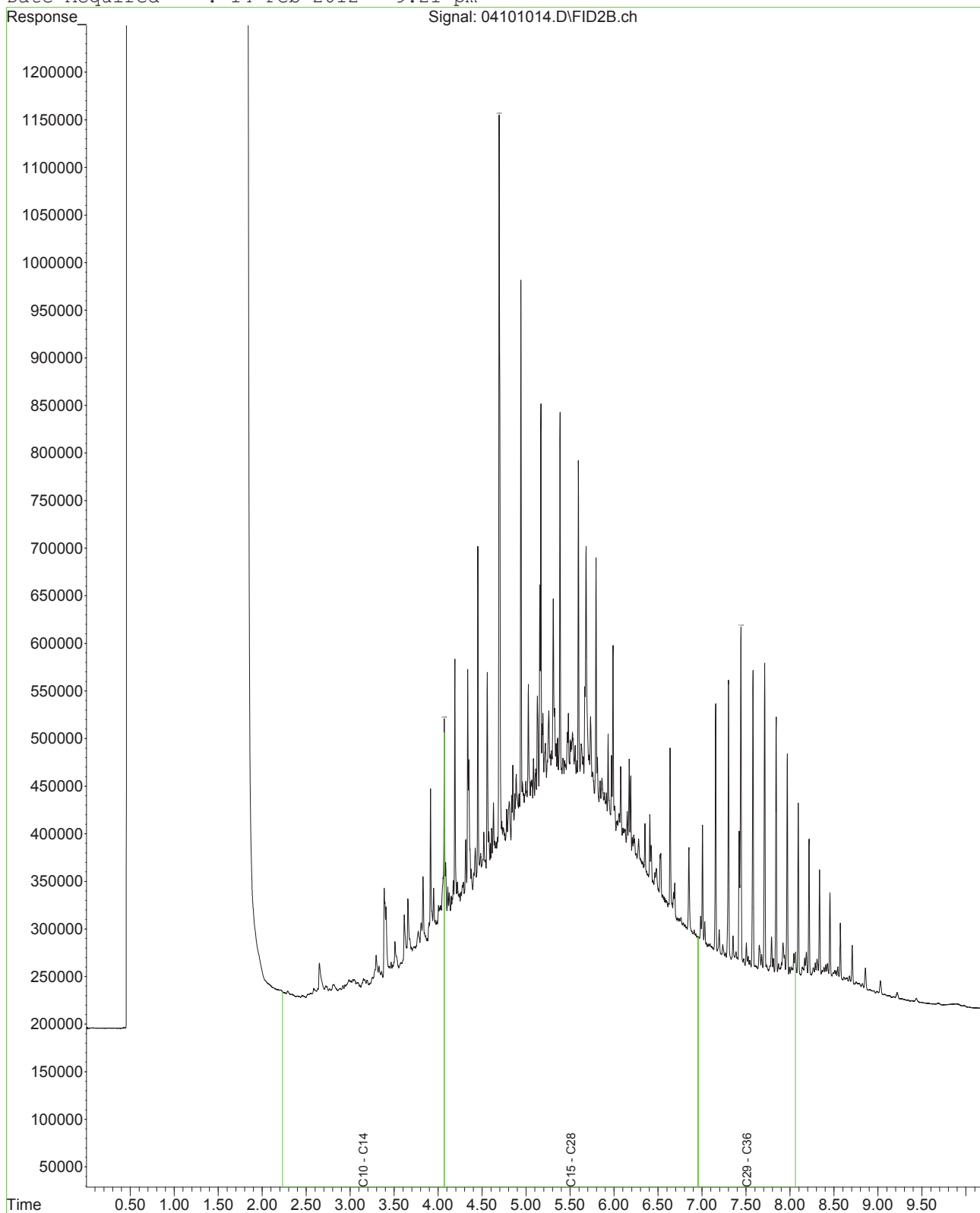
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Sample ID : SW5-1025/6005
Date Acquired : 14 Feb 2012 3:08 pm



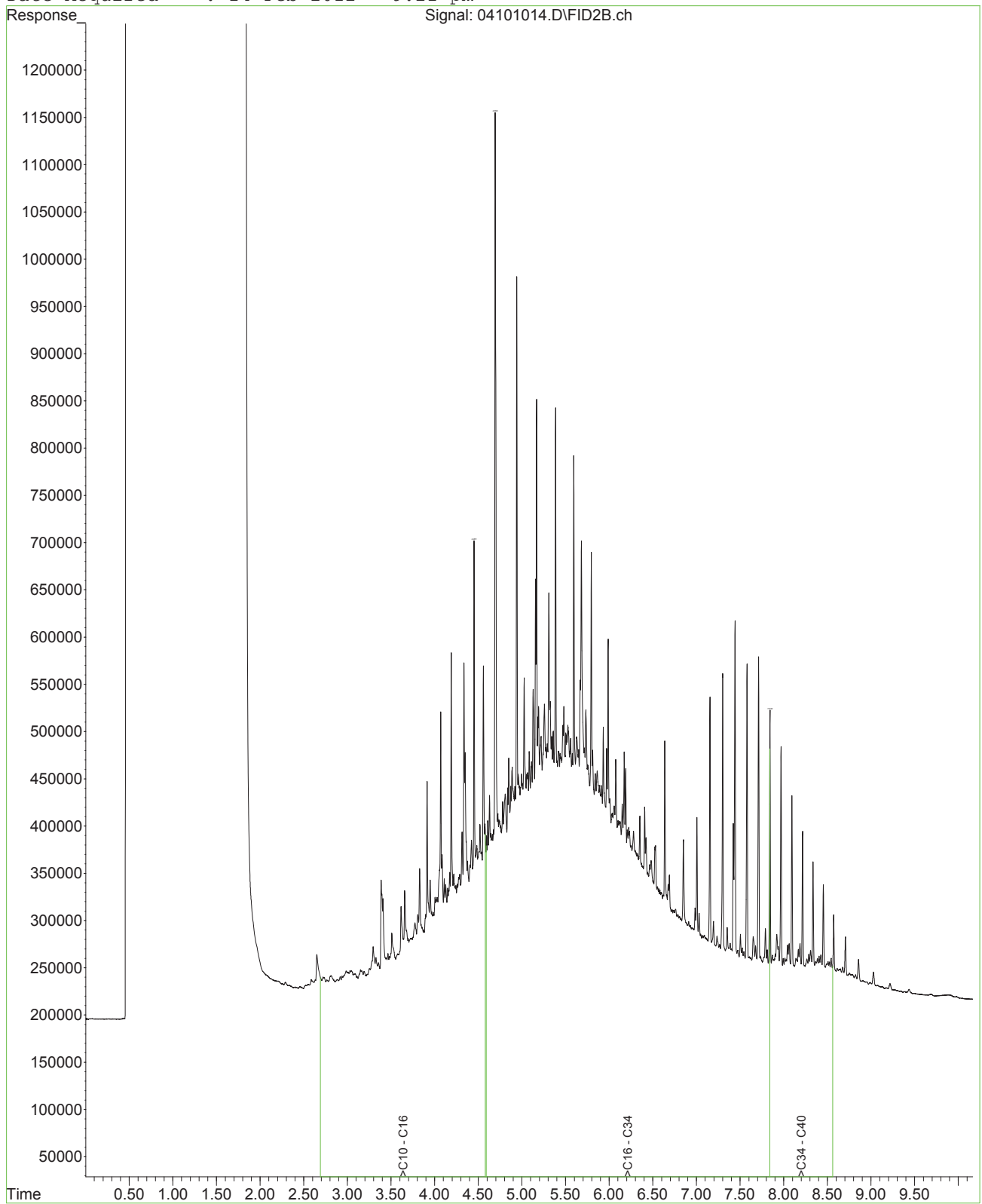
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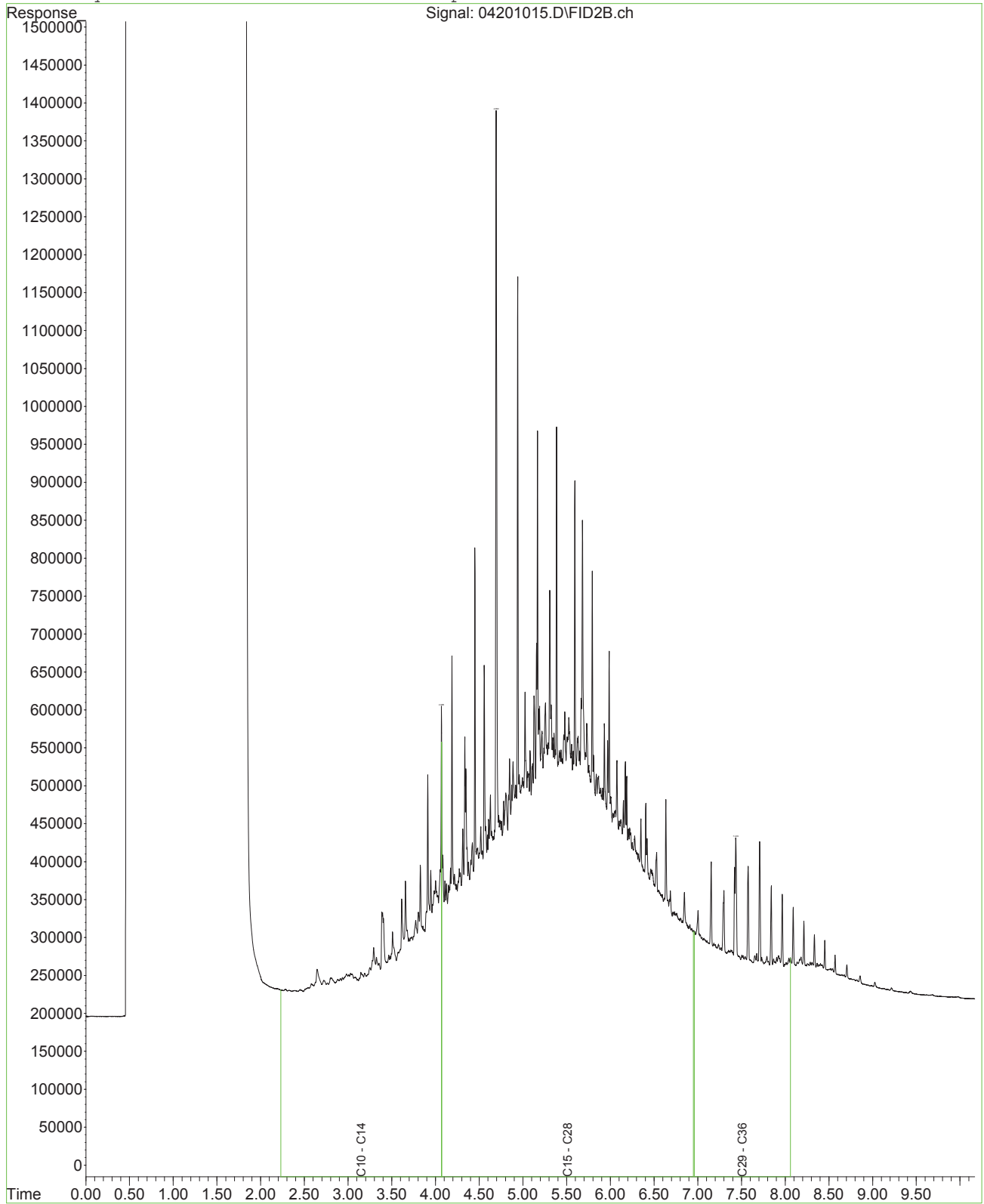
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Sample ID : SW6-1016/6006
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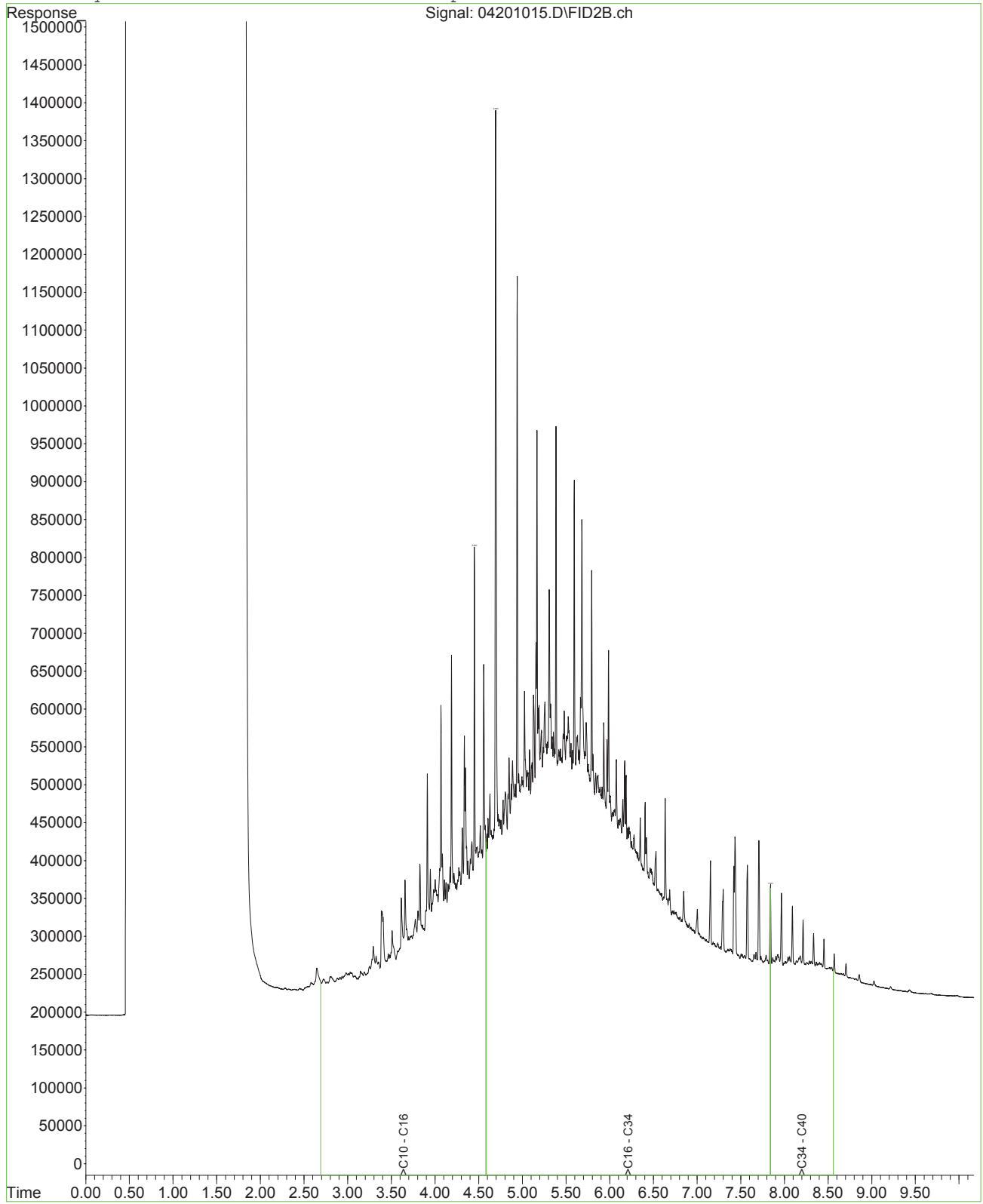
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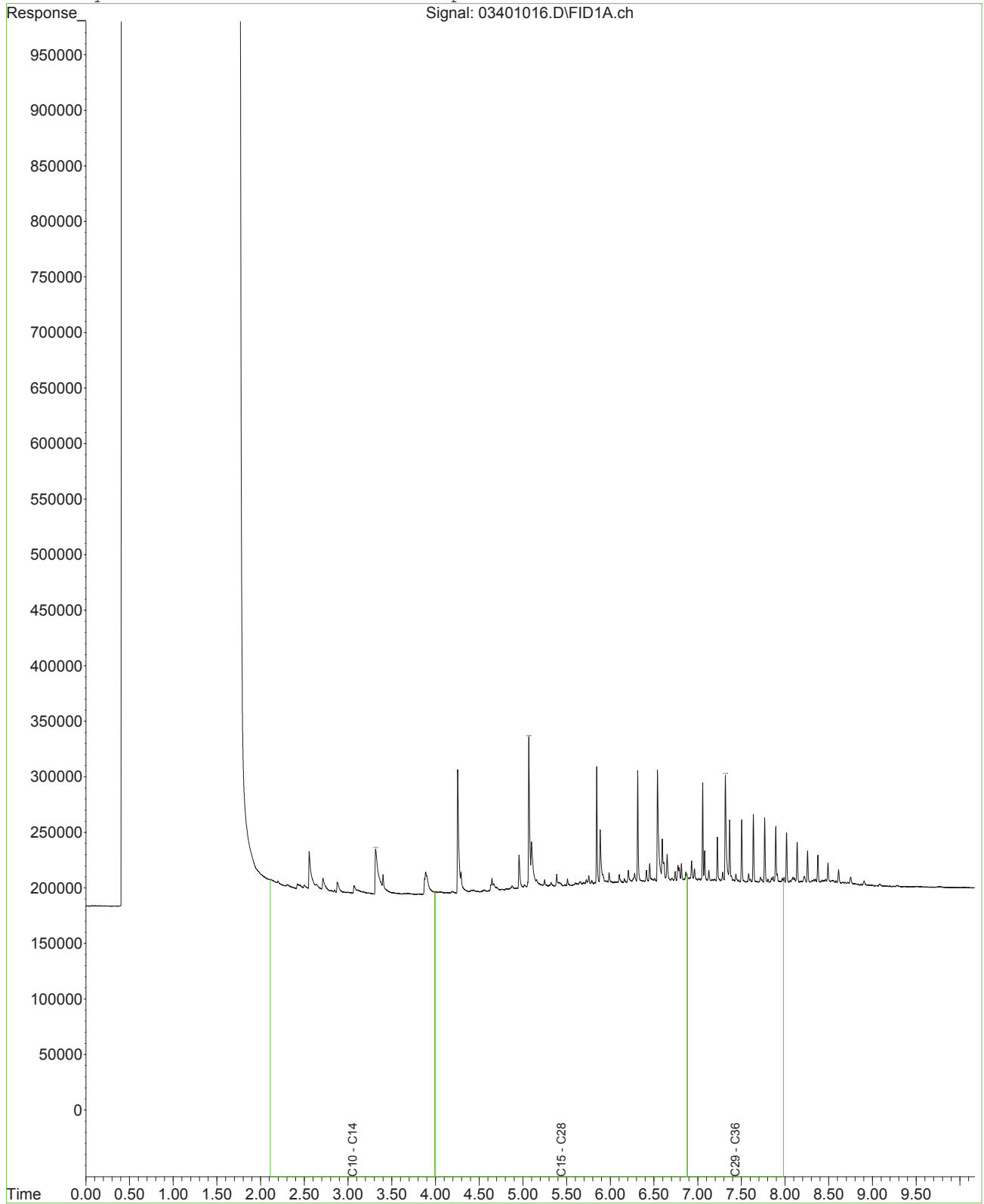
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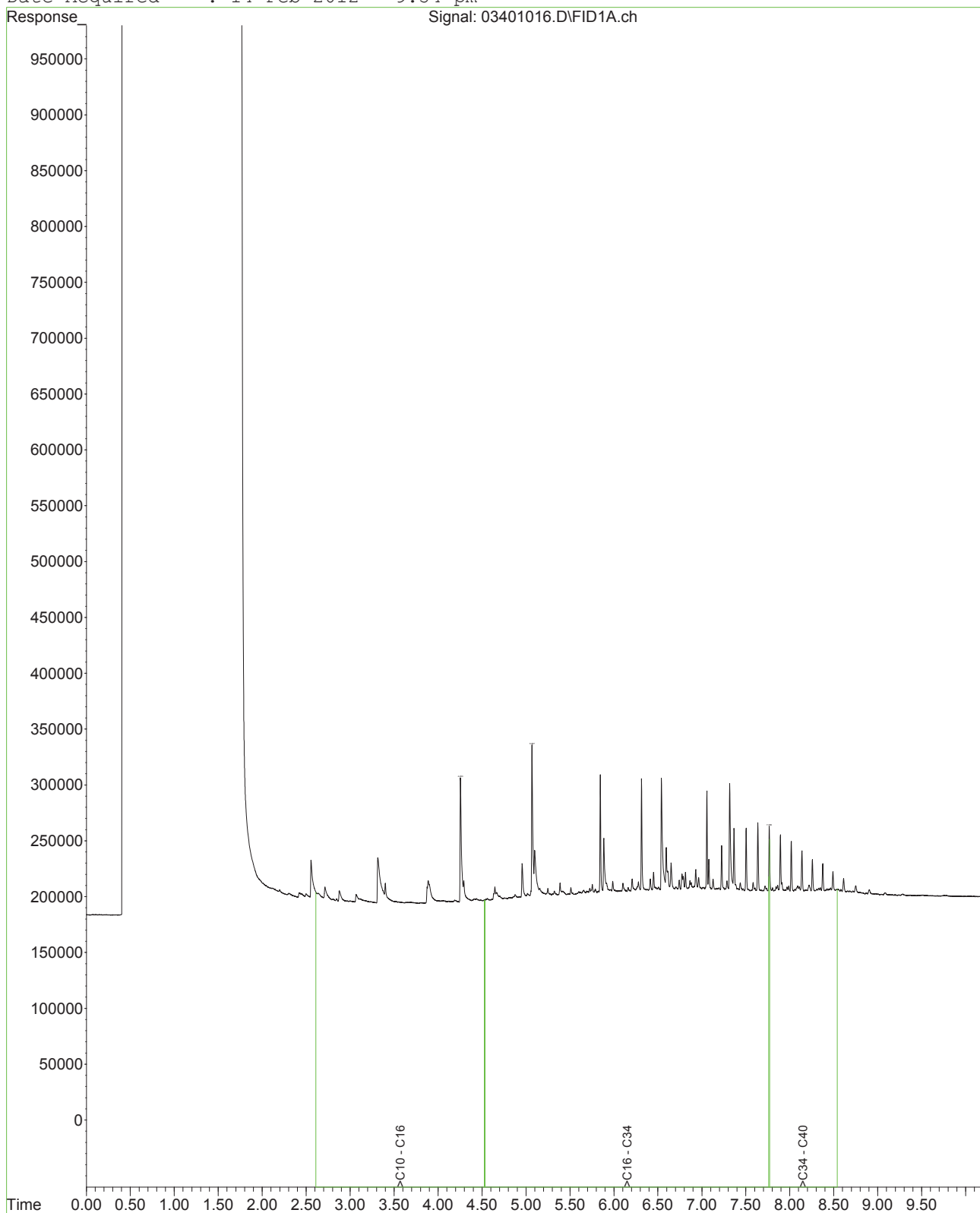
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Date Acquired : 14 Feb 2012 9:37 pm



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Laboratory Number: EM1201357-001
Sample ID : SW1-1051/6001
Date Acquired : 14 Feb 2012 9:54 pm



Fraction Scheme :
Data File : 03401016.D
Laboratory Number: EM1201357-001
Sample ID : SW1-1051/6001
Date Acquired : 14 Feb 2012 9:54 pm



ANALYTICAL RESULTS SHEET

EP-072

**Volatile Scan for Unknowns
(20 Largest Peaks > LOR)**

Batch No.: EM1201358
 Sample I.D. : 13
 Client I.D. : SD1-1051/8001
 Sample Amt (g) : 5.34
 Matrix : Soil

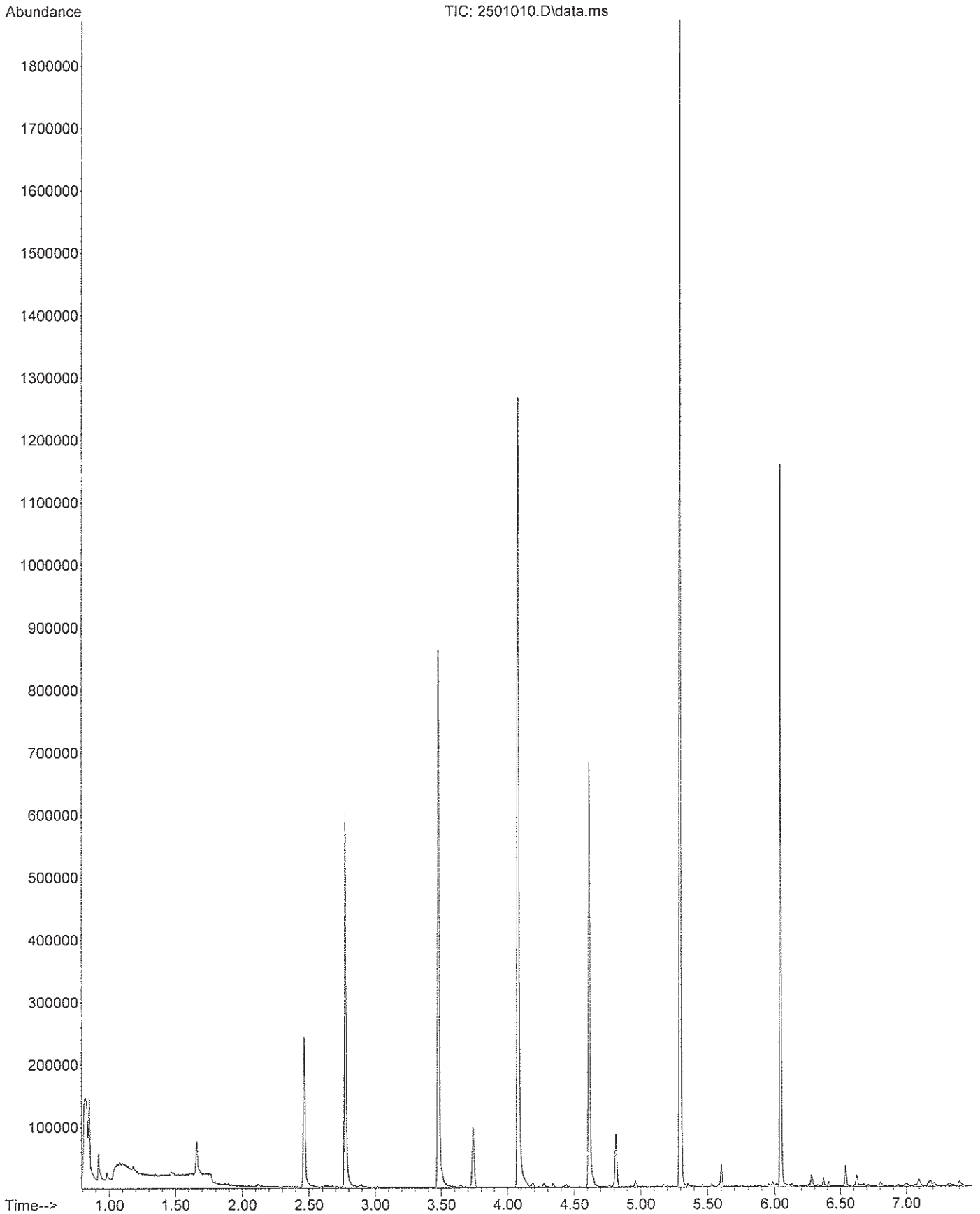
Units : mg/kg
 Analyst : GW
 Initials:
 Final Volume (mL): 10
 Extract Dilution : 1: 1

Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
NO VOC COMPOUNDS DETECTED ABOVE LOR					

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	2.77	1,4-Difluorobenzene	542881	50
2	4.08	Chlorobenzene-d5	1120909	50
3	5.30	1,4-Dichlorobenzene-d4	1396813	50
4	6.04	Napthalene-d8	798888	50

File : C:\msdchem\1\DATA\2564217\2501010.D
Operator : GW
Acquired : 13 Feb 2012 7:42 pm using AcqMethod FASTVOC.M
Instrument : VO5
Sample Name: 2564217_3
Misc Info : EM1201358-013
Vial Number: 25



ANALYTICAL RESULTS SHEET

EP-072

**Volatile Scan for Unknowns
(20 Largest Peaks > LOR)**

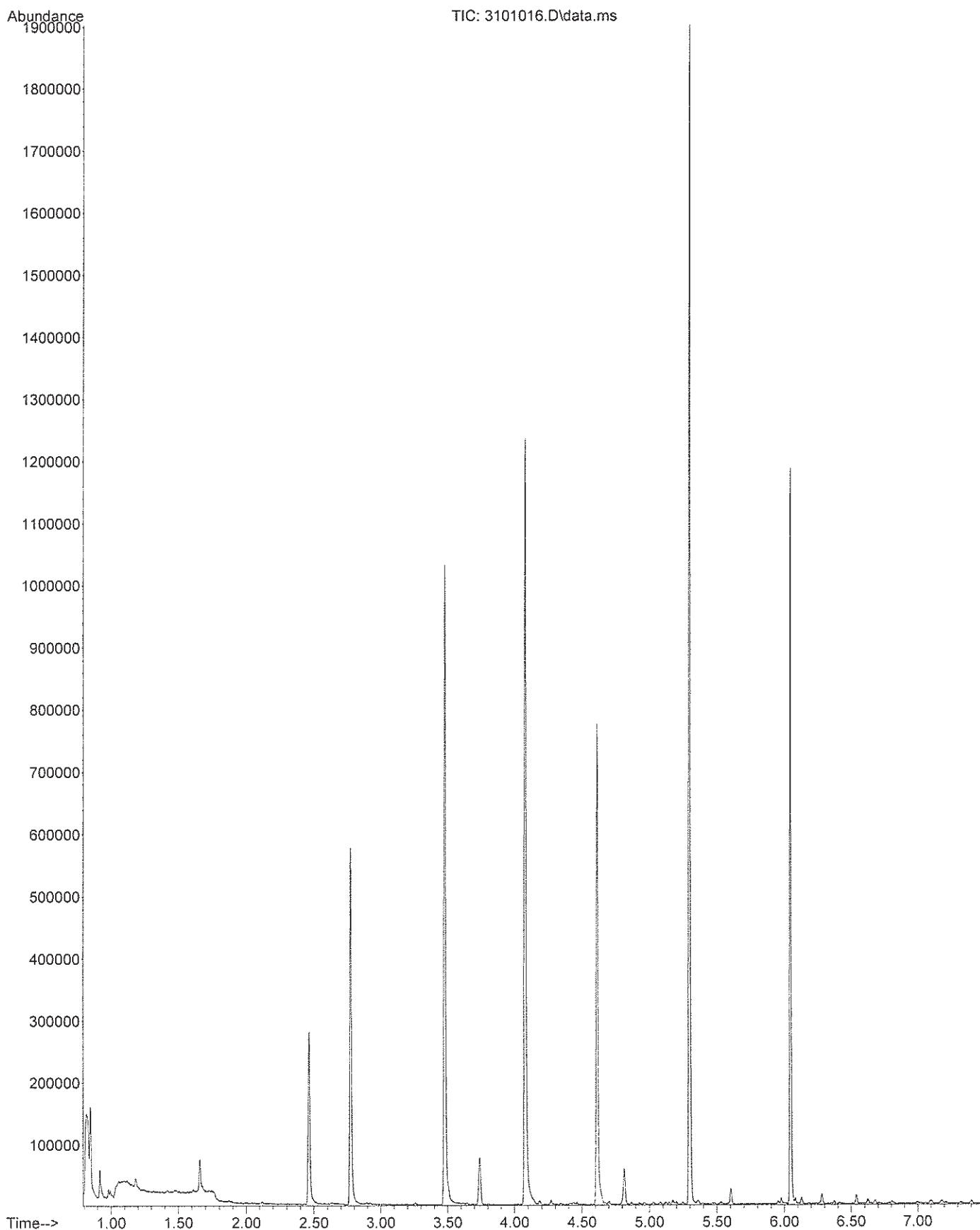
Batch No.:	EM1201358	Units :	mg/kg
Sample I.D. :	14	Analyst	GW
Client I.D. :	SD2-1052/8002	Initials:	
Sample Amt (g) :	5.22	Final Volume (mL):	10
Matrix : Soil		Extract Dilution :	1: 1

Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
NO VOC COMPOUNDS DETECTED ABOVE LOR					

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	2.77	1,4-Difluorobenzene	529602	50
2	4.08	Chlorobenzene-d5	1114694	50
3	5.30	1,4-Dichlorobenzene-d4	1386172	50
4	6.05	Napthalene-d8	790384	50

File :C:\msdchem\1\DATA\2564217\3101016.D
Operator : GW
Acquired : 13 Feb 2012 9:26 pm using AcqMethod FASTVOC.M
Instrument : VO5
Sample Name: 2564217_6
Misc Info : EM1201358-014
Vial Number: 31



ANALYTICAL RESULTS SHEET

EP-072

**Volatile Scan for Unknowns
(20 Largest Peaks > LOR)**

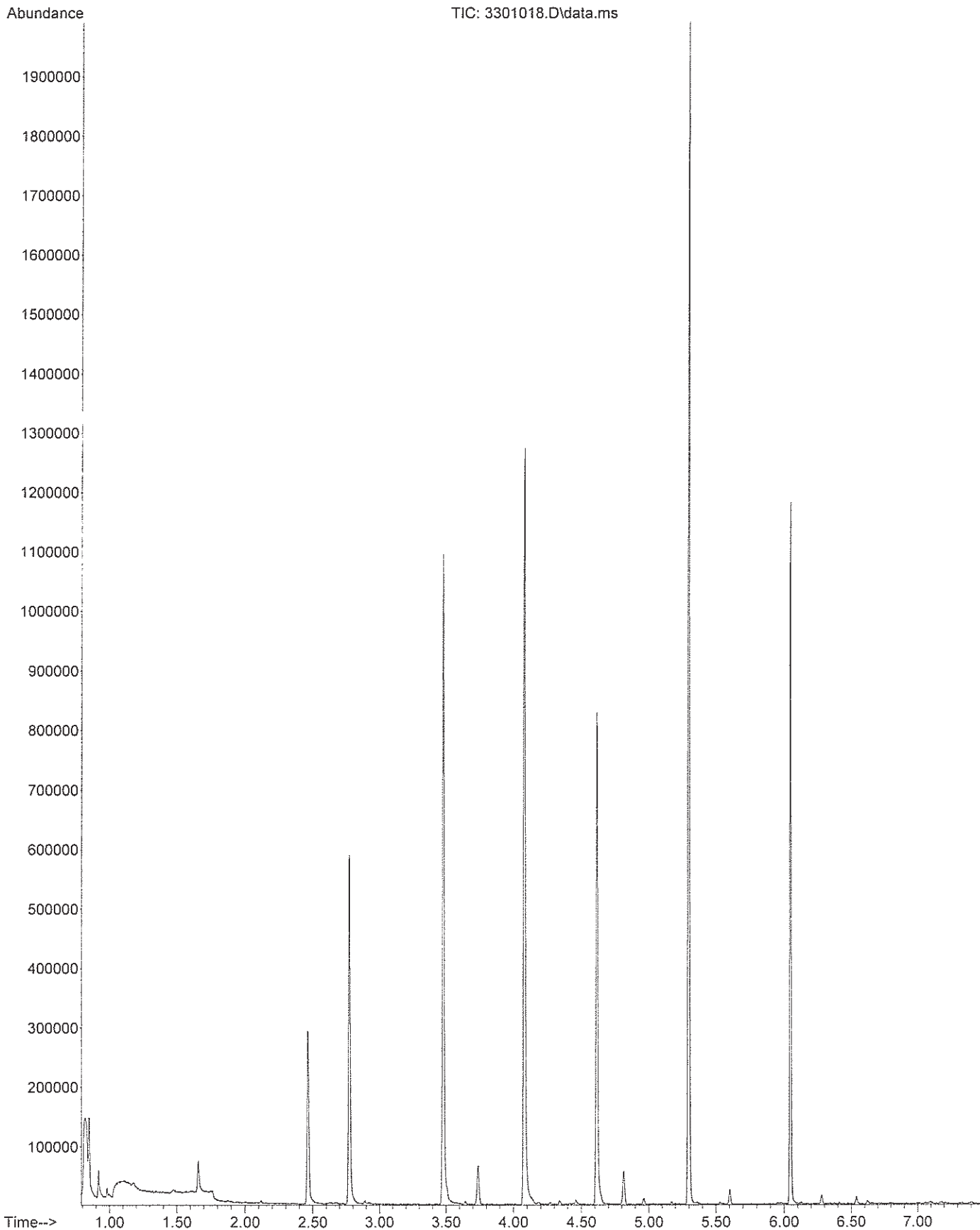
Batch No.:	EM1201358	Units :	mg/kg
Sample I.D. :	15	Analyst	GW
Client I.D. :	SD3-1043/8003	Initials:	
Sample Amt (g) :	5.46	Final Volume (mL):	10
Matrix : Soil		Extract Dilution :	1: 1

Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
NO VOC COMPOUNDS DETECTED ABOVE LOR					

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	2.77	1,4-Difluorobenzene	538333	50
2	4.08	Chlorobenzene-d5	1148321	50
3	5.30	1,4-Dichlorobenzene-d4	1424823	50
4	6.05	Napthalene-d8	804400	50

File :C:\msdchem\1\DATA\2564217\3301018.D
Operator : GW
Acquired : 13 Feb 2012 10:00 pm using AcqMethod FASTVOC.M
Instrument : VO5
Sample Name: 2564217_8
Misc Info : EM1201358-015
Vial Number: 33



ANALYTICAL RESULTS SHEET

EP-072

**Volatile Scan for Unknowns
(20 Largest Peaks > LOR)**

Batch No.: EM1201358
 Sample I.D. : 16
 Client I.D. : SD4-1044/8004
 Sample Amt (g) : 5.33
 Matrix : Soil

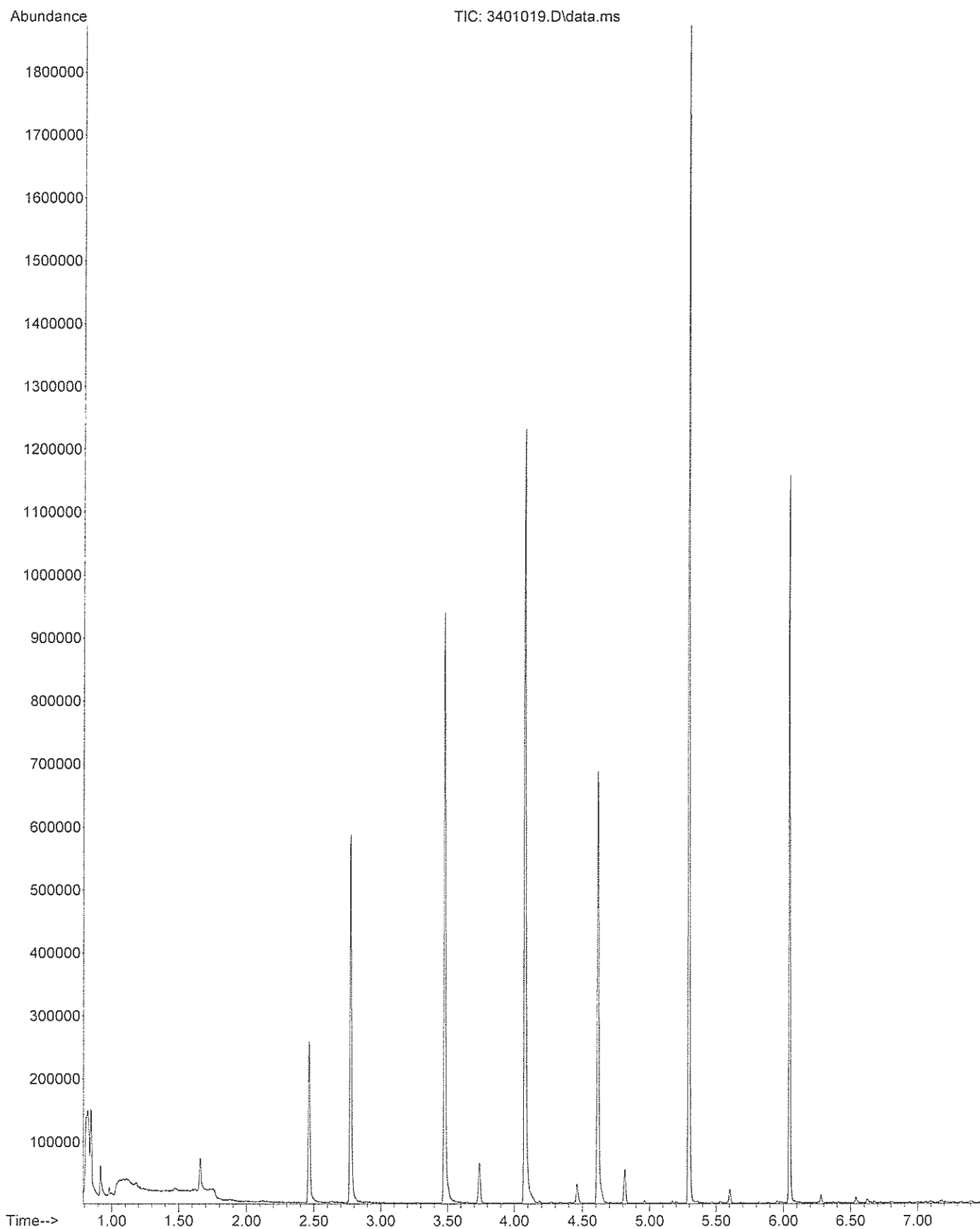
Units : mg/kg
 Analyst GW
 Initials:
 Final Volume (mL): 10
 Extract Dilution : 1: 1

Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
NO VOC COMPOUNDS DETECTED ABOVE LOR					

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	2.77	1,4-Difluorobenzene	533056	50
2	4.08	Chlorobenzene-d5	1105764	50
3	5.30	1,4-Dichlorobenzene-d4	1381473	50
4	6.05	Napthalene-d8	791521	50

File :C:\msdchem\1\DATA\2564217\3401019.D
Operator : GW
Acquired : 13 Feb 2012 10:17 pm using AcqMethod FASTVOC.M
Instrument : VO5
Sample Name: 2564217_9
Misc Info : EM1201358-016
Vial Number: 34



ANALYTICAL RESULTS SHEET

EP-072

**Volatile Scan for Unknowns
(20 Largest Peaks > LOR)**

Batch No.: EM1201358
 Sample I.D. : 17
 Client I.D. : SD5-1035/8005
 Sample Amt (g) : 5.5
 Matrix : Soil

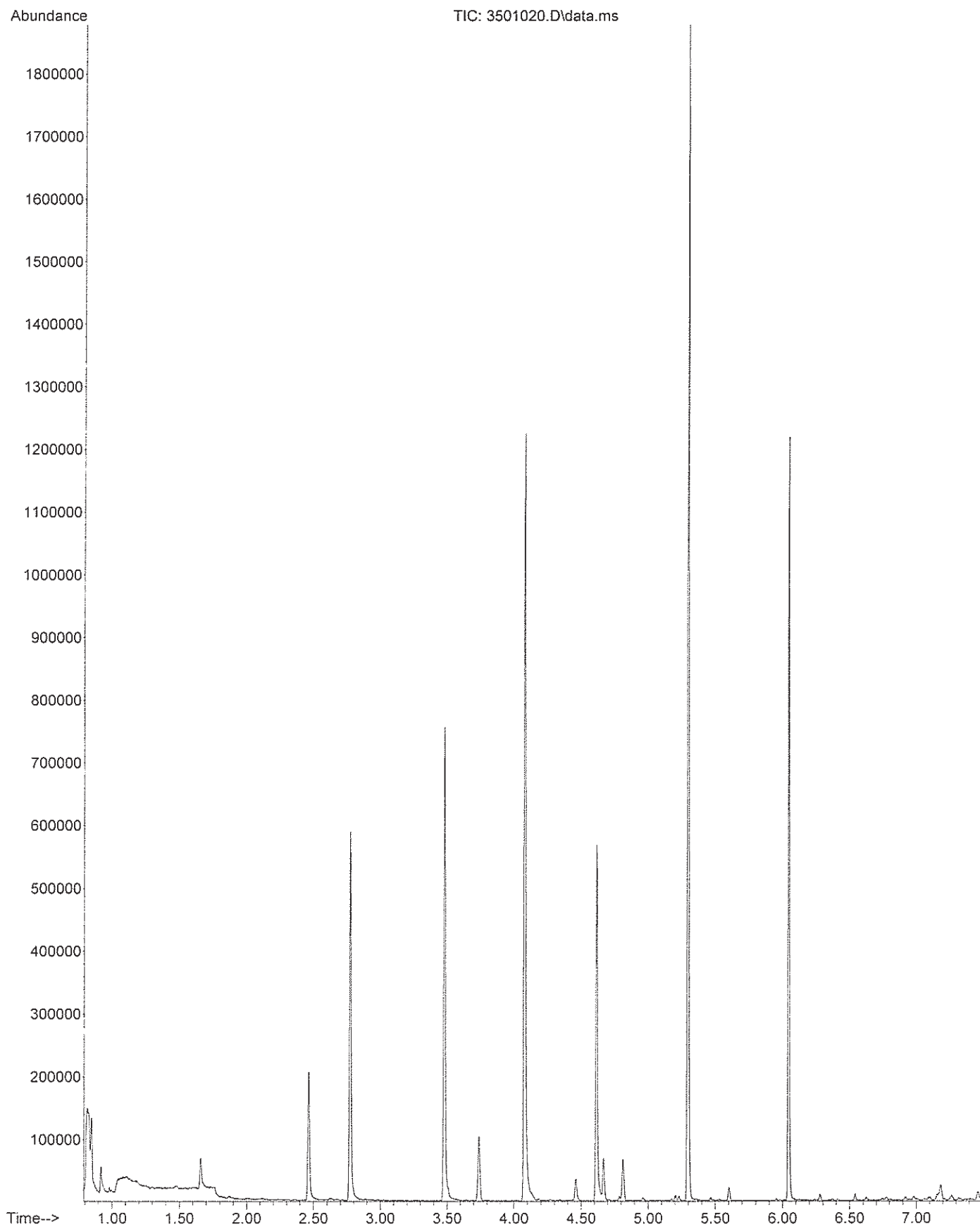
Units : mg/kg
 Analyst GW
 Initials:
 Final Volume (mL): 10
 Extract Dilution : 1: 1

Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
NO VOC COMPOUNDS DETECTED ABOVE LOR					

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	2.77	1,4-Difluorobenzene	535160	50
2	4.08	Chlorobenzene-d5	1110853	50
3	5.30	1,4-Dichlorobenzene-d4	1376702	50
4	6.05	Napthalene-d8	809226	50

File :C:\msdchem\1\DATA\2564217\3501020.D
Operator : GW
Acquired : 13 Feb 2012 10:35 pm using AcqMethod FASTVOC.M
Instrument : VO5
Sample Name: 2564217_10
Misc Info : EM1201358-017
Vial Number: 35



ANALYTICAL RESULTS SHEET

EP-072

**Volatile Scan for Unknowns
(20 Largest Peaks > LOR)**

Batch No.: EM1201358
 Sample I.D. : 18
 Client I.D. : SD6-1036/8006
 Sample Amt (g) : 5.07
 Matrix : Soil

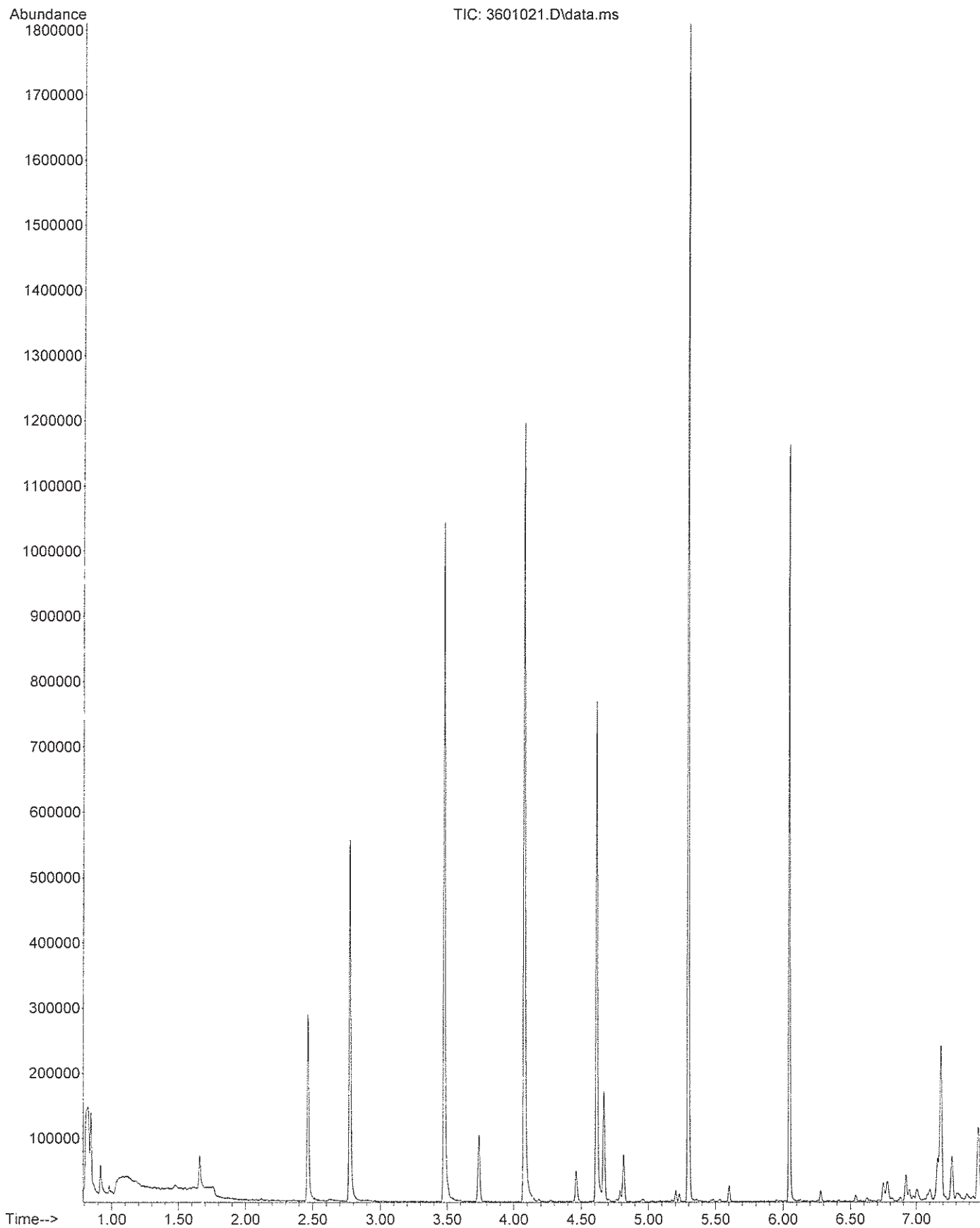
Units : mg/kg
 Analyst GW
 Initials:
 Final Volume (mL): 10
 Extract Dilution : 1: 1

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	4.67	93	.alpha.-Pinene	153978	0.72	2
2	7.19	98	Decahydro-trimethyl-methylene-Cyclopropazulene	284040	1.78	4
3	7.27	76	Octahydro-dimethyl-(methylethenyl)-Azulene	79856	0.50	4

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	2.77	1,4-Difluorobenzene	506220	50
2	4.08	Chlorobenzene-d5	1052604	50
3	5.30	1,4-Dichlorobenzene-d4	1313169	50
4	6.05	Napthalene-d8	786489	50

File :C:\msdchem\1\DATA\2564217\3601021.D
Operator : GW
Acquired : 13 Feb 2012 10:52 pm using AcqMethod FASTVOC.M
Instrument : VO5
Sample Name: 2564217_11
Misc Info : EM1201358-018
Vial Number: 36



ANALYTICAL RESULTS SHEET

EP-072

**Volatile Scan for Unknowns
(20 Largest Peaks > LOR)**

Batch No.: EM1201358
 Sample I.D. : 19
 Client I.D. : SD7-1027/8007
 Sample Amt (g) : 5.18
 Matrix : Soil

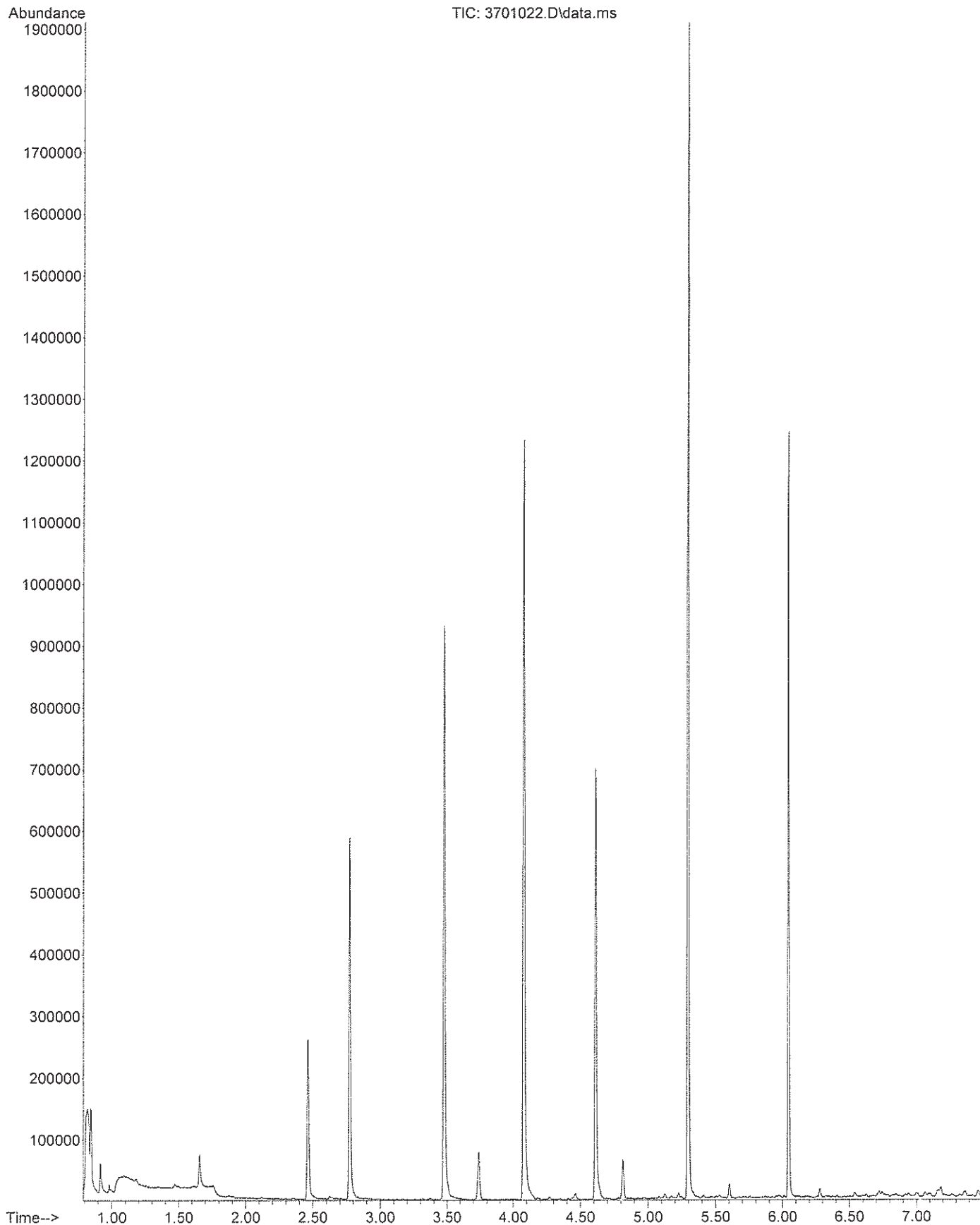
Units : mg/kg
 Analyst GW
 Initials:
 Final Volume (mL): 10
 Extract Dilution : 1: 1

Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
NO VOC COMPOUNDS DETECTED ABOVE LOR					

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	2.77	1,4-Difluorobenzene	527210	50
2	4.08	Chlorobenzene-d5	1089829	50
3	5.30	1,4-Dichlorobenzene-d4	1403445	50
4	6.05	Napthalene-d8	851731	50

File :C:\msdchem\1\DATA\2564217\3701022.D
Operator : GW
Acquired : 13 Feb 2012 11:09 pm using AcqMethod FASTVOC.M
Instrument : VO5
Sample Name: 2564217_12
Misc Info : EM1201358-019
Vial Number: 37



ANALYTICAL RESULTS SHEET

EP-072

**Volatile Scan for Unknowns
(20 Largest Peaks > LOR)**

Batch No.: EM1201358
 Sample I.D. : 20
 Client I.D. : SD8-1028/8008
 Sample Amt (g) : 5.12
 Matrix : Soil

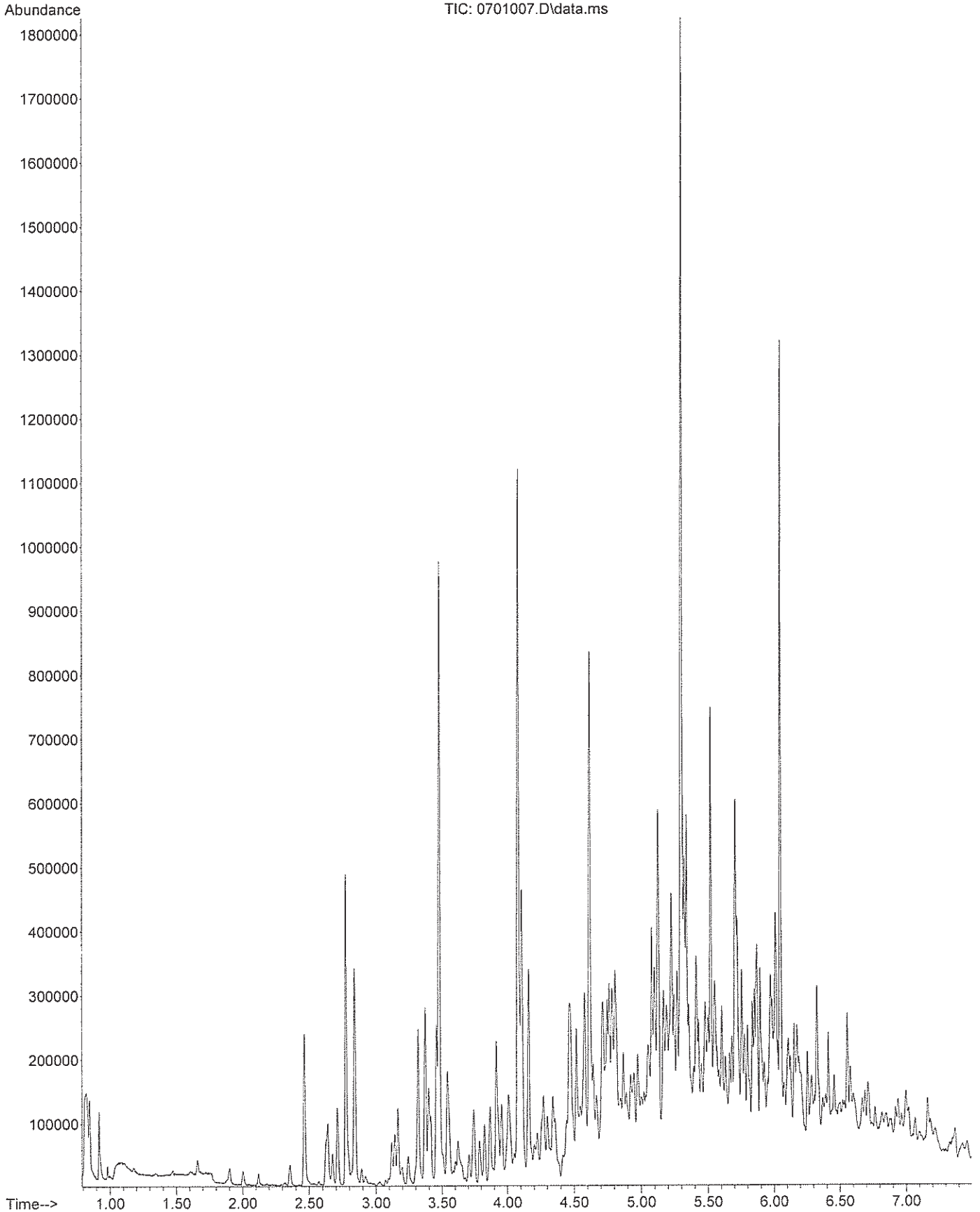
Units : mg/kg
 Analyst GW
 Initials:
 Final Volume (mL): 10
 Extract Dilution : 1: 1

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	2.84	72	Tetramethyl-Butane	350131	3.74	1
2	3.32	91	Trimethyl-Pentane	269735	2.88	1
3	3.37	72	Methyl-Hexane	269565	2.88	1
4	3.40	86	2-Methyl-Heptane	203524	2.17	1
5	3.46	87	3-Methyl-Heptane	222611	1.04	2
6	3.54	72	Trimethyl-Hexane	250191	1.17	2
7	3.92	83	Dimethyl-Heptane	230313	1.08	2
8	4.11	NA	Substituted Alkane	444906	2.09	2
9	4.16	87	Methyl-Octane	315568	1.48	2
10	4.58	72	Dimethyl-Octane	222377	1.04	2
11	4.71	NA	Unknown Aliphatic Compound	299180	1.02	3
12	4.78	72	Trimethyl-Octane	204792	0.70	3
13	4.81	81	Methyl-Nonane	245849	0.84	3
14	5.12	NA	Substituted Alkane	473707	1.62	3
15	5.52	97	1-Methyl-2-(1-methylethyl)-Benzene	357487	1.22	3
16	5.71	94	1-Methyl-4-(1-methylethyl)-Benzene	629839	3.66	4
17	5.87	93	Ethyl-dimethyl-Benzene	233216	1.35	4
18	5.89	NA	Unknown Aromatic Compound	214071	1.24	4
19	5.97	74	Dihydro-dimethyl-Indene	311379	1.81	4
20	6.01	87	Ethyl-(methylethyl)-Benzene	331106	1.92	4

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	2.77	1,4-Difluorobenzene	456994	50
2	4.08	Chlorobenzene-d5	1041378	50
3	5.30	1,4-Dichlorobenzene-d4	1429262	50
4	6.05	Naphthalene-d8	840607	50

File : C:\msdchem\1\DATA\2564217RR\0701007.D
Operator : GW
Acquired : 14 Feb 2012 11:58 am using AcqMethod FASTVOC.M
Instrument : VO5
Sample Name: 2564217_13 NEAT
Misc Info : EM1201358-020
Vial Number: 7



ANALYTICAL RESULTS SHEET

EP-072

**Volatile Scan for Unknowns
(20 Largest Peaks > LOR)**

Batch No.: EM1201358
 Sample I.D. : 22
 Client I.D. : SD10-10110/8010
 Sample Amt (g) : 5.3
 Matrix : Soil

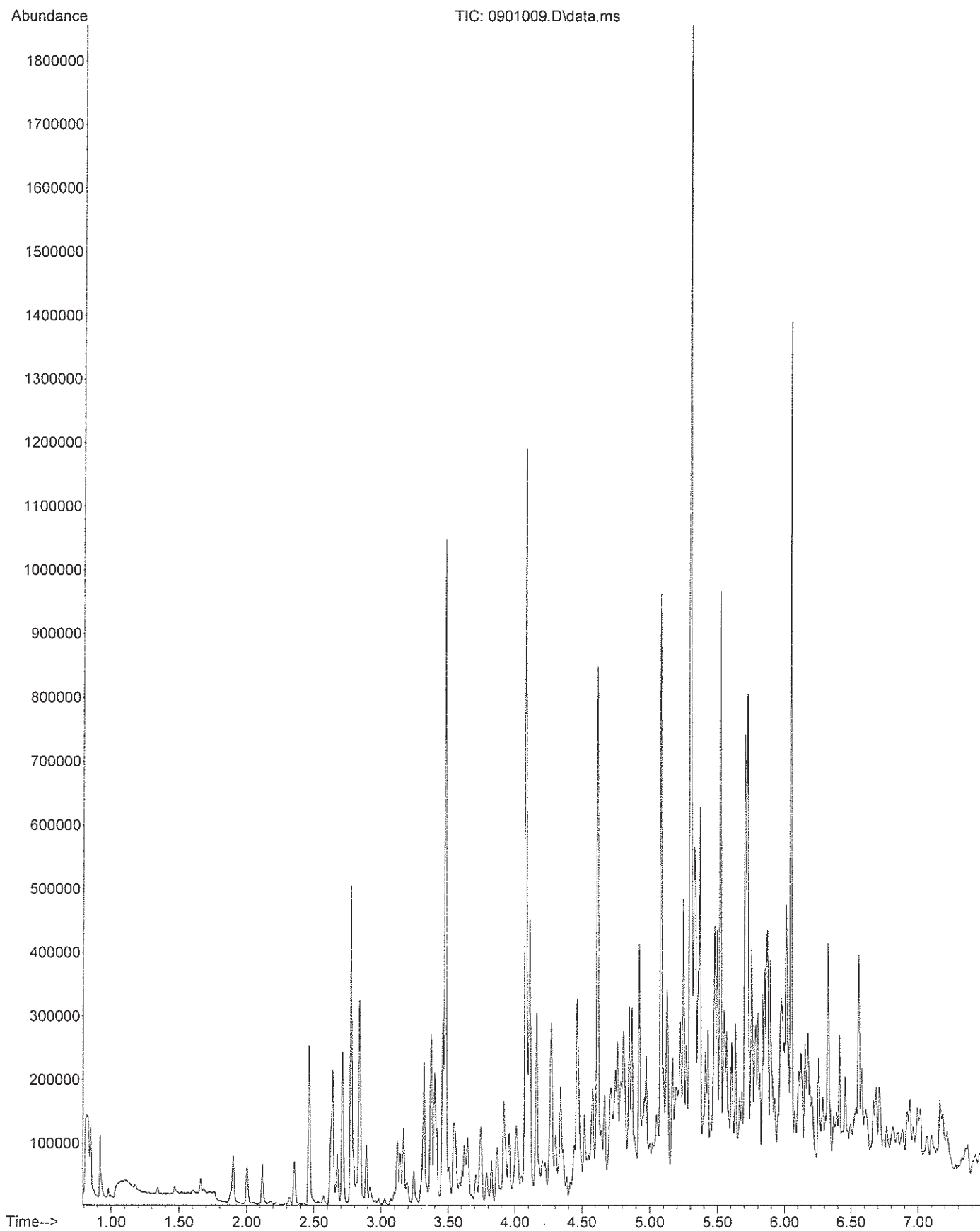
Units : mg/kg
 Analyst GW
 Initials:
 Final Volume (mL): 10
 Extract Dilution : 1: 1

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	2.64	90/87	Cyclohexane/Methyl-Hexane	288271	3.08	1
2	2.84	72	Tetramethyl-Butane	332226	3.55	1
3	3.32	91	Trimethyl-Pentane	276427	2.95	1
4	3.40	90	2-Methyl-Heptane	254457	2.72	1
5	3.46	87	3-Methyl-Heptane	250765	1.12	2
6	4.11	NA	Substituted Alkane	403981	1.80	2
7	4.16	83	Methyl-Octane	274917	1.23	2
8	4.46	NA	Unknown Volatile Compound	482223	2.15	2
9	5.12	NA	Unknown Aliphatic Compound	298680	0.92	3
10	5.33	94	Methyl-propyl-Benzene	508508	1.56	3
11	5.37	95	1-Methyl-4-(1-methylethyl)-Benzene	346709	1.06	3
12	5.48	97	2-Ethyl-1,4-dimethyl-Benzene	292592	0.90	3
13	5.52	97	1-Methyl-2-(1-methylethyl)-Benzene	529087	1.62	3
14	5.70	97	1,2,3,4-Tetramethyl-Benzene	516913	2.54	4
15	5.72	95	1,2,4,5-Tetramethyl-Benzene	523949	2.57	4
16	5.75	NA	Unknown Aromatic Compound	240278	1.18	4
17	5.87	94	Ethyl-dimethyl-Benzene	259194	1.27	4
18	5.97	93	Dihydro-dimethyl-Indene	408234	2.00	4
19	6.01	87	Ethyl-(methylethyl)-Benzene	440961	2.16	4
20	6.32	NA	Unknown Volatile Compound	306469	1.50	4

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	2.77	1,4-Difluorobenzene	441713	50
2	4.08	Chlorobenzene-d5	1057764	50
3	5.30	1,4-Dichlorobenzene-d4	1536695	50
4	6.05	Napthalene-d8	961115	50

File : C:\msdchem\1\DATA\2564217RR\0901009.D
Operator : GW
Acquired : 14 Feb 2012 12:32 pm using AcqMethod FASTVOC.M
Instrument : VO5
Sample Name: 2564217_15 NEAT
Misc Info : EM1201358-022
Vial Number: 9



ANALYTICAL RESULTS SHEET

EP-072

Volatile Scan for Unknowns
(20 Largest Peaks > LOR)

Batch No.: EM1201358

Units : mg/kg

Sample I.D. : 23

Analyst GW

Client I.D. : DUP2-10110/8811

Initials:

Sample Amt (g) : 5.15

Final Volume (mL): 10

Matrix : Soil

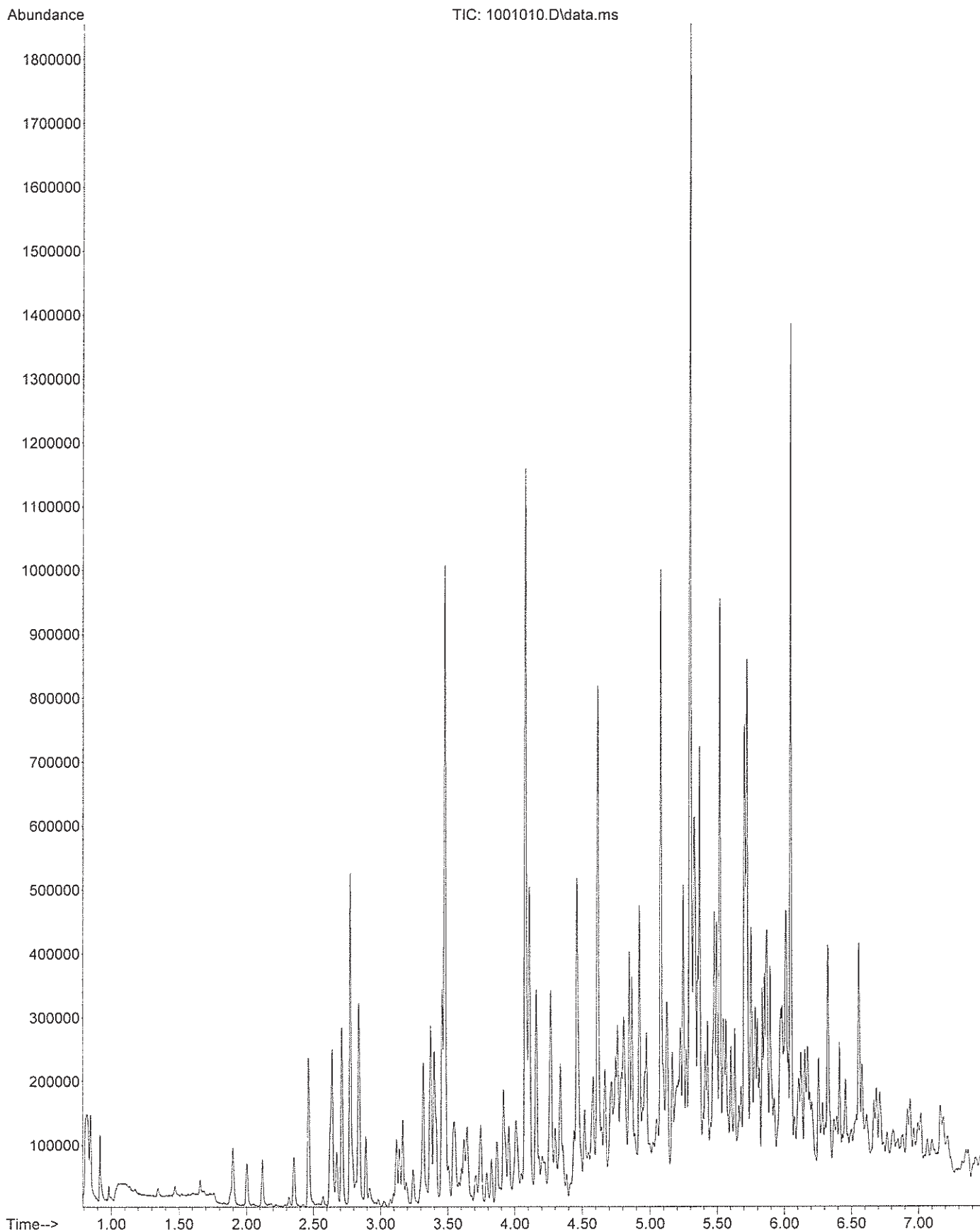
Extract Dilution : 1: 1

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	2.64	93/91	Cyclohexane/2-Methyl-Hexane	329271	3.48	1
2	2.71	95	3-Methyl-Hexane	268306	2.84	1
3	2.84	72	Tetramethyl-Butane	357673	3.78	1
4	3.32	91	Trimethyl-Pentane	285617	3.02	1
5	3.40	91	2-Methyl-Heptane	297550	3.15	1
6	3.46	87	3-Methyl-Heptane	288351	1.36	2
7	4.11	NA	Substituted Alkane	470871	2.22	2
8	4.16	83	Methyl-Octane	324133	1.53	2
9	4.46	NA	Unknown Volatile Compound	547297	2.59	2
10	4.81	81	Methyl-Nonane	354783	1.15	3
11	5.12	NA	Substituted Alkane	274513	0.89	3
12	5.33	94	Methyl-propyl-Benzene	537738	1.74	3
13	5.37	95	1-Methyl-4-(1-methylethyl)-Benzene	414192	1.34	3
14	5.48	96	2-Ethyl-1,4-dimethyl-Benzene	354604	1.15	3
15	5.52	97	1-Methyl-2-(1-methylethyl)-Benzene	530185	1.72	3
16	5.71	95	1,2,3,4-Tetramethyl-Benzene	514298	2.64	4
17	5.72	97	1,2,4,5Tetramethyl-Benzene	558902	2.86	4
18	5.87	93	1-Ethyl-2,4-dimethyl-Benzene	268092	1.37	4
19	6.01	87	Ethyl-(methylethyl)-Benzene	307378	1.58	4
20	6.32	NA	Unknown Volatile Compound	318894	1.63	4

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	2.77	1,4-Difluorobenzene	458802	50
2	4.08	Chlorobenzene-d5	1027705	50
3	5.30	1,4-Dichlorobenzene-d4	1499649	50
4	6.05	Napthalene-d8	947324	50

File :C:\msdchem\1\DATA\2564217RR\1001010.D
Operator : GW
Acquired : 14 Feb 2012 12:50 pm using AcqMethod FASTVOC.M
Instrument : VO5
Sample Name: 2564217_16 NEAT
Misc Info : EM1201358-023
Vial Number: 10



ANALYTICAL RESULTS SHEET

EP-073

Semivolatile Scan for Unknowns

(20 Largest Peaks > LOR)

SHEET413/1

Batch No.: EM1201358

Units : mg/kg

Sample I.D. : 1

Client I.D. : SD1 - 1051/8001

Analyst : PTN

Sample Amt (g) : 20.54

Final Volume (mL): 5

Matrix : Soil

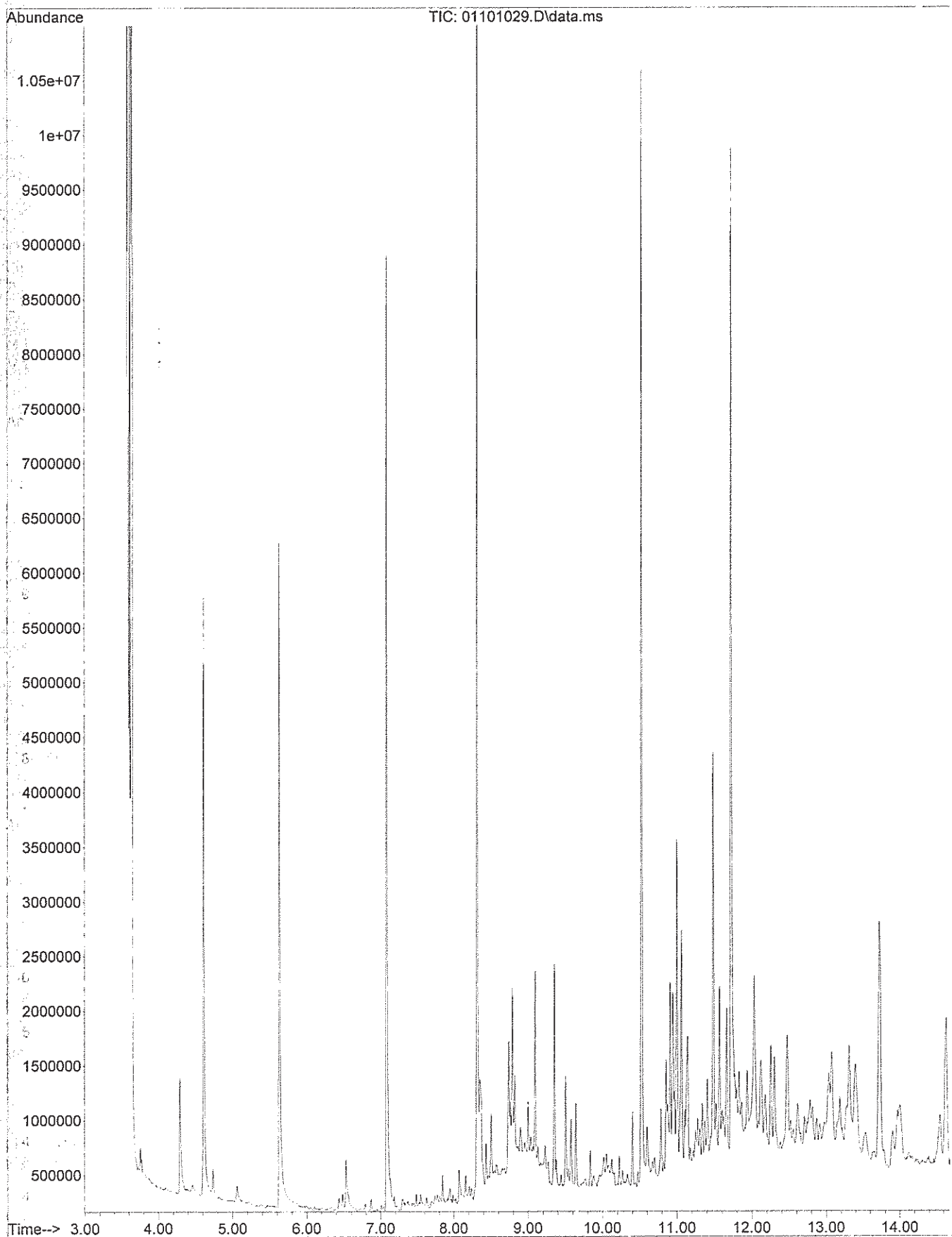
Extract Dilution : 1: 5

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	8.79	91	Hexadecanoic acid	1810505	4	4
2	10.94	90	Substituted alkane	2740365	6	5
3	11.14	92	Pentatriacontene isomer	1865128	4	5
4	11.67	94	1-Octadecene	1540508	3	5
5	12.03	97	Nonadecane	2667904	6	6
6	12.25	93	Pentatriacontene isomer	1277469	3	6
7	12.30	83	Coprostan-3-one	1301837	3	6
8	13.72	93	Stigmast-4-en-3-one	5527427	11	6

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	4.61	1,4-Dichlorobenzene-d4	5345714	20
2	5.63	Naphthalene-d8	7493053	20
3	7.08	Acenaphthene-d10	9253146	20
4	8.31	Phenanthrene-d10	10135035	20
5	10.52	Chrysene-d12	10747569	20
6	11.72	Perylene-d12	11723772	20

File : D:\MSDCHEM\1\DATA\2585334\01101029.D
Operator : SV15
Acquired : 24 Feb 2012 1:03 am using AcqMethod FASTSVOC.M
Instrument : SV-15
Sample Name: 2585334_1 x5
Misc Info : SD1 - 1051/8001
Vial Number: 11



ANALYTICAL RESULTS SHEET

EP-073

Semivolatile Scan for Unknowns

(20 Largest Peaks > LOR)

SHEET413/1

Batch No.: EM1201358

Units : mg/kg

Sample I.D. : 2

Client I.D. : SD2 - 1052/8002

Analyst : AW

Sample Amt (g) : 20.9

Final Volume (mL): 5

Matrix : Soil

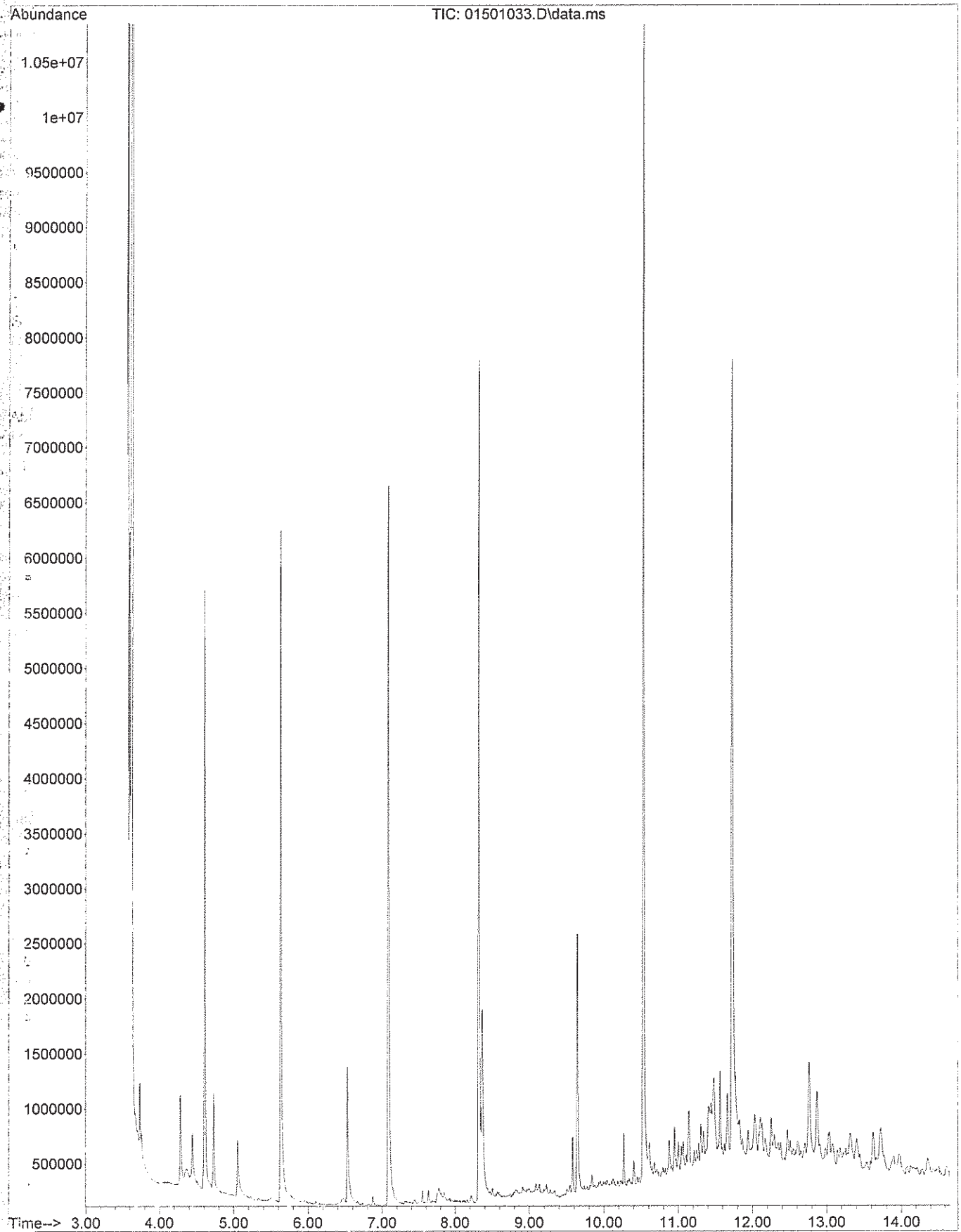
Extract Dilution : 1: 1

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	11.479	94	eicosane isomer	1268798	1	6
2	12.762	91	methoxyfriedooleanene	1668687	1	6

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	4.61	1,4-Dichlorobenzene-d4	5003432	20
2	5.63	Naphthalene-d8	7002168	20
3	7.08	Acenaphthene-d10	8808475	20
4	8.31	Phenanthrene-d10	9056650	20
5	10.52	Chrysene-d12	12469172	20
6	11.72	Perylene-d12	11458243	20

File : D:\MSDCHEM\1\DATA\2585334\01501033.D
Operator : SV15
Acquired : 24 Feb 2012 2:19 am using AcqMethod FASTSVOC.M
Instrument : SV-15
Sample Name: 2585334_5
Misc Info : SD2 - 1052/8002
Vial Number: 15



ANALYTICAL RESULTS SHEET

EP-073

**Semivolatile Scan for Unknowns
(20 Largest Peaks > LOR)**

SHEET413/1

Batch No.: EM1201358
 Sample I.D. : 3
 Analyst : AW
 Sample Amt (g) : 20.9
 Matrix : Soil

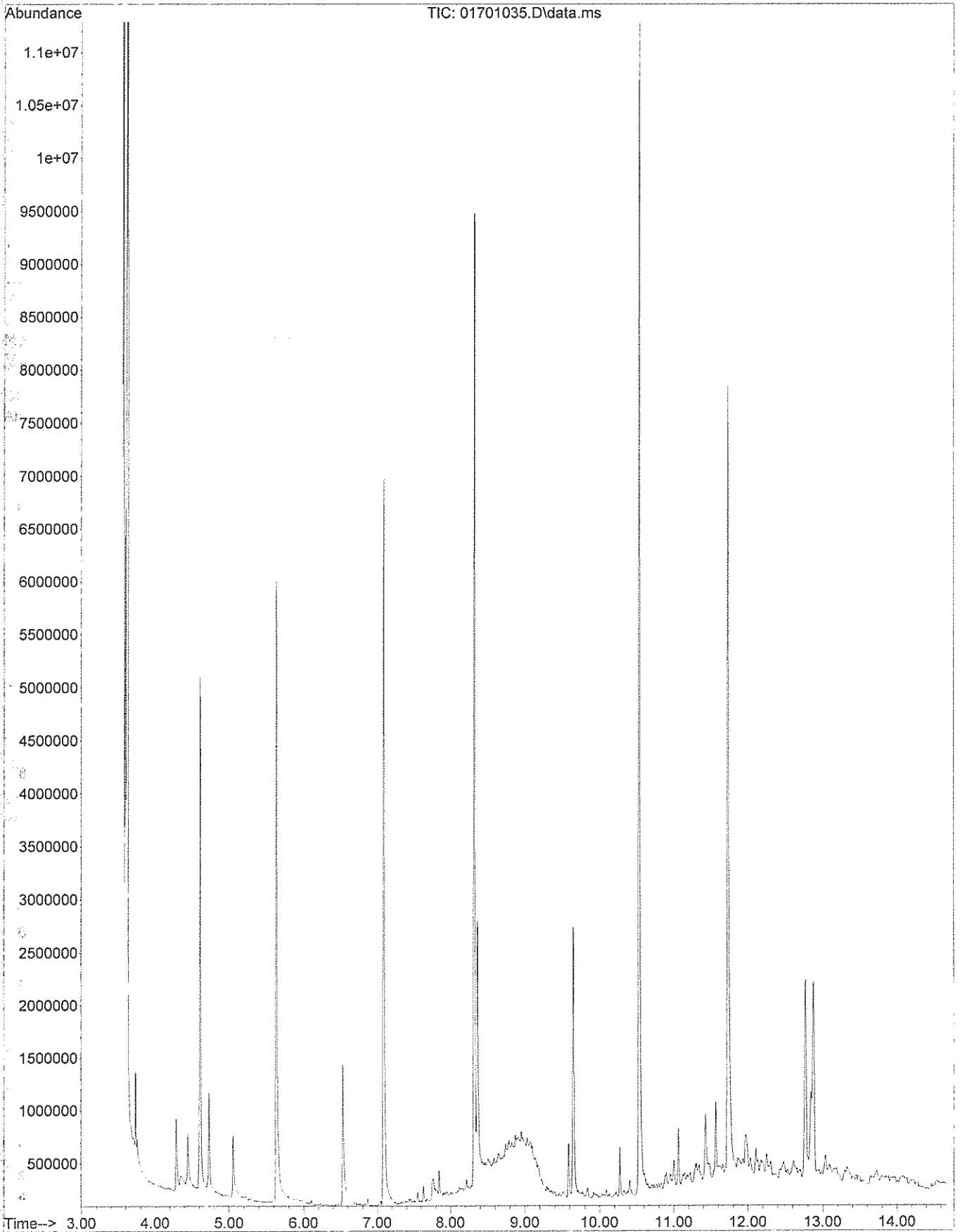
Units : mg/kg
 Client I.D. : SD3 - 1043/8003
 Final Volume (mL): 5
 Extract Dilution : 1: 1

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	12.767	86	Methoxyfriedooleanene	3217230	1	6
2	12.872	n/a	Unknown substituted alkane	4223405	2	6

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	4.61	1,4-Dichlorobenzene-d4	5169177	20
2	5.63	Naphthalene-d8	7605185	20
3	7.08	Acenaphthene-d10	8867063	20
4	8.31	Phenanthrene-d10	9772641	20
5	10.52	Chrysene-d12	13206335	20
6	11.72	Perylene-d12	11510774	20

File :D:\MSDCHEM\1\DATA\2585334\01701035.D
Operator : SV15
Acquired : 24 Feb 2012 2:57 am using AcqMethod FASTSVOC.M
Instrument : SV-15
Sample Name: 2585334_7
Misc Info : SD3 - 1043/8003
Vial Number: 17



ANALYTICAL RESULTS SHEET

EP-073

Semivolatile Scan for Unknowns

(20 Largest Peaks > LOR)

SHEET413/1

Batch No.: EM1201358
 Sample I.D.: 4
 Analyst: AW
 Sample Amt (g): 22.5
 Matrix: Soil

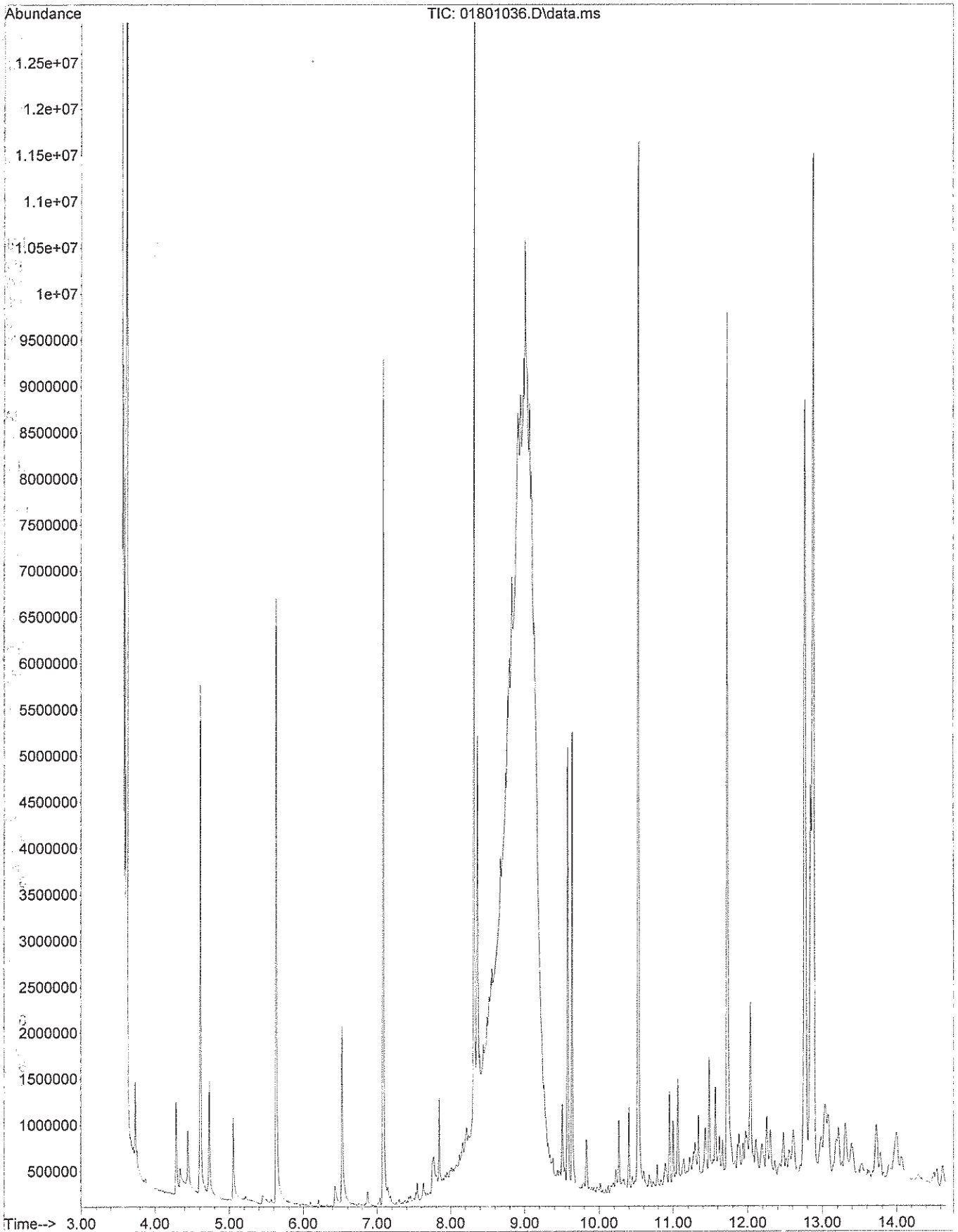
Units: mg/kg
 Client I.D.: SD4 - 1044/8004
 Final Volume (mL): 5
 Extract Dilution: 1: 1

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	9.002	99	Sulfur	238779382	98	4
2	9.573	n/a	Unknown peak	4528347	2	5
3	11.479	98	Eicosane	1307987	0	6
4	12.033	98	Nonadecane	2632074	1	6
5	12.767	92	Methoxyfriedooleanene	14597890	6	6
6	12.884	n/a	Unknown substituted alkane	17670685	7	6

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	4.61	1,4-Dichlorobenzene-d4	5142151	20
2	5.63	Naphthalene-d8	7031743	20
3	7.08	Acenaphthene-d10	9021698	20
4	8.31	Phenanthrene-d10	10806319	20
5	10.52	Chrysene-d12	13169884	20
6	11.72	Perylene-d12	11752235	20

File : D:\MSDCHEM\1\DATA\2585334\01801036.D
Operator : SV15
Acquired : 24 Feb 2012 3:16 am using AcqMethod FASTSVOC.M
Instrument : SV-15
Sample Name: 2585334_8
Misc Info : SD4 - 1044/8004
Vial Number: 18



ANALYTICAL RESULTS SHEET

EP-073

Semivolatile Scan for Unknowns
(20 Largest Peaks > LOR)

SHEET413/1

Batch No.: EM1201358
 Sample I.D.: 5
 Analyst: AW
 Sample Amt (g): 20.3
 Matrix: Soil

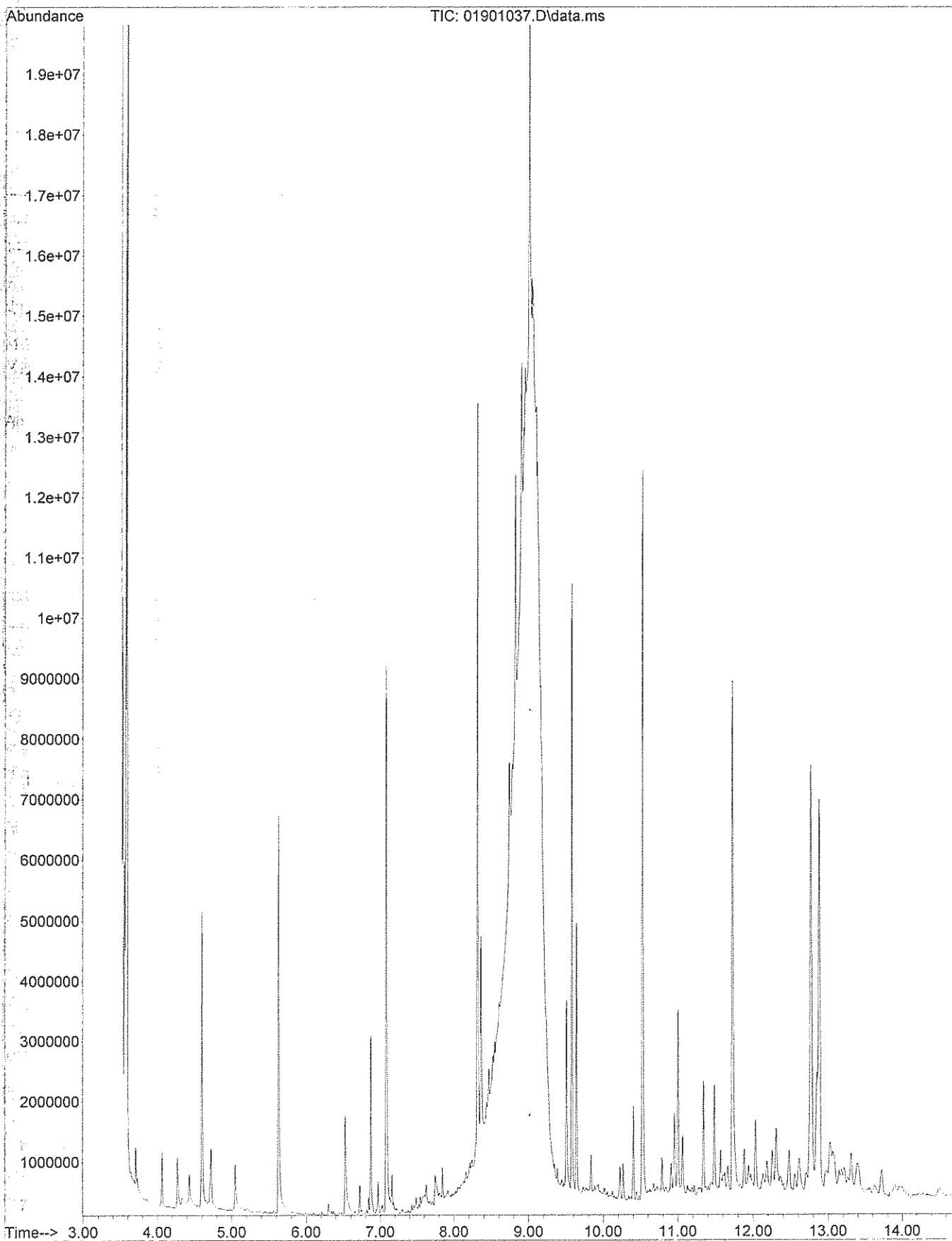
Units: mg/kg
 Client I.D.: SD5 - 1035/8005
 Final Volume (mL): 5
 Extract Dilution: 1: 1

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	4.065	82	Substituted alkene	773348	1	1
2	6.869	99	Decahydrotrimethylmethylenecycloprop[e]azulene	2550040	1	3
3	9.002	98	Sulfur	358187925	153	4
4	9.503	83	Substituted alkane	3109817	1	5
5	9.573	n/a	Unknown peak	8762483	3	5
6	10.401	94	Hexadecane isomer	1380783	1	5
7	10.949	96	Heptadecane	1434858	1	5
8	11.001	82	Substituted alkane	3277342	1	5
9	11.339	91	Octadecanal	1899284	1	6
10	11.485	95	Eicosane	1842667	1	6
11	12.033	95	Hexadecane isomer	1516158	1	6
12	12.301	86	Coprostan-3-one	1392772	1	6
13	12.61	92	Substituted alkane	1196801	1	6
14	12.767	92	Methoxyfriedooleanene	11800513	5	6
15	12.878	n/a	Unknown substituted alkane	12932484	6	6

- The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	4.61	1,4-Dichlorobenzene-d4	4743287	20
2	5.63	Naphthalene-d8	7062860	20
3	7.08	Acenaphthene-d10	9409140	20
4	8.31	Phenanthrene-d10	11497466	20
5	10.52	Chrysene-d12	13064581	20
6	11.72	Perylene-d12	11482156	20

File : D:\MSDCHEM\1\DATA\2585334\01901037.D
Operator : SV15
Acquired : 24 Feb 2012 3:35 am using AcqMethod FASTSVOC.M
Instrument : SV-15
Sample Name: 2585334_9
Misc Info : SD5 - 1035/8005
Vial Number: 19



ANALYTICAL RESULTS SHEET

EP-073

Semivolatile Scan for Unknowns

(20 Largest Peaks > LOR)

SHEET413/1

Batch No.: EM1201358

Units : mg/kg

Sample I.D. : 6

Client I.D. : SD6 - 1036/8006

Analyst : AW

Sample Amt (g) : 20.3

Final Volume (mL): 5

Matrix : Soil

Extract Dilution : 1: 1

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	4.071	91	trimethylbicyclohept-2-ene	4567106	4	1
2	4.712	91	eucalyptol	4694483	4	1
3	6.84	98	octahydrotrimethylcyclopropa[a]naphthalene	2742568	1	3
4	6.875	98	Decahydrotrimethylmethylenecycloprop[e]azulene isomer	34981850	13	3
5	6.968	98	Decahydrotrimethylmethylenecycloprop[e]azulene isomer	6568194	2	3
6	7.533	96	globulol	14183556	5	3
7	9.089	98	sulfur	671663417	254	4
8	10.401	95	hexadecane	3255898	1	5
9	10.786	92	octadecanal	2112866	1	5
10	10.955	95	docosane	8123059	3	5
11	11.001	n/a	unknown substituted alkane	25239404	9	5
12	11.339	97	1-hexacosanal isomer	8054688	3	6
13	11.485	91	tetratetracontane	9777769	4	6
14	11.887	97	1-hexacosanal isomer	6502389	3	6
15	12.039	91	nonadecane	6055358	2	6
16	12.114	93	substituted alkane	1857270	1	6
17	12.313	92	Coprostan-3-one	5180386	2	6
18	12.487	90	substituted alkane	4164006	2	6
19	12.563	92	pentatricontane	4546558	2	6
20	13.082	91	Decahydrotrimethylmethylenecycloprop[e]azulene isomer	3615074	1	6

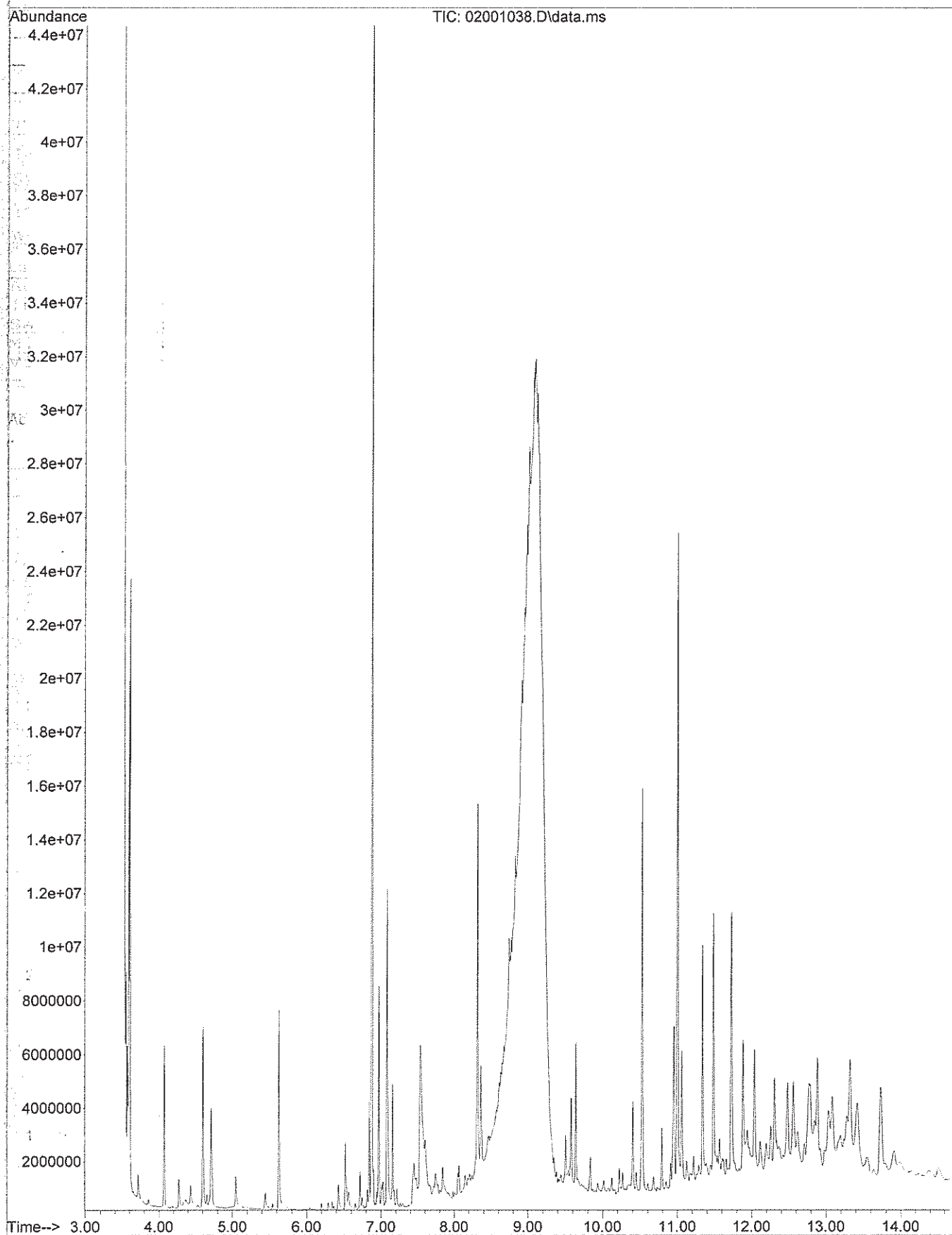
1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.

2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.

3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	4.61	1,4-Dichlorobenzene-d4	5723998	20
2	5.63	Naphthalene-d8	7026773	20
3	7.08	Acenaphthene-d10	12980333	20
4	8.31	Phenanthrene-d10	13016366	20
5	10.52	Chrysene-d12	14515529	20
6	11.72	Perylene-d12	12317688	20

File : D:\MSDCHEM\1\DATA\2585334\02001038.D
Operator : SV15
Acquired : 24 Feb 2012 3:54 am using AcqMethod FASTSVOC.M
Instrument : SV-15
Sample Name: 2585334_10
Misc Info : SD6 - 1036/8006
Vial Number: 20



ANALYTICAL RESULTS SHEET

EP-073

Semivolatile Scan for Unknowns

(20 Largest Peaks > LOR)

SHEET413/1

Batch No.: EM1201358

Units : mg/kg

Sample I.D. : 7

Client I.D. : SD7 - 1027/8007

Analyst : PTN

Sample Amt (g) : 20.7

Final Volume (mL): 15

Matrix : Soil

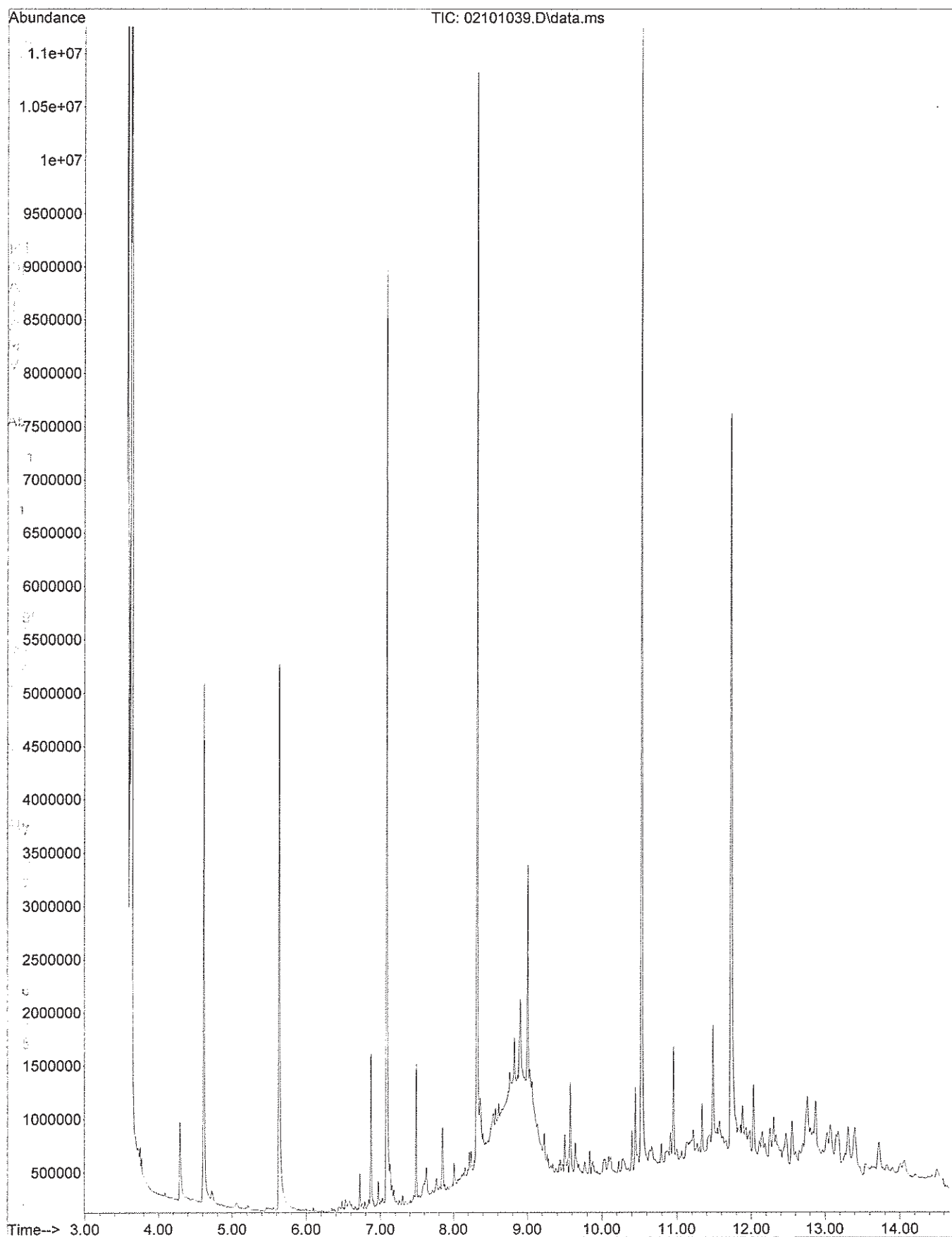
Extract Dilution : 1: 5

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	6.87	99	[1aR-(1a.alpha.,4a.alpha.,7.alpha.,7a.beta.,7b.alpha.)]-decahydro-1,1,7-trimethyl-4-methylene-1H-cycloprop[e]azulene	1531321	23	1
2	7.49	90	Phosphonic acid ester	1122400	8	4
3	9.00	91	Sulfur	3306115	25	4
4	11.49	98	Substituted alkane	1360943	8	5

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg. Particular sample required dilution prior to analysis due to sample matrix interferences. LOR values have been adjusted accordingly.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	4.61	1,4-Dichlorobenzene-d4	4819632	20
2	5.63	Naphthalene-d8	6669265	20
3	7.08	Acenaphthene-d10	8720071	20
4	8.31	Phenanthrene-d10	9660992	20
5	10.52	Chrysene-d12	11605399	20
6	11.72	Perylene-d12	11213070	20

File :D:\MSDCHEM\1\DATA\2585334\02101039.D
Operator : SV15
Acquired : 24 Feb 2012 4:13 am using AcqMethod FASTSVOC.M
Instrument : SV-15
Sample Name: 2585334_11 x5
Misc Info : SD7 - 1027/8007
Vial Number: 21



ANALYTICAL RESULTS SHEET

EP-073

Semivolatile Scan for Unknowns

(20 Largest Peaks > LOR)

SHEET413/1

Batch No.: EM1201358

Units : mg/kg

Sample I.D. : 8

Client I.D. : SD8 - 1028/8008

Analyst : PTN

Sample Amt (g) : 20.6

Final Volume (mL): 15

Matrix : Soil

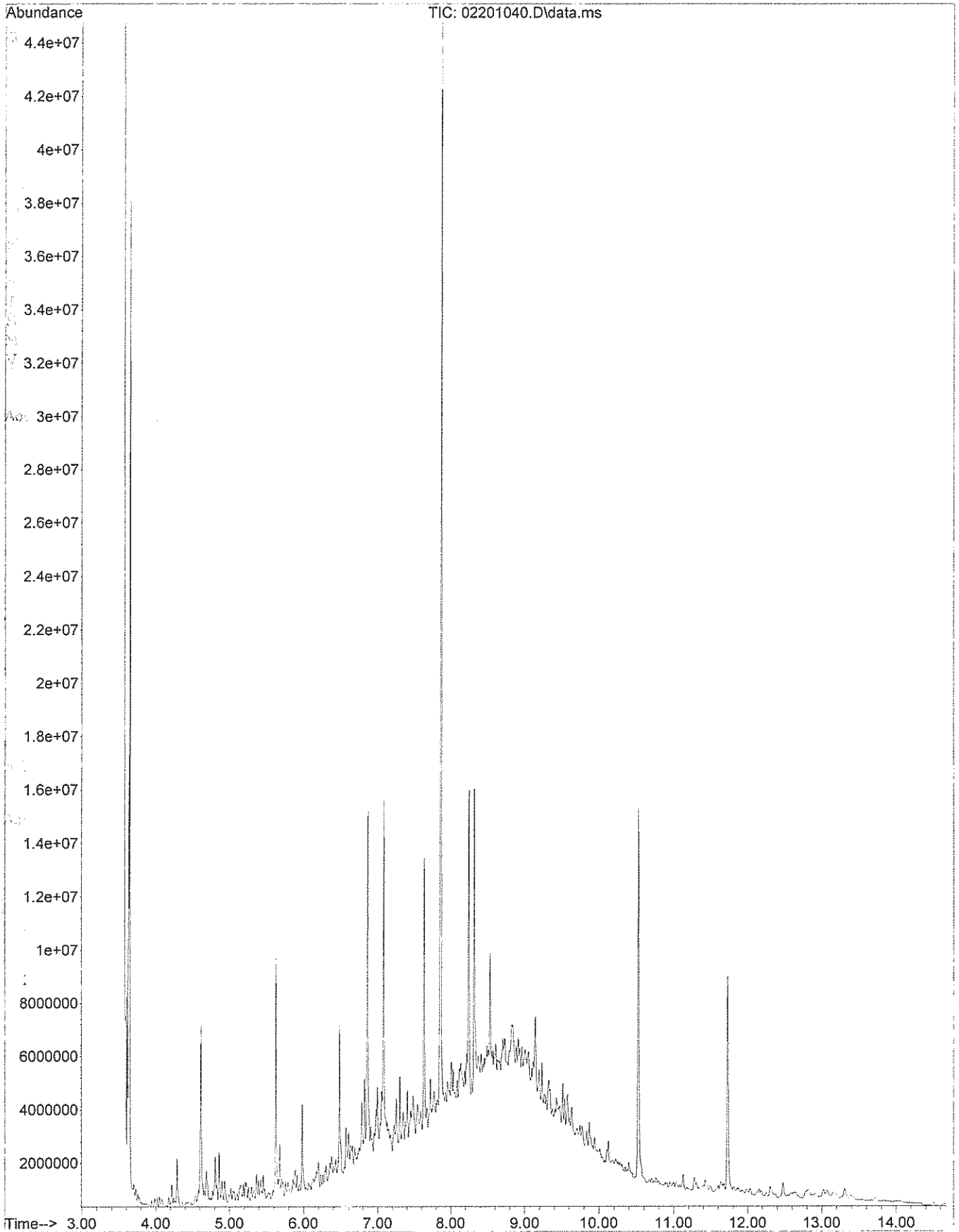
Extract Dilution : 1: 5

Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #	
1	4.69	90	Substituted alkane	1648308	16	1
2	4.86	94	Substituted alkane	1509307	14	1
3	5.37	81	5-Methyl-undecane	918714	9	1
4	5.46	86	3-Methyl-undecane	1001273	9	1
5	5.68	90	2,6-Dimethyl-undecane	1314198	11	2
6	6.48	83	2,7,10-Trimethyl-dodecane	5666855	49	2
7	6.86	91	2,6,10,14-Tetramethyl-hexadecane	11029913	63	3
8	7.86	91	2,6,11,15-Tetramethyl-hexadecane	39752984	226	3
9	8.24	90	2,6,11-Trimethyl-dodecane	10976859	63	3
10	8.53	95	3,8-Dimethyl-decane	3329540	21	4
11	9.14	90	Substituted alkane	3426508	21	4
12	9.23	97	N-methyl-N-[4-[4-methoxy-1-hexahydropyrid	1197871	7	4
13	10.12	86	Substituted alkane	1194767	7	4

- 1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.
- 2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.
- 3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg. Particular sample required dilution prior to analysis due to sample matrix interferences. LOR values have been adjusted accordingly.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	4.61	1,4-Dichlorobenzene-d4	7726183	20
2	5.63	Naphthalene-d8	8384714	20
3	7.08	Acenaphthene-d10	12780655	20
4	8.31	Phenanthrene-d10	11705436	20
5	10.52	Chrysene-d12	17246517	20
6	11.72	Perylene-d12	9889606	20

File : D:\MSDCHEM\1\DATA\2585334\02201040.D
Operator : SV15
Acquired : 24 Feb 2012 4:32 am using AcqMethod FASTSVOC.M
Instrument : SV-15
Sample Name: 2585334_12 x5
Misc Info : SD8 - 1028/8008
Vial Number: 22



ANALYTICAL RESULTS SHEET

EP-073

Semivolatile Scan for Unknowns

(20 Largest Peaks > LOR)

SHEET413/1

Batch No.: EM1201358

Units : mg/kg

Sample I.D. : 9

Client I.D. : SD9 - 1019/8009

Analyst : PTN

Sample Amt (g) : 20.3

Final Volume (mL): 15

Matrix : Soil

Extract Dilution : 1: 5

Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #	
1	5.46	80	3-Methyl-undecane	1296849	14	1
2	5.68	87	4,6-Dimethyl-undecane	1633649	12	2
3	6.48	91	2,7,10-Trimethyl-dodecane	17530894	128	2
4	6.61	91	Chloro-octadecane isomer	4790775	35	2
5	6.79	93	Muurolane-A	2797231	20	2
6	6.88	90	Substituted alkane	54472331	398	2
7	7.26	89	Substituted alkane	23594367	85	3
8	7.46	87	Substituted alkane	10512830	38	3
9	7.66	93	Substituted alkane	78981126	285	3
10	7.90	93	2,6,10,14-Tetramethyl-pentadecane	224477203	811	3
11	8.03	95	Substituted alkane	10204920	37	3
12	8.27	89	2,6,10-Trimethyl-dodecane	89890626	325	3
13	8.60	91	Substituted alkane	18579566	70	4
14	8.94	92	Substituted alkane	34097754	129	4
15	9.17	94	Chloro-octadecane isomer	30159061	114	4
16	9.26	91	Substituted alkane	35298638	134	4
17	9.56	92	Substituted alkane	22700589	86	4
18	9.85	97	Substituted alkane	16874341	64	4
19	10.13	93	Substituted alkane	22094825	84	4
20	10.41	96	Substituted alkane	7254824	27	4

1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.

2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.

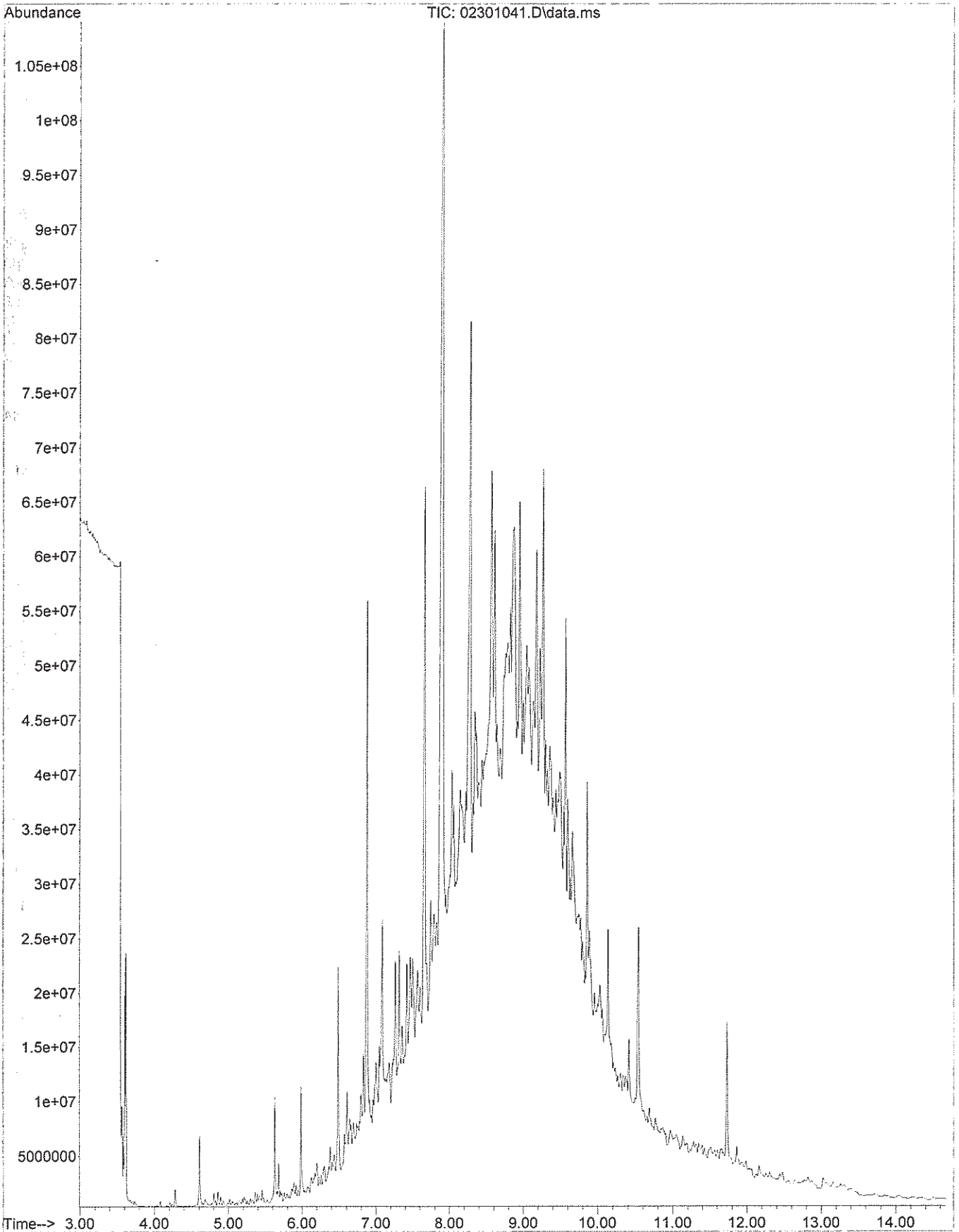
3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg. Particular sample required dilution prior to analysis due to sample matrix interferences. LOR values have been adjusted accordingly.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	4.61	1,4-Dichlorobenzene-d4	6737540	20
2	5.63	Naphthalene-d8	10122502	20
3	7.08	Acenaphthene-d10	20443297	20
4	8.31	Phenanthrene-d10	19503023	20
5	10.52	Chrysene-d12	26725006	20
6	11.72	Perylene-d12	17141627	20

2) T

3) T

File :D:\MSDCHEM\1\DATA\2585334\02301041.D
Operator : SV15
Acquired : 24 Feb 2012 4:51 am using AcqMethod FASTSVOC.M
Instrument : SV-15
Sample Name: 2585334_13 x5
Misc Info : SD9 - 1019/8009
Vial Number: 23



ANALYTICAL RESULTS SHEET

EP-073

Semivolatile Scan for Unknowns

(20 Largest Peaks > LOR)

SHEET413/1

Batch No.: EM1201358

Units : mg/kg

Sample I.D. : 10

Client I.D. : SD10 - 10110/8010

Analyst : AW

Sample Amt (g) : 21.2

Final Volume (mL): 15

Matrix : Soil

Extract Dilution : 1: 5

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	3.59	N/A	Unknown semi-volatile compound	3380993	46	1
2	5.98	N/A	Unknown semi-volatile compound	3530202	34	2
3	6.48	90	2,6,11-Trimethyl-dodecane	6013703	57	2
4	6.86	91	2,6,10,15-Tetramethyl-heptadecane	16215753	155	2
5	6.99	N/A	Unknown semi-volatile compound	5474241	52	2
6	7.25	86	Substituted alkane	4101512	18	3
7	7.30	N/A	Unknown semi-volatile compound	3772954	17	3
8	7.48	N/A	Unknown semi-volatile compound	3452313	15	3
9	7.56	N/A	Unknown semi-volatile compound	3205668	14	3
10	7.64	90	4,9-Dipropyl-dodecane	20376933	90	3
11	7.87	90	2,6,10,14-Tetramethyl-pentadecane	73322088	324	3
12	8.24	90	Substituted alkane	26623714	118	3
13	8.54	94	3,8-Dimethyl-decane	7235775	39	4
14	8.58	91	Substituted alkane	3796214	21	4
15	8.91	96	Substituted alkane	7635775	41	4
16	9.15	90	1-Chloro-hexadecane	6401010	35	4
17	9.19	N/A	Unknown semi-volatile compound	3635551	20	4
18	9.24	93	Substituted alkane	5841295	32	4
19	9.33	90	1-Chloro-octadecane	3145122	17	4
20	9.54	93	Substituted alkane	4163423	23	4

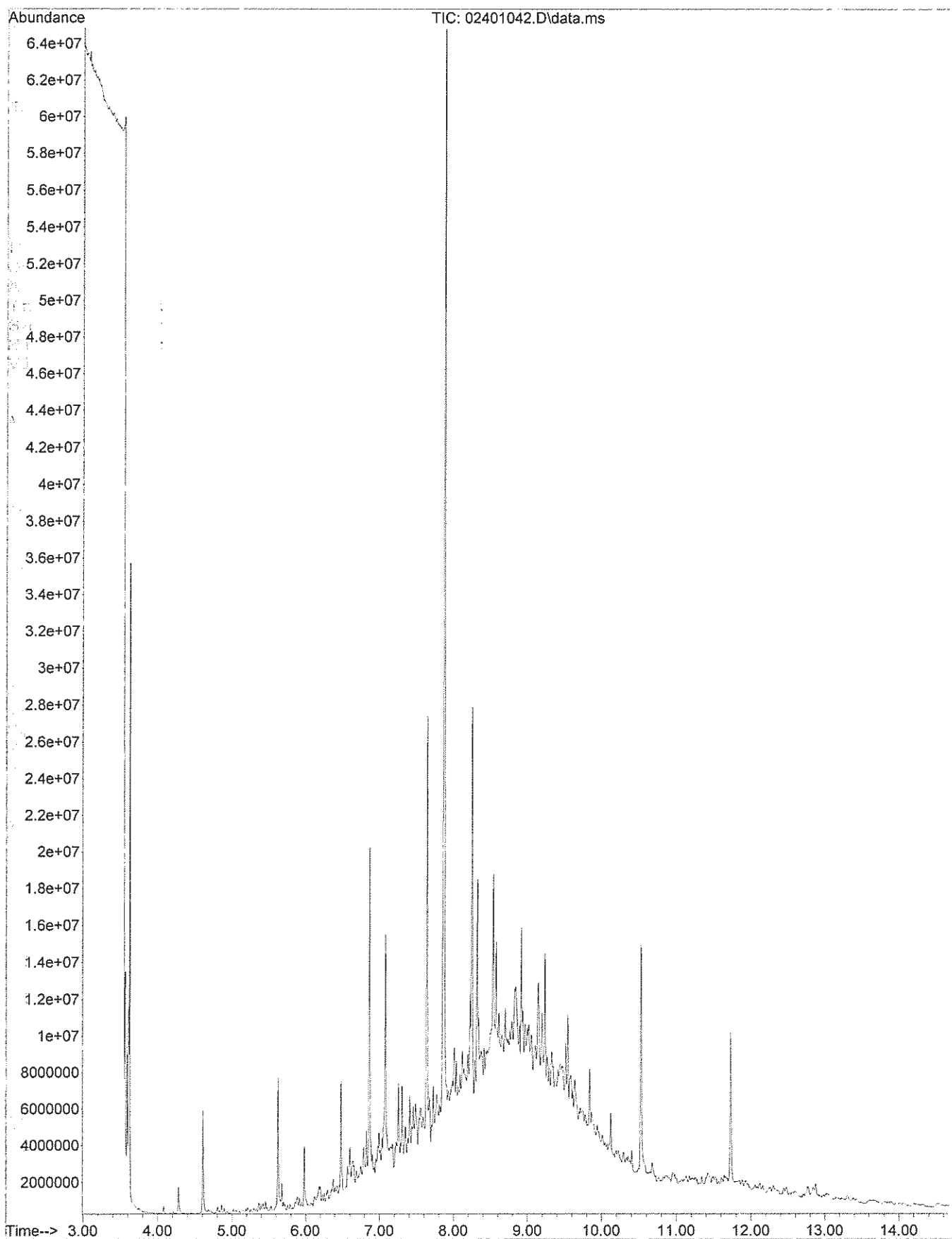
1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.

2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.

3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg. Particular sample required dilution prior to analysis due to sample matrix interferences. LOR values have been adjusted accordingly.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	4.61	1,4-Dichlorobenzene-d4	5241837	20
2	5.63	Naphthalene-d8	7409662	20
3	7.08	Acenaphthene-d10	16031852	20
4	8.31	Phenanthrene-d10	13043286	20
5	10.52	Chrysene-d12	16025262	20
6	11.72	Perylene-d12	9207968	20

File :D:\MSDCHEM\1\DATA\2585334\02401042.D
Operator : SV15
Acquired : 24 Feb 2012 5:10 am using AcqMethod FASTSVOC.M
Instrument : SV-15
Sample Name: 2585334_14 x5
Misc Info : SD10 - T0110/8010
Vial Number: 24



ANALYTICAL RESULTS SHEET

EP-073

Semivolatile Scan for Unknowns

(20 Largest Peaks > LOR)

SHEET413/1

Batch No.: EM1201358

Units : mg/kg

Sample I.D. : 11

Client I.D. : Dup2 - 10110/8811

Analyst : PTN

Sample Amt (g) : 21.6

Final Volume (mL): 15

Matrix : Soil

Extract Dilution : 1: 5

	Retention Time (min)	Unknown Match Quality (%)	COMPOUND tentatively identified from Library Search (NBS49K)	Compound Area	Estimated Amount	IS #
1	3.61	N/A	Unknown semi-volatile compound	3911554	30	2
2	5.98	N/A	Unknown semi-volatile compound	4598231	36	2
3	6.48	90	2,6,11-Trimethyl-dodecane	9028050	70	2
4	6.86	90	2,6,10,15-Tetramethyl-heptadecane	21837152	169	2
5	7.00	N/A	Unknown semi-volatile compound	3873953	15	3
6	7.22	N/A	Unknown semi-volatile compound	3840912	15	3
7	7.25	89	Substituted alkane	6037995	24	3
8	7.31	N/A	Unknown semi-volatile compound	5443295	22	3
9	7.55	N/A	Unknown semi-volatile compound	4978835	20	3
10	7.64	90	4,9-Dipropyl-dodecane	27874736	111	3
11	7.87	81	2,6,10,14-Tetramethyl-pentadecane	100268164	400	3
12	8.12	N/A	Unknown semi-volatile compound	3775132	15	3
13	8.25	91	Substituted alkane	36050443	145	4
14	8.54	96	3,8-Dimethyl-decane	11159135	45	4
15	8.58	89	Substituted alkane	4017800	16	4
16	8.92	90	Substituted alkane	8998492	36	4
17	9.15	91	1-Chloro-hexadecane	10966966	44	4
18	9.24	92	Substituted alkane	5798726	23	4
19	9.33	86	1-Chloro-octadecane	6689280	27	4
20	9.54	93	Substituted alkane	4008148	16	3

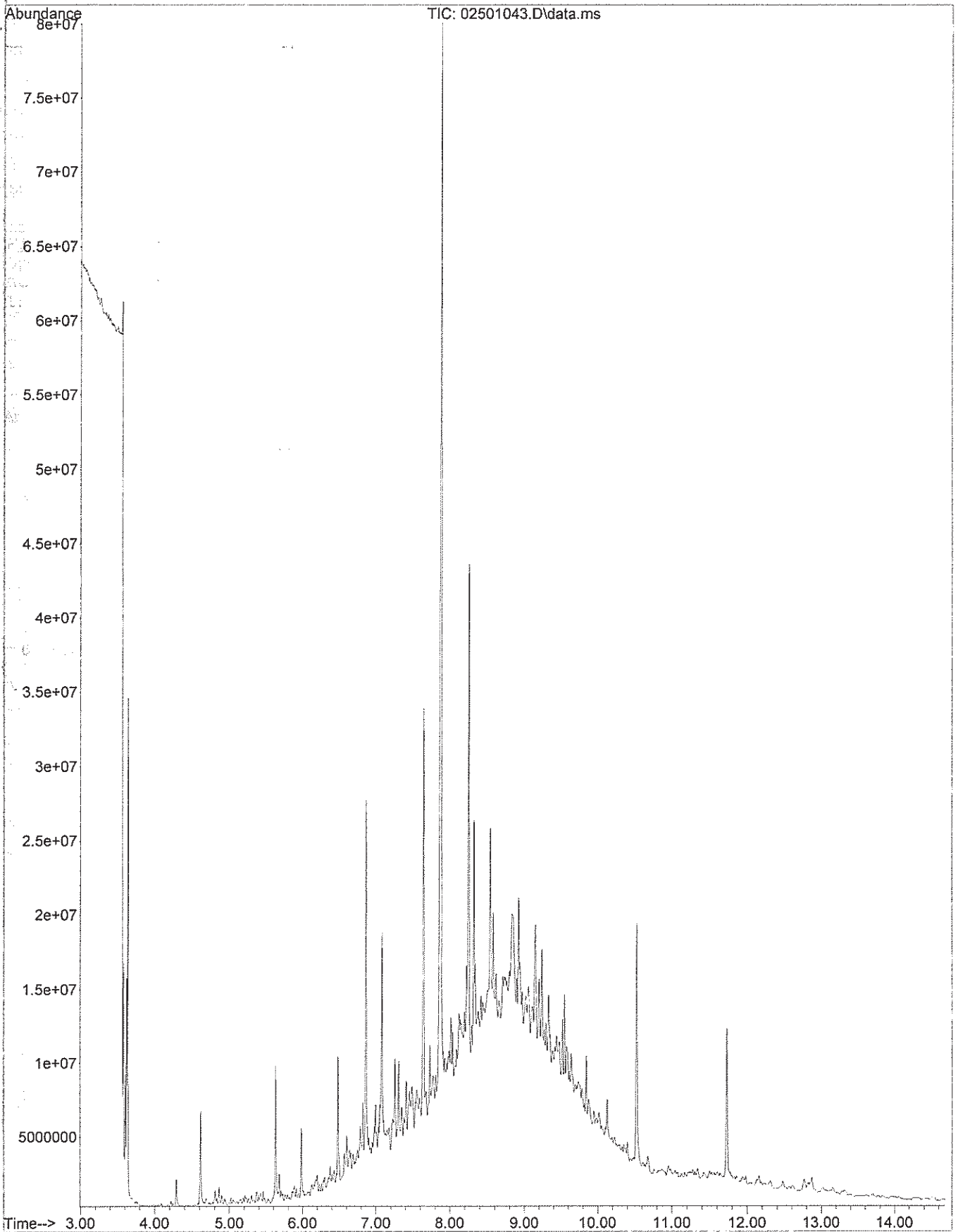
1) The "Unknown Match Quality" is a value representing the probability that the unknown is correctly identified from a reference spectrum. An N/A in this field indicates that a generalized compound category has been inserted due to low spectra matches.

2) The estimated concentration is based on an assumed 1:1 response ratio with the closest eluting Internal Standard.

3) The level of reporting (LOR) is equal to one tenth of the concentration of the associated internal standard, which is equivalent to 0.5 mg/kg. Particular sample required dilution prior to analysis due to sample matrix interferences. LOR values have been adjusted accordingly.

IS #	R.T.	Internal Standard	Area	Amount ng/uL
1	4.61	1,4-Dichlorobenzene-d4	6832342	20
2	5.63	Naphthalene-d8	8980686	20
3	7.08	Acenaphthene-d10	17387259	20
4	8.31	Phenanthrene-d10	17282764	20
5	10.52	Chrysene-d12	20700739	20
6	11.72	Perylene-d12	13010522	20

File : D:\MSDCHEM\1\DATA\2585334\02501043.D
Operator : SV15
Acquired : 24 Feb 2012 5:29 am using AcqMethod FASTSVOC.M
Instrument : SV-15
Sample Name: 2585334_15 x5
Misc Info : Dup2 - 10110/8811
Vial Number: 25



Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EM1201358	Page	: 1 of 34
Client	: GOLDER ASSOCIATES	Laboratory	: Environmental Division Melbourne
Contact	: Niamh McCormack	Contact	: Samantha Smith
Address	: P O BOX 6079 Building 7, 570-588 Swan St, Richmond, VIC. 3121 HAWTHORN WEST VIC, AUSTRALIA 3122	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: nmccormack@golder.com.au	E-mail	: samantha.smith@alsglobal.com
Telephone	: +61 03 8862 3500	Telephone	: +61-3-8549 9644
Facsimile	: +61 03 8862 3501	Facsimile	: +61-3-8549 9601
Project	: 117613201	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: GA-MEL 332509	Date Samples Received	: 09-FEB-2012
C-O-C number	: ----	Issue Date	: 29-FEB-2012
Sampler	: NMc	No. of samples received	: 23
Site	: F - Vic	No. of samples analysed	: 23
Quote number	: ME/054/12		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits



NATA Accredited Laboratory 825

Accredited for compliance with
ISO/IEC 17025.


Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Edwandy Fadjjar	Organic Coordinator	Sydney Organics
Eric Chau	Metals Team Leader	Melbourne Inorganics
Herman Lin	Laboratory Coordinator	Melbourne Inorganics
Nancy Wang	Senior Semivolatile Instrument Chemist	Melbourne Organics
Phalak Inthaksono	Laboratory Manager - Organics	Sydney Organics
Stephen Hislop	Senior Inorganic Chemist	Brisbane Inorganics
Stephen Hislop	Senior Inorganic Chemist	Stafford Minerals - AY

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A Campbell Brothers Limited Company





Page : 3 of 34
Work Order : EM1201358
Client : GOLDER ASSOCIATES
Project : 117613201

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.

LOR = Limit of reporting

^ = This result is computed from individual analyte detections at or above the level of reporting

- EP075: Particular samples required dilution prior to analysis due to matrix interferences. LOR values have been adjusted accordingly.
- EP075: Samples were extracted outside of holding times due to a LIMS computer glitch. Results should be scrutinised accordingly.
- EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
- EP080/074: Particular sample (EM-1201358-013,017,019,020,021), LOR has been raised due to the high moisture content.
- EP130, EP131A+ B: Various samples required dilution due to the presence of high level contaminants. LOR values have been adjusted accordingly.
- EP130, EP131A+B : Particular samples required dilution prior to extraction due to matrix interferences. LOR values have been adjusted accordingly. Surrogates can not be determined due to samples matrix.
- EP231: PFOA & PFOS results are reported as an aggregate of linear and branched isomers. Samples required dilution due to the presence of high level contaminants. Matrix spike recovery not determined for PFOA & PFOS due to high background levels of target analytes.
- Pesticides, SVTPH, Perchlorate & PFOS/PFOA conducted by ALS Sydney, NATA accreditation no. 825, site no 10911.
- This is a split batch with EM1201412 due to Dioxin/Furan analysis turnaround.
- TOC and metals analysis conducted by ALS Brisbane, NATA Site No. 818.



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sampling date / time	Client sample ID	SD1 - 1051/8001 08-FEB-2012 15:00 EM1201358-001	SD2 - 1052/8002 08-FEB-2012 15:00 EM1201358-002	SD3 - 1043/8003 08-FEB-2012 15:00 EM1201358-003	SD4 - 1044/8004 08-FEB-2012 15:00 EM1201358-004	SD5 - 1035/8005 08-FEB-2012 15:00 EM1201358-005
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		33.3	3.1	14.5	11.2	19.6
EG020-SD: Total Metals in Sediments by ICPMS									
Arsenic	7440-38-2	1.00	mg/kg		8.21	<1.00	1.83	3.04	1.80
Cadmium	7440-43-9	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
Chromium	7440-47-3	1.0	mg/kg		67.2	11.1	23.0	35.9	26.2
Copper	7440-50-8	1.0	mg/kg		6.0	3.8	5.2	5.3	4.6
Lead	7439-92-1	1.0	mg/kg		14.4	8.1	12.2	10.9	7.9
Nickel	7440-02-0	1.0	mg/kg		8.1	4.0	3.4	8.2	8.0
Zinc	7440-66-6	1.0	mg/kg		24.8	12.0	4.0	6.8	7.8
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.01	mg/kg		0.02	0.01	0.01	0.01	<0.01
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%		6.29	3.15	0.63	0.62	1.42
EP075A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg		<5.0	<1.0	<1.0	<1.0	<1.0
2-Nitrophenol	88-75-5	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
2,4-Dimethylphenol	105-67-9	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
2,4-Dichlorophenol	120-83-2	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
2,6-Dichlorophenol	87-65-0	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	1	mg/kg		<5	<1	<1	<1	<1
EP075B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
2-Methylnaphthalene	91-57-6	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
2-Chloronaphthalene	91-58-7	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<2.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sampling date / time	Client sample ID	SD1 - 1051/8001 08-FEB-2012 15:00 EM1201358-001	SD2 - 1052/8002 08-FEB-2012 15:00 EM1201358-002	SD3 - 1043/8003 08-FEB-2012 15:00 EM1201358-003	SD4 - 1044/8004 08-FEB-2012 15:00 EM1201358-004	SD5 - 1035/8005 08-FEB-2012 15:00 EM1201358-005
EP075B: Polynuclear Aromatic Hydrocarbons - Continued									
N-2-Fluorenyl Acetamide	53-96-3	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1			<5	<1	<1	<1	<1
7-12-Dimethylbenz(a)anthracene	57-97-6	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
3-Methylcholanthrene	56-49-5	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3-cd)pyrene	193-39-5	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	53-70-3	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	191-24-2	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Sum of PAHs	----	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
EP075C: Phthalate Esters									
Dimethyl phthalate	131-11-3	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Diethyl phthalate	84-66-2	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Di-n-butyl phthalate	84-74-2	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Butyl benzyl phthalate	85-68-7	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
bis(2-ethylhexyl) phthalate	117-81-7	5.0			<25.0	<5.0	<5.0	<5.0	<5.0
Di-n-octylphthalate	117-84-0	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
EP075D: Nitrosamines									
N-Nitrosomethylethylamine	10595-95-6	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
N-Nitrosodiethylamine	55-18-5	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
N-Nitrosopyrrolidine	930-55-2	1.0			<5.0	<1.0	<1.0	<1.0	<1.0
N-Nitrosomorpholine	59-89-2	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
N-Nitrosodi-n-propylamine	621-64-7	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
N-Nitrosopiperidine	100-75-4	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
N-Nitrosodibutylamine	924-16-3	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0			<5.0	<1.0	<1.0	<1.0	<1.0
Methapyriline	91-80-5	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
EP075E: Nitroaromatics and Ketones									
2-Picoline	109-06-8	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Acetophenone	98-86-2	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Nitrobenzene	98-95-3	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Isophorone	78-59-1	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
2,6-Dinitrotoluene	606-20-2	1.0			<5.0	<1.0	<1.0	<1.0	<1.0
2,4-Dinitrotoluene	121-14-2	1.0			<5.0	<1.0	<1.0	<1.0	<1.0
1-Naphthylamine	134-32-7	0.5			<2.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	Client sampling date / time		Client sample ID				
		LOR	Unit	SD1 - 1051/8001	SD2 - 1052/8002	SD3 - 1043/8003	SD4 - 1044/8004	SD5 - 1035/8005
EP075E: Nitroaromatics and Ketones - Continued								
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
Azobenzene	103-33-3	1	mg/kg	<5	<1	<1	<1	<1
1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
Phenacetin	62-44-2	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
4-Aminobiphenyl	92-67-1	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
Pronamide	23950-58-5	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
Chlorbenzilate	510-15-6	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
EP075F: Haloethers								
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
EP075G: Chlorinated Hydrocarbons								
1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
Hexachloroethane	67-72-1	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
Hexachloropropylene	1888-71-7	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<12.5	<2.5	<2.5	<2.5	<2.5
Pentachlorobenzene	608-93-5	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	<5.0	<1.0	<1.0	<1.0	<1.0
EP075H: Anilines and Benzidines								
Aniline	62-53-3	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
4-Chloroaniline	106-47-8	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
2-Nitroaniline	88-74-4	1.0	mg/kg	<5.0	<1.0	<1.0	<1.0	<1.0
3-Nitroaniline	99-09-2	1.0	mg/kg	<5.0	<1.0	<1.0	<1.0	<1.0
Dibenzofuran	132-64-9	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
4-Nitroaniline	100-01-6	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
Carbazole	86-74-8	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
3,3'-Dichlorobenzidine	91-94-1	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5
beta-BHC	319-85-7	0.5	mg/kg	<2.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sampling date / time		SD1 - 1051/8001 08-FEB-2012 15:00 EM1201358-001	SD2 - 1052/8002 08-FEB-2012 15:00 EM1201358-002	SD3 - 1043/8003 08-FEB-2012 15:00 EM1201358-003	SD4 - 1044/8004 08-FEB-2012 15:00 EM1201358-004	SD5 - 1035/8005 08-FEB-2012 15:00 EM1201358-005
			Unit	Unit					
EP075I: Organochlorine Pesticides - Continued									
gamma-BHC	58-89-9	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
delta-BHC	319-86-8	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Heptachlor	76-44-8	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Aldrin	309-00-2	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Heptachlor epoxide	1024-57-3	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
alpha-Endosulfan	959-98-8	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
4,4'-DDE	72-55-9	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Dieldrin	60-57-1	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Endrin	72-20-8	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
beta-Endosulfan	33213-65-9	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
4,4'-DDD	72-54-8	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Endosulfan sulfate	1031-07-8	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
4,4'-DDT	50-29-3	1.0			<5.0	<1.0	<1.0	<1.0	<1.0
EP075J: Organophosphorus Pesticides									
Dichlorvos	62-73-7	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Dimethoate	60-51-5	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Diazinon	333-41-5	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Chlorpyrifos-methyl	5598-13-0	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Malathion	121-75-5	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Fenthion	55-38-9	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Chlorpyrifos	2921-88-2	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Pirimphos-ethyl	23505-41-1	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Chlorfenvinphos	470-90-6	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Prothiofos	34643-46-4	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
Ethion	563-12-2	0.5			<2.5	<0.5	<0.5	<0.5	<0.5
EP080-SD / EP071-SD: Total Petroleum Hydrocarbons									
C10 - C14 Fraction	----	3			<3	<3	<3	<3	10
C15 - C28 Fraction	----	3			138	111	26	56	84
C29 - C36 Fraction	----	5			168	122	45	67	88
^ C10 - C36 Fraction (sum)	----	3			306	233	71	123	182
EP130A: Organophosphorus Pesticides (Ultra-trace)									
Bromophos-ethyl	4824-78-6	10			<16	<12	<16	<16	<16
Carbophenothion	786-19-6	10			<16	<12	<16	<16	<16
Chlorfenvinphos (E)	18708-86-6	10			<16	<12	<16	<16	<16
Chlorfenvinphos (Z)	18708-87-7	10			<16	<12	<16	<16	<16
Chlorpyrifos	2921-88-2	10			<16	<12	<16	<16	<16
Chlorpyrifos-methyl	5598-13-0	10			<16	<12	<16	<16	<16
Demeton-S-methyl	919-86-8	10			<16	<12	<16	<16	<16



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID				
			Unit	EM1201358-001	EM1201358-002	EM1201358-003	EM1201358-004	EM1201358-005	
EP130A: Organophosphorus Pesticides (Ultra-trace) - Continued									
Diazinon	333-41-5	10	µg/kg	<16	<12	<16	<16	<16	<16
Dichlorvos	62-73-7	10	µg/kg	<16	<12	<16	<16	<16	<16
Dimethoate	60-51-5	10	µg/kg	<16	<12	<16	<16	<16	<16
Ethion	563-12-2	10	µg/kg	<16	<12	<16	<16	<16	<16
Fenamiphos	22224-92-6	10	µg/kg	<16	<12	<16	<16	<16	<16
Fenthion	55-38-9	10	µg/kg	<16	<12	<16	<16	<16	<16
Malathion	121-75-5	10	µg/kg	<16	<12	<16	<16	<16	<16
Azinphos Methyl	86-50-0	10	µg/kg	<16	<12	<16	<16	<16	<16
Monocrotophos	6923-22-4	10	µg/kg	<16	<12	<16	<16	<16	<16
Parathion	56-38-2	10	µg/kg	<16	<12	<16	<16	<16	<16
Parathion-methyl	298-00-0	10	µg/kg	<16	<12	<16	<16	<16	<16
Pirimphos-ethyl	23505-41-1	10	µg/kg	<16	<12	<16	<16	<16	<16
Prothiofos	34643-46-4	10	µg/kg	<16	<12	<16	<16	<16	<16
EP131A: Organochlorine Pesticides									
Aldrin	309-00-2	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
alpha-BHC	319-84-6	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
beta-BHC	319-85-7	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
delta-BHC	319-86-8	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
4,4'-DDD	72-54-8	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
4,4'-DDE	72-55-9	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
4,4'-DDT	50-29-3	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
^ Sum of DDD + DDE + DDT	----		µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Dieldrin	60-57-1	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
alpha-Endosulfan	959-98-8	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
beta-Endosulfan	33213-65-9	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Endosulfan sulfate	1031-07-8	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
^ Endosulfan (sum)	115-29-7	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Endrin	72-20-8	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Endrin aldehyde	7421-93-4	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Endrin ketone	53494-70-5	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Heptachlor	76-44-8	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Heptachlor epoxide	1024-57-3	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Hexachlorobenzene (HCB)	118-74-1	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
gamma-BHC	58-89-9	0.25	µg/kg	<0.31	<0.25	<0.31	<0.31	<0.31	<0.31
Methoxychlor	72-43-5	0.50	µg/kg	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
cis-Chlordane	5103-71-9	0.25	µg/kg	<0.31	<0.25	<0.31	<0.31	<0.31	<0.31
trans-Chlordane	5103-74-2	0.25	µg/kg	<0.31	<0.25	<0.31	<0.31	<0.31	<0.31
^ Total Chlordane (sum)	----		µg/kg	<0.31	<0.25	<0.31	<0.31	<0.31	<0.31



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sampling date / time	Client sample ID	SD1 - 1051/8001	SD2 - 1052/8002	SD3 - 1043/8003	SD4 - 1044/8004	SD5 - 1035/8005
			Unit		08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00
					EM1201358-001	EM1201358-002	EM1201358-003	EM1201358-004	EM1201358-005
EP131A: Organochlorine Pesticides - Continued									
Oxychloridane	27304-13-8	0.50	µg/kg		<0.50	<0.50	<0.50	<0.50	<0.50
EP131B: Polychlorinated Biphenyls (as Aroclors)									
^ Total Polychlorinated biphenyls									
Aroclor 1016	12674-11-2	5.0	µg/kg		<15.6	<12.5	<15.6	<15.6	<15.6
Aroclor 1221	11104-28-2	5.0	µg/kg		<15.6	<12.5	<15.6	<15.6	<15.6
Aroclor 1232	11141-16-5	5.0	µg/kg		<15.6	<12.5	<15.6	<15.6	<15.6
Aroclor 1242	53469-21-9	5.0	µg/kg		<15.6	<12.5	<15.6	<15.6	<15.6
Aroclor 1248	12672-29-6	5.0	µg/kg		<15.6	<12.5	<15.6	<15.6	<15.6
Aroclor 1254	11097-69-1	5.0	µg/kg		<15.6	<12.5	<15.6	<15.6	<15.6
Aroclor 1260	11096-82-5	5.0	µg/kg		<15.6	<12.5	<15.6	<15.6	<15.6
EP216: Perchlorate by LC/MS									
Perchlorate	7601-90-3	10.0	µg/kg		<10.0	<10.0	<10.0	<10.0	<10.0
EP231: Perfluoroctyl Acids and Sulfonates.									
PFOS	1763-23-1	0.0005	mg/kg		0.153	0.342	0.495	0.773	0.534
PFOA	335-67-1	0.0005	mg/kg		0.0028	0.0021	0.0079	0.0050	0.0127
6:2 Fluorotelomer Sulfonate (6:2 Fts)	27619-97-2	0.005	mg/kg		0.023	0.028	0.260	0.174	0.302
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	367-12-4	0.1	%		92.1	71.8	77.5	89.9	87.6
Phenol-d6	13127-88-3	0.1	%		89.2	60.1	65.0	75.8	72.3
2-Chlorophenol-D4	93951-73-6	0.1	%		88.5	53.0	62.8	72.1	65.3
2,4,6-Tribromophenol	118-79-6	0.1	%		98.4	69.1	77.3	91.2	95.3
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	4165-60-0	0.1	%		86.9	46.6	54.9	64.6	64.0
1,2-Dichlorobenzene-D4	2199-69-1	0.1	%		99.1	53.5	65.7	75.7	66.4
2-Fluorobiphenyl	321-60-8	0.1	%		85.5	44.5	51.0	66.5	61.3
Anthracene-d10	1719-06-8	0.1	%		96.5	71.2	74.8	89.1	78.8
4-Terphenyl-d14	1718-51-0	0.1	%		83.0	54.8	62.7	76.1	66.0
EP130S: Organophosphorus Pesticide Surrogate									
DEF	78-48-8	0.1	%		Not Determined	95.3	Not Determined	20.4	40.4
EP131S: OC Pesticide Surrogate									
Dibromo-DDE	21655-73-2	0.1	%		25.3	110	13.4	47.3	28.5
EP131T: PCB Surrogate									
Decachlorobiphenyl	2051-24-3	0.1	%		28.6	90.0	22.6	44.2	25.2



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sampling date / time	Client sample ID	SD6 - 1036/8006	SD7 - 1027/8007	SD8 - 1028/8008	SD9 - 1019/8009	SD10 - 10110/8010
			Unit		08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00
					EM1201358-006	EM1201358-007	EM1201358-008	EM1201358-009	EM1201358-010
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		7.6	10.7	43.5	13.6	9.2
EG020-SD: Total Metals in Sediments by ICPMS									
Arsenic	7440-38-2	1.00	mg/kg		<1.00	<1.00	1.94	1.97	1.35
Cadmium	7440-43-9	0.1	mg/kg		<0.1	<0.1	0.5	0.2	0.2
Chromium	7440-47-3	1.0	mg/kg		6.5	9.5	14.6	15.8	22.1
Copper	7440-50-8	1.0	mg/kg		1.9	5.6	22.0	31.3	12.6
Lead	7439-92-1	1.0	mg/kg		2.3	3.7	18.6	44.0	81.7
Nickel	7440-02-0	1.0	mg/kg		2.6	12.2	10.6	18.5	9.7
Zinc	7440-66-6	1.0	mg/kg		6.3	34.8	357	399	136
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.01	mg/kg		<0.01	0.01	0.02	0.01	<0.01
EP003: Total Organic Carbon (TOC) in Soil									
Total Organic Carbon	----	0.02	%		4.25	2.90	8.88	9.19	1.95
EP075A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg		<1.0	<15.0	<15.0	<15.0	<15.0
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
2,4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
2,4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
2,6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
Pentachlorophenol	87-86-5	1	mg/kg		<1	<15	<15	<15	<15
EP075B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
2-Methylnaphthalene	91-57-6	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
2-Chloronaphthalene	91-58-7	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<7.5	<7.5	<7.5	<7.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<7.5	<7.5	10.3	<7.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<7.5	<7.5	19.6	10.2



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 Work Order : EM1201358
 Client : GOLDR ASSOCIATES
 Project : 117613201

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sampling date / time	Client sample ID	SD6 - 1036/8006 08-FEB-2012 15:00 EM1201358-006	SD7 - 1027/8007 08-FEB-2012 15:00 EM1201358-007	SD8 - 1028/8008 08-FEB-2012 15:00 EM1201358-008	SD9 - 1019/8009 08-FEB-2012 15:00 EM1201358-009	SD10 - 10110/8010 08-FEB-2012 15:00 EM1201358-010
EP075B: Polynuclear Aromatic Hydrocarbons - Continued									
N-2-Fluorenyl Acetamide	53-96-3	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Benz(a)anthracene	56-55-3	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Chrysene	218-01-9	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1			<1	<15	<15	<15	<15
7-12-Dimethylbenz(a)anthracene	57-97-6	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Benzo(a)pyrene	50-32-8	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
3-Methylcholanthrene	56-49-5	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Indeno(1.2.3-cd)pyrene	193-39-5	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Dibenz(a,h)anthracene	53-70-3	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Benzo(g,h,i)perylene	191-24-2	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
^ Sum of PAHs	----	0.5			<0.5	<7.5	<7.5	29.9	10.2
EP075C: Phthalate Esters									
Dimethyl phthalate	131-11-3	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Diethyl phthalate	84-66-2	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Di-n-butyl phthalate	84-74-2	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Butyl benzyl phthalate	85-68-7	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
bis(2-ethylhexyl) phthalate	117-81-7	5.0			<5.0	<75.0	<75.0	<75.0	<75.0
Di-n-octylphthalate	117-84-0	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
EP075D: Nitrosamines									
N-Nitrosomethylethylamine	10595-95-6	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
N-Nitrosodiethylamine	55-18-5	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
N-Nitrosopyrrolidine	930-55-2	1.0			<1.0	<15.0	<15.0	<15.0	<15.0
N-Nitrosomorpholine	59-89-2	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
N-Nitrosodi-n-propylamine	621-64-7	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
N-Nitrosopiperidine	100-75-4	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
N-Nitrosodibutylamine	924-16-3	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0			<1.0	<15.0	<15.0	<15.0	<15.0
Methapyriline	91-80-5	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
EP075E: Nitroaromatics and Ketones									
2-Picoline	109-06-8	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Acetophenone	98-86-2	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Nitrobenzene	98-95-3	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Isophorone	78-59-1	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
2,6-Dinitrotoluene	606-20-2	1.0			<1.0	<15.0	<15.0	<15.0	<15.0
2,4-Dinitrotoluene	121-14-2	1.0			<1.0	<15.0	<15.0	<15.0	<15.0
1-Naphthylamine	134-32-7	0.5			<0.5	<7.5	<7.5	<7.5	<7.5



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	Client sampling date / time		SD6 - 1036/8006	SD7 - 1027/8007	SD8 - 1028/8008	SD9 - 1019/8009	SD10 - 10110/8010
		LOR	Unit					
EP075E: Nitroaromatics and Ketones - Continued								
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
Azobenzene	103-33-3	1	mg/kg	<1	<15	<15	<15	<15
1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
Phenacetin	62-44-2	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
Pronamide	23950-58-5	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
Chlorbenzilate	510-15-6	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
EP075F: Haloethers								
Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
EP075G: Chlorinated Hydrocarbons								
1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<2.5	<37.5	<37.5	<37.5	<37.5
Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	<1.0	<15.0	<15.0	<15.0	<15.0
EP075H: Anilines and Benzidines								
Aniline	62-53-3	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
2-Nitroaniline	88-74-4	1.0	mg/kg	<1.0	<15.0	<15.0	<15.0	<15.0
3-Nitroaniline	99-09-2	1.0	mg/kg	<1.0	<15.0	<15.0	<15.0	<15.0
Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
Carbazole	86-74-8	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
3,3'-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
EP075I: Organochlorine Pesticides								
alpha-BHC	319-84-6	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5
beta-BHC	319-85-7	0.5	mg/kg	<0.5	<7.5	<7.5	<7.5	<7.5



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sampling date / time		SD6 - 1036/8006 08-FEB-2012 15:00 EM1201358-006	SD7 - 1027/8007 08-FEB-2012 15:00 EM1201358-007	SD8 - 1028/8008 08-FEB-2012 15:00 EM1201358-008	SD9 - 1019/8009 08-FEB-2012 15:00 EM1201358-009	SD10 - 10110/8010 08-FEB-2012 15:00 EM1201358-010
			Unit	Unit					
EP075I: Organochlorine Pesticides - Continued									
gamma-BHC	58-89-9	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
delta-BHC	319-86-8	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Heptachlor	76-44-8	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Aldrin	309-00-2	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Heptachlor epoxide	1024-57-3	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
alpha-Endosulfan	959-98-8	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
4,4'-DDE	72-55-9	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Dieldrin	60-57-1	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Endrin	72-20-8	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
beta-Endosulfan	33213-65-9	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
4,4'-DDD	72-54-8	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Endosulfan sulfate	1031-07-8	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
4,4'-DDT	50-29-3	1.0			<1.0	<15.0	<15.0	<15.0	<15.0
EP075J: Organophosphorus Pesticides									
Dichlorvos	62-73-7	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Dimethoate	60-51-5	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Diazinon	333-41-5	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Chlorpyrifos-methyl	5598-13-0	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Malathion	121-75-5	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Fenthion	55-38-9	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Chlorpyrifos	2921-88-2	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Pirimphos-ethyl	23505-41-1	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Chlorfenvinphos	470-90-6	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Prothiofos	34643-46-4	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
Ethion	563-12-2	0.5			<0.5	<7.5	<7.5	<7.5	<7.5
EP080-SD / EP071-SD: Total Petroleum Hydrocarbons									
C10 - C14 Fraction	----	3			11	<6	685	1550	214
C15 - C28 Fraction	----	3			129	169	3720	19300	1860
C29 - C36 Fraction	----	5			147	126	270	792	450
^ C10 - C36 Fraction (sum)	----	3			287	295	4680	21600	2520
EP130A: Organophosphorus Pesticides (Ultra-trace)									
Bromophos-ethyl	4824-78-6	10			<31	<31	<31	<250	<250
Carbophenothion	786-19-6	10			<31	<31	<31	<250	<250
Chlorfenvinphos (E)	18708-86-6	10.0			----	----	----	<250	<250
Chlorfenvinphos (E)	18708-86-6	10			<31	<31	<31	----	----
Chlorfenvinphos (Z)	18708-87-7	10			<31	<31	<31	<250	<250
Chlorpyrifos	2921-88-2	10			<31	<31	<31	<250	<250
Chlorpyrifos-methyl	5598-13-0	10			<31	<31	<31	<250	<250



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sampling date / time		SD6 - 1036/8006 08-FEB-2012 15:00 EM1201358-006	SD7 - 1027/8007 08-FEB-2012 15:00 EM1201358-007	SD8 - 1028/8008 08-FEB-2012 15:00 EM1201358-008	SD9 - 1019/8009 08-FEB-2012 15:00 EM1201358-009	SD10 - 10110/8010 08-FEB-2012 15:00 EM1201358-010
			Unit	Unit					
EP130A: Organophosphorus Pesticides (Ultra-trace) - Continued									
Demeton-S-methyl	919-86-8	10	µg/kg		<31	<31	<31	<250	<250
Diazinon	333-41-5	10	µg/kg		<31	<31	<31	<250	<250
Dichlorvos	62-73-7	10	µg/kg		<31	<31	<31	<250	<250
Dimethoate	60-51-5	10	µg/kg		<31	<31	<31	<250	<250
Ethion	563-12-2	10	µg/kg		<31	<31	<31	<250	<250
Fenamiphos	22224-92-6	10	µg/kg		<31	<31	<31	<250	<250
Fenthion	55-38-9	10	µg/kg		<31	<31	<31	<250	<250
Malathion	121-75-5	10	µg/kg		<31	<31	<31	<250	<250
Azinphos Methyl	86-50-0	10	µg/kg		<31	<31	<31	<250	<250
Monocrotophos	6923-22-4	10	µg/kg		<31	<31	<31	<250	<250
Parathion	56-38-2	10	µg/kg		<31	<31	<31	<250	<250
Parathion-methyl	298-00-0	10	µg/kg		<31	<31	<31	<250	<250
Pirimphos-ethyl	23505-41-1	10	µg/kg		<31	<31	<31	<250	<250
Prothiofos	34643-46-4	10	µg/kg		<31	<31	<31	<250	<250
EP131A: Organochlorine Pesticides									
Aldrin	309-00-2	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
alpha-BHC	319-84-6	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
beta-BHC	319-85-7	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
delta-BHC	319-86-8	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
4,4'-DDD	72-54-8	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
4,4'-DDE	72-55-9	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
4,4'-DDT	50-29-3	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
^ Sum of DDD + DDE + DDT	----		µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
Dieldrin	60-57-1	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
alpha-Endosulfan	959-98-8	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
beta-Endosulfan	33213-65-9	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
Endosulfan sulfate	1031-07-8	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
^ Endosulfan (sum)	115-29-7	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
Endrin	72-20-8	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
Endrin aldehyde	7421-93-4	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
Endrin ketone	53494-70-5	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
Heptachlor	76-44-8	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
Heptachlor epoxide	1024-57-3	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
Hexachlorobenzene (HCB)	118-74-1	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
gamma-BHC	58-89-9	0.25	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
Methoxychlor	72-43-5	0.50	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
cis-Chlordane	5103-71-9	0.25	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62
trans-Chlordane	5103-74-2	0.25	µg/kg		<0.62	<0.62	<0.62	<0.62	<0.62



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	Client sampling date / time	Client sample ID	SD6 - 1036/8006	SD7 - 1027/8007	SD8 - 1028/8008	SD9 - 1019/8009	SD10 - 10110/8010
EP131A: Organochlorine Pesticides - Continued										
^ Total Chlordane (sum)	---	0.25	µg/kg	08-FEB-2012 15:00	EM1201358-006	<0.62	<0.62	<0.62	<0.62	<0.62
Oxychlorthane	27304-13-8	0.50	µg/kg	08-FEB-2012 15:00	EM1201358-007	<0.62	<0.62	<0.62	<0.62	<0.62
EP131B: Polychlorinated Biphenyls (as Aroclors)										
^ Total Polychlorinated biphenyls	---	5.0	µg/kg	08-FEB-2012 15:00	EM1201358-008	<31.2	<31.2	<31.2	<31.2	<31.2
Aroclor 1016	12674-11-2	5.0	µg/kg	08-FEB-2012 15:00	EM1201358-009	<31.2	<31.2	<31.2	<31.2	<31.2
Aroclor 1221	11104-28-2	5.0	µg/kg	08-FEB-2012 15:00	EM1201358-010	<31.2	<31.2	<31.2	<31.2	<31.2
Aroclor 1232	11141-16-5	5.0	µg/kg			<31.2	<31.2	<31.2	<31.2	<31.2
Aroclor 1242	53469-21-9	5.0	µg/kg			<31.2	<31.2	<31.2	<31.2	<31.2
Aroclor 1248	12672-29-6	5.0	µg/kg			<31.2	<31.2	<31.2	<31.2	<31.2
Aroclor 1254	11097-69-1	5.0	µg/kg			<31.2	<31.2	<31.2	<31.2	<31.2
Aroclor 1260	11096-82-5	5.0	µg/kg			<31.2	<31.2	<31.2	<31.2	<31.2
EP216: Perchlorate by LC/MS										
Perchlorate	7601-90-3	10.0	µg/kg	08-FEB-2012 15:00		<10.0	<10.0	<10.0	<10.0	<10.0
EP231: Perfluorooctyl Acids and Sulfonates.										
PFOA	1763-23-1	0.0005	mg/kg	08-FEB-2012 15:00		0.750	1.92	7.53	13.7	66.0
6:2 Fluorotelomer Sulfonate (6:2 Fts)	335-67-1	0.0005	mg/kg	08-FEB-2012 15:00		0.0148	0.0224	0.0662	0.164	1.24
	27619-97-2	0.005	mg/kg	08-FEB-2012 15:00		0.400	0.237	0.389	0.719	0.882
EP075S: Acid Extractable Surrogates										
2-Fluorophenol	367-12-4	0.1	%	08-FEB-2012 15:00		97.6	Not Determined	Not Determined	Not Determined	Not Determined
Phenol-d6	13127-88-3	0.1	%	08-FEB-2012 15:00		66.9	Not Determined	Not Determined	Not Determined	Not Determined
2-Chlorophenol-D4	93951-73-6	0.1	%	08-FEB-2012 15:00		71.2	Not Determined	Not Determined	Not Determined	Not Determined
2,4,6-Tribromophenol	118-79-6	0.1	%	08-FEB-2012 15:00		99.5	Not Determined	Not Determined	Not Determined	Not Determined
EP075T: Base/Neutral Extractable Surrogates										
Nitrobenzene-D5	4165-60-0	0.1	%	08-FEB-2012 15:00		88.5	Not Determined	Not Determined	Not Determined	Not Determined
1,2-Dichlorobenzene-D4	2199-69-1	0.1	%	08-FEB-2012 15:00		66.7	Not Determined	Not Determined	Not Determined	Not Determined
2-Fluorobiphenyl	321-60-8	0.1	%	08-FEB-2012 15:00		71.5	Not Determined	Not Determined	Not Determined	Not Determined
Anthracene-d10	1719-06-8	0.1	%	08-FEB-2012 15:00		79.6	Not Determined	Not Determined	Not Determined	Not Determined
4-Terphenyl-d14	1718-51-0	0.1	%	08-FEB-2012 15:00		67.6	Not Determined	Not Determined	Not Determined	Not Determined
EP130S: Organophosphorus Pesticide Surrogate										
DEF	78-48-8	0.1	%	08-FEB-2012 15:00		22.2	25.8	28.2	Not Determined	Not Determined
EP131S: OC Pesticide Surrogate										
Dibromo-DDE	21655-73-2	0.1	%	08-FEB-2012 15:00		14.3	12.9	Not Determined	122	Not Determined
EP131T: PCB Surrogate										
Decachlorobiphenyl	2051-24-3	0.1	%	08-FEB-2012 15:00		17.2	16.1	Not Determined	Not Determined	Not Determined



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	Client sampling date / time		Client sample ID					
				08-FEB-2012 15:00	08-FEB-2012 15:00	SD1 - 1051/8001 Volatiles	SD2 - 1052/8002 Volatiles	SD3 - 1043/8003 Volatiles	SD4 - 1044/8004 Volatiles		
EA055: Moisture Content											
Moisture Content (dried @ 103°C)	----	1.0	%	8.6	73.4	27.7	41.2	44.1			
EG020-SD: Total Metals in Sediments by ICPMS											
Arsenic	7440-38-2	1.00	mg/kg	6.27	----	----	----	----	----	----	----
Cadmium	7440-43-9	0.1	mg/kg	0.2	----	----	----	----	----	----	----
Chromium	7440-47-3	1.0	mg/kg	33.5	----	----	----	----	----	----	----
Copper	7440-50-8	1.0	mg/kg	12.0	----	----	----	----	----	----	----
Lead	7439-92-1	1.0	mg/kg	96.6	----	----	----	----	----	----	----
Nickel	7440-02-0	1.0	mg/kg	13.7	----	----	----	----	----	----	----
Zinc	7440-66-6	1.0	mg/kg	120	----	----	----	----	----	----	----
EG035T: Total Recoverable Mercury by FIMS											
Mercury	7439-97-6	0.01	mg/kg	<0.01	----	----	----	----	----	----	----
EP003: Total Organic Carbon (TOC) in Soil											
Total Organic Carbon	----	0.02	%	2.12	----	----	----	----	----	----	----
EP074A: Monocyclic Aromatic Hydrocarbons											
Styrene	100-42-5	0.5	ng/kg	----	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Isopropylbenzene	98-82-8	0.5	ng/kg	----	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
n-Propylbenzene	103-65-1	0.5	ng/kg	----	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,3,5-Trimethylbenzene	108-67-8	0.5	ng/kg	----	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
sec-Butylbenzene	135-98-8	0.5	ng/kg	----	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2,4-Trimethylbenzene	95-63-6	0.5	ng/kg	----	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
tert-Butylbenzene	98-06-6	0.5	ng/kg	----	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
p-Isopropyltoluene	99-87-6	0.5	ng/kg	----	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
n-Butylbenzene	104-51-8	0.5	ng/kg	----	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP074B: Oxygenated Compounds											
Vinyl Acetate	108-05-4	5	mg/kg	----	<10	<5	<5	<5	<5	<5	<5
2-Butanone (MEK)	78-93-3	5	mg/kg	----	<10	<5	<5	<5	<5	<5	<5
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	----	<10	<5	<5	<5	<5	<5	<5
2-Hexanone (MIBK)	591-78-6	5	mg/kg	----	<10	<5	<5	<5	<5	<5	<5
EP074C: Sulfonated Compounds											
Carbon disulfide	75-15-0	0.5	mg/kg	----	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
EP074D: Fumigants											
2,2-Dichloropropane	594-20-7	0.5	mg/kg	----	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	78-87-5	0.5	mg/kg	----	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	----	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	----	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	----	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID			
			Dup2 - 10110/8811	SD1 - 1051/8001	SD2 - 1052/8002	SD3 - 1043/8003	SD4 - 1044/8004	
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	75-71-8	5	08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00
Chloromethane	74-87-3	5	---	<10	<5	<5	<5	<5
Vinyl chloride	75-01-4	5	---	<10	<5	<5	<5	<5
Bromomethane	74-83-9	5	---	<10	<5	<5	<5	<5
Chloroethane	75-00-3	5	---	<10	<5	<5	<5	<5
Trichlorofluoromethane	75-69-4	5	---	<10	<5	<5	<5	<5
1,1-Dichloroethene	75-35-4	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
Iodomethane	74-88-4	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	156-60-5	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	75-34-3	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
cis-1,2-Dichloroethene	156-59-2	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	71-55-6	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
1,1-Dichloropropylene	563-58-6	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
Carbon Tetrachloride	56-23-5	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	107-06-2	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
Trichloroethene	79-01-6	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
Dibromomethane	74-95-3	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	79-00-5	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
1,3-Dichloropropane	142-28-9	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	127-18-4	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
1,1,1,2-Tetrachloroethane	630-20-6	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
trans-1,4-Dichloro-2-butene	110-57-6	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
cis-1,4-Dichloro-2-butene	1476-11-5	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	79-34-5	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
1,2,3-Trichloropropane	96-18-4	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
Pentachloroethane	76-01-7	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
1,2-Dibromo-3-chloropropane	96-12-8	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
Hexachlorobutadiene	87-68-3	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-7	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
Bromobenzene	108-86-1	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
2-Chlorotoluene	95-49-8	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
4-Chlorotoluene	106-43-4	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	541-73-1	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	106-46-7	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
1,2-Dichlorobenzene	95-50-1	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5
1,2,4-Trichlorobenzene	120-82-1	0.5	---	<1.0	<0.5	<0.5	<0.5	<0.5



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID			
			Unit	EM1201358-011	SD1 - 1051/8001 Volatiles	SD2 - 1052/8002 Volatiles	SD3 - 1043/8003 Volatiles	SD4 - 1044/8004 Volatiles
EP074F: Halogenated Aromatic Compounds - Continued								
1,2,3-Trichlorobenzene	87-61-6	0.5	mg/kg	EM1201358-011	08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00
EP074G: Trihalomethanes								
Chloroform	67-66-3	0.5	mg/kg	EM1201358-014	08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00
Bromodichloromethane	75-27-4	0.5	mg/kg	EM1201358-015	08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00
Dibromochloromethane	124-48-1	0.5	mg/kg	EM1201358-016	08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00	08-FEB-2012 15:00
Bromoform	75-25-2	0.5	mg/kg					
EP074H: Naphthalene								
Naphthalene	91-20-3	5	mg/kg					
EP075A: Phenolic Compounds								
Phenol	108-95-2	0.5	mg/kg					
2-Chlorophenol	95-57-8	0.5	mg/kg					
2-Methylphenol	95-48-7	0.5	mg/kg					
3- & 4-Methylphenol	1319-77-3	0.5	mg/kg					
2-Nitrophenol	88-75-5	0.5	mg/kg					
2,4-Dimethylphenol	105-67-9	0.5	mg/kg					
2,4-Dichlorophenol	120-83-2	0.5	mg/kg					
2,6-Dichlorophenol	87-65-0	0.5	mg/kg					
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg					
2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg					
2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg					
Pentachlorophenol	87-86-5	1	mg/kg					
EP075B: Polynuclear Aromatic Hydrocarbons								
Naphthalene	91-20-3	0.5	mg/kg					
2-Methylnaphthalene	91-57-6	0.5	mg/kg					
2-Chloronaphthalene	91-58-7	0.5	mg/kg					
Acenaphthylene	208-96-8	0.5	mg/kg					
Acenaphthene	83-32-9	0.5	mg/kg					
Fluorene	86-73-7	0.5	mg/kg					
Phenanthrene	85-01-8	0.5	mg/kg					
Anthracene	120-12-7	0.5	mg/kg					
Fluoranthene	206-44-0	0.5	mg/kg					
Pyrene	129-00-0	0.5	mg/kg					
N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg					
Benz(a)anthracene	56-55-3	0.5	mg/kg					
Chrysene	218-01-9	0.5	mg/kg					
Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg					



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 Work Order : EM1201358
 Client : GOLDR ASSOCIATES
 Project : 117613201

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID			
			Unit	EM1201358-011	SD1 - 1051/8001 Volatiles	SD2 - 1052/8002 Volatiles	SD3 - 1043/8003 Volatiles	SD4 - 1044/8004 Volatiles
EP075B: Polynuclear Aromatic Hydrocarbons - Continued								
7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<7.5				
Benzo(a)pyrene	50-32-8	0.5	mg/kg	<7.5				
3-Methylcholanthrene	56-49-5	0.5	mg/kg	<7.5				
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<7.5				
Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<7.5				
Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<7.5				
^ Sum of PAHs		0.5	mg/kg	10.1				
EP075C: Phthalate Esters								
Dimethyl phthalate	131-11-3	0.5	mg/kg	<7.5				
Diethyl phthalate	84-66-2	0.5	mg/kg	<7.5				
Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<7.5				
Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<7.5				
bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	<75.0				
Di-n-octylphthalate	117-84-0	0.5	mg/kg	<7.5				
EP075D: Nitrosamines								
N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<7.5				
N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<7.5				
N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	<15.0				
N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<7.5				
N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<7.5				
N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<7.5				
N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<7.5				
N-Nitrosodiphenyl & Diphenylamine	86-30-6	1.0	mg/kg	<15.0				
Methapyriline	91-80-5	0.5	mg/kg	<7.5				
EP075E: Nitroaromatics and Ketones								
2-Picoline	109-06-8	0.5	mg/kg	<7.5				
Acetophenone	98-86-2	0.5	mg/kg	<7.5				
Nitrobenzene	98-95-3	0.5	mg/kg	<7.5				
Isophorone	78-59-1	0.5	mg/kg	<7.5				
2,6-Dinitrotoluene	606-20-2	1.0	mg/kg	<15.0				
2,4-Dinitrotoluene	121-14-2	1.0	mg/kg	<15.0				
1-Naphthylamine	134-32-7	0.5	mg/kg	<7.5				
4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<7.5				
5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<7.5				
Azobenzene	103-33-3	1	mg/kg	<15				
1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<7.5				



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sample ID		Dup2 - 10110/8811	SD1 - 1051/8001 Volatiles	SD2 - 1052/8002 Volatiles	SD3 - 1043/8003 Volatiles	SD4 - 1044/8004 Volatiles
			Client sampling date / time	Unit					
EP075E: Nitroaromatics and Ketones - Continued									
Phenacetin	62-44-2	0.5		mg/kg	<7.5				
4-Aminobiphenyl	92-67-1	0.5		mg/kg	<7.5				
Pentachloronitrobenzene	82-68-8	0.5		mg/kg	<7.5				
Pronamide	23950-58-5	0.5		mg/kg	<7.5				
Dimethylaminoazobenzene	60-11-7	0.5		mg/kg	<7.5				
Chlorobenzilate	510-15-6	0.5		mg/kg	<7.5				
EP075F: Haloethers									
Bis(2-chloroethyl) ether	111-44-4	0.5		mg/kg	<7.5				
Bis(2-chloroethoxy) methane	111-91-1	0.5		mg/kg	<7.5				
4-Chlorophenyl phenyl ether	7005-72-3	0.5		mg/kg	<7.5				
4-Bromophenyl phenyl ether	101-55-3	0.5		mg/kg	<7.5				
EP075G: Chlorinated Hydrocarbons									
1,3-Dichlorobenzene	541-73-1	0.5		mg/kg	<7.5				
1,4-Dichlorobenzene	106-46-7	0.5		mg/kg	<7.5				
1,2-Dichlorobenzene	95-50-1	0.5		mg/kg	<7.5				
Hexachloroethane	67-72-1	0.5		mg/kg	<7.5				
1,2,4-Trichlorobenzene	120-82-1	0.5		mg/kg	<7.5				
Hexachloropropylene	1888-71-7	0.5		mg/kg	<7.5				
Hexachlorobutadiene	87-68-3	0.5		mg/kg	<7.5				
Hexachlorocyclopentadiene	77-47-4	2.5		mg/kg	<37.5				
Pentachlorobenzene	608-93-5	0.5		mg/kg	<7.5				
Hexachlorobenzene (HCB)	118-74-1	1.0		mg/kg	<15.0				
EP075H: Anilines and Benzidines									
Aniline	62-53-3	0.5		mg/kg	<7.5				
4-Chloroaniline	106-47-8	0.5		mg/kg	<7.5				
2-Nitroaniline	88-74-4	1.0		mg/kg	<15.0				
3-Nitroaniline	99-09-2	1.0		mg/kg	<15.0				
Dibenzofuran	132-64-9	0.5		mg/kg	<7.5				
4-Nitroaniline	100-01-6	0.5		mg/kg	<7.5				
Carbazole	86-74-8	0.5		mg/kg	<7.5				
3,3'-Dichlorobenzidine	91-94-1	0.5		mg/kg	<7.5				
EP075I: Organochlorine Pesticides									
alpha-BHC	319-84-6	0.5		mg/kg	<7.5				
beta-BHC	319-85-7	0.5		mg/kg	<7.5				
gamma-BHC	58-89-9	0.5		mg/kg	<7.5				
delta-BHC	319-86-8	0.5		mg/kg	<7.5				
Heptachlor	76-44-8	0.5		mg/kg	<7.5				



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID			
			Unit	EM1201358-011	SD1 - 1051/8001 Volatiles	SD2 - 1052/8002 Volatiles	SD3 - 1043/8003 Volatiles	SD4 - 1044/8004 Volatiles
EP075J: Organochlorine Pesticides - Continued								
Aldrin	309-00-2	0.5	mg/kg	<7.5				
Heptachlor epoxide	1024-57-3	0.5	mg/kg	<7.5				
alpha-Endosulfan	959-98-8	0.5	mg/kg	<7.5				
4,4'-DDE	72-55-9	0.5	mg/kg	<7.5				
Dieldrin	60-57-1	0.5	mg/kg	<7.5				
Endrin	72-20-8	0.5	mg/kg	<7.5				
beta-Endosulfan	33213-65-9	0.5	mg/kg	<7.5				
4,4'-DDD	72-54-8	0.5	mg/kg	<7.5				
Endosulfan sulfate	1031-07-8	0.5	mg/kg	<7.5				
4,4'-DDT	50-29-3	1.0	mg/kg	<15.0				
EP075J: Organophosphorus Pesticides								
Dichlorvos	62-73-7	0.5	mg/kg	<7.5				
Dimethoate	60-51-5	0.5	mg/kg	<7.5				
Diazinon	333-41-5	0.5	mg/kg	<7.5				
Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<7.5				
Malathion	121-75-5	0.5	mg/kg	<7.5				
Fenthion	55-38-9	0.5	mg/kg	<7.5				
Chlorpyrifos	2921-88-2	0.5	mg/kg	<7.5				
Pirimiphos-ethyl	23505-41-1	0.5	mg/kg	<7.5				
Chlorfenvinphos	470-90-6	0.5	mg/kg	<7.5				
Prothiofos	34643-46-4	0.5	mg/kg	<7.5				
Ethion	563-12-2	0.5	mg/kg	<7.5				
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction	----	10	mg/kg	----	<20	<10	<10	<10
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction	----	10	mg/kg	----	<20	<10	<10	<10
EP080: BTEXN								
Benzene	71-43-2	0.2	mg/kg	----	<0.4	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	----	<1.0	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	----	<1.0	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3	0.5	mg/kg	----	<1.0	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg	----	<1.0	<0.5	<0.5	<0.5
^ Total Xylenes	1330-20-7	0.5	mg/kg	----	<1.0	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg	----	<0.4	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg	----	<2	<1	<1	<1
EP080-SD / EP071-SD: Total Petroleum Hydrocarbons								



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 Work Order : EM1201358
 Client : GOLDR ASSOCIATES
 Project : 117613201

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	Client sample ID			
				Dup2 - 10110/8811	SD1 - 1051/8001	SD2 - 1052/8002	SD3 - 1043/8003	SD4 - 1044/8004
Client sampling date / time				Volatiles			
08-FEB-2012 15:00				08-FEB-2012 15:00			
EM1201358-011				EM1201358-014			
EM1201358-015				EM1201358-016			
EP080-SD / EP071-SD: Total Petroleum Hydrocarbons - Continued							
C10 - C14 Fraction		3	mg/kg	246			
C15 - C28 Fraction		3	mg/kg	2090			
C29 - C36 Fraction		5	mg/kg	396			
^ C10 - C36 Fraction (sum)		3	mg/kg	2730			
EP130A: Organophosphorus Pesticides (Ultra-trace)							
Bromophos-ethyl	4824-78-6	10	µg/kg	<250			
Carbophenothion	786-19-6	10	µg/kg	<250			
Chlorfenvinphos (E)	18708-86-6	10.0	µg/kg	<250			
Chlorfenvinphos (Z)	18708-87-7	10	µg/kg	<250			
Chlorpyrifos	2921-88-2	10	µg/kg	<250			
Chlorpyrifos-methyl	5598-13-0	10	µg/kg	<250			
Demeton-S-methyl	919-86-8	10	µg/kg	<250			
Diazinon	333-41-5	10	µg/kg	<250			
Dichlorvos	62-73-7	10	µg/kg	<250			
Dimethoate	60-51-5	10	µg/kg	<250			
Ethion	563-12-2	10	µg/kg	<250			
Fenamiphos	22224-92-6	10	µg/kg	<250			
Fenthion	55-38-9	10	µg/kg	<250			
Malathion	121-75-5	10	µg/kg	<250			
Azinphos Methyl	86-50-0	10	µg/kg	<250			
Monocrotophos	6923-22-4	10	µg/kg	<250			
Parathion	56-38-2	10	µg/kg	<250			
Parathion-methyl	298-00-0	10	µg/kg	<250			
Pirimphos-ethyl	23505-41-1	10	µg/kg	<250			
Prothiofos	34643-46-4	10	µg/kg	<250			
EP131A: Organochlorine Pesticides							
Aldrin	309-00-2	0.50	µg/kg	<0.62			
alpha-BHC	319-84-6	0.50	µg/kg	<0.62			
beta-BHC	319-85-7	0.50	µg/kg	<0.62			
delta-BHC	319-86-8	0.50	µg/kg	<0.62			
4,4'-DDD	72-54-8	0.50	µg/kg	<0.62			
4,4'-DDE	72-55-9	0.50	µg/kg	<0.62			
4,4'-DDT	50-29-3	0.50	µg/kg	<0.62			
^ Sum of DDD + DDE + DDT			µg/kg	<0.62			
Dieldrin	60-57-1	0.50	µg/kg	<0.62			
alpha-Endosulfan	959-98-8	0.50	µg/kg	<0.62			
beta-Endosulfan	33213-65-9	0.50	µg/kg	<0.62			



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID			
			Unit	Dup2 - 10110/8811	SD1 - 1051/8001	SD2 - 1052/8002	SD3 - 1043/8003	SD4 - 1044/8004
EP131A: Organochlorine Pesticides - Continued								
Endosulfan sulfate	1031-07-8	0.50	µg/kg	<0.62				Volatiles 08-FEB-2012 15:00 EM1201358-016
Endosulfan (sum)	115-29-7	0.50	µg/kg	<0.62				Volatiles 08-FEB-2012 15:00 EM1201358-015
Endrin	72-20-8	0.50	µg/kg	<0.62				Volatiles 08-FEB-2012 15:00 EM1201358-014
Endrin aldehyde	7421-93-4	0.50	µg/kg	<0.62				Volatiles 08-FEB-2012 15:00 EM1201358-013
Endrin ketone	53494-70-5	0.50	µg/kg	<0.62				Volatiles 08-FEB-2012 15:00 EM1201358-014
Heptachlor	76-44-8	0.50	µg/kg	<0.62				Volatiles 08-FEB-2012 15:00 EM1201358-015
Heptachlor epoxide	1024-57-3	0.50	µg/kg	<0.62				Volatiles 08-FEB-2012 15:00 EM1201358-014
Hexachlorobenzene (HCB)	118-74-1	0.50	µg/kg	<0.62				Volatiles 08-FEB-2012 15:00 EM1201358-015
gamma-BHC	58-89-9	0.25	µg/kg	<0.62				Volatiles 08-FEB-2012 15:00 EM1201358-014
Methoxychlor	72-43-5	0.50	µg/kg	<0.62				Volatiles 08-FEB-2012 15:00 EM1201358-015
cis-Chlordane	5103-71-9	0.25	µg/kg	<0.62				Volatiles 08-FEB-2012 15:00 EM1201358-014
trans-Chlordane	5103-74-2	0.25	µg/kg	<0.62				Volatiles 08-FEB-2012 15:00 EM1201358-015
Total Chlordane (sum)	****	0.25	µg/kg	<0.62				Volatiles 08-FEB-2012 15:00 EM1201358-014
Oxychlorane	27304-13-8	0.50	µg/kg	<0.62				Volatiles 08-FEB-2012 15:00 EM1201358-015
EP131B: Polychlorinated Biphenyls (as Aroclors)								
Total Polychlorinated biphenyls	****	5.0	µg/kg	<31.2				Volatiles 08-FEB-2012 15:00 EM1201358-014
Aroclor 1016	12674-11-2	5.0	µg/kg	<31.2				Volatiles 08-FEB-2012 15:00 EM1201358-015
Aroclor 1221	11104-28-2	5.0	µg/kg	<31.2				Volatiles 08-FEB-2012 15:00 EM1201358-014
Aroclor 1232	11141-16-5	5.0	µg/kg	<31.2				Volatiles 08-FEB-2012 15:00 EM1201358-015
Aroclor 1242	53469-21-9	5.0	µg/kg	<31.2				Volatiles 08-FEB-2012 15:00 EM1201358-014
Aroclor 1248	12672-29-6	5.0	µg/kg	<31.2				Volatiles 08-FEB-2012 15:00 EM1201358-015
Aroclor 1254	11097-69-1	5.0	µg/kg	<31.2				Volatiles 08-FEB-2012 15:00 EM1201358-014
Aroclor 1260	11096-82-5	5.0	µg/kg	<31.2				Volatiles 08-FEB-2012 15:00 EM1201358-015
EP216: Perchlorate by LC/MS								
Perchlorate	7601-90-3	10.0	µg/kg	<10.0				Volatiles 08-FEB-2012 15:00 EM1201358-014
EP231: Perfluorooctyl Acids and Sulfonates.								
PFOA	1763-23-1	0.0005	mg/kg	72.2				Volatiles 08-FEB-2012 15:00 EM1201358-015
PFOA	335-67-1	0.0005	mg/kg	0.866				Volatiles 08-FEB-2012 15:00 EM1201358-014
6:2 Fluorotelomer Sulfonate (6:2 FIS)	27619-97-2	0.005	mg/kg	0.624				Volatiles 08-FEB-2012 15:00 EM1201358-015
EP074S: VOC Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	---	62.1	74.1	76.3	67.7
Toluene-D8	2037-26-5	0.1	%	---	63.4	76.2	75.3	67.4
4-Bromofluorobenzene	460-00-4	0.1	%	---	66.3	77.7	80.3	69.4
EP075S: Acid Extractable Surrogates								
2-Fluorophenol	367-12-4	0.1	%	Not Determined				Volatiles 08-FEB-2012 15:00 EM1201358-014



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 Work Order : EM1201358
 Client : GOLDR ASSOCIATES
 Project : 117613201

Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	Client sample ID				
				Dup2 - 10110/8811	SD1 - 1051/8001	SD2 - 1052/8002	SD3 - 1043/8003	SD4 - 1044/8004
			Client sampling date / time	Volatiles	Volatiles	Volatiles	Volatiles	Volatiles
EP075S: Acid Extractable Surrogates - Continued								
Phenol-d6	13127-88-3	0.1	%	Not Determined	Not Determined	Not Determined	Not Determined	Not Determined
2-Chlorophenol-D4	93951-73-6	0.1	%	Not Determined	Not Determined	Not Determined	Not Determined	Not Determined
2,4,6-Tribromophenol	118-79-6	0.1	%	Not Determined	Not Determined	Not Determined	Not Determined	Not Determined
EP075T: Base/Neutral Extractable Surrogates								
Nitrobenzene-D5	4165-60-0	0.1	%	Not Determined	Not Determined	Not Determined	Not Determined	Not Determined
1,2-Dichlorobenzene-D4	2199-69-1	0.1	%	Not Determined	Not Determined	Not Determined	Not Determined	Not Determined
2-Fluorobiphenyl	321-60-8	0.1	%	Not Determined	Not Determined	Not Determined	Not Determined	Not Determined
Anthracene-d10	1719-06-8	0.1	%	Not Determined	Not Determined	Not Determined	Not Determined	Not Determined
4-Terphenyl-d14	1718-51-0	0.1	%	Not Determined	Not Determined	Not Determined	Not Determined	Not Determined
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	17060-07-0	0.1	%	Not Determined	63.6	76.7	76.2	69.4
Toluene-D8	2037-26-5	0.1	%	Not Determined	58.2	70.2	69.3	62.0
4-Bromofluorobenzene	460-00-4	0.1	%	Not Determined	62.9	74.5	75.8	66.6
EP130S: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	Not Determined	Not Determined	Not Determined	Not Determined	Not Determined
EP131S: OC Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	Not Determined	Not Determined	Not Determined	Not Determined	Not Determined
EP131T: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	Not Determined	Not Determined	Not Determined	Not Determined	Not Determined



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID	
			Unit	Unit	Volatiles	Volatiles
EA055: Moisture Content						
Moisture Content (dried @ 103°C)	----	1.0	%	63.1	42.1	80.6
EP074A: Monocyclic Aromatic Hydrocarbons						
Styrene	100-42-5	0.5	mg/kg	<1.0	<0.5	<2.0
Isopropylbenzene	98-82-8	0.5	mg/kg	<1.0	<0.5	<2.0
n-Propylbenzene	103-65-1	0.5	mg/kg	<1.0	<0.5	<2.0
1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg	<1.0	<0.5	<2.0
sec-Butylbenzene	135-98-8	0.5	mg/kg	<1.0	<0.5	<2.0
1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg	<1.0	<0.5	<2.0
tert-Butylbenzene	98-06-6	0.5	mg/kg	<1.0	<0.5	<2.0
p-Isopropyltoluene	99-87-6	0.5	mg/kg	<1.0	<0.5	<2.0
n-Butylbenzene	104-51-8	0.5	mg/kg	<1.0	<0.5	<2.0
EP074B: Oxygenated Compounds						
Vinyl Acetate	108-05-4	5	mg/kg	<10	<5	<20
2-Butanone (MEK)	78-93-3	5	mg/kg	<10	<5	<20
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<10	<5	<20
2-Hexanone (MBK)	591-78-6	5	mg/kg	<10	<5	<20
EP074C: Sulfonated Compounds						
Carbon disulfide	75-15-0	0.5	mg/kg	<1.0	<0.5	<2.0
EP074D: Fumigants						
2,2-Dichloropropane	594-20-7	0.5	mg/kg	<1.0	<0.5	<2.0
1,2-Dichloropropane	78-87-5	0.5	mg/kg	<1.0	<0.5	<2.0
cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<1.0	<0.5	<2.0
trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<1.0	<0.5	<2.0
1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<1.0	<0.5	<2.0
EP074E: Halogenated Aliphatic Compounds						
Dichlorodifluoromethane	75-71-8	5	mg/kg	<10	<5	<20
Chloromethane	74-87-3	5	mg/kg	<10	<5	<20
Vinyl chloride	75-01-4	5	mg/kg	<10	<5	<20
Bromomethane	74-83-9	5	mg/kg	<10	<5	<20
Chloroethane	75-00-3	5	mg/kg	<10	<5	<20
Trichlorofluoromethane	75-69-4	5	mg/kg	<10	<5	<20
1,1-Dichloroethene	75-35-4	0.5	mg/kg	<1.0	<0.5	<2.0
Iodomethane	74-88-4	0.5	mg/kg	<1.0	<0.5	<2.0
trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<1.0	<0.5	<2.0
1,1-Dichloroethane	75-34-3	0.5	mg/kg	<1.0	<0.5	<2.0
cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<1.0	<0.5	<2.0



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID				
			Unit	EM1201358-017	EM1201358-018	EM1201358-019	EM1201358-020	EM1201358-021	
EP074E: Halogenated Aliphatic Compounds - Continued									
1.1.1-Trichloroethane	71-55-6	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
1.1-Dichloropropylene	563-58-6	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
Carbon Tetrachloride	56-23-5	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
1.2-Dichloroethane	107-06-2	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
Trichloroethane	79-01-6	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
Dibromomethane	74-95-3	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
1.1.1-Trichloroethane	79-00-5	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
1.3-Dichloropropane	142-28-9	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
Tetrachloroethane	127-18-4	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
Pentachloroethane	76-01-7	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
Hexachlorobutadiene	87-68-3	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
EP074F: Halogenated Aromatic Compounds									
Chlorobenzene	108-90-7	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
Bromobenzene	108-86-1	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
2-Chlorotoluene	95-49-8	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
4-Chlorotoluene	106-43-4	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
EP074G: Trihalomethanes									
Chloroform	67-66-3	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
Bromodichloromethane	75-27-4	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
Dibromochloromethane	124-48-1	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
Bromoform	75-25-2	0.5	mg/kg	<1.0	<0.5	<1.0	<1.0	<2.0	<2.0
EP074H: Naphthalene									
Naphthalene	91-20-3	5	mg/kg	<10	<5	<10	<10	<20	<20
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg	<20	<10	<20	<20	244	166



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	Client sample ID					
				Client sampling date / time	Volatiles	Volatiles	Volatiles	Volatiles	
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg	<20	<10	<20	<20	343	221
EP080: BTEXN									
Benzene	71-43-2	0.2	mg/kg	<0.4	<0.2	<0.4	<0.8	<0.8	<0.8
Toluene	108-88-3	0.5	mg/kg	<1.0	<0.5	<1.0	<2.0	<2.0	<2.0
Ethylbenzene	100-41-4	0.5	mg/kg	<1.0	<0.5	<1.0	<2.0	<2.0	<2.0
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<1.0	<0.5	<1.0	<2.0	<2.0	<2.0
ortho-Xylene	95-47-6	0.5	mg/kg	<1.0	<0.5	<1.0	<2.0	<2.0	<2.0
^ Total Xylenes	1330-20-7	0.5	mg/kg	<1.0	<0.5	<1.0	<2.0	<2.0	<2.0
^ Sum of BTEX	----	0.2	mg/kg	<0.4	<0.2	<0.4	<0.8	<0.8	<0.8
Naphthalene	91-20-3	1	mg/kg	<2	<1	<2	<4	<4	<4
EP074S: VOC Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	55.8	78.4	71.1	74.5	74.5	63.1
Toluene-D8	2037-26-5	0.1	%	55.2	78.2	70.6	74.6	74.6	61.4
4-Bromofluorobenzene	460-00-4	0.1	%	56.8	81.1	72.2	77.1	77.1	63.8
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	17060-07-0	0.1	%	56.1	80.9	72.5	70.1	70.1	59.7
Toluene-D8	2037-26-5	0.1	%	51.0	72.1	65.6	71.9	71.9	59.4
4-Bromofluorobenzene	460-00-4	0.1	%	54.1	76.6	68.4	75.7	75.7	61.5



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Unit	Client sample ID		Volatiles	Volatiles	Volatiles	Volatiles
				Client sampling date / time	Client sampling date / time				
EA055: Moisture Content									
Moisture Content (dried @ 103°C)		1.0	%			39.8		42.5	
EP074A: Monocyclic Aromatic Hydrocarbons									
Styrene	100-42-5	0.5	mg/kg			<0.5		<0.5	
Isopropylbenzene	98-82-8	0.5	mg/kg			<0.5		<0.5	
n-Propylbenzene	103-65-1	0.5	mg/kg			<0.5		<0.5	
1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg			1.3		1.6	
sec-Butylbenzene	135-98-8	0.5	mg/kg			<0.5		<0.5	
1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg			3.0		3.7	
tert-Butylbenzene	98-06-6	0.5	mg/kg			<0.5		<0.5	
p-Isopropyltoluene	99-87-6	0.5	mg/kg			<0.5		<0.5	
n-Butylbenzene	104-51-8	0.5	mg/kg			<0.5		<0.5	
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-05-4	5	mg/kg			<5		<5	
2-Butanone (MEK)	78-93-3	5	mg/kg			<5		<5	
4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg			<5		<5	
2-Hexanone (MBK)	591-78-6	5	mg/kg			<5		<5	
EP074C: Sulfonated Compounds									
Carbon disulfide	75-15-0	0.5	mg/kg			<0.5		<0.5	
EP074D: Fumigants									
2,2-Dichloropropane	594-20-7	0.5	mg/kg			<0.5		<0.5	
1,2-Dichloropropane	78-87-5	0.5	mg/kg			<0.5		<0.5	
cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg			<0.5		<0.5	
trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg			<0.5		<0.5	
1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg			<0.5		<0.5	
EP074E: Halogenated Aliphatic Compounds									
Dichlorodifluoromethane	75-71-8	5	mg/kg			<5		<5	
Chloromethane	74-87-3	5	mg/kg			<5		<5	
Vinyl chloride	75-01-4	5	mg/kg			<5		<5	
Bromomethane	74-83-9	5	mg/kg			<5		<5	
Chloroethane	75-00-3	5	mg/kg			<5		<5	
Trichlorofluoromethane	75-69-4	5	mg/kg			<5		<5	
1,1-Dichloroethene	75-35-4	0.5	mg/kg			<0.5		<0.5	
Iodomethane	74-88-4	0.5	mg/kg			<0.5		<0.5	
trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg			<0.5		<0.5	
1,1-Dichloroethane	75-34-3	0.5	mg/kg			<0.5		<0.5	
cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg			<0.5		<0.5	



Analytical Results

Sub-Matrix: SEDIMENT

Compound	CAS Number	LOR	Client sample ID		SD10 - 10110/8010 Volatiles	Dup2 - 10110/8811 Volatiles	Unit
			Client sampling date / time	Unit			
EP074E: Halogenated Aliphatic Compounds - Continued							
1.1.1-Trichloroethane	71-55-6	0.5			<0.5	<0.5	mg/kg
1.1-Dichloropropylene	563-58-6	0.5			<0.5	<0.5	mg/kg
Carbon Tetrachloride	56-23-5	0.5			<0.5	<0.5	mg/kg
1.2-Dichloroethane	107-06-2	0.5			<0.5	<0.5	mg/kg
Trichloroethene	79-01-6	0.5			<0.5	<0.5	mg/kg
Dibromomethane	74-95-3	0.5			<0.5	<0.5	mg/kg
1.1.2-Trichloroethane	79-00-5	0.5			<0.5	<0.5	mg/kg
1.3-Dichloropropane	142-28-9	0.5			<0.5	<0.5	mg/kg
Tetrachloroethene	127-18-4	0.5			<0.5	<0.5	mg/kg
1.1.1.2-Tetrachloroethane	630-20-6	0.5			<0.5	<0.5	mg/kg
trans-1.4-Dichloro-2-butene	110-57-6	0.5			<0.5	<0.5	mg/kg
cis-1.4-Dichloro-2-butene	1476-11-5	0.5			<0.5	<0.5	mg/kg
1.1.2.2-Tetrachloroethane	79-34-5	0.5			<0.5	<0.5	mg/kg
1.2.3-Trichloropropane	96-18-4	0.5			<0.5	<0.5	mg/kg
Pentachloroethane	76-01-7	0.5			<0.5	<0.5	mg/kg
1.2-Dibromo-3-chloropropane	96-12-8	0.5			<0.5	<0.5	mg/kg
Hexachlorobutadiene	87-68-3	0.5			<0.5	<0.5	mg/kg
EP074F: Halogenated Aromatic Compounds							
Chlorobenzene	108-90-7	0.5			<0.5	<0.5	mg/kg
Bromobenzene	108-86-1	0.5			<0.5	<0.5	mg/kg
2-Chlorotoluene	95-49-8	0.5			<0.5	<0.5	mg/kg
4-Chlorotoluene	106-43-4	0.5			<0.5	<0.5	mg/kg
1.3-Dichlorobenzene	541-73-1	0.5			<0.5	<0.5	mg/kg
1.4-Dichlorobenzene	106-46-7	0.5			<0.5	<0.5	mg/kg
1.2-Dichlorobenzene	95-50-1	0.5			<0.5	<0.5	mg/kg
1.2.4-Trichlorobenzene	120-82-1	0.5			<0.5	<0.5	mg/kg
1.2.3-Trichlorobenzene	87-61-6	0.5			<0.5	<0.5	mg/kg
EP074G: Trihalomethanes							
Chloroform	67-66-3	0.5			<0.5	<0.5	mg/kg
Bromodichloromethane	75-27-4	0.5			<0.5	<0.5	mg/kg
Dibromochloromethane	124-48-1	0.5			<0.5	<0.5	mg/kg
Bromoform	75-25-2	0.5			<0.5	<0.5	mg/kg
EP074H: Naphthalene							
Naphthalene	91-20-3	5			<5	<5	mg/kg
EP080/071: Total Petroleum Hydrocarbons							
C6 - C9 Fraction	----	10			71	88	mg/kg



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 Work Order : EM1201358
 Client : GOLDR ASSOCIATES
 Project : 117613201

Analytical Results

Compound	CAS Number	LOR	Unit	Client sample ID	
				Client sampling date / time	Client sample ID
Sub-Matrix: SEDIMENT					
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft					
C6 - C10 Fraction		10	mg/kg	96	118
EP080: BTEXN					
Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5
meta- & para-Xylene	108-38-3	106-42-3	0.5	1.4	1.9
ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5
Total Xylenes	1330-20-7	0.5	mg/kg	1.4	1.9
Sum of BTEX		0.2	mg/kg	1.4	1.9
Naphthalene	91-20-3	1	mg/kg	<1	<1
EP074S: VOC Surrogates					
1,2-Dichloroethane-D4	17060-07-0	0.1	%	75.6	73.2
Toluene-D8	2037-26-5	0.1	%	77.0	74.1
4-Bromofluorobenzene	460-00-4	0.1	%	78.5	76.0
EP080S: TPH(V)/BTEX Surrogates					
1,2-Dichloroethane-D4	17060-07-0	0.1	%	70.5	68.6
Toluene-D8	2037-26-5	0.1	%	74.0	71.1
4-Bromofluorobenzene	460-00-4	0.1	%	76.7	76.6



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 Client : GOLDR ASSOCIATES
 Project : 117613201

Analytical Results

Sub-Matrix: WATER

Compound	CAS Number	Client sampling date / time		Client sample ID	Unit	LOR	Result	Result	Result	Result
		LOR	Unit							
EP074A: Monocyclic Aromatic Hydrocarbons										
Benzene	71-43-2	1	µg/L	Trip 3 - 10110/6712	<1	.....	.....	.....	.....	.....
Toluene	108-88-3	2	µg/L	08-FEB-2012 15:00	<2	.....	.....	.....	.....	.....
Ethylbenzene	100-41-4	2	µg/L		<2	.....	.....	.....	.....	.....
meta- & para-Xylene	108-38-3	2	µg/L		<2	.....	.....	.....	.....	.....
Styrene	100-42-5	5	µg/L		<5	.....	.....	.....	.....	.....
ortho-Xylene	95-47-6	2	µg/L		<2	.....	.....	.....	.....	.....
Isopropylbenzene	98-82-8	5	µg/L		<5	.....	.....	.....	.....	.....
n-Propylbenzene	103-65-1	5	µg/L		<5	.....	.....	.....	.....	.....
1,3,5-Trimethylbenzene	108-67-8	5	µg/L		<5	.....	.....	.....	.....	.....
sec-Butylbenzene	135-98-8	5	µg/L		<5	.....	.....	.....	.....	.....
1,2,4-Trimethylbenzene	95-63-6	5	µg/L		<5	.....	.....	.....	.....	.....
tert-Butylbenzene	98-06-6	5	µg/L		<5	.....	.....	.....	.....	.....
p-Isopropyltoluene	99-87-6	5	µg/L		<5	.....	.....	.....	.....	.....
n-Butylbenzene	104-51-8	5	µg/L		<5	.....	.....	.....	.....	.....
EP074B: Oxygenated Compounds										
Vinyl Acetate	108-05-4	50	µg/L		<50	.....	.....	.....	.....	.....
2-Butanone (MEK)	78-93-3	50	µg/L		<50	.....	.....	.....	.....	.....
4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L		<50	.....	.....	.....	.....	.....
2-Hexanone (MBK)	591-78-6	50	µg/L		<50	.....	.....	.....	.....	.....
EP074C: Sulfonated Compounds										
Carbon disulfide	75-15-0	5	µg/L		<5	.....	.....	.....	.....	.....
EP074D: Fumigants										
2,2-Dichloropropane	594-20-7	5	µg/L		<5	.....	.....	.....	.....	.....
1,2-Dichloropropane	78-87-5	5	µg/L		<5	.....	.....	.....	.....	.....
cis-1,3-Dichloropropylene	10061-01-5	5	µg/L		<5	.....	.....	.....	.....	.....
trans-1,3-Dichloropropylene	10061-02-6	5	µg/L		<5	.....	.....	.....	.....	.....
1,2-Dibromoethane (EDB)	106-93-4	5	µg/L		<5	.....	.....	.....	.....	.....
EP074E: Halogenated Aliphatic Compounds										
Dichlorodifluoromethane	75-71-8	50	µg/L		<50	.....	.....	.....	.....	.....
Chloromethane	74-87-3	50	µg/L		<50	.....	.....	.....	.....	.....
Vinyl chloride	75-01-4	50	µg/L		<50	.....	.....	.....	.....	.....
Bromomethane	74-83-9	50	µg/L		<50	.....	.....	.....	.....	.....
Chloroethane	75-00-3	50	µg/L		<50	.....	.....	.....	.....	.....
Trichlorofluoromethane	75-69-4	50	µg/L		<50	.....	.....	.....	.....	.....
1,1-Dichloroethene	75-35-4	5	µg/L		<5	.....	.....	.....	.....	.....
Iodomethane	74-88-4	5	µg/L		<5	.....	.....	.....	.....	.....
trans-1,2-Dichloroethene	156-60-5	5	µg/L		<5	.....	.....	.....	.....	.....
1,1-Dichloroethane	75-34-3	5	µg/L		<5	.....	.....	.....	.....	.....



Analytical Results

Sub-Matrix: WATER

Compound	Client sampling date / time		Client sample ID	Client sampling date / time	
	CAS Number	LOR		Unit	Unit
EP074E: Halogenated Aliphatic Compounds - Continued					
cis-1,2-Dichloroethene	156-59-2	5	µg/L	<5	
1,1,1-Trichloroethane	71-55-6	5	µg/L	<5	
1,1-Dichloropropylene	563-58-6	5	µg/L	<5	
Carbon Tetrachloride	56-23-5	5	µg/L	<5	
1,2-Dichloroethane	107-06-2	5	µg/L	<5	
Trichloroethene	79-01-6	5	µg/L	<5	
Dibromomethane	74-95-3	5	µg/L	<5	
1,1,2-Trichloroethane	79-00-5	5	µg/L	<5	
1,3-Dichloropropane	142-28-9	5	µg/L	<5	
Tetrachloroethene	127-18-4	5	µg/L	<5	
1,1,1,2-Tetrachloroethane	630-20-6	5	µg/L	<5	
trans-1,4-Dichloro-2-butene	110-57-6	5	µg/L	<5	
cis-1,4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	
1,1,2,2-Tetrachloroethane	79-34-5	5	µg/L	<5	
1,2,3-Trichloropropane	96-18-4	5	µg/L	<5	
Pentachloroethane	76-01-7	5	µg/L	<5	
1,2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	
Hexachlorobutadiene	87-68-3	5	µg/L	<5	
EP074F: Halogenated Aromatic Compounds					
Chlorobenzene	108-90-7	5	µg/L	<5	
Bromobenzene	108-86-1	5	µg/L	<5	
2-Chlorotoluene	95-49-8	5	µg/L	<5	
4-Chlorotoluene	106-43-4	5	µg/L	<5	
1,3-Dichlorobenzene	541-73-1	5	µg/L	<5	
1,4-Dichlorobenzene	106-46-7	5	µg/L	<5	
1,2-Dichlorobenzene	95-50-1	5	µg/L	<5	
1,2,4-Trichlorobenzene	120-82-1	5	µg/L	<5	
1,2,3-Trichlorobenzene	87-61-6	5	µg/L	<5	
EP074G: Trihalomethanes					
Chloroform	67-66-3	5	µg/L	<5	
Bromodichloromethane	75-27-4	5	µg/L	<5	
Dibromochloromethane	124-48-1	5	µg/L	<5	
Bromoform	75-25-2	5	µg/L	<5	
EP074H: Naphthalene					
Naphthalene	91-20-3	7	µg/L	<7	
EP074S: VOC Surrogates					
1,2-Dichloroethane-D4	17060-07-0	0.1	%	108	
Toluene-D8	2037-26-5	0.1	%	104	



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Client : GOLDR ASSOCIATES
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Analytical Results

Sub-Matrix: WATER

Compound	CAS Number	LOR	Unit	Client sample ID		Client sampling date / time	Trip 3 - 10110/6712	08-FEB-2012 15:00	EM1201358-012	107
EP074S: VOC Surrogates - Continued										
4-Bromofluorobenzene	460-00-4	0.1	%							



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Surrogate Control Limits

Sub-Matrix: SEDIMENT		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1,2-Dichloroethane-D4	17060-07-0	62	122
Toluene-D8	2037-26-5	64	120
4-Bromofluorobenzene	460-00-4	66	124
EP075S: Acid Extractable Surrogates			
2-Fluorophenol	367-12-4	14	126
Phenol-d6	13127-88-3	12.2	122
2-Chlorophenol-D4	93951-73-6	14.2	127
2,4,6-Tribromophenol	118-79-6	12.4	133
EP075T: Base/Neutral Extractable Surrogates			
Nitrobenzene-D5	4165-60-0	12.4	128
1,2-Dichlorobenzene-D4	2199-69-1	11.6	108
2-Fluorobiphenyl	321-60-8	18.7	127
Anthracene-d10	1719-06-8	28.5	142
4-Terphenyl-d14	1718-51-0	25.8	138
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	17060-07-0	57	129
Toluene-D8	2037-26-5	58	120
4-Bromofluorobenzene	460-00-4	56	126
EP130S: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	27.8	149
EP131S: OC Pesticide Surrogate			
Dibromo-DDE	21655-73-2	10	136
EP131T: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	10	164
Sub-Matrix: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1,2-Dichloroethane-D4	17060-07-0	72	132
Toluene-D8	2037-26-5	74	128
4-Bromofluorobenzene	460-00-4	70	132

Environmental Division

QUALITY CONTROL REPORT

Work Order	: EM1201358	Page	: 1 of 32
Client	: GOLDER ASSOCIATES	Laboratory	: Environmental Division Melbourne
Contact	: Niamh McCormack	Contact	: Samantha Smith
Address	: P O BOX 6079 Building 7, 570-588 Swan St, Richmond, VIC. 3121 HAWTHORN WEST VIC, AUSTRALIA 3122	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: nmccormack@golder.com.au	E-mail	: samantha.smith@alsglobal.com
Telephone	: +61 03 8862 3500	Telephone	: +61-3-8549 9644
Facsimile	: +61 03 8862 3501	Facsimile	: +61-3-8549 9601
Project	: 117613201	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: F - Vic	Date Samples Received	: 09-FEB-2012
C-O-C number	: ----	Issue Date	: 29-FEB-2012
Sampler	: NMC	No. of samples received	: 23
Order number	: GA-MEL 332509	No. of samples analysed	: 23
Quote number	: ME/054/12		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD), and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits



NATA Accredited Laboratory 825

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ISO/IEC 17025.

WORLD RECOGNISED
ACCREDITATION

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Edwandy Fadjar	Organic Coordinator	Sydney Organics
Eric Chau	Metals Team Leader	Melbourne Inorganics
Herman Lin	Laboratory Coordinator	Melbourne Inorganics
Nancy Wang	Senior Semivolatile Instrument Chemist	Melbourne Organics
Phalak Inthaksono	Laboratory Manager - Organics	Sydney Organics
Stephen Hislop	Senior Inorganic Chemist	Brisbane Inorganics
Stephen Hislop	Senior Inorganic Chemist	Stafford Minerals - AY



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Client : GOLDR ASSOCIATES
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General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :
Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
= Indicates failed QC



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 Client : GOLDER ASSOCIATES
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Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: SOIL		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EA055: Moisture Content (QC Lot: 2165794)											
EM1201358-001	SD1 - 1051/8001	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	33.3	33.3	0.0	0% - 20%		
EM1201358-011	Dup2 - 10110/8811	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	8.6	9.8	13.0	No Limit		
EA055: Moisture Content (QC Lot: 2165795)											
EM1201358-022	SD10 - 10110/8010	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	39.8	47.1	16.8	0% - 20%		
	Volatiles										
EM1201378-014	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	---	1.0	%	10.0	9.9	0.0	No Limit		
EG020-SD: Total Metals in Sediments by ICPMS (QC Lot: 2171814)											
EM1201358-001	SD1 - 1051/8001	EG020-SD: Cadmium	7440-43-9	0.1	mg/kg	<0.1	<0.1	0.0	No Limit		
		EG020-SD: Chromium	7440-47-3	1.0	mg/kg	67.2	56.8	16.7	0% - 20%		
		EG020-SD: Copper	7440-50-8	1.0	mg/kg	6.0	5.3	12.5	No Limit		
		EG020-SD: Lead	7439-92-1	1.0	mg/kg	14.4	9.8	38.6	No Limit		
		EG020-SD: Nickel	7440-02-0	1.0	mg/kg	8.1	7.2	12.6	No Limit		
		EG020-SD: Zinc	7440-66-6	1.0	mg/kg	24.8	21.6	13.9	0% - 20%		
		EG020-SD: Arsenic	7440-38-2	1.00	mg/kg	8.21	7.05	15.3	No Limit		
EM1201358-011	Dup2 - 10110/8811	EG020-SD: Cadmium	7440-43-9	0.1	mg/kg	0.2	0.2	0.0	No Limit		
		EG020-SD: Chromium	7440-47-3	1.0	mg/kg	33.5	34.4	2.8	0% - 20%		
		EG020-SD: Copper	7440-50-8	1.0	mg/kg	12.0	12.3	1.8	0% - 50%		
		EG020-SD: Lead	7439-92-1	1.0	mg/kg	96.6	96.8	0.1	0% - 20%		
		EG020-SD: Nickel	7440-02-0	1.0	mg/kg	13.7	13.7	0.0	0% - 50%		
		EG020-SD: Zinc	7440-66-6	1.0	mg/kg	120	120	0.2	0% - 20%		
		EG020-SD: Arsenic	7440-38-2	1.00	mg/kg	6.27	6.37	1.5	No Limit		
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2171813)											
EM1201358-001	SD1 - 1051/8001	EG035T-LL: Mercury	7439-97-6	0.01	mg/kg	0.02	0.02	0.0	No Limit		
EM1201358-011	Dup2 - 10110/8811	EG035T-LL: Mercury	7439-97-6	0.01	mg/kg	<0.01	<0.01	0.0	No Limit		
EP003: Total Organic Carbon (TOC) in Soil (QC Lot: 2173384)											
EM1201358-001	SD1 - 1051/8001	EP003: Total Organic Carbon	---	0.02	%	6.29	5.91	6.2	0% - 20%		
EM1201358-011	Dup2 - 10110/8811	EP003: Total Organic Carbon	---	0.02	%	2.12	2.11	0.7	0% - 20%		
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 2165419)											
EM1201358-013	SD1 - 1051/8001	Volatiles									
		EP074: Styrene	100-42-5	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: 1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: 1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		



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 Client : GOLDR ASSOCIATES
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Sub-Matrix: SOIL		Method: Compound		Laboratory Duplicate (DUP) Report			
Laboratory sample ID	Client sample ID	CAS Number	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 2165419) - continued							
EM1201358-013	SD1 - 1051/8001 Volatiles	99-87-6	mg/kg	<1.0	<1.0	0.0	No Limit
		104-51-8	mg/kg	<1.0	<1.0	0.0	No Limit
EM1201358-023	Dup2 - 10110/8811 Volatiles	100-42-5	mg/kg	<0.5	<0.5	0.0	No Limit
		98-82-8	mg/kg	<0.5	<0.5	0.0	No Limit
		103-65-1	mg/kg	<0.5	<0.5	0.0	No Limit
		108-67-8	mg/kg	1.6	1.6	0.0	No Limit
		135-98-8	mg/kg	<0.5	<0.5	0.0	No Limit
		95-63-6	mg/kg	3.7	3.7	0.0	No Limit
		98-06-6	mg/kg	<0.5	<0.5	0.0	No Limit
		99-87-6	mg/kg	<0.5	<0.5	0.0	No Limit
		104-51-8	mg/kg	<0.5	<0.5	0.0	No Limit
EP074B: Oxygenated Compounds (QC Lot: 2165419)							
EM1201358-013	SD1 - 1051/8001 Volatiles	108-05-4	mg/kg	<10	<10	0.0	No Limit
		78-93-3	mg/kg	<10	<10	0.0	No Limit
		108-10-1	mg/kg	<10	<10	0.0	No Limit
		591-78-6	mg/kg	<10	<10	0.0	No Limit
EM1201358-023	Dup2 - 10110/8811 Volatiles	108-05-4	mg/kg	<5	<5	0.0	No Limit
		78-93-3	mg/kg	<5	<5	0.0	No Limit
		108-10-1	mg/kg	<5	<5	0.0	No Limit
		591-78-6	mg/kg	<5	<5	0.0	No Limit
EP074C: Sulfonated Compounds (QC Lot: 2165419)							
EM1201358-013	SD1 - 1051/8001 Volatiles	75-15-0	mg/kg	<1.0	<1.0	0.0	No Limit
EM1201358-023	Dup2 - 10110/8811 Volatiles	75-15-0	mg/kg	<0.5	<0.5	0.0	No Limit
EP074D: Fumigants (QC Lot: 2165419)							
EM1201358-013	SD1 - 1051/8001 Volatiles	594-20-7	mg/kg	<1.0	<1.0	0.0	No Limit
		78-87-5	mg/kg	<1.0	<1.0	0.0	No Limit
		10061-01-5	mg/kg	<1.0	<1.0	0.0	No Limit
		10061-02-6	mg/kg	<1.0	<1.0	0.0	No Limit
		106-93-4	mg/kg	<1.0	<1.0	0.0	No Limit
EM1201358-023	Dup2 - 10110/8811 Volatiles	594-20-7	mg/kg	<0.5	<0.5	0.0	No Limit
		78-87-5	mg/kg	<0.5	<0.5	0.0	No Limit
		10061-01-5	mg/kg	<0.5	<0.5	0.0	No Limit
		10061-02-6	mg/kg	<0.5	<0.5	0.0	No Limit
		106-93-4	mg/kg	<0.5	<0.5	0.0	No Limit
EP074E: Halogenated Aliphatic Compounds (QC Lot: 2165419)							



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 Project : 117613201

Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)	
						Original Result	Duplicate Result	RPD (%)		
EM1201358-013		EP074E: Halogenated Aliphatic Compounds (QC Lot: 2165419) - continued								
		SD1 - 1051/8001 Volatiles								
		EP074: 1,1-Dichloroethene	75-35-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: 1,1-Dichloroethane	75-34-3	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: 1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: 1,1-Dichloropropylene	563-58-6	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: 1,2-Dichloroethane	107-06-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: 1,1,2-Trichloroethane	79-00-5	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: 1,3-Dichloropropane	142-28-9	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: 1,1,1,2-Tetrachloroethane	630-20-6	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: trans-1,4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: cis-1,4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: 1,1,2,2-Tetrachloroethane	79-34-5	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: 1,2,3-Trichloropropane	96-18-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
		EP074: 1,2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<1.0	<1.0	0.0	No Limit	
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<1.0	<1.0	0.0	No Limit			
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<10	<10	0.0	No Limit			
EP074: Chloromethane	74-87-3	5	mg/kg	<10	<10	0.0	No Limit			
EP074: Vinyl chloride	75-01-4	5	mg/kg	<10	<10	0.0	No Limit			
EP074: Bromomethane	74-83-9	5	mg/kg	<10	<10	0.0	No Limit			
EP074: Chloroethane	75-00-3	5	mg/kg	<10	<10	0.0	No Limit			
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<10	<10	0.0	No Limit			
EP074: 1,1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit			
EM1201358-023	Dup2 - 10110/8811 Volatiles	EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP074: trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP074: 1,1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP074: cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP074: 1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP074: 1,1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP074: 1,2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	



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 Work Order : EM1201358
 Client : GOLDER ASSOCIATES
 Project : 117613201

Sub-Matrix: SOIL		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EP074E: Halogenated Aliphatic Compounds (QC Lot: 2165419) - continued											
EM1201358-023	Dup2 - 10110/8811 Volatiles	EP074: 1.1.2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1.3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1.1.1.2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: trans-1.4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: cis-1.4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1.1.2.2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1.2.3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1.2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.0	No Limit		
EP074F: Halogenated Aromatic Compounds (QC Lot: 2165419)											
EM1201358-013	SD1 - 1051/8001 Volatiles	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EM1201358-023	Dup2 - 10110/8811 Volatiles	EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1.3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1.4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1.2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1.2.4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1.2.3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP074G: Trihalomethanes (QC Lot: 2165419)											



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 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: SOIL		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EP074G: Trihalomethanes (QC Lot: 2165419) - continued											
EM1201358-013	SD1 - 1051/8001	Volatiles									
		EP074: Chloroform	67-66-3	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP074: Bromoform	75-25-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
EM1201358-023	Dup2 - 10110/8811	Volatiles									
		EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP074H: Naphthalene (QC Lot: 2165419)											
EM1201358-013	SD1 - 1051/8001	Volatiles									
		EP074: Naphthalene	91-20-3	5	mg/kg	<10	<10	0.0	No Limit		
EM1201358-023	Dup2 - 10110/8811	Volatiles									
		EP074: Naphthalene	91-20-3	5	mg/kg	<5	<5	0.0	No Limit		
EP075A: Phenolic Compounds (QC Lot: 2181384)											
EM1201358-001	SD1 - 1051/8001										
		EP075: Phenol	108-95-2	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<5.0	<5.0	0.0	No Limit		
		EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: Pentachlorophenol	87-86-5	1	mg/kg	<5	<5	0.0	No Limit		
EM1201358-010	SD10 - 10110/8010										
		EP075: Phenol	108-95-2	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<15.0	<15.0	0.0	No Limit		
		EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: Pentachlorophenol	87-86-5	1	mg/kg	<15	<15	0.0	No Limit		
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2181384)											



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 Client : GOLDR ASSOCIATES
 Project : 117613201

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EM1201358-001	SD1 - 1051/8001	EP075: Naphthalene	91-20-3	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Acenaphthene	83-32-9	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Fluorene	86-73-7	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Phenanthrene	85-01-8	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Anthracene	120-12-7	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Fluoranthene	206-44-0	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Pyrene	129-00-0	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Chrysene	218-01-9	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 7,12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Sum of PAHs	----	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
EM1201358-010	SD10 - 10110/8010	EP075: Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<5	<5	0.0	No Limit
		EP075: Naphthalene	207-08-9	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: 2-Methylnaphthalene	91-20-3	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: 2-Chloronaphthalene	91-57-6	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Acenaphthylene	91-58-7	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Acenaphthene	208-96-8	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Fluorene	83-32-9	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Phenanthrene	86-73-7	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Anthracene	85-01-8	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Fluoranthene	120-12-7	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Pyrene	206-44-0	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: N-2-Fluorenyl Acetamide	129-00-0	0.5	mg/kg	10.2	10.1	0.0	0% - 20%
		EP075: Benz(a)anthracene	53-96-3	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Chrysene	56-55-3	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: 7,12-Dimethylbenz(a)anthracene	218-01-9	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Benzo(a)pyrene	57-97-6	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: 3-Methylcholanthrene	50-32-8	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Indeno(1,2,3-cd)pyrene	56-49-5	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Dibenz(a,h)anthracene	193-39-5	0.5	mg/kg	<7.5	<7.5	0.0	No Limit



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 Client : GOLDER ASSOCIATES
 Project : 117613201

Sub-Matrix: SOIL		Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2181384) - continued									
EM1201358-010	SD10 - 10110/8010	EP075: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Sum of PAHs	----	0.5	mg/kg	10.2	10.1	1.0	0% - 20%
		EP075: Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<15	<15	0.0	No Limit
EP075C: Phthalate Esters (QC Lot: 2181384)									
EM1201358-001	SD1 - 1051/8001	EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	<25.0	<25.0	0.0	No Limit
EM1201358-010	SD10 - 10110/8010	EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: bis(2-ethylhexyl) phthalate	117-81-7	5.0	mg/kg	<75.0	<75.0	0.0	No Limit
EP075D: Nitrosamines (QC Lot: 2181384)									
EM1201358-001	SD1 - 1051/8001	EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Methapyrilene	91-80-5	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	<5.0	<5.0	0.0	No Limit
		EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg	<5.0	<5.0	0.0	No Limit
EM1201358-010	SD10 - 10110/8010	EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Methapyrilene	91-80-5	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: N-Nitrosopyrrolidine	930-55-2	1.0	mg/kg	<15.0	<15.0	0.0	No Limit
		EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	1.0	mg/kg	<15.0	<15.0	0.0	No Limit
EP075E: Nitroaromatics and Ketones (QC Lot: 2181384)									



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Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EM1201358-001	SD1 - 1051/8001	EP075: 2-Picoline	109-06-8	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Acetophenone	98-86-2	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Isophorone	78-59-1	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Phenacetin	62-44-2	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Pronamide	23950-58-5	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Chlorbenzilate	510-15-6	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Azobenzene	103-33-3	1	mg/kg	<5	<5	0.0	No Limit
		EP075: 2,6-Dinitrotoluene	606-20-2	1.0	mg/kg	<5.0	<5.0	0.0	No Limit
		EP075: 2,4-Dinitrotoluene	121-14-2	1.0	mg/kg	<5.0	<5.0	0.0	No Limit
		EP075: 2-Picoline	109-06-8	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Acetophenone	98-86-2	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
EP075: Isophorone	78-59-1	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
EP075: 1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
EP075: Phenacetin	62-44-2	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
EP075: Pronamide	23950-58-5	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
EP075: Chlorbenzilate	510-15-6	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
EP075: Azobenzene	103-33-3	1	mg/kg	<15	<15	0.0	No Limit		
EP075: 2,6-Dinitrotoluene	606-20-2	1.0	mg/kg	<15.0	<15.0	0.0	No Limit		
EP075: 2,4-Dinitrotoluene	121-14-2	1.0	mg/kg	<15.0	<15.0	0.0	No Limit		
EM1201358-001	SD1 - 1051/8001	EP075: Bis(2-chloroethoxy) ether	111-44-4	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<2.5	<2.5	0.0	No Limit



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Sub-Matrix: SOIL		Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075F: Haloethers (QC Lot: 2181384) - continued									
EM1201358-010	SD10 - 10110/8010	EP075: Bis(2-chloroethoxy) ether	111-44-4	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
EP075G: Chlorinated Hydrocarbons (QC Lot: 2181384)									
EM1201358-001	SD1 - 1051/8001	EP075: 1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	<5.0	<5.0	0.0	No Limit
		EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<12.5	<12.5	0.0	No Limit
EM1201358-010	SD10 - 10110/8010	EP075: 1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: 1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: 1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: 1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Hexachlorobenzene (HCB)	118-74-1	1.0	mg/kg	<15.0	<15.0	0.0	No Limit
		EP075: Hexachlorocyclopentadiene	77-47-4	2.5	mg/kg	<37.5	<37.5	0.0	No Limit
EP075H: Anilines and Benzidines (QC Lot: 2181384)									
EM1201358-001	SD1 - 1051/8001	EP075: Aniline	62-53-3	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Carbazole	86-74-8	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 3,3'-Dichlorobenzidine	91-94-1	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: 2-Nitroaniline	88-74-4	1.0	mg/kg	<5.0	<5.0	0.0	No Limit
		EP075: 3-Nitroaniline	99-09-2	1.0	mg/kg	<5.0	<5.0	0.0	No Limit
		EP075: Aniline	62-53-3	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
EM1201358-010	SD10 - 10110/8010	EP075: Carbazole	86-74-8	0.5	mg/kg	<7.5	<7.5	0.0	No Limit



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Sub-Matrix: SOIL		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EP075H: Anilines and Benzidines (QC Lot: 2181384) - continued											
EM1201358-010	SD10 - 10110/8010	EP075: 3,3'-Dichlorobenzidine	91-94-1	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: 2-Nitroaniline	88-74-4	1.0	mg/kg	<15.0	<15.0	0.0	No Limit		
		EP075: 3-Nitroaniline	99-09-2	1.0	mg/kg	<15.0	<15.0	0.0	No Limit		
EP075I: Organochlorine Pesticides (QC Lot: 2181384)											
EM1201358-001	SD1 - 1051/8001	EP075: alpha-BHC	319-84-6	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: beta-BHC	319-85-7	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: gamma-BHC	58-89-9	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: delta-BHC	319-86-8	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: Heptachlor	76-44-8	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: Aldrin	309-00-2	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: 4,4'-DDE	72-55-9	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: Dieldrin	60-57-1	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: Endrin	72-20-8	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: 4,4'-DDD	72-54-8	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: 4,4'-DDT	50-29-3	1.0	mg/kg	<5.0	<5.0	0.0	No Limit		
EM1201358-010	SD10 - 10110/8010	EP075: alpha-BHC	319-84-6	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: beta-BHC	319-85-7	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: gamma-BHC	58-89-9	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: delta-BHC	319-86-8	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: Heptachlor	76-44-8	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: Aldrin	309-00-2	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: 4,4'-DDE	72-55-9	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: Dieldrin	60-57-1	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: Endrin	72-20-8	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: 4,4'-DDD	72-54-8	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<7.5	<7.5	0.0	No Limit		
		EP075: 4,4'-DDT	50-29-3	1.0	mg/kg	<15.0	<15.0	0.0	No Limit		
EP075J: Organophosphorus Pesticides (QC Lot: 2181384)											
EM1201358-001	SD1 - 1051/8001	EP075: Dichlorvos	62-73-7	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: Dimethoate	60-51-5	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: Diazinon	333-41-5	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		



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Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EP075J: Organophosphorus Pesticides (QC Lot: 2181384) - continued									
EM1201358-001	SD1 - 1051/8001	EP075: Malathion	121-75-5	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Fenthion	55-38-9	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Prothiofos	34643-46-4	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
		EP075: Ethion	563-12-2	0.5	mg/kg	<2.5	<2.5	0.0	No Limit
EM1201358-010	SD10 - 10110/8010	EP075: Dichlorvos	62-73-7	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Dimethoate	60-51-5	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Diazinon	333-41-5	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Malathion	121-75-5	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Fenthion	55-38-9	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Prothiofos	34643-46-4	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
		EP075: Ethion	563-12-2	0.5	mg/kg	<7.5	<7.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2165418)									
EM1201358-013	SD1 - 1051/8001 Volatiles	EP080: C6 - C9 Fraction	----	10	mg/kg	<20	<20	0.0	No Limit
EM1201358-023	Dup2 - 10110/8811 Volatiles	EP080: C6 - C9 Fraction	----	10	mg/kg	88	91	3.4	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2165418)									
EM1201358-013	SD1 - 1051/8001 Volatiles	EP080: C6 - C10 Fraction	----	10	mg/kg	<20	<20	0.0	No Limit
EM1201358-023	Dup2 - 10110/8811 Volatiles	EP080: C6 - C10 Fraction	----	10	mg/kg	118	122	3.3	0% - 50%
EP080: BTEXN (QC Lot: 2165418)									
EM1201358-013	SD1 - 1051/8001 Volatiles	EP080: Benzene	71-43-2	0.2	mg/kg	<0.4	<0.4	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP080: ortho-Xylene	106-42-3	0.5	mg/kg	<1.0	<1.0	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<2	<2	0.0	No Limit
		EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EM1201358-023	Dup2 - 10110/8811 Volatiles	EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	1.9	2.1	12.3	No Limit
		EP080: ortho-Xylene	106-42-3	0.5	mg/kg	1.9	2.1	12.3	No Limit



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 Project : 117613201

Sub-Matrix: SOIL		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EP080: BTEXN (QC Lot: 2165418) - continued											
EM1201358-023	Dup2 - 10110/8811 Volatiles	EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit		
EP080-SD / EP071-SD: Total Petroleum Hydrocarbons (QC Lot: 2170551)											
EM1201358-002	SD2 - 1052/8002	EP071-SD: C10 - C14 Fraction	----	3	mg/kg	<3	<3	0.0	No Limit		
		EP071-SD: C15 - C28 Fraction	----	3	mg/kg	111	116	4.1	0% - 20%		
		EP071-SD: C29 - C36 Fraction	----	5	mg/kg	122	115	6.3	0% - 20%		
EM1201358-010	SD10 - 10110/8010	EP071-SD: C10 - C14 Fraction	----	3	mg/kg	214	233	8.9	0% - 20%		
		EP071-SD: C15 - C28 Fraction	----	3	mg/kg	1860	1970	5.5	0% - 20%		
		EP071-SD: C29 - C36 Fraction	----	5	mg/kg	450	483	7.1	0% - 20%		
EP130A: Organophosphorus Pesticides (Ultra-trace) (QC Lot: 2171047)											
EM1201358-002	SD2 - 1052/8002	EP130: Bromophos-ethyl	4824-78-6	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Carbophenothion	786-19-6	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Chlorfenvinphos (E)	18708-86-6	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Chlorfenvinphos (Z)	18708-87-7	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Chlorpyrifos	2921-88-2	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Chlorpyrifos-methyl	5598-13-0	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Demeton-S-methyl	919-86-8	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Diazinon	333-41-5	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Dichlorvos	62-73-7	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Dimethoate	60-51-5	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Ethion	563-12-2	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Fenamiphos	22224-92-6	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Fenthion	55-38-9	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Malathion	121-75-5	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Azinphos Methyl	86-50-0	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Monocrotophos	6923-22-4	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Parathion	56-38-2	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Parathion-methyl	298-00-0	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Pirimiphos-ethyl	23505-41-1	10	µg/kg	<12	<12	0.0	No Limit		
		EP130: Prothiofos	34643-46-4	10	µg/kg	<12	<12	0.0	No Limit		
EM1201358-010	SD10 - 10110/8010	EP130: Bromophos-ethyl	4824-78-6	10	µg/kg	<250	<250	0.0	No Limit		
		EP130: Carbophenothion	786-19-6	10	µg/kg	<250	<250	0.0	No Limit		
		EP130: Chlorfenvinphos (Z)	18708-87-7	10	µg/kg	<250	<250	0.0	No Limit		
		EP130: Chlorpyrifos	2921-88-2	10	µg/kg	<250	<250	0.0	No Limit		
		EP130: Chlorpyrifos-methyl	5598-13-0	10	µg/kg	<250	<250	0.0	No Limit		
		EP130: Demeton-S-methyl	919-86-8	10	µg/kg	<250	<250	0.0	No Limit		
		EP130: Diazinon	333-41-5	10	µg/kg	<250	<250	0.0	No Limit		
		EP130: Dichlorvos	62-73-7	10	µg/kg	<250	<250	0.0	No Limit		



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Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EP130A: Organophosphorus Pesticides (Ultra-trace) (QC Lot: 2171047) - continued									
EM1201358-010	SD10 - 10110/8010	EP130: Dimethoate	60-51-5	10	µg/kg	<250	<250	0.0	No Limit
		EP130: Ethion	563-12-2	10	µg/kg	<250	<250	0.0	No Limit
		EP130: Fenamiphos	22224-92-6	10	µg/kg	<250	<250	0.0	No Limit
		EP130: Fenthion	55-38-9	10	µg/kg	<250	<250	0.0	No Limit
		EP130: Malathion	121-75-5	10	µg/kg	<250	<250	0.0	No Limit
		EP130: Azinphos Methyl	86-50-0	10	µg/kg	<250	<250	0.0	No Limit
		EP130: Monocrotophos	6923-22-4	10	µg/kg	<250	<250	0.0	No Limit
		EP130: Parathion	56-38-2	10	µg/kg	<250	<250	0.0	No Limit
		EP130: Parathion-methyl	298-00-0	10	µg/kg	<250	<250	0.0	No Limit
		EP130: Pirimphos-ethyl	23505-41-1	10	µg/kg	<250	<250	0.0	No Limit
		EP130: Prothiofos	34643-46-4	10	µg/kg	<250	<250	0.0	No Limit
		EP130: Chlorfenvinphos (E)	18708-86-6	10.0	µg/kg	<250	<250	0.0	No Limit
EP131A: Organochlorine Pesticides (QC Lot: 2171048)									
EM1201358-002	SD2 - 1052/8002	EP131A: gamma-BHC	58-89-9	0.25	µg/kg	<0.25	<0.25	0.0	No Limit
		EP131A: cis-Chlordane	5103-71-9	0.25	µg/kg	<0.25	<0.25	0.0	No Limit
		EP131A: trans-Chlordane	5103-74-2	0.25	µg/kg	<0.25	<0.25	0.0	No Limit
		EP131A: Total Chlordane (sum)	----	0.25	µg/kg	<0.25	<0.25	0.0	No Limit
		EP131A: Aldrin	309-00-2	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: alpha-BHC	319-84-6	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: beta-BHC	319-85-7	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: delta-BHC	319-86-8	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: 4,4'-DDD	72-54-8	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: 4,4'-DDE	72-55-9	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: 4,4'-DDT	50-29-3	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: Sum of DDD + DDE + DDT	----	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: Dieldrin	60-57-1	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: alpha-Endosulfan	959-98-8	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: beta-Endosulfan	33213-65-9	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: Endosulfan sulfate	1031-07-8	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: Endosulfan (sum)	115-29-7	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: Endrin	72-20-8	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: Endrin aldehyde	7421-93-4	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: Endrin ketone	53494-70-5	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: Heptachlor	76-44-8	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: Heptachlor epoxide	1024-57-3	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: Hexachlorobenzene (HCB)	118-74-1	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
		EP131A: Methoxychlor	72-43-5	0.50	µg/kg	<0.50	<0.50	0.0	No Limit
EM1201358-010	SD10 - 10110/8010	EP131A: gamma-BHC	58-89-9	0.25	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: cis-Chlordane	5103-71-9	0.25	µg/kg	<0.62	<0.62	0.0	No Limit



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Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
EP131A: Organochlorine Pesticides (QC Lot: 2171048) - continued									
EM1201358-010	SD10 - 10110/8010	EP131A: trans-Chlordane	5103-74-2	0.25	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: Total Chlordane (sum)	----	0.25	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: Aldrin	309-00-2	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: alpha-BHC	319-84-6	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: beta-BHC	319-85-7	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: delta-BHC	319-86-8	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: 4,4'-DDD	72-54-8	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: 4,4'-DDE	72-55-9	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: 4,4'-DDT	50-29-3	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: Sum of DDD + DDE + DDT	----	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: Dieldrin	60-57-1	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: alpha-Endosulfan	959-98-8	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: beta-Endosulfan	33213-65-9	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: Endosulfan sulfate	1031-07-8	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: Endosulfan (sum)	115-29-7	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: Endrin	72-20-8	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: Endrin aldehyde	7421-93-4	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: Endrin ketone	53494-70-5	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: Heptachlor	76-44-8	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: Heptachlor epoxide	1024-57-3	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: Hexachlorobenzene (HCB)	118-74-1	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
		EP131A: Methoxychlor	72-43-5	0.50	µg/kg	<0.62	<0.62	0.0	No Limit
EP131B: Polychlorinated Biphenyls (as Aroclors) (QC Lot: 2171049)									
EM1201358-002	SD2 - 1052/8002	EP131B: Total Polychlorinated biphenyls	----	5.0	µg/kg	<12.5	<12.5	0.0	No Limit
		EP131B: Aroclor 1016	12674-11-2	5.0	µg/kg	<12.5	<12.5	0.0	No Limit
		EP131B: Aroclor 1221	11104-28-2	5.0	µg/kg	<12.5	<12.5	0.0	No Limit
		EP131B: Aroclor 1232	11141-16-5	5.0	µg/kg	<12.5	<12.5	0.0	No Limit
		EP131B: Aroclor 1242	53469-21-9	5.0	µg/kg	<12.5	<12.5	0.0	No Limit
		EP131B: Aroclor 1248	12672-29-6	5.0	µg/kg	<12.5	<12.5	0.0	No Limit
		EP131B: Aroclor 1254	11097-69-1	5.0	µg/kg	<12.5	<12.5	0.0	No Limit
		EP131B: Aroclor 1260	11096-82-5	5.0	µg/kg	<12.5	<12.5	0.0	No Limit
EM1201358-010	SD10 - 10110/8010	EP131B: Total Polychlorinated biphenyls	----	5.0	µg/kg	<31.2	<31.2	0.0	No Limit
		EP131B: Aroclor 1016	12674-11-2	5.0	µg/kg	<31.2	<31.2	0.0	No Limit
		EP131B: Aroclor 1221	11104-28-2	5.0	µg/kg	<31.2	<31.2	0.0	No Limit
		EP131B: Aroclor 1232	11141-16-5	5.0	µg/kg	<31.2	<31.2	0.0	No Limit
		EP131B: Aroclor 1242	53469-21-9	5.0	µg/kg	<31.2	<31.2	0.0	No Limit
		EP131B: Aroclor 1248	12672-29-6	5.0	µg/kg	<31.2	<31.2	0.0	No Limit
		EP131B: Aroclor 1254	11097-69-1	5.0	µg/kg	<31.2	<31.2	0.0	No Limit
		EP131B: Aroclor 1260	11096-82-5	5.0	µg/kg	<31.2	<31.2	0.0	No Limit



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Sub-Matrix: SOIL		Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP216: Perchlorate by LC/MS (QC Lot: 2169289)									
EM1201358-001	SD1 - 1051/8001	EP216: Perchlorate	7601-90-3	10.0	µg/kg	<10.0	<10.0	0.0	No Limit
EM1201358-010	SD10 - 10110/8010	EP216: Perchlorate	7601-90-3	10.0	µg/kg	<10.0	<10.0	0.0	No Limit
EP231: Perfluorooctyl Acids and Sulfonates. (QC Lot: 2168886)									
EM1201358-001	SD1 - 1051/8001	EP231: PFOS	1763-23-1	0.0005	mg/kg	0.153	0.232	# 40.8	0% - 20%
		EP231: PFOA	335-67-1	0.0005	mg/kg	0.0028	0.0036	25.2	No Limit
		EP231: 6:2 Fluorotelomer Sulfonate (6:2 FtS)	27619-97-2	0.005	mg/kg	0.023	0.034	40.5	No Limit
EM1201358-011	Dup2 - 10110/8811	EP231: PFOS	1763-23-1	0.0005	mg/kg	72.2	80.7	11.1	0% - 20%
		EP231: PFOA	335-67-1	0.0005	mg/kg	0.866	0.874	1.0	0% - 20%
		EP231: 6:2 Fluorotelomer Sulfonate (6:2 FtS)	27619-97-2	0.005	mg/kg	0.624	0.592	5.2	0% - 20%

Sub-Matrix: WATER		Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074A: Monocyclic Aromatic Hydrocarbons (QC Lot: 2166956)									
EM1201357-001	Anonymous	EP074: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP074: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP074: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP074: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit
			106-42-3						
		EP074: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP074: Styrene	100-42-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	<5	0.0	No Limit
EP074B: Oxygenated Compounds (QC Lot: 2166956)									
EM1201357-001	Anonymous	EP074: Vinyl Acetate	108-05-4	50	µg/L	<50	<50	0.0	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	<50	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	50	µg/L	<50	<50	0.0	No Limit
EP074C: Sulfonated Compounds (QC Lot: 2166956)									
EM1201357-001	Anonymous	EP074: Carbon disulfide	75-15-0	5	µg/L	<5	<5	0.0	No Limit
EP074D: Fumigants (QC Lot: 2166956)									
EM1201357-001	Anonymous	EP074: 2,2-Dichloropropane	594-20-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2-Dichloropropane	78-87-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1,3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1,3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	0.0	No Limit



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Sub-Matrix: WATER		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
EP074D: Fumigants (QC Lot: 2166956) - continued											
EM1201357-001	Anonymous	EP074: 1,2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	0.0	No Limit		
EP074E: Halogenated Aliphatic Compounds (QC Lot: 2166956)											
EM1201357-001	Anonymous	EP074: 1,1-Dichloroethene	75-35-4	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Iodomethane	74-88-4	5	µg/L	<5	<5	0.0	No Limit		
		EP074: trans-1,2-Dichloroethene	156-60-5	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,1-Dichloroethane	75-34-3	5	µg/L	<5	<5	0.0	No Limit		
		EP074: cis-1,2-Dichloroethene	156-59-2	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,1,1-Trichloroethane	71-55-6	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,2-Dichloroethane	107-06-2	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Trichloroethene	79-01-6	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Dibromomethane	74-95-3	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,1,2-Trichloroethane	79-00-5	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,3-Dichloropropane	142-28-9	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,1,1,2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	0.0	No Limit		
		EP074: trans-1,4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	0.0	No Limit		
		EP074: cis-1,4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,1,2,2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,2,3-Trichloropropane	96-18-4	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Pentachloroethane	76-01-7	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	0.0	No Limit		
		EP074: Chloromethane	74-87-3	50	µg/L	<50	<50	0.0	No Limit		
		EP074: Vinyl chloride	75-01-4	50	µg/L	<50	<50	0.0	No Limit		
		EP074: Bromomethane	74-83-9	50	µg/L	<50	<50	0.0	No Limit		
		EP074: Chloroethane	75-00-3	50	µg/L	<50	<50	0.0	No Limit		
		EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	0.0	No Limit		
EP074F: Halogenated Aromatic Compounds (QC Lot: 2166956)											
EM1201357-001	Anonymous	EP074: Chlorobenzene	108-90-7	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Bromobenzene	108-86-1	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,3-Dichlorobenzene	541-73-1	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,4-Dichlorobenzene	106-46-7	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,2-Dichlorobenzene	95-50-1	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,2,4-Trichlorobenzene	120-82-1	5	µg/L	<5	<5	0.0	No Limit		



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Sub-Matrix: WATER									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP074F: Halogenated Aromatic Compounds (QC Lot: 2166956) - continued									
EM1201357-001	Anonymous	EP074: 1,2,3-Trichlorobenzene	87-61-6	5	µg/L	<5	<5	0.0	No Limit
EP074G: Trihalomethanes (QC Lot: 2166956)									
EM1201357-001	Anonymous	EP074: Chloroform	67-66-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: Bromoform	75-25-2	5	µg/L	<5	<5	0.0	No Limit
EP074H: Naphthalene (QC Lot: 2166956)									
EM1201357-001	Anonymous	EP074: Naphthalene	91-20-3	7	µg/L	<7	<7	0.0	No Limit



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Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: SOIL

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
EG020-SD: Total Metals in Sediments by ICPMS (QCLot: 2171814)									
EG020-SD: Arsenic	7440-38-2	1.0	mg/kg	<1.00	13.8 mg/kg	98.3	98.3	82	124
EG020-SD: Cadmium	7440-43-9	0.1	mg/kg	<0.1	2.82 mg/kg	87.9	87.9	83	113
EG020-SD: Chromium	7440-47-3	1.0	mg/kg	<1.0	60.93 mg/kg	93.4	93.4	84	122
EG020-SD: Copper	7440-50-8	1.0	mg/kg	<1.0	54.7 mg/kg	83.4	83.4	82	121
EG020-SD: Lead	7439-92-1	1.0	mg/kg	<1.0	55.5 mg/kg	91.4	91.4	83	116
EG020-SD: Nickel	7440-02-0	1.0	mg/kg	<1.0	55.1 mg/kg	87.7	87.7	83	123
EG020-SD: Zinc	7440-66-6	1.0	mg/kg	<1.0	105 mg/kg	87.6	87.6	86	125
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2171813)									
EG035T-LL: Mercury	7439-97-6	0.01	mg/kg	<0.01	0.111 mg/kg	83.2	83.2	70	126
EP003: Total Organic Carbon (TOC) in Soil (QCLot: 2173384)									
EP003: Total Organic Carbon	----	0.02	%	<0.02	100 %	102	102	70	130
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 2165419)									
EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	1 mg/kg	94.5	94.5	64	120
EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	1 mg/kg	97.2	97.2	74	120
EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	1 mg/kg	86.5	86.5	65	117
EP074: 1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	1 mg/kg	85.9	85.9	65	117
EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	1 mg/kg	87.4	87.4	67	117
EP074: 1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	1 mg/kg	85.6	85.6	66	117
EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	1 mg/kg	88.3	88.3	68	116
EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	1 mg/kg	87.5	87.5	64	117
EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	1 mg/kg	81.7	81.7	59	115
EP074B: Oxygenated Compounds (QCLot: 2165419)									
EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	10 mg/kg	106	106	40	138
EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	10 mg/kg	106	106	61	143
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	10 mg/kg	118	118	63	137
EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	10 mg/kg	110	110	63	133
EP074C: Sulfonated Compounds (QCLot: 2165419)									
EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	1 mg/kg	93.6	93.6	57	121
EP074D: Fumigants (QCLot: 2165419)									
EP074: 2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	1 mg/kg	93.1	93.1	51	130
EP074: 1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	1 mg/kg	99.6	99.6	73	121
EP074: cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	94.0	94.0	59	109
EP074: trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	100	100	52	110
EP074: 1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	1 mg/kg	106	106	68	120



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Sub-Matrix: SOIL		Method Blank (MB) Report			Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
						LCS	Low	High
EP074E: Halogenated Aliphatic Compounds (QCLot: 2165419)								
EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	10 mg/kg	91.7	34	122
EP074: Chloromethane	74-87-3	5	mg/kg	<5	10 mg/kg	110	52	133
EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	10 mg/kg	100	47	133
EP074: Bromomethane	74-83-9	5	mg/kg	<5	10 mg/kg	71.4	39	116
EP074: Chloroethane	75-00-3	5	mg/kg	<5	10 mg/kg	101	43	137
EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	10 mg/kg	100	61	126
EP074: 1,1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	1 mg/kg	98.2	62	124
EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	1 mg/kg	86.2	47	116
EP074: trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	1 mg/kg	100	69	119
EP074: 1,1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	1 mg/kg	99.2	70	120
EP074: cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	1 mg/kg	98.3	72	120
EP074: 1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	1 mg/kg	95.5	64	112
EP074: 1,1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	1 mg/kg	93.6	71	117
EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	1 mg/kg	88.1	51	106
EP074: 1,2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	1 mg/kg	102	70	126
EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	1 mg/kg	97.6	71	120
EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	1 mg/kg	102	70	122
EP074: 1,1,2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	1 mg/kg	101	73	125
EP074: 1,3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	1 mg/kg	103	75	125
EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	1 mg/kg	97.2	71	120
EP074: 1,1,1,2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	1 mg/kg	88.1	54	106
EP074: trans-1,4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	1 mg/kg	96.7	46	112
EP074: cis-1,4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	92.5	21.8	117
EP074: 1,1,2,2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	1 mg/kg	110	71	131
EP074: 1,2,3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	1 mg/kg	108	70	134
EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	1 mg/kg	77.0	40	94
EP074: 1,2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	1 mg/kg	100	41	113
EP074: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	1 mg/kg	78.1	40	127
EP074F: Halogenated Aromatic Compounds (QCLot: 2165419)								
EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	1 mg/kg	98.6	78	120
EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	1 mg/kg	89.6	68	116
EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	1 mg/kg	88.1	67	117
EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	1 mg/kg	85.1	67	115
EP074: 1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	1 mg/kg	85.0	69	115
EP074: 1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	1 mg/kg	90.5	70	116
EP074: 1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	1 mg/kg	90.0	72	116
EP074: 1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	1 mg/kg	70.1	49	118
EP074: 1,2,3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	1 mg/kg	72.3	60	120
EP074G: Trihalomethanes (QCLot: 2165419)								



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Sub-Matrix: SOIL				Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	LCS	Low	High
EP074G: Trihalomethanes (QCLot: 2165419) - continued									
EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	98.7	71	121	
EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	88.0	60	108	
EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	84.7	48	104	
EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	77.8	40	106	
EP074H: Naphthalene (QCLot: 2165419)									
EP074: Naphthalene	91-20-3	5	mg/kg	<5	1 mg/kg	98.2	61	132	
EP075A: Phenolic Compounds (QCLot: 2181384)									
EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	2.5 mg/kg	95.4	38	138	
EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	2.5 mg/kg	78.6	39	129	
EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	2.5 mg/kg	76.0	33	132	
EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<1.0	2.5 mg/kg	96.9	35	131	
EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	2.5 mg/kg	78.3	31	131	
EP075: 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	2.5 mg/kg	92.3	10	135	
EP075: 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	2.5 mg/kg	80.2	35	133	
EP075: 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	2.5 mg/kg	82.5	36	132	
EP075: 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	2.5 mg/kg	93.0	39	143	
EP075: 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	2.5 mg/kg	74.0	34	138	
EP075: 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	2.5 mg/kg	108	30.2	142	
EP075: Pentachlorophenol	87-86-5	1.0	mg/kg	<1	2.5 mg/kg	84.8	14	136	
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 2181384)									
EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	2.5 mg/kg	80.3	39	128	
EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	2.5 mg/kg	83.0	40	136	
EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	2.5 mg/kg	66.4	29.5	137	
EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2.5 mg/kg	78.8	38	138	
EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2.5 mg/kg	80.8	45	133	
EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	2.5 mg/kg	81.2	47	137	
EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2.5 mg/kg	84.7	45	133	
EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	2.5 mg/kg	89.8	44	130	
EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2.5 mg/kg	89.9	46	138	
EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	2.5 mg/kg	86.4	43	145	
EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	2.5 mg/kg	87.4	43	143	
EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2.5 mg/kg	86.0	43	139	
EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	2.5 mg/kg	91.1	42	140	
EP075: Benzo(b) & Benzo(k)fluoranthene	205-99-2	1	mg/kg	<1	5 mg/kg	90.1	43	139	
EP075: 7,12-Dimethylbenz(a)anthracene	207-08-9								
EP075: 7,12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	2.5 mg/kg	87.8	40	154	
EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2.5 mg/kg	86.2	38	138	
EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	2.5 mg/kg	81.3	46	162	
EP075: Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2.5 mg/kg	110	49	159	



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Sub-Matrix: SOIL				Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	LCS	Low	High
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 2181384) - continued									
EP075: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2.5 mg/kg	103	49	157	
EP075: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2.5 mg/kg	123	48	158	
EP075: Sum of PAHs	----	0.5	mg/kg	<0.5	----	----	----	----	
EP075C: Phthalate Esters (QCLot: 2181384)									
EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	2.5 mg/kg	83.8	40	142	
EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	2.5 mg/kg	85.9	48	140	
EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	2.5 mg/kg	95.7	38	169	
EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	2.5 mg/kg	92.0	42	140	
EP075: bis(2-ethylhexyl) phthalate	117-81-7	0.5	mg/kg	<2.5	2.5 mg/kg	114	47	155	
EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	2.5 mg/kg	92.5	47	137	
EP075D: Nitrosamines (QCLot: 2181384)									
EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	2.5 mg/kg	102	16.2	136	
EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	2.5 mg/kg	98.4	33	132	
EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<1.0	2.5 mg/kg	90.2	27.7	130	
EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	2.5 mg/kg	98.8	33	131	
EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	2.5 mg/kg	86.4	36	127	
EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	2.5 mg/kg	86.3	35	128	
EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	2.5 mg/kg	91.2	37	139	
EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<1.0	2.5 mg/kg	77.7	42	134	
EP075: Methapyrene	91-80-5	0.5	mg/kg	<0.5	2.5 mg/kg	# 16.3	24.4	143	
EP075E: Nitroaromatics and Ketones (QCLot: 2181384)									
EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	2.5 mg/kg	92.4	10	138	
EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	2.5 mg/kg	75.4	35	128	
EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	2.5 mg/kg	82.4	36	127	
EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	2.5 mg/kg	81.3	40	136	
EP075: 2,6-Dinitrotoluene	606-20-2	0.5	mg/kg	<1.0	2.5 mg/kg	80.4	42	140	
EP075: 2,4-Dinitrotoluene	121-14-2	0.5	mg/kg	<1.0	2.5 mg/kg	77.6	46	140	
EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	2.5 mg/kg	# 4.5	10	84	
EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	2.5 mg/kg	56.6	17.7	153	
EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	2.5 mg/kg	85.5	37	125	
EP075: Azobenzene	103-33-3	1	mg/kg	<1	2.5 mg/kg	87.6	46	140	
EP075: 1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	2.5 mg/kg	80.2	12.6	151	
EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	2.5 mg/kg	74.3	48	142	
EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	2.5 mg/kg	11.7	10	97	
EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	2.5 mg/kg	90.8	47	139	
EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	2.5 mg/kg	93.7	45	133	
EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	2.5 mg/kg	79.1	42	136	
EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	2.5 mg/kg	70.3	41	141	



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 Project : 117613201

Sub-Matrix: SOIL				Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	LCS	Low	High
EP075F: Haloethers (QC Lot: 2181384)									
EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	2.5 mg/kg	84.1	36	146	
EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	2.5 mg/kg	75.8	40	136	
EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	2.5 mg/kg	80.1	46	136	
EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	2.5 mg/kg	74.5	44	140	
EP075G: Chlorinated Hydrocarbons (QC Lot: 2181384)									
EP075: 1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	2.5 mg/kg	74.4	35	122	
EP075: 1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	2.5 mg/kg	81.0	36	125	
EP075: 1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	2.5 mg/kg	72.5	37	123	
EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	2.5 mg/kg	70.1	33	123	
EP075: 1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	2.5 mg/kg	73.2	36	132	
EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	2.5 mg/kg	83.6	26.6	137	
EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	2.5 mg/kg	78.1	40	130	
EP075: Hexachlorocyclopentadiene	77-47-4	0.5	mg/kg	<2.5	2.5 mg/kg	36.6	17.3	141	
EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	2.5 mg/kg	83.8	46	136	
EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<1.0	5 mg/kg	78.7	40	142	
EP075H: Anilines and Benzidines (QC Lot: 2181384)									
EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	2.5 mg/kg	24.9	10	114	
EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	2.5 mg/kg	18.3	10	103	
EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<1.0	2.5 mg/kg	90.3	40	142	
EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<1.0	2.5 mg/kg	45.7	23.3	125	
EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	2.5 mg/kg	79.7	46	134	
EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	2.5 mg/kg	67.1	38	132	
EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	2.5 mg/kg	85.7	44	134	
EP075: 3,3'-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	2.5 mg/kg	20.7	10	124	
EP075I: Organochlorine Pesticides (QC Lot: 2181384)									
EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	2.5 mg/kg	86.4	50	134	
EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	2.5 mg/kg	91.0	47	135	
EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	2.5 mg/kg	87.8	50	137	
EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	2.5 mg/kg	95.0	48	136	
EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	2.5 mg/kg	87.7	40	138	
EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	2.5 mg/kg	91.2	44	140	
EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	2.5 mg/kg	86.6	45	139	
EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	2.5 mg/kg	96.8	46	142	
EP075: 4,4'-DDE	72-55-9	0.5	mg/kg	<0.5	2.5 mg/kg	87.8	70	130	
EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	2.5 mg/kg	96.0	47	139	
EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	2.5 mg/kg	96.0	42	142	
EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	2.5 mg/kg	94.6	47	141	
EP075: 4,4'-DDD	72-54-8	0.5	mg/kg	<0.5	2.5 mg/kg	84.1	42	146	
EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	2.5 mg/kg	83.9	41	141	



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 Client : GOLDR ASSOCIATES
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Sub-Matrix: SOIL				Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	LCS	Low	High
EP075I: Organochlorine Pesticides (QCLot: 2181384) - continued									
EP075: 4,4'-DDT	50-29-3	0.5	mg/kg	<1.0	2.5 mg/kg	86.6	86.6	19.6	148
EP075J: Organophosphorus Pesticides (QCLot: 2181384)									
EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	2.5 mg/kg	81.6	81.6	21.9	131
EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	2.5 mg/kg	90.2	90.2	38	142
EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	2.5 mg/kg	98.8	98.8	36	133
EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	2.5 mg/kg	86.6	86.6	35	143
EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	2.5 mg/kg	91.6	91.6	35	143
EP075: Fenitrothion	55-38-9	0.5	mg/kg	<0.5	2.5 mg/kg	82.0	82.0	25.1	135
EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	2.5 mg/kg	90.4	90.4	36	132
EP075: Pirimiphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	2.5 mg/kg	89.3	89.3	36	135
EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	2.5 mg/kg	87.2	87.2	35	138
EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	2.5 mg/kg	93.6	93.6	37	135
EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	2.5 mg/kg	89.8	89.8	38	137
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2165418)									
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	32 mg/kg	91.7	91.7	70	133
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2165418)									
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	37 mg/kg	91.7	91.7	70	130
EP080: BTEXN (QCLot: 2165418)									
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	94.8	94.8	72	126
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	92.6	92.6	73	129
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	92.4	92.4	72	126
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	93.2	93.2	70	138
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	95.4	95.4	73	131
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	122	122	70	130
EP080-SD / EP071-SD: Total Petroleum Hydrocarbons (QCLot: 2170551)									
EP071-SD: C10 - C14 Fraction	----	3	mg/kg	<3	5 mg/kg	104	104	75.2	116
EP071-SD: C15 - C28 Fraction	----	3	mg/kg	<3	6.75 mg/kg	109	109	75.3	113
EP071-SD: C29 - C36 Fraction	----	5	mg/kg	<5	5 mg/kg	94.0	94.0	72.6	117
EP130A: Organophosphorus Pesticides (Ultra-trace) (QCLot: 2171047)									
EP130: Bromophos-ethyl	4824-78-6	10	µg/kg	<10	50 µg/kg	99.3	99.3	36.9	142
EP130: Carbophenothion	786-19-6	10	µg/kg	<10	50 µg/kg	74.7	74.7	0.5	157
EP130: Chlorfenvinphos (E)	18708-86-6	10	µg/kg	<10.0	5 µg/kg	90.8	90.8	50.3	137
EP130: Chlorfenvinphos (Z)	18708-87-7	10	µg/kg	<10	50 µg/kg	90.6	90.6	55.9	152
EP130: Chlorpyrifos	2921-88-2	10	µg/kg	<10	50 µg/kg	103	103	49	140
EP130: Chlorpyrifos-methyl	5598-13-0	10	µg/kg	<10	50 µg/kg	90.5	90.5	28.1	142
EP130: Demeton-S-methyl	919-86-8	10	µg/kg	<10	50 µg/kg	70.2	70.2	36.6	172
EP130: Diazinon	333-41-5	10	µg/kg	<10	50 µg/kg	99.9	99.9	37.2	148



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Sub-Matrix: SOIL				Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	LCS	Low	High
EP130A: Organophosphorus Pesticides (Ultra-trace) (QCLot: 2171047) - continued									
EP130: Dichlorvos	62-73-7	10	µg/kg	<10	50 µg/kg	89.9	32.7	153	
EP130: Dimethoate	60-51-5	10	µg/kg	<10	50 µg/kg	75.5	33.2	150	
EP130: Ethion	563-12-2	10	µg/kg	<10	50 µg/kg	82.0	44	146	
EP130: Fenamiphos	22224-92-6	10	µg/kg	<10	50 µg/kg	78.0	3.08	162	
EP130: Fenthion	55-38-9	10	µg/kg	<10	50 µg/kg	98.4	10.6	157	
EP130: Malathion	121-75-5	10	µg/kg	<10	50 µg/kg	94.8	38.1	143	
EP130: Azinphos Methyl	86-50-0	10	µg/kg	<10	50 µg/kg	75.5	8.13	159	
EP130: Monocrotophos	6923-22-4	10	µg/kg	<10	50 µg/kg	82.8	19.7	176	
EP130: Parathion	56-38-2	10	µg/kg	<10	50 µg/kg	97.6	39.2	145	
EP130: Parathion-methyl	298-00-0	10	µg/kg	<10	50 µg/kg	88.6	23.5	152	
EP130: Pirimphos-ethyl	23505-41-1	10	µg/kg	<10	50 µg/kg	86.7	47.1	141	
EP130: Prothiofos	34643-46-4	10	µg/kg	<10	50 µg/kg	88.9	36.1	148	
EP131A: Organochlorine Pesticides (QCLot: 2171048)									
EP131A: Aldrin	309-00-2	0.5	µg/kg	<0.50	5 µg/kg	70.4	31.7	140	
EP131A: alpha-BHC	319-84-6	0.5	µg/kg	<0.50	5 µg/kg	80.2	24.5	150	
EP131A: beta-BHC	319-85-7	0.5	µg/kg	<0.50	5 µg/kg	68.9	36.9	139	
EP131A: delta-BHC	319-86-8	0.5	µg/kg	<0.50	5 µg/kg	62.5	38.2	137	
EP131A: 4,4'-DDD	72-54-8	0.5	µg/kg	<0.50	5 µg/kg	64.6	42.5	141	
EP131A: 4,4'-DDE	72-55-9	0.5	µg/kg	<0.50	5 µg/kg	68.0	34.8	140	
EP131A: 4,4'-DDT	50-29-3	0.5	µg/kg	<0.50	5 µg/kg	106	38	143	
EP131A: Sum of DDD + DDE + DDT	----	0.5	µg/kg	<0.50	----	----	----	----	
EP131A: Dieldrin	60-57-1	0.5	µg/kg	<0.50	5 µg/kg	85.1	43.2	134	
EP131A: alpha-Endosulfan	959-98-8	0.5	µg/kg	<0.50	5 µg/kg	62.5	23.7	139	
EP131A: beta-Endosulfan	33213-65-9	0.5	µg/kg	<0.50	5 µg/kg	63.1	35.8	138	
EP131A: Endosulfan sulfate	1031-07-8	0.5	µg/kg	<0.50	5 µg/kg	72.7	7.45	158	
EP131A: Endosulfan (sum)	115-29-7	0.5	µg/kg	<0.50	----	----	----	----	
EP131A: Endrin	72-20-8	0.5	µg/kg	<0.50	5 µg/kg	67.9	21.6	162	
EP131A: Endrin aldehyde	7421-93-4	0.5	µg/kg	<0.50	5 µg/kg	73.3	19.3	131	
EP131A: Endrin ketone	53494-70-5	0.5	µg/kg	<0.50	5 µg/kg	72.2	17.9	141	
EP131A: Heptachlor	76-44-8	0.5	µg/kg	<0.50	5 µg/kg	65.2	31	153	
EP131A: Heptachlor epoxide	1024-57-3	0.5	µg/kg	<0.50	5 µg/kg	69.2	34.3	138	
EP131A: Hexachlorobenzene (HCB)	118-74-1	0.5	µg/kg	<0.50	5 µg/kg	72.7	18.6	146	
EP131A: gamma-BHC	58-89-9	0.5	µg/kg	<0.50	5 µg/kg	83.6	30.7	145	
EP131A: Methoxychlor	72-43-5	0.5	µg/kg	<0.50	5 µg/kg	69.0	15	157	
EP131A: cis-Chlordane	5103-71-9	0.5	µg/kg	<0.50	5 µg/kg	77.8	22.3	145	
EP131A: trans-Chlordane	5103-74-2	0.5	µg/kg	<0.50	5 µg/kg	62.1	42.4	139	
EP131A: Total Chlordane (sum)	----	0.5	µg/kg	<0.50	----	----	----	----	
EP131B: Polychlorinated Biphenyls (as Aroclors) (QCLot: 2171049)									
EP131B: Total Polychlorinated biphenyls	----	5	µg/kg	<5.0	----	----	----	----	



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Sub-Matrix: SOIL				Method Blank (MB) Report		Spike Concentration		Laboratory Control Spike (LCS) Report	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High	
EP131B: Polychlorinated Biphenyls (as Aroclors) (QCLot: 2171049) - continued									
EP131B: Aroclor 1016	12674-11-2	5	µg/kg	<5.0	---	---	---	---	
EP131B: Aroclor 1221	11104-28-2	5	µg/kg	<5.0	---	---	---	---	
EP131B: Aroclor 1232	11141-16-5	5	µg/kg	<5.0	---	---	---	---	
EP131B: Aroclor 1242	53469-21-9	5	µg/kg	<5.0	---	---	---	---	
EP131B: Aroclor 1248	12672-29-6	5	µg/kg	<5.0	---	---	---	---	
EP131B: Aroclor 1254	11097-69-1	5	µg/kg	<5.0	50 µg/kg	116	61.3	121	
EP131B: Aroclor 1260	11096-82-5	5	µg/kg	<5.0	---	---	---	---	
EP216: Perchlorate by LC/MS (QCLot: 2169289)									
EP216: Perchlorate	7601-90-3	10	µg/kg	<10.0	25 µg/kg	90.6	56	130	
EP231: Perfluoroalkyl Acids and Sulfonates. (QCLot: 2168886)									
EP231: PFOS	1763-23-1	0.0005	mg/kg	<0.0005	0.005 mg/kg	116	54	146	
EP231: PFOA	335-67-1	0.0005	mg/kg	<0.0005	0.005 mg/kg	97.4	54	134	
EP231: 6:2 Fluorotelomer Sulfonate (6:2 FS)	27619-97-2	0.005	mg/kg	<0.005	.025 mg/kg	71.6	56	138	
Sub-Matrix: WATER									
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High	
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 2166956)									
EP074: Benzene	71-43-2	1	µg/L	<1	20 µg/L	91.5	79	121	
EP074: Toluene	108-88-3	2	µg/L	<2	20 µg/L	90.8	80	124	
EP074: Ethylbenzene	100-41-4	2	µg/L	<2	20 µg/L	92.3	79	121	
EP074: meta- & para-Xylene	108-38-3	2	µg/L	<2	40 µg/L	92.7	80	122	
EP074: Styrene	100-42-3	5	µg/L	<5	20 µg/L	93.1	74	122	
EP074: ortho-Xylene	95-47-6	2	µg/L	<2	20 µg/L	93.6	81	123	
EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	20 µg/L	91.4	80	120	
EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	20 µg/L	86.4	70	120	
EP074: 1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	20 µg/L	88.2	71	119	
EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	20 µg/L	87.4	72	120	
EP074: 1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	20 µg/L	88.9	73	119	
EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	20 µg/L	87.2	73	119	
EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	20 µg/L	88.1	71	121	
EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	20 µg/L	87.0	65	121	
EP074B: Oxygenated Compounds (QCLot: 2166956)									
EP074: Vinyl Acetate	108-05-4	50	µg/L	<50	200 µg/L	98.8	57	131	
EP074: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	200 µg/L	101	69	135	
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	200 µg/L	101	68	136	
EP074: 2-Hexanone (MBK)	591-78-6	50	µg/L	<50	200 µg/L	103	68	138	
EP074C: Sulfonated Compounds (QCLot: 2166956)									



Sub-Matrix: WATER				Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	LCS	Low	High
EP074C: Sulfonated Compounds (QCLot: 2166956) - continued									
EP074: Carbon disulfide	75-15-0	5	µg/L	<5	20 µg/L	85.6	85.6	67	127
EP074D: Fumigants (QCLot: 2166956)									
EP074: 2,2-Dichloropropane	594-20-7	5	µg/L	<5	20 µg/L	92.3	92.3	59	128
EP074: 1,2-Dichloropropane	78-87-5	5	µg/L	<5	20 µg/L	96.7	96.7	77	121
EP074: cis-1,3-Dichloropropylene	10061-01-5	5	µg/L	<5	20 µg/L	92.3	92.3	70	118
EP074: trans-1,3-Dichloropropylene	10061-02-6	5	µg/L	<5	20 µg/L	95.3	95.3	66	120
EP074: 1,2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	20 µg/L	97.0	97.0	78	124
EP074E: Halogenated Aliphatic Compounds (QCLot: 2166956)									
EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	200 µg/L	89.4	89.4	58	148
EP074: Chloromethane	74-87-3	50	µg/L	<50	200 µg/L	93.6	93.6	62	142
EP074: Vinyl chloride	75-01-4	50	µg/L	<50	200 µg/L	83.2	83.2	61	141
EP074: Bromomethane	74-83-9	50	µg/L	<50	200 µg/L	83.2	83.2	57	131
EP074: Chloroethane	75-00-3	50	µg/L	<50	200 µg/L	89.5	89.5	64	138
EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	200 µg/L	88.9	88.9	67	131
EP074: 1,1-Dichloroethene	75-35-4	5	µg/L	<5	20 µg/L	87.6	87.6	71	125
EP074: Iodomethane	74-88-4	5	µg/L	<5	20 µg/L	82.8	82.8	61	135
EP074: trans-1,2-Dichloroethene	156-60-5	5	µg/L	<5	20 µg/L	90.1	90.1	75	121
EP074: 1,1-Dichloroethane	75-34-3	5	µg/L	<5	20 µg/L	93.0	93.0	77	121
EP074: cis-1,2-Dichloroethene	156-59-2	5	µg/L	<5	20 µg/L	92.2	92.2	78	122
EP074: 1,1,1-Trichloroethane	71-55-6	5	µg/L	<5	20 µg/L	88.8	88.8	70	120
EP074: 1,1-Dichloropropylene	563-58-6	5	µg/L	<5	20 µg/L	89.7	89.7	74	122
EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	20 µg/L	83.0	83.0	57	123
EP074: 1,2-Dichloroethane	107-06-2	5	µg/L	<5	20 µg/L	94.7	94.7	75	125
EP074: Trichloroethene	79-01-6	5	µg/L	<5	20 µg/L	91.5	91.5	77	121
EP074: Dibromomethane	74-95-3	5	µg/L	<5	20 µg/L	96.3	96.3	76	122
EP074: 1,1,2-Trichloroethane	79-00-5	5	µg/L	<5	20 µg/L	92.8	92.8	78	126
EP074: 1,3-Dichloropropane	142-28-9	5	µg/L	<5	20 µg/L	97.2	97.2	79	125
EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	20 µg/L	89.2	89.2	76	122
EP074: 1,1,1,2-Tetrachloroethane	630-20-6	5	µg/L	<5	20 µg/L	89.7	89.7	65	119
EP074: trans-1,4-Dichloro-2-butene	110-57-6	5	µg/L	<5	20 µg/L	88.7	88.7	46	126
EP074: cis-1,4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	20 µg/L	95.2	95.2	54	132
EP074: 1,1,2,2-Tetrachloroethane	79-34-5	5	µg/L	<5	20 µg/L	100	100	75	131
EP074: 1,2,3-Trichloropropane	96-18-4	5	µg/L	<5	20 µg/L	99.8	99.8	75	133
EP074: Pentachloroethane	76-01-7	5	µg/L	<5	20 µg/L	83.2	83.2	46	118
EP074: 1,2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	20 µg/L	98.5	98.5	54	124
EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	20 µg/L	85.7	85.7	50	134
EP074F: Halogenated Aromatic Compounds (QCLot: 2166956)									
EP074: Chlorobenzene	108-90-7	5	µg/L	<5	20 µg/L	94.8	94.8	81	121
EP074: Bromobenzene	108-86-1	5	µg/L	<5	20 µg/L	91.8	91.8	75	119



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 Work Order : EM1201358
 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: **WATER**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
EP074F: Halogenated Aromatic Compounds (QCLot: 2166956) - continued									
EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	20 µg/L	86.1	73	121	
EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	20 µg/L	88.1	72	120	
EP074: 1,3-Dichlorobenzene	541-73-1	5	µg/L	<5	20 µg/L	91.3	73	119	
EP074: 1,4-Dichlorobenzene	106-46-7	5	µg/L	<5	20 µg/L	92.0	74	120	
EP074: 1,2-Dichlorobenzene	95-50-1	5	µg/L	<5	20 µg/L	92.6	78	118	
EP074: 1,2,4-Trichlorobenzene	120-82-1	5	µg/L	<5	20 µg/L	92.1	56	128	
EP074: 1,2,3-Trichlorobenzene	87-61-6	5	µg/L	<5	20 µg/L	95.9	69	123	
EP074G: Trihalomethanes (QCLot: 2166956)									
EP074: Chloroform	67-66-3	5	µg/L	<5	20 µg/L	93.5	77	121	
EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	20 µg/L	90.0	69	117	
EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	20 µg/L	87.5	59	119	
EP074: Bromoform	75-25-2	5	µg/L	<5	20 µg/L	83.5	49	121	
EP074H: Naphthalene (QCLot: 2166956)									
EP074: Naphthalene	91-20-3	7	µg/L	<7	20 µg/L	101	76	124	



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Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report		
				Spike Concentration	Spike Recovery (%) MS	Recovery Limits (%) Low High
EG020-SD: Total Metals in Sediments by ICPMS (QCLot: 2171814)						
EM1201358-002	SD2 - 1052/8002	EG020-SD: Arsenic	7440-38-2	50 mg/kg	72.2	70 130
		EG020-SD: Cadmium	7440-43-9	25 mg/kg	84.5	70 130
		EG020-SD: Chromium	7440-47-3	50 mg/kg	88.9	70 130
		EG020-SD: Copper	7440-50-8	50 mg/kg	75.3	70 130
		EG020-SD: Lead	7439-92-1	50 mg/kg	84.0	70 130
		EG020-SD: Nickel	7440-02-0	50 mg/kg	80.6	70 130
		EG020-SD: Zinc	7440-66-6	50 mg/kg	76.4	70 130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2171813)						
EM1201358-002	SD2 - 1052/8002	EG035T-LL: Mercury	7439-97-6	0.5 mg/kg	86.3	70 130
EP074E: Halogenated Aliphatic Compounds (QCLot: 2165419)						
EM1201358-014	SD2 - 1052/8002 Volatiles	EP074: 1,1-Dichloroethene	75-35-4	2 mg/kg	50.4	50 124
		EP074: Trichloroethene	79-01-6	2 mg/kg	77.7	60 122
EP074F: Halogenated Aromatic Compounds (QCLot: 2165419)						
EM1201358-014	SD2 - 1052/8002 Volatiles	EP074: Chlorobenzene	108-90-7	2 mg/kg	91.9	69 129
EP075A: Phenolic Compounds (QCLot: 2181384)						
EM1201358-002	SD2 - 1052/8002	EP075: Phenol	108-95-2	5 mg/kg	66.0	23.7 119
		EP075: 2-Chlorophenol	95-57-8	5 mg/kg	57.5	31.1 116
		EP075: 2-Nitrophenol	88-75-5	5 mg/kg	65.2	16.4 115
		EP075: 4-Chloro-3-Methylphenol	59-50-7	5 mg/kg	85.4	22.3 122
		EP075: Pentachlorophenol	87-86-5	5 mg/kg	99.8	17.6 142
EP075B: Polynuclear Aromatic Hydrocarbons (QCLot: 2181384)						
EM1201358-002	SD2 - 1052/8002	EP075: Acenaphthene	83-32-9	5 mg/kg	79.1	25.4 122
		EP075: Pyrene	129-00-0	5 mg/kg	77.8	14.6 127
EP075D: Nitrosamines (QCLot: 2181384)						
EM1201358-002	SD2 - 1052/8002	EP075: N-Nitrosodi-n-propylamine	621-64-7	5 mg/kg	50.5	17.8 110
EP075E: Nitroaromatics and Ketones (QCLot: 2181384)						
EM1201358-002	SD2 - 1052/8002	EP075: 2,4-Dinitrotoluene	121-14-2	5 mg/kg	88.9	28.3 112
EP075G: Chlorinated Hydrocarbons (QCLot: 2181384)						
EM1201358-002	SD2 - 1052/8002	EP075: 1,4-Dichlorobenzene	106-46-7	5 mg/kg	57.3	23 112
		EP075: 1,2,4-Trichlorobenzene	120-82-1	5 mg/kg	54.0	12.9 111
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2165418)						
EM1201358-014	SD2 - 1052/8002 Volatiles	EP080: C6 - C9 Fraction	----	28 mg/kg	72.6	49 127
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2165418)						



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Sub-Matrix: SOIL		Matrix Spike (MS) Report				
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Spike Concentration	Recovery Limits (%)	
				MS	Low	High
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2165418) - continued						
EM1201358-014	SD2 - 1052/8002	Volatiles				
		EP080: C6 - C10 Fraction	----	33 mg/kg	75.7	70 130
EP080: BTEXN (QCLot: 2165418)						
EM1201358-014	SD2 - 1052/8002	Volatiles				
		EP080: Benzene	71-43-2	2 mg/kg	75.4	58 136
		EP080: Toluene	108-88-3	2 mg/kg	82.4	63 135
EP080-SD / EP071-SD: Total Petroleum Hydrocarbons (QCLot: 2170551)						
EM1201358-002	SD2 - 1052/8002					
		EP071-SD: C10 - C14 Fraction	----	19.75 mg/kg	82.3	70 130
		EP071-SD: C15 - C28 Fraction	----	87.25 mg/kg	116	70 130
		EP071-SD: C29 - C36 Fraction	----	60 mg/kg	126	70 130
EP130A: Organophosphorus Pesticides (Ultra-trace) (QCLot: 2171047)						
EM1201358-002	SD2 - 1052/8002					
		EP130: Bromophos-ethyl	4824-78-6	50 µg/kg	39.1	36.9 142
		EP130: Carbophenothion	786-19-6	50 µg/kg	83.2	0.5 157
		EP130: Chlorfenvinphos (E)	18708-86-6	5 µg/kg	54.3	50.3 137
		EP130: Chlorfenvinphos (Z)	18708-87-7	50 µg/kg	59.7	55.9 152
		EP130: Chlorpyrifos	2921-88-2	50 µg/kg	51.6	49 140
		EP130: Chlorpyrifos-methyl	5598-13-0	50 µg/kg	55.0	28.1 142
		EP130: Demeton-S-methyl	919-86-8	50 µg/kg	69.5	36.6 172
		EP130: Diazinon	333-41-5	50 µg/kg	54.9	37.2 148
		EP130: Dichlorvos	62-73-7	50 µg/kg	56.2	32.7 153
		EP130: Dimethoate	60-51-5	50 µg/kg	91.6	33.2 150
		EP130: Ethion	563-12-2	50 µg/kg	49.0	44 146
		EP130: Fenamiphos	22224-92-6	50 µg/kg	38.3	3.08 162
		EP130: Fenthion	55-38-9	50 µg/kg	45.3	10.6 157
		EP130: Malathion	121-75-5	50 µg/kg	49.6	38.1 143
		EP130: Azinphos Methyl	86-50-0	50 µg/kg	75.4	8.13 159
		EP130: Monocrotophos	6923-22-4	50 µg/kg	60.6	19.7 176
		EP130: Parathion	56-38-2	50 µg/kg	43.7	39.2 145
		EP130: Parathion-methyl	298-00-0	50 µg/kg	51.4	23.5 152
		EP130: Pirimphos-ethyl	23505-41-1	50 µg/kg	48.9	47.1 141
		EP130: Prothiofos	34643-46-4	50 µg/kg	45.8	36.1 148
EP131A: Organochlorine Pesticides (QCLot: 2171048)						
EM1201358-002	SD2 - 1052/8002					
		EP131A: Aldrin	309-00-2	5 µg/kg	41.8	31.7 140
		EP131A: alpha-BHC	319-84-6	5 µg/kg	95.7	24.5 150
		EP131A: beta-BHC	319-85-7	5 µg/kg	73.0	36.9 139
		EP131A: delta-BHC	319-86-8	5 µg/kg	60.3	38.2 137
		EP131A: 4,4'-DDD	72-54-8	5 µg/kg	50.1	42.5 141
		EP131A: 4,4'-DDE	72-55-9	5 µg/kg	56.8	34.8 140
		EP131A: 4,4'-DDT	50-29-3	5 µg/kg	63.1	38 143
		EP131A: Dieldrin	60-57-1	5 µg/kg	68.5	43.2 134



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 Project : 117613201

Sub-Matrix: SOIL

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike Concentration	Spike Recovery (%)		
				Low	High		
EP131A: Organochlorine Pesticides (QCLot: 2171048) - continued							
EM1201358-002	SD2 - 1052/8002	EP131A: alpha-Endosulfan	959-98-8	5 µg/kg	62.6	23.7	139
		EP131A: beta-Endosulfan	33213-65-9	5 µg/kg	51.1	35.8	138
		EP131A: Endosulfan sulfate	1031-07-8	5 µg/kg	55.4	7.45	158
		EP131A: Endrin	72-20-8	5 µg/kg	94.5	21.6	162
		EP131A: Endrin aldehyde	7421-93-4	5 µg/kg	41.3	19.3	131
		EP131A: Endrin ketone	53494-70-5	5 µg/kg	29.0	17.9	141
		EP131A: Heptachlor	76-44-8	5 µg/kg	53.2	31	153
		EP131A: Heptachlor epoxide	1024-57-3	5 µg/kg	47.9	34.3	138
		EP131A: Hexachlorobenzene (HCB)	118-74-1	5 µg/kg	85.3	18.6	146
		EP131A: gamma-BHC	58-89-9	5 µg/kg	80.9	30.7	145
		EP131A: Methoxychlor	72-43-5	5 µg/kg	42.4	15	157
		EP131A: cis-Chlordane	5103-71-9	5 µg/kg	57.8	22.3	145
		EP131A: trans-Chlordane	5103-74-2	5 µg/kg	54.9	42.4	139
EP131B: Polychlorinated Biphenyls (as Aroclors) (QCLot: 2171049)							
EM1201358-002	SD2 - 1052/8002	EP131B: Aroclor 1254	11097-69-1	50 µg/kg	# 58.0	61.3	121
EP216: Perchlorate by LC/MS (QCLot: 2169289)							
EM1201358-001	SD1 - 1051/8001	EP216: Perchlorate	7601-90-3	25 µg/kg	104	70	130
EP231: Perfluoroalkyl Acids and Sulfonates. (QCLot: 2168886)							
EM1201358-001	SD1 - 1051/8001	EP231: PFOS	1763-23-1	0.005 mg/kg	# Not Determined	54	146
		EP231: PFOA	335-67-1	0.005 mg/kg	# Not Determined	54	134
		EP231: 6:2 Fluorotelomer Sulfonate (6:2 FtS)	27619-97-2	.025 mg/kg	# 49.0	56	138

Sub-Matrix: WATER

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike Concentration	Spike Recovery (%)		
				Low	High		
EP074A: Monocyclic Aromatic Hydrocarbons (QCLot: 2166956)							
EM1201357-002	Anonymous	EP074: Benzene	71-43-2	20 µg/L	101	64	121
		EP074: Toluene	108-88-3	20 µg/L	99.9	63	125
EP074E: Halogenated Aliphatic Compounds (QCLot: 2166956)							
EM1201357-002	Anonymous	EP074: 1,1-Dichloroethene	75-35-4	20 µg/L	91.9	52	104
		EP074: Trichloroethene	79-01-6	20 µg/L	94.7	59	120
EP074F: Halogenated Aromatic Compounds (QCLot: 2166956)							
EM1201357-002	Anonymous	EP074: Chlorobenzene	108-90-7	20 µg/L	106	63	132

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EM1201358	Page	: 1 of 20
Client	: GOLDER ASSOCIATES	Laboratory	: Environmental Division Melbourne
Contact	: Niamh McCormack	Contact	: Samantha Smith
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Facsimile	: +61 03 8862 3501	Facsimile	: +61-3-8549 9601
Project	: 117613201	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: F - Vic	Date Samples Received	: 09-FEB-2012
C-O-C number	: ----	Issue Date	: 29-FEB-2012
Sampler	: NMc	No. of samples received	: 23
Order number	: GA-MEL 332509	No. of samples analysed	: 23
Quote number	: ME/054/12		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers



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Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days), Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: SOIL

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Container / Client Sample ID(s)	Sample Date		Extraction / Preparation		Analysis		
		Date extracted	Due for extraction	Date analysed	Due for analysis	Evaluation	Evaluation	
EA055: Moisture Content								
Soil Glass Jar - Unpreserved								
	SD2 - 1052/8002, SD1 - 1051/8001, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, SD10 - 10110/8010, Dup2 - 10110/8811, SD2 - 1052/8002 - Volatiles, SD3 - 1043/8003 - Volatiles, SD4 - 1044/8004 - Volatiles, SD5 - 1035/8005 - Volatiles, SD6 - 1036/8006 - Volatiles, SD7 - 1027/8007 - Volatiles, SD8 - 1028/8008 - Volatiles, SD9 - 1019/8009 - Volatiles, SD10 - 10110/8010 - Volatiles, Dup2 - 10110/8811 - Volatiles	08-FEB-2012	----	----	----	13-FEB-2012	22-FEB-2012	✓
EG020-SD: Total Metals in Sediments by ICPMS								
Soil Glass Jar - Unpreserved								
	SD2 - 1052/8002, SD1 - 1051/8001, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, SD10 - 10110/8010, Dup2 - 10110/8811	08-FEB-2012	22-FEB-2012	06-AUG-2012	23-FEB-2012	06-AUG-2012	✓	
EG035T: Total Recoverable Mercury by FIMS								
Soil Glass Jar - Unpreserved								
	SD2 - 1052/8002, SD1 - 1051/8001, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, SD10 - 10110/8010, Dup2 - 10110/8811	08-FEB-2012	22-FEB-2012	07-MAR-2012	23-FEB-2012	07-MAR-2012	✓	



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 Client : GOLDR ASSOCIATES
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Matrix: SOIL Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation		Analysis	
		Date extracted	Due for extraction	Date analysed	Due for analysis
EP003: Total Organic Carbon (TOC) in Soil					
Pulp Bag					
SD1 - 1051/8001, SD3 - 1043/8003, SD5 - 1035/8005, SD7 - 1027/8007, SD9 - 1019/8009, Dup2 - 10110/8811	08-FEB-2012	17-FEB-2012	15-FEB-2012	17-FEB-2012	16-MAR-2012
SD2 - 1052/8002, SD4 - 1044/8004, SD6 - 1036/8006, SD8 - 1028/8008, SD10 - 10110/8010,				✗	✓
EP074A: Monocyclic Aromatic Hydrocarbons					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001 - Volatiles, SD3 - 1043/8003 - Volatiles, SD5 - 1035/8005 - Volatiles, SD7 - 1027/8007 - Volatiles, SD9 - 1019/8009 - Volatiles, Dup2 - 10110/8811 - Volatiles	08-FEB-2012	13-FEB-2012	22-FEB-2012	13-FEB-2012	22-FEB-2012
SD2 - 1052/8002 - Volatiles, SD4 - 1044/8004 - Volatiles, SD6 - 1036/8006 - Volatiles, SD8 - 1028/8008 - Volatiles, SD10 - 10110/8010 - Volatiles,				✓	✓
EP074B: Oxygenated Compounds					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001 - Volatiles, SD3 - 1043/8003 - Volatiles, SD5 - 1035/8005 - Volatiles, SD7 - 1027/8007 - Volatiles, SD9 - 1019/8009 - Volatiles, Dup2 - 10110/8811 - Volatiles	08-FEB-2012	13-FEB-2012	22-FEB-2012	13-FEB-2012	22-FEB-2012
SD2 - 1052/8002 - Volatiles, SD4 - 1044/8004 - Volatiles, SD6 - 1036/8006 - Volatiles, SD8 - 1028/8008 - Volatiles, SD10 - 10110/8010 - Volatiles,				✓	✓
EP074C: Sulfonated Compounds					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001 - Volatiles, SD3 - 1043/8003 - Volatiles, SD5 - 1035/8005 - Volatiles, SD7 - 1027/8007 - Volatiles, SD9 - 1019/8009 - Volatiles, Dup2 - 10110/8811 - Volatiles	08-FEB-2012	13-FEB-2012	22-FEB-2012	13-FEB-2012	22-FEB-2012
SD2 - 1052/8002 - Volatiles, SD4 - 1044/8004 - Volatiles, SD6 - 1036/8006 - Volatiles, SD8 - 1028/8008 - Volatiles, SD10 - 10110/8010 - Volatiles,				✓	✓
EP074D: Fumigants					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001 - Volatiles, SD3 - 1043/8003 - Volatiles, SD5 - 1035/8005 - Volatiles, SD7 - 1027/8007 - Volatiles, SD9 - 1019/8009 - Volatiles, Dup2 - 10110/8811 - Volatiles	08-FEB-2012	13-FEB-2012	22-FEB-2012	13-FEB-2012	22-FEB-2012
SD2 - 1052/8002 - Volatiles, SD4 - 1044/8004 - Volatiles, SD6 - 1036/8006 - Volatiles, SD8 - 1028/8008 - Volatiles, SD10 - 10110/8010 - Volatiles,				✓	✓



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 Client : GOLDR ASSOCIATES
 Project : 117613201

Matrix: SOIL Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation		Analysis	
		Date extracted	Due for extraction	Date analysed	Due for analysis
EP074E: Halogenated Aliphatic Compounds					
Soil Glass Jar - Unpreserved					
SD2 - 1052/8002 - Volatiles, SD1 - 1051/8001 - Volatiles, SD3 - 1043/8003 - Volatiles, SD5 - 1035/8005 - Volatiles, SD7 - 1027/8007 - Volatiles, SD9 - 1019/8009 - Volatiles, Dup2 - 10110/8811 - Volatiles	08-FEB-2012	13-FEB-2012	22-FEB-2012	13-FEB-2012	22-FEB-2012
				✓	✓
EP074F: Halogenated Aromatic Compounds					
Soil Glass Jar - Unpreserved					
SD2 - 1052/8002 - Volatiles, SD4 - 1044/8004 - Volatiles, SD6 - 1036/8006 - Volatiles, SD8 - 1028/8008 - Volatiles, SD10 - 10110/8010 - Volatiles, Dup2 - 10110/8811 - Volatiles	08-FEB-2012	13-FEB-2012	22-FEB-2012	13-FEB-2012	22-FEB-2012
				✓	✓
EP074G: Trihalomethanes					
Soil Glass Jar - Unpreserved					
SD2 - 1052/8002 - Volatiles, SD4 - 1044/8004 - Volatiles, SD6 - 1036/8006 - Volatiles, SD8 - 1028/8008 - Volatiles, SD10 - 10110/8010 - Volatiles, Dup2 - 10110/8811 - Volatiles	08-FEB-2012	13-FEB-2012	22-FEB-2012	13-FEB-2012	22-FEB-2012
				✓	✓
EP074H: Naphthalene					
Soil Glass Jar - Unpreserved					
SD2 - 1052/8002 - Volatiles, SD4 - 1044/8004 - Volatiles, SD6 - 1036/8006 - Volatiles, SD8 - 1028/8008 - Volatiles, SD10 - 10110/8010 - Volatiles, Dup2 - 10110/8811 - Volatiles	08-FEB-2012	13-FEB-2012	22-FEB-2012	13-FEB-2012	22-FEB-2012
				✓	✓
EP075A: Phenolic Compounds					
Soil Glass Jar - Unpreserved					
SD2 - 1052/8002, SD4 - 1044/8004, SD6 - 1036/8006, SD8 - 1028/8008, SD10 - 10110/8010, Dup2 - 10110/8811	08-FEB-2012	23-FEB-2012	22-FEB-2012	24-FEB-2012	03-APR-2012
				✗	✓



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Matrix: SOIL Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation		Analysis	
		Date extracted	Due for extraction	Date analysed	Due for analysis
EP075B: Polynuclear Aromatic Hydrocarbons					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001, SD2 - 1052/8002, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, Dup2 - 10110/8811	08-FEB-2012	23-FEB-2012	22-FEB-2012	24-FEB-2012	03-APR-2012
				✘	✓
EP075C: Phthalate Esters					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001, SD2 - 1052/8002, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, Dup2 - 10110/8811	08-FEB-2012	23-FEB-2012	22-FEB-2012	24-FEB-2012	03-APR-2012
				✘	✓
EP075D: Nitrosamines					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001, SD2 - 1052/8002, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, Dup2 - 10110/8811	08-FEB-2012	23-FEB-2012	22-FEB-2012	24-FEB-2012	03-APR-2012
				✘	✓
EP075E: Nitroaromatics and Ketones					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001, SD2 - 1052/8002, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, Dup2 - 10110/8811	08-FEB-2012	23-FEB-2012	22-FEB-2012	24-FEB-2012	03-APR-2012
				✘	✓
EP075F: Haloethers					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001, SD2 - 1052/8002, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, Dup2 - 10110/8811	08-FEB-2012	23-FEB-2012	22-FEB-2012	24-FEB-2012	03-APR-2012
				✘	✓



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Matrix: SOIL Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation		Analysis	
		Date extracted	Due for extraction	Date analysed	Due for analysis
EP075G: Chlorinated Hydrocarbons					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001, SD3 - 1043/8003, SD5 - 1035/8005, SD7 - 1027/8007, SD9 - 1019/8009, Dup2 - 10110/8811	08-FEB-2012	23-FEB-2012	22-FEB-2012	24-FEB-2012	03-APR-2012
SD2 - 1052/8002, SD4 - 1044/8004, SD6 - 1036/8006, SD8 - 1028/8008, SD10 - 10110/8010,				✘	✓
EP075H: Anilines and Benzidines					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001, SD3 - 1043/8003, SD5 - 1035/8005, SD7 - 1027/8007, SD9 - 1019/8009, Dup2 - 10110/8811	08-FEB-2012	23-FEB-2012	22-FEB-2012	24-FEB-2012	03-APR-2012
SD2 - 1052/8002, SD4 - 1044/8004, SD6 - 1036/8006, SD8 - 1028/8008, SD10 - 10110/8010,				✘	✓
EP075I: Organochlorine Pesticides					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001, SD3 - 1043/8003, SD5 - 1035/8005, SD7 - 1027/8007, SD9 - 1019/8009, Dup2 - 10110/8811	08-FEB-2012	23-FEB-2012	22-FEB-2012	24-FEB-2012	03-APR-2012
SD2 - 1052/8002, SD4 - 1044/8004, SD6 - 1036/8006, SD8 - 1028/8008, SD10 - 10110/8010,				✘	✓
EP075J: Organophosphorus Pesticides					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001, SD3 - 1043/8003, SD5 - 1035/8005, SD7 - 1027/8007, SD9 - 1019/8009, Dup2 - 10110/8811	08-FEB-2012	23-FEB-2012	22-FEB-2012	24-FEB-2012	03-APR-2012
SD2 - 1052/8002, SD4 - 1044/8004, SD6 - 1036/8006, SD8 - 1028/8008, SD10 - 10110/8010,				✘	✓
EP080/071: Total Petroleum Hydrocarbons					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001 - Volatiles, SD3 - 1043/8003 - Volatiles, SD5 - 1035/8005 - Volatiles, SD7 - 1027/8007 - Volatiles, SD9 - 1019/8009 - Volatiles, Dup2 - 10110/8811 - Volatiles	08-FEB-2012	13-FEB-2012	22-FEB-2012	13-FEB-2012	22-FEB-2012
SD2 - 1052/8002 - Volatiles, SD4 - 1044/8004 - Volatiles, SD6 - 1036/8006 - Volatiles, SD8 - 1028/8008 - Volatiles, SD10 - 10110/8010 - Volatiles,				✓	✓



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Matrix: SOIL
 Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation		Analysis	
		Date extracted	Due for extraction	Date analysed	Due for analysis
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001 - Volatiles, SD3 - 1043/8003 - Volatiles, SD5 - 1035/8005 - Volatiles, SD7 - 1027/8007 - Volatiles, SD9 - 1019/8009 - Volatiles, Dup2 - 10110/8811 - Volatiles	08-FEB-2012	13-FEB-2012	22-FEB-2012	✓	22-FEB-2012
SD2 - 1052/8002 - Volatiles, SD4 - 1044/8004 - Volatiles, SD6 - 1036/8006 - Volatiles, SD8 - 1028/8008 - Volatiles, SD10 - 10110/8010 - Volatiles, Dup2 - 10110/8811 - Volatiles	08-FEB-2012	13-FEB-2012	22-FEB-2012	✓	22-FEB-2012
EP080: BTEXN					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001 - Volatiles, SD3 - 1043/8003 - Volatiles, SD5 - 1035/8005 - Volatiles, SD7 - 1027/8007 - Volatiles, SD9 - 1019/8009 - Volatiles, Dup2 - 10110/8811 - Volatiles	08-FEB-2012	13-FEB-2012	22-FEB-2012	✓	22-FEB-2012
SD2 - 1052/8002 - Volatiles, SD4 - 1044/8004 - Volatiles, SD6 - 1036/8006 - Volatiles, SD8 - 1028/8008 - Volatiles, SD10 - 10110/8010 - Volatiles, Dup2 - 10110/8811 - Volatiles	08-FEB-2012	15-FEB-2012	22-FEB-2012	✓	26-MAR-2012
EP080-SD / EP071-SD: Total Petroleum Hydrocarbons					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001, SD3 - 1043/8003, SD5 - 1035/8005, SD7 - 1027/8007, SD9 - 1019/8009, Dup2 - 10110/8811	08-FEB-2012	15-FEB-2012	22-FEB-2012	✓	26-MAR-2012
SD2 - 1052/8002, SD4 - 1044/8004, SD6 - 1036/8006, SD8 - 1028/8008, SD10 - 10110/8010, Dup2 - 10110/8811	08-FEB-2012	17-FEB-2012	22-FEB-2012	✓	28-MAR-2012
EP130A: Organophosphorus Pesticides (Ultra-trace)					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001, SD3 - 1043/8003, SD5 - 1035/8005, SD7 - 1027/8007, SD9 - 1019/8009, Dup2 - 10110/8811	08-FEB-2012	17-FEB-2012	22-FEB-2012	✓	28-MAR-2012
SD2 - 1052/8002, SD4 - 1044/8004, SD6 - 1036/8006, SD8 - 1028/8008, SD10 - 10110/8010, Dup2 - 10110/8811	08-FEB-2012	21-FEB-2012	22-FEB-2012	✓	28-MAR-2012
EP131A: Organochlorine Pesticides					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001, SD3 - 1043/8003, SD5 - 1035/8005, SD7 - 1027/8007, SD9 - 1019/8009, Dup2 - 10110/8811	08-FEB-2012	17-FEB-2012	22-FEB-2012	✓	28-MAR-2012
SD2 - 1052/8002, SD4 - 1044/8004, SD6 - 1036/8006, SD8 - 1028/8008, SD10 - 10110/8010, Dup2 - 10110/8811	08-FEB-2012	21-FEB-2012	22-FEB-2012	✓	28-MAR-2012



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Matrix: SOIL Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation		Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP131B: Polychlorinated Biphenyls (as Aroclors)							
Soil Glass Jar - Unpreserved							
SD1 - 1051/8001, SD3 - 1043/8003, SD5 - 1035/8005, SD7 - 1027/8007, SD9 - 1019/8009, Dup2 - 10110/8811	08-FEB-2012	17-FEB-2012	22-FEB-2012	✓	21-FEB-2012	28-MAR-2012	✓
SD2 - 1052/8002, SD4 - 1044/8004, SD6 - 1036/8006, SD8 - 1028/8008, SD10 - 10110/8010,							
EP216: Perchlorate by LC/MS							
Soil Glass Jar - Unpreserved							
SD1 - 1051/8001, SD3 - 1043/8003, SD5 - 1035/8005, SD7 - 1027/8007, SD9 - 1019/8009, Dup2 - 10110/8811	08-FEB-2012	15-FEB-2012	07-MAR-2012	✓	17-FEB-2012	14-MAR-2012	✓
SD2 - 1052/8002, SD4 - 1044/8004, SD6 - 1036/8006, SD8 - 1028/8008, SD10 - 10110/8010,							
EP231: Perfluorooctyl Acids and Sulfonates.							
Soil Glass Jar - Unpreserved							
SD1 - 1051/8001, SD3 - 1043/8003, SD5 - 1035/8005, SD7 - 1027/8007, SD9 - 1019/8009, Dup2 - 10110/8811	08-FEB-2012	16-FEB-2012	06-AUG-2012	✓	16-FEB-2012	27-MAR-2012	✓
SD2 - 1052/8002, SD4 - 1044/8004, SD6 - 1036/8006, SD8 - 1028/8008, SD10 - 10110/8010,							

Matrix: WATER Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation		Analysis			
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP074A: Monocyclic Aromatic Hydrocarbons							
Amber VOC Vial- NaHSO4 or H2SO4							
Trip 3 - 10110/6712	08-FEB-2012	14-FEB-2012	22-FEB-2012	✓	14-FEB-2012	22-FEB-2012	✓
EP074B: Oxygenated Compounds							
Amber VOC Vial- NaHSO4 or H2SO4							
Trip 3 - 10110/6712	08-FEB-2012	14-FEB-2012	22-FEB-2012	✓	14-FEB-2012	22-FEB-2012	✓
EP074C: Sulfonated Compounds							
Amber VOC Vial- NaHSO4 or H2SO4							
Trip 3 - 10110/6712	08-FEB-2012	14-FEB-2012	22-FEB-2012	✓	14-FEB-2012	22-FEB-2012	✓
EP074D: Fumigants							
Amber VOC Vial- NaHSO4 or H2SO4							
Trip 3 - 10110/6712	08-FEB-2012	14-FEB-2012	22-FEB-2012	✓	14-FEB-2012	22-FEB-2012	✓
EP074E: Halogenated Aliphatic Compounds							
Amber VOC Vial- NaHSO4 or H2SO4							
Trip 3 - 10110/6712	08-FEB-2012	14-FEB-2012	22-FEB-2012	✓	14-FEB-2012	22-FEB-2012	✓



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Matrix: WATER Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Sample Date	Extraction / Preparation		Analysis	
		Date extracted	Due for extraction	Date analysed	Due for analysis
EP074F: Halogenated Aromatic Compounds					
Amber VOC Vial- NaHSO4 or H2SO4 Trip 3 - 10110/6712	08-FEB-2012	14-FEB-2012	22-FEB-2012	14-FEB-2012	22-FEB-2012
			✓		✓
EP074G: Trihalomethanes					
Amber VOC Vial- NaHSO4 or H2SO4 Trip 3 - 10110/6712	08-FEB-2012	14-FEB-2012	22-FEB-2012	14-FEB-2012	22-FEB-2012
			✓		✓
EP074H: Naphthalene					
Amber VOC Vial- NaHSO4 or H2SO4 Trip 3 - 10110/6712	08-FEB-2012	14-FEB-2012	22-FEB-2012	14-FEB-2012	22-FEB-2012
			✓		✓



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Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type Analytical Methods	Method	Count		Rate (%)		Evaluation	Quality Control Specification
		QC	Regular	Actual	Expected		
Laboratory Duplicates (DUP)							
Moisture Content	EA055-103	4	40	10.0	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organochlorine Pesticides (Ultra-trace)	EP131A	2	12	16.7	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organophosphorus Pesticides (Ultra-trace)	EP130	2	11	18.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PCB's (Ultra-trace)	EP131B	2	12	16.7	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Perchlorate in Soils and Sediments by LC/MS	EP216	2	11	18.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Perfluorooctyl Acids and Sulfonates by LC/MS/MS	EP231	2	11	18.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Semivolatile Organic Compounds	EP075	2	11	18.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS (Low Level)	EG035T-LL	2	11	18.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Sediments by ICPMS	EG020-SD	2	11	18.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Organic Carbon	EP003	2	11	18.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071-SD	2	11	18.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	2	11	18.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	2	11	18.2	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Organochlorine Pesticides (Ultra-trace)	EP131A	1	12	8.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organophosphorus Pesticides (Ultra-trace)	EP130	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PCB's (Ultra-trace)	EP131B	1	12	8.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Perchlorate in Soils and Sediments by LC/MS	EP216	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Perfluorooctyl Acids and Sulfonates by LC/MS/MS	EP231	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Semivolatile Organic Compounds	EP075	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS (Low Level)	EG035T-LL	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Sediments by ICPMS	EG020-SD	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Organic Carbon	EP003	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071-SD	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Organochlorine Pesticides (Ultra-trace)	EP131A	1	12	8.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Organophosphorus Pesticides (Ultra-trace)	EP130	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PCB's (Ultra-trace)	EP131B	1	12	8.3	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Perchlorate in Soils and Sediments by LC/MS	EP216	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Perfluorooctyl Acids and Sulfonates by LC/MS/MS	EP231	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Semivolatile Organic Compounds	EP075	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS (Low Level)	EG035T-LL	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals in Sediments by ICPMS	EG020-SD	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Organic Carbon	EP003	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071-SD	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Volatile Organic Compounds	EP074	1	11	9.1	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement



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Matrix: **SOIL** Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type	Analytical Methods	Method	Count		Rate (%)		Quality Control Specification
			QC	Regular	Actual	Expected		Evaluation
Matrix Spikes (MS)	Organochlorine Pesticides (Ultra-trace)	EP131A	1	12	8.3	5.0	ALS QCS3 requirement
	Organophosphorus Pesticides (Ultra-trace)	EP130	1	11	9.1	5.0	ALS QCS3 requirement
	PCB's (Ultra-trace)	EP131B	1	12	8.3	5.0	ALS QCS3 requirement
	Perchlorate in Soils and Sediments by LC/MS	EP216	1	11	9.1	5.0	ALS QCS3 requirement
	Perfluorooctyl Acids and Sulfonates by LC/MS/MS	EP231	1	11	9.1	5.0	ALS QCS3 requirement
	Semivolatile Organic Compounds	EP075	1	11	9.1	5.0	ALS QCS3 requirement
	Total Mercury by FIMS (Low Level)	EG035T-LL	1	11	9.1	5.0	ALS QCS3 requirement
	Total Metals in Sediments by ICPMS	EG020-SD	1	11	9.1	5.0	ALS QCS3 requirement
	TPH - Semivolatile Fraction	EP071-SD	1	11	9.1	5.0	ALS QCS3 requirement
	TPH Volatiles/BTEX	EP080	1	11	9.1	5.0	ALS QCS3 requirement
	Volatile Organic Compounds	EP074	1	11	9.1	5.0	ALS QCS3 requirement

Matrix: **WATER** Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type	Analytical Methods	Method	Count		Rate (%)		Quality Control Specification
			QC	Regular	Actual	Expected		Evaluation
Laboratory Duplicates (DUP)	Volatile Organic Compounds	EP074	1	10	10.0	10.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
					✓		
Laboratory Control Samples (LCS)	Volatile Organic Compounds	EP074	1	10	10.0	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
					✓		
Method Blanks (MB)	Volatile Organic Compounds	EP074	1	10	10.0	5.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
					✓		
Matrix Spikes (MS)	Volatile Organic Compounds	EP074	1	10	10.0	5.0	ALS QCS3 requirement
					✓		



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Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
Moisture Content	EA055-103	SOIL	A gravimetric procedure based on weight loss over a 12 hour drying period at 103-105 degrees C. This method is compliant with NEPM (2010 Draft) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Total Metals in Sediments by ICPMS	EG020-SD	SOIL	(APHA 21st ed., 3125; USEPA SW846 - 6020; ALS QWI-EN/EG020): The ICPMS technique utilizes a highly efficient argon plasma to ionize selected elements. Ions are then passed into a high vacuum mass spectrometer, which separates the analytes based on their distinct mass to charge ratios prior to their measurement by a discrete dynode ion detector. Analyte list and LORs per NODG.
Total Mercury by FIMS (Low Level)	EG035T-LL	SOIL	AS 3550, APHA 21st ed., 3112 Hg - B (Flow-injection (SnCl ₂)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl ₂ which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3)
Total Organic Carbon	EP003	SOIL	In-house C-IR17. Dried and pulverised sample is reacted with acid to remove inorganic Carbonates, then combusted in a LECO furnace in the presence of strong oxidants / catalysts. The evolved (Organic) Carbon (as CO ₂) is automatically measured by infra-red detector.
TPH - Semivolatile Fraction	EP071-SD	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 504)
Volatile Scan for Unknowns	EP072	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS and unknowns are identified by comparison of peaks with the NIST library. Semi-quantification is by comparison with the closest eluting internal standard.
Semivolatile Scan for Unknowns	EP073	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Capillary GC/MS and unknowns are identified by comparison of peaks with the NIST library. Semi-quantification is by comparison with the closest eluting internal standard.
Volatile Organic Compounds	EP074	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 501)
Semivolatile Organic Compounds	EP075	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (1999) Schedule B(3) (Method 502)
TPH Volatiles/BTEX	EP080	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 501)
Organophosphorus Pesticides (Ultra-trace)	EP130	SOIL	USEPA Method 3640 (GPC cleanup), 8141 (GC/FPD - Capillary Column) This technique is compliant with NEPM (1999) Schedule B(3) (Method 505)
Organochlorine Pesticides (Ultra-trace)	EP131A	SOIL	USEPA Method 3640 (GPC cleanup), 3620 (Florisil), 8081/8082 (GC/uECD/uECD) This technique is compliant with NEPM (1999) Schedule B(3) (Method 504)
PCB's (Ultra-trace)	EP131B	SOIL	USEPA Method 3640 (GPC cleanup), 3620 (Florisil), 8081/8082 (GC/uECD/uECD) This technique is compliant with NEPM (1999) Schedule B(3) (Method 504)
Perchlorate in Soils and Sediments by LC/MS	EP216	SOIL	US EPA Method 6850: 5 g of sample is extracted with 25 mL of water acidified with acetic acid, filtered with a 0.2 µm filter (to extend extract holding time) and analysed by LC/MS in ESI (negative) mode.



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Analytical Methods	Method	Matrix	Method Descriptions
Perfluorooctyl Acids and Sulfonates by LC/MS/MS	* EP231	SOIL	In-House. A portion of soil is soaked in sodium hydroxide followed by extraction with methanol. The extract is neutralised with HCl and an aliquot taken to dryness, made up in mobile phase. Analysis is by LC/MS/MS, ESI Negative Mode using MRM.
Volatile Scan for Unknowns	EP072	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Volatile Organic Compounds	EP074	WATER	USEPA SW 846 - 8260B Water samples are directly purged prior to analysis by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Preparation Methods	Method	Matrix	Method Descriptions
Hot Block Digest for metals in soils sediments and sludges	EN69	SOIL	USEPA 200.2 Mod. Hot Block Acid Digestion 1.0g of sample is heated with Nitric and Hydrochloric acids, then cooled. Peroxide is added and samples heated and cooled again before being filtered and bulked to volume for analysis. Digest is appropriate for determination of selected metals in sludge, sediments, and soils. This method is compliant with NEPM (1999) Schedule B(3) (Method 202)
Sample Extraction for Perchlorate	EP216-PR	SOIL	US EPA 6850.
Sample Extraction for Perfluoroalkyl Compounds	EP231-PR	SOIL	In-House
Methanolic Extraction of Soils for Purge and Trap	ORG16	SOIL	(USEPA SW 846 - 5030A) 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.
Tumbler Extraction of Solids (Option A - Concentrating)	ORG17A	SOIL	In-house, Mechanical agitation (tumbler). 20g of sample, Na2SO4 and surrogate are extracted with 150mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Tumbler Extraction of Solids/ Sample Cleanup	ORG17A-UJP	SOIL	In-house, Mechanical agitation (tumbler). 20g of sample, Na2SO4 and surrogate are extracted with 150mL 1:1 DCM/Acetone by end over end tumble. Samples are extracted, concentrated (by KD) and exchanged into an appropriate solvent for GPC and florasil cleanup as required.
Tumbler Extraction of Solids for LVI (Non-concentrating)	ORG17D	SOIL	In house: 10g of sample, Na2SO4 and surrogate are extracted with 50mL 1:1 DCM/Acetone by end over end tumbling. An aliquot is concentrated by nitrogen blowdown to a reduced volume for analysis if required.
Volatiles Water Preparation	ORG16-W	WATER	A 5 mL aliquot or 5 mL of a diluted sample is added to a 40 mL VOC vial for sparging.



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Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QW/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: SOIL

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Duplicate (DUP) RPDs							
EP231: Perfluorooctyl Acids and Sulfonates.	EM1201358-001	SD1 - 1051/8001	PFOS	1763-23-1	40.8 %	0-20%	RPD exceeds LOR based limits
Laboratory Control Spike (LCS) Recoveries							
EP075D: Nitrosamines	2582920-002	----	Methapyriene	91-80-5	16.3 %	24.4-143%	Recovery less than lower control limit
EP075E: Nitroaromatics and Ketones	2582920-002	----	1-Naphthylamine	134-32-7	4.5 %	10-84%	Recovery less than lower control limit
Matrix Spike (MS) Recoveries							
EP131B: Polychlorinated Biphenyls (as Aroclors)	EM1201358-002	SD2 - 1052/8002	Aroclor 1254	11097-69-1	58.0 %	61.3-121%	Recovery less than lower data quality objective
EP231: Perfluorooctyl Acids and Sulfonates.	EM1201358-001	SD1 - 1051/8001	PFOS	1763-23-1	Not Determined	----	MS recovery not determined, background level greater than or equal to 4x spike level.
EP231: Perfluorooctyl Acids and Sulfonates.	EM1201358-001	SD1 - 1051/8001	PFOA	335-67-1	Not Determined	----	Matrix spike recovery not determined due to sample matrix interference.
EP231: Perfluorooctyl Acids and Sulfonates.	EM1201358-001	SD1 - 1051/8001	6:2 Fluorotelomer Sulfonate (6:2 Fts)	27619-97-2	49.0 %	56-138%	Recovery less than lower data quality objective

- For all matrices, no Method Blank value outliers occur.

Regular Sample Surrogates

Sub-Matrix: SEDIMENT

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted							
EP074S: VOC Surrogates	EM1201358-017	SD5 - 1035/8005 Volatiles	1,2-Dichloroethane-D4	17060-07-0	55.8 %	62-122 %	Recovery less than lower data quality objective
EP074S: VOC Surrogates	EM1201358-013	SD1 - 1051/8001 Volatiles	Toluene-D8	2037-26-5	63.4 %	64-120 %	Recovery less than lower data quality objective
EP074S: VOC Surrogates	EM1201358-017	SD5 - 1035/8005 Volatiles	Toluene-D8	2037-26-5	55.2 %	64-120 %	Recovery less than lower data quality objective
EP074S: VOC Surrogates	EM1201358-021	SD9 - 1019/8009 Volatiles	Toluene-D8	2037-26-5	61.4 %	64-120 %	Recovery less than lower data quality objective
EP074S: VOC Surrogates	EM1201358-017	SD5 - 1035/8005 Volatiles	4-Bromofluorobenzene	460-00-4	56.8 %	66-124 %	Recovery less than lower data quality objective
EP074S: VOC Surrogates	EM1201358-021	SD9 - 1019/8009 Volatiles	4-Bromofluorobenzene	460-00-4	63.8 %	66-124 %	Recovery less than lower data quality objective
EP075S: Acid Extractable Surrogates	EM1201358-008	SD8 - 1028/8008	2-Fluorophenol	367-12-4	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences



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Sub-Matrix: **SEDIMENT**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted - Continued							
EP075S: Acid Extractable Surrogates	EM1201358-010	SD10 - 10110/8010	2-Fluorophenol	367-12-4	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-007	SD7 - 1027/8007	2-Fluorophenol	367-12-4	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-009	SD9 - 1019/8009	2-Fluorophenol	367-12-4	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-011	Dup2 - 10110/8811	2-Fluorophenol	367-12-4	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-008	SD8 - 1028/8008	Phenol-d6	13127-88-3	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-010	SD10 - 10110/8010	Phenol-d6	13127-88-3	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-007	SD7 - 1027/8007	Phenol-d6	13127-88-3	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-009	SD9 - 1019/8009	Phenol-d6	13127-88-3	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-011	Dup2 - 10110/8811	Phenol-d6	13127-88-3	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-008	SD8 - 1028/8008	2-Chlorophenol-D4	93951-73-6	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-010	SD10 - 10110/8010	2-Chlorophenol-D4	93951-73-6	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-007	SD7 - 1027/8007	2-Chlorophenol-D4	93951-73-6	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-009	SD9 - 1019/8009	2-Chlorophenol-D4	93951-73-6	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-011	Dup2 - 10110/8811	2-Chlorophenol-D4	93951-73-6	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-008	SD8 - 1028/8008	2.4.6-Tribromophenol	118-79-6	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-010	SD10 - 10110/8010	2.4.6-Tribromophenol	118-79-6	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-007	SD7 - 1027/8007	2.4.6-Tribromophenol	118-79-6	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-009	SD9 - 1019/8009	2.4.6-Tribromophenol	118-79-6	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075S: Acid Extractable Surrogates	EM1201358-011	Dup2 - 10110/8811	2.4.6-Tribromophenol	118-79-6	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-008	SD8 - 1028/8008	Nitrobenzene-D5	4165-60-0	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-010	SD10 - 10110/8010	Nitrobenzene-D5	4165-60-0	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-007	SD7 - 1027/8007	Nitrobenzene-D5	4165-60-0	Not Determined	----	Surrogate recovery not determined due to (target or non-target) matrix interferences



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Sub-Matrix: **SEDIMENT**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted - Continued							
EP075T: Base/Neutral Extractable Surrogates	EM1201358-009	SD9 - 1019/8009	Nitrobenzene-D5	4165-60-0	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-011	Dup2 - 10110/8811	Nitrobenzene-D5	4165-60-0	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-008	SD8 - 1028/8008	1,2-Dichlorobenzene-D4	2199-69-1	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-010	SD10 - 10110/8010	1,2-Dichlorobenzene-D4	2199-69-1	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-007	SD7 - 1027/8007	1,2-Dichlorobenzene-D4	2199-69-1	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-009	SD9 - 1019/8009	1,2-Dichlorobenzene-D4	2199-69-1	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-011	Dup2 - 10110/8811	1,2-Dichlorobenzene-D4	2199-69-1	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-008	SD8 - 1028/8008	2-Fluorobiphenyl	321-60-8	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-010	SD10 - 10110/8010	2-Fluorobiphenyl	321-60-8	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-007	SD7 - 1027/8007	2-Fluorobiphenyl	321-60-8	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-009	SD9 - 1019/8009	2-Fluorobiphenyl	321-60-8	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-011	Dup2 - 10110/8811	2-Fluorobiphenyl	321-60-8	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-008	SD8 - 1028/8008	Anthracene-d10	1719-06-8	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-010	SD10 - 10110/8010	Anthracene-d10	1719-06-8	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-007	SD7 - 1027/8007	Anthracene-d10	1719-06-8	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-009	SD9 - 1019/8009	Anthracene-d10	1719-06-8	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-011	Dup2 - 10110/8811	Anthracene-d10	1719-06-8	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-008	SD8 - 1028/8008	4-Terphenyl-d14	1718-51-0	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-010	SD10 - 10110/8010	4-Terphenyl-d14	1718-51-0	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-007	SD7 - 1027/8007	4-Terphenyl-d14	1718-51-0	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-009	SD9 - 1019/8009	4-Terphenyl-d14	1718-51-0	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP075T: Base/Neutral Extractable Surrogates	EM1201358-011	Dup2 - 10110/8811	4-Terphenyl-d14	1718-51-0	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences



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Sub-Matrix: **SEDIMENT**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Samples Submitted - Continued							
EP080S: TPH(V)/BTEX Surrogates	EM1201358-017	SD5 - 1035/8005 Volatiles	1,2-Dichloroethane-D4	17060-07-0	56.1 %	57-129 %	Recovery less than lower data quality objective
EP080S: TPH(V)/BTEX Surrogates	EM1201358-017	SD5 - 1035/8005 Volatiles	Toluene-D8	2037-26-5	51.0 %	58-120 %	Recovery less than lower data quality objective
EP080S: TPH(V)/BTEX Surrogates	EM1201358-017	SD5 - 1035/8005 Volatiles	4-Bromofluorobenzene	460-00-4	54.1 %	56-126 %	Recovery less than lower data quality objective
EP130S: Organophosphorus Pesticide Surrogate	EM1201358-001	SD1 - 1051/8001	DEF	78-48-8	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP130S: Organophosphorus Pesticide Surrogate	EM1201358-004	SD4 - 1044/8004	DEF	78-48-8	20.4 %	27.8-149 %	Recovery less than lower data quality objective
EP130S: Organophosphorus Pesticide Surrogate	EM1201358-006	SD6 - 1036/8006	DEF	78-48-8	22.2 %	27.8-149 %	Recovery less than lower data quality objective
EP130S: Organophosphorus Pesticide Surrogate	EM1201358-010	SD10 - 10110/8010	DEF	78-48-8	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP130S: Organophosphorus Pesticide Surrogate	EM1201358-003	SD3 - 1043/8003	DEF	78-48-8	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP130S: Organophosphorus Pesticide Surrogate	EM1201358-007	SD7 - 1027/8007	DEF	78-48-8	25.8 %	27.8-149 %	Recovery less than lower data quality objective
EP130S: Organophosphorus Pesticide Surrogate	EM1201358-009	SD9 - 1019/8009	DEF	78-48-8	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP130S: Organophosphorus Pesticide Surrogate	EM1201358-011	Dup2 - 10110/8811	DEF	78-48-8	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP131S: OC Pesticide Surrogate	EM1201358-008	SD8 - 1028/8008	Dibromo-DDE	21655-73-2	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP131S: OC Pesticide Surrogate	EM1201358-010	SD10 - 10110/8010	Dibromo-DDE	21655-73-2	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP131S: OC Pesticide Surrogate	EM1201358-011	Dup2 - 10110/8811	Dibromo-DDE	21655-73-2	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP131T: PCB Surrogate	EM1201358-008	SD8 - 1028/8008	Decachlorobiphenyl	2051-24-3	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP131T: PCB Surrogate	EM1201358-010	SD10 - 10110/8010	Decachlorobiphenyl	2051-24-3	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP131T: PCB Surrogate	EM1201358-009	SD9 - 1019/8009	Decachlorobiphenyl	2051-24-3	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences
EP131T: PCB Surrogate	EM1201358-011	Dup2 - 10110/8811	Decachlorobiphenyl	2051-24-3	Not Determined	---	Surrogate recovery not determined due to (target or non-target) matrix interferences

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

Matrix: **SOIL**

Method Container / Client Sample ID(s)	Extraction / Preparation		Analysis	
	Date extracted	Due for extraction	Date analysed	Due for analysis
EP003: Total Organic Carbon (TOC) in Soil				



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Matrix: SOIL

Method	Extraction / Preparation			Analysis	
	Date extracted	Due for extraction	Days overdue	Date analysed	Days overdue
EP003: Total Organic Carbon (TOC) in Soil - Analysis Holding Time Compliance					
Pulp Bag					
SD1 - 1051/8001, SD2 - 1052/8002, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, SD10 - 10110/8010, Dup2 - 10110/8811	17-FEB-2012	15-FEB-2012	2	----	----
EP075A: Phenolic Compounds					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001, SD2 - 1052/8002, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, SD10 - 10110/8010, Dup2 - 10110/8811	23-FEB-2012	22-FEB-2012	1	----	----
EP075B: Polynuclear Aromatic Hydrocarbons					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001, SD2 - 1052/8002, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, SD10 - 10110/8010, Dup2 - 10110/8811	23-FEB-2012	22-FEB-2012	1	----	----
EP075C: Phthalate Esters					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001, SD2 - 1052/8002, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, SD10 - 10110/8010, Dup2 - 10110/8811	23-FEB-2012	22-FEB-2012	1	----	----
EP075D: Nitrosamines					
Soil Glass Jar - Unpreserved					
SD1 - 1051/8001, SD2 - 1052/8002, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, SD10 - 10110/8010, Dup2 - 10110/8811	23-FEB-2012	22-FEB-2012	1	----	----
EP075E: Nitroaromatics and Ketones					



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Matrix: SOIL

Method	Extraction / Preparation			Analysis		
	Date extracted	Due for extraction	Days overdue	Date analysed	Due for analysis	Days overdue
EP075E: Nitroaromatics and Ketones - Analysis Holding Time Compliance						
Soil Glass Jar - Unpreserved						
Container / Client Sample ID(s)	23-FEB-2012	22-FEB-2012	1	----	----	----
SD1 - 1051/8001, SD2 - 1052/8002, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, SD10 - 10110/8010, Dup2 - 10110/8811						
EP075F: Haloethers						
Soil Glass Jar - Unpreserved						
Container / Client Sample ID(s)	23-FEB-2012	22-FEB-2012	1	----	----	----
SD1 - 1051/8001, SD2 - 1052/8002, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, SD10 - 10110/8010, Dup2 - 10110/8811						
EP075G: Chlorinated Hydrocarbons						
Soil Glass Jar - Unpreserved						
Container / Client Sample ID(s)	23-FEB-2012	22-FEB-2012	1	----	----	----
SD1 - 1051/8001, SD2 - 1052/8002, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, SD10 - 10110/8010, Dup2 - 10110/8811						
EP075H: Anilines and Benzidines						
Soil Glass Jar - Unpreserved						
Container / Client Sample ID(s)	23-FEB-2012	22-FEB-2012	1	----	----	----
SD1 - 1051/8001, SD2 - 1052/8002, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, SD10 - 10110/8010, Dup2 - 10110/8811						
EP075I: Organochlorine Pesticides						
Soil Glass Jar - Unpreserved						
Container / Client Sample ID(s)	23-FEB-2012	22-FEB-2012	1	----	----	----
SD1 - 1051/8001, SD2 - 1052/8002, SD3 - 1043/8003, SD4 - 1044/8004, SD5 - 1035/8005, SD6 - 1036/8006, SD7 - 1027/8007, SD8 - 1028/8008, SD9 - 1019/8009, SD10 - 10110/8010, Dup2 - 10110/8811						
EP075J: Organophosphorus Pesticides						



Page : 20 of 20
 Work Order : EM1201358
 Client : GOLDER ASSOCIATES
 Project : 117613201

Matrix: **SOIL**

Method	Extraction / Preparation			Analysis	
	Date extracted	Due for extraction	Days overdue	Date analysed	Days overdue
Container / Client Sample ID(s) EP075J: Organophosphorus Pesticides - Analysis Holding Time Compliance Soil Glass Jar - Unpreserved SD1 - 1051/8001, SD3 - 1043/8003, SD5 - 1035/8005, SD7 - 1027/8007, SD9 - 1019/8009, Dup2 - 10110/8811 SD2 - 1052/8002, SD4 - 1044/8004, SD6 - 1036/8006, SD8 - 1028/8008, SD10 - 10110/8010,	23-FEB-2012	22-FEB-2012	1	----	----

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- **No Quality Control Sample Frequency Outliers exist.**

Split batch of EM1201412
CHAIN OF CUSTODY



GOLDER ASSOCIATES PTY LTD
Building 7, Botanica Corporate Park
576-588 Swan Street
RICHMOND

Tel: (03) 8862 3500
Fax: (03) 8862 3501

# OBSERVATIONS	SAMPLE DATE	SAMPLE NUMBER TAA XXX/MQNN	SAMPLE TYPE	SAMPLE DEPTH (m)	No. OF CONTAINERS	TPH	BTEX	Metals	PAH	Phenols	VOC (full & unknown scan)	SVOC (full & unknown scan)	Pesticides (OC & OP)	PCBs	Perchlorates	PFOS/PFOA	Dioxins/Furans	TOC	
1	8/02/2012	SD1 - 1051/8001	sediment	N/A	6	x	x	x	x	x	x	x	x	x	x	x	x	x	x
2	8/02/2012	SD2 - 1052/8002	sediment	N/A	5	x	x	x	x	x	x	x	x	x	x	x	x	x	x
3	8/02/2012	SD3 - 1043/8003	sediment	N/A	5	x	x	x	x	x	x	x	x	x	x	x	x	x	x
4	8/02/2012	SD4 - 1044/8004	sediment	N/A	5	x	x	x	x	x	x	x	x	x	x	x	x	x	x
5	8/02/2012	SD5 - 1035/8005	sediment	N/A	5	x	x	x	x	x	x	x	x	x	x	x	x	x	x
6	8/02/2012	SD6 - 1036/8006	sediment	N/A	5	x	x	x	x	x	x	x	x	x	x	x	x	x	x
7	8/02/2012	SD7 - 1027/8007	sediment	N/A	5	x	x	x	x	x	x	x	x	x	x	x	x	x	x
8	8/02/2012	SD8 - 1028/8008	sediment	N/A	5	x	x	x	x	x	x	x	x	x	x	x	x	x	x
9	8/02/2012	SD9 - 1019/8009	sediment	N/A	5	x	x	x	x	x	x	x	x	x	x	x	x	x	x
10	8/02/2012	SD10 - 10110/8010	sediment	N/A	5	x	x	x	x	x	x	x	x	x	x	x	x	x	x
11	8/02/2012	Dup2 - 10110/8811	sediment	N/A	5	x	x	x	x	x	x	x	x	x	x	x	x	x	x
12	8/02/2012	Trip 3 - 10110/6712	Trip	N/A	1														

Environmental Division
Melbourne
Work Order
AM
101
EM1201358



Telephone: +61-3-8549 9600

Special Instructions:

TURN AROUND TIME REQUIRED

1 Working Day
 2 Working Days
 3 Working Days
 4 Working Days
 5 Working Days (standard)
 Other

SAMPLE RECEIPT

Relinquished by: Niamh McCormack Date: 9/02/2012 Received by: *RACU* Date: *2/12*

Organization: Golder Associates Received by: *AM* Date: *2/12*

ANALYTICAL SCHEDULE

Relinquished by: Niamh McCormack Date: 9/02/2012 Received by: Date: Security Sealed

Organization: Golder Associates Received by: Date: Date: Chilled

Organization: Received by: Date: Date: Frozen

Organization: Received by: Date: Date: Ambient

RECEIVING LABORATORY TO CONFIRM RECEIPT OF ANALYTICAL SCHEDULE BY RETURN FAX TO: (03) 8862 3501

Observations to Assist Analysis and OHS
 C - Expected to be Highly Contaminated HS - Expected High Salinity S - Sheen
 N - NAPL Sample HOC - Expected High Total Organic Carbon O - Odourous

Original (white) - Laboratory
 Duplicate (yellow) - Project File
 Triplicate (pink) - COC Book

Date: _____

CERTIFICATE OF ANALYSIS

Client	GOLDER ASSOCIATES	Laboratory :	Environmental Division Melbourne
Contact	Niamh McCormack	Contact	LAB.MANAGER.EM McGrath
Address:	P O BOX 6079 Building 7, 570-588 Swan St, Richmond, VIC. 3121 HAWTHORN WEST VIC, AUSTRALIA 3122	Address:	4 Westall Rd Springvale VIC 3171 Australia
Project	117613201 F-ViC	Quote #	EN/002/11
Order #	GA-MEL 332509	Received:	9 Feb 2012
C-O-C #	- Not provided -	Issued	28 Feb 2012
Site	F-ViC	Number of Samples	
E-mail	nmccormack@golder.com.au	Received:	6
Phone	8862 3500	Analysed:	6
Fax	8862 3501		
E-mail	Melbourne.Enviro.Services@alsglobal.com		

Notes

- LOR = Limit of reporting
- I-TEF = International toxic equivalency factor
- I-TEQ = International toxic equivalence
- T = tetra Pe = penta Hx = hexa Hp =hepta O = octa CDD, dioxin = chlorinated dibenzo-p-dioxin WHO-TEF = World Health Organisation toxic equivalency factor
- 1 I-TEQ(zero) and WHO-TEQ(zero) calculated treating <LOR as zero concentration WHO-TEQ = World Health Organisation toxic equivalence
- 2 I-TEQ(0.5 LOR) and WHO-TEQ(0.5 zero) calculated treating <LOR as 0.5 LOR concentration CDF, furan = chlorinated dibenzofuran
- 3 I-TEQ(LOR) and WHO-TEQ(LOR) calculated treating <LOR as LOR concentration
- 4 Totals LORs are calculated by multiplying the number of peaks by the individual LOR per compound

Work order specific comments

Samples analysed 'as received', results reported on 'dry weight' basis.
 EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
 EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
 Split batch of EM1201358 due to long turn-around of dioxin and furan analysis.
 EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
 EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
 EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
 EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
 Dioxins and Furans conducted by ALS Brisbane, NATA Site No. 818.

ALSE - Excellence in Analytical Testing

NATA Accredited Laboratory - 825

This document is issued in accordance with NATA's accreditation requirements.

Accredited for compliance with ISO/IEC 17025



This document has been digitally signed by those names that appear on this report and are the authorised signatories. Digital signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatory

Peter Blow

Position

HRMS Chemist

Department

GC/HR-MS - NATA 825 (818 - Brisbane)

Client : GOLDER ASSOCIATES
Project : 117613201 F-V/C

Work Order : EM1201412
ALS Quote Reference : EN/002/11



ALS Environmental



Client : GOLDER ASSOCIATES
 Project : 117613201 F-V/C

Work Order : EM1201412
 ALS Quote Reference : EN/002/11

ANALYTICAL RESULTS FOR DIOXINS AND FURANS

Method Code EP300 Laboratory Sample ID: EM1201412001 Qc Lot Number: 2184403 Date Sampled: 08-Feb-2012
 Client Sample ID: SD1-1051/8001 10.0 Sample Matrix: SEDIMENT Date Extracted: 24-Feb-2012
 Date Analysed: 24-Feb-2012

Compound	Conc	LOR pg/g	WHO-TEF	WHO-TEQ1 (zero)	WHO-TEQ2 (0.5 LOR)	WHO-TEQ3 (LOR)	I-TEF	I-TEQ1 (zero)	I-TEQ2 (0.5 LOR)	I-TEQ3 (LOR)	¹³ C ₁₂ Rec(%)
2378-TCDD	<0.5	0.5	1	0.00	0.25	0.50	1	0.00	0.25	0.50	50.7
12378-PeCDD	<2.5	2.5	1	0.00	1.26	2.51	0.5	0.00	0.63	1.26	38.6
123478-HxCDD	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	38.5
123678-HxCDD	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	88.3
123789-HxCDD	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	-
1234678-HpCDD	3.7	2.5	0.01	0.04	0.04	0.04	0.01	0.04	0.04	0.04	41.5
OCDD	84.5	10.1	0.0003	0.03	0.03	0.03	0.001	0.08	0.08	0.08	25.3
2378-TCDF	<0.5	0.5	0.1	0.00	0.03	0.05	0.1	0.00	0.03	0.05	46.1
12378-PeCDF	<2.5	2.5	0.03	0.00	0.04	0.08	0.05	0.00	0.06	0.13	32.5
23478-PeCDF	<2.5	2.5	0.3	0.00	0.38	0.75	0.5	0.00	0.63	1.26	31.0
123478-HxCDF	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	32.9
123678-HxCDF	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	75.5
234678-HxCDF	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	49.6
123789-HxCDF	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	32.4
1234678-HpCDF	<2.5	2.5	0.01	0.00	0.01	0.03	0.01	0.00	0.01	0.03	39.0
1234789-HpCDF	<2.5	2.5	0.01	0.00	0.01	0.03	0.01	0.00	0.01	0.03	23.5
OCDF	<5.0	5.0	0.0003	0.00	0.00	0.00	0.001	0.00	0.00	0.01	-
Total TEQ	-	-	-	0.06	2.92	5.77	-	0.12	2.62	5.13	-

Group Totals	Conc	LOR ₄ pg/g	No. of Peaks
Tetra-Dioxins	1.6	1.5	3
Penta-Dioxins	<2.5	2.5	1
Hexa-Dioxins	<2.5	2.5	1
Hepta-Dioxins	9.0	5.0	2
Octa-Dioxin	84.5	10.1	1
Tetra-Furans	4.4	1.0	2
Penta-Furans	<2.5	2.5	1
Hexa-Furans	<5.0	5.0	2
Hepta-Furans	<2.5	2.5	1
Octa-Furan	<5.0	5.0	1
PCDD/Fs	99.5		



Work Order : EM1201412
ALS Quote Reference : EN/002/11

Client : GOLDER ASSOCIATES
Project : 117613201 F-VIC

ANALYTICAL RESULTS FOR DIOXINS AND FURANS

Method Code EP300 Laboratory Sample ID: EM1201412002 Qc Lot Number: 2184403 Date Sampled: 08-Feb-2012
Client Sample ID: SD7-1027/8007 10.0 Sample Matrix: SEDIMENT Date Extracted: 24-Feb-2012
Date Analysed: 24-Feb-2012

Compound	Conc	LOR pg/g	WHO-TEF	WHO-TEQ1 (zero)	WHO-TEQ2 (0.5 LOR)	WHO-TEQ3 (LOR)	I-TEF	I-TEQ1 (zero)	I-TEQ2 (0.5 LOR)	I-TEQ3 (LOR)	¹³ C ₁₂ Rec(%)
2378-TCDD	<0.5	0.5	1	0.00	0.25	0.50	1	0.00	0.25	0.50	54.6
12378-PeCDD	<2.5	2.5	1	0.00	1.24	2.49	0.5	0.00	0.62	1.24	39.0
123478-HxCDD	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	34.2
123678-HxCDD	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	78.1
123789-HxCDD	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	-
1234678-HpCDD	4.4	2.5	0.01	0.04	0.04	0.04	0.01	0.04	0.04	0.04	38.4
OCDD	61.2	10.0	0.0003	0.02	0.02	0.02	0.001	0.06	0.06	0.06	21.6
2378-TCDF	<0.5	0.5	0.1	0.00	0.02	0.05	0.1	0.00	0.02	0.05	42.2
12378-PeCDF	<2.5	2.5	0.03	0.00	0.04	0.07	0.05	0.00	0.06	0.12	34.4
23478-PeCDF	<2.5	2.5	0.3	0.00	0.37	0.75	0.5	0.00	0.62	1.24	34.7
123478-HxCDF	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	28.1
123678-HxCDF	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	63.4
234678-HxCDF	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	44.1
123789-HxCDF	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	36.6
1234678-HpCDF	<2.5	2.5	0.01	0.00	0.01	0.02	0.01	0.00	0.01	0.02	30.9
1234789-HpCDF	<2.5	2.5	0.01	0.00	0.01	0.02	0.01	0.00	0.01	0.02	22.5
OCDF	<5.0	5.0	0.0003	0.00	0.00	0.00	0.001	0.00	0.00	0.00	-
Total TEQ	-	-	-	0.06	2.89	5.71	-	0.11	2.58	5.06	-

Group Totals	Conc	LOR ₄ pg/g	No. of Peaks
Tetra-Dioxins	<0.5	0.5	1
Penta-Dioxins	<2.5	2.5	1
Hexa-Dioxins	<2.5	2.5	1
Hepta-Dioxins	9.1	5.0	2
Octa-Dioxin	61.2	10.0	1
Tetra-Furans	2.9	1.0	2
Penta-Furans	<2.5	2.5	1
Hexa-Furans	<2.5	2.5	1
Hepta-Furans	<2.5	2.5	1
Octa-Furan	<5.0	5.0	1
PCDD/Fs	73.2		



Work Order : EM1201412
ALS Quote Reference : EN/002/11

Client : GOLDER ASSOCIATES
Project : 117613201 F-V/C

ANALYTICAL RESULTS FOR DIOXINS AND FURANS

Method Code EP300 Laboratory Sample ID: EM1201412003 Qc Lot Number: 2184402 Date Sampled: 08-Feb-2012
Client Sample ID: SD8-1028/8008 10.0 Sample Matrix: SEDIMENT Date Extracted: 24-Feb-2012
Date Analysed: 24-Feb-2012

Compound	Conc	LOR pg/g	WHO-TEF	WHO-TEQ1 (zero)	WHO-TEQ2 (0.5 LOR)	WHO-TEQ3 (LOR)	I-TEF	I-TEQ1 (zero)	I-TEQ2 (0.5 LOR)	I-TEQ3 (LOR)	¹³ C ₁₂ Rec(%)
2378-TCDD	0.6	0.5	1	0.56	0.56	0.56	1	0.56	0.56	0.56	62.9
12378-PeCDD	<2.5	2.5	1	0.00	1.26	2.51	0.5	0.00	0.63	1.26	69.2
123478-HxCDD	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	38.9
123678-HxCDD	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	74.8
123789-HxCDD	2.6	2.5	0.1	0.26	0.26	0.26	0.1	0.26	0.26	0.26	-
1234678-HpCDD	82.1	2.5	0.01	0.82	0.82	0.82	0.01	0.82	0.82	0.82	53.1
OCDD	721.0	10.1	0.0003	0.22	0.22	0.22	0.001	0.72	0.72	0.72	47.3
2378-TCDF	2.0	0.5	0.1	0.20	0.20	0.20	0.1	0.20	0.20	0.20	50.8
12378-PeCDF	<2.5	2.5	0.03	0.00	0.04	0.08	0.05	0.00	0.06	0.13	59.3
23478-PeCDF	2.8	2.5	0.3	0.84	0.84	0.84	0.5	1.41	1.41	1.41	60.3
123478-HxCDF	3.5	2.5	0.1	0.35	0.35	0.35	0.1	0.35	0.35	0.35	32.6
123678-HxCDF	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	54.2
234678-HxCDF	3.0	2.5	0.1	0.30	0.30	0.30	0.1	0.30	0.30	0.30	44.8
123789-HxCDF	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	44.4
1234678-HpCDF	16.0	2.5	0.01	0.16	0.16	0.16	0.01	0.16	0.16	0.16	42.6
1234789-HpCDF	<2.5	2.5	0.01	0.00	0.01	0.03	0.01	0.00	0.01	0.03	43.3
OCDF	14.5	5.0	0.0003	0.00	0.00	0.00	0.001	0.01	0.01	0.01	-
Total TEQ	-	-	-	3.72	5.52	7.33	-	4.79	6.00	7.20	-

Group Totals	Conc	LOR ₄ pg/g	No. of Peaks
Tetra-Dioxins	8.3	5.5	11
Penta-Dioxins	<20.1	20.1	8
Hexa-Dioxins	32.0	17.6	7
Hepta-Dioxins	157.0	5.0	2
Octa-Dioxin	721.0	10.1	1
Tetra-Furans	138.0	11.6	23
Penta-Furans	43.0	27.6	11
Hexa-Furans	<22.6	22.6	9
Hepta-Furans	31.9	10.1	4
Octa-Furan	14.5	5.0	1
PCDD/Fs	1145.7		



Work Order : EM1201412
ALS Quote Reference : EN/002/11

Client : GOLDER ASSOCIATES
Project : 117613201 F-VIC

ANALYTICAL RESULTS FOR DIOXINS AND FURANS

Method Code EP300 Laboratory Sample ID: EM1201412004 Qc Lot Number: 2184402 Date Sampled: 08-Feb-2012
Client Sample ID: SD9-1019/8009 10.0 Sample Matrix: SEDIMENT Date Extracted: 24-Feb-2012
Date Analysed: 24-Feb-2012

Compound	Conc	LOR pg/g	WHO-TEF	WHO-TEQ1 (zero)	WHO-TEQ2 (0.5 LOR)	WHO-TEQ3 (LOR)	I-TEF	I-TEQ1 (zero)	I-TEQ2 (0.5 LOR)	I-TEQ3 (LOR)	¹³ C ₁₂ Rec(%)
2378-TCDD	<0.5	0.5	1	0.00	0.25	0.50	1	0.00	0.25	0.50	52.8
12378-PeCDD	<2.5	2.5	1	0.00	1.25	2.49	0.5	0.00	0.62	1.25	133.4
123478-HxCDD	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	48.2
123678-HxCDD	3.4	2.5	0.1	0.34	0.34	0.34	0.1	0.34	0.34	0.34	62.6
123789-HxCDD	3.9	2.5	0.1	0.39	0.39	0.39	0.1	0.39	0.39	0.39	-
1234678-HpCDD	83.6	2.5	0.01	0.84	0.84	0.84	0.01	0.84	0.84	0.84	62.8
OCDD	1060.0	10.0	0.0003	0.32	0.32	0.32	0.001	1.06	1.06	1.06	41.7
2378-TCDF	1.1	0.5	0.1	0.11	0.11	0.11	0.1	0.11	0.11	0.11	45.1
12378-PeCDF	<2.5	2.5	0.03	0.00	0.04	0.07	0.05	0.00	0.06	0.12	101.1
23478-PeCDF	<2.5	2.5	0.3	0.00	0.37	0.75	0.5	0.00	0.62	1.25	104.9
123478-HxCDF	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	37.3
123678-HxCDF	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	39.9
234678-HxCDF	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	44.0
123789-HxCDF	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	45.3
1234678-HpCDF	13.0	2.5	0.01	0.13	0.13	0.13	0.01	0.13	0.13	0.13	41.7
1234789-HpCDF	<2.5	2.5	0.01	0.00	0.01	0.02	0.01	0.00	0.01	0.02	53.8
OCDF	15.2	5.0	0.0003	0.00	0.00	0.00	0.001	0.02	0.02	0.02	-
Total TEQ	-	-	-	2.12	4.66	7.20	-	2.87	5.06	7.25	-

Group Totals	Conc	LOR ₄ pg/g	No. of Peaks
Tetra-Dioxins	<0.5	0.5	1
Penta-Dioxins	<14.9	14.9	6
Hexa-Dioxins	29.6	17.4	7
Hepta-Dioxins	141.0	5.0	2
Octa-Dioxin	1060.0	10.0	1
Tetra-Furans	35.3	7.5	15
Penta-Furans	<22.4	22.4	9
Hexa-Furans	<17.4	17.4	7
Hepta-Furans	25.7	10.0	4
Octa-Furan	15.2	5.0	1
PCDD/Fs	1306.8		



Client : GOLDER ASSOCIATES
 Project : 117613201 F-V/C

Work Order : EM1201412
 ALS Quote Reference : EN/002/11

ANALYTICAL RESULTS FOR DIOXINS AND FURANS

Method Code EP300 Laboratory Sample ID: EM1201412005 Qc Lot Number: 2184403 Date Sampled: 08-Feb-2012
 Client Sample ID: SD10-10110/8010 10.0 Sample Matrix: SEDIMENT Date Extracted: 24-Feb-2012
 Date Analysed: 24-Feb-2012

Compound	Conc	LOR pg/g	WHO-TEF	WHO-TEF (zero)	WHO-TEQ ₁ (0.5 LOR)	WHO-TEQ ₂ (LOR)	WHO-TEQ ₃ (LOR)	I-TEF	I-TEQ ₁ (zero)	I-TEQ ₂ (0.5 LOR)	I-TEQ ₃ (LOR)	¹³ C ₁₂ Rec(%)
2378-TCDD	<0.5	0.5	1	0.00	0.00	0.25	0.50	1	0.00	0.25	0.50	49.9
12378-PeCDD	<2.5	2.5	1	0.00	0.00	1.25	2.50	0.5	0.00	0.63	1.25	53.2
123478-HxCDD	<2.5	2.5	0.1	0.00	0.00	0.13	0.25	0.1	0.00	0.13	0.25	32.8
123678-HxCDD	2.8	2.5	0.1	0.28	0.28	0.28	0.28	0.1	0.28	0.28	0.28	51.1
123789-HxCDD	2.9	2.5	0.1	0.29	0.29	0.29	0.29	0.1	0.29	0.29	0.29	-
1234678-HpCDD	77.6	2.5	0.01	0.78	0.78	0.78	0.78	0.01	0.78	0.78	0.78	39.4
OCDD	1110.0	10.0	0.0003	0.33	0.33	0.33	0.33	0.001	1.11	1.11	1.11	30.7
2378-TCDF	1.0	0.5	0.1	0.10	0.10	0.10	0.10	0.1	0.10	0.10	0.10	45.8
12378-PeCDF	<2.5	2.5	0.03	0.00	0.00	0.04	0.08	0.05	0.00	0.06	0.13	49.2
23478-PeCDF	<2.5	2.5	0.3	0.00	0.00	0.38	0.75	0.5	0.00	0.63	1.25	47.5
123478-HxCDF	<2.5	2.5	0.1	0.00	0.00	0.13	0.25	0.1	0.00	0.13	0.25	25.8
123678-HxCDF	<2.5	2.5	0.1	0.00	0.00	0.13	0.25	0.1	0.00	0.13	0.25	36.4
234678-HxCDF	<2.5	2.5	0.1	0.00	0.00	0.13	0.25	0.1	0.00	0.13	0.25	32.5
123789-HxCDF	<2.5	2.5	0.1	0.00	0.00	0.13	0.25	0.1	0.00	0.13	0.25	34.0
1234678-HpCDF	12.8	2.5	0.01	0.13	0.13	0.13	0.13	0.01	0.13	0.13	0.13	29.9
1234789-HpCDF	<2.5	2.5	0.01	0.00	0.00	0.01	0.03	0.01	0.00	0.01	0.03	31.8
OCDF	16.9	5.0	0.0003	0.01	0.01	0.01	0.01	0.001	0.02	0.02	0.02	-
Total TEQ	-	-	-	1.91	1.91	4.46	7.01	-	2.70	4.90	7.10	-

Group Totals	Conc	LOR ₄ pg/g	No. of Peaks
Tetra-Dioxins	<5.5	5.5	11
Penta-Dioxins	<20.0	20.0	8
Hexa-Dioxins	26.4	15.0	6
Hepta-Dioxins	143.0	5.0	2
Octa-Dioxin	1110.0	10.0	1
Tetra-Furans	49.2	8.5	17
Penta-Furans	<25.0	25.0	10
Hexa-Furans	<17.5	17.5	7
Hepta-Furans	24.4	7.5	3
Octa-Furan	16.9	5.0	1
PCDD/Fs	1369.9		



Work Order : EM1201412
ALS Quote Reference : EN/002/11

Client : GOLDER ASSOCIATES
Project : 117613201 F-VIC

ANALYTICAL RESULTS FOR DIOXINS AND FURANS

Method Code EP300 Laboratory Sample ID: EM1201412006 Qc Lot Number: 2184403 Date Sampled: 08-Feb-2012
Client Sample ID: DUP2-10110/8811 10.0 Sample Matrix: SEDIMENT Date Extracted: 24-Feb-2012
Date Analysed: 24-Feb-2012

Compound	Conc	LOR pg/g	WHO-TEF	WHO-TEQ1 (zero)	WHO-TEQ2 (0.5 LOR)	WHO-TEQ3 (LOR)	I-TEF	I-TEQ1 (zero)	I-TEQ2 (0.5 LOR)	I-TEQ3 (LOR)	¹³ C ₁₂ Rec(%)
2378-TCDD	<0.5	0.5	1	0.00	0.25	0.50	1	0.00	0.25	0.50	41.6
12378-PeCDD	<2.5	2.5	1	0.00	1.24	2.49	0.5	0.00	0.62	1.24	44.0
123478-HxCDD	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	32.2
123678-HxCDD	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	51.1
123789-HxCDD	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	-
1234678-HpCDD	25.2	2.5	0.01	0.25	0.25	0.25	0.01	0.25	0.25	0.25	37.0
OCDD	325.0	10.0	0.0003	0.10	0.10	0.10	0.001	0.33	0.33	0.33	29.5
2378-TCDF	<0.5	0.5	0.1	0.00	0.02	0.05	0.1	0.00	0.02	0.05	35.7
12378-PeCDF	<2.5	2.5	0.03	0.00	0.04	0.07	0.05	0.00	0.06	0.12	39.1
23478-PeCDF	<2.5	2.5	0.3	0.00	0.37	0.75	0.5	0.00	0.62	1.24	36.7
123478-HxCDF	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	26.2
123678-HxCDF	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	42.1
234678-HxCDF	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	34.1
123789-HxCDF	<2.5	2.5	0.1	0.00	0.12	0.25	0.1	0.00	0.12	0.25	32.9
1234678-HpCDF	4.6	2.5	0.01	0.05	0.05	0.05	0.01	0.05	0.05	0.05	29.7
1234789-HpCDF	<2.5	2.5	0.01	0.00	0.01	0.02	0.01	0.00	0.01	0.02	29.2
OCDF	<5.0	5.0	0.0003	0.00	0.00	0.00	0.001	0.00	0.00	0.00	-
Total TEQ	-	-	-	0.40	3.21	6.02	-	0.62	3.09	5.55	-

Group Totals	Conc	LOR ₄ pg/g	No. of Peaks
Tetra-Dioxins	<2.0	2.0	4
Penta-Dioxins	<14.9	14.9	6
Hexa-Dioxins	<10.0	10.0	4
Hepta-Dioxins	48.7	5.0	2
Octa-Dioxin	325.0	10.0	1
Tetra-Furans	21.7	7.5	15
Penta-Furans	<14.9	14.9	6
Hexa-Furans	<12.4	12.4	5
Hepta-Furans	8.0	5.0	2
Octa-Furan	<5.0	5.0	1
PCDD/Fs	403.4		



ALS Environmental

QUALITY CONTROL REPORT

Client	GOLDER ASSOCIATES	Laboratory :	Environmental Division Melbourne	1 of 3
Contact	Niamh McCormack	Contact	LAB.MANAGER.EM McGrath	Work Order: EM1201412
Address:	P O BOX 6079 Building 7, 570-588 Swan St, Richmond, VIC. 3121 HAWTHORN WEST	Address:	Springvale VIC 3171 Australia	
	VIC, AUSTRALIA 3122			
Project	117613201 F-Vic	Quote #	EN/002/11	Received: 9 Feb 2012
Order #	GA-MEL 332509			Issued 28 Feb 2012
C-O-C #	- Not provided -			
Site	F-Vic			
E-mail	nmccormack@golder.com.au	E-mail	Melbourne.Enviro.Services@alsg	Number of Samples
Phone	8862 3500	Phone	+61-3-8549 9600	Received: 6
Fax	8862 3501	Fax	+61-3-8549 9601	Analysed: 6

Work order specific comments

EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
Split batch of EM1201358 due to long turn-around of dioxon and furan analysis.
EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
EP075: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
Dioxins and Furans conducted by ALS Brisbane, NATA Site No. 818.

ALSE - Excellence in Analytical Testing



NATA Accredited Laboratory - 825

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Accredited for compliance with ISO/IEC 17025

This document has been digitally signed by those names that appear on this report and are the authorised signatories. Digital signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatory	Position	Department
Peter Blow	HRMS Chemist	GC/HR-MS - NATA 825 (818 - Brisbane)

Client : GOLDER ASSOCIATES
Project : 117613201 F-VIC

Work Order : EM1201412
ALS Quote Reference : EN/002/11



Quality Control Results Laboratory Control Samples(LCS)

Laboratory Sample Id : 2586240-010
QC Lot Number : 2184403
Sample Mass (g) : 2.0
Sample Name : BCR 529 Sandy soil

Compound	Conc pg/g	Lower 1 pg/g	Upper 1 pg/g	¹³ C ¹² Rec(%)	Lower 2 (%)	Upper 2 (%)
2378-TCDD	4120.0	3900	5100	68.8	25	164
12378-PeCDD	449.0	390	490	81.1	25	181
123478-HxCDD	952.0	900	1500	70.7	32	141
123678-HxCDD	4780.0	4500	6300	77.2	28	130
123789-HxCDD	2800.0	2600	3400	-	-	-
2378-TCDF	77.9	65	91	60.3	24	169
12378-PeCDF	121.0	110	170	67.6	24	185
23478-PeCDF	343.0	290	430	66.4	21	178
123478-HxCDF	3370.0	2900	3900	56.0	26	152
123678-HxCDF	1020.0	940	1240	71.0	26	123
234678-HxCDF	398.0	330	410	61.7	28	136
123789-HxCDF	434.0	12	32	73.8	29	147

Notes

1. Acceptable concentration limits are as quoted on the analytical certificate for the certified reference material
2. Acceptable recovery limits are derived from EPA1613 Revision B

T = tetra
Pe = penta
Hx = hexa
Hp = hepta
O = octa



Client : GOLDER ASSOCIATES
 Project : 117613201 F-VIC

Work Order : EM1201412
 ALS Quote Reference : EN/002/11

ALS Environmental

Quality Control Report Method Blank (MB)

Laboratory Sample ID: 2586240-001
 Sample Mass (g) : 10.0
 Qc Lot Number : 2184403

Sample Matrix: SOIL
 Date Extracted: 24-Feb-2012
 Date Analysed: 24-Feb-2012

Compound	Conc pg/g	LOR pg/g	WHO-TEF	WHO-TE Q ₁	WHO-TE Q ₂	WHO-TE Q ₃	I-TEF	I-TEQ ₁ (zero)	I-TEQ ₂ (0.5 LOR)	I-TEQ ₃ (LOR)	¹³ C ₁₂ Rec (%)
2378-TCDD	<0.5	0.5	1	0.00	0.25	0.50	1	0.00	0.25	0.50	50.8
12378-PeCDD	<2.5	2.5	1	0.00	1.25	2.50	0.5	0.00	0.63	1.25	72.2
123478-HxCDD	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	60.4
123678-HxCDD	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	84.5
123789-HxCDD	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	-
1234678-HpCD	<2.5	2.5	0.01	0.00	0.01	0.03	0.01	0.00	0.01	0.03	74.6
OCDD	<10.0	10.0	0.0003	0.00	0.00	0.00	0.001	0.00	0.01	0.01	68.4
2378-TCDF	<0.5	0.5	0.1	0.00	0.03	0.05	0.1	0.00	0.03	0.05	45.7
12378-PeCDF	<2.5	2.5	0.03	0.00	0.04	0.08	0.05	0.00	0.06	0.13	54.0
23478-PeCDF	<2.5	2.5	0.3	0.00	0.38	0.75	0.5	0.00	0.63	1.25	54.5
123478-HxCDF	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	43.6
123678-HxCDF	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	58.5
234678-HxCDF	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	54.2
123789-HxCDF	<2.5	2.5	0.1	0.00	0.13	0.25	0.1	0.00	0.13	0.25	57.6
1234678-HpCD	<2.5	2.5	0.01	0.00	0.01	0.03	0.01	0.00	0.01	0.03	52.4
1234789-HpCD	<2.5	2.5	0.01	0.00	0.01	0.03	0.01	0.00	0.01	0.03	54.7
OCDF	<5.0	5.0	0.0003	0.00	0.00	0.00	0.001	0.00	0.00	0.01	-
TEQ_(WHO)				0.00	2.89	5.72	TEQ_(I)	0.00	2.55	5.04	

Group Totals	Conc pg/g	LOR ₄ pg/g	No. of Peaks
Tetra-Dioxins	<0.5	0.5	1
Penta-Dioxins	<2.5	2.5	1
Hexa-Dioxins	<2.5	2.5	1
Hepta-Dioxins	<5.0	5.0	2
Octa-Dioxin	<10.0	10.0	1
Tetra-Furans	<0.5	0.5	1
Penta-Furans	<2.5	2.5	1
Hexa-Furans	<2.5	2.5	1
Hepta-Furans	<2.5	2.5	1
Octa-Furan	<5.0	5.0	1
PCDD/Fs	0.00		

Notes

LOR = Limit of reporting

I-TEF = International toxic equivalency factor

I-TEQ = International toxic equivalence (pg/g)

WHO-TEF = World Health Organistaion toxic equivalency factor

WHO-TEQ = World Health Organisation toxic equivalence (pg/g)

T = tetra

Pe = penta

Hx = hexa

Hp =hepta

O = octa

CDD, dioxin = chlorinated dibenzo-p-dioxin

CDF, furan = chlorinated dibenzofuran

1 I-TEQ_(zero) and WHO-TEQ_(zero) calculated treating <LOR as zero concentration (pg/g)

2 I-TEQ_(0.5 LOR) and WHO-TEQ_(0.5 LOR) calculated treating <LOR as 50% LoR concentration (pg/g)

3 I-TEQ_(LOR) and WHO-TEQ_(LOR) calculated treating <LOR as LoR concentration (pg/g)

4 Totals LORs are calculated by multiplying the number of peaks by the individual LOR per compound

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EM1201412	Page	: 1 of 5
Client	: GOLDER ASSOCIATES	Laboratory	: Environmental Division Melbourne
Contact	: Niamh McCormack	Contact	: Samantha Smith
Address	: P O BOX 6079 Building 7, 570-588 Swan St, Richmond, VIC. 3121 HAWTHORN WEST VIC, AUSTRALIA 3122	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: nmccormack@golder.com.au	E-mail	: samantha.smith@alsglobal.com
Telephone	: +61 03 8862 3500	Telephone	: +61-3-8549 9644
Facsimile	: +61 03 8862 3501	Facsimile	: +61-3-8549 9601
Project	: 117613201 F-VIC	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: F-VIC	Date Samples Received	: 09-FEB-2012
C-O-C number	: ----	Issue Date	: 28-FEB-2012
Sampler	: NM	No. of samples received	: 6
Order number	: GA-MEL 332509	No. of samples analysed	: 6
Quote number	: EN/002/11		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers



Page : 2 of 5
 Work Order : EM1201412
 Client : GOLDER ASSOCIATES
 Project : 117613201 F-VIC

Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days), Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: SOIL

Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Container / Client Sample ID(s)	Sample Date	Extraction / Preparation		Analysis		
			Date extracted	Due for extraction	Date analysed	Due for analysis	Evaluation
Dioxins - Individual							
Soil Glass Jar - Unpreserved							
	SD1-1051/8001,	08-FEB-2012	24-FEB-2012	07-FEB-2013	24-FEB-2012	23-FEB-2013	✓
	SD8-1028/8008,						
	SD10-10110/8010,						
	DUP2-10110/8811						
Dioxins - Total							
Soil Glass Jar - Unpreserved							
	SD1-1051/8001,	08-FEB-2012	24-FEB-2012	07-FEB-2013	24-FEB-2012	23-FEB-2013	✓
	SD8-1028/8008,						
	SD10-10110/8010,						
	DUP2-10110/8811						



Page : 3 of 5
 Work Order : EM1201412
 Client : GOLDER ASSOCIATES
 Project : 117613201 F-VIC

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(were) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: * = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type Analytical Methods	Method	Count		Rate (%)		Quality Control Specification	
		QC	Regular	Actual	Expected	Evaluation	
Laboratory Duplicates (DUP)							
PCDDs and PCDFs by GC/HRMS	EP300B	1	8	12.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PCDDs and PCDFs by GC/HRMS	EP300I	1	8	12.5	10.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
PCDDs and PCDFs by GC/HRMS	EP300I	1	8	12.5	30.0	✗	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
PCDDs and PCDFs by GC/HRMS	EP300B	1	8	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PCDDs and PCDFs by GC/HRMS	EP300I	1	8	12.5	5.0	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement



Page : 4 of 5
Work Order : EM1201412
Client : GOLDER ASSOCIATES
Project : 117613201 F-VIC

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
PCDDs and PCDFs by GC/HRMS	EP300B	SOIL	EPA method 1613.
PCDDs and PCDFs by GC/HRMS	EP300I	SOIL	EPA method 1613.



Page : 5 of 5
 Work Order : EM1201412
 Client : GOLDER ASSOCIATES
 Project : 117613201 F-VIC

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW846 or ALS-QW/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

- For all matrices, no Method Blank value outliers occur.
- For all matrices, no Duplicate outliers occur.
- For all matrices, no Laboratory Control outliers occur.
- For all matrices, no Matrix Spike outliers occur.

Regular Sample Surrogates

- For all regular sample matrices, no surrogate recovery outliers occur.

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

- No Analysis Holding Time Outliers exist.

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

Matrix: SOIL

Quality Control Sample Type Method	Count		Rate (%)		Quality Control Specification
	QC	Regular	Actual	Expected	
Laboratory Control Samples (LCS) PCDDs and PCDFs by GC/HRMS	1	8	12.5	30.0	NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Split batch of EM1201358



GOLDER ASSOCIATES PTY LTD
 Building 7, Botanica Corporate Park
 570-588 Swan Street
 RICHMOND

Tel: (03) 8862 3500
 Fax: (03) 8862 3501

Page 1 of 1

Golder Job Number: 117613201
 Job Location: F - VIC
 Laboratory Issued To: ALS
 Order No.: GA-MEL-332509
 Sampled By (Golder): Niamh McCormack
 Golder Job Contact: Niamh McCormack
 Golder Contact Email: nmsccormack@golder.com.au

# OBSERVATIONS	SAMPLE DATE	SAMPLE NUMBER TAAXXX/MQNN	SAMPLE TYPE	SAMPLE DEPTH (m)	No. OF CONTAINERS	TPH	BTEX	Metals	PAH	Phenols	VOC (Full & unknown scan)	SVOC (Full & unknown scan)	Pesticides (OC & OP)	PCBs	Perchlorates	PFOA/PFOA	Dioxins/Furans	TOC	
HOC	8/02/2012	SD1 - 1051/8001	sediment	N/A	6	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HOC	8/02/2012	SD2 - 1052/8002	sediment	N/A	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HOC	8/02/2012	SD3 - 1043/8003	sediment	N/A	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HOC	8/02/2012	SD4 - 1044/8004	sediment	N/A	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HOC	8/02/2012	SD5 - 1035/8005	sediment	N/A	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HOC	8/02/2012	SD6 - 1036/8006	sediment	N/A	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X
C & HOC	8/02/2012	SD7 - 1027/8007	sediment	N/A	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X
C & HOC	8/02/2012	SD8 - 1028/8008	sediment	N/A	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X
C & HOC	8/02/2012	SD9 - 1019/8009	sediment	N/A	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X
C & HOC	8/02/2012	SD10 - 10110/8010	sediment	N/A	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X
C & HOC	8/02/2012	Dup2 - 10110/8811	sediment	N/A	5	X	X	X	X	X	X	X	X	X	X	X	X	X	X
	8/02/2012	Trip 3 - 10110/6712	Trip	N/A	1	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Environmental Division
 Melbourne
 Work Order
EM1201412



Telephone: +61-3-8549 9600

Special Instructions:

TURN AROUND TIME REQUIRED
 1 Working Day 2 Working Days 3 Working Days 4 Working Days 5 Working Days (standard) Other

SAMPLE RECEIPT
 Relinquished by: Niamh McCormack
 Organisation: Golder Associates
 Date: 9/02/2012
 Time: 10:00
 Received by: [Signature] [Signature]
 Organisation: Golder Associates
 Date: 9/2/2012
 Time: 10:00

DELIVERED BY: COURIER/LAB GOLDER
 RECEIVED BY: Security Sealed Chilled Frozen Ambient
 Email HAND

RECEIVING LABORATORY TO CONFIRM RECEIPT OF ANALYTICAL SCHEDULE BY RETURN FAX TO: (03) 8862 3501

Observations to Assist Analysis and OH&S
 C - Expected to be Highly Contaminated HS - Expected High Salinity S - Sheen
 N - NAPL Sample HOC - Expected High Total Organic Carbon O - Odourous



Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: EM1201441	
Y R C i r	PGOLDER ASSOCIATES	
Y : i r 7 ur	Pc Cv NjMuy : br 7uh	
SAAb aa	Ps gf god Bg069	
E-v 7 E	ODKDeef.gp60-o88g:w7i gr.gQNV : i A.g/ly .gh121	
U i f p N t i l	WST UWd Rc gT Ek Lj/ly .s4 k URSf ISgh122	
57ua0 E	Pi v uu: bv 7uh@e: fA bu: v .7D	
sb j l ur	P+X1gHf88X2gb00	
d b l t g Dv L l b	P+X1gHf88X2gb01	
y -d -y g Dv L l b	P116X1H201	
k 7v p f b	PGS-MEf OgH2o09	
k Q	P-----	
QD. r t g Dv L l b	PRM	
	P5Ik / Vif E	
	PME-0o3z12	

UNAg b p: bg adp l bal Al ag 7i t g pb nCdag b p: br(a)g wQNg rNag b l d i ul .g RI adfag 7ppf g r: g rN g a7v p f (a)g 7ag aD L v Q i Ag S f g p7el ag : g rNag b p: bg N7nl g L l i i g uN uhl Ag 7i Ag 7ppb nl Ag : t b f 7al .g

UNAg l brQ7ri g g Si 7 f e a g g i : i r 7 C ag N g : f e w e g e : b v 7 r C i P

- G i l l b r i g : v v i i r a
- S i 7 f e r 07 R i a d f a
- k D b e 7 r i g : i r b f g Q Q a



WORLD RECOGNISED ACCREDITATION

Signatories

c SUS f suud Ag 7 L : b r : t t g 2o
g
Suud Ag Ag : t g : v p f e i ul g w Q Ng
l k d f E y g f 602o.

m Q i Q i b i 7 i A
E b o y N 7 D
c 7 i u t g 7 i e
s N 7 f h g i r N 7 h a : i l
V 7 b a N 7 g V g T G e
B C e L C g C

Position

k l i C i g i : b e 7 i Q g N v Q r
M l i r f i g J 7 v g l 7 A l b
k l i C i g i v Q : f r e g i a r t D v l i r y N v Q r
f 7 L : b r : t t g M 7 i 7 e l t g g t b e 7 i Q a
c : i - M l r f i g J 7 v g l 7 A l b
k l i C i g i b e 7 i Q g N v Q r

Accreditation Category

M l E : D o l g i : b e 7 i Q a
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M l E : D o l g i b e 7 i Q a
k t A l t g t b e 7 i Q a
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P1g glo	P a 7 v 7 i r N 7 . a v Q N 7 f e e F . L 7 F u : v	
P E i n Q i v l i r i r i g n Q C i g M l E : D o l	P + X 1 - H 8 o 3 9 9 X 3 3	
P k 7 v 7 i r N 7 g v Q N	P + X 1 - H 8 o 3 9 9 X 0 1	
P 3 g t l a r 7 f i g R A g k p b C e n 7 f f g v l y g D a r b 7 r e g h 1 6 1	P c E s M g l 9 9 9 g k u N A D F g (H) g i A g s f k g y k H H q D Q v l i r	
	P 1 0 - 5 E O - 2 0 1 2	
	P 2 8 - 5 E O - 2 0 1 2	
	P X	
	P X	
	m 7 r i g 7 v p f a g R i u l Q i A	
	l a a Q g n 7 r i	
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	c : . g g 7 v p f a g t 7 f e a l A	

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S A A b a a

Environmental Division Melbourne

Part of the **ALS Laboratory Group**

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 s b j j ur P 116X1H201

General Comments

UN g 7i 7F eD7fj pb ul ADd eg Dal Ag Lt g rN g Ei nD i v i i r7fj mDdC: i g N7nl g LI i i g Al ni F pl Ag b v g l ar7L EAn Ag Cr i b 7iCi 7F e g b u: ei OI Ag pb ul ADd eg aDuNy 7ag rN: al g pDL EAn Ag Lt g rN g 4 k Es S: g Ss V6: g Sk g 7i Ag c Es M: g li g N: Dal .
 Al ni F pl Ag pb ul ADd eg b g v pF: t i AgD: gN 7Lal i ul g G: uDv i i r A gar7i A7bAg t d t g f e: j r d i ar .
 T N b g : e rDd g l r l b v e7rCi g N7ag . I i i g l b : b v l A g d aDfag7d g t p: b l Ag i 7G d g v l eN d . 7 a e a .
 T N b 7f t p: b l Ag f aag N7i g =) d f aDf e g N e N t g N7i g N g d R: g N a g 7i g d j g d g : e rDd g : i r i r g c a D O C: i r g 7v p f f g b A D J Ag l e N t g v p F: t l A g t y 7 r d e g r l b l d i u l .
 T N b g N g d R g 7f t p: b l A g d aDf e g N a g b v g a 7i A7bAg d R: g N a g 7i g d j g d g : e rDd g : i r i r g c a D O C: i r g 7v p f f g b A D J Ag l e N t g v p F: t l A g t y 7 r d e g r l b l d i u l .
 T N i g 7v p e e g O i g : b v 7iCi g e g : r e b n O l A g t g N g u e i r g 7v p e e g 7i a g 7b g a N w i g v e N D 7 g e O j g r : v p : i i i r g j i g N a l g e a 7i u l a g N g O l g r : v p : i i i r g N 7 a g l i i 7 a a D v l A g t g N g 7 L : b 7 r : t g : t p b u l a e C e g D p : a l a .

/ l t p y S k g D v L i t k y r S k g e a r t d g D v L i t g b v g a 7 r 7 L 7 a l g r 7 e r 7 O l A g t g N v e 7 f e s L a r 7 u r a g k l b n O l a g J N g r N v e 7 f e s L a r 7 u r a g k l b n O l e e 7 g a D C: i g g N g S v l e O 7 f e : u O r t .
 f d R g k e O e g t p: b r C e
 A g k J N e g t a D f e g a g : v p D i A g b v g e A e O D 7 f e j 7 F r i r g l r u r C: i a g 7 r g t g 7 L : n l g N g f n l f e t p: b r C e

- EP066/068: EM1201441_1 Particular sample required dilution prior to analysis due to matrix interferences. LOR values have been adjusted accordingly.
- EP076: 'Sum of PAH' is the sum of the USEPA 16 priority PAHs
- EP231: PFOS & PFOS results are reported as an aggregate of linear and branched isomers. Matrix spike recovery not determined for PFOS due to high background level of target analyte.
- Perchlorate and PFOS/PFOA conducted by ALS Sydney, NATA accreditation no. 825, site no 10911.



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Analytical Results

Compound	CAS Number	Client sampling date / time		Client sample ID	Client sample ID			
		LOR	Unit		A9HA1/3001 10-5EO-2012gloR0 EM1201441-001	A9HA2/3001 10-5EO-2012gloR0 EM1201441-002	A8HA1/2001 10-5EO-2012gloR0 EM1201441-003	A8HA3/2001 10-5EO-2012gloR0 EM1201441-004
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	µ	16.0	19.3	28.3	18.0	----
EG005T: Total Metals by ICP-AES								
Arsenic	6330-HB-2	0	v eže	7	6	=0	=0	----
Cadmium	6330-3H-9	1	v eže	=1	=1	=1	=1	----
Chromium	6330-36-H	2	v eže	46	39	37	30	----
Copper	6330-00-8	0	v eže	15	16	10	=0	----
Lead	63H-92-1	0	v eže	30	64	13	11	----
Nickel	6330-02-0	2	v eže	26	27	12	9	----
Zinc	6330-XX-X	0	v eže	91	89	8	37	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	63H-96-X	0.1	v eže	=0.1	=0.1	=0.1	=0.1	----
EP004: Organic Matter								
Total Organic Carbon	----	0.0	µ	2.4	4.3	0.6	1.4	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.10	v eže	=0.00	=0.10	=0.10	=0.10	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	H19-83-X	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
Hexachlorobenzene (HCB)	118-63-1	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
beta-BHC	H19-80-6	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
gamma-BHC	08-89-9	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
delta-BHC	H19-8X-8	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
Heptachlor	6X-33-8	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
Aldrin	H09-00-2	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
Heptachlor epoxide	1023-06-H	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
trans-Chlordane	010H63-2	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
alpha-Endosulfan	909-98-8	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
cis-Chlordane	010H61-9	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
Dieldrin	X0-06-1	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
4,4'-DDE	62-00-9	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
Endrin	62-20-8	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
beta-Endosulfan	HH21HX0-9	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
4,4'-DDD	62-03-8	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
Endrin aldehyde	6321-9H3	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
Endosulfan sulfate	10H1-06-8	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
4,4'-DDT	00-29-H	0.2	v eže	=1.0	=0.2	=0.2	=0.2	----
Endrin ketone	0H93-60-0	0.00	v eže	=0.20	=0.00	=0.00	=0.00	----
Methoxychlor	62-3Ho	0.2	v eže	=1.0	=0.2	=0.2	=0.2	----



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Analytical Results

k DL-M7rtG: SOIL

Compound	CAS Number	Client sampling data / time		Client sample ID			
		LOR	Unit	A9HA1/3001 10-5EO-2012gtoR0 EM1201441-001	A9HA2/3001 10-5EO-2012gtoR0 EM1201441-002	A8HA1/2001 10-5EO-2012gtoR0 EM1201441-003	A8HA3/2001 10-5EO-2012gtoR0 EM1201441-004
EP068B: Organophosphorus Pesticides (OP)							
Dichlorvos	X2-6H6	0.00	v eže	=0.20	=0.00	=0.00	=0.00
Demeton-S-methyl	919-8X-8	0.00	v eže	=0.20	=0.00	=0.00	=0.00
Monocrotophos	X92H-22-3	0.2	v eže	=1.0	=0.2	=0.2	=0.2
Dimethoate	X0-01-0	0.00	v eže	=0.20	=0.00	=0.00	=0.00
Diazinon	HH-31-0	0.00	v eže	=0.20	=0.00	=0.00	=0.00
Chlorpyrifos-methyl	oo98-1H-0	0.00	v eže	=0.20	=0.00	=0.00	=0.00
Parathion-methyl	298-00-0	0.2	v eže	=1.0	=0.2	=0.2	=0.2
Malathion	121-60-0	0.00	v eže	=0.20	=0.00	=0.00	=0.00
Fenthion	oo-HB-9	0.00	v eže	=0.20	=0.00	=0.00	=0.00
Chlorpyrifos	2921-88-2	0.00	v eže	=0.20	=0.00	=0.00	=0.00
Parathion	oX-HB-2	0.2	v eže	=1.0	=0.2	=0.2	=0.2
Pirimiphos-ethyl	2H00-31-1	0.00	v eže	=0.20	=0.00	=0.00	=0.00
Chlorfenvinphos	360-90-X	0.00	v eže	=0.20	=0.00	=0.00	=0.00
Bromophos-ethyl	3823-68-X	0.00	v eže	=0.20	=0.00	=0.00	=0.00
Fenamiphos	22223-92-X	0.00	v eže	=0.20	=0.00	=0.00	=0.00
Prothiofos	H3X3H-3X-3	0.00	v eže	=0.20	=0.00	=0.00	=0.00
Ethion	oXH-12-2	0.00	v eže	=0.20	=0.00	=0.00	=0.00
Carbophenothion	68X-19-X	0.00	v eže	=0.20	=0.00	=0.00	=0.00
Azinphos Methyl	8X-o0-0	0.00	v eže	=0.20	=0.00	=0.00	=0.00
EP074A: Monocyclic Aromatic Hydrocarbons							
Styrene	100-32-0	0.0	v eže	=0.0	=0.0	=0.0	=0.0
Isopropylbenzene	98-82-8	0.0	v eže	=0.0	=0.0	=0.0	=0.0
n-Propylbenzene	10H-X0-1	0.0	v eže	=0.0	=0.0	=0.0	=0.0
1,3,5-Trimethylbenzene	108-X6-8	0.0	v eže	=0.0	=0.0	=0.0	=0.0
sec-Butylbenzene	1Hb-98-8	0.0	v eže	=0.0	=0.0	=0.0	=0.0
1,2,4-Trimethylbenzene	90-XHX	0.0	v eže	=0.0	=0.0	=0.0	=0.0
tert-Butylbenzene	98-0XX	0.0	v eže	=0.0	=0.0	=0.0	=0.0
p-Isopropyltoluene	99-86-X	0.0	v eže	=0.0	=0.0	=0.0	=0.0
n-Butylbenzene	103-01-8	0.0	v eže	=0.0	=0.0	=0.0	=0.0
EP074B: Oxygenated Compounds							
Vinyl Acetate	108-00-3	0	v eže	=0	=0	=0	=0
2-Butanone (MEK)	68-9HH	0	v eže	=0	=0	=0	=0
4-Methyl-2-pentanone (MIBK)	108-10-1	0	v eže	=0	=0	=0	=0
2-Hexanone (MIBK)	o91-68-X	0	v eže	=0	=0	=0	=0
EP074C: Sulfonated Compounds							
Carbon disulfide	60-10-0	0.0	v eže	=0.0	=0.0	=0.0	=0.0
EP074D: Fumigants							
2,2-Dichloropropane	o93-20-6	0.0	v eže	=0.0	=0.0	=0.0	=0.0



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Analytical Results

k DL-M7rtG: SOIL

Compound	CAS Number	LOR	Client sampling date / time		Client sample ID			
			Unit	EM1201441-001	EM1201441-002	EM1201441-003	EM1201441-004	
EP074D: Fumigants - Continued								
1,2-Dichloropropane	68-86-0	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
cis-1,3-Dichloropropylene	100X1-01-0	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
trans-1,3-Dichloropropylene	100X1-02-X	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
1,2-Dibromoethane (EDB)	10X-9H-3	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
EP074E: Halogenated Aliphatic Compounds								
Dichlorodifluoromethane	60-61-8	0	v ezh	=0	=0	=0	=0	=0
Chloromethane	63-86-H	0	v ezh	=0	=0	=0	=0	=0
Vinyl chloride	60-01-3	0	v ezh	=0	=0	=0	=0	=0
Bromomethane	63-8H-9	0	v ezh	=0	=0	=0	=0	=0
Chloroethane	60-00-H	0	v ezh	=0	=0	=0	=0	=0
Trichlorofluoromethane	60-X9-3	0	v ezh	=0	=0	=0	=0	=0
1,1-Dichloroethane	60-Hb-3	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
Iodomethane	63-88-3	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
trans-1,2-Dichloroethene	10X-X0-0	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
1,1-Dichloroethane	60-HB-H	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
cis-1,2-Dichloroethene	10X-09-2	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
1,1,1-Trichloroethane	61-00-X	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
1,1-Dichloropropylene	0XH08-X	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
Carbon Tetrachloride	0X-2Ho	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
1,2-Dichloroethane	106-0X-2	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
Trichloroethene	69-01-X	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
Dibromomethane	63-90-H	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
1,1,2-Trichloroethane	69-00-0	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
1,3-Dichloropropane	132-28-9	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
Tetrachloroethene	126-18-3	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
1,1,1,2-Tetrachloroethane	XH-20-X	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
trans-1,4-Dichloro-2-butene	110-06-X	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
cis-1,4-Dichloro-2-butene	136X-11-0	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
1,1,2,2-Tetrachloroethane	69-HB-0	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
1,2,3-Trichloropropane	9X-18-3	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
Pentachloroethane	6X-01-6	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
1,2-Dibromo-3-chloropropane	9X-12-8	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
EP074F: Halogenated Aromatic Compounds								
Chlorobenzene	108-90-6	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
Bromobenzene	108-8X-1	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
2-Chlorotoluene	90-39-8	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
4-Chlorotoluene	10X-3H-3	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0
1,2,3-Trichlorobenzene	86-X1-X	0.0	v ezh	=0.0	=0.0	=0.0	=0.0	=0.0



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Compound	CAS Number	LOR	Client sampling date / time		Client sample ID
			Unit	Unit	
EP074G: Trihalomethanes					
Chloroform	X6-XX-H	0.0	v eže	=0.0	=0.0
Bromodichloromethane	60-26-3	0.0	v eže	=0.0	=0.0
Dibromochloromethane	123-38-1	0.0	v eže	=0.0	=0.0
Bromoform	60-20-2	0.0	v eže	=0.0	=0.0
EP075A: Phenolic Compounds					
Phenol	108-90-2	0.0	v eže	=0.0	=0.0
2-Chlorophenol	90-06-8	0.0	v eže	=0.0	=0.0
2-Methylphenol	90-38-6	0.0	v eže	=0.0	=0.0
3- & 4-Methylphenol	1H19-66-H	0.0	v eže	=1.0	=1.0
2-Nitrophenol	88-60-0	0.0	v eže	=0.0	=0.0
2,4-Dimethylphenol	100-X6-9	0.0	v eže	=0.0	=0.0
2,4-Dichlorophenol	120-8H2	0.0	v eže	=0.0	=0.0
2,6-Dichlorophenol	86-X0-0	0.0	v eže	=0.0	=0.0
4-Chloro-3-Methylphenol	09-00-6	0.0	v eže	=0.0	=0.0
2,4,6-Trichlorophenol	88-0X2	0.0	v eže	=0.0	=0.0
2,4,5-Trichlorophenol	90-90-3	0.0	v eže	=0.0	=0.0
Pentachlorophenol	86-8X-0	1	v eže	=1	=1
EP075B: Polynuclear Aromatic Hydrocarbons					
Naphthalene	91-20-H	0.0	v eže	=0.0	=0.0
2-Methylnaphthalene	91-06-X	0.0	v eže	=0.0	=0.0
2-Chloronaphthalene	91-08-6	0.0	v eže	=0.0	=0.0
Acenaphthylene	208-9X-8	0.0	v eže	=0.0	=0.0
Acenaphthene	8H2-9	0.0	v eže	=0.0	=0.0
Fluorene	8X-6H6	0.0	v eže	=0.0	=0.0
Phenanthrene	80-01-8	0.0	v eže	=0.0	=0.0
Anthracene	120-12-6	0.0	v eže	=0.0	=0.0
Fluoranthene	20X-33-0	0.0	v eže	=0.0	=0.0
Pyrene	129-00-0	0.0	v eže	=0.0	=0.0
N-2-Fluorenyl Acetamide	oH9X-H	0.0	v eže	=0.0	=0.0
Benz(a)anthracene	oX-oo-H	0.0	v eže	=0.0	=0.0
Chrysene	218-01-9	0.0	v eže	=0.0	=0.0
Benzo(b) & Benzo(k)fluoranthene	200-99-2g06-08-9	1	v eže	=1	=1
7,12-Dimethylbenz(a)anthracene	06-96-X	0.0	v eže	=0.0	=0.0
Benzo(a)pyrene	00-H2-8	0.0	v eže	=0.0	=0.0
3-Methylcholanthrene	oX-39-0	0.0	v eže	=0.0	=0.0
Indeno(1,2,3-cd)pyrene	19HH9-o	0.0	v eže	=0.0	=0.0
Dibenz(a,h)anthracene	oH60-H	0.0	v eže	=0.0	=0.0



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Analytical Results

k DL-M7rtG: SOIL

Compound	CAS Number	Client sampling date / time		Client sample ID			
		LOR	Unit	A9HA1/3001 10-5EO-2012gloR0 EM1201441-001	A9HA2/3001 10-5EO-2012gloR0 EM1201441-002	A8HA1/2001 10-5EO-2012gloR0 EM1201441-003	A8HA3/2001 10-5EO-2012gloR0 EM1201441-004
EP075B: Polynuclear Aromatic Hydrocarbons - Continued							
Benzo(g,h,i)perylene	191-23-2	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
Sum of PAHs	----	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
EP075C: Phthalate Esters							
Dimethyl phthalate	1H1-11-H	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
Diethyl phthalate	83-XX-2	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
Di-n-butyl phthalate	83-63-2	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
Butyl benzyl phthalate	80-X8-6	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
bis(2-ethylhexyl) phthalate	116-81-6	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
Di-n-octylphthalate	116-83-0	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
EP075D: Nitrosamines							
N-Nitrosomethylethylamine	10090-90-X	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
N-Nitrosodiethylamine	00-18-0	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
N-Nitrosopyrrolidine	9H0-00-2	0.0	v e z h e	=1.0	=1.0	=1.0	=1.0
N-Nitrosomorpholine	09-89-2	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
N-Nitrosodi-n-propylamine	X21-X3-6	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
N-Nitrosopiperidine	100-60-3	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
N-Nitrosodibutylamine	923-1X-H	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
N-Nitrosodiphenyl & Methapyriline	8X-H0-Xgl 22-H9-3	0.0	v e z h e	=1.0	=1.0	=1.0	=1.0
	91-80-0	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
EP075E: Nitroaromatics and Ketones							
2-Picoline	109-0X-8	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
Acetophenone	98-8X-2	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
Nitrobenzene	98-90-H	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
Isophorone	68-09-1	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
2,6-Dinitrotoluene	X0X-20-2	0.0	v e z h e	=1.0	=1.0	=1.0	=1.0
2,4-Dinitrotoluene	121-13-2	0.0	v e z h e	=1.0	=1.0	=1.0	=1.0
1-Naphthylamine	1H3-H2-6	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
4-Nitroquinoline-N-oxide	0X-06-0	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
5-Nitro-o-toluidine	99-00-8	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
Azobenzene	10HHHH	1	v e z h e	=1	=1	=1	=1
1,3,5-Trinitrobenzene	99-Hb-3	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
Phenacetin	X2-33-2	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
4-Amino biphenyl	92-X6-1	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
Pentachloronitrobenzene	82-X8-8	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
Pronamide	2H00-08-0	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
Dimethylaminoazobenzene	X0-11-6	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0
Chlorobenzilate	010-10-X	0.0	v e z h e	=0.0	=0.0	=0.0	=0.0



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Analytical Results

k DL-M7rtG: SOIL

Compound	CAS Number	Client sampling date / time		Client sample ID	A9HA1/3001 10-5EO-2012gloR0 EM1201441-001	A9HA2/3001 10-5EO-2012gloR0 EM1201441-002	A8HA1/2001 10-5EO-2012gloR0 EM1201441-003	A8HA3/2001 10-5EO-2012gloR0 EM1201441-004	
		LOR	Unit						
EP075F: Haloethers									
Bis(2-chloroethyl) ether	111-33-3	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
Bis(2-chloroethoxy) methane	111-91-1	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
4-Chlorophenyl phenyl ether	6000-62-H	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
4-Bromophenyl phenyl ether	101-00-H	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
EP075G: Chlorinated Hydrocarbons									
1,3-Dichlorobenzene	631-6H-1	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
1,4-Dichlorobenzene	10X-3X-6	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
1,2-Dichlorobenzene	90-00-1	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
Hexachloroethane	X6-62-1	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
1,2,4-Trichlorobenzene	120-82-1	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
Hexachloropropylene	1888-61-6	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
Hexachlorobutadiene	86-X8-H	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
Hexachlorocyclopentadiene	66-36-3	0.0	v e z h e		=2.0	=2.0	=2.0	=2.0	----
Pentachlorobenzene	X08-9H-0	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
Hexachlorobenzene (HCB)	118-63-1	0.0	v e z h e		=1.0	=1.0	=1.0	=1.0	----
EP075H: Anilines and Benzidines									
Aniline	X2-oHH	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
4-Chloroaniline	10X-36-8	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
2-Nitroaniline	88-63-3	0.0	v e z h e		=1.0	=1.0	=1.0	=1.0	----
3-Nitroaniline	99-09-2	0.0	v e z h e		=1.0	=1.0	=1.0	=1.0	----
Dibenzofuran	1H2-X3-9	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
4-Nitroaniline	100-01-X	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
Carbazole	8X-63-8	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
3,3'-Dichlorobenzidine	91-93-1	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
EP075I: Organochlorine Pesticides									
alpha-BHC	H19-83-X	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
beta-BHC	H19-80-6	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
gamma-BHC	08-89-9	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
delta-BHC	H19-8X-8	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
Heptachlor	6X-33-8	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
Aldrin	H09-00-2	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
Heptachlor epoxide	1023-06-H	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
alpha-Endosulfan	909-98-8	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
4,4'-DDE	62-00-9	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
Dieldrin	X0-06-1	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
Endrin	62-20-8	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
beta-Endosulfan	HH21H-X0-9	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----
4,4'-DDD	62-03-8	0.0	v e z h e		=0.0	=0.0	=0.0	=0.0	----



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Compound	CAS Number	LOR	Client sampling date / time		Client sample ID
			Unit	Unit	
EP075I: Organochlorine Pesticides - Continued					
Endosulfan sulfate	10H1-06-8	0.0	v eže	=0.0	A9HA1/3001 10-5EO-2012gloR0
4,4'-DDT	00-29-H	0.0	v eže	=1.0	A9HA2/3001 10-5EO-2012gloR0
EP075J: Organophosphorus Pesticides					
Dichlorvos	X2-6H6	0.0	v eže	=0.0	A8HA1/2001 10-5EO-2012gloR0
Dimethoate	X0-01-0	0.0	v eže	=0.0	A8HA3/2001 10-5EO-2012gloR0
Diazinon	HH-31-0	0.0	v eže	=0.0	EM1201441-003
Chlorpyrifos-methyl	0098-1H0	0.0	v eže	=0.0	EM1201441-002
Malathion	121-60-0	0.0	v eže	=0.0	EM1201441-001
Fenthion	00-H8-9	0.0	v eže	=0.0	EM1201441-001
Chlorpyrifos	2921-88-2	0.0	v eže	=0.0	EM1201441-001
Pirimiphos-ethyl	2H600-31-1	0.0	v eže	=0.0	EM1201441-001
Chlorfenvinphos	360-90-X	0.0	v eže	=0.0	EM1201441-001
Prothiofos	H3X3H-3X-3	0.0	v eže	=0.0	EM1201441-001
Ethion	0XH-12-2	0.0	v eže	=0.0	EM1201441-001
EP080/071: Total Petroleum Hydrocarbons					
C6 - C9 Fraction	----	10	v eže	=10	=10
C10 - C14 Fraction	----	00	v eže	=00	=00
C15 - C28 Fraction	----	100	v eže	=100	=100
C29 - C36 Fraction	----	100	v eže	=100	=100
∑C10 - C36 Fraction (sum)	----	00	v eže	=00	=00
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft					
C6 - C10 Fraction	----	10	v eže	=10	=10
∑C6 - C10 Fraction minus BTEX (F1)	----	10	v eže	=10	=10
>C10 - C16 Fraction	----	00	v eže	=00	=00
>C16 - C34 Fraction	----	100	v eže	=100	=100
>C34 - C40 Fraction	----	100	v eže	=100	=100
∑>C10 - C40 Fraction (sum)	----	00	v eže	=00	=00
EP080: BTEX					
Benzene	61-3H2	0.2	v eže	=0.2	=0.2
Toluene	108-88-H	0.0	v eže	=0.0	=0.0
Ethylbenzene	100-31-3	0.0	v eže	=0.0	=0.0
meta- & para-Xylene	108-HB-Hj0X-32-H	0.0	v eže	=0.0	=0.0
ortho-Xylene	90-36-X	0.0	v eže	=0.0	=0.0
EP080: BTEXN					
∑Sum of BTEX	----	0.2	v eže	=0.2	=0.2
∑Total Xylenes	1H0-20-6	0.0	v eže	=0.0	=0.0
Naphthalene	91-20-H	1	v eže	=1	=1



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Compound	CAS Number	LOR	Client sample ID						
			Client sampling date / time	Unit	A9HA1/3001	A9HA2/3001	A8HA1/2001	A8HA3/2001	
EP216: Perchlorate by LC/MS									
Perchlorate	6X01-90-H	10.0	%ežte	=10.0	=10.0	=10.0	=10.0		
EP231: Perfluorooctyl Acids and Sulfonates.									
PFOA	16XH2H1	0.0000	v ežte	0.287	2.19	0.0053	0.0204		
	Hb-X6-1	0.0000	v ežte	0.0076	0.0208	0.0009	=0.0000		
	26X19-96-2	0.000	v ežte	0.036	1.64	=0.000	=0.000		
(FIS)									
EP066S: PCB Surrogate									
Decachlorobiphenyl	2001-23-H	0.1	µ	62.5	56.8	58.4	66.2		
EP068S: Organochlorine Pesticide Surrogate									
Dibromo-DDE	21X00-6H2	0.1	µ	67.4	66.8	70.6	77.9		
EP068T: Organophosphorus Pesticide Surrogate									
DEF	68-38-8	0.1	µ	54.6	70.1	65.0	73.9		
EP074S: VOC Surrogates									
1,2-Dichloroethane-D4	160X0-06-0	0.1	µ	83.9	80.8	75.7	80.4		
Toluene-D8	20H6-2X-0	0.1	µ	89.4	82.5	81.0	85.6		
4-Bromofluorobenzene	3X0-00-3	0.1	µ	81.6	76.9	75.4	80.4		
EP075S: Acid Extractable Surrogates									
2-Fluorophenol	HX6-12-3	0.1	µ	95.4	75.1	55.6	72.8		
Phenol-d6	1H126-88-H	0.1	µ	90.2	77.0	58.9	77.2		
2-Chlorophenol-D4	9H01-6HX	0.1	µ	83.8	66.8	50.7	66.3		
2,4,6-Tribromophenol	118-69-X	0.1	µ	92.4	61.4	45.2	76.1		
EP075T: Base/Neutral Extractable Surrogates									
Nitrobenzene-D5	31X0-X0-0	0.1	µ	85.4	72.5	70.4	72.6		
1,2-Dichlorobenzene-D4	2199-X9-1	0.1	µ	70.2	58.1	52.8	61.5		
2-Fluorobiphenyl	H21-X0-8	0.1	µ	84.9	62.1	52.2	70.2		
Anthracene-d10	1619-0X-8	0.1	µ	99.1	73.2	61.5	91.5		
4-Terphenyl-d14	1618-01-0	0.1	µ	95.9	66.6	54.5	87.3		
EP080S: TPH(V)/BTEX Surrogates									
1,2-Dichloroethane-D4	160X0-06-0	0.1	µ	82.7	79.7	74.6	80.2		
Toluene-D8	20H6-2X-0	0.1	µ	84.6	77.2	77.3	81.4		
4-Bromofluorobenzene	3X0-00-3	0.1	µ	82.7	75.3	78.1	82.3		



s 7el P 12g_glo
 T : bhgi bAI b P EM1201331
 y fC: i r P Gd f mER\$kk d y ISUEK
 s b j j ur p 116X1H201

Analytical Results

k DL-M7rtG: WATER

Compound	CAS Number	LOR	Client sampling date / time		A9HA2/37100212 10-5EO-2012gloR00	A9HA2/35100212 10-5EO-2012gloR00	EM1201441-005	EM1201441-006	Unit
			Client sample ID	Client sampling date / time					
EG020T: Total Metals by ICP-MS									
Arsenic	6330-HB-2	0.001					=0.001		%ef
Cadmium	6330-3H9	0.0001					=0.0001		%ef
Chromium	6330-36-H	0.001					=0.001		%ef
Copper	6330-00-8	0.001					=0.001		%ef
Nickel	6330-02-0	0.001					=0.001		%ef
Lead	63H9-92-1	0.001					=0.001		%ef
Zinc	6330-XX-X	0.000					=0.000		%ef
EG035T: Total Recoverable Mercury by FIMS									
Mercury	63H9-96-X	0.0001					=0.0001		%ef
EP074A: Monocyclic Aromatic Hydrocarbons									
Benzene	61-3H2	1			16				%ef
Toluene	108-88-H	2			17				%ef
Ethylbenzene	100-31-3	2			15				%ef
meta- & para-Xylene	108-HB-Hj0X-32-H	2			30				%ef
Styrene	100-32-0	0			=0				%ef
ortho-Xylene	90-36-X	2			16				%ef
Isopropylbenzene	98-82-8	0			=0				%ef
n-Propylbenzene	10H-X0-1	0			=0				%ef
1,3,5-Trimethylbenzene	108-X6-8	0			=0				%ef
sec-Butylbenzene	1Hb-98-8	0			=0				%ef
1,2,4-Trimethylbenzene	90-XHX	0			=0				%ef
tert-Butylbenzene	98-0XX	0			=0				%ef
p-Isopropyltoluene	99-86-X	0			=0				%ef
n-Butylbenzene	103-01-8	0			=0				%ef
EP074B: Oxygenated Compounds									
Vinyl Acetate	108-00-3	00			=00				%ef
2-Butanone (MEK)	68-9HH	00			=00				%ef
4-Methyl-2-pentanone (MIBK)	108-10-1	00			=00				%ef
2-Hexanone (MIBK)	091-68-X	00			=00				%ef
EP074C: Sulfonated Compounds									
Carbon disulfide	60-10-0	0			=0				%ef
EP074D: Fumigants									
2,2-Dichloropropane	093-20-6	0			=0				%ef
1,2-Dichloropropane	68-86-0	0			=0				%ef
cis-1,3-Dichloropropylene	100X1-01-0	0			=0				%ef
trans-1,3-Dichloropropylene	100X1-02-X	0			=0				%ef
1,2-Dibromoethane (EDB)	10X-9H-3	0			=0				%ef



s 7el
 T : bhgi bAl b
 y fC: i r
 s b j j ur
 P 1H9 glo
 P EM1201331
 P Gd f mER\$kk dy ISUEk
 P 116X1H201

Analytical Results

k DL-M7rtG: WATER

Compound	Client sampling date / time		Client sample ID	Client sampling date / time	
	CAS Number	LOR		Unit	Unit
EP074E: Halogenated Aliphatic Compounds					
Dichlorodifluoromethane	60-61-8	00	%ef	=00	A9HA2/37100212
Chloromethane	63-86-H	00	%ef	=00	10-5EO-2012gloR0
Vinyl chloride	60-01-3	00	%ef	=00	10-5EO-2012gloR0
Bromomethane	63-8H9	00	%ef	=00	EM1201441-005
Chloroethane	60-00-H	00	%ef	=00	A9HA2/35100212
Trichlorofluoromethane	60-X9-3	00	%ef	=00	10-5EO-2012gloR0
1.1-Dichloroethene	60-Hb-3	0	%ef	=0	EM1201441-006
Iodomethane	63-88-3	0	%ef	=0	
trans-1.2-Dichloroethene	1oX-X0-o	0	%ef	=0	
1.1-Dichloroethane	60-H3-H	0	%ef	=0	
cis-1.2-Dichloroethene	1oX-o9-2	0	%ef	=0	
1.1.1-Trichloroethane	61-oo-X	0	%ef	=0	
1.1-Dichloropropylene	oXH+o8-X	0	%ef	=0	
Carbon Tetrachloride	oX-2Ho	0	%ef	=0	
1.2-Dichloroethane	106-0X-2	0	%ef	=0	
Trichloroethene	69-01-X	0	%ef	=0	
Dibromomethane	63-90-H	0	%ef	=0	
1.1.2-Trichloroethane	69-00-o	0	%ef	=0	
1.3-Dichloropropane	132-28-9	0	%ef	=0	
Tetrachloroethene	126-18-3	0	%ef	=0	
1.1.1.2-Tetrachloroethane	XH-20-X	0	%ef	=0	
trans-1.4-Dichloro-2-butene	110-06-X	0	%ef	=0	
cis-1.4-Dichloro-2-butene	136X-11-o	0	%ef	=0	
1.1.2.2-Tetrachloroethane	69-H3-o	0	%ef	=0	
1.2.3-Trichloropropane	9X-18-3	0	%ef	=0	
Pentachloroethane	6X-01-6	0	%ef	=0	
1.2-Dibromo-3-chloropropane	9X-12-8	0	%ef	=0	
Hexachlorobutadiene	86-X8-H	0	%ef	=0	
EP074F: Halogenated Aromatic Compounds					
Chlorobenzene	108-90-6	0	%ef	=0	
Bromobenzene	108-8X-1	0	%ef	=0	
2-Chlorotoluene	90-39-8	0	%ef	=0	
4-Chlorotoluene	10X-3H-3	0	%ef	=0	
1.3-Dichlorobenzene	631-6H-1	0	%ef	=0	
1.4-Dichlorobenzene	10X-3X-6	0	%ef	=0	
1.2-Dichlorobenzene	90-o0-1	0	%ef	=0	
1.2.4-Trichlorobenzene	120-82-1	0	%ef	=0	
1.2.3-Trichlorobenzene	86-X1-X	0	%ef	=0	



s 7el P 13g_glo
 T : bhgi bAI b P EM1201331
 y fC: i r P Gd f mER\$kk d y ISUEK
 s b j j ur P 116X1H201

Analytical Results

k DL-M7rtG: WATER

Compound	CAS Number	LOR	Client sampling date / time		A9HA2/37100212 10-5EO-2012gloR0	A9HA2/35100212 10-5EO-2012gloR0	EM1201441-005	EM1201441-006
			Client sample ID	Unit				
EP074G: Trihalomethanes								
Chloroform	X6-XX-H	0	%ef		=0			
Bromodichloromethane	60-26-3	0	%ef		=0			
Dibromochloromethane	123-38-1	0	%ef		=0			
Bromoform	60-20-2	0	%ef		=0			
EP074H: Naphthalene								
Naphthalene	91-20-H	6	%ef		=6			
EP080/071: Total Petroleum Hydrocarbons								
C6 - C9 Fraction		20	%ef			=20		
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft								
C6 - C10 Fraction		20	%ef			=20		
gC6 - C10 Fraction minus BTEX (F1)		20	%ef			=20		
EP080: BTEXN								
Benzene	61-3H-2	1	%ef			=1		
Toluene	108-88-H	2	%ef			=2		
Ethylbenzene	100-31-3	2	%ef			=2		
meta- & para-Xylene	108-HB+gOX-32-H	2	%ef			=2		
ortho-Xylene	90-36-X	2	%ef			=2		
gTotal Xylenes	1H0-20-6	2	%ef			=2		
gSum of BTEX		1	%ef			=1		
Naphthalene	91-20-H	0	%ef			=0		
EP074S: VOC Surrogates								
1,2-Dichloroethane-D4	160X0-06-0	0.1	µ		74.4			
Toluene-D8	20H6-2X-0	0.1	µ		98.7			
4-Bromofluorobenzene	3X0-00-3	0.1	µ		95.0			
EP080S: TPH(V)/BTEX Surrogates								
1,2-Dichloroethane-D4	160X0-06-0	0.1	µ			98.1		
Toluene-D8	20H6-2X-0	0.1	µ			98.6		
4-Bromofluorobenzene	3X0-00-3	0.1	µ			96.7		



s 7el P 1og_glo
 T : bngi bA b P EM1201331
 y fC'i r P Gd f mER\$kk d y ISUEk
 s b j j ur P 116X1H201

Surrogate Control Limits

k DL-M7rds: SOIL		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2001-23-H	HH	1H
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21Xoo-6H2	29.8	13X
EP068T: Organophosphorus Pesticide Surrogate			
DEF	68-38-8	2H6	13X
EP074S: VOC Surrogates			
1,2-Dichloroethane-D4	160X0-06-0	X2	122
Toluene-D8	20H6-2X-o	X3	120
4-Bromofluorobenzene	3X0-00-3	XX	123
EP075S: Acid Extractable Surrogates			
2-Fluorophenol	HX6-12-3	13	12X
Phenol-d6	1H126-88-H	12.2	122
2-Chlorophenol-D4	9H01-6HX	13.2	126
2,4,6-Tribromophenol	118-69-X	12.3	1H
EP075T: Base/Neutral Extractable Surrogates			
Nitrobenzene-D5	31Xo-X0-0	12.3	128
1,2-Dichlorobenzene-D4	2199-X0-1	11.X	108
2-Fluorobiphenyl	H21-X0-8	18.6	126
Anthracene-d10	1619-0X-8	28.0	132
4-Terphenyl-d14	1618-o1-0	20.8	1H
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	160X0-06-0	06	129
Toluene-D8	20H6-2X-o	08	120
4-Bromofluorobenzene	3X0-00-3	oX	12X
k DL-M7rds: WATER		Recovery Limits (%)	
Compound	CAS Number	Low	High
EP074S: VOC Surrogates			
1,2-Dichloroethane-D4	160X0-06-0	62	1H2
Toluene-D8	20H6-2X-o	63	128
4-Bromofluorobenzene	3X0-00-3	60	1H2
EP080S: TPH(V)/BTEX Surrogates			
1,2-Dichloroethane-D4	160X0-06-0	6H	1H1
Toluene-D8	20H6-2X-o	62	123
4-Bromofluorobenzene	3X0-00-3	60	12X

Environmental Division

QUALITY CONTROL REPORT

Work Order	: EM1201331	Page	: 1 of 33
Client	: 5 07GEL DRROADS	Laboratory	: Environmental Division Melbourne
Contact	: Niamh McCormack	Contact	: Samantha Smith
Address	: P O BOX 6079 Building 7, 570-588 Swan St, Richmond, VIC. 3121 HAWTHORN WEST VIC, AUSTRALIA 3122	Address	: 4 Westall Rd Springvale VIC Australia 3171
E-mail	: nmccormack@golder.com.au	E-mail	: samantha.smith@alsglobal.com
Telephone	: +61 03 8862 3500	Telephone	: +61-3-8549 9644
Facsimile	: +61 03 8862 3501	Facsimile	: +61-3-8549 9601
Project	: 117613201	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: FISKVILLE	Date Samples Received	: 10-FEB-2012
C-O-C number	: ----	Issue Date	: 28-FEB-2012
Sampler	: RM	No. of samples received	: 6
Order number	: GA-MELB 332509	No. of samples analysed	: 6
Quote number	: ME/054/12		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD), and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits



NATA Accredited Laboratory 825

Accredited for compliance with
ISO/IEC 17025.

WORLD RECOGNISED
ACCREDITATION

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	Position	Accreditation Category
Dilani Fernando	Senior Inorganic Chemist	Melbourne Inorganics
Eric Chau	Metals Team Leader	Melbourne Inorganics
Nancy Wang	Senior Semivolatle Instrument Chemist	Melbourne Organics
Phalak Inthaksono	Laboratory Manager - Organics	Sydney Organics
Varsha Ho Wing	Non-Metals Team Leader	Melbourne Inorganics
Xingbin Lin	Senior Organic Chemist	Melbourne Organics



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Work Order : EM1201441
Client : GOLDR ASSOCIATES
Project : 117613201

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key :

- Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
- CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
- LOR = Limit of reporting
- RPD = Relative Percentage Difference
- # = Indicates failed QC



Page : 3 of 33
 Work Order : EM1201441
 Client : GOLDR ASSOCIATES
 Project : 117613201

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: ROS		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
ED011 : MoFisre Aol iel i v A 7oi: 21aby1IP											
EM1201441-001	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	<1.0	<1.0	0.0	No Limit		
EM1201428-041	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	20.5	20.7	0.8	0% - 20%		
E5001 C: Coi- (Mei- (F Q3) dER v A 7oi: 21y1u01 P											
EM1201441-001	A9HA1/3001	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit		
		EG005T: Chromium	7440-47-3	2	mg/kg	46	41	11.7	0% - 20%		
		EG005T: Nickel	7440-02-0	2	mg/kg	26	24	6.5	0% - 50%		
		EG005T: Arsenic	7440-38-2	5	mg/kg	7	<5	27.6	No Limit		
		EG005T: Copper	7440-50-8	5	mg/kg	15	14	0.0	No Limit		
		EG005T: Lead	7439-92-1	5	mg/kg	30	31	4.2	No Limit		
		EG005T: Zinc	7440-66-6	5	mg/kg	91	74	20.3	0% - 50%		
EM1201552-008	Anonymous	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit		
		EG005T: Chromium	7440-47-3	2	mg/kg	63	59	5.6	0% - 20%		
		EG005T: Nickel	7440-02-0	2	mg/kg	23	24	6.0	0% - 50%		
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit		
		EG005T: Copper	7440-50-8	5	mg/kg	8	9	0.0	No Limit		
		EG005T: Lead	7439-92-1	5	mg/kg	18	10	56.5	No Limit		
		EG005T: Zinc	7440-66-6	5	mg/kg	10	10	0.0	No Limit		
E50ul C: Coi- (Le6oher- Qe Mer6s r4 Q4 nSMR v A 7oi: 21y1u0aP											
EM1201441-001	A9HA1/3001	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit		
EM1201552-008	Anonymous	EG035T: Mercury	7439-97-6	0.1	mg/kg	0.1	0.1	0.0	No Limit		
E) 003: OrB- J B M- iter v A 7oi: 21aby1 uP											
EM1201441-001	A9HA1/3001	EP004: Total Organic Carbon	----	0.5	%	2.4	2.3	0.0	No Limit		
E) 0aa:) o(46p(orT - ied 8 Tpel 4(F v) A8 P v A 7oi: 21b1unr8P											
EM1201441-001	A9HA1/3001	EP066: Total Polychlorinated biphenyls	----	0.10	mg/kg	<0.50	<0.50	0.0	No Limit		
EM1201552-011	Anonymous	EP066: Total Polychlorinated biphenyls	----	0.10	mg/kg	<0.10	<0.10	0.0	No Limit		
E) 0ayD: OrB- J o6p(orT e) eFI BDeF VOAP v A 7oi: 21b1umrP											
EM1201441-001	A9HA1/3001	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		



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 Work Order : EM1201441
 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: ROS		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
E) 0ayD: OrB- J o6p(orI e) eFI 6eF YOAP v A 7oi: 21b1umP c6ol IT sed A9HA1/3001											
EM1201441-001		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<1.0	<1.0	0.0	No Limit		
EM1201552-011	Anonymous	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
		EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
E) 0ay8: OrB- J ogpoEgporvF) eFI 6eF YOAP v A 7oi: 21b1umP A9HA1/3001											
EM1201441-001		EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.25	<0.25	0.0	No Limit		



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 Work Order : EM1201441
 Client : GOLDR ASSOCIATES
 Project : 117613201

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)
						Original Result	Duplicate Result	RPD (%)	
E) 0ay8 : OrB- J ogpoEgprsF) eFlb TefF.vO) P v A 7oi: 24b1umrP c6ol iT sed EM1201441-001	A9HA1/3001	EP068: Malathion	121-75-5	0.05	mg/kg	<0.25	<0.25	0.0	No Limit
		EP068: Fenthion	55-38-9	0.05	mg/kg	<0.25	<0.25	0.0	No Limit
		EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.25	<0.25	0.0	No Limit
		EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.25	<0.25	0.0	No Limit
		EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.25	<0.25	0.0	No Limit
		EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.25	<0.25	0.0	No Limit
		EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.25	<0.25	0.0	No Limit
		EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.25	<0.25	0.0	No Limit
		EP068: Ethion	563-12-2	0.05	mg/kg	<0.25	<0.25	0.0	No Limit
		EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.25	<0.25	0.0	No Limit
		EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.25	<0.25	0.0	No Limit
		EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<1.0	<1.0	0.0	No Limit
		EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<1.0	<1.0	0.0	No Limit
		EP068: Parathion	56-38-2	0.2	mg/kg	<1.0	<1.0	0.0	No Limit
		EP068: Dichlorvos	62-73-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Demeton-S-methyl	919-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dimethoate	60-51-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Diazinon	333-41-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Chlorpyrifos-methyl	5598-13-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Malathion	121-75-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
EP068: Fenthion	55-38-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Chlorpyrifos	2921-88-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Pirimphos-ethyl	23505-41-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Chlorfenvinphos	470-90-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Bromophos-ethyl	4824-78-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Fenamiphos	22224-92-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Prothiofos	34643-46-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Ethion	563-12-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Carbophenothion	786-19-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Azinphos Methyl	86-50-0	0.05	mg/kg	<0.05	<0.05	0.0	No Limit		
EP068: Monocrotophos	6923-22-4	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
EP068: Parathion-methyl	298-00-0	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
EP068: Parathion	56-38-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit		
E) 0b3D: Mol 0646(6 DroH - i T6 94dro6- rQol F v A 7oi: 21abal nP									
EM1201441-001	A9HA1/3001	EP074: Styrene	100-42-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: Isopropylbenzene	98-82-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: n-Propylbenzene	103-65-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: 1,3,5-Trimethylbenzene	108-67-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP074: sec-Butylbenzene	135-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit



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 Work Order : EM1201441
 Client : GOLDER ASSOCIATES
 Project : 117613201

Sub-Matrix: ROS		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
E) 0b3D: Mol 0646 (6 DroH - iTB 9.4dro6- rQol F v A 7oi: 21abal nP c6ol iT sed											
EM1201441-001	A9HA1/3001	EP074: 1,2,4-Trimethylbenzene	95-63-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: tert-Butylbenzene	98-06-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: p-Isopropyltoluene	99-87-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: n-Butylbenzene	104-51-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
E) 0b38 : Ox4Bel - ied AoH gosI dF v A 7oi: 21abal nP											
EM1201441-001	A9HA1/3001	EP074: Vinyl Acetate	108-05-4	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: 2-Butanone (MEK)	78-93-3	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: 2-Hexanone (MBK)	591-78-6	5	mg/kg	<5	<5	0.0	No Limit		
E) 0b3A: Rs (fol - ied AoH gosI dF v A 7oi: 21abal nP											
EM1201441-001	A9HA1/3001	EP074: Carbon disulfide	75-15-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
E) 0b3G: nsH TB- iF v A 7oi: 21abal nP											
EM1201441-001	A9HA1/3001	EP074: 2,2-Dichloropropane	594-20-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,2-Dichloropropane	78-87-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: cis-1,3-Dichloropropylene	10061-01-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: trans-1,3-Dichloropropylene	10061-02-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,2-Dibromoethane (EDB)	106-93-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
E) 0b3E: 9 - (oBel - ied D(Ep- iTB AoH gosI dF v A 7oi: 21abal nP											
EM1201441-001	A9HA1/3001	EP074: 1,1-Dichloroethene	75-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Iodomethane	74-88-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: trans-1,2-Dichloroethene	156-60-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,1-Dichloroethane	75-34-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: cis-1,2-Dichloroethene	156-59-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,1,1-Trichloroethane	71-55-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,1-Dichloropropylene	563-58-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Carbon Tetrachloride	56-23-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,2-Dichloroethane	107-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Trichloroethene	79-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Dibromomethane	74-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,1,2-Trichloroethane	79-00-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,3-Dichloropropane	142-28-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Tetrachloroethene	127-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,1,1,2-Tetrachloroethane	630-20-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: trans-1,4-Dichloro-2-butene	110-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: cis-1,4-Dichloro-2-butene	1476-11-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,1,2,2-Tetrachloroethane	79-34-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,2,3-Trichloropropane	96-18-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Pentachloroethane	76-01-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,2-Dibromo-3-chloropropane	96-12-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		



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 Work Order : EM1201441
 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: ROS		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
E) 0b3E: 9-(o)Bel - ied D(Tp- i)B AoH gosl dF v A 7oi: 21abal mP c6ol iT sed											
EM1201441-001	A9HA1/3001	EP074: Dichlorodifluoromethane	75-71-8	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: Chloromethane	74-87-3	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: Vinyl chloride	75-01-4	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: Bromomethane	74-83-9	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: Chloroethane	75-00-3	5	mg/kg	<5	<5	0.0	No Limit		
		EP074: Trichlorofluoromethane	75-69-4	5	mg/kg	<5	<5	0.0	No Limit		
E) 0b3n: 9-(o)Bel - ied DroH - i)B AoH gosl dF v A 7oi: 21abal mP											
EM1201441-001	A9HA1/3001	EP074: Chlorobenzene	108-90-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Bromobenzene	108-86-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 2-Chlorotoluene	95-49-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 4-Chlorotoluene	106-43-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: 1,2,3-Trichlorobenzene	87-61-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
E) 0b35: 0(Tp- (o)Heip- i) eF v A 7oi: 21abal mP											
EM1201441-001	A9HA1/3001	EP074: Chloroform	67-66-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP074: Bromoform	75-25-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
E) 0b) D:) pel o(TB AoH gosl dF v A 7oi: 21b)umP											
EM1201441-001	A9HA1/3001	EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	<1	0.0	No Limit		
		EP075: Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	<1	0.0	No Limit		
EM1201552-011	Anonymous										



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 Work Order : EM1201441
 Client : GOLDR ASSOCIATES
 Project : 117613201

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report					
						Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
E) 0bl D:) pel o(B AoHgosl dF vA 7oi: 21b1uuaP c6ol iT sed EM1201552-011	Anonymous	EP075: 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pentachlorophenol	87-86-5	1	mg/kg	<1	<1	0.0	No Limit		
		E) 0bl 8:) o(4l s6(e-r DroH - iB 94dro6-rQol F vA 7oi: 21b1uuaP									
		EP075: Naphthalene	A9HA1/3001	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP075: 2-Methylnaphthalene		91-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP075: 2-Chloronaphthalene		91-58-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP075: Acenaphthylene		208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP075: Acenaphthene		83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP075: Fluorene		86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP075: Phenanthrene		85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP075: Anthracene		120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP075: Fluoranthene		206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP075: Pyrene		129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
		EP075: N-2-Fluorenyl Acetamide		53-96-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit	
EP075: Benz(a)anthracene		56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit			
EP075: Chrysene		218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit			
EP075: 7.12-Dimethylbenz(a)anthracene		57-97-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit			
EP075: Benzo(a)pyrene		50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit			
EP075: 3-Methylcholanthrene		56-49-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit			
EP075: Indeno(1.2.3.cd)pyrene		193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit			
EP075: Dibenz(a,h)anthracene		53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit			
EP075: Benzo(g,h,i)perylene		191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit			
EP075: Sum of PAHs		----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit			
EP075: Benzo(b) & Benzo(k)fluoranthene		205-99-2	1	mg/kg	<1	<1	0.0	No Limit			
		207-08-9									
EM1201552-011	Anonymous	EP075: Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 7.12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		



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 Work Order : EM1201441
 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: ROS		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
E) 0bl 8 :) o(4l s6(e-r DroH - iB 9 4dro6- rQbl F v. A 7oi: 21b1uraP c6ol IT sed											
EM1201552-011	Anonymous	EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Sum of PAHs	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	<1	0.0	No Limit		
E) 0bl A:) pjp- (ie EFierF v. A 7oi: 21b1uraP											
EM1201441-001	A9HA1/3001	EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: bis(2-ethylhexyl) phthalate	117-81-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: bis(2-ethylhexyl) phthalate	117-81-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
E) 0bl G: NTroF-H T eF v. A 7oi: 21b1uraP											
EM1201441-001	A9HA1/3001	EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: Methapyrene	91-80-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		



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 Work Order : EM1201441
 Client : GOLDER ASSOCIATES
 Project : 117613201

Sub-Matrix: ROS		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
E) 0bl G: NTroF-H T eF v A 7oi: 21b1uraP c6ol i T sed											
EM1201552-011	Anonymous	EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
E) 0bl E: NTro-roH - iBF - l d Keiol eF v A 7oi: 21b1uraP											
EM1201441-001	A9HA1/3001	EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,6-Dinitrotoluene	606-20-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: 2,4-Dinitrotoluene	121-14-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Chlorbenzilate	510-15-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Azobenzene	103-33-3	1	mg/kg	<1	<1	0.0	No Limit		
EM1201552-011	Anonymous	EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2,6-Dinitrotoluene	606-20-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: 2,4-Dinitrotoluene	121-14-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Chlorbenzilate	510-15-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Azobenzene	103-33-3	1	mg/kg	<1	<1	0.0	No Limit		
E) 0bl n: 9 - (oeiperF v A 7oi: 21b1uraP											



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 Work Order : EM1201441
 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: ROS		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method/Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
E) 0bl n: 9 - (oe)perF - t. A 7oi: 21b1umP c6ol IT sed											
EM1201441-001	A9HA1/3001	EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EM1201552-011	Anonymous	EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
E) 0bl 5 : Ap(or)T - ied 9 4dro6- rQbl F - t. A 7oi: 21b1umP											
EM1201441-001	A9HA1/3001	EP075: 1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Hexachlorocyclopentadiene	77-47-4	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
EM1201552-011	Anonymous	EP075: 1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Hexachlorocyclopentadiene	77-47-4	0.5	mg/kg	<2.5	<2.5	0.0	No Limit		
		EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
E) 0bl 9 : DI TT eF - I d 8 el z BT eF - t. A 7oi: 21b1umP											
EM1201441-001	A9HA1/3001	EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 3,3'-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EM1201552-011	Anonymous	EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		



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 Work Order : EM1201441
 Client : GOLDR ASSOCIATES
 Project : 117613201

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Laboratory Duplicate (DUP) Report			Recovery Limits (%)		
						Original Result	Duplicate Result	RPD (%)			
E) 0bl 9 : DI T eF - l d 8 el z TI eF v A 7 oi: 21b1unaP c6ol iT sed EM1201552-011	Anonymous	EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
		EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		EP075: 3,3'-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
		E) 0bl 9 OrB- l o6p(orT e) eFI6TeF v A 7 oi: 21b1unaP									
		EM1201441-001 A9HA1/3001		EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
				EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075: gamma-BHC	58-89-9			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075: delta-BHC	319-86-8			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075: Heptachlor	76-44-8			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075: Aldrin	309-00-2			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075: Heptachlor epoxide	1024-57-3			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075: alpha-Endosulfan	959-98-8			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075: 4,4'-DDE	72-55-9			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075: Dieldrin	60-57-1			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075: Endrin	72-20-8			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075: beta-Endosulfan	33213-65-9			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075: 4,4'-DDD	72-54-8			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075: Endosulfan sulfate	1031-07-8			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075: 4,4'-DDT	50-29-3			0.5	mg/kg	<1.0	<1.0	0.0	No Limit		
EP075: alpha-BHC	319-84-6			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075: beta-BHC	319-85-7			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075: gamma-BHC	58-89-9			0.5	mg/kg	<0.5	<0.5	0.0	No Limit		
EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit				
EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit				
EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit				
EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit				
EP075: alpha-Endosulfan	959-98-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit				
EP075: 4,4'-DDE	72-55-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit				
EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit				
EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit				
EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit				
EP075: 4,4'-DDD	72-54-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit				
EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit				
EP075: 4,4'-DDT	50-29-3	0.5	mg/kg	<1.0	<1.0	0.0	No Limit				
E) 0bl J: OrB- l ogpofgprs F) eFI6TeF v A 7 oi: 21b1unaP											



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 Work Order : EM1201441
 Client : GOLDER ASSOCIATES
 Project : 117613201

Sub-Matrix: ROS		Laboratory Duplicate (DUP) Report							
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
E) 0bl J: OrB- l ogpoFgprsF) eFlBüdeF. A 7oi: 21bl unaP c6ol IT sed									
EM1201441-001	A9HA1/3001	EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dichlorvos	62-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
E) 0y0/0b1: Coi- () eiro(esH 9 4dro6- rQol F. A 7oi: 21abal yP									
EM1201441-001	A9HA1/3001	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
E) 0y0/0b1: Coi- () eiro(esH 9 4dro6- rQol F. A 7oi: 21bl b2bP									
EB1203892-001	Anonymous	EP071: C15 - C28 Fraction	----	100	mg/kg	150	140	12.9	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	2120	1990	6.3	0% - 20%
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	2270	2130	6.4	0% - 20%
		EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
E) 0y0/0b1: Coi- () Le6oher- Qe 9 4dro6- rQol F cNE) M 2010 Gr- fi. A 7oi: 21abal yP									
EM1201441-001	A9HA1/3001	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
E) 0y0/0b1: Coi- () Le6oher- Qe 9 4dro6- rQol F cNE) M 2010 Gr- fi. A 7oi: 21bl b2bP									
EB1203892-001	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	2370	2220	6.5	0% - 20%



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Sub-Matrix: ROS									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
E) 0y0/0b1: Coi- (Le6oher-Qe 94dro6-rQoI F cNE) M 2010 Gr- fi v A 7oi: 21bl b2bP c6oI IT sed									
EB1203892-001	Anonymous	EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	2370	2220	6.5	0% - 20%
EM1201673-023	Anonymous	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
		EP071: >C10 - C40 Fraction (sum)	----	50	mg/kg	<50	<50	0.0	No Limit
E) 0y0: 8CEXN v A 7oi: 21abal yP									
EM1201441-001	A9HA1/3001	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
E) 21a:) er6p(or-ie Q4 7A/MR v A 7oi: 21bl yuaP									
EM1201441-001	A9HA1/3001	EP216: Perchlorate	7601-90-3	10.0	µg/kg	<10.0	<10.0	0.0	No Limit
E) 21ut:) erf(soro6i4/D6tIF - l d Rs(fol - ief. v A 7oi: 21bl l buP									
EM1201441-001	A9HA1/3001	EP231: PFOA	1763-23-1	0.0005	mg/kg	0.287	0.279	3.0	0% - 20%
		EP231: PFOA	335-67-1	0.0005	mg/kg	0.0076	0.0085	10.9	0% - 50%
		EP231: 6:2 Fluorotelomer Sulfonate (6:2 FtS)	27619-97-2	0.005	mg/kg	0.036	0.029	20.3	No Limit
		EP231: PFOA	1763-23-1	0.0005	mg/kg	0.0006	0.0007	17.8	No Limit
		EP231: PFOA	335-67-1	0.0005	mg/kg	<0.0005	<0.0005	0.0	No Limit
		EP231: 6:2 Fluorotelomer Sulfonate (6:2 FtS)	27619-97-2	0.005	mg/kg	<0.005	<0.005	0.0	No Limit
Sub-Matrix: WDCEL									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
E5 020C: Coi- (Mei- (F Q4 S) eMIR v A 7oi: 21y1abuP									
EM1201441-006	A9HA2/35100212	EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	<0.005	0.0	No Limit
		EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
		EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Copper	7440-50-8	0.001	mg/L	0.001	0.001	0.0	No Limit
		EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	<0.001	0.0	No Limit
		EG020A-T: Zinc	7440-66-6	0.005	mg/L	0.006	0.006	0.0	No Limit
EM1201844-006	Anonymous								



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 Project : 117613201

Sub-Matrix: WDCEL									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
E5 0ul C: Coli- (Le6oher-Qe Mer6sr4 Q4 n3MR v. A 7oi: 21b1uabp									
EM1201365-001	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
EM1201387-008	Anonymous	EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	<0.0001	0.0	No Limit
E) 0b3D: Mol.o646(16 DroH - i 16 9 4dro6- rQol F v. A 7oi: 21y1y2mP									
EM1201441-005	A9HA2/37100212	EP074: Benzene	71-43-2	1	µg/L	16	15	10.3	0% - 50%
		EP074: Toluene	108-88-3	2	µg/L	17	19	7.6	No Limit
		EP074: Ethylbenzene	100-41-4	2	µg/L	15	16	0.0	No Limit
		EP074: meta- & para-Xylene	108-38-3	2	µg/L	30	31	3.8	0% - 50%
		EP074: ortho-Xylene	106-42-3						
		EP074: Styrene	95-47-6	2	µg/L	16	16	0.0	No Limit
		EP074: Isopropylbenzene	100-42-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: n-Propylbenzene	98-82-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,3,5-Trimethylbenzene	103-65-1	5	µg/L	<5	<5	0.0	No Limit
		EP074: sec-Butylbenzene	108-67-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2,4-Trimethylbenzene	135-98-8	5	µg/L	<5	<5	0.0	No Limit
		EP074: tert-Butylbenzene	95-63-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: p-Isopropyltoluene	98-06-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: n-Butylbenzene	99-87-6	5	µg/L	<5	<5	0.0	No Limit
			104-51-8	5	µg/L	<5	<5	0.0	No Limit
E) 0b38 : Ox4Bel - ied AoH gosI dF v. A 7oi: 21y1y2mP									
EM1201441-005	A9HA2/37100212	EP074: Vinyl Acetate	108-05-4	50	µg/L	<50	<50	0.0	No Limit
		EP074: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	<50	0.0	No Limit
		EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	<50	0.0	No Limit
		EP074: 2-Hexanone (MBK)	591-78-6	50	µg/L	<50	<50	0.0	No Limit
E) 0b3A: Rs(foI - ied AoH gosI dF v. A 7oi: 21y1y2mP									
EM1201441-005	A9HA2/37100212	EP074: Carbon disulfide	75-15-0	5	µg/L	<5	<5	0.0	No Limit
E) 0b3G: nsHTB- I f v. A 7oi: 21y1y2mP									
EM1201441-005	A9HA2/37100212	EP074: 2,2-Dichloropropane	594-20-7	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2-Dichloropropane	78-87-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1,3-Dichloropropylene	10061-01-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1,3-Dichloropropylene	10061-02-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	<5	0.0	No Limit
E) 0b3E: 9-(oBel - ied D(Up- iS AoH gosI dF v. A 7oi: 21y1y2mP									
EM1201441-005	A9HA2/37100212	EP074: 1,1-Dichloroethene	75-35-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: Iodomethane	74-88-4	5	µg/L	<5	<5	0.0	No Limit
		EP074: trans-1,2-Dichloroethene	156-60-5	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1-Dichloroethane	75-34-3	5	µg/L	<5	<5	0.0	No Limit
		EP074: cis-1,2-Dichloroethene	156-59-2	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1,1-Trichloroethane	71-55-6	5	µg/L	<5	<5	0.0	No Limit
		EP074: 1,1-Dichloropropylene	563-58-6	5	µg/L	<5	<5	0.0	No Limit



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Sub-Matrix: WDCEL		Laboratory Duplicate (DUP) Report									
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)		
E) 0b3E: 9-(o)BeI - ied D(Tp- I)6 AoH gosl dF v A 7oi: 21y1y2mP c6ol I T sed											
EM1201441-005	A9HA2/37100212	EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,2-Dichloroethane	107-06-2	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Trichloroethene	79-01-6	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Dibromomethane	74-95-3	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,1,2-Trichloroethane	79-00-5	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,3-Dichloropropane	142-28-9	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,1,1,2-Tetrachloroethane	630-20-6	5	µg/L	<5	<5	0.0	No Limit		
		EP074: trans-1,4-Dichloro-2-butene	110-57-6	5	µg/L	<5	<5	0.0	No Limit		
		EP074: cis-1,4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,1,2,2-Tetrachloroethane	79-34-5	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,2,3-Trichloropropane	96-18-4	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Pentachloroethane	76-01-7	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	<50	0.0	No Limit		
		EP074: Chloromethane	74-87-3	50	µg/L	<50	<50	0.0	No Limit		
		EP074: Vinyl chloride	75-01-4	50	µg/L	<50	<50	0.0	No Limit		
		EP074: Bromomethane	74-83-9	50	µg/L	<50	<50	0.0	No Limit		
		EP074: Chloroethane	75-00-3	50	µg/L	<50	<50	0.0	No Limit		
		EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	<50	0.0	No Limit		
E) 0b3n: 9-(o)BeI - ied DroH - I)6 AoH gosl dF v A 7oi: 21y1y2mP											
EM1201441-005	A9HA2/37100212	EP074: Chlorobenzene	108-90-7	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Bromobenzene	108-86-1	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,3-Dichlorobenzene	541-73-1	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,4-Dichlorobenzene	106-46-7	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,2-Dichlorobenzene	95-50-1	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,2,4-Trichlorobenzene	120-82-1	5	µg/L	<5	<5	0.0	No Limit		
		EP074: 1,2,3-Trichlorobenzene	87-61-6	5	µg/L	<5	<5	0.0	No Limit		
E) 0b35: Cr(Tp- (o)Heip- I eF v A 7oi: 21y1y2mP											
EM1201441-005	A9HA2/37100212	EP074: Chloroform	67-66-3	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	<5	0.0	No Limit		
		EP074: Bromoform	75-25-2	5	µg/L	<5	<5	0.0	No Limit		
E) 0b39: N- gpiP- (e) e v A 7oi: 21y1y2mP											
EM1201441-005	A9HA2/37100212	EP074: Naphthalene	91-20-3	7	µg/L	<7	<7	0.0	No Limit		
E) 0y0/0b1: Coi- () eiro(esH 9 4dro6- rCo) F v A 7oi: 21y1y3l mP											



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Sub-Matrix: **WDECEL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report				Recovery Limits (%)	
				LOR	Unit	Original Result	Duplicate Result		RPD (%)
E) 0y0/0b1: Col- () eiro(es)H 9 4dro6- rQoI F t A 7oi: 21y1 3I mP c6oI iT sed									
EM1201441-006	A9HA2/35100212	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EM1201778-003	Anonymous	EP080: C6 - C9 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
E) 0y0/0b1: Col- (L e6oher- Qe 9 4dro6- rQoI F cNE) M 2010 Gr- fi t A 7oi: 21y1 3I mP									
EM1201441-006	A9HA2/35100212	EP080: C6 - C10 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
EM1201778-003	Anonymous	EP080: C6 - C10 Fraction	----	20	µg/L	<20	<20	0.0	No Limit
E) 0y0: 8 CEXN t A 7oi: 21y1 3I mP									
EM1201441-006	A9HA2/35100212	EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
		EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit
EM1201778-003 Anonymous									
		EP080: Benzene	71-43-2	1	µg/L	<1	<1	0.0	No Limit
		EP080: Toluene	108-88-3	2	µg/L	<2	<2	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	2	µg/L	<2	<2	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3	2	µg/L	<2	<2	0.0	No Limit
			106-42-3						
		EP080: ortho-Xylene	95-47-6	2	µg/L	<2	<2	0.0	No Limit
		EP080: Naphthalene	91-20-3	5	µg/L	<5	<5	0.0	No Limit



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Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
E5 00l C: Coi- (Le6oher-Qe Mer6sr4 Q4 n3MR v A7oi: 21y1u0aP									
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	13.6 mg/kg	98.4		74	132
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	2.8 mg/kg	97.0		71	123
EG005T: Chromium	7440-47-3	2	mg/kg	<2	60.9 mg/kg	106		73	125
EG005T: Copper	7440-50-8	5	mg/kg	<5	55.1 mg/kg	102		74	124
EG005T: Lead	7439-92-1	5	mg/kg	<5	54.9 mg/kg	105		74	126
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.1 mg/kg	107		74	128
EG005T: Zinc	7440-66-6	5	mg/kg	<5	105 mg/kg	102		74	124
E5 0ul C: Coi- (Le6oher-Qe Mer6sr4 Q4 n3MR v A7oi: 21y1u0aP									
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	1.47 mg/kg	105		64	116
E) 003: OrB- l B M- ier v A7oi: 21aby1uP									
EP004: Total Organic Carbon	----	0.5	%	<0.5	43.5 %	106		94	118
E) 0aa:) o(46p(orT - ied 8 Tpel 4(F v A8P v A7oi: 21b1un8P									
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.10	1.24 mg/kg	62.7		55	135
E) 0ayD: OrB- l o6p(orT e) eFTB6eF VOAP v A7oi: 21b1umIP									
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	97.1		52	133
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	94.1		50	132
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	99.3		50	138
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	98.2		54	132
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.6		51	133
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.4		51	134
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	89.1		52	133
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	90.8		54	136
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	90.9		53	136
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	97.3		53	133
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.0		52	137
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	97.1		49	132
EP068: 4,4'-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	90.4		53	134
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	90.2		45	141
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	99.2		54	132
EP068: 4,4'-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	88.4		52	136
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	74.0		49	135
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	92.2		49	142
EP068: 4,4'-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	93.1		40	146
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	92.2		51	137



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 Work Order : EM1201441
 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: ROS	Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report		
					Result	Concentration	Spike	Spike Recovery (%)	Recovery Limits (%)
E) DayD: OrB- l o6p(orT e) eFTBdeF VOAP v A7oi: 21bftumP c6ol iT sed									
EP068: Methoxychlor		72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	97.3	38	149
E) Day8: OrB- l ogpoEgprsF) eFTBdeF vO) P v A7oi: 21bftumP									
EP068: Dichlorvos		62-73-7	0.05	mg/kg	<0.05	0.5 mg/kg	50.1	35	137
EP068: Demeton-S-methyl		919-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	72.7	26.8	140
EP068: Monocrotophos		6923-22-4	0.2	mg/kg	<0.2	0.5 mg/kg	107	10	185
EP068: Dimethoate		60-51-5	0.05	mg/kg	<0.05	0.5 mg/kg	99.0	46	144
EP068: Diazinon		333-41-5	0.05	mg/kg	<0.05	0.5 mg/kg	88.8	50	134
EP068: Chlorpyrifos-methyl		5598-13-0	0.05	mg/kg	<0.05	0.5 mg/kg	89.8	52	134
EP068: Parathion-methyl		298-00-0	0.2	mg/kg	<0.2	0.5 mg/kg	89.3	50	137
EP068: Malathion		121-75-5	0.05	mg/kg	<0.05	0.5 mg/kg	91.0	46	140
EP068: Fenthion		55-38-9	0.05	mg/kg	<0.05	0.5 mg/kg	86.0	50	134
EP068: Chlorpyrifos		2921-88-2	0.05	mg/kg	<0.05	0.5 mg/kg	89.4	52	134
EP068: Parathion		56-38-2	0.2	mg/kg	<0.2	0.5 mg/kg	89.6	47	139
EP068: Pirimphos-ethyl		23505-41-1	0.05	mg/kg	<0.05	0.5 mg/kg	89.3	48	137
EP068: Chlorfenvinphos		470-90-6	0.05	mg/kg	<0.05	0.5 mg/kg	92.1	48	143
EP068: Bromophos-ethyl		4824-78-6	0.05	mg/kg	<0.05	0.5 mg/kg	90.5	52	136
EP068: Fenamiphos		22224-92-6	0.05	mg/kg	<0.05	0.5 mg/kg	78.8	37	136
EP068: Prothiofos		34643-46-4	0.05	mg/kg	<0.05	0.5 mg/kg	89.3	50	136
EP068: Ethion		563-12-2	0.05	mg/kg	<0.05	0.5 mg/kg	94.2	50	136
EP068: Carbophenothion		786-19-6	0.05	mg/kg	<0.05	0.5 mg/kg	87.8	47	138
EP068: Azinphos Methyl		86-50-0	0.05	mg/kg	<0.05	0.5 mg/kg	97.7	19.6	170
E) 0b3D: Mol o646(6 DroH - iTB 9 4dro6- rQol F v A7oi: 21abal nP									
EP074: Styrene		100-42-5	0.5	mg/kg	<0.5	1 mg/kg	90.2	64	120
EP074: Isopropylbenzene		98-82-8	0.5	mg/kg	<0.5	1 mg/kg	94.5	74	120
EP074: n-Propylbenzene		103-65-1	0.5	mg/kg	<0.5	1 mg/kg	95.6	65	117
EP074: 1,3,5-Trimethylbenzene		108-67-8	0.5	mg/kg	<0.5	1 mg/kg	92.0	65	117
EP074: sec-Butylbenzene		135-98-8	0.5	mg/kg	<0.5	1 mg/kg	97.6	67	117
EP074: 1,2,4-Trimethylbenzene		95-63-6	0.5	mg/kg	<0.5	1 mg/kg	91.7	66	117
EP074: tert-Butylbenzene		98-06-6	0.5	mg/kg	<0.5	1 mg/kg	95.6	68	116
EP074: p-Isopropyltoluene		99-87-6	0.5	mg/kg	<0.5	1 mg/kg	99.4	64	117
EP074: n-Butylbenzene		104-51-8	0.5	mg/kg	<0.5	1 mg/kg	86.3	59	115
E) 0b38: Ox4Bel - ied AoH gosl dF v A7oi: 21abal nP									
EP074: Vinyl Acetate		108-05-4	5	mg/kg	<5	10 mg/kg	77.2	40	138
EP074: 2-Butanone (MEK)		78-93-3	5	mg/kg	<5	10 mg/kg	85.0	61	143
EP074: 4-Methyl-2-pentanone (MIBK)		108-10-1	5	mg/kg	<5	10 mg/kg	84.2	63	137
EP074: 2-Hexanone (MBK)		591-78-6	5	mg/kg	<5	10 mg/kg	82.8	63	133
E) 0b3A: Rs(ol - ied AoH gosl dF v A7oi: 21abal nP									
EP074: Carbon disulfide		75-15-0	0.5	mg/kg	<0.5	1 mg/kg	99.2	57	121



Sub-Matrix: ROS	Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
					Result	Concentration	Spike	Spike Recovery (%)	LCS	Low	High
E) 0b3G: nsH TB- I F v. A7oi: 21 abal nP										
EP074: 2,2-Dichloropropane		594-20-7	0.5	mg/kg	<0.5	1 mg/kg	115	51	130	
EP074: 1,2-Dichloropropane		78-87-5	0.5	mg/kg	<0.5	1 mg/kg	94.6	73	121	
EP074: cis-1,3-Dichloropropylene		10061-01-5	0.5	mg/kg	<0.5	1 mg/kg	80.4	59	109	
EP074: trans-1,3-Dichloropropylene		10061-02-6	0.5	mg/kg	<0.5	1 mg/kg	65.3	52	110	
EP074: 1,2-Dibromoethane (EDB)		106-93-4	0.5	mg/kg	<0.5	1 mg/kg	92.8	68	120	
E) 0b3E: 9 - (oBe) - ied D[tp- iB AoH gos] dF v. A7oi: 21 abal nP										
EP074: Dichlorodifluoromethane		75-71-8	5	mg/kg	<5	10 mg/kg	76.2	34	122	
EP074: Chloromethane		74-87-3	5	mg/kg	<5	10 mg/kg	87.5	52	133	
EP074: Vinyl chloride		75-01-4	5	mg/kg	<5	10 mg/kg	92.2	47	133	
EP074: Bromomethane		74-83-9	5	mg/kg	<5	10 mg/kg	89.0	39	116	
EP074: Chloroethane		75-00-3	5	mg/kg	<5	10 mg/kg	100	43	137	
EP074: Trichlorofluoromethane		75-69-4	5	mg/kg	<5	10 mg/kg	106	61	126	
EP074: 1,1-Dichloroethene		75-35-4	0.5	mg/kg	<0.5	1 mg/kg	94.6	62	124	
EP074: Iodomethane		74-88-4	0.5	mg/kg	<0.5	1 mg/kg	78.0	47	116	
EP074: trans-1,2-Dichloroethene		156-60-5	0.5	mg/kg	<0.5	1 mg/kg	96.2	69	119	
EP074: 1,1-Dichloroethane		75-34-3	0.5	mg/kg	<0.5	1 mg/kg	93.6	70	120	
EP074: cis-1,2-Dichloroethene		156-59-2	0.5	mg/kg	<0.5	1 mg/kg	95.5	72	120	
EP074: 1,1,1-Trichloroethane		71-55-6	0.5	mg/kg	<0.5	1 mg/kg	91.2	64	112	
EP074: 1,1-Dichloropropylene		563-58-6	0.5	mg/kg	<0.5	1 mg/kg	93.0	71	117	
EP074: Carbon Tetrachloride		56-23-5	0.5	mg/kg	<0.5	1 mg/kg	85.6	51	106	
EP074: 1,2-Dichloroethane		107-06-2	0.5	mg/kg	<0.5	1 mg/kg	92.6	70	126	
EP074: Trichloroethane		79-01-6	0.5	mg/kg	<0.5	1 mg/kg	94.7	71	120	
EP074: Dibromomethane		74-95-3	0.5	mg/kg	<0.5	1 mg/kg	92.6	70	122	
EP074: 1,1,2-Trichloroethane		79-00-5	0.5	mg/kg	<0.5	1 mg/kg	92.0	73	125	
EP074: 1,3-Dichloropropane		142-28-9	0.5	mg/kg	<0.5	1 mg/kg	97.9	75	125	
EP074: Tetrachloroethene		127-18-4	0.5	mg/kg	<0.5	1 mg/kg	99.3	71	120	
EP074: 1,1,1,2-Tetrachloroethane		630-20-6	0.5	mg/kg	<0.5	1 mg/kg	93.2	54	106	
EP074: trans-1,4-Dichloro-2-butene		110-57-6	0.5	mg/kg	<0.5	1 mg/kg	70.6	46	112	
EP074: cis-1,4-Dichloro-2-butene		1476-11-5	0.5	mg/kg	<0.5	1 mg/kg	103	21.8	117	
EP074: 1,1,2,2-Tetrachloroethane		79-34-5	0.5	mg/kg	<0.5	1 mg/kg	101	71	131	
EP074: 1,2,3-Trichloropropane		96-18-4	0.5	mg/kg	<0.5	1 mg/kg	91.4	70	134	
EP074: Pentachloroethane		76-01-7	0.5	mg/kg	<0.5	1 mg/kg	80.2	40	94	
EP074: 1,2-Dibromo-3-chloropropane		96-12-8	0.5	mg/kg	<0.5	1 mg/kg	81.3	41	113	
E) 0b3n: 9 - (oBe) - ied DroH - iB AoH gos] dF v. A7oi: 21 abal nP										
EP074: Chlorobenzene		108-90-7	0.5	mg/kg	<0.5	1 mg/kg	103	78	120	
EP074: Bromobenzene		108-86-1	0.5	mg/kg	<0.5	1 mg/kg	92.8	68	116	
EP074: 2-Chlorotoluene		95-49-8	0.5	mg/kg	<0.5	1 mg/kg	93.1	67	117	
EP074: 4-Chlorotoluene		106-43-4	0.5	mg/kg	<0.5	1 mg/kg	94.2	67	115	
EP074: 1,2,3-Trichlorobenzene		87-61-6	0.5	mg/kg	<0.5	1 mg/kg	102	60	120	



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 Work Order : EM1201441
 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: ROS		Method: Compound			Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
Method	Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	LCS	Recovery Limits (%)	
								Low	High	
E) 0b35 : CrP- (oHeip- l eF v. A7oi: 21abal mP										
EP074:	Chloroform	67-66-3	0.5	mg/kg	<0.5	1 mg/kg	95.8	71	121	
EP074:	Bromodichloromethane	75-27-4	0.5	mg/kg	<0.5	1 mg/kg	90.7	60	108	
EP074:	Dibromochloromethane	124-48-1	0.5	mg/kg	<0.5	1 mg/kg	82.3	48	104	
EP074:	Bromoform	75-25-2	0.5	mg/kg	<0.5	1 mg/kg	85.2	40	106	
E) 0bl D:) pel oTB AoHgosi dF v. A7oi: 21b1unrP										
EP075:	Phenol	108-95-2	0.5	mg/kg	<0.5	2.5 mg/kg	92.5	38	138	
EP075:	2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	2.5 mg/kg	75.3	39	129	
EP075:	2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	2.5 mg/kg	78.8	33	132	
EP075:	3- & 4-Methylphenol	1319-77-3	0.5	mg/kg	<1.0					
EP075:	2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	2.5 mg/kg	92.1	35	131	
EP075:	2,4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	2.5 mg/kg	94.9	10	135	
EP075:	2,4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	2.5 mg/kg	80.4	35	133	
EP075:	2,6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	2.5 mg/kg	81.0	36	132	
EP075:	4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	2.5 mg/kg	92.4	39	143	
EP075:	2,4,6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	2.5 mg/kg	70.9	34	138	
EP075:	2,4,5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	2.5 mg/kg	108	30.2	142	
EP075:	Pentachlorophenol	87-86-5	1.0	mg/kg	<1	2.5 mg/kg	88.9	14	136	
E) 0bl 8:) o(4l s6(e- r DroH- iTB 94dro6- rQoI F v. A7oi: 21b1unrP										
EP075:	Naphthalene	91-20-3	0.5	mg/kg	<0.5	2.5 mg/kg	80.3	39	128	
EP075:	2-Methylnaphthalene	91-57-6	0.5	mg/kg	<0.5	2.5 mg/kg	78.3	40	136	
EP075:	2-Chloronaphthalene	91-58-7	0.5	mg/kg	<0.5	2.5 mg/kg	65.1	29.5	137	
EP075:	Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	2.5 mg/kg	76.4	38	138	
EP075:	Acenaphthene	83-32-9	0.5	mg/kg	<0.5	2.5 mg/kg	81.9	45	133	



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 Client : GOLDR ASSOCIATES
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Sub-Matrix: ROS		Method Blank (MB) Report			Laboratory Control Spike (LCS) Report		
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)
				Low	High		
E) 0bl 8 :) o(4l s6(e- r DroH - iB 9 4dro6- rQoI F v. A7oi: 21b1unaP c6ol iT sed							
EP075: Fluorene	86-73-7	0.5	mg/kg	<0.5	2.5 mg/kg	81.0	47 137
EP075: Phenanthrene	85-01-8	0.5	mg/kg	<0.5	2.5 mg/kg	85.5	45 133
EP075: Anthracene	120-12-7	0.5	mg/kg	<0.5	2.5 mg/kg	88.3	44 130
EP075: Fluoranthene	206-44-0	0.5	mg/kg	<0.5	2.5 mg/kg	91.5	46 138
EP075: Pyrene	129-00-0	0.5	mg/kg	<0.5	2.5 mg/kg	86.3	43 145
EP075: N-2-Fluorenyl Acetamide	53-96-3	0.5	mg/kg	<0.5	2.5 mg/kg	90.5	43 143
EP075: Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	2.5 mg/kg	83.5	43 139
EP075: Chrysene	218-01-9	0.5	mg/kg	<0.5	2.5 mg/kg	89.7	42 140
EP075: Benzo(b) & Benzo(k)fluoranthene	205-99-2 207-08-9	1	mg/kg	<1	5 mg/kg	90.2	43 139
EP075: 7,12-Dimethylbenz(a)anthracene	57-97-6	0.5	mg/kg	<0.5	2.5 mg/kg	87.3	40 154
EP075: Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	2.5 mg/kg	87.6	38 138
EP075: 3-Methylcholanthrene	56-49-5	0.5	mg/kg	<0.5	2.5 mg/kg	81.6	46 162
EP075: Indeno(1,2,3-cd)pyrene	193-39-5	0.5	mg/kg	<0.5	2.5 mg/kg	113	49 159
EP075: Dibenz(a,h)anthracene	53-70-3	0.5	mg/kg	<0.5	2.5 mg/kg	108	49 157
EP075: Benzo(g,h,i)perylene	191-24-2	0.5	mg/kg	<0.5	2.5 mg/kg	118	48 158
EP075: Sum of PAHs	----	0.5	mg/kg	<0.5	2.5 mg/kg	----	----
E) 0bl A :) pip(- ie EFierF v. A7oi: 21b1unaP							
EP075: Dimethyl phthalate	131-11-3	0.5	mg/kg	<0.5	2.5 mg/kg	82.4	40 142
EP075: Diethyl phthalate	84-66-2	0.5	mg/kg	<0.5	2.5 mg/kg	85.1	48 140
EP075: Di-n-butyl phthalate	84-74-2	0.5	mg/kg	<0.5	2.5 mg/kg	95.4	38 169
EP075: Butyl benzyl phthalate	85-68-7	0.5	mg/kg	<0.5	2.5 mg/kg	92.6	42 140



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 Work Order : EM1201441
 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: ROS		Method Blank (MB) Report			Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
						LCS	Low	High
E) 0bl A:) pip- (- ie EFierF v A7oi: 21b1unaP c6ol IT sed								
EP075: bis(2-ethylhexyl) phthalate	117-81-7	0.5	mg/kg	<5.0	2.5 mg/kg	112	47	155
EP075: Di-n-octylphthalate	117-84-0	0.5	mg/kg	<0.5	2.5 mg/kg	91.2	47	137
E) 0bl G: NTroF-H T eF v A7oi: 21b1unaP								
EP075: N-Nitrosomethylethylamine	10595-95-6	0.5	mg/kg	<0.5	2.5 mg/kg	95.6	16.2	136
EP075: N-Nitrosodiethylamine	55-18-5	0.5	mg/kg	<0.5	2.5 mg/kg	85.7	33	132
EP075: N-Nitrosopyrrolidine	930-55-2	0.5	mg/kg	<1.0	2.5 mg/kg	87.1	27.7	130
EP075: N-Nitrosomorpholine	59-89-2	0.5	mg/kg	<0.5	2.5 mg/kg	112	33	131
EP075: N-Nitrosodi-n-propylamine	621-64-7	0.5	mg/kg	<0.5	2.5 mg/kg	86.0	36	127
EP075: N-Nitrosopiperidine	100-75-4	0.5	mg/kg	<0.5	2.5 mg/kg	86.5	35	128
EP075: N-Nitrosodibutylamine	924-16-3	0.5	mg/kg	<0.5	2.5 mg/kg	87.6	37	139
EP075: N-Nitrosodiphenyl & Diphenylamine	86-30-6 122-39-4	0.5	mg/kg	<1.0	2.5 mg/kg	79.3	42	134
EP075: Methapyrilene	91-80-5	0.5	mg/kg	<0.5	2.5 mg/kg	# 18.7	24.4	143
E) 0bl E: NTro- roH - iT6F - J d Keiol eF v A7oi: 21b1unaP								
EP075: 2-Picoline	109-06-8	0.5	mg/kg	<0.5	2.5 mg/kg	90.5	10	138
EP075: Acetophenone	98-86-2	0.5	mg/kg	<0.5	2.5 mg/kg	77.2	35	128
EP075: Nitrobenzene	98-95-3	0.5	mg/kg	<0.5	2.5 mg/kg	81.2	36	127
EP075: Isophorone	78-59-1	0.5	mg/kg	<0.5	2.5 mg/kg	83.7	40	136
EP075: 2,6-Dinitrotoluene	606-20-2	0.5	mg/kg	<1.0	2.5 mg/kg	79.7	42	140
EP075: 2,4-Dinitrotoluene	121-14-2	0.5	mg/kg	<1.0	2.5 mg/kg	85.2	46	140
EP075: 1-Naphthylamine	134-32-7	0.5	mg/kg	<0.5	2.5 mg/kg	# 4.4	10	84
EP075: 4-Nitroquinoline-N-oxide	56-57-5	0.5	mg/kg	<0.5	2.5 mg/kg	60.1	17.7	153



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 Work Order : EM1201441
 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: ROS				Method Blank (MB) Report			Laboratory Control Spike (LCS) Report		
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	LCS	Low	High
E) 0bl E: NTro-roH - iBF - I d KeioI eF v A7oi: 21b1unaP c6ol IT sed									
EP075: 5-Nitro-o-toluidine	99-55-8	0.5	mg/kg	<0.5	2.5 mg/kg	74.4	74.4	37	125
EP075: Azobenzene	103-33-3	1	mg/kg	<1	2.5 mg/kg	96.1	96.1	46	140
EP075: 1,3,5-Trinitrobenzene	99-35-4	0.5	mg/kg	<0.5	2.5 mg/kg	80.6	80.6	12.6	151
EP075: Phenacetin	62-44-2	0.5	mg/kg	<0.5	2.5 mg/kg	74.9	74.9	48	142
EP075: 4-Aminobiphenyl	92-67-1	0.5	mg/kg	<0.5	2.5 mg/kg	12.0	12.0	10	97
EP075: Pentachloronitrobenzene	82-68-8	0.5	mg/kg	<0.5	2.5 mg/kg	91.5	91.5	47	139
EP075: Pronamide	23950-58-5	0.5	mg/kg	<0.5	2.5 mg/kg	93.6	93.6	45	133
EP075: Dimethylaminoazobenzene	60-11-7	0.5	mg/kg	<0.5	2.5 mg/kg	84.6	84.6	42	136
EP075: Chlorobenzilate	510-15-6	0.5	mg/kg	<0.5	2.5 mg/kg	67.7	67.7	41	141
E) 0bl n: 9 - (oeliperF v A7oi: 21b1unaP									
EP075: Bis(2-chloroethyl) ether	111-44-4	0.5	mg/kg	<0.5	2.5 mg/kg	71.5	71.5	36	146
EP075: Bis(2-chloroethoxy) methane	111-91-1	0.5	mg/kg	<0.5	2.5 mg/kg	84.5	84.5	40	136
EP075: 4-Chlorophenyl phenyl ether	7005-72-3	0.5	mg/kg	<0.5	2.5 mg/kg	80.8	80.8	46	136
EP075: 4-Bromophenyl phenyl ether	101-55-3	0.5	mg/kg	<0.5	2.5 mg/kg	77.2	77.2	44	140
E) 0bl 5: Ap(orT - ied 94dro6 - rQol F v A7oi: 21b1unaP									
EP075: 1,3-Dichlorobenzene	541-73-1	0.5	mg/kg	<0.5	2.5 mg/kg	74.8	74.8	35	122
EP075: 1,4-Dichlorobenzene	106-46-7	0.5	mg/kg	<0.5	2.5 mg/kg	84.4	84.4	36	125
EP075: 1,2-Dichlorobenzene	95-50-1	0.5	mg/kg	<0.5	2.5 mg/kg	81.7	81.7	37	123
EP075: Hexachloroethane	67-72-1	0.5	mg/kg	<0.5	2.5 mg/kg	72.6	72.6	33	123
EP075: 1,2,4-Trichlorobenzene	120-82-1	0.5	mg/kg	<0.5	2.5 mg/kg	77.2	77.2	36	132
EP075: Hexachloropropylene	1888-71-7	0.5	mg/kg	<0.5	2.5 mg/kg	83.5	83.5	26.6	137



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 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: ROS		Method Blank (MB) Report			Laboratory Control Spike (LCS) Report		
Method: Compound	CAS Number	LOR	Unit	Result	Spike Concentration	Spike Recovery (%)	Recovery Limits (%)
				Low	High		
E) 0bl 5 : Ap(or)T - ied 94dro6- rQbl F v. A7oi: 21b1unaP c6ol iT sed							
EP075: Hexachlorobutadiene	87-68-3	0.5	mg/kg	<0.5	2.5 mg/kg	80.1	40
EP075: Hexachlorocyclopentadiene	77-47-4	0.5	mg/kg	<2.5	2.5 mg/kg	43.9	17.3
EP075: Pentachlorobenzene	608-93-5	0.5	mg/kg	<0.5	2.5 mg/kg	83.3	46
EP075: Hexachlorobenzene (HCB)	118-74-1	0.5	mg/kg	<1.0	5 mg/kg	80.2	40
E) 0bl 9 : DI T eF - l d 8 el z BT eF v. A7oi: 21b1unaP							
EP075: Aniline	62-53-3	0.5	mg/kg	<0.5	2.5 mg/kg	31.5	10
EP075: 4-Chloroaniline	106-47-8	0.5	mg/kg	<0.5	2.5 mg/kg	16.2	10
EP075: 2-Nitroaniline	88-74-4	0.5	mg/kg	<1.0	2.5 mg/kg	86.5	40
EP075: 3-Nitroaniline	99-09-2	0.5	mg/kg	<1.0	2.5 mg/kg	44.6	23.3
EP075: Dibenzofuran	132-64-9	0.5	mg/kg	<0.5	2.5 mg/kg	89.1	46
EP075: 4-Nitroaniline	100-01-6	0.5	mg/kg	<0.5	2.5 mg/kg	74.9	38
EP075: Carbazole	86-74-8	0.5	mg/kg	<0.5	2.5 mg/kg	86.1	44
EP075: 3,3'-Dichlorobenzidine	91-94-1	0.5	mg/kg	<0.5	2.5 mg/kg	20.1	10
E) 0bl 9 OrB- l o6p(or)T e) eFI B eF v. A7oi: 21b1unaP							
EP075: alpha-BHC	319-84-6	0.5	mg/kg	<0.5	2.5 mg/kg	88.7	50
EP075: beta-BHC	319-85-7	0.5	mg/kg	<0.5	2.5 mg/kg	92.2	47
EP075: gamma-BHC	58-89-9	0.5	mg/kg	<0.5	2.5 mg/kg	96.3	50
EP075: delta-BHC	319-86-8	0.5	mg/kg	<0.5	2.5 mg/kg	94.8	48
EP075: Heptachlor	76-44-8	0.5	mg/kg	<0.5	2.5 mg/kg	88.2	40
EP075: Aldrin	309-00-2	0.5	mg/kg	<0.5	2.5 mg/kg	89.3	44
EP075: Heptachlor epoxide	1024-57-3	0.5	mg/kg	<0.5	2.5 mg/kg	85.8	45



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 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: **ROS**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Spike Concentration	Laboratory Control Spike (LCS) Report		Recovery Limits (%)
				Result	Concentration		Spike Recovery (%)	Low		High
E) 0bl S OrB- l o6p(rT e) eFlT6deF v A7oi: 21btUmaP c6ol IT sed									
EP075: alpha-Endosulfan	999-98-8	0.5	mg/kg	<0.5	2.5 mg/kg	100	46	142	
EP075: 4,4'-DDE	72-55-9	0.5	mg/kg	<0.5	2.5 mg/kg	87.2	70	130	
EP075: Dieldrin	60-57-1	0.5	mg/kg	<0.5	2.5 mg/kg	97.3	47	139	
EP075: Endrin	72-20-8	0.5	mg/kg	<0.5	2.5 mg/kg	97.3	42	142	
EP075: beta-Endosulfan	33213-65-9	0.5	mg/kg	<0.5	2.5 mg/kg	93.5	47	141	
EP075: 4,4'-DDD	72-54-8	0.5	mg/kg	<0.5	2.5 mg/kg	86.4	42	146	
EP075: Endosulfan sulfate	1031-07-8	0.5	mg/kg	<0.5	2.5 mg/kg	84.3	41	141	
EP075: 4,4'-DDT	50-29-3	0.5	mg/kg	<1.0	2.5 mg/kg	87.6	19.6	148	
E) 0bl J: OrB- l ogpofgporsF) eFlT6deF v A7oi: 21btUmaP									
EP075: Dieldrin	62-73-7	0.5	mg/kg	<0.5	2.5 mg/kg	77.3	21.9	131	
EP075: Dimethoate	60-51-5	0.5	mg/kg	<0.5	2.5 mg/kg	90.5	38	142	
EP075: Diazinon	333-41-5	0.5	mg/kg	<0.5	2.5 mg/kg	98.5	36	133	
EP075: Chlorpyrifos-methyl	5598-13-0	0.5	mg/kg	<0.5	2.5 mg/kg	87.5	35	143	
EP075: Malathion	121-75-5	0.5	mg/kg	<0.5	2.5 mg/kg	90.9	35	143	
EP075: Fenthion	55-38-9	0.5	mg/kg	<0.5	2.5 mg/kg	85.8	25.1	135	
EP075: Chlorpyrifos	2921-88-2	0.5	mg/kg	<0.5	2.5 mg/kg	93.5	36	132	
EP075: Pirimphos-ethyl	23505-41-1	0.5	mg/kg	<0.5	2.5 mg/kg	89.5	36	135	
EP075: Chlorfenvinphos	470-90-6	0.5	mg/kg	<0.5	2.5 mg/kg	89.1	35	138	
EP075: Prothiofos	34643-46-4	0.5	mg/kg	<0.5	2.5 mg/kg	94.2	37	135	
EP075: Ethion	563-12-2	0.5	mg/kg	<0.5	2.5 mg/kg	88.6	38	137	
E) 0y0/0b1: Col- () eiro(esH 94dro6-rCol F v A7oi: 21abal yP									



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 Work Order : EM1201441
 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: ROS				Method Blank (MB) Report		Laboratory Control Spike (LCS) Report			
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	Spike Recovery (%)	LCS	Low	High
E) 0y0/0b1: Coi- () eiro(esH 9 4dro6-rQol F ¼ A7oi: 21 abal yP c6ol i T sed									
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	32 mg/kg	111	70	70	133
E) 0y0/0b1: Coi- () eiro(esH 9 4dro6-rQol F ¼ A7oi: 21 bl b2bP									
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	544 mg/kg	76.6	55	55	123
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	1981 mg/kg	91.0	72	72	134
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	818 mg/kg	93.6	71	71	143
EP071: C10 - C36 Fraction (sum)	----	50	mg/kg	<50	----	----	----	----	----
E) 0y0/0b1: Coi- (L 6oher- Qe 9 4dro6-rQol F cNE) M 2010 Gr- fi ¼ A7oi: 21 abal yP									
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	37 mg/kg	110	70	70	130
E) 0y0/0b1: Coi- (L 6oher- Qe 9 4dro6-rQol F cNE) M 2010 Gr- fi ¼ A7oi: 21 bl b2bP									
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	870 mg/kg	85.7	69	69	123
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	2495 mg/kg	94.0	71	71	134
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	263 mg/kg	91.5	63	63	143
EP071: >C10 - C40 Fraction (sum)	----	100	mg/kg	<100	----	----	----	----	----
E) 0y0: 8 CEXN ¼ A7oi: 21 abal yP									
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	2 mg/kg	102	72	72	126
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	2 mg/kg	109	73	73	129
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	2 mg/kg	106	72	72	126
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	4 mg/kg	114	70	70	138
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	2 mg/kg	107	73	73	131
EP080: Naphthalene	91-20-3	1	mg/kg	<1	0.5 mg/kg	128	70	70	130
E) 21a:) erf6p(or-ie Q 7AJMR ¼ A7oi: 21 bl yuaP									
EP216: Perchlorate	7601-90-3	10	µg/kg	<10.0	25 µg/kg	98.6	56	56	130
E) 2u1:) erf(soro6i4(D6 6IF- l d Rs(foI - ieF. ¼ A7oi: 21 bl l buP									
EP231: PFOS	1763-23-1	0.0005	mg/kg	<0.0005	0.005 mg/kg	69.1	54	54	146
EP231: PFOA	335-67-1	0.0005	mg/kg	<0.0005	0.005 mg/kg	73.7	54	54	134
EP231: 6:2 Fluorotelomer Sulfonate (6:2 FIS)	27619-97-2	0.005	mg/kg	<0.005	0.025 mg/kg	72.2	56	56	138
Sub-Matrix: WDCEL									
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	Spike Recovery (%)	LCS	Low	High
E5 020C: Coi- (Mei- (F Q S) oMR ¼ A7oi: 21 y1abuP									
EG020A-T: Arsenic	7440-38-2	0.001	mg/L	<0.001	0.1 mg/L	105	86	86	110
EG020A-T: Cadmium	7440-43-9	0.0001	mg/L	<0.0001	0.1 mg/L	94.8	87	87	111
EG020A-T: Chromium	7440-47-3	0.001	mg/L	<0.001	0.1 mg/L	99.5	87	87	115
EG020A-T: Copper	7440-50-8	0.001	mg/L	<0.001	0.1 mg/L	101	88	88	110
EG020A-T: Lead	7439-92-1	0.001	mg/L	<0.001	0.1 mg/L	104	90	90	114
EG020A-T: Nickel	7440-02-0	0.001	mg/L	<0.001	0.1 mg/L	96.4	89	89	113
EG020A-T: Zinc	7440-66-6	0.005	mg/L	<0.005	0.1 mg/L	99.8	82	82	116



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 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: **WDCEL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report		
				Result	Concentration	Spike Recovery (%)	LCS	Low	High
E5 0ul C: Coli - (Le6oher- Qe Mer6sr4 Q4 n3MR v A7oi: 21b1uabP								
EG035T: Mercury	7439-97-6	0.0001	mg/L	<0.0001	0.0100 mg/L	85.3	69	125
E) 0b3D: Mol o646(6 DroH - iT6 9 4dro6- rQol F v A7oi: 21y1y2nP								
EP074: Benzene	71-43-2	1	µg/L	<1	20 µg/L	106	79	121
EP074: Toluene	108-88-3	2	µg/L	<2	20 µg/L	107	80	124
EP074: Ethylbenzene	100-41-4	2	µg/L	<2	20 µg/L	99.2	79	121
EP074: meta- & para-Xylene	108-38-3	2	µg/L	<2	40 µg/L	102	80	122
	106-42-3							
EP074: Styrene	100-42-5	5	µg/L	<5	20 µg/L	102	74	122
EP074: ortho-Xylene	95-47-6	2	µg/L	<2	20 µg/L	106	81	123
EP074: Isopropylbenzene	98-82-8	5	µg/L	<5	20 µg/L	96.3	80	120
EP074: n-Propylbenzene	103-65-1	5	µg/L	<5	20 µg/L	80.2	70	120
EP074: 1,3,5-Trimethylbenzene	108-67-8	5	µg/L	<5	20 µg/L	84.6	71	119
EP074: sec-Butylbenzene	135-98-8	5	µg/L	<5	20 µg/L	81.8	72	120
EP074: 1,2,4-Trimethylbenzene	95-63-6	5	µg/L	<5	20 µg/L	88.7	73	119
EP074: tert-Butylbenzene	98-06-6	5	µg/L	<5	20 µg/L	84.1	73	119
EP074: p-Isopropyltoluene	99-87-6	5	µg/L	<5	20 µg/L	82.5	71	121
EP074: n-Butylbenzene	104-51-8	5	µg/L	<5	20 µg/L	79.1	65	121
E) 0b38: Ox4Bel - ied AoH gos l dF v A7oi: 21y1y2nP								
EP074: Vinyl Acetate	108-05-4	50	µg/L	<50	200 µg/L	105	57	131
EP074: 2-Butanone (MEK)	78-93-3	50	µg/L	<50	200 µg/L	95.4	69	135
EP074: 4-Methyl-2-pentanone (MIBK)	108-10-1	50	µg/L	<50	200 µg/L	106	68	136
EP074: 2-Hexanone (MBK)	591-78-6	50	µg/L	<50	200 µg/L	98.1	68	138
E) 0b3A: Rs (ol) - ied AoH gos l dF v A7oi: 21y1y2nP								
EP074: Carbon disulfide	75-15-0	5	µg/L	<5	20 µg/L	85.4	67	127
E) 0b3G: nsH B- l F v A7oi: 21y1y2nP								
EP074: 2,2-Dichloropropane	594-20-7	5	µg/L	<5	20 µg/L	87.4	59	128
EP074: 1,2-Dichloropropane	78-87-5	5	µg/L	<5	20 µg/L	114	77	121
EP074: cis-1,3-Dichloropropylene	10061-01-5	5	µg/L	<5	20 µg/L	89.5	70	118
EP074: trans-1,3-Dichloropropylene	10061-02-6	5	µg/L	<5	20 µg/L	85.6	66	120
EP074: 1,2-Dibromoethane (EDB)	106-93-4	5	µg/L	<5	20 µg/L	105	78	124
E) 0b3E: 9 - (oBel) - ied D(6p- 16 AoH gos l dF v A7oi: 21y1y2nP								
EP074: Dichlorodifluoromethane	75-71-8	50	µg/L	<50	200 µg/L	101	58	148
EP074: Chloromethane	74-87-3	50	µg/L	<50	200 µg/L	107	62	142
EP074: Vinyl chloride	75-01-4	50	µg/L	<50	200 µg/L	91.3	61	141
EP074: Bromomethane	74-83-9	50	µg/L	<50	200 µg/L	90.6	57	131
EP074: Chloroethane	75-00-3	50	µg/L	<50	200 µg/L	112	64	138
EP074: Trichlorofluoromethane	75-69-4	50	µg/L	<50	200 µg/L	95.0	67	131
EP074: 1,1-Dichloroethene	75-35-4	5	µg/L	<5	20 µg/L	98.0	71	125



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 Client : GOLDR ASSOCIATES
 Project : 117613201

Sub-Matrix: **WDCEL**

Method: Compound	CAS Number	LOR	Unit	Result	Laboratory Control Spike (LCS) Report			
					Spike Concentration	Spike Recovery (%)	Recovery Limits (%)	
				Method Blank (MB) Report	LCS	Low	High	
E) 0b3E: 9-(oBel - ied D(igp- iB AoH gosI dF v A7oi: 21y1y2nP c6ol iT sed								
EP074: Iodomethane	74-88-4	5	µg/L	<5	20 µg/L	90.3	61	135
EP074: trans-1,2-Dichloroethene	156-60-5	5	µg/L	<5	20 µg/L	83.7	75	121
EP074: 1,1-Dichloroethane	75-34-3	5	µg/L	<5	20 µg/L	104	77	121
EP074: cis-1,2-Dichloroethene	156-59-2	5	µg/L	<5	20 µg/L	112	78	122
EP074: 1,1,1-Trichloroethane	71-55-6	5	µg/L	<5	20 µg/L	87.2	70	120
EP074: 1,1-Dichloropropylene	563-58-6	5	µg/L	<5	20 µg/L	96.8	74	122
EP074: Carbon Tetrachloride	56-23-5	5	µg/L	<5	20 µg/L	79.7	57	123
EP074: 1,2-Dichloroethane	107-06-2	5	µg/L	<5	20 µg/L	111	75	125
EP074: Trichloroethene	79-01-6	5	µg/L	<5	20 µg/L	96.4	77	121
EP074: Dibromomethane	74-95-3	5	µg/L	<5	20 µg/L	104	76	122
EP074: 1,1,2-Trichloroethane	79-00-5	5	µg/L	<5	20 µg/L	111	78	126
EP074: 1,3-Dichloropropane	142-28-9	5	µg/L	<5	20 µg/L	114	79	125
EP074: Tetrachloroethene	127-18-4	5	µg/L	<5	20 µg/L	95.9	76	122
EP074: 1,1,1,2-Tetrachloroethane	630-20-6	5	µg/L	<5	20 µg/L	93.3	65	119
EP074: trans-1,4-Dichloro-2-butene	110-57-6	5	µg/L	<5	20 µg/L	92.0	46	126
EP074: cis-1,4-Dichloro-2-butene	1476-11-5	5	µg/L	<5	20 µg/L	66.5	54	132
EP074: 1,1,2,2-Tetrachloroethane	79-34-5	5	µg/L	<5	20 µg/L	96.8	75	131
EP074: 1,2,3-Trichloropropane	96-18-4	5	µg/L	<5	20 µg/L	112	75	133
EP074: Pentachloroethane	76-01-7	5	µg/L	<5	20 µg/L	74.4	46	118
EP074: 1,2-Dibromo-3-chloropropane	96-12-8	5	µg/L	<5	20 µg/L	72.5	54	124
EP074: Hexachlorobutadiene	87-68-3	5	µg/L	<5	20 µg/L	93.5	50	134
E) 0b3n: 9-(oBel - ied DroH - iB AoH gosI dF v A7oi: 21y1y2nP								
EP074: Chlorobenzene	108-90-7	5	µg/L	<5	20 µg/L	108	81	121
EP074: Bromobenzene	108-86-1	5	µg/L	<5	20 µg/L	88.4	75	119
EP074: 2-Chlorotoluene	95-49-8	5	µg/L	<5	20 µg/L	89.9	73	121
EP074: 4-Chlorotoluene	106-43-4	5	µg/L	<5	20 µg/L	86.9	72	120
EP074: 1,3-Dichlorobenzene	541-73-1	5	µg/L	<5	20 µg/L	94.6	73	119
EP074: 1,4-Dichlorobenzene	106-46-7	5	µg/L	<5	20 µg/L	95.3	74	120
EP074: 1,2-Dichlorobenzene	95-50-1	5	µg/L	<5	20 µg/L	99.7	78	118
EP074: 1,2,4-Trichlorobenzene	120-82-1	5	µg/L	<5	20 µg/L	104	56	128
EP074: 1,2,3-Trichlorobenzene	87-61-6	5	µg/L	<5	20 µg/L	110	69	123
E) 0b35: CrP-(oHeip-i eF v A7oi: 21y1y2nP								
EP074: Chloroform	67-66-3	5	µg/L	<5	20 µg/L	104	77	121
EP074: Bromodichloromethane	75-27-4	5	µg/L	<5	20 µg/L	91.4	69	117
EP074: Dibromochloromethane	124-48-1	5	µg/L	<5	20 µg/L	85.9	59	119
EP074: Bromoform	75-25-2	5	µg/L	<5	20 µg/L	81.1	49	121
E) 0b39: N-gpip-(eI e v A7oi: 21y1y2nP								
EP074: Naphthalene	91-20-3	7	µg/L	<7	20 µg/L	114	76	124
E) 0y0/0b1: Coi-() eiro(esH 94dro6-rQol F v A7oi: 21y1y13I nP								



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Sub-Matrix: **WDCEL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report		Laboratory Control Spike (LCS) Report						
				Result	Concentration	Spike Recovery (%)	Recovery Limits (%)	Low	High			
E) 0y0/0b1: Coi- () eiro(esH 9 4dro6-rQoI F v A7oi: 21y13I mP c6ol iT sed												
EP080: C6 - C9 Fraction	----	20	µg/L	<20	320 µg/L	99.1	72	136				
E) 0y0/0b1: Coi- (Le6oher-Q(e 9 4dro6-rQoI F cNE) M 2010 Gr- fi v A7oi: 21y13I mP												
EP080: C6 - C10 Fraction	----	20	µg/L	<20	370 µg/L	94.4	70	130				
E) 0y0: 8 CEXN v A7oi: 21y13I mP												
EP080: Benzene	71-43-2	1	µg/L	<1	20 µg/L	101	73	127				
EP080: Toluene	108-88-3	2	µg/L	<2	20 µg/L	101	74	128				
EP080: Ethylbenzene	100-41-4	2	µg/L	<2	20 µg/L	95.6	72	126				
EP080: meta- & para-Xylene	108-38-3 106-42-3	2	µg/L	<2	40 µg/L	99.8	69	133				
EP080: ortho-Xylene	95-47-6	2	µg/L	<2	20 µg/L	98.2	74	128				
EP080: Naphthalene	91-20-3	5	µg/L	<5	5 µg/L	120	70	130				



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Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **ROS**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report		
				Spike Concentration	Spike Recovery (%) MS	Recovery Limits (%) Low High
E5 00l C: Coi- (Mei- (F Q4 8) dER v A7oi: 21y1u0l P						
EM1201441-002	A9HA2/3001	EG005T: Arsenic	7440-38-2	50 mg/kg	76.6	70 130
		EG005T: Cadmium	7440-43-9	50 mg/kg	100	70 130
		EG005T: Chromium	7440-47-3	50 mg/kg	83.5	70 130
		EG005T: Copper	7440-50-8	50 mg/kg	102	70 130
		EG005T: Lead	7439-92-1	50 mg/kg	82.5	70 130
		EG005T: Nickel	7440-02-0	50 mg/kg	101	70 130
		EG005T: Zinc	7440-66-6	50 mg/kg	123	70 130
E5 0ul C: Coi- (Le6oher- Qe Mer6sr4 Q4 n9MR v A7oi: 21y1u0aP						
EM1201441-002	A9HA2/3001	EG035T: Mercury	7439-97-6	5.0 mg/kg	103	56 122
E) 0aa:) o(48p(orT - ied 8 Tpel 4(F v A8P v A7oi: 21b1un8P						
EM1201441-003	A8HA1/2001	EP066: Total Polychlorinated biphenyls	----	1.24 mg/kg	87.8	55 132
E) 0ayD: OrB- l o6p(orT e) eFlT6eF vOAP v A7oi: 21b1umuP						
EM1201441-002	A9HA2/3001	EP068: gamma-BHC	58-89-9	0.5 mg/kg	56.7	30 129
		EP068: Heptachlor	76-44-8	0.5 mg/kg	54.0	22.2 129
		EP068: Aldrin	309-00-2	0.5 mg/kg	40.3	25 128
		EP068: Dieldrin	60-57-1	0.5 mg/kg	48.7	36 132
		EP068: Endrin	72-20-8	0.5 mg/kg	48.2	32 138
		EP068: 4,4'-DDT	50-29-3	0.5 mg/kg	43.1	21.8 140
E) 0ay8: OrB- l ogpoEgorsF) eFlT6eF vO) P v A7oi: 21b1umuP						
EM1201441-002	A9HA2/3001	EP068: Diazinon	333-41-5	0.5 mg/kg	49.1	39 129
		EP068: Chlorpyrifos-methyl	5598-13-0	0.5 mg/kg	51.2	39 126
		EP068: Pirimphos-ethyl	23505-41-1	0.5 mg/kg	49.2	38 130
		EP068: Bromophos-ethyl	4824-78-6	0.5 mg/kg	42.4	35 114
		EP068: Prothiofos	34643-46-4	0.5 mg/kg	47.3	39 125
E) 0b3E: 9 - (oBeI - ied D(Tjp- lB AoH gosI dF v A7oi: 21abal nP						
EM1201441-002	A9HA2/3001	EP074: 1,1-Dichloroethene	75-35-4	2 mg/kg	55.5	50 124
		EP074: Trichloroethene	79-01-6	2 mg/kg	75.2	60 122
E) 0b3n: 9 - (oBeI - ied DroH - lB AoH gosI dF v A7oi: 21abal nP						
EM1201441-002	A9HA2/3001	EP074: Chlorobenzene	108-90-7	2 mg/kg	91.9	69 129
E) 0bl D:) pel o(TB AoH gosI dF v A7oi: 21b1unaP						
EM1201441-004	A8HA3/2001	EP075: Phenol	108-95-2	5 mg/kg	76.0	23.7 119
		EP075: 2-Chlorophenol	95-57-8	5 mg/kg	66.7	31.1 116
		EP075: 2-Nitrophenol	88-75-5	5 mg/kg	75.8	16.4 115
		EP075: 4-Chloro-3-Methylphenol	59-50-7	5 mg/kg	92.7	22.3 122



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Laboratory sample ID		Client sample ID	Method: Compound	CAS Number	Spike Concentration	Matrix Spike (MS) Report		
					Spike Recovery (%)	Low	High	
					MS	Low	High	
E) 0bl D:) pel o(B A o H g o s l o F	EM1201441-004	A8HA3/2001	EP075: Pentachlorophenol	87-86-5	5 mg/kg	82.5	17.6	142
E) 0bl 8:) o(4l s6(e- r DroH- i B 9 4dro6- rQoI F	EM1201441-004	A8HA3/2001	EP075: Acenaphthene	83-32-9	5 mg/kg	73.7	25.4	122
E) 0bl G: NTroF- H T e F	EM1201441-004	A8HA3/2001	EP075: Pyrene	129-00-0	5 mg/kg	74.5	14.6	127
E) 0bl E: NTro- roH- i B F - i d KeioI e F	EM1201441-004	A8HA3/2001	EP075: N-Nitrosodi-n-propylamine	621-64-7	5 mg/kg	64.3	17.8	110
E) 0bl 5: Ap(o r T - i ed 9 4dro6- rQoI F	EM1201441-004	A8HA3/2001	EP075: 2,4-Dinitrotoluene	121-14-2	5 mg/kg	70.5	28.3	112
E) 0y0/0b1: Coi- () eiro(esH 9 4dro6- rQoI F	EM1201441-002	A9HA2/3001	EP075: 1,4-Dichlorobenzene	106-46-7	5 mg/kg	67.7	23	112
E) 0y0/0b1: Coi- () eiro(esH 9 4dro6- rQoI F	EB1203892-002	Anonymous	EP075: 1,2,4-Trichlorobenzene	120-82-1	5 mg/kg	60.9	12.9	111
E) 0y0/0b1: Coi- () eiro(esH 9 4dro6- rQoI F	EM1201441-002	A9HA2/3001	EP080: C6 - C9 Fraction	----	28 mg/kg	84.2	49	127
E) 0y0/0b1: Coi- () eiro(esH 9 4dro6- rQoI F	EM1201441-002	A9HA2/3001	EP071: C10 - C14 Fraction	----	544 mg/kg	77.5	54	123
E) 0y0/0b1: Coi- () eiro(esH 9 4dro6- rQoI F	EM1201441-002	A9HA2/3001	EP071: C15 - C28 Fraction	----	1981 mg/kg	92.7	74	134
E) 0y0/0b1: Coi- () eiro(esH 9 4dro6- rQoI F	EM1201441-002	A9HA2/3001	EP071: C29 - C36 Fraction	----	818 mg/kg	95.7	63	143
E) 0y0/0b1: Coi- () eiro(esH 9 4dro6- rQoI F	EM1201441-002	A9HA2/3001	EP080: C6 - C10 Fraction	----	33 mg/kg	82.6	70	130
E) 0y0/0b1: Coi- () eiro(esH 9 4dro6- rQoI F	EM1201441-002	A9HA2/3001	EP071: >C10 - C16 Fraction	----	870 mg/kg	85.8	54	123
E) 0y0/0b1: Coi- () eiro(esH 9 4dro6- rQoI F	EM1201441-002	A9HA2/3001	EP071: >C16 - C34 Fraction	----	2495 mg/kg	95.4	74	134
E) 0y0/0b1: Coi- () eiro(esH 9 4dro6- rQoI F	EM1201441-002	A9HA2/3001	EP071: >C34 - C40 Fraction	----	263 mg/kg	86.5	63	143
E) 21a:) er6p(or- ie Q 7 A M R	EM1201441-001	A9HA1/3001	EP080: Benzene	71-43-2	2 mg/kg	85.7	58	136
E) 21a:) er6p(or- ie Q 7 A M R	EM1201441-001	A9HA1/3001	EP080: Toluene	108-88-3	2 mg/kg	90.8	63	135
E) 21a:) er6p(or- ie Q 7 A M R	EM1201441-001	A9HA1/3001	EP216: Perchlorate	7601-90-3	25 µg/kg	97.2	70	130
E) 21a:) er6p(or- ie Q 7 A M R	EM1201441-001	A9HA1/3001	EP231: PFOS	1763-23-1	0.005 mg/kg	# Not Determined	54	146
E) 21a:) er6p(or- ie Q 7 A M R	EM1201441-001	A9HA1/3001	EP231: PFOA	335-67-1	0.005 mg/kg	67.0	54	134
E) 21a:) er6p(or- ie Q 7 A M R	EM1201441-001	A9HA1/3001	EP231: 6:2 Fluorotelomer Sulfonate (6:2 Fts)	27619-97-2	.025 mg/kg	61.9	56	138

Sub-Matrix: **WDCEL**



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Sub-Matrix: **WDCEL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report				
				Spike Concentration	Spike Recovery (%)			
					MS	Low	High	
E5 020C: Coi- (Mei- (F Q4 SA) dMR v A7oi: 21y1abuP								
EM1201441-006	A9HAZ/35100212	EG020A-T: Arsenic	7440-38-2	1 mg/L	110	72	146	
		EG020A-T: Cadmium	7440-43-9	0.25 mg/L	89.8	73	131	
		EG020A-T: Chromium	7440-47-3	1 mg/L	86.2	65	131	
		EG020A-T: Copper	7440-50-8	1 mg/L	89.4	71	125	
		EG020A-T: Lead	7439-92-1	1 mg/L	95.6	68	130	
		EG020A-T: Nickel	7440-02-0	1 mg/L	86.4	72	128	
		EG020A-T: Zinc	7440-66-6	1 mg/L	92.1	67	129	
E5 0ul C: Coi- (Le6oher- Qe Mer6sr4 Q4 nSMR v A7oi: 21b1uabP								
EM1201365-002	Anonymous	EG035T: Mercury	7439-97-6	0.0100 mg/L	87.8	70	130	
E) 0b3D: Mol o646(16 DroH - iB 9 4dro6- rQol F v A7oi: 21y1y2nP								
EM1201609-022	Anonymous	EP074: Benzene	71-43-2	20 µg/L	89.1	64	121	
		EP074: Toluene	108-88-3	20 µg/L	92.7	63	125	
E) 0b3E: 9 - (pBeI - ied D(Ep- iB Aoh gos l dF v A7oi: 21y1y2nP								
EM1201609-022	Anonymous	EP074: 1,1-Dichloroethene	75-35-4	20 µg/L	81.2	52	104	
		EP074: Trichloroethene	79-01-6	20 µg/L	81.7	59	120	
E) 0b3n: 9 - (pBeI - ied DroH - iB Aoh gos l dF v A7oi: 21y1y2nP								
EM1201609-022	Anonymous	EP074: Chlorobenzene	108-90-7	20 µg/L	95.3	63	132	
E) 0y0/0b1: Coi- (eiro(esH 9 4dro6- rQol F v A7oi: 21y13l nP								
EM1201763-001	Anonymous	EP080: C6 - C9 Fraction	----	280 µg/L	84.5	51	125	
E) 0y0/0b1: Coi- (Le6oher- Qe 9 4dro6- rQol F cNE) M 2010 Gr- fi v A7oi: 21y13l nP								
EM1201763-001	Anonymous	EP080: C6 - C10 Fraction	----	330 µg/L	85.2	70	130	
E) 0y0: 8 CEXN v A7oi: 21y13l nP								
EM1201763-001	Anonymous	EP080: Benzene	71-43-2	20 µg/L	75.4	63	131	
		EP080: Toluene	108-88-3	20 µg/L	79.9	65	133	

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: EM1201441	Page	: 1 of 12
Client	: GOLDER ASSOCIATES	Laboratory	: Environmental Division Melbourne
Contact	: Niamh McCormack	Contact	: Samantha Smith
Address	: P O BOX 6079 Building 7, 570-588 Swan St, Richmond, VIC. 3121 HAWTHORN WEST VIC, AUSTRALIA 3122	Address	: 4 Westall Rd Springvale VIC Australia 3171
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Telephone	: +61 03 8862 3500	Telephone	: +61-3-8549 9644
Facsimile	: +61 03 8862 3501	Facsimile	: +61-3-8549 9601
Project	: 117613201	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: FISKVILLE	Date Samples Received	: 10-FEB-2012
C-O-C number	: ----	Issue Date	: 28-FEB-2012
Sampler	: RM	No. of samples received	: 6
Order number	: GA-MELB 332509	No. of samples analysed	: 6
Quote number	: ME/054/12		

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers



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Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non-volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days), Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **SOIL** Evaluation: * = Holding time breach ; ✓ = Within holding time.

Method	Container / Client Sample ID(s)	Sample Date	Extraction / Preparation		Analysis	
			Date extracted	Due for extraction	Date analysed	Due for analysis
EA055: Moisture Content						
Soil Glass Jar - Unpreserved	A9HA1/3001, A8HA1/2001	10-FEB-2012	----	----	14-FEB-2012	24-FEB-2012 ✓
EG005T: Total Metals by ICP-AES						
Soil Glass Jar - Unpreserved	A9HA2/3001, A8HA3/2001	10-FEB-2012	23-FEB-2012	08-AUG-2012	27-FEB-2012	08-AUG-2012 ✓
EG035T: Total Recoverable Mercury by FIMS						
Soil Glass Jar - Unpreserved	A9HA1/3001, A8HA1/2001	10-FEB-2012	23-FEB-2012	09-MAR-2012	24-FEB-2012	09-MAR-2012 ✓
EP004: Organic Matter						
Soil Glass Jar - Unpreserved	A9HA1/3001, A8HA1/2001	10-FEB-2012	14-FEB-2012	17-FEB-2012	14-FEB-2012	13-MAR-2012 ✓
EP066: Polychlorinated Biphenyls (PCB)						
Soil Glass Jar - Unpreserved	A9HA2/3001, A8HA3/2001	10-FEB-2012	17-FEB-2012	24-FEB-2012	20-FEB-2012	28-MAR-2012 ✓
EP068A: Organochlorine Pesticides (OC)						
Soil Glass Jar - Unpreserved	A9HA2/3001, A8HA3/2001	10-FEB-2012	17-FEB-2012	24-FEB-2012	20-FEB-2012	28-MAR-2012 ✓
EP068B: Organophosphorus Pesticides (OP)						
Soil Glass Jar - Unpreserved	A9HA2/3001, A8HA3/2001	10-FEB-2012	17-FEB-2012	24-FEB-2012	20-FEB-2012	28-MAR-2012 ✓
EP074A: Monocyclic Aromatic Hydrocarbons						
Soil Glass Jar - Unpreserved	A9HA2/3001, A8HA1/2001	10-FEB-2012	14-FEB-2012	24-FEB-2012	17-FEB-2012	24-FEB-2012 ✓