LABORATORY RESULTS - *Consolidation e/logp Plot*

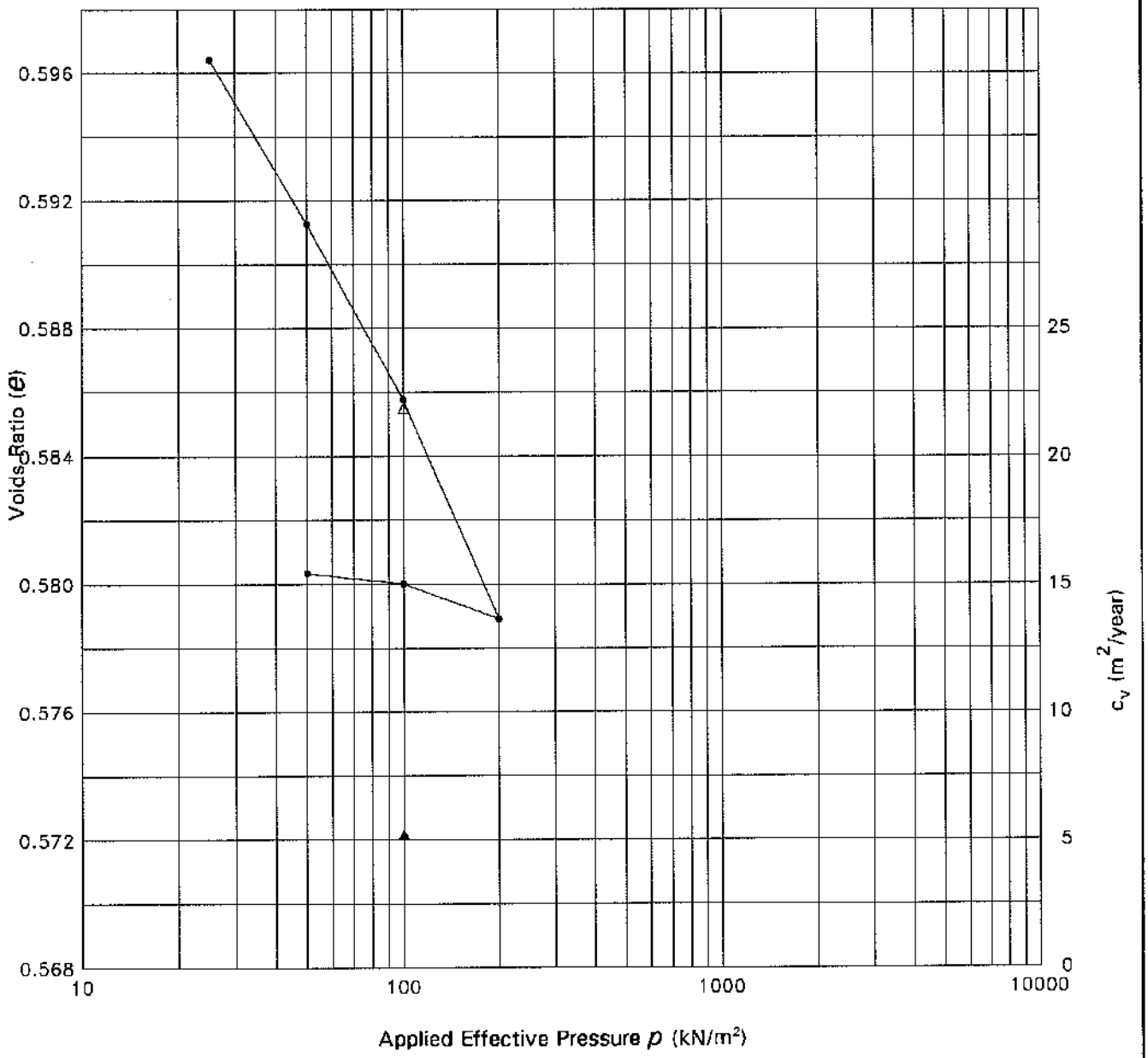
Project COOPERATIVE ACADEMY

Client

Project No PN081814
Borehole 2
Sample Depth 2.00 - 2.65 m
Sample Type U

The determination of one dimensional consolidation properties in accordance with Clause 3 of BS1377: Part 5: 1990

Symbols: Voids Ratio •, c_{v50} ▲, c_{v90} △



Applied Pressure kN/m²	0-25	25-50	50-100	100-200	200-100	100-50				
m_v m²/MN	0.13	0.13	0.07	0.04	0.01	.00				
c_{v50} Log Time m²/yr	-	-	5.18	-	-	-				
c_{v90} Root Time m²/yr	-	-	21.86	-	-	-				
Voids Ratio	0.596	0.591	0.586	0.579	0.580	0.580				

Description
N12563 Brown mottled grey sandy SILT

Specimen Diameter	74.930	mm
Initial Height	18.930	mm
Particle Density	2.65 Assumed	
Initial Voids Ratio	0.602	

Initial Water Content	21.94	%
Final Water Content	21.37	%
Initial Saturation	96.63	%
Initial Bulk Density	2.02	Mg/m³
Initial Dry Density	1.65	Mg/m³

Remarks Laboratory temperature 20°C ± 4°C
Specimen cut vertically from base of sample

geotechnics

LABORATORY RESULTS - *Consolidation e/logp Plot*

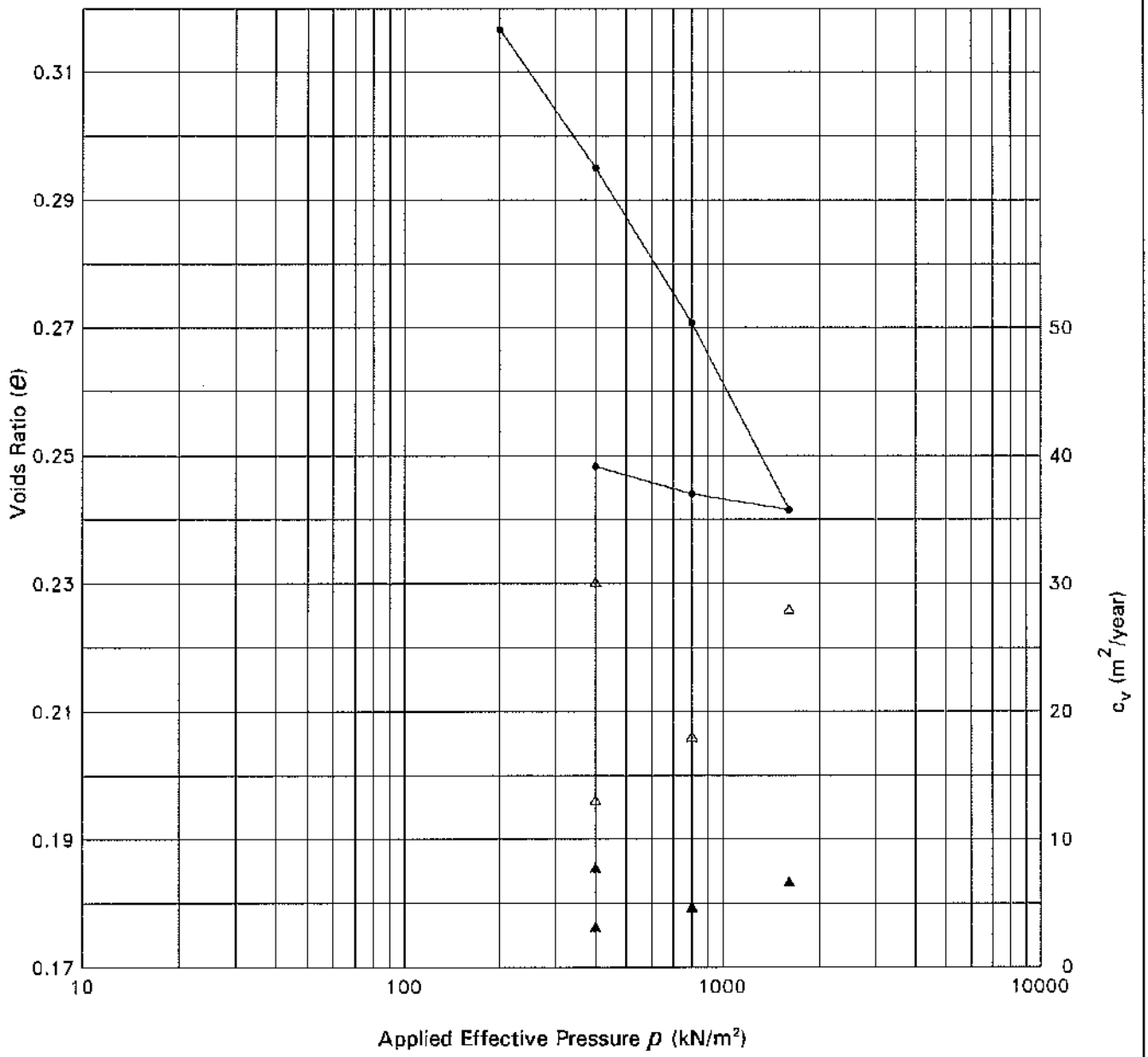
Project COOPERATIVE ACADEMY

Client

Project No PN081814
Borehole 2
Sample Depth 6.50 - 6.95 m
Sample Type U

The determination of one dimensional consolidation properties in accordance with Clause 3 of BS1377: Part 5: 1990

Symbols: Voids Ratio •, c_{v50} ▲, c_{v90} △



Applied Pressure kN/m²	0-200	200-400	400-800	800-1600	1600-800	800-400				
m_v m²/MN	0.22	0.08	0.05	0.03	.00	0.01				
c_{v50} Log Time m²/yr	-	3.16	4.66	6.67	-	7.77				
c_{v90} Root Time m²/yr	-	13.08	18.04	27.99	-	30.10				
Voids Ratio	0.317	0.295	0.271	0.242	0.244	0.248				

Description
N12565 Brown slightly sandy CLAY

Specimen Diameter	74.970	mm
Initial Height	18.920	mm
Particle Density	2.65 Assumed	
Initial Voids Ratio	0.378	

Initial Water Content	15.17	%
Final Water Content	13.10	%
Initial Saturation	100	%
Initial Bulk Density	2.22	Mg/m³
Initial Dry Density	1.92	Mg/m³

Remarks Laboratory temperature 20°C ± 4°C
Specimen cut vertically from base of sample

geotechnics

LABORATORY RESULTS - *Consolidation e/logp Plot*

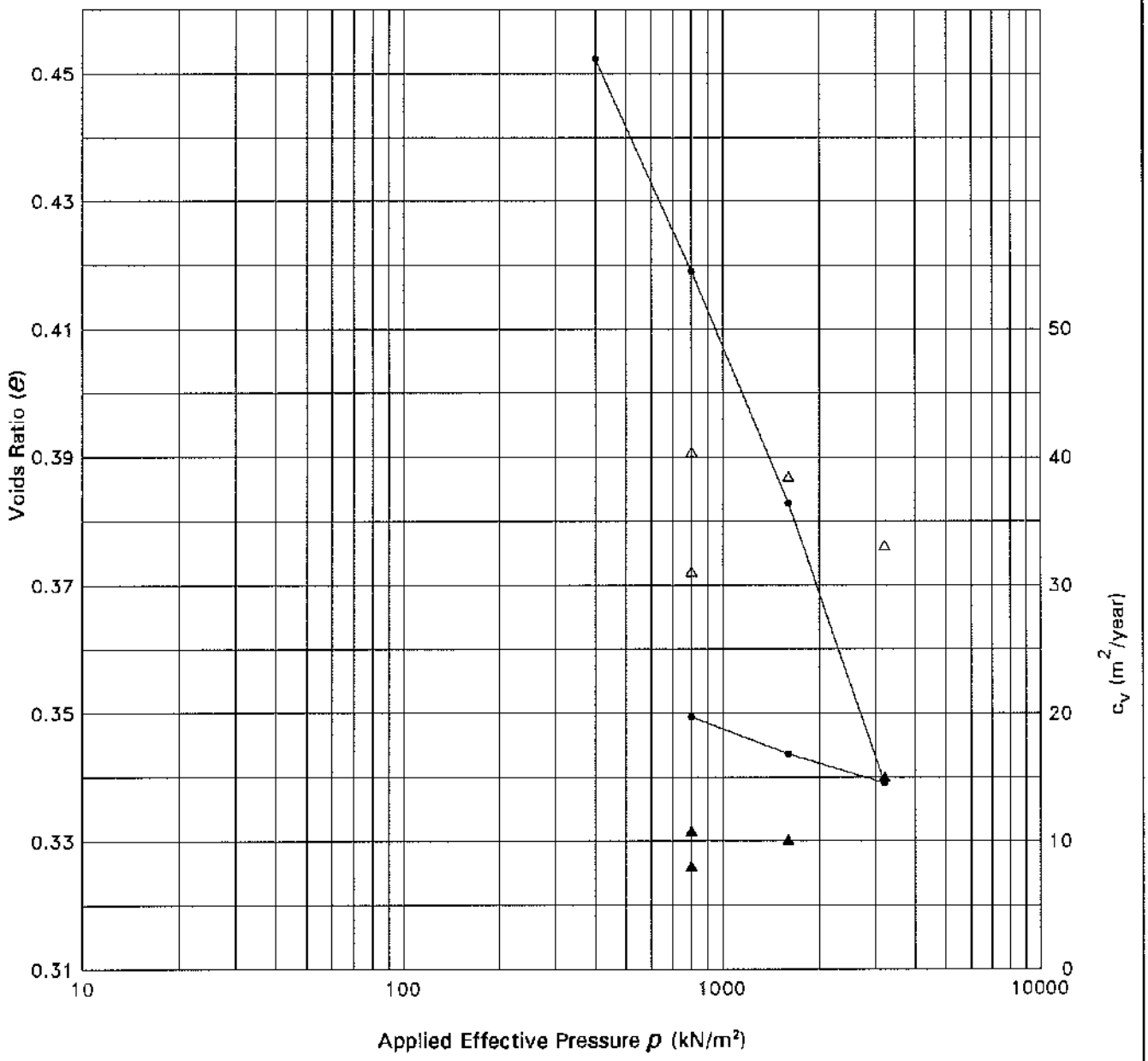
Project COOPERATIVE ACADEMY

Client

Project No PN081814
Borehole 2
Sample Depth 11.00 - 11.45 m
Sample Type U

The determination of one dimensional consolidation properties in accordance with Clause 3 of BS1377: Part 5: 1990

Symbols: Voids Ratio •, c_{v50} ▲, c_{v90} △



Applied Pressure	kN/m²	0-400	400-800	800-1600	1600-3200	3200-1600	1600-800				
m_v	m^2/MN	0.18	0.06	0.03	0.02	.00	0.01				
c_{v50} Log Time	m^2/yr	-	8.01	10.10	15.01	-	10.79				
c_{v90} Root Time	m^2/yr	-	31.04	38.46	33.10	-	40.39				
Voids Ratio		0.452	0.419	0.383	0.339	0.344	0.349				

Description
N12567 Brown slightly sandy CLAY

Specimen Diameter	74.970	mm
Initial Height	18.930	mm
Particle Density	2.65 Assumed	
Initial Voids Ratio	0.564	

Initial Water Content	22.91	%
Final Water Content	17.73	%
Initial Saturation	100	%
Initial Bulk Density	2.08	Mg/m^3
Initial Dry Density	1.69	Mg/m^3

Remarks Laboratory temperature 20°C ± 4°C
Specimen cut vertically from base of sample

geotechnics

LABORATORY RESULTS - *Consolidation e/logp Plot*

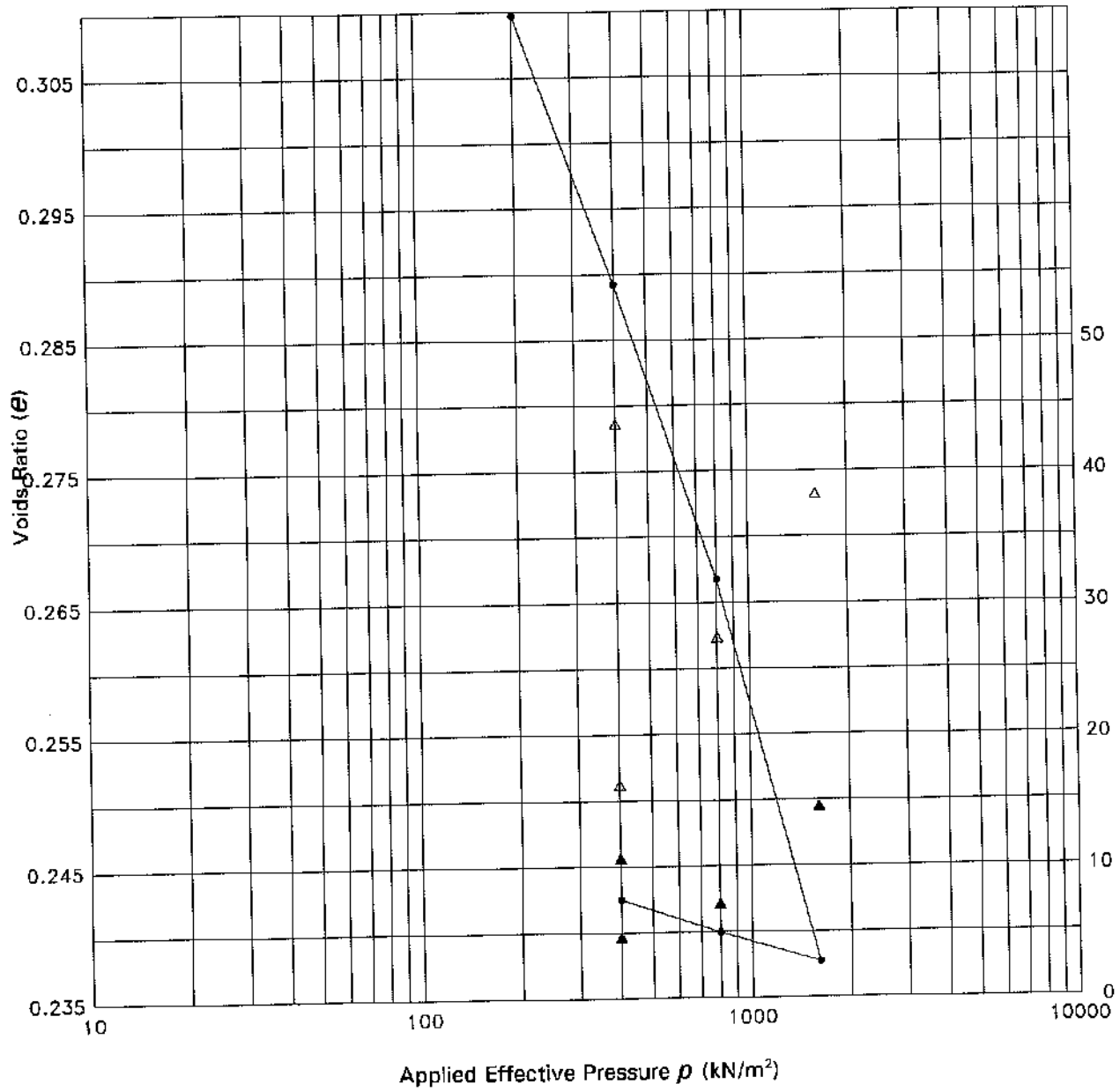
Project COOPERATIVE ACADEMY

Client

Project No PN081814
Borehole 3
Sample Depth 7.00 - 7.45 m
Sample Type U

The determination of one dimensional consolidation properties in accordance with Clause 3 of BS1377: Part 5: 1990

Symbols: Voids Ratio •, c_{v50} ▲, c_{v90} △



Applied Pressure kN/m²	0-200	200-400	400-800	800-1600	1600-800	800-400				
m_v m²/MN	0.22	0.08	0.04	0.03	.00	0.01				
c_{v50} Log Time m²/yr	-	4.60	7.15	14.51	-	10.64				
c_{v90} Root Time m²/yr	-	16.22	27.36	38.17	-	43.59				
Voids Ratio	0.310	0.289	0.267	0.238	0.240	0.242				

Description
N12574 Brown slightly sandy gravelly CLAY

Specimen Diameter	75.020	mm
Initial Height	18.830	mm
Particle Density	2.65 Assumed	
Initial Voids Ratio	0.371	

Initial Water Content	15.12	%
Final Water Content	12.62	%
Initial Saturation	100	%
Initial Bulk Density	2.23	Mg/m³
Initial Dry Density	1.93	Mg/m³

Remarks Laboratory temperature 20°C ± 4°C
Specimen cut vertically from base of sample
Small inclusions removed

geotechnics

APPENDIX 5
Laboratory Test Results - Contamination

ALcontrol Laboratories

Unit 7-8 Hawarden Business Park
Manor Road (off Manor Lane)
Hawarden
Deeside
CH5 3US
Tel: (01244) 528700
Fax: (01244) 528701
email: mkt@alcontrol.co.uk
website: www.alcontrol.co.uk

Geotechnics Ltd
The Geotechnical Centre
Unit 1
Borders Industrial Estate
River Lane
Saltney, Chester
CH4 8RJ ATTN: Stewart Garnet

CERTIFICATE OF ANALYSIS

Date: 06 August, 2008
Our Reference: 08/09998/02/01
Your Reference: PN081814
Location: Co-operative Academy

A total of 232 samples was received for analysis between Wednesday, 04 June 2008 and Monday, 30 June 2008 and completed on Monday, 28 July 2008. Accredited laboratory tests are defined in the log sheet, but opinions, interpretations and on-site data expressed herein are outside the scope of ISO 17025 accreditation. We are pleased to enclose our final report, it was a pleasure to be of service to you, and we look forward to our continuing association.

Should this report require incorporation into client reports, it must be used in its entirety and not simply with the data sections alone.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials- whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Signed

Diane Whittlestone
Tech. Support Manager

David O'Hare
Project Manager

Caroline Suttie
Project Coordinator
Team Leader

Valid if signed by any of the above signatories.

Compiled By

Briony Johnson

1291
GROUP

ALcontrol Laboratories is a trading division of ALcontrol UK Limited.
Registered Office: Templeborough House, Mill Close, Rotherham, S60 1BZ. Registered in England and Wales No. 4057291

ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 04/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 1
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?			✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓							
Sample Number	Sample Identity	P / V	Depth	Sample Type	Metals ICP. 9 (S)	Boron Water Soluble (S)	Chromium VI (S)	Cyanide Total (S)	Cyanide Free (S)	Thiocyanate (S)	Sulphate Total (S)	Sulphur Total (S)	Sulphide Easily Liberated (S)	pH (S)	Phenols HPLC (S)	PAH Spec MS (S)	EPH CWG GC (S)	GRO CWG GC (S)	VOC MS (S)	SVOC excl PAH MS (S)	TOC (S)	Asbestos Screen (ID)	CEN Leach 1 Step 2:1	Arsenic (1 Step CEN 2:1) (MS)	Cadmium (1 Step CEN 2:1) (MS)	Chromium (1 Step CEN 2:1) (MS)	Copper (1 Step CEN 2:1) (MS)	Nickel (1 Step CEN 2:1) (MS)
1	BH1	JAR 250g	0.20	SOLID																		X						
2	BH1	JAR 250g	0.50	SOLID	X	X	X	X	X	X	X	X	X	X	X	X					X							
3	BH1	JAR 250g	1.00	SOLID	Sample on Hold																							
4	BH1	JAR 250g	2.00	SOLID	X	X	X	X	X	X	X	X	X	X	X	X												
5	BH1	JAR 250g	2.90	SOLID	Sample on Hold																							
6	BH1	JAR 250g	3.90	SOLID	Sample on Hold																							
7	BH1	JAR 250g	4.90	SOLID	Sample on Hold																							
8	BH1	JAR 250g	6.50	SOLID	Sample on Hold																							
9	BH1	JAR 250g	7.50	SOLID																								
10	BH1	JAR 250g	9.00	SOLID	Sample on Hold																							
11	BH1	JAR 250g	10.50	SOLID	Sample on Hold																							
12	BH1	JAR 250g	12.00	SOLID	Sample on Hold																							
13	BH1	JAR 250g	13.50	SOLID	Sample on Hold																							
14	BH2	JAR 250g	0.20	SOLID	Sample on Hold																							
15	BH2	VOC	0.20	SOLID	Sample on Hold																							
16	BH2	JAR 250g	0.50	SOLID	X	X	X	X	X	X	X	X	X	X	X	X												
17	BH2	VOC	0.50	SOLID	Sample on Hold																							
18	BH2	JAR 250g	1.00	SOLID	Sample on Hold																							
19	BH2	VOC	1.00	SOLID	Sample on Hold																							
20	BH2	JAR 250g	2.00	SOLID	Sample on Hold																							
21	BH2	VOC	2.00	SOLID	Sample on Hold																							
22	BH2	JAR 250g	3.00	SOLID	Sample on Hold																							

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 04/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 1
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?			✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓								
Sample Number	Sample Identity	P / V	Depth	Sample Type	Metals ICP. 9 (S)	Boron Water Soluble (S)	Chromium VI (S)	Cyanide Total (S)	Cyanide Free (S)	Thiocyanate (S)	Sulphate Total (S)	Sulphur Total (S)	Sulphide Easily Liberated (S)	pH (S)	Phenols HPLC (S)	PAH Spec MS (S)	EPH CWG GC (S)	GRO CWG GC (S)	VOC MS (S)	SVOC excl PAH MS (S)	TOC (S)	Asbestos Screen (ID)	CEN Leach 1 Step 2:1	Arsenic (1 Step CEN 2:1) (MS)	Cadmium (1 Step CEN 2:1) (MS)	Chromium (1 Step CEN 2:1) (MS)	Copper (1 Step CEN 2:1) (MS)	Nickel (1 Step CEN 2:1) (MS)
23	BH2	VOC	3.00	SOLID	Sample on Hold																							
24	BH3	VOC	0.20	SOLID	Sample on Hold																							
25	BH3	JAR 250g	0.50	SOLID	Sample on Hold																							
26	BH3	VOC	0.50	SOLID	Sample on Hold																							
27	BH3	JAR 250g	0.70	SOLID	Sample on Hold																							
28	BH3	JAR 250g	1.00	SOLID	Sample on Hold																							
29	BH3	VOC	1.00	SOLID	Sample on Hold																							
30	BH3	JAR 250g	2.00	SOLID	Sample on Hold																							
31	BH3	VOC	2.00	SOLID	Sample on Hold																							
32	BH3	JAR 250g	3.00	SOLID	Sample on Hold																							
33	BH3	JAR 250g	4.50	SOLID	Sample on Hold																							
34	BH3	VOC	4.50	SOLID	Sample on Hold																							
35	BH3	JAR 250g	6.00	SOLID	Sample on Hold																							
36	BH3	VOC	6.00	SOLID	Sample on Hold																							
37	BH3	JAR 250g	7.50	SOLID	Sample on Hold																							
38	BH3	VOC	7.50	SOLID	Sample on Hold																							
39	BH3	JAR 250g	9.00	SOLID	Sample on Hold																							
40	BH3	VOC	9.00	SOLID	Sample on Hold																							
41	BH3	JAR 250g	10.50	SOLID	Sample on Hold																							
42	BH3	VOC	10.50	SOLID	Sample on Hold																							
43	BH3	JAR 250g	12.00	SOLID	Sample on Hold																							
44	BH3	VOC	12.00	SOLID	Sample on Hold																							

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 04/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 1
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?			✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓								
Sample Number	Sample Identity	P / V	Depth	Sample Type	Metals ICP. 9 (S)	Boron Water Soluble (S)	Chromium VI (S)	Cyanide Total (S)	Cyanide Free (S)	Thiocyanate (S)	Sulphate Total (S)	Sulphur Total (S)	Sulphide Easily Liberated (S)	pH (S)	Phenols HPLC (S)	PAH Spec MS (S)	EPH CWG GC (S)	GRO CWG GC (S)	VOC MS (S)	SVOC excl PAH MS (S)	TOC (S)	Asbestos Screen (ID)	CEN Leach 1 Step 2:1	Arsenic (1 Step CEN 2:1) (MS)	Cadmium (1 Step CEN 2:1) (MS)	Chromium (1 Step CEN 2:1) (MS)	Copper (1 Step CEN 2:1) (MS)	Nickel (1 Step CEN 2:1) (MS)
45	BH3	VOC	12.30	SOLID	Sample on Hold																							
46	BH3	JAR 250g	13.50	SOLID	Sample on Hold																							
47	BH3	VOC	13.50	SOLID	Sample on Hold																							
48	BH3	JAR 250g	15.00	SOLID																								
49	BH3	VOC	15.00	SOLID	Sample on Hold																							
50	BH3	JAR 250g	16.50	SOLID	Sample on Hold																							
51	BH3	VOC	16.50	SOLID	Sample on Hold																							
52	BH3	JAR 250g	18.00	SOLID	Sample on Hold																							
53	BH3	VOC	18.00	SOLID	Sample on Hold																							
54	BH3	JAR 250g	19.50	SOLID	Sample on Hold																							
55	BH3	VOC	19.50	SOLID	Sample on Hold																							
56	NO ID	JAR 250g	0.20	SOLID	Sample on Hold																							
57	WS1	JAR 250g	0.50	SOLID	Sample on Hold																							
58	WS2	JAR 250g	0.20	SOLID	Sample on Hold																							
59	WS2	JAR 250g	0.50	SOLID	X	X	X	X	X	X	X	X	X	X	X	X												
60	WS2	VOC	0.50	SOLID	Sample on Hold																							
61	WS2	JAR 250g	1.00	SOLID	Sample on Hold																							
62	WS2	VOC	1.00	SOLID	Sample on Hold																							
63	WS2D1	VOC	0.20	SOLID	Sample on Hold																							
64	WS3	JAR 250g	0.20	SOLID	Sample on Hold																							
65	WS3	VOC	0.20	SOLID	Sample on Hold																							
66	WS3	JAR 250g	0.50	SOLID	X	X	X	X	X	X	X	X	X	X	X	X	X			X		X						

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 04/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 1
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?			✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓								
Sample Number	Sample Identity	P / V	Depth	Sample Type	Metals ICP. 9 (S)	Boron Water Soluble (S)	Chromium VI (S)	Cyanide Total (S)	Cyanide Free (S)	Thiocyanate (S)	Sulphate Total (S)	Sulphur Total (S)	Sulphide Easily Liberated (S)	pH (S)	Phenols HPLC (S)	PAH Spec MS (S)	EPH CWG GC (S)	GRO CWG GC (S)	VOC MS (S)	SVOC excl PAH MS (S)	TOC (S)	Asbestos Screen (ID)	CEN Leach 1 Step 2:1	Arsenic (1 Step CEN 2:1) (MS)	Cadmium (1 Step CEN 2:1) (MS)	Chromium (1 Step CEN 2:1) (MS)	Copper (1 Step CEN 2:1) (MS)	Nickel (1 Step CEN 2:1) (MS)
67	WS3	VOC	0.50	SOLID														X	X									
68	WS3	JAR 250g	1.00	SOLID	Sample on Hold																							
69	WS3	VOC	1.00	SOLID	Sample on Hold																							
70	WS7	JAR 250g	0.20	SOLID	X	X	X	X	X	X	X	X	X	X	X	X						X						
71	WS7	VOC	0.20	SOLID	Sample on Hold																							
72	WS7	JAR 250g	0.70	SOLID																			2	2	2	2	2	2
73	WS7	VOC	0.70	SOLID	Sample on Hold																							
74	WS7	JAR 250g	1.20	SOLID	X	X	X	X	X	X	X	X	X	X	X	X	X			X	X							
75	WS7	VOC	1.20	SOLID														X	X									
76	WS8	JAR 250g	0.20	SOLID	Sample on Hold																							
77	WS8	VOC	0.20	SOLID	Sample on Hold																							
78	WS8	JAR 250g	0.50	SOLID	Sample on Hold																							
79	WS8	VOC	0.50	SOLID	Sample on Hold																							
80	WS8	JAR 250g	1.20	SOLID	Sample on Hold																							
81	WS8	VOC	1.20	SOLID	Sample on Hold																							
82	WS8	JAR 250g	1.80	SOLID	X	X	X	X	X	X	X	X	X	X	X	X	X											
83	WS8	VOC	1.80	SOLID														X										
84	WS8	JAR 250g	2.50	SOLID	Sample on Hold																							
85	WS8	VOC	2.50	SOLID	Sample on Hold																							
86	WS8	JAR 250g	4.70	SOLID	Sample on Hold																							
87	WS8	VOC	4.80	SOLID	Sample on Hold																							
88	WS10	JAR 250g	0.20	SOLID	Sample on Hold																							

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 04/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 1
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

					UKAS Accredited ?	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓							
Sample Number	Sample Identity	P / V	Depth	Sample Type		Metals ICP. 9 (S)	Boron Water Soluble (S)	Chromium VI (S)	Cyanide Total (S)	Cyanide Free (S)	Thiocyanate (S)	Sulphate Total (S)	Sulphur Total (S)	Sulphide Easily Liberated (S)	pH (S)	Phenols HPLC (S)	PAH Spec MS (S)	EPH CWG GC (S)	GRO CWG GC (S)	VOC MS (S)	SVOC excl PAH MS (S)	TOC (S)	Asbestos Screen (ID)	CEN Leach 1 Step 2:1	Arsenic (1 Step CEN 2:1) (MS)	Cadmium (1 Step CEN 2:1) (MS)	Chromium (1 Step CEN 2:1) (MS)	Copper (1 Step CEN 2:1) (MS)	Nickel (1 Step CEN 2:1) (MS)
89	WS10	VOC	0.20	SOLID		Sample on Hold																						
90	WS10	VOC	0.20	SOLID		Sample on Hold																						
91	WS10	VOC	0.50	SOLID		Sample on Hold																						
92	WS11A	VOC	0.20	SOLID		Sample on Hold																						
93	WS11A	JAR 250g	0.50	SOLID		X	X	X	X	X	X	X	X	X	X	X	X	X			X		X						
94	WS11A	VOC	0.50	SOLID															X	X									
95	WS11A	JAR 250g	1.00	SOLID		Sample on Hold																						
96	WS11A	VOC	1.00	SOLID		Sample on Hold																						
97	WS12	JAR 250g	0.20	SOLID		Sample on Hold																						
98	WS12	JAR 250g	0.50	SOLID		X	X	X	X	X	X	X	X	X	X	X	X	X				X							
99	WS12	VOC	0.50	SOLID															X										
100	WS12	VOC	0.70	SOLID		Sample on Hold																						
101	WS12	JAR 250g	1.00	SOLID		Sample on Hold																						
102	WS12	VOC	1.00	SOLID		Sample on Hold																						
103	WS13	JAR 250g	0.20	SOLID		X	X	X	X	X	X	X	X	X	X	X	X						X						
104	WS13	VOC	0.20	SOLID		Sample on Hold																						
105	WS13	JAR 250g	0.50	SOLID		Sample on Hold																						
106	WS13	VOC	0.50	SOLID		Sample on Hold																						
107	WS13	JAR 250g	1.00	SOLID		X	X	X	X	X	X	X	X	X	X	X	X												
108	WS13	VOC	1.00	SOLID		Sample on Hold																						
109	WS14	JAR 250g	0.20	SOLID		Sample on Hold																						
110	WS14	VOC	0.20	SOLID		Sample on Hold																						

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 04/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 1
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

					UKAS Accredited ?	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓							
Sample Number	Sample Identity	P / V	Depth	Sample Type		Metals ICP. 9 (S)	Boron Water Soluble (S)	Chromium VI (S)	Cyanide Total (S)	Cyanide Free (S)	Thiocyanate (S)	Sulphate Total (S)	Sulphur Total (S)	Sulphide Easily Liberated (S)	pH (S)	Phenols HPLC (S)	PAH Spec MS (S)	EPH CWG GC (S)	GRO CWG GC (S)	VOC MS (S)	SVOC excl PAH MS (S)	TOC (S)	Asbestos Screen (ID)	CEN Leach 1 Step 2:1	Arsenic (1 Step CEN 2:1) (MS)	Cadmium (1 Step CEN 2:1) (MS)	Chromium (1 Step CEN 2:1) (MS)	Copper (1 Step CEN 2:1) (MS)	Nickel (1 Step CEN 2:1) (MS)
111	WS14	JAR 250g	0.50	SOLID		Sample on Hold																						
112	WS14	VOC	0.50	SOLID		Sample on Hold																						
113	WS14	JAR 250g	1.00	SOLID		Sample on Hold																						
114	WS14	VOC	1.00	SOLID		Sample on Hold																						
115	WS15	JAR 250g	0.20	SOLID		X	X	X	X	X	X	X	X	X	X	X	X						X						
116	WS15	VOC	0.20	SOLID		Sample on Hold																						
117	WS16	JAR 250g	0.20	SOLID		Sample on Hold																						
118	WS16	JAR 250g	0.20	SOLID		Sample on Hold																						
119	WS16	VOC	0.50	SOLID		Sample on Hold																						
120	WS16A	JAR 250g	0.20	SOLID		X	X	X	X	X	X	X	X	X	X	X	X	X											
121	WS16A	VOC	0.20	SOLID															X										
122	WS16A	JAR 250g	0.50	SOLID		Sample on Hold																						
123	WS16A	VOC	0.50	SOLID		Sample on Hold																						
124	WS17	JAR 250g	0.20	SOLID		X	X	X	X	X	X	X	X	X	X	X	X												
125	WS17	VOC	0.20	SOLID		Sample on Hold																						
126	WS17	JAR 250g	0.50	SOLID		Sample on Hold																						
127	WS17	VOC	0.50	SOLID		Sample on Hold																						
128	WS18	JAR 250g	0.20	SOLID		Sample on Hold																						
129	WS18	VOC	0.20	SOLID		Sample on Hold																						
130	WS18	JAR 250g	0.30-1.00	SOLID		X	X	X	X	X	X	X	X	X	X	X	X	X											
131	WS18	VOC	0.30-1.00	SOLID															X										
132	WS18	JAR 250g	1.00-1.50	SOLID		Sample on Hold																						

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 04/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 1
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

				UKAS Accredited ?	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓								
Sample Number	Sample Identity	P / V	Depth	Sample Type	Metals ICP. 9 (S)	Boron Water Soluble (S)	Chromium VI (S)	Cyanide Total (S)	Cyanide Free (S)	Thiocyanate (S)	Sulphate Total (S)	Sulphur Total (S)	Sulphide Easily Liberated (S)	pH (S)	Phenols HPLC (S)	PAH Spec MS (S)	EPH CWG GC (S)	GRO CWG GC (S)	VOC MS (S)	SVOC excl PAH MS (S)	TOC (S)	Asbestos Screen (ID)	CEN Leach 1 Step 2:1	Arsenic (1 Step CEN 2:1) (MS)	Cadmium (1 Step CEN 2:1) (MS)	Chromium (1 Step CEN 2:1) (MS)	Copper (1 Step CEN 2:1) (MS)	Nickel (1 Step CEN 2:1) (MS)
133	WS18	VOC	1.00-1.50	SOLID	Sample on Hold																							
134	WS19	JAR 250g	0.20	SOLID																	X	X						
135	WS19	VOC	0.20	SOLID	Sample on Hold																							
136	WS19	JAR 250g	0.50	SOLID	X	X	X	X	X	X	X	X	X	X	X	X												
137	WS19	VOC	0.50	SOLID	Sample on Hold																							
				Total Number of Tests	17	17	17	17	17	17	17	17	17	17	17	17	7	7	3	3	4	7	1	1	1	1	1	1

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 04/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 1
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?																	✓	✓							
Sample Number	Sample Identity	P / V	Depth	Sample Type	Lead (1 Step CEN 2:1) (MS)	Boron (1 Step CEN 2:1) (MS)	Zinc (1 Step CEN 2:1) (ICP-MS)	Mercury (1 Step CEN 2:1) (CVAF)	Selenium (1 Step CEN 2:1) (MS)	Chromium VI (1 Step CEN 2:1)	Cyanide Total (1 Step CEN 2:1)	Cyanide Free (1 Step CEN 2:1)	Thiocyanate (1 Step CEN 2:1)	Sulphate Kone (1 Step CEN 2:1)	Sulphide (1 Step CEN 2:1)	Phenols HPLC (1 Step CEN 2:1)	Free Sulphur (1 Step CEN 2:1)	PAH Spec MS (1 Step CEN 2:1)	EPH CWG GC (1 Step CEN 2:1)	GRO CWG GC (1 Step CEN 2:1)	pH (S)	Sulphate Soluble Kone 2:1 (S)						
1	BH1	JAR 250g	0.20	SOLID																							
2	BH1	JAR 250g	0.50	SOLID																							
3	BH1	JAR 250g	1.00	SOLID	Sample on Hold																						
4	BH1	JAR 250g	2.00	SOLID																							
5	BH1	JAR 250g	2.90	SOLID	Sample on Hold																						
6	BH1	JAR 250g	3.90	SOLID	Sample on Hold																						
7	BH1	JAR 250g	4.90	SOLID	Sample on Hold																						
8	BH1	JAR 250g	6.50	SOLID	Sample on Hold																						
9	BH1	JAR 250g	7.50	SOLID																	X	X					
10	BH1	JAR 250g	9.00	SOLID	Sample on Hold																						
11	BH1	JAR 250g	10.50	SOLID	Sample on Hold																						
12	BH1	JAR 250g	12.00	SOLID	Sample on Hold																						
13	BH1	JAR 250g	13.50	SOLID	Sample on Hold																						
14	BH2	JAR 250g	0.20	SOLID	Sample on Hold																						
15	BH2	VOC	0.20	SOLID	Sample on Hold																						
16	BH2	JAR 250g	0.50	SOLID																							
17	BH2	VOC	0.50	SOLID	Sample on Hold																						
18	BH2	JAR 250g	1.00	SOLID	Sample on Hold																						
19	BH2	VOC	1.00	SOLID	Sample on Hold																						
20	BH2	JAR 250g	2.00	SOLID	Sample on Hold																						
21	BH2	VOC	2.00	SOLID	Sample on Hold																						
22	BH2	JAR 250g	3.00	SOLID	Sample on Hold																						

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 04/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 1
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?																	✓	✓						
Sample Number	Sample Identity	P / V	Depth	Sample Type	Lead (1 Step CEN 2:1) (MS)	Boron (1 Step CEN 2:1) (MS)	Zinc (1 Step CEN 2:1) (ICP-MS)	Mercury (1 Step CEN 2:1) (CVAF)	Selenium (1 Step CEN 2:1) (MS)	Chromium VI (1 Step CEN 2:1)	Cyanide Total (1 Step CEN 2:1)	Cyanide Free (1 Step CEN 2:1)	Thiocyanate (1 Step CEN 2:1)	Sulphate Kone (1 Step CEN 2:1)	Sulphide (1 Step CEN 2:1)	Phenols HPLC (1 Step CEN 2:1)	Free Sulphur (1 Step CEN 2:1)	PAH Spec MS (1 Step CEN 2:1)	EPH CWG GC (1 Step CEN 2:1)	GRO CWG GC (1 Step CEN 2:1)	pH (S)	Sulphate Soluble Kone 2:1 (S)						
23	BH2	VOC	3.00	SOLID	Sample on Hold																						
24	BH3	VOC	0.20	SOLID	Sample on Hold																						
25	BH3	JAR 250g	0.50	SOLID	Sample on Hold																						
26	BH3	VOC	0.50	SOLID	Sample on Hold																						
27	BH3	JAR 250g	0.70	SOLID	Sample on Hold																						
28	BH3	JAR 250g	1.00	SOLID	Sample on Hold																						
29	BH3	VOC	1.00	SOLID	Sample on Hold																						
30	BH3	JAR 250g	2.00	SOLID	Sample on Hold																						
31	BH3	VOC	2.00	SOLID	Sample on Hold																						
32	BH3	JAR 250g	3.00	SOLID	Sample on Hold																						
33	BH3	JAR 250g	4.50	SOLID	Sample on Hold																						
34	BH3	VOC	4.50	SOLID	Sample on Hold																						
35	BH3	JAR 250g	6.00	SOLID	Sample on Hold																						
36	BH3	VOC	6.00	SOLID	Sample on Hold																						
37	BH3	JAR 250g	7.50	SOLID	Sample on Hold																						
38	BH3	VOC	7.50	SOLID	Sample on Hold																						
39	BH3	JAR 250g	9.00	SOLID	Sample on Hold																						
40	BH3	VOC	9.00	SOLID	Sample on Hold																						
41	BH3	JAR 250g	10.50	SOLID	Sample on Hold																						
42	BH3	VOC	10.50	SOLID	Sample on Hold																						
43	BH3	JAR 250g	12.00	SOLID	Sample on Hold																						
44	BH3	VOC	12.00	SOLID	Sample on Hold																						

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 04/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 1
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?																	✓	✓						
Sample Number	Sample Identity	P / V	Depth	Sample Type	Lead (1 Step CEN 2:1) (MS)	Boron (1 Step CEN 2:1) (MS)	Zinc (1 Step CEN 2:1) (ICP-MS)	Mercury (1 Step CEN 2:1) (CVAE)	Selenium (1 Step CEN 2:1) (MS)	Chromium VI (1 Step CEN 2:1)	Cyanide Total (1 Step CEN 2:1)	Cyanide Free (1 Step CEN 2:1)	Thiocyanate (1 Step CEN 2:1)	Sulphate Kone (1 Step CEN 2:1)	Sulphide (1 Step CEN 2:1)	Phenols HPLC (1 Step CEN 2:1)	Free Sulphur (1 Step CEN 2:1)	PAH Spec MS (1 Step CEN 2:1)	EPH CWG GC (1 Step CEN 2:1)	GRO CWG GC (1 Step CEN 2:1)	pH (S)	Sulphate Soluble Kone 2:1 (S)						
45	BH3	VOC	12.30	SOLID	Sample on Hold																						
46	BH3	JAR 250g	13.50	SOLID	Sample on Hold																						
47	BH3	VOC	13.50	SOLID	Sample on Hold																						
48	BH3	JAR 250g	15.00	SOLID																	X	X					
49	BH3	VOC	15.00	SOLID	Sample on Hold																						
50	BH3	JAR 250g	16.50	SOLID	Sample on Hold																						
51	BH3	VOC	16.50	SOLID	Sample on Hold																						
52	BH3	JAR 250g	18.00	SOLID	Sample on Hold																						
53	BH3	VOC	18.00	SOLID	Sample on Hold																						
54	BH3	JAR 250g	19.50	SOLID	Sample on Hold																						
55	BH3	VOC	19.50	SOLID	Sample on Hold																						
56	NO ID	JAR 250g	0.20	SOLID	Sample on Hold																						
57	WS1	JAR 250g	0.50	SOLID	Sample on Hold																						
58	WS2	JAR 250g	0.20	SOLID	Sample on Hold																						
59	WS2	JAR 250g	0.50	SOLID																							
60	WS2	VOC	0.50	SOLID	Sample on Hold																						
61	WS2	JAR 250g	1.00	SOLID	Sample on Hold																						
62	WS2	VOC	1.00	SOLID	Sample on Hold																						
63	WS2D1	VOC	0.20	SOLID	Sample on Hold																						
64	WS3	JAR 250g	0.20	SOLID	Sample on Hold																						
65	WS3	VOC	0.20	SOLID	Sample on Hold																						
66	WS3	JAR 250g	0.50	SOLID																							

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TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
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LOCATION : Co-operative Academy

BATCH NUMBER : 1
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?																	✓	✓							
Sample Number	Sample Identity	P / V	Depth	Sample Type	Lead (1 Step CEN 2:1) (MS)	Boron (1 Step CEN 2:1) (MS)	Zinc (1 Step CEN 2:1) (ICP-MS)	Mercury (1 Step CEN 2:1) (CVAE)	Selenium (1 Step CEN 2:1) (MS)	Chromium VI (1 Step CEN 2:1)	Cyanide Total (1 Step CEN 2:1)	Cyanide Free (1 Step CEN 2:1)	Thiocyanate (1 Step CEN 2:1)	Sulphate Kone (1 Step CEN 2:1)	Sulphide (1 Step CEN 2:1)	Phenols HPLC (1 Step CEN 2:1)	Free Sulphur (1 Step CEN 2:1)	PAH Spec MS (1 Step CEN 2:1)	EPH CWG GC (1 Step CEN 2:1)	GRO CWG GC (1 Step CEN 2:1)	pH (S)	Sulphate Soluble Kone 2:1 (S)						
67	WS3	VOC	0.50	SOLID																							
68	WS3	JAR 250g	1.00	SOLID	Sample on Hold																						
69	WS3	VOC	1.00	SOLID	Sample on Hold																						
70	WS7	JAR 250g	0.20	SOLID																							
71	WS7	VOC	0.20	SOLID	Sample on Hold																						
72	WS7	JAR 250g	0.70	SOLID	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2							
73	WS7	VOC	0.70	SOLID	Sample on Hold																						
74	WS7	JAR 250g	1.20	SOLID																							
75	WS7	VOC	1.20	SOLID																							
76	WS8	JAR 250g	0.20	SOLID	Sample on Hold																						
77	WS8	VOC	0.20	SOLID	Sample on Hold																						
78	WS8	JAR 250g	0.50	SOLID	Sample on Hold																						
79	WS8	VOC	0.50	SOLID	Sample on Hold																						
80	WS8	JAR 250g	1.20	SOLID	Sample on Hold																						
81	WS8	VOC	1.20	SOLID	Sample on Hold																						
82	WS8	JAR 250g	1.80	SOLID																							
83	WS8	VOC	1.80	SOLID																							
84	WS8	JAR 250g	2.50	SOLID	Sample on Hold																						
85	WS8	VOC	2.50	SOLID	Sample on Hold																						
86	WS8	JAR 250g	4.70	SOLID	Sample on Hold																						
87	WS8	VOC	4.80	SOLID	Sample on Hold																						
88	WS10	JAR 250g	0.20	SOLID	Sample on Hold																						

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 04/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 1
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?																	✓	✓							
Sample Number	Sample Identity	P / V	Depth	Sample Type	Lead (1 Step CEN 2:1) (MS)	Boron (1 Step CEN 2:1) (MS)	Zinc (1 Step CEN 2:1) (ICP-MS)	Mercury (1 Step CEN 2:1) (CVAE)	Selenium (1 Step CEN 2:1) (MS)	Chromium VI (1 Step CEN 2:1)	Cyanide Total (1 Step CEN 2:1)	Cyanide Free (1 Step CEN 2:1)	Thiocyanate (1 Step CEN 2:1)	Sulphate Kone (1 Step CEN 2:1)	Sulphide (1 Step CEN 2:1)	Phenols HPLC (1 Step CEN 2:1)	Free Sulphur (1 Step CEN 2:1)	PAH Spec MS (1 Step CEN 2:1)	EPH CWG GC (1 Step CEN 2:1)	GRO CWG GC (1 Step CEN 2:1)	pH (S)	Sulphate Soluble Kone 2:1 (S)						
89	WS10	VOC	0.20	SOLID	Sample on Hold																						
90	WS10	VOC	0.20	SOLID	Sample on Hold																						
91	WS10	VOC	0.50	SOLID	Sample on Hold																						
92	WS11A	VOC	0.20	SOLID	Sample on Hold																						
93	WS11A	JAR 250g	0.50	SOLID																							
94	WS11A	VOC	0.50	SOLID																							
95	WS11A	JAR 250g	1.00	SOLID	Sample on Hold																						
96	WS11A	VOC	1.00	SOLID	Sample on Hold																						
97	WS12	JAR 250g	0.20	SOLID	Sample on Hold																						
98	WS12	JAR 250g	0.50	SOLID																							
99	WS12	VOC	0.50	SOLID																							
100	WS12	VOC	0.70	SOLID	Sample on Hold																						
101	WS12	JAR 250g	1.00	SOLID	Sample on Hold																						
102	WS12	VOC	1.00	SOLID	Sample on Hold																						
103	WS13	JAR 250g	0.20	SOLID																							
104	WS13	VOC	0.20	SOLID	Sample on Hold																						
105	WS13	JAR 250g	0.50	SOLID	Sample on Hold																						
106	WS13	VOC	0.50	SOLID	Sample on Hold																						
107	WS13	JAR 250g	1.00	SOLID																							
108	WS13	VOC	1.00	SOLID	Sample on Hold																						
109	WS14	JAR 250g	0.20	SOLID	Sample on Hold																						
110	WS14	VOC	0.20	SOLID	Sample on Hold																						

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 04/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 1
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?																	✓	✓							
Sample Number	Sample Identity	P / V	Depth	Sample Type	Lead (1 Step CEN 2:1) (MS)	Boron (1 Step CEN 2:1) (MS)	Zinc (1 Step CEN 2:1) (ICP-MS)	Mercury (1 Step CEN 2:1) (CVAF)	Selenium (1 Step CEN 2:1) (MS)	Chromium VI (1 Step CEN 2:1)	Cyanide Total (1 Step CEN 2:1)	Cyanide Free (1 Step CEN 2:1)	Thiocyanate (1 Step CEN 2:1)	Sulphate Kone (1 Step CEN 2:1)	Sulphide (1 Step CEN 2:1)	Phenols HPLC (1 Step CEN 2:1)	Free Sulphur (1 Step CEN 2:1)	PAH Spec MS (1 Step CEN 2:1)	EPH CWG GC (1 Step CEN 2:1)	GRO CWG GC (1 Step CEN 2:1)	pH (S)	Sulphate Soluble Kone 2:1 (S)						
111	WS14	JAR 250g	0.50	SOLID	Sample on Hold																						
112	WS14	VOC	0.50	SOLID	Sample on Hold																						
113	WS14	JAR 250g	1.00	SOLID	Sample on Hold																						
114	WS14	VOC	1.00	SOLID	Sample on Hold																						
115	WS15	JAR 250g	0.20	SOLID																							
116	WS15	VOC	0.20	SOLID	Sample on Hold																						
117	WS16	JAR 250g	0.20	SOLID	Sample on Hold																						
118	WS16	JAR 250g	0.20	SOLID	Sample on Hold																						
119	WS16	VOC	0.50	SOLID	Sample on Hold																						
120	WS16A	JAR 250g	0.20	SOLID																							
121	WS16A	VOC	0.20	SOLID																							
122	WS16A	JAR 250g	0.50	SOLID	Sample on Hold																						
123	WS16A	VOC	0.50	SOLID	Sample on Hold																						
124	WS17	JAR 250g	0.20	SOLID																							
125	WS17	VOC	0.20	SOLID	Sample on Hold																						
126	WS17	JAR 250g	0.50	SOLID	Sample on Hold																						
127	WS17	VOC	0.50	SOLID	Sample on Hold																						
128	WS18	JAR 250g	0.20	SOLID	Sample on Hold																						
129	WS18	VOC	0.20	SOLID	Sample on Hold																						
130	WS18	JAR 250g	0.30-1.00	SOLID																							
131	WS18	VOC	0.30-1.00	SOLID																							
132	WS18	JAR 250g	1.00-1.50	SOLID	Sample on Hold																						

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 04/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 1
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?																✓	✓						
Sample Number	Sample Identity	P / V	Depth	Sample Type	Lead (1 Step CEN 2:1) (MS)	Boron (1 Step CEN 2:1) (MS)	Zinc (1 Step CEN 2:1) (ICP-MS)	Mercury (1 Step CEN 2:1) (CVAE)	Selenium (1 Step CEN 2:1) (MS)	Chromium VI (1 Step CEN 2:1)	Cyanide Total (1 Step CEN 2:1)	Cyanide Free (1 Step CEN 2:1)	Thiocyanate (1 Step CEN 2:1)	Sulphate Kone (1 Step CEN 2:1)	Sulphide (1 Step CEN 2:1)	Phenols HPLC (1 Step CEN 2:1)	Free Sulphur (1 Step CEN 2:1)	PAH Spec MS (1 Step CEN 2:1)	EPH CWG GC (1 Step CEN 2:1)	GRO CWG GC (1 Step CEN 2:1)	pH (S)	Sulphate Soluble Kone 2:1 (S)						
133	WS18	VOC	1.00-1.50	SOLID	Sample on Hold																					
134	WS19	JAR 250g	0.20	SOLID																						
135	WS19	VOC	0.20	SOLID	Sample on Hold																					
136	WS19	JAR 250g	0.50	SOLID																						
137	WS19	VOC	0.50	SOLID	Sample on Hold																					
		Total Number of Tests			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2						

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 05/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 2
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?			✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓							
Sample Number	Sample Identity	P / V	Depth	Sample Type	Metals ICP. 9 (S)	Boron Water Soluble (S)	Chromium VI (S)	Cyanide Total (S)	Cyanide Free (S)	Thiocyanate (S)	Sulphate Total (S)	Sulphur Total (S)	Sulphide Easily Liberated (S)	pH (S)	Phenols HPLC (S)	PAH Spec MS (S)	EPH CWG GC (S)	GRO CWG GC (S)	VOC MS (S)	SVOC excl PAH MS (S)	TOC (S)	Asbestos Screen (ID)	CEN Leach 1 Step 2:1	Arsenic (1 Step CEN 2:1) (MS)	Cadmium (1 Step CEN 2:1) (MS)	Chromium (1 Step CEN 2:1) (MS)	Copper (1 Step CEN 2:1) (MS)	Nickel (1 Step CEN 2:1) (MS)
138	BH 1	1KGTub	2.90	SOLID	Sample on Hold																							
139	BH 1	1KGTub	2.90	SOLID	Sample on Hold																							
140	BH 1	1KGTub	3.90	SOLID	Sample on Hold																							
141	BH 1	1KGTub	3.90	SOLID	Sample on Hold																							
142	BH 1	1KGTub	4.90	SOLID	Sample on Hold																							
143	BH 1	1KGTub	4.90	SOLID	Sample on Hold																							
144	BH 1	1KGTub	6.50	SOLID	Sample on Hold																							
145	BH 1	1KGTub	6.50	SOLID	Sample on Hold																							
146	BH 1	1KGTub	7.50	SOLID	Sample on Hold																							
147	BH 1	1KGTub	7.50	SOLID	Sample on Hold																							
148	BH 1	1KGTub	10.50	SOLID	Sample on Hold																							
149	BH 1	1KGTub	12.00	SOLID	Sample on Hold																							
150	BH 1	1KGTub	12.00	SOLID	Sample on Hold																							
151	BH 2	1KGTub	0.20	SOLID	Sample on Hold																							
152	BH 2	1KGTub	0.20	SOLID	Sample on Hold																							
153	BH 2	1KGTub	0.50	SOLID	Sample on Hold																							
154	BH 2	1KGTub	0.50	SOLID	Sample on Hold																							
155	BH 2	1KGTub	1.00	SOLID	Sample on Hold																							
156	BH 2	1KGTub	1.00	SOLID	Sample on Hold																							
157	BH 2	1KGTub	2.00	SOLID	Sample on Hold																							
158	BH 2	1KGTub	2.00	SOLID	Sample on Hold																							
159	BH 2	1KGTub	3.00	SOLID	Sample on Hold																							

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 05/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 2
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?			✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓							
Sample Number	Sample Identity	P / V	Depth	Sample Type	Metals ICP. 9 (S)	Boron Water Soluble (S)	Chromium VI (S)	Cyanide Total (S)	Cyanide Free (S)	Thiocyanate (S)	Sulphate Total (S)	Sulphur Total (S)	Sulphide Easily Liberated (S)	pH (S)	Phenols HPLC (S)	PAH Spec MS (S)	EPH CWG GC (S)	GRO CWG GC (S)	VOC MS (S)	SVOC excl PAH MS (S)	TOC (S)	Asbestos Screen (ID)	CEN Leach 1 Step 2:1	Arsenic (1 Step CEN 2:1) (MS)	Cadmium (1 Step CEN 2:1) (MS)	Chromium (1 Step CEN 2:1) (MS)	Copper (1 Step CEN 2:1) (MS)	Nickel (1 Step CEN 2:1) (MS)
160	BH 2	1KGTub	3.00	SOLID	Sample on Hold																							
161	BH 3	1KGTub	0.20	SOLID	X	X	X	X	X	X	X	X	X	X	X	X												
162	BH 3	1KGTub	0.20	SOLID																			2	2	2	2	2	2
163	BH 3	1KGTub	0.30	SOLID	Sample on Hold																							
164	BH 3	1KGTub	0.50	SOLID	Sample on Hold																							
165	BH 3	1KGTub	0.50	SOLID	Sample on Hold																							
166	BH 3	1KGTub	1.00	SOLID	Sample on Hold																							
167	BH 3	1KGTub	1.00	SOLID	Sample on Hold																							
168	BH 3	1KGTub	2.00	SOLID	Sample on Hold																							
169	BH 3	1KGTub	2.00	SOLID	Sample on Hold																							
170	BH 3	1KGTub	3.00	SOLID	Sample on Hold																							
171	BH 3	1KGTub	3.00	SOLID	Sample on Hold																							
172	BH 3	1KGTub	4.50	SOLID	Sample on Hold																							
173	BH 3	1KGTub	4.50	SOLID	Sample on Hold																							
174	BH 3	1KGTub	6.00	SOLID	Sample on Hold																							
175	BH 3	1KGTub	6.00	SOLID	Sample on Hold																							
176	BH 3	1KGTub	7.50	SOLID	Sample on Hold																							
177	BH 3	1KGTub	7.50	SOLID	Sample on Hold																							
178	BH 3	1KGTub	9.00	SOLID	Sample on Hold																							
179	BH 3	1KGTub	9.00	SOLID	Sample on Hold																							
180	BH 3	1KGTub	10.50	SOLID	Sample on Hold																							
181	BH 3	1KGTub	10.50	SOLID	Sample on Hold																							

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 05/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 2
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

					UKAS Accredited ?	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓							
Sample Number	Sample Identity	P / V	Depth	Sample Type		Metals ICP. 9 (S)	Boron Water Soluble (S)	Chromium VI (S)	Cyanide Total (S)	Cyanide Free (S)	Thiocyanate (S)	Sulphate Total (S)	Sulphur Total (S)	Sulphide Easily Liberated (S)	pH (S)	Phenols HPLC (S)	PAH Spec MS (S)	EPH CWG GC (S)	GRO CWG GC (S)	VOC MS (S)	SVOC excl PAH MS (S)	TOC (S)	Asbestos Screen (ID)	CEN Leach 1 Step 2:1	Arsenic (1 Step CEN 2:1) (MS)	Cadmium (1 Step CEN 2:1) (MS)	Chromium (1 Step CEN 2:1) (MS)	Copper (1 Step CEN 2:1) (MS)	Nickel (1 Step CEN 2:1) (MS)
182	BH 3	1KGTub	12.00	SOLID		Sample on Hold																						
183	BH 3	1KGTub	12.00	SOLID		Sample on Hold																						
184	BH 3	1KGTub	13.50	SOLID		Sample on Hold																						
185	BH 3	1KGTub	13.50	SOLID		Sample on Hold																						
186	BH 3	1KGTub	15.00	SOLID		Sample on Hold																						
187	BH 3	1KGTub	15.00	SOLID		Sample on Hold																						
188	BH 3	1KGTub	16.50	SOLID		Sample on Hold																						
189	BH 3	1KGTub	16.50	SOLID		Sample on Hold																						
190	BH 3	1KGTub	18.00	SOLID		Sample on Hold																						
191	BH 3	1KGTub	18.00	SOLID		Sample on Hold																						
192	BH 3	1KGTub	19.50	SOLID		Sample on Hold																						
193	BH 3	1KGTub	19.50	SOLID		Sample on Hold																						
194	WS 4	JAR 250g	0.20	SOLID		X	X	X	X	X	X	X	X	X	X	X	X						X						
195	WS 4	VOC	0.20	SOLID		Sample on Hold																						
196	WS 4	JAR 250g	0.50	SOLID		Sample on Hold																						
197	WS 4	VOC	0.50	SOLID		Sample on Hold																						
198	WS 4	JAR 250g	1.00	SOLID		Sample on Hold																						
199	WS 4	VOC	1.00	SOLID		Sample on Hold																						
200	WS 5	JAR 250g	0.20	SOLID		Sample on Hold																						
201	WS 5	VOC	0.20	SOLID		Sample on Hold																						
202	WS 5	JAR 250g	0.50	SOLID		Sample on Hold																						
203	WS 5	VOC	0.50	SOLID		Sample on Hold																						

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 05/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 2
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓							
Sample Number	Sample Identity	P / V	Depth	Sample Type	Metals ICP. 9 (S)	Boron Water Soluble (S)	Chromium VI (S)	Cyanide Total (S)	Cyanide Free (S)	Thiocyanate (S)	Sulphate Total (S)	Sulphur Total (S)	Sulphide Easily Liberated (S)	pH (S)	Phenols HPLC (S)	PAH Spec MS (S)	EPH CWG GC (S)	GRO CWG GC (S)	VOC MS (S)	SVOC excl PAH MS (S)	TOC (S)	Asbestos Screen (ID)	CEN Leach 1 Step 2:1	Arsenic (1 Step CEN 2:1) (MS)	Cadmium (1 Step CEN 2:1) (MS)	Chromium (1 Step CEN 2:1) (MS)	Copper (1 Step CEN 2:1) (MS)	Nickel (1 Step CEN 2:1) (MS)
204	WS 5	JAR 250g	1.00	SOLID	X	X	X	X	X	X	X	X	X	X	X	X	X				X							
205	WS 5	VOC	1.00	SOLID														X										
206	WS 6	JAR 250g	0.20	SOLID	X	X	X	X	X	X	X	X	X	X	X	X												
207	WS 6	VOC	0.20	SOLID	Sample on Hold																							
208	WS 6	JAR 250g	0.50	SOLID	Sample on Hold																							
209	WS 6	VOC	0.50	SOLID	Sample on Hold																							
210	WS 6A	JAR 250g	0.20	SOLID	Sample on Hold																							
211	WS 6A	VOC	0.20	SOLID	Sample on Hold																							
212	WS 6A	JAR 250g	0.50	SOLID	X	X	X	X	X	X	X	X	X	X	X	X	X			X								
213	WS 6A	VOC	0.50	SOLID														X	X									
		Total Number of Tests			5	5	5	5	5	5	5	5	5	5	5	5	2	2	1	1	1	1	1	1	1	1	1	1

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TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 05/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 2
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?																									
Sample Number	Sample Identity	P / V	Depth	Sample Type	Lead (1 Step CEN 2:1) (MS)	Boron (1 Step CEN 2:1) (MS)	Zinc (1 Step CEN 2:1) (ICP-MS)	Mercury (1 Step CEN 2:1) (CVAE)	Selenium (1 Step CEN 2:1) (MS)	Chromium VI (1 Step CEN 2:1)	Cyanide Total (1 Step CEN 2:1)	Cyanide Free (1 Step CEN 2:1)	Thiocyanate (1 Step CEN 2:1)	Sulphate Kone (1 Step CEN 2:1)	Sulphide (1 Step CEN 2:1)	Phenols HPLC (1 Step CEN 2:1)	Free Sulphur (1 Step CEN 2:1)	PAH Spec MS (1 Step CEN 2:1)	EPH CWG GC (1 Step CEN 2:1)	GRO CWG GC (1 Step CEN 2:1)								
138	BH 1	1KGTub	2.90	SOLID	Sample on Hold																						
139	BH 1	1KGTub	2.90	SOLID	Sample on Hold																						
140	BH 1	1KGTub	3.90	SOLID	Sample on Hold																						
141	BH 1	1KGTub	3.90	SOLID	Sample on Hold																						
142	BH 1	1KGTub	4.90	SOLID	Sample on Hold																						
143	BH 1	1KGTub	4.90	SOLID	Sample on Hold																						
144	BH 1	1KGTub	6.50	SOLID	Sample on Hold																						
145	BH 1	1KGTub	6.50	SOLID	Sample on Hold																						
146	BH 1	1KGTub	7.50	SOLID	Sample on Hold																						
147	BH 1	1KGTub	7.50	SOLID	Sample on Hold																						
148	BH 1	1KGTub	10.50	SOLID	Sample on Hold																						
149	BH 1	1KGTub	12.00	SOLID	Sample on Hold																						
150	BH 1	1KGTub	12.00	SOLID	Sample on Hold																						
151	BH 2	1KGTub	0.20	SOLID	Sample on Hold																						
152	BH 2	1KGTub	0.20	SOLID	Sample on Hold																						
153	BH 2	1KGTub	0.50	SOLID	Sample on Hold																						
154	BH 2	1KGTub	0.50	SOLID	Sample on Hold																						
155	BH 2	1KGTub	1.00	SOLID	Sample on Hold																						
156	BH 2	1KGTub	1.00	SOLID	Sample on Hold																						
157	BH 2	1KGTub	2.00	SOLID	Sample on Hold																						
158	BH 2	1KGTub	2.00	SOLID	Sample on Hold																						
159	BH 2	1KGTub	3.00	SOLID	Sample on Hold																						

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 05/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 2
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?																									
Sample Number	Sample Identity	P / V	Depth	Sample Type	Lead (1 Step CEN 2:1) (MS)	Boron (1 Step CEN 2:1) (MS)	Zinc (1 Step CEN 2:1) (ICP-MS)	Mercury (1 Step CEN 2:1) (CVAE)	Selenium (1 Step CEN 2:1) (MS)	Chromium VI (1 Step CEN 2:1)	Cyanide Total (1 Step CEN 2:1)	Cyanide Free (1 Step CEN 2:1)	Thiocyanate (1 Step CEN 2:1)	Sulphate Kone (1 Step CEN 2:1)	Sulphide (1 Step CEN 2:1)	Phenols HPLC (1 Step CEN 2:1)	Free Sulphur (1 Step CEN 2:1)	PAH Spec MS (1 Step CEN 2:1)	EPH CWG GC (1 Step CEN 2:1)	GRO CWG GC (1 Step CEN 2:1)								
160	BH 2	1KGTub	3.00	SOLID	Sample on Hold																						
161	BH 3	1KGTub	0.20	SOLID																							
162	BH 3	1KGTub	0.20	SOLID	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2							
163	BH 3	1KGTub	0.30	SOLID	Sample on Hold																						
164	BH 3	1KGTub	0.50	SOLID	Sample on Hold																						
165	BH 3	1KGTub	0.50	SOLID	Sample on Hold																						
166	BH 3	1KGTub	1.00	SOLID	Sample on Hold																						
167	BH 3	1KGTub	1.00	SOLID	Sample on Hold																						
168	BH 3	1KGTub	2.00	SOLID	Sample on Hold																						
169	BH 3	1KGTub	2.00	SOLID	Sample on Hold																						
170	BH 3	1KGTub	3.00	SOLID	Sample on Hold																						
171	BH 3	1KGTub	3.00	SOLID	Sample on Hold																						
172	BH 3	1KGTub	4.50	SOLID	Sample on Hold																						
173	BH 3	1KGTub	4.50	SOLID	Sample on Hold																						
174	BH 3	1KGTub	6.00	SOLID	Sample on Hold																						
175	BH 3	1KGTub	6.00	SOLID	Sample on Hold																						
176	BH 3	1KGTub	7.50	SOLID	Sample on Hold																						
177	BH 3	1KGTub	7.50	SOLID	Sample on Hold																						
178	BH 3	1KGTub	9.00	SOLID	Sample on Hold																						
179	BH 3	1KGTub	9.00	SOLID	Sample on Hold																						
180	BH 3	1KGTub	10.50	SOLID	Sample on Hold																						
181	BH 3	1KGTub	10.50	SOLID	Sample on Hold																						

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 05/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 2
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?																									
Sample Number	Sample Identity	P / V	Depth	Sample Type	Lead (1 Step CEN 2:1) (MS)	Boron (1 Step CEN 2:1) (MS)	Zinc (1 Step CEN 2:1) (ICP-MS)	Mercury (1 Step CEN 2:1) (CVAE)	Selenium (1 Step CEN 2:1) (MS)	Chromium VI (1 Step CEN 2:1)	Cyanide Total (1 Step CEN 2:1)	Cyanide Free (1 Step CEN 2:1)	Thiocyanate (1 Step CEN 2:1)	Sulphate Kone (1 Step CEN 2:1)	Sulphide (1 Step CEN 2:1)	Phenols HPLC (1 Step CEN 2:1)	Free Sulphur (1 Step CEN 2:1)	PAH Spec MS (1 Step CEN 2:1)	EPH CWG GC (1 Step CEN 2:1)	GRO CWG GC (1 Step CEN 2:1)								
182	BH 3	1KGTub	12.00	SOLID	Sample on Hold																						
183	BH 3	1KGTub	12.00	SOLID	Sample on Hold																						
184	BH 3	1KGTub	13.50	SOLID	Sample on Hold																						
185	BH 3	1KGTub	13.50	SOLID	Sample on Hold																						
186	BH 3	1KGTub	15.00	SOLID	Sample on Hold																						
187	BH 3	1KGTub	15.00	SOLID	Sample on Hold																						
188	BH 3	1KGTub	16.50	SOLID	Sample on Hold																						
189	BH 3	1KGTub	16.50	SOLID	Sample on Hold																						
190	BH 3	1KGTub	18.00	SOLID	Sample on Hold																						
191	BH 3	1KGTub	18.00	SOLID	Sample on Hold																						
192	BH 3	1KGTub	19.50	SOLID	Sample on Hold																						
193	BH 3	1KGTub	19.50	SOLID	Sample on Hold																						
194	WS 4	JAR 250g	0.20	SOLID																							
195	WS 4	VOC	0.20	SOLID	Sample on Hold																						
196	WS 4	JAR 250g	0.50	SOLID	Sample on Hold																						
197	WS 4	VOC	0.50	SOLID	Sample on Hold																						
198	WS 4	JAR 250g	1.00	SOLID	Sample on Hold																						
199	WS 4	VOC	1.00	SOLID	Sample on Hold																						
200	WS 5	JAR 250g	0.20	SOLID	Sample on Hold																						
201	WS 5	VOC	0.20	SOLID	Sample on Hold																						
202	WS 5	JAR 250g	0.50	SOLID	Sample on Hold																						
203	WS 5	VOC	0.50	SOLID	Sample on Hold																						

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 05/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 2
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 5 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?																									
Sample Number	Sample Identity	P / V	Depth	Sample Type	Lead (1 Step CEN 2:1) (MS)	Boron (1 Step CEN 2:1) (MS)	Zinc (1 Step CEN 2:1) (ICP-MS)	Mercury (1 Step CEN 2:1) (CVAE)	Selenium (1 Step CEN 2:1) (MS)	Chromium VI (1 Step CEN 2:1)	Cyanide Total (1 Step CEN 2:1)	Cyanide Free (1 Step CEN 2:1)	Thiocyanate (1 Step CEN 2:1)	Sulphate Kone (1 Step CEN 2:1)	Sulphide (1 Step CEN 2:1)	Phenols HPLC (1 Step CEN 2:1)	Free Sulphur (1 Step CEN 2:1)	PAH Spec MS (1 Step CEN 2:1)	EPH CWG GC (1 Step CEN 2:1)	GRO CWG GC (1 Step CEN 2:1)								
204	WS 5	JAR 250g	1.00	SOLID																							
205	WS 5	VOC	1.00	SOLID																							
206	WS 6	JAR 250g	0.20	SOLID																							
207	WS 6	VOC	0.20	SOLID	Sample on Hold																						
208	WS 6	JAR 250g	0.50	SOLID	Sample on Hold																						
209	WS 6	VOC	0.50	SOLID	Sample on Hold																						
210	WS 6A	JAR 250g	0.20	SOLID	Sample on Hold																						
211	WS 6A	VOC	0.20	SOLID	Sample on Hold																						
212	WS 6A	JAR 250g	0.50	SOLID																							
213	WS 6A	VOC	0.50	SOLID																							
		Total Number of Tests			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1							

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 19/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 3
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 10 days

Numeric values indicate additional scheduling

* indicates test subcontracted

				UKAS Accredited ?		✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓						✓	✓		
Sample Number	Sample Identity	P / V	Depth	Sample Type	Take Volatile (W)	VOC MS (W)	SVOC excl PAH MS (W)	Metals ICP-MS 9 (W)	Mercury Dissolved (W) (CVAF)	Chromium VI (W)	Cyanide Total (W)	Cyanide Free (W)	Thiocyanate (W)	Sulphate Kone (W)	Sulphide (W)	pH (W)	Phenols HPLC (W)	PAH Spec MS Aqueous (W)	Free Sulphur (W)	Take NaOH (W)	Take Zinc Acetate (W)	EPH CWG GC Aqueous (W)	GRO CWG GC (W)	Take H2SO4 (W)	Ammoniacal Nitrogen as N (W)	Chloride Kone (W)	Sodium Dissolved (W)	Potassium Dissolved (W)
214	BH2	1lglass	UNKNOWN	LIQUID																				2	2	2	2	2
215	BH2	1lglass	UNKNOWN	LIQUID																								
216	WS1	1lglass	UNKNOWN	LIQUID																				2	2	2	2	2
217	WS1	1lglass	UNKNOWN	LIQUID																								
218	WS4	1lglass	UNKNOWN	LIQUID							X	X	X		X		X			X	X			2	2	2	2	2
219	WS4	1lglass	UNKNOWN	LIQUID	X	X	X	X	X	X				X		X		X	X			X	X					
220	WS16	1lglass	UNKNOWN	LIQUID							X	X	X		X		X			X	X			2	2	2	2	2
221	WS16	1lglass	UNKNOWN	LIQUID	X	X	X	X	X	X				X		X		X	X			X	X					
222	WS19	1lglass	UNKNOWN	LIQUID							X	X	X		X		X			X	X			2	2	2	2	2
223	WS19	1lglass	UNKNOWN	LIQUID	X	X	X	X	X	X				X		X		X	X			X	X					
				Total Number of Tests	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**5**	**5**	**5**	**5**	**5**

Printed : 06/08/08 15:37:07

ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 30/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 4
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 10 days

Numeric values indicate additional scheduling

* indicates test subcontracted

Sample Number	Sample Identity	P / V	Depth	Sample Type	Metals ICP. 9 (S)	Boron Water Soluble (S)	Chromium VI (S)	Cyanide Total (S)	Cyanide Free (S)	Thiocyanate (S)	Sulphate Total (S)	Sulphur Total (S)	Sulphide Easily Liberated (S)	pH (S)	Phenols HPLC (S)	PAH Spec MS (S)	EPH CWG GC (S)	GRO CWG GC (S)	Asbestos Screen (ID)	TOC (S)	pH (S)	PCB 7 Congeners (S)	Mineral Oil C10-40 (S)	Acid Neutralising Capacity (S)	Coronene Rapid GC (S)	Loss on Ignition (S)	CEN Leach 2:1	CEN Leach 8:1
		UKAS Accredited ?			✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓		✓		
224	WS 10	1KGTub	0.50	SOLID																							X	X
225	WS 10	1KGTub	0.50	SOLID			X	X	X	X			X		X				X		X					X		
226	WS 10	JAR 250g	0.50	SOLID	X	X					X	X				X	X			X		X	X	X	X			
227	WS 10	VOC	0.50	SOLID														X										
228	WS 16	1KGTub	0.50	SOLID																								
229	WS 16	1KGTub	0.50	SOLID			X	X	X	X			X	X	X				X									
230	WS 16	JAR 250g	0.50	SOLID	X	X					X	X				X				X								
231	WS 16	VOC	0.50	SOLID	Sample on Hold																							
232	WS 19	1KGTub	1.20-1.60	SOLID																								
		Total Number of Tests			2	2	2	2	2	2	2	2	2	1	2	2	1	1	2	2	1	1	1	1	1	1	1	1

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 30/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 4
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 10 days

Numeric values indicate additional scheduling

* indicates test subcontracted

				UKAS Accredited ?																								
Sample Number	Sample Identity	P / V	Depth	Sample Type	Metals ICP-MS 9 (CEN 2:1)	Metals ICP-MS 9 (CEN 8:1)	Metals ICP-MS 9 (CEN 10:1C)	Barium (CEN 2:1) (ICP-MS)	Barium (CEN 8:1) (ICP-MS)	Barium (CEN 10:1C) (ICP-MS)	Molybdenum (CEN 2:1) (ICP-MS)	Molybdenum (CEN 8:1) (ICP-MS)	Molybdenum (CEN 10:1C) (ICP-MS)	Mercury (CEN 2:1) (CVAF)	Mercury (CEN 8:1) (CVAF)	Mercury (CEN 10:1C) (CVAF)	Antimony (CEN 2:1) (ICP-MS)	Antimony (CEN 8:1) (ICP-MS)	Antimony (CEN 10:1C) (ICP-MS)	Chloride Kone (CEN 2:1)	Chloride Kone (CEN 8:1)	Chloride Kone (CEN 10:1C)	Fluoride Kone (CEN 2:1)	Fluoride Kone (CEN 8:1)	Fluoride Kone (CEN 10:1C)	Sulphate Kone (CEN 2:1)	Sulphate Kone (CEN 8:1)	Sulphate Kone (CEN 10:1C)
224	WS 10	1KGTub	0.50	SOLID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
225	WS 10	1KGTub	0.50	SOLID																								
226	WS 10	JAR 250g	0.50	SOLID																								
227	WS 10	VOC	0.50	SOLID																								
228	WS 16	1KGTub	0.50	SOLID																								
229	WS 16	1KGTub	0.50	SOLID																								
230	WS 16	JAR 250g	0.50	SOLID																								
231	WS 16	VOC	0.50	SOLID	Sample on Hold																							
232	WS 19	1KGTub	1.20-1.60	SOLID																								
				Total Number of Tests	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

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ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 30/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 4
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 10 days

Numeric values indicate additional scheduling

* indicates test subcontracted

				UKAS Accredited ?																							
Sample Number	Sample Identity	P / V	Depth	Sample Type	Phenols HPLC (CEN 2:1)	Phenols HPLC (CEN 8:1)	Phenols HPLC (CEN 10:1C)	DOC (CEN 2:1)	DOC (CEN 8:1)	DOC (CEN 10:1C)	TDS (CEN 2:1)	TDS (CEN 8:1)	TDS (CEN 10:1C)	CEN Leach 1 Step 2:1	Arsenic (1 Step CEN 2:1) (MS)	Cadmium (1 Step CEN 2:1) (MS)	Chromium (1 Step CEN 2:1) (MS)	Copper (1 Step CEN 2:1) (MS)	Nickel (1 Step CEN 2:1) (MS)	Lead (1 Step CEN 2:1) (MS)	Boron (1 Step CEN 2:1) (MS)	Zinc (1 Step CEN 2:1) (ICP-MS)	Mercury (1 Step CEN 2:1) (CVAF)	Selenium (1 Step CEN 2:1) (MS)	Chromium VI (1 Step CEN 2:1)	Cyanide Total (1 Step CEN 2:1)	Cyanide Free (1 Step CEN 2:1)	Thiocyanate (1 Step CEN 2:1)
224	WS 10	1KGTub	0.50	SOLID	X	X	X	X	X	X	X	X	X																
225	WS 10	1KGTub	0.50	SOLID																									
226	WS 10	JAR 250g	0.50	SOLID																									
227	WS 10	VOC	0.50	SOLID																									
228	WS 16	1KGTub	0.50	SOLID										X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
229	WS 16	1KGTub	0.50	SOLID																									
230	WS 16	JAR 250g	0.50	SOLID																									
231	WS 16	VOC	0.50	SOLID	Sample on Hold																								
232	WS 19	1KGTub	1.20-1.60	SOLID																									
			Total Number of Tests		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Printed : 06/08/08 15:38:21

ALcontrol Laboratories
TEST SCHEDULE

JOB NUMBER : 08/9998/02
CLIENT : Geotechnics Ltd
CONTACT : Stewart Garnet
DATE OF RECEIPT : 30/06/08
LOCATION : Co-operative Academy

BATCH NUMBER : 4
CLIENT REF/CODE : PN081814
ORDER NUMBER : PN081814
TURNAROUND : 10 days

Numeric values indicate additional scheduling

* indicates test subcontracted

		UKAS Accredited ?									✓	✓															
Sample Number	Sample Identity	P / V	Depth	Sample Type	Sulphate Kone (1 Step CEN 2:1)	Sulphide (1 Step CEN 2:1)	Phenols HPLC (1 Step CEN 2:1)	Free Sulphur (1 Step CEN 2:1)	PAH Spec MS (1 Step CEN 2:1)	EPH CWG GC (1 Step CEN 2:1)	GRO CWG GC (1 Step CEN 2:1)	pH (S)	Sulphate Soluble Kone 2:1 (S)															
224	WS 10	1KGTub	0.50	SOLID																							
225	WS 10	1KGTub	0.50	SOLID																							
226	WS 10	JAR 250g	0.50	SOLID																							
227	WS 10	VOC	0.50	SOLID																							
228	WS 16	1KGTub	0.50	SOLID	X	X	X	X	X	X	X																
229	WS 16	1KGTub	0.50	SOLID																							
230	WS 16	JAR 250g	0.50	SOLID																							
231	WS 16	VOC	0.50	SOLID	Sample on Hold																						
232	WS 19	1KGTub	1.20-1.60	SOLID								X	X														
		Total Number of Tests			1	1	1	1	1	1	1	1	1														

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ISO 17025 Form	FORM NO:SQS 105
ALCONTROL LABORATORIES	SHEET 1 OF 1
	ISSUE NO: 2
	WRITTEN BY: DOH
Title of Form	ISSUE DATE: 27/01/05
Notification of NDP's (No determination possible).	APPROVED BY: DP

Job Number : 08/9998
Client : Geotechnics
Sample Type : SOIL

Job No.	Sample No.	Sample ID.	Analyte(s)	Reason
9998	72	BH1	CEN 2:1 1 STEP	Not enough sample

ISO 17025 Form	FORM NO:SQS 105
ALCONTROL LABORATORIES	SHEET 1 OF 1
	ISSUE NO: 2
	WRITTEN BY: DOH
Title of Form	ISSUE DATE: 27/01/05
Notification of NDP's (No determination possible).	APPROVED BY: DP

Job Number : 08/9998
Client : GEOTECHNICS
Sample Type : SOIL

Job No.	Sample No.	Sample ID.	Analyte(s)	Reason
08/9998	228	WS16	CEN 2.1 1STEP RE-EX	NOT ENOUGH SAMPLE

ALcontrol Laboratories Analytical Services
Sample Descriptions

Job Number: 08/09998/02/01
Client: Geotechnics Ltd
Client Ref : PN081814

Grain sizes

<0.063mm	Very Fine
0.1mm - 0.063mm	Fine
0.1mm - 2mm	Medium
2mm - 10mm	Coarse
>10mm	Very Coarse

Sample Identity	Depth (m)	Colour	Grain Size	Description	Batch
BH1	0.50	Brown	<0.063mm	Clay with some Stones	1
BH1	2.0	Brown	0.1mm - 2mm	Sandy Clay with some Stones	1
BH1	7.50	Brown	0.1mm - 2mm	Sandy Loam	1
BH2	0.5	Brown	<0.063mm	Clay	1
BH 3	0.20	Brown	0.1mm - 0.063mm	Silty Clay	2
BH3	15.0	Brown	0.1mm - 2mm	Sandy Silt Loam	1
WS2	0.50	Brown	0.1mm - 0.063mm	Silty Clay Loam with some Stones	1
WS3	0.50	Dark Brown	0.1mm - 0.063mm	Silt Loam with some Vegetation	1
WS 4	0.20	Brown	0.1mm - 0.063mm	Silt Loam with some Stones	2
WS 5	1.00	Brown	0.1mm - 2mm	Loamy Sand	2
WS 6	0.20	Dark Brown	0.1mm - 0.063mm	Silty Clay	2
WS 6A	0.50	Dark Brown	0.1mm - 0.063mm	Silt Loam with some Stones	2
WS7	0.2	Brown	<0.063mm	Clay Loam	1
WS7	0.7	Brown	2mm - 10mm	Sandy Loam with some Stones	1
WS7	1.2	Dark Brown	<0.063mm	Silty Clay	1
WS8	1.8	Grey	0.1mm - 2mm	Sand with some Stones	1
WS 10	0.50	Dark Brown	0.1mm - 2mm	Sandy Clay Loam with some Stones	4
WS11A	0.50	Brown	<0.063mm	Clay	1
WS12	0.50	Brown	0.1mm - 0.063mm	Sandy Clay with some Stones	1
WS13	0.20	Dark Brown	0.1mm - 2mm	Sandy Loam with some Stones	1
WS13	1.0	Brown	0.1mm - 0.063mm	Sandy Clay with some Stones	1
WS15	0.2	Brown	0.1mm - 0.063mm	Silt Loam with some Vegetation	1
WS 16	0.50	Dark Brown	0.1mm - 2mm	Sandy Clay Loam with some Stones	4
WS16A	0.2	Brown	<0.063mm	Clay Loam with some Stones	1
WS17	0.2	Brown	0.1mm - 0.063mm	Silty Clay with some Vegetation	1
WS18	0.3-1.0	Dark Brown	0.1mm - 2mm	Sandy Loam with some Stones	1
WS19	0.2	Brown	<0.063mm	Clay	1
WS19	0.5	Brown	<0.063mm	Clay	1
WS 19	1.20-1.60	Brown	0.1mm - 0.063mm	Silt Loam	4

* These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials-whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.
Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
[1] Sample Description supplied by client

Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
[M] MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	BH1	BH1	BH1	BH1	BH2	BH 3	BH3	WS2	WS3	Method Code	LoD/Units
Depth (m)	0.20	0.50	2.0	7.50	0.5	0.20	15.0	0.50	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	04.06.08	04.06.08	04.06.08	04.06.08	04.06.08	05.06.08	04.06.08	04.06.08	04.06.08		
Batch	1	1	1	1	1	2	1	1	1		
Sample Number(s)	**1**	**2**	**4**	**9**	**16-17**	**161-162**	**48-49**	**59-60**	**66-67**		
Total Sulphate	-	150	<100	-	350	160	-	210	1500	TM129#M	<100 mg/kg
Boron Water Soluble	-	<3.5	<3.5	-	<3.5	<3.5	-	<3.5	5.2	TM129#M	<3.5 mg/kg
Arsenic	-	5	<3	-	7	4	-	<3	18	TM129#M	<3.0 mg/kg
Cadmium	-	0.3	<0.2	-	0.3	<0.2	-	<0.2	0.4	TM129	<0.2 mg/kg
Chromium	-	21	15	-	18	20	-	17	21	TM129#M	<4.5 mg/kg
Copper	-	20	16	-	23	27	-	14	55	TM129#M	<6 mg/kg
Lead	-	15	9	-	63	17	-	20	160	TM129#M	<2 mg/kg
Mercury	-	<0.4	<0.4	-	<0.4	<0.4	-	<0.4	<0.4	TM129#M	<0.4 mg/kg
Nickel	-	26	19	-	19	25	-	22	19	TM129#M	<0.9 mg/kg
Selenium	-	<3	<3	-	<3	<3	-	<3	<3	TM129#M	<3 mg/kg
Zinc	-	63	36	-	93	56	-	56	170	TM129#M	<2.5 mg/kg
ANC at pH4	-	-	-	-	-	-	-	-	-	TM182#	<0.03 mol/kg
ANC at pH6	-	-	-	-	-	-	-	-	-	TM182#	<0.03 mol/kg
Water Soluble Sulphate as SO4 2:1 Extract	-	-	-	0.021	-	-	0.037	-	-	TM098#M	<0.003 g/l
Easily Liberated Sulphide	-	<15	<15	-	<15	<15	-	<15	23	TM180#	<15 mg/kg
Hexavalent Chromium	-	<0.3	<3.0	-	<0.3	<3.0	-	<3.0	<15.0	TM151#	<0.3 mg/kg
Total Organic Carbon	-	1.0	-	-	-	-	-	-	-	TM132#M	<0.2 %
Phenols Monohydric	-	<0.15	<0.15	-	<0.15	<0.15	-	<0.15	<0.15	TM062#M	<0.15 mg/kg
Thiocyanate	-	<1	<1	-	<1	<1	-	<1	<1	TM153#M	<1 mg/kg
Total Cyanide	-	<1	<1	-	<1	<1	-	<1	<1	TM153#M	<1 mg/kg
Free Cyanide	-	<1	<1	-	<1	<1	-	<1	<1	TM153	<1 mg/kg
Asbestos Presence Screen	No Fibres Detected	-	-	-	-	-	-	-	No Fibres Detected	TM001	NONE
Loss on Ignition	-	-	-	-	-	-	-	-	-	TM018#M	<0.3 %
pH Value	-	8.28	7.82	8.39	7.82	7.89	8.24	8.59	6.40	TM133#M	<1.00 pH Units
Total Sulphur	-	0.03	0.02	-	0.04	0.04	-	0.03	0.19	TM068#	<0.01 %

All results expressed on a dry weight basis.

Date 06.08.2008

Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
[M] MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	BH1	BH1	BH1	BH1	BH2	BH 3	BH3	WS2	WS3	Method Code	LoD/Units
Depth (m)	0.20	0.50	2.0	7.50	0.5	0.20	15.0	0.50	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	04.06.08	04.06.08	04.06.08	04.06.08	04.06.08	05.06.08	04.06.08	04.06.08	04.06.08		
Batch	1	1	1	1	1	2	1	1	1		
Sample Number(s)	**1**	**2**	**4**	**9**	**16-17**	**161-162**	**48-49**	**59-60**	**66-67**		
GRO (C4-C12)	-	-	-	-	-	-	-	-	<10	TM089	<10 ug/kg
MTBE	-	-	-	-	-	-	-	-	<10	TM089#	<10 ug/kg
Benzene	-	-	-	-	-	-	-	-	<10	TM089#M	<10 ug/kg
Toluene	-	-	-	-	-	-	-	-	<10	TM089#M	<10 ug/kg
Ethyl benzene	-	-	-	-	-	-	-	-	<10	TM089#M	<10 ug/kg
m & p Xylene	-	-	-	-	-	-	-	-	<10	TM089#M	<10 ug/kg
o Xylene	-	-	-	-	-	-	-	-	<10	TM089#M	<10 ug/kg
Aliphatics C5-C6	-	-	-	-	-	-	-	-	<10	TM089	<10 ug/kg
Aliphatics >C6-C8	-	-	-	-	-	-	-	-	<10	TM089	<10 ug/kg
Aliphatics >C8-C10	-	-	-	-	-	-	-	-	<10	TM089	<10 ug/kg
Aliphatics >C10-C12	-	-	-	-	-	-	-	-	<10	TM089	<10 ug/kg
Aliphatics >C12-C16	-	-	-	-	-	-	-	-	8500	TM173#	<100 ug/kg
Aliphatics >C16-C21	-	-	-	-	-	-	-	-	35000	TM173#	<100 ug/kg
Aliphatics >C21-C35	-	-	-	-	-	-	-	-	98000	TM173#	<100 ug/kg
Total Aliphatics C5-C35	-	-	-	-	-	-	-	-	140000	TM61/89	<100 ug/kg
Aromatics C6-C7	-	-	-	-	-	-	-	-	<10	TM089	<10 ug/kg
Aromatics >C7-C8	-	-	-	-	-	-	-	-	<10	TM089	<10 ug/kg
Aromatics >EC8-EC10	-	-	-	-	-	-	-	-	<10	TM089	<10 ug/kg
Aromatics >EC10-EC12	-	-	-	-	-	-	-	-	<10	TM089	<10 ug/kg
Aromatics >EC12-EC16	-	-	-	-	-	-	-	-	7400	TM173#	<100 ug/kg
Aromatics >EC16-EC21	-	-	-	-	-	-	-	-	20000	TM173#	<100 ug/kg
Aromatics >EC21-EC35	-	-	-	-	-	-	-	-	210000	TM173#	<100 ug/kg
Total Aromatics C6-C35	-	-	-	-	-	-	-	-	230000	TM61/89	<100 ug/kg
TPH (Aliphatics and Aromatics C5-C35)	-	-	-	-	-	-	-	-	370000	TM61/89	<100 ug/kg

All results expressed on a dry weight basis.

Date 06.08.2008

Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
[M] MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	BH1	BH1	BH1	BH1	BH2	BH 3	BH3	WS2	WS3	Method Code	LoD/Units
Depth (m)	0.20	0.50	2.0	7.50	0.5	0.20	15.0	0.50	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	04.06.08	04.06.08	04.06.08	04.06.08	04.06.08	05.06.08	04.06.08	04.06.08	04.06.08		
Batch	1	1	1	1	1	2	1	1	1		
Sample Number(s)	**1**	**2**	**4**	**9**	**16-17**	**161-162**	**48-49**	**59-60**	**66-67**		
PAH by GCMS											
Naphthalene	-	1400	10	-	37	<10	-	350	1200	TM074[#M]	<10 ug/kg
Acenaphthylene	-	58	<5	-	17	<5	-	44	50	TM074[#M]	<5 ug/kg
Acenaphthene	-	75	<14	-	37	<14	-	72	460	TM074[#M]	<14 ug/kg
Fluorene	-	100	<12	-	31	<12	-	100	320	TM074[#M]	<12 ug/kg
Phenanthrene	-	240	63	-	370	110	-	860	1500	TM074[#M]	<21 ug/kg
Anthracene	-	24	<9	-	89	16	-	190	280	TM074[#M]	<9 ug/kg
Fluoranthene	-	120	<25	-	600	140	-	1100	1900	TM074[#M]	<25 ug/kg
Pyrene	-	110	25	-	570	140	-	950	1600	TM074[#M]	<22 ug/kg
Benz(a)anthracene	-	79	32	-	310	94	-	490	870	TM074[#M]	<12 ug/kg
Chrysene	-	110	33	-	350	91	-	500	980	TM074[#M]	<10 ug/kg
Benzo(b)fluoranthene	-	97	32	-	420	90	-	420	910	TM074[#M]	<16 ug/kg
Benzo(k)fluoranthene	-	39	<25	-	210	42	-	190	330	TM074[#M]	<25 ug/kg
Benzo(a)pyrene	-	52	14	-	330	65	-	420	750	TM074[#M]	<12 ug/kg
Indeno(123cd)pyrene	-	32	<11	-	190	33	-	220	530	TM074[#M]	<11 ug/kg
Dibenzo(ah)anthracene	-	17	<8	-	61	9	-	83	210	TM074[#M]	<8 ug/kg
Benzo(ghi)perylene	-	68	22	-	250	53	-	300	710	TM074[#M]	<10 ug/kg
PAH 16 Total	-	2600	230	-	3900	890	-	6300	13000	TM074[#M]	<25 ug/kg
PCB 7 Congeners											
PCB congener 28	-	-	-	-	-	-	-	-	-	TM168	<3 ug/kg
PCB congener 52	-	-	-	-	-	-	-	-	-	TM168	<3 ug/kg
PCB congener 101	-	-	-	-	-	-	-	-	-	TM168	<3 ug/kg
PCB congener 118	-	-	-	-	-	-	-	-	-	TM168	<3 ug/kg
PCB congener 153	-	-	-	-	-	-	-	-	-	TM168	<3 ug/kg
PCB congener 138	-	-	-	-	-	-	-	-	-	TM168	<3 ug/kg
PCB congener 180	-	-	-	-	-	-	-	-	-	TM168	<3 ug/kg
Total of 7 Congener PCBs	-	-	-	-	-	-	-	-	-	TM168	<3 ug/kg

All results expressed on a dry weight basis.

Date 06.08.2008

Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
[M] MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	BH1	BH1	BH1	BH1	BH2	BH 3	BH3	WS2	WS3	Method Code	LoD/Units
Depth (m)	0.20	0.50	2.0	7.50	0.5	0.20	15.0	0.50	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	04.06.08	04.06.08	04.06.08	04.06.08	04.06.08	05.06.08	04.06.08	04.06.08	04.06.08		
Batch	1	1	1	1	1	2	1	1	1		
Sample Number(s)	**1**	**2**	**4**	**9**	**16-17**	**161-162**	**48-49**	**59-60**	**66-67**		
SVOC by GCMS											
Phenols											
2-Chlorophenol	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
2-Methylphenol	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
2-Nitrophenol	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
2,4-Dichlorophenol	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
2,4-Dimethylphenol	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
2,4,5-Trichlorophenol	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
2,4,6-Trichlorophenol	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
4-Chloro-3-methylphenol	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
4-Methylphenol	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
4-Nitrophenol	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Pentachlorophenol	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Phenol	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
PAHs											
2-Chloronaphthalene	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
2-Methylnaphthalene	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Phthalates											
Bis(2-ethylhexyl) phthalate	-	-	-	-	-	-	-	-	580	TM157	<100 ug/kg
Butylbenzyl phthalate	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Di-n-butyl phthalate	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Di-n-Octyl phthalate	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Diethyl phthalate	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Dimethyl phthalate	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Other Semi-volatiles											
1,2-Dichlorobenzene	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
1,3-Dichlorobenzene	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg

All results expressed on a dry weight basis.

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ALcontrol Laboratories Analytical Services
Table Of Results

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Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	BH1	BH1	BH1	BH1	BH2	BH 3	BH3	WS2	WS3	Method Code	LoD/Units
Depth (m)	0.20	0.50	2.0	7.50	0.5	0.20	15.0	0.50	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	04.06.08	04.06.08	04.06.08	04.06.08	04.06.08	05.06.08	04.06.08	04.06.08	04.06.08		
Batch	1	1	1	1	1	2	1	1	1		
Sample Number(s)	**1**	**2**	**4**	**9**	**16-17**	**161-162**	**48-49**	**59-60**	**66-67**		
Other Semi-volatiles (cont)											
1,4-Dichlorobenzene	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
2-Nitroaniline	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
2,4-Dinitrotoluene	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
2,6-Dinitrotoluene	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
3-Nitroaniline	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
4-Bromophenylphenylether	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
4-Chloroaniline	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
4-Chlorophenylphenylether	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
4-Nitroaniline	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Azobenzene	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Bis(2-chloroethoxy)methane	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Bis(2-chloroethyl)ether	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Carbazole	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Dibenzofuran	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Hexachlorobenzene	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Hexachlorobutadiene	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Hexachlorocyclopentadiene	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Hexachloroethane	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Isophorone	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
N-nitrosodi-n-propylamine	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg
Nitrobenzene	-	-	-	-	-	-	-	-	<100	TM157	<100 ug/kg

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ALcontrol Laboratories Analytical Services
Table Of Results

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Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	BH1	BH1	BH1	BH1	BH2	BH 3	BH3	WS2	WS3	Method Code	LoD/Units
Depth (m)	0.20	0.50	2.0	7.50	0.5	0.20	15.0	0.50	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	04.06.08	04.06.08	04.06.08	04.06.08	04.06.08	05.06.08	04.06.08	04.06.08	04.06.08		
Batch	1	1	1	1	1	2	1	1	1		
Sample Number(s)	**1**	**2**	**4**	**9**	**16-17**	**161-162**	**48-49**	**59-60**	**66-67**		
Volatile Organic Compounds											
Dichlorodifluoromethane	-	-	-	-	-	-	-	-	<4	TM116[#]	<4 ug/kg
Chloromethane	-	-	-	-	-	-	-	-	22	TM116[#]	<7 ug/kg
Vinyl Chloride	-	-	-	-	-	-	-	-	<10	TM116[#M]	<10 ug/kg
Bromomethane	-	-	-	-	-	-	-	-	<13	TM116	<13 ug/kg
Chloroethane	-	-	-	-	-	-	-	-	<14	TM116[#]	<14 ug/kg
Trichlorofluoromethane	-	-	-	-	-	-	-	-	<6	TM116[#M]	<6 ug/kg
trans-1-2-Dichloroethene	-	-	-	-	-	-	-	-	<11	TM116[#]	<11 ug/kg
Dichloromethane	-	-	-	-	-	-	-	-	<10	TM116[#]	<10 ug/kg
Carbon Disulphide	-	-	-	-	-	-	-	-	<7	TM116[#M]	<7 ug/kg
1.1-Dichloroethene	-	-	-	-	-	-	-	-	<10	TM116[#M]	<10 ug/kg
1.1-Dichloroethane	-	-	-	-	-	-	-	-	<8	TM116[#M]	<8 ug/kg
Methyl Tertiary Butyl Ether	-	-	-	-	-	-	-	-	<11	TM116	<11 ug/kg
cis-1-2-Dichloroethene	-	-	-	-	-	-	-	-	<5	TM116[#M]	<5 ug/kg
Bromochloromethane	-	-	-	-	-	-	-	-	<14	TM116[#]	<14 ug/kg
Chloroform	-	-	-	-	-	-	-	-	<8	TM116[#M]	<8 ug/kg
2.2-Dichloropropane	-	-	-	-	-	-	-	-	<12	TM116	<12 ug/kg
1.2-Dichloroethane	-	-	-	-	-	-	-	-	<5	TM116[#]	<5 ug/kg
1.1.1-Trichloroethane	-	-	-	-	-	-	-	-	<7	TM116[#M]	<7 ug/kg
1.1-Dichloropropene	-	-	-	-	-	-	-	-	<11	TM116[#M]	<11 ug/kg
Benzene	-	-	-	-	-	-	-	-	<9	TM116[#M]	<9 ug/kg
Carbontetrachloride	-	-	-	-	-	-	-	-	<14	TM116[#M]	<14 ug/kg
Dibromomethane	-	-	-	-	-	-	-	-	<9	TM116[#]	<9 ug/kg
1.2-Dichloropropane	-	-	-	-	-	-	-	-	<12	TM116[#M]	<12 ug/kg
Bromodichloromethane	-	-	-	-	-	-	-	-	<7	TM116[#M]	<7 ug/kg
Trichloroethene	-	-	-	-	-	-	-	-	<9	TM116[#M]	<9 ug/kg
cis-1-3-Dichloropropene	-	-	-	-	-	-	-	-	<14	TM116[#M]	<14 ug/kg
trans-1-3-Dichloropropene	-	-	-	-	-	-	-	-	<14	TM116[#M]	<14 ug/kg
1.1.2-Trichloroethane	-	-	-	-	-	-	-	-	<10	TM116[#]	<10 ug/kg
Toluene	-	-	-	-	-	-	-	-	9	TM116[#M]	<5 ug/kg
1.3-Dichloropropane	-	-	-	-	-	-	-	-	<7	TM116[#]	<7 ug/kg

All results expressed on a dry weight basis.

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Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

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Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	BH1	BH1	BH1	BH1	BH2	BH 3	BH3	WS2	WS3	Method Code	LoD/Units
Depth (m)	0.20	0.50	2.0	7.50	0.5	0.20	15.0	0.50	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	04.06.08	04.06.08	04.06.08	04.06.08	04.06.08	05.06.08	04.06.08	04.06.08	04.06.08		
Batch	1	1	1	1	1	2	1	1	1		
Sample Number(s)	**1**	**2**	**4**	**9**	**16-17**	**161-162**	**48-49**	**59-60**	**66-67**		
Volatile Organic Compounds (cont)											
Dibromochloromethane	-	-	-	-	-	-	-	-	<13	TM116[#]	<13 ug/kg
1.2-Dibromoethane	-	-	-	-	-	-	-	-	<12	TM116[#]	<12 ug/kg
Tetrachloroethene	-	-	-	-	-	-	-	-	18	TM116[#]	<5 ug/kg
1.1.1.2-Tetrachloroethane	-	-	-	-	-	-	-	-	<10	TM116[#M]	<10 ug/kg
Chlorobenzene	-	-	-	-	-	-	-	-	<5	TM116[#M]	<5 ug/kg
Ethylbenzene	-	-	-	-	-	-	-	-	<4	TM116[#]	<4 ug/kg
p/m-Xylene	-	-	-	-	-	-	-	-	27	TM116[#]	<14 ug/kg
Bromoform	-	-	-	-	-	-	-	-	<10	TM116[#]	<10 ug/kg
Styrene	-	-	-	-	-	-	-	-	<10	TM116[#]	<10 ug/kg
1.1.2.2-Tetrachloroethane	-	-	-	-	-	-	-	-	<10	TM116[#]	<10 ug/kg
o-Xylene	-	-	-	-	-	-	-	-	<10	TM116[#]	<10 ug/kg
1.2.3-Trichloropropane	-	-	-	-	-	-	-	-	<17	TM116[#]	<17 ug/kg
Isopropylbenzene	-	-	-	-	-	-	-	-	<5	TM116[#]	<5 ug/kg
Bromobenzene	-	-	-	-	-	-	-	-	<10	TM116[#M]	<10 ug/kg
2-Chlorotoluene	-	-	-	-	-	-	-	-	<9	TM116[#]	<9 ug/kg
Propylbenzene	-	-	-	-	-	-	-	-	<11	TM116[#]	<11 ug/kg
4-Chlorotoluene	-	-	-	-	-	-	-	-	<12	TM116[#]	<12 ug/kg
1.2.4-Trimethylbenzene	-	-	-	-	-	-	-	-	<9	TM116[#]	<9 ug/kg
4-Isopropyltoluene	-	-	-	-	-	-	-	-	<11	TM116[#]	<11 ug/kg
1.3.5-Trimethylbenzene	-	-	-	-	-	-	-	-	<8	TM116[#]	<8 ug/kg
1.2-Dichlorobenzene	-	-	-	-	-	-	-	-	<12	TM116[#M]	<12 ug/kg
1.4-Dichlorobenzene	-	-	-	-	-	-	-	-	<5	TM116[#M]	<5 ug/kg
sec-Butylbenzene	-	-	-	-	-	-	-	-	<10	TM116[#]	<10 ug/kg
tert-Butylbenzene	-	-	-	-	-	-	-	-	<12	TM116[#]	<12 ug/kg
1.3-Dichlorobenzene	-	-	-	-	-	-	-	-	<6	TM116[#]	<6 ug/kg
n-Butylbenzene	-	-	-	-	-	-	-	-	<10	TM116[#]	<10 ug/kg
1.2-Dibromo-3-chloropropane	-	-	-	-	-	-	-	-	<14	TM116[#]	<14 ug/kg
1.2.4-Trichlorobenzene	-	-	-	-	-	-	-	-	<6	TM116[#]	<6 ug/kg
Naphthalene	-	-	-	-	-	-	-	-	<13	TM116[#]	<13 ug/kg
1.2.3-Trichlorobenzene	-	-	-	-	-	-	-	-	<11	TM116[#]	<11 ug/kg

All results expressed on a dry weight basis.

Date 06.08.2008

Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
[M] MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	BH1	BH1	BH1	BH1	BH2	BH 3	BH3	WS2	WS3	Method Code	LoD/Units
Depth (m)	0.20	0.50	2.0	7.50	0.5	0.20	15.0	0.50	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	04.06.08	04.06.08	04.06.08	04.06.08	04.06.08	05.06.08	04.06.08	04.06.08	04.06.08		
Batch	1	1	1	1	1	2	1	1	1		
Sample Number(s)	**1**	**2**	**4**	**9**	**16-17**	**161-162**	**48-49**	**59-60**	**66-67**		
Volatile Organic Compounds (cont)											
Hexachlorobutadiene	-	-	-	-	-	-	-	-	<12	TM116[#]	<12 ug/kg

All results expressed on a dry weight basis.

Date 06.08.2008

Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

ISO 17025 accredited
M MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS 4	WS 5	WS 6	WS 6A	WS7	WS7	WS7	WS8	WS 10	Method Code	LoD/Units
Depth (m)	0.20	1.00	0.20	0.50	0.2	0.7	1.2	1.8	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	05.06.08	05.06.08	05.06.08	05.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08		
Batch	2	2	2	2	1	1	1	1	4		
Sample Number(s)	194-195	204-205	206-207	212-213	70-71	72-73	74-75	82-83	224-227		
Total Sulphate	1000	250	1500	2500	130	-	590	1900	880	TM129#M	<100 mg/kg
Boron Water Soluble	<3.5	<3.5	<3.5	<3.5	<3.5	-	<3.5	<3.5	<3.5	TM129#M	<3.5 mg/kg
Arsenic	3	5	43	18	4	-	16	7	11	TM129#M	<3.0 mg/kg
Cadmium	0.4	1.0	1.1	1.0	<0.2	-	0.4	0.6	<0.2	TM129	<0.2 mg/kg
Chromium	13	12	33	16	22	-	17	19	22	TM129#M	<4.5 mg/kg
Copper	12	31	560	100	22	-	36	110	55	TM129#M	<6 mg/kg
Lead	14	24	420	130	14	-	210	120	80	TM129#M	<2 mg/kg
Mercury	<0.4	<0.4	<0.4	<0.4	<0.4	-	0.7	<0.4	<0.4	TM129#M	<0.4 mg/kg
Nickel	17	16	60	28	21	-	15	74	26	TM129#M	<0.9 mg/kg
Selenium	<3	<3	<3	<3	<3	-	<3	<3	<3	TM129#M	<3 mg/kg
Zinc	56	130	700	180	52	-	88	140	140	TM129#M	<2.5 mg/kg
ANC at pH4	-	-	-	-	-	-	-	-	0.40	TM182#	<0.03 mol/kg
ANC at pH6	-	-	-	-	-	-	-	-	0.04	TM182#	<0.03 mol/kg
Water Soluble Sulphate as SO4 2:1 Extract	-	-	-	-	-	-	-	-	-	TM098#M	<0.003 g/l
Easily Liberated Sulphide	<15	<15	<15	130	<15	-	<15	39	<15	TM180#	<15 mg/kg
Hexavalent Chromium	<0.3	<30.0	<6.0	<0.3	<3.0	-	<6.0	<0.3	<3.0	TM151#	<0.3 mg/kg
Total Organic Carbon	-	3.9	-	-	-	-	3.2	-	3.2	TM132#M	<0.2 %
Phenols Monohydric	<0.15	<0.15	<0.15	<0.15	<0.15	-	<0.15	<0.15	<0.15	TM062#M	<0.15 mg/kg
Thiocyanate	<1	<1	<1	<1	<1	-	<1	<1	<1	TM153#M	<1 mg/kg
Total Cyanide	<1	<1	<1	<1	<1	-	<1	<1	<1	TM153#M	<1 mg/kg
Free Cyanide	<1	<1	<1	<1	<1	-	<1	<1	<1	TM153	<1 mg/kg
Asbestos Presence Screen	No Fibres Detected	-	-	-	No Fibres Detected	-	-	-	No Fibres Detected	TM001	NONE
Loss on Ignition	-	-	-	-	-	-	-	-	4.5	TM018#M	<0.3 %
pH Value	9.56	7.27	7.11	7.65	7.26	-	6.72	7.92	8.01	TM133#M	<1.00 pH Units
Total Sulphur	0.06	0.06	0.33	0.58	0.02	-	0.09	0.25	0.05	TM068#	<0.01 %

All results expressed on a dry weight basis.

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Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

ISO 17025 accredited
M MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS 4	WS 5	WS 6	WS 6A	WS7	WS7	WS7	WS8	WS 10	Method Code	LoD/Units
Depth (m)	0.20	1.00	0.20	0.50	0.2	0.7	1.2	1.8	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	05.06.08	05.06.08	05.06.08	05.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08		
Batch	2	2	2	2	1	1	1	1	4		
Sample Number(s)	**194-195**	**204-205**	**206-207**	**212-213**	**70-71**	**72-73**	**74-75**	**82-83**	**224-227**		
GRO (C4-C12)	-	<10	-	<10	-	-	<10	<10	<10	TM089	<10 ug/kg
MTBE	-	<10	-	<10	-	-	<10	<10	<10	TM089#	<10 ug/kg
Benzene	-	<10	-	<10	-	-	<10	<10	<10	TM089#M	<10 ug/kg
Toluene	-	<10	-	<10	-	-	<10	<10	<10	TM089#M	<10 ug/kg
Ethyl benzene	-	<10	-	<10	-	-	<10	<10	<10	TM089#M	<10 ug/kg
m & p Xylene	-	<10	-	<10	-	-	<10	<10	<10	TM089#M	<10 ug/kg
o Xylene	-	<10	-	<10	-	-	<10	<10	<10	TM089#M	<10 ug/kg
Aliphatics C5-C6	-	<10	-	<10	-	-	<10	<10	<10	TM089	<10 ug/kg
Aliphatics >C6-C8	-	<10	-	<10	-	-	<10	<10	<10	TM089	<10 ug/kg
Aliphatics >C8-C10	-	<10	-	<10	-	-	<10	<10	<10	TM089	<10 ug/kg
Aliphatics >C10-C12	-	<10	-	<10	-	-	<10	<10	<10	TM089	<10 ug/kg
Aliphatics >C12-C16	-	<100	-	67000	-	-	14000	18000	1800	TM173#	<100 ug/kg
Aliphatics >C16-C21	-	<100	-	120000	-	-	7000	11000	8000	TM173#	<100 ug/kg
Aliphatics >C21-C35	-	13000	-	1000000	-	-	25000	120000	59000	TM173#	<100 ug/kg
Total Aliphatics C5-C35	-	13000	-	1200000	-	-	46000	140000	68000	TM61/89	<100 ug/kg
Aromatics C6-C7	-	<10	-	<10	-	-	<10	<10	<10	TM089	<10 ug/kg
Aromatics >C7-C8	-	<10	-	<10	-	-	<10	<10	<10	TM089	<10 ug/kg
Aromatics >EC8-EC10	-	<10	-	<10	-	-	<10	<10	<10	TM089	<10 ug/kg
Aromatics >EC10-EC12	-	<10	-	<10	-	-	<10	<10	<10	TM089	<10 ug/kg
Aromatics >EC12-EC16	-	3400	-	31000	-	-	7900	8900	2600	TM173#	<100 ug/kg
Aromatics >EC16-EC21	-	3900	-	110000	-	-	17000	19000	8000	TM173#	<100 ug/kg
Aromatics >EC21-EC35	-	29000	-	1300000	-	-	160000	220000	100000	TM173#	<100 ug/kg
Total Aromatics C6-C35	-	37000	-	1400000	-	-	190000	250000	110000	TM61/89	<100 ug/kg
TPH (Aliphatics and Aromatics C5-C35)	-	49000	-	2600000	-	-	240000	400000	180000	TM61/89	<100 ug/kg

All results expressed on a dry weight basis.

Date 06.08.2008

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Preliminary

ALcontrol Laboratories Analytical Services
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[#] ISO 17025 accredited
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* Subcontracted test
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Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS 4	WS 5	WS 6	WS 6A	WS7	WS7	WS7	WS8	WS 10	Method Code	LoD/Units
Depth (m)	0.20	1.00	0.20	0.50	0.2	0.7	1.2	1.8	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	05.06.08	05.06.08	05.06.08	05.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08		
Batch	2	2	2	2	1	1	1	1	4		
Sample Number(s)	**194-195**	**204-205**	**206-207**	**212-213**	**70-71**	**72-73**	**74-75**	**82-83**	**224-227**		
Mineral Oil	-	-	-	-	-	-	-	-	160	TM061[#]	<1 mg/kg
Mineral Oil % Surrogate Recovery	-	-	-	-	-	-	-	-	93	TM061[#]	%
Coronene	-	-	-	-	-	-	-	-	<2	TM213	<2 mg/kg

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ALcontrol Laboratories Analytical Services
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Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS 4	WS 5	WS 6	WS 6A	WS7	WS7	WS7	WS8	WS 10	Method Code	LoD/Units
Depth (m)	0.20	1.00	0.20	0.50	0.2	0.7	1.2	1.8	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	05.06.08	05.06.08	05.06.08	05.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08		
Batch	2	2	2	2	1	1	1	1	4		
Sample Number(s)	**194-195**	**204-205**	**206-207**	**212-213**	**70-71**	**72-73**	**74-75**	**82-83**	**224-227**		
PAH by GCMS											
Naphthalene	1700	390	1400	2000	710	-	1600	17000	250	TM074[#M]	<10 ug/kg
Acenaphthylene	85	11	51	160	24	-	98	1100	31	TM074[#M]	<5 ug/kg
Acenaphthene	650	23	100	3700	33	-	510	5100	190	TM074[#M]	<14 ug/kg
Fluorene	560	27	80	2700	47	-	410	3700	210	TM074[#M]	<12 ug/kg
Phenanthrene	3700	140	690	10000	61	-	2900	15000	1800	TM074[#M]	<21 ug/kg
Anthracene	890	17	130	3900	<9	-	570	4600	480	TM074[#M]	<9 ug/kg
Fluoranthene	3600	130	1000	21000	41	-	4000	42000	3000	TM074[#M]	<25 ug/kg
Pyrene	2900	130	900	18000	37	-	3400	36000	2400	TM074[#M]	<22 ug/kg
Benz(a)anthracene	1400	82	550	8300	33	-	1900	22000	1500	TM074[#M]	<12 ug/kg
Chrysene	1800	110	660	9000	28	-	2100	24000	1400	TM074[#M]	<10 ug/kg
Benzo(b)fluoranthene	1500	67	640	10000	31	-	2000	25000	2000	TM074[#M]	<16 ug/kg
Benzo(k)fluoranthene	590	26	210	3400	<25	-	810	12000	900	TM074[#M]	<25 ug/kg
Benzo(a)pyrene	1400	56	360	8900	22	-	1900	23000	1400	TM074[#M]	<12 ug/kg
Indeno(123cd)pyrene	650	25	210	4300	14	-	1000	12000	570	TM074[#M]	<11 ug/kg
Dibenzo(ah)anthracene	390	21	150	1900	<8	-	380	4000	200	TM074[#M]	<8 ug/kg
Benzo(ghi)perylene	950	58	380	6200	19	-	1400	15000	760	TM074[#M]	<10 ug/kg
PAH 16 Total	23000	1300	7500	110000	1100	-	25000	260000	17000	TM074[#M]	<25 ug/kg

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Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS 4	WS 5	WS 6	WS 6A	WS7	WS7	WS7	WS8	WS 10	Method Code	LoD/Units
Depth (m)	0.20	1.00	0.20	0.50	0.2	0.7	1.2	1.8	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	05.06.08	05.06.08	05.06.08	05.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08		
Batch	2	2	2	2	1	1	1	1	4		
Sample Number(s)	**194-195**	**204-205**	**206-207**	**212-213**	**70-71**	**72-73**	**74-75**	**82-83**	**224-227**		
PCB 7 Congeners											
PCB congener 28	-	-	-	-	-	-	-	-	<3	TM168	<3 ug/kg
PCB congener 52	-	-	-	-	-	-	-	-	<3	TM168	<3 ug/kg
PCB congener 101	-	-	-	-	-	-	-	-	<3	TM168	<3 ug/kg
PCB congener 118	-	-	-	-	-	-	-	-	<3	TM168	<3 ug/kg
PCB congener 153	-	-	-	-	-	-	-	-	<3	TM168	<3 ug/kg
PCB congener 138	-	-	-	-	-	-	-	-	<3	TM168	<3 ug/kg
PCB congener 180	-	-	-	-	-	-	-	-	<3	TM168	<3 ug/kg
Total of 7 Congener PCBs	-	-	-	-	-	-	-	-	<3	TM168	<3 ug/kg

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Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS 4	WS 5	WS 6	WS 6A	WS7	WS7	WS7	WS8	WS 10	Method Code	LoD/Units
Depth (m)	0.20	1.00	0.20	0.50	0.2	0.7	1.2	1.8	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	05.06.08	05.06.08	05.06.08	05.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08		
Batch	2	2	2	2	1	1	1	1	4		
Sample Number(s)	**194-195**	**204-205**	**206-207**	**212-213**	**70-71**	**72-73**	**74-75**	**82-83**	**224-227**		
SVOC by GCMS											
Phenols											
2-Chlorophenol	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
2-Methylphenol	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
2-Nitrophenol	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
2,4-Dichlorophenol	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
2,4-Dimethylphenol	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
2,4,5-Trichlorophenol	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
2,4,6-Trichlorophenol	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
4-Chloro-3-methylphenol	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
4-Methylphenol	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
4-Nitrophenol	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Pentachlorophenol	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Phenol	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
PAHs											
2-Chloronaphthalene	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
2-Methylnaphthalene	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Phthalates											
Bis(2-ethylhexyl) phthalate	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Butylbenzyl phthalate	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Di-n-butyl phthalate	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Di-n-Octyl phthalate	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Diethyl phthalate	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Dimethyl phthalate	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Other Semi-volatiles											
1,2-Dichlorobenzene	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
1,2,4-Trichlorobenzene	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
1,3-Dichlorobenzene	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg

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[#] ISO 17025 accredited
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* Subcontracted test
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Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS 4	WS 5	WS 6	WS 6A	WS7	WS7	WS7	WS8	WS 10	Method Code	LoD/Units
Depth (m)	0.20	1.00	0.20	0.50	0.2	0.7	1.2	1.8	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	05.06.08	05.06.08	05.06.08	05.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08		
Batch	2	2	2	2	1	1	1	1	4		
Sample Number(s)	**194-195**	**204-205**	**206-207**	**212-213**	**70-71**	**72-73**	**74-75**	**82-83**	**224-227**		
Other Semi-volatiles (cont)											
1,4-Dichlorobenzene	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
2-Nitroaniline	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
2,4-Dinitrotoluene	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
2,6-Dinitrotoluene	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
3-Nitroaniline	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
4-Bromophenylphenylether	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
4-Chloroaniline	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
4-Chlorophenylphenylether	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
4-Nitroaniline	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Azobenzene	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Bis(2-chloroethoxy)methane	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Bis(2-chloroethyl)ether	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Carbazole	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Dibenzofuran	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Hexachlorobenzene	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Hexachlorobutadiene	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Hexachlorocyclopentadiene	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Hexachloroethane	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Isophorone	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
N-nitrosodi-n-propylamine	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg
Nitrobenzene	-	-	-	<1000	-	-	<100	-	-	TM157	<100 ug/kg

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ALcontrol Laboratories Analytical Services
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Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS 4	WS 5	WS 6	WS 6A	WS7	WS7	WS7	WS8	WS 10	Method Code	LoD/Units
Depth (m)	0.20	1.00	0.20	0.50	0.2	0.7	1.2	1.8	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	05.06.08	05.06.08	05.06.08	05.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08		
Batch	2	2	2	2	1	1	1	1	4		
Sample Number(s)	194-195	204-205	206-207	212-213	70-71	72-73	74-75	82-83	224-227		
Volatile Organic Compounds											
Dichlorodifluoromethane	-	-	-	<4	-	-	<4	-	-	TM116[#]	<4 ug/kg
Chloromethane	-	-	-	<7	-	-	<7	-	-	TM116[#]	<7 ug/kg
Vinyl Chloride	-	-	-	<10	-	-	<10	-	-	TM116[#M]	<10 ug/kg
Bromomethane	-	-	-	<13	-	-	<13	-	-	TM116	<13 ug/kg
Chloroethane	-	-	-	<14	-	-	<14	-	-	TM116[#]	<14 ug/kg
Trichlorofluoromethane	-	-	-	<6	-	-	<6	-	-	TM116[#M]	<6 ug/kg
trans-1-2-Dichloroethene	-	-	-	<11	-	-	<11	-	-	TM116[#]	<11 ug/kg
Dichloromethane	-	-	-	<10	-	-	<10	-	-	TM116[#]	<10 ug/kg
Carbon Disulphide	-	-	-	<7	-	-	<7	-	-	TM116[#M]	<7 ug/kg
1.1-Dichloroethene	-	-	-	<10	-	-	<10	-	-	TM116[#M]	<10 ug/kg
1.1-Dichloroethane	-	-	-	<8	-	-	<8	-	-	TM116[#M]	<8 ug/kg
Methyl Tertiary Butyl Ether	-	-	-	<11	-	-	<11	-	-	TM116	<11 ug/kg
cis-1-2-Dichloroethene	-	-	-	<5	-	-	<5	-	-	TM116[#M]	<5 ug/kg
Bromochloromethane	-	-	-	<14	-	-	<14	-	-	TM116[#]	<14 ug/kg
Chloroform	-	-	-	<8	-	-	<8	-	-	TM116[#M]	<8 ug/kg
2.2-Dichloropropane	-	-	-	<12	-	-	<12	-	-	TM116	<12 ug/kg
1.2-Dichloroethane	-	-	-	<5	-	-	<5	-	-	TM116[#]	<5 ug/kg
1.1.1-Trichloroethane	-	-	-	<7	-	-	<7	-	-	TM116[#M]	<7 ug/kg
1.1-Dichloropropene	-	-	-	<11	-	-	<11	-	-	TM116[#M]	<11 ug/kg
Benzene	-	-	-	<9	-	-	<9	-	-	TM116[#M]	<9 ug/kg
Carbontetrachloride	-	-	-	<14	-	-	<14	-	-	TM116[#M]	<14 ug/kg
Dibromomethane	-	-	-	<9	-	-	<9	-	-	TM116[#]	<9 ug/kg
1.2-Dichloropropane	-	-	-	<12	-	-	<12	-	-	TM116[#M]	<12 ug/kg
Bromodichloromethane	-	-	-	<7	-	-	<7	-	-	TM116[#M]	<7 ug/kg
Trichloroethene	-	-	-	<9	-	-	<9	-	-	TM116[#M]	<9 ug/kg
cis-1-3-Dichloropropene	-	-	-	<14	-	-	<14	-	-	TM116[#M]	<14 ug/kg
trans-1-3-Dichloropropene	-	-	-	<14	-	-	<14	-	-	TM116[#M]	<14 ug/kg
1.1.2-Trichloroethane	-	-	-	<10	-	-	<10	-	-	TM116[#]	<10 ug/kg
Toluene	-	-	-	<5	-	-	9	-	-	TM116[#M]	<5 ug/kg
1.3-Dichloropropane	-	-	-	<7	-	-	<7	-	-	TM116[#]	<7 ug/kg

All results expressed on a dry weight basis.

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Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS 4	WS 5	WS 6	WS 6A	WS7	WS7	WS7	WS8	WS 10	Method Code	LoD/Units
Depth (m)	0.20	1.00	0.20	0.50	0.2	0.7	1.2	1.8	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	05.06.08	05.06.08	05.06.08	05.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08		
Batch	2	2	2	2	1	1	1	1	4		
Sample Number(s)	**194-195**	**204-205**	**206-207**	**212-213**	**70-71**	**72-73**	**74-75**	**82-83**	**224-227**		
Volatile Organic Compounds (cont)											
Dibromochloromethane	-	-	-	<13	-	-	<13	-	-	TM116[#]	<13 ug/kg
1.2-Dibromoethane	-	-	-	<12	-	-	<12	-	-	TM116[#]	<12 ug/kg
Tetrachloroethene	-	-	-	<5	-	-	7	-	-	TM116[#]	<5 ug/kg
1.1.1.2-Tetrachloroethane	-	-	-	<10	-	-	<10	-	-	TM116[#M]	<10 ug/kg
Chlorobenzene	-	-	-	<5	-	-	<5	-	-	TM116[#M]	<5 ug/kg
Ethylbenzene	-	-	-	<4	-	-	<4	-	-	TM116[#]	<4 ug/kg
p/m-Xylene	-	-	-	<14	-	-	<14	-	-	TM116[#]	<14 ug/kg
Bromoform	-	-	-	<10	-	-	<10	-	-	TM116[#]	<10 ug/kg
Styrene	-	-	-	<10	-	-	<10	-	-	TM116[#]	<10 ug/kg
1.1.2.2-Tetrachloroethane	-	-	-	<10	-	-	<10	-	-	TM116[#]	<10 ug/kg
o-Xylene	-	-	-	<10	-	-	<10	-	-	TM116[#]	<10 ug/kg
1.2.3-Trichloropropane	-	-	-	<17	-	-	<17	-	-	TM116[#]	<17 ug/kg
Isopropylbenzene	-	-	-	<5	-	-	<5	-	-	TM116[#]	<5 ug/kg
Bromobenzene	-	-	-	<10	-	-	<10	-	-	TM116[#M]	<10 ug/kg
2-Chlorotoluene	-	-	-	<9	-	-	<9	-	-	TM116[#]	<9 ug/kg
Propylbenzene	-	-	-	<11	-	-	<11	-	-	TM116[#]	<11 ug/kg
4-Chlorotoluene	-	-	-	<12	-	-	<12	-	-	TM116[#]	<12 ug/kg
1.2.4-Trimethylbenzene	-	-	-	<9	-	-	<9	-	-	TM116[#]	<9 ug/kg
4-Isopropyltoluene	-	-	-	<11	-	-	<11	-	-	TM116[#]	<11 ug/kg
1.3.5-Trimethylbenzene	-	-	-	<8	-	-	<8	-	-	TM116[#]	<8 ug/kg
1.2-Dichlorobenzene	-	-	-	<12	-	-	<12	-	-	TM116[#M]	<12 ug/kg
1.4-Dichlorobenzene	-	-	-	<5	-	-	<5	-	-	TM116[#M]	<5 ug/kg
sec-Butylbenzene	-	-	-	<10	-	-	<10	-	-	TM116[#]	<10 ug/kg
tert-Butylbenzene	-	-	-	<12	-	-	<12	-	-	TM116[#]	<12 ug/kg
1.3-Dichlorobenzene	-	-	-	<6	-	-	<6	-	-	TM116[#]	<6 ug/kg
n-Butylbenzene	-	-	-	<10	-	-	<10	-	-	TM116[#]	<10 ug/kg
1.2-Dibromo-3-chloropropane	-	-	-	<14	-	-	<14	-	-	TM116[#]	<14 ug/kg
1.2.4-Trichlorobenzene	-	-	-	<6	-	-	<6	-	-	TM116[#]	<6 ug/kg
Naphthalene	-	-	-	<13	-	-	<13	-	-	TM116[#]	<13 ug/kg
1.2.3-Trichlorobenzene	-	-	-	<11	-	-	<11	-	-	TM116[#]	<11 ug/kg

All results expressed on a dry weight basis.

Date 06.08.2008

Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

ISO 17025 accredited
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* Subcontracted test
» Shown on prev. report

Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS 4	WS 5	WS 6	WS 6A	WS7	WS7	WS7	WS8	WS 10	Method Code	LoD/Units
Depth (m)	0.20	1.00	0.20	0.50	0.2	0.7	1.2	1.8	0.50		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	05.06.08	05.06.08	05.06.08	05.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08		
Batch	2	2	2	2	1	1	1	1	4		
Sample Number(s)	**194-195**	**204-205**	**206-207**	**212-213**	**70-71**	**72-73**	**74-75**	**82-83**	**224-227**		
Volatile Organic Compounds (cont)											
Hexachlorobutadiene	-	-	-	<12	-	-	<12	-	-	TM116#	<12 ug/kg

All results expressed on a dry weight basis.

Date 06.08.2008

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ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
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Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS11A	WS12	WS13	WS13	WS15	WS 16	WS16A	WS17	WS18	Method Code	LoD/Units
Depth (m)	0.50	0.50	0.20	1.0	0.2	0.50	0.2	0.2	0.3-1.0		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	04.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08	04.06.08	04.06.08	04.06.08		
Batch	1	1	1	1	1	4	1	1	1		
Sample Number(s)	**93-94**	**98-99**	**103-104**	**107-108**	**115-116**	**228-231**	**120-121**	**124-125**	**130-131**		
Total Sulphate	140	190	820	150	640	1400	350	760	5300	TM129[#M]	<100 mg/kg
Boron Water Soluble	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	19	TM129[#M]	<3.5 mg/kg
Arsenic	3	5	27	<3	5	49	8	6	82	TM129[#M]	<3.0 mg/kg
Cadmium	<0.2	0.5	0.7	<0.2	0.2	<0.2	0.2	0.3	1.6	TM129	<0.2 mg/kg
Chromium	23	22	22	24	15	50	16	19	51	TM129[#M]	<4.5 mg/kg
Copper	22	19	160	22	20	200	26	25	440	TM129[#M]	<6 mg/kg
Lead	11	16	220	13	45	270	45	44	360	TM129[#M]	<2 mg/kg
Mercury	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.4	TM129[#M]	<0.4 mg/kg
Nickel	33	23	55	35	13	56	16	17	150	TM129[#M]	<0.9 mg/kg
Selenium	<3	<3	<3	<3	<3	<3	<3	<3	<3	TM129[#M]	<3 mg/kg
Zinc	62	110	210	67	55	350	73	65	700	TM129[#M]	<2.5 mg/kg
ANC at pH4	-	-	-	-	-	-	-	-	-	TM182[#]	<0.03 mol/kg
ANC at pH6	-	-	-	-	-	-	-	-	-	TM182[#]	<0.03 mol/kg
Water Soluble Sulphate as SO4 2:1 Extract	-	-	-	-	-	-	-	-	-	TM098[#M]	<0.003 g/l
Easily Liberated Sulphide	<15	<15	34	<15	<15	<15	<15	<15	<15	TM180[#]	<15 mg/kg
Hexavalent Chromium	<0.3	<3.0	<3.0	<0.3	<6.0	<3.0	<3.0	<6.0	<3.0	TM151[#]	<0.3 mg/kg
Total Organic Carbon	-	0.9	-	-	-	12	-	-	-	TM132[#M]	<0.2 %
Phenols Monohydric	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	TM062[#M]	<0.15 mg/kg
Thiocyanate	<1	<1	<1	<1	1	1	<1	<1	<1	TM153[#M]	<1 mg/kg
Total Cyanide	<1	<1	2	<1	<1	1	<1	<1	<1	TM153[#M]	<1 mg/kg
Free Cyanide	<1	<1	<1	<1	<1	<1	<1	<1	<1	TM153	<1 mg/kg
Asbestos Presence Screen	No Fibres Detected	-	No Fibres Detected	-	No Fibres Detected	No Fibres Detected	-	-	-	TM001	NONE
Loss on Ignition	-	-	-	-	-	-	-	-	-	TM018[#M]	<0.3 %
pH Value	7.79	7.27	7.78	7.31	5.75	6.26	7.48	5.91	6.46	TM133[#M]	<1.00 pH Units
Total Sulphur	0.02	0.03	0.30	0.03	0.03	0.17	0.05	0.05	0.46	TM068[#]	<0.01 %

All results expressed on a dry weight basis.

Date 06.08.2008

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ALcontrol Laboratories Analytical Services
Table Of Results

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» Shown on prev. report

Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS11A	WS12	WS13	WS13	WS15	WS 16	WS16A	WS17	WS18	Method Code	LoD/Units
Depth (m)	0.50	0.50	0.20	1.0	0.2	0.50	0.2	0.2	0.3-1.0		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	04.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08	04.06.08	04.06.08	04.06.08		
Batch	1	1	1	1	1	4	1	1	1		
Sample Number(s)	**93-94**	**98-99**	**103-104**	**107-108**	**115-116**	**228-231**	**120-121**	**124-125**	**130-131**		
GRO (C4-C12)	<10	<10	-	-	-	-	<10	-	61	TM089	<10 ug/kg
MTBE	<10	<10	-	-	-	-	<10	-	<10	TM089#	<10 ug/kg
Benzene	<10	<10	-	-	-	-	<10	-	<10	TM089#M	<10 ug/kg
Toluene	<10	<10	-	-	-	-	<10	-	23	TM089#M	<10 ug/kg
Ethyl benzene	<10	<10	-	-	-	-	<10	-	<10	TM089#M	<10 ug/kg
m & p Xylene	<10	<10	-	-	-	-	<10	-	<10	TM089#M	<10 ug/kg
o Xylene	<10	<10	-	-	-	-	<10	-	<10	TM089#M	<10 ug/kg
Aliphatics C5-C6	<10	<10	-	-	-	-	<10	-	<10	TM089	<10 ug/kg
Aliphatics >C6-C8	<10	<10	-	-	-	-	<10	-	<10	TM089	<10 ug/kg
Aliphatics >C8-C10	<10	<10	-	-	-	-	<10	-	15	TM089	<10 ug/kg
Aliphatics >C10-C12	<10	<10	-	-	-	-	<10	-	<10	TM089	<10 ug/kg
Aliphatics >C12-C16	4400	<100	-	-	-	-	<100	-	14000	TM173#	<100 ug/kg
Aliphatics >C16-C21	6000	<100	-	-	-	-	<100	-	56000	TM173#	<100 ug/kg
Aliphatics >C21-C35	9900	<100	-	-	-	-	4800	-	410000	TM173#	<100 ug/kg
Total Aliphatics C5-C35	20000	<100	-	-	-	-	4800	-	480000	TM61/89	<100 ug/kg
Aromatics C6-C7	<10	<10	-	-	-	-	<10	-	<10	TM089	<10 ug/kg
Aromatics >C7-C8	<10	<10	-	-	-	-	<10	-	23	TM089	<10 ug/kg
Aromatics >EC8-EC10	<10	<10	-	-	-	-	<10	-	23	TM089	<10 ug/kg
Aromatics >EC10-EC12	<10	<10	-	-	-	-	<10	-	<10	TM089	<10 ug/kg
Aromatics >EC12-EC16	<100	<100	-	-	-	-	3500	-	5900	TM173#	<100 ug/kg
Aromatics >EC16-EC21	<100	<100	-	-	-	-	9100	-	11000	TM173#	<100 ug/kg
Aromatics >EC21-EC35	10000	15000	-	-	-	-	59000	-	130000	TM173#	<100 ug/kg
Total Aromatics C6-C35	10000	15000	-	-	-	-	72000	-	150000	TM61/89	<100 ug/kg
TPH (Aliphatics and Aromatics C5-C35)	31000	15000	-	-	-	-	77000	-	630000	TM61/89	<100 ug/kg

All results expressed on a dry weight basis.

Date 06.08.2008

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Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
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* Subcontracted test
» Shown on prev. report

Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS11A	WS12	WS13	WS13	WS15	WS 16	WS16A	WS17	WS18	Method Code	LoD/Units
Depth (m)	0.50	0.50	0.20	1.0	0.2	0.50	0.2	0.2	0.3-1.0		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	04.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08	04.06.08	04.06.08	04.06.08		
Batch	1	1	1	1	1	4	1	1	1		
Sample Number(s)	**93-94**	**98-99**	**103-104**	**107-108**	**115-116**	**228-231**	**120-121**	**124-125**	**130-131**		
PAH by GCMS											
Naphthalene	15	17	2800	18	21	410	92	27	1100	TM074[#M]	<10 ug/kg
Acenaphthylene	<5	<5	140	<5	11	23	25	13	14	TM074[#M]	<5 ug/kg
Acenaphthene	<14	<14	420	<14	17	42	58	16	68	TM074[#M]	<14 ug/kg
Fluorene	<12	<12	240	<12	<12	44	51	<12	64	TM074[#M]	<12 ug/kg
Phenanthrene	51	110	4100	64	170	800	780	160	1000	TM074[#M]	<21 ug/kg
Anthracene	<9	23	890	<9	40	130	180	37	160	TM074[#M]	<9 ug/kg
Fluoranthene	42	130	5200	42	370	1100	1100	320	880	TM074[#M]	<25 ug/kg
Pyrene	37	120	4700	41	330	950	980	280	710	TM074[#M]	<22 ug/kg
Benz(a)anthracene	38	83	2600	37	200	660	550	190	460	TM074[#M]	<12 ug/kg
Chrysene	41	88	3000	54	220	740	600	200	630	TM074[#M]	<10 ug/kg
Benzo(b)fluoranthene	52	91	3500	53	270	980	720	240	740	TM074[#M]	<16 ug/kg
Benzo(k)fluoranthene	<25	44	1500	27	120	290	330	120	390	TM074[#M]	<25 ug/kg
Benzo(a)pyrene	22	66	2400	21	220	480	510	180	350	TM074[#M]	<12 ug/kg
Indeno(123cd)pyrene	14	37	1500	14	140	250	280	110	200	TM074[#M]	<11 ug/kg
Dibenzo(ah)anthracene	<8	13	520	<8	41	93	99	27	99	TM074[#M]	<8 ug/kg
Benzo(ghi)perylene	23	56	2000	33	170	390	380	140	310	TM074[#M]	<10 ug/kg
PAH 16 Total	340	880	36000	400	2300	7400	6700	2000	7200	TM074[#M]	<25 ug/kg
PCB 7 Congeners											
PCB congener 28	-	-	-	-	-	-	-	-	-	TM168	<3 ug/kg
PCB congener 52	-	-	-	-	-	-	-	-	-	TM168	<3 ug/kg
PCB congener 101	-	-	-	-	-	-	-	-	-	TM168	<3 ug/kg
PCB congener 118	-	-	-	-	-	-	-	-	-	TM168	<3 ug/kg
PCB congener 153	-	-	-	-	-	-	-	-	-	TM168	<3 ug/kg
PCB congener 138	-	-	-	-	-	-	-	-	-	TM168	<3 ug/kg
PCB congener 180	-	-	-	-	-	-	-	-	-	TM168	<3 ug/kg
Total of 7 Congener PCBs	-	-	-	-	-	-	-	-	-	TM168	<3 ug/kg

All results expressed on a dry weight basis.

Date 06.08.2008

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ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
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* Subcontracted test
» Shown on prev. report

Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS11A	WS12	WS13	WS13	WS15	WS 16	WS16A	WS17	WS18	Method Code	LoD/Units
Depth (m)	0.50	0.50	0.20	1.0	0.2	0.50	0.2	0.2	0.3-1.0		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	04.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08	04.06.08	04.06.08	04.06.08		
Batch	1	1	1	1	1	4	1	1	1		
Sample Number(s)	**93-94**	**98-99**	**103-104**	**107-108**	**115-116**	**228-231**	**120-121**	**124-125**	**130-131**		
SVOC by GCMS											
Phenols											
2-Chlorophenol	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
2-Methylphenol	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
2-Nitrophenol	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
2,4-Dichlorophenol	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
2,4-Dimethylphenol	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
2,4,5-Trichlorophenol	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
2,4,6-Trichlorophenol	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
4-Chloro-3-methylphenol	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
4-Methylphenol	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
4-Nitrophenol	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Pentachlorophenol	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Phenol	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
PAHs											
2-Chloronaphthalene	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
2-Methylnaphthalene	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Phthalates											
Bis(2-ethylhexyl) phthalate	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Butylbenzyl phthalate	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Di-n-butyl phthalate	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Di-n-Octyl phthalate	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Diethyl phthalate	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Dimethyl phthalate	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Other Semi-volatiles											
1,2-Dichlorobenzene	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
1,2,4-Trichlorobenzene	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
1,3-Dichlorobenzene	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg

All results expressed on a dry weight basis.

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ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
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* Subcontracted test
» Shown on prev. report

Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS11A	WS12	WS13	WS13	WS15	WS 16	WS16A	WS17	WS18	Method Code	LoD/Units
Depth (m)	0.50	0.50	0.20	1.0	0.2	0.50	0.2	0.2	0.3-1.0		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	04.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08	04.06.08	04.06.08	04.06.08		
Batch	1	1	1	1	1	4	1	1	1		
Sample Number(s)	**93-94**	**98-99**	**103-104**	**107-108**	**115-116**	**228-231**	**120-121**	**124-125**	**130-131**		
Other Semi-volatiles (cont)											
1,4-Dichlorobenzene	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
2-Nitroaniline	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
2,4-Dinitrotoluene	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
2,6-Dinitrotoluene	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
3-Nitroaniline	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
4-Bromophenylphenylether	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
4-Chloroaniline	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
4-Chlorophenylphenylether	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
4-Nitroaniline	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Azobenzene	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Bis(2-chloroethoxy)methane	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Bis(2-chloroethyl)ether	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Carbazole	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Dibenzofuran	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Hexachlorobenzene	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Hexachlorobutadiene	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Hexachlorocyclopentadiene	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Hexachloroethane	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Isophorone	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
N-nitrosodi-n-propylamine	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg
Nitrobenzene	<100	-	-	-	-	-	-	-	-	TM157	<100 ug/kg

All results expressed on a dry weight basis.

Date 06.08.2008

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Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
[M] MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS11A	WS12	WS13	WS13	WS15	WS 16	WS16A	WS17	WS18	Method Code	LoD/Units
Depth (m)	0.50	0.50	0.20	1.0	0.2	0.50	0.2	0.2	0.3-1.0		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	04.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08	04.06.08	04.06.08	04.06.08		
Batch	1	1	1	1	1	4	1	1	1		
Sample Number(s)	93-94	98-99	103-104	107-108	115-116	228-231	120-121	124-125	130-131		
Volatile Organic Compounds											
Dichlorodifluoromethane	<4	-	-	-	-	-	-	-	-	TM116[#]	<4 ug/kg
Chloromethane	22	-	-	-	-	-	-	-	-	TM116[#]	<7 ug/kg
Vinyl Chloride	<10	-	-	-	-	-	-	-	-	TM116[#M]	<10 ug/kg
Bromomethane	<13	-	-	-	-	-	-	-	-	TM116	<13 ug/kg
Chloroethane	<14	-	-	-	-	-	-	-	-	TM116[#]	<14 ug/kg
Trichlorofluoromethane	<6	-	-	-	-	-	-	-	-	TM116[#M]	<6 ug/kg
trans-1-2-Dichloroethene	<11	-	-	-	-	-	-	-	-	TM116[#]	<11 ug/kg
Dichloromethane	<10	-	-	-	-	-	-	-	-	TM116[#]	<10 ug/kg
Carbon Disulphide	<7	-	-	-	-	-	-	-	-	TM116[#M]	<7 ug/kg
1.1-Dichloroethene	<10	-	-	-	-	-	-	-	-	TM116[#M]	<10 ug/kg
1.1-Dichloroethane	<8	-	-	-	-	-	-	-	-	TM116[#M]	<8 ug/kg
Methyl Tertiary Butyl Ether	<11	-	-	-	-	-	-	-	-	TM116	<11 ug/kg
cis-1-2-Dichloroethene	<5	-	-	-	-	-	-	-	-	TM116[#M]	<5 ug/kg
Bromochloromethane	<14	-	-	-	-	-	-	-	-	TM116[#]	<14 ug/kg
Chloroform	<8	-	-	-	-	-	-	-	-	TM116[#M]	<8 ug/kg
2.2-Dichloropropane	<12	-	-	-	-	-	-	-	-	TM116	<12 ug/kg
1.2-Dichloroethane	<5	-	-	-	-	-	-	-	-	TM116[#]	<5 ug/kg
1.1.1-Trichloroethane	<7	-	-	-	-	-	-	-	-	TM116[#M]	<7 ug/kg
1.1-Dichloropropene	<11	-	-	-	-	-	-	-	-	TM116[#M]	<11 ug/kg
Benzene	<9	-	-	-	-	-	-	-	-	TM116[#M]	<9 ug/kg
Carbontetrachloride	<14	-	-	-	-	-	-	-	-	TM116[#M]	<14 ug/kg
Dibromomethane	<9	-	-	-	-	-	-	-	-	TM116[#]	<9 ug/kg
1.2-Dichloropropane	<12	-	-	-	-	-	-	-	-	TM116[#M]	<12 ug/kg
Bromodichloromethane	<7	-	-	-	-	-	-	-	-	TM116[#M]	<7 ug/kg
Trichloroethene	<9	-	-	-	-	-	-	-	-	TM116[#M]	<9 ug/kg
cis-1-3-Dichloropropene	<14	-	-	-	-	-	-	-	-	TM116[#M]	<14 ug/kg
trans-1-3-Dichloropropene	<14	-	-	-	-	-	-	-	-	TM116[#M]	<14 ug/kg
1.1.2-Trichloroethane	<10	-	-	-	-	-	-	-	-	TM116[#]	<10 ug/kg
Toluene	15	-	-	-	-	-	-	-	-	TM116[#M]	<5 ug/kg
1.3-Dichloropropane	<7	-	-	-	-	-	-	-	-	TM116[#]	<7 ug/kg

All results expressed on a dry weight basis.

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ALcontrol Laboratories Analytical Services
Table Of Results

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Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS11A	WS12	WS13	WS13	WS15	WS 16	WS16A	WS17	WS18	Method Code	LoD/Units
Depth (m)	0.50	0.50	0.20	1.0	0.2	0.50	0.2	0.2	0.3-1.0		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	04.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08	04.06.08	04.06.08	04.06.08		
Batch	1	1	1	1	1	4	1	1	1		
Sample Number(s)	93-94	98-99	103-104	107-108	115-116	228-231	120-121	124-125	130-131		
Volatile Organic Compounds (cont)											
Dibromochloromethane	<13	-	-	-	-	-	-	-	-	TM116[#]	<13 ug/kg
1.2-Dibromoethane	<12	-	-	-	-	-	-	-	-	TM116[#]	<12 ug/kg
Tetrachloroethene	8	-	-	-	-	-	-	-	-	TM116[#]	<5 ug/kg
1.1.1.2-Tetrachloroethane	<10	-	-	-	-	-	-	-	-	TM116[#M]	<10 ug/kg
Chlorobenzene	<5	-	-	-	-	-	-	-	-	TM116[#M]	<5 ug/kg
Ethylbenzene	<4	-	-	-	-	-	-	-	-	TM116[#]	<4 ug/kg
p/m-Xylene	<14	-	-	-	-	-	-	-	-	TM116[#]	<14 ug/kg
Bromoform	<10	-	-	-	-	-	-	-	-	TM116[#]	<10 ug/kg
Styrene	<10	-	-	-	-	-	-	-	-	TM116[#]	<10 ug/kg
1.1.2.2-Tetrachloroethane	<10	-	-	-	-	-	-	-	-	TM116[#]	<10 ug/kg
o-Xylene	<10	-	-	-	-	-	-	-	-	TM116[#]	<10 ug/kg
1.2.3-Trichloropropane	<17	-	-	-	-	-	-	-	-	TM116[#]	<17 ug/kg
Isopropylbenzene	<5	-	-	-	-	-	-	-	-	TM116[#]	<5 ug/kg
Bromobenzene	<10	-	-	-	-	-	-	-	-	TM116[#M]	<10 ug/kg
2-Chlorotoluene	<9	-	-	-	-	-	-	-	-	TM116[#]	<9 ug/kg
Propylbenzene	<11	-	-	-	-	-	-	-	-	TM116[#]	<11 ug/kg
4-Chlorotoluene	<12	-	-	-	-	-	-	-	-	TM116[#]	<12 ug/kg
1.2.4-Trimethylbenzene	<9	-	-	-	-	-	-	-	-	TM116[#]	<9 ug/kg
4-Isopropyltoluene	<11	-	-	-	-	-	-	-	-	TM116[#]	<11 ug/kg
1.3.5-Trimethylbenzene	<8	-	-	-	-	-	-	-	-	TM116[#]	<8 ug/kg
1.2-Dichlorobenzene	<12	-	-	-	-	-	-	-	-	TM116[#M]	<12 ug/kg
1.4-Dichlorobenzene	<5	-	-	-	-	-	-	-	-	TM116[#M]	<5 ug/kg
sec-Butylbenzene	<10	-	-	-	-	-	-	-	-	TM116[#]	<10 ug/kg
tert-Butylbenzene	<12	-	-	-	-	-	-	-	-	TM116[#]	<12 ug/kg
1.3-Dichlorobenzene	<6	-	-	-	-	-	-	-	-	TM116[#]	<6 ug/kg
n-Butylbenzene	<10	-	-	-	-	-	-	-	-	TM116[#]	<10 ug/kg
1.2-Dibromo-3-chloropropane	<14	-	-	-	-	-	-	-	-	TM116[#]	<14 ug/kg
1.2.4-Trichlorobenzene	<6	-	-	-	-	-	-	-	-	TM116[#]	<6 ug/kg
Naphthalene	<13	-	-	-	-	-	-	-	-	TM116[#]	<13 ug/kg
1.2.3-Trichlorobenzene	<11	-	-	-	-	-	-	-	-	TM116[#]	<11 ug/kg

All results expressed on a dry weight basis.

Date 06.08.2008

Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
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Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS11A	WS12	WS13	WS13	WS15	WS 16	WS16A	WS17	WS18	Method Code	LoD/Units
Depth (m)	0.50	0.50	0.20	1.0	0.2	0.50	0.2	0.2	0.3-1.0		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date											
Sample Received Date	04.06.08	04.06.08	04.06.08	04.06.08	04.06.08	30.06.08	04.06.08	04.06.08	04.06.08		
Batch	1	1	1	1	1	4	1	1	1		
Sample Number(s)	**93-94**	**98-99**	**103-104**	**107-108**	**115-116**	**228-231**	**120-121**	**124-125**	**130-131**		
Volatile Organic Compounds (cont)											
Hexachlorobutadiene	<12	-	-	-	-	-	-	-	-	TM116[#]	<12 ug/kg

All results expressed on a dry weight basis.

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[#] ISO 17025 accredited
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Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS19	WS19	WS 19							Method Code	LoD/Units
Depth (m)	0.2	0.5	1.20-1.60								
Sample Type	SOLID	SOLID	SOLID								
Sampled Date											
Sample Received Date	04.06.08	04.06.08	30.06.08								
Batch	1	1	4								
Sample Number(s)	**134-135**	**136-137**	**232**								
Total Sulphate	-	220	-							TM129[#M]	<100 mg/kg
Boron Water Soluble	-	<3.5	-							TM129[#M]	<3.5 mg/kg
Arsenic	-	3	-							TM129[#M]	<3.0 mg/kg
Cadmium	-	<0.2	-							TM129	<0.2 mg/kg
Chromium	-	21	-							TM129[#M]	<4.5 mg/kg
Copper	-	22	-							TM129[#M]	<6 mg/kg
Lead	-	12	-							TM129[#M]	<2 mg/kg
Mercury	-	<0.4	-							TM129[#M]	<0.4 mg/kg
Nickel	-	21	-							TM129[#M]	<0.9 mg/kg
Selenium	-	<3	-							TM129[#M]	<3 mg/kg
Zinc	-	51	-							TM129[#M]	<2.5 mg/kg
ANC at pH4	-	-	-							TM182[#]	<0.03 mol/kg
ANC at pH6	-	-	-							TM182[#]	<0.03 mol/kg
Water Soluble Sulphate as SO4 2:1 Extract	-	-	0.027							TM098[#M]	<0.003 g/l
Easily Liberated Sulphide	-	<15	-							TM180[#]	<15 mg/kg
Hexavalent Chromium	-	<6.0	-							TM151[#]	<0.3 mg/kg
Total Organic Carbon	0.5	-	-							TM132[#M]	<0.2 %
Phenols Monohydric	-	<0.15	-							TM062[#M]	<0.15 mg/kg
Thiocyanate	-	<1	-							TM153[#M]	<1 mg/kg
Total Cyanide	-	<1	-							TM153[#M]	<1 mg/kg
Free Cyanide	-	<1	-							TM153	<1 mg/kg
Asbestos Presence Screen	No Fibres Detected	-	-							TM001	NONE
Loss on Ignition	-	-	-							TM018[#M]	<0.3 %
pH Value	-	5.76	5.34							TM133[#M]	<1.00 pH Units
Total Sulphur	-	0.01	-							TM068[#]	<0.01 %

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ALcontrol Laboratories Analytical Services
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* Subcontracted test
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Job Number: 08/09998/02/01 **Matrix:** SOLID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	WS19	WS19	WS 19							Method Code	LoD/Units
Depth (m)	0.2	0.5	1.20-1.60								
Sample Type	SOLID	SOLID	SOLID								
Sampled Date											
Sample Received Date	04.06.08	04.06.08	30.06.08								
Batch	1	1	4								
Sample Number(s)	**134-135**	**136-137**	**232**								
PAH by GCMS											
Naphthalene	-	<10	-							TM074[#M]	<10 ug/kg
Acenaphthylene	-	<5	-							TM074[#M]	<5 ug/kg
Acenaphthene	-	<14	-							TM074[#M]	<14 ug/kg
Fluorene	-	<12	-							TM074[#M]	<12 ug/kg
Phenanthrene	-	24	-							TM074[#M]	<21 ug/kg
Anthracene	-	<9	-							TM074[#M]	<9 ug/kg
Fluoranthene	-	<25	-							TM074[#M]	<25 ug/kg
Pyrene	-	<22	-							TM074[#M]	<22 ug/kg
Benz(a)anthracene	-	22	-							TM074[#M]	<12 ug/kg
Chrysene	-	<10	-							TM074[#M]	<10 ug/kg
Benzo(b)fluoranthene	-	<16	-							TM074[#M]	<16 ug/kg
Benzo(k)fluoranthene	-	<25	-							TM074[#M]	<25 ug/kg
Benzo(a)pyrene	-	<12	-							TM074[#M]	<12 ug/kg
Indeno(123cd)pyrene	-	<11	-							TM074[#M]	<11 ug/kg
Dibenzo(ah)anthracene	-	<8	-							TM074[#M]	<8 ug/kg
Benzo(ghi)perylene	-	<10	-							TM074[#M]	<10 ug/kg
PAH 16 Total	-	46	-							TM074[#M]	<25 ug/kg

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ALcontrol Laboratories Analytical Services
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Job Number: 08/09998/02/01 **Matrix:** LIQUID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	BH2	WS1	WS4	WS16	WS19					Method Code	LoD/Units
Depth (m)											
Sample Type	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID						
Sampled Date	17.06.08	17.06.08	17.06.08	17.06.08	17.06.08						
Sample Received Date	19.06.08	19.06.08	19.06.08	19.06.08	19.06.08						
Batch	3	3	3	3	3						
Sample Number(s)	**214-215**	**216-217**	**218-219**	**220-221**	**222-223**						
Arsenic Dissolved (ICP-MS)	-	-	<0.75	2.4	1.2					TM152[#]	<0.75 ug/l
Boron Dissolved (ICP-MS)	-	-	<20	<20	<20					TM152[#]	<20 ug/l
Cadmium Dissolved (ICP-MS)	-	-	0.39	0.25	1.5					TM152[#]	<0.22 ug/l
Chromium Dissolved (ICP-MS)	-	-	3	8	5					TM152[#]	<1 ug/l
Copper Dissolved (ICP-MS)	-	-	<1.6	4.3	5.7					TM152[#]	<1.6 ug/l
Lead Dissolved (ICP-MS)	-	-	0.9	<0.4	1.7					TM152[#]	<0.4 ug/l
Nickel Dissolved (ICP-MS)	-	-	6.2	7.3	3.8					TM152[#]	<1.5 ug/l
Selenium Dissolved (ICP-MS)	-	-	<1	3	<1					TM152[#]	<1 ug/l
Zinc Dissolved (ICP-MS)	-	-	<5	<5	130					TM152[#]	<5 ug/l
Mercury Dissolved (CVAF)	-	-	<0.01	<0.01	<0.01					TM183[#]	<0.01 ug/l
Potassium Dissolved	3.0	0.9	3.3	1.5	1.2					TM083	<0.2 mg/l
Sodium Dissolved	27	8.1	17	17	11					TM083	<0.2 mg/l
Sulphate (soluble)	-	-	40	15	62					TM098[#]	<3 mg/l
Chloride	17	56	11	28	18					TM097[#]	<1 mg/l
Sulphide	-	-	<0.5	<0.5	<0.5					TM101	<0.5 mg/l
Ammoniacal Nitrogen as N	0.5	13	<0.2	1.5	<0.2					TM099[#]	<0.2 mg/l
Hexavalent Chromium	-	-	0.03	<0.03	<0.03					TM151[#]	<0.03 mg/l
Phenols Monohydric	-	-	<0.35	<0.35	<0.35					TM062[#]	<0.35 mg/l
Thiocyanate	-	-	<0.05	<0.05	<0.05					TM153[#]	<0.05 mg/l
Total Cyanide	-	-	<0.05	<0.05	<0.05					TM153[#]	<0.05 mg/l
Free Cyanide	-	-	<0.05	<0.05	<0.05					TM153[#]	<0.05 mg/l
Free Sulphur	-	-	<0.05	<0.05	<0.05					TM136[#]	<0.05 mg/l
pH Value	-	-	8.43	8.16	8.22					TM133[#]	<1.00 pH Units

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Job Number: 08/09998/02/01 **Matrix:** LIQUID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	BH2	WS1	WS4	WS16	WS19					Method Code	LoD/Units
Depth (m)											
Sample Type	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID						
Sampled Date	17.06.08	17.06.08	17.06.08	17.06.08	17.06.08						
Sample Received Date	19.06.08	19.06.08	19.06.08	19.06.08	19.06.08						
Batch	3	3	3	3	3						
Sample Number(s)	**214-215**	**216-217**	**218-219**	**220-221**	**222-223**						
GRO (C4-C12)	-	-	<10	<10	<10					TM089[#]	<10 ug/l
MTBE	-	-	<10	<10	<10					TM089[#]	<10 ug/l
Benzene	-	-	<10	<10	<10					TM089[#]	<10 ug/l
Toluene	-	-	<10	<10	<10					TM089[#]	<10 ug/l
Ethyl benzene	-	-	<10	<10	<10					TM089[#]	<10 ug/l
m & p Xylene	-	-	<10	<10	<10					TM089[#]	<10 ug/l
o Xylene	-	-	<10	<10	<10					TM089[#]	<10 ug/l
Aliphatics C5-C6	-	-	<10	<10	<10					TM089	<10 ug/l
Aliphatics >C6-C8	-	-	<10	<10	<10					TM089	<10 ug/l
Aliphatics >C8-C10	-	-	<10	<10	<10					TM089	<10 ug/l
Aliphatics >C10-C12	-	-	<10	<10	<10					TM089	<10 ug/l
Aliphatics >C12-C16 Aqueous	-	-	<10	<10	<10					TM174	<10 ug/l
Aliphatics >C16-C21 Aqueous	-	-	<10	<10	<10					TM174	<10 ug/l
Aliphatics >C21-C35 Aqueous	-	-	<10	<10	<10					TM174	<10 ug/l
Total Aliphatics C5-C35 Aqueous	-	-	<10	<10	<10					TM61/89	<10 ug/l
Aromatics C6-C7	-	-	<10	<10	<10					TM089[#]	<10 ug/l
Aromatics >C7-C8	-	-	<10	<10	<10					TM089[#]	<10 ug/l
Aromatics >EC8-EC10	-	-	<10	<10	<10					TM089	<10 ug/l
Aromatics >EC10-EC12	-	-	<10	<10	<10					TM089	<10 ug/l
Aromatics >EC12-EC16 Aqueous	-	-	<10	<10	<10					TM174	<10 ug/l
Aromatics >EC16-EC21 Aqueous	-	-	<10	<10	<10					TM174	<10 ug/l
Aromatics >EC21-EC35 Aqueous	-	-	<10	<10	<10					TM174	<10 ug/l
Total Aromatics C6-C35 Aqueous	-	-	<10	<10	<10					TM61/89	<10 ug/l
TPH (Aliphatics and Aromatics C5-C35) Aqueous	-	-	<10	<10	<10					TM61/89	<10 ug/l

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[#] ISO 17025 accredited
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Job Number: 08/09998/02/01 **Matrix:** LIQUID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	BH2	WS1	WS4	WS16	WS19					Method Code	LoD/Units
Depth (m)											
Sample Type	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID						
Sampled Date	17.06.08	17.06.08	17.06.08	17.06.08	17.06.08						
Sample Received Date	19.06.08	19.06.08	19.06.08	19.06.08	19.06.08						
Batch	3	3	3	3	3						
Sample Number(s)	**214-215**	**216-217**	**218-219**	**220-221**	**222-223**						
PAH by GCMS											
Naphthalene Aqueous	-	-	<100	<100	<100					TM178	<100 ng/l
Acenaphthylene Aqueous	-	-	<11	<11	<11					TM178	<11 ng/l
Acenaphthene Aqueous	-	-	<15	23	<15					TM178	<15 ng/l
Fluorene Aqueous	-	-	<14	14	<14					TM178	<14 ng/l
Phenanthrene Aqueous	-	-	<22	58	<22					TM178	<22 ng/l
Anthracene Aqueous	-	-	<15	<15	<15					TM178	<15 ng/l
Fluoranthene Aqueous	-	-	<17	24	<17					TM178	<17 ng/l
Pyrene Aqueous	-	-	<15	20	<15					TM178	<15 ng/l
Benz(a)anthracene Aqueous	-	-	<17	<17	<17					TM178	<17 ng/l
Chrysene Aqueous	-	-	<13	<13	<13					TM178	<13 ng/l
Benzo(b)fluoranthene Aqueous	-	-	<23	<23	<23					TM178	<23 ng/l
Benzo(k)fluoranthene Aqueous	-	-	<27	<27	<27					TM178	<27 ng/l
Benzo(a)pyrene Aqueous	-	-	<9	<9	<9					TM178	<9 ng/l
Indeno(123cd)pyrene Aqueous	-	-	<14	<14	<14					TM178	<14 ng/l
Dibenzo(ah)anthracene Aqueous	-	-	<16	<16	<16					TM178	<16 ng/l
Benzo(ghi)perylene Aqueous	-	-	<16	<16	<16					TM178	<16 ng/l
PAH 16 Total Aqueous	-	-	<100	140	<100					TM178	<100 ng/l

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Job Number: 08/09998/02/01 **Matrix:** LIQUID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	BH2	WS1	WS4	WS16	WS19					Method Code	LoD/Units
Depth (m)											
Sample Type	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID						
Sampled Date	17.06.08	17.06.08	17.06.08	17.06.08	17.06.08						
Sample Received Date	19.06.08	19.06.08	19.06.08	19.06.08	19.06.08						
Batch	3	3	3	3	3						
Sample Number(s)	**214-215**	**216-217**	**218-219**	**220-221**	**222-223**						
SVOC by GCMS											
Phenols											
2-Chlorophenol	-	-	<1	<1	<1					TM176	<1 ug/l
2-Methylphenol	-	-	<1	<1	<1					TM176	<1 ug/l
2-Nitrophenol	-	-	<1	<1	<1					TM176	<1 ug/l
2,4-Dichlorophenol	-	-	<1	<1	<1					TM176	<1 ug/l
2,4-Dimethylphenol	-	-	<1	<1	<1					TM176	<1 ug/l
2,4,5-Trichlorophenol	-	-	<1	<1	<1					TM176	<1 ug/l
2,4,6-Trichlorophenol	-	-	<1	<1	<1					TM176	<1 ug/l
4-Chloro-3-methylphenol	-	-	<1	<1	<1					TM176	<1 ug/l
4-Methylphenol	-	-	2	2	1					TM176	<1 ug/l
4-Nitrophenol	-	-	<1	<1	<1					TM176	<1 ug/l
Pentachlorophenol	-	-	<1	<1	<1					TM176	<1 ug/l
Phenol	-	-	<1	<1	<1					TM176	<1 ug/l

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Job Number: 08/09998/02/01 **Matrix:** LIQUID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	BH2	WS1	WS4	WS16	WS19					Method Code	LoD/Units
Depth (m)											
Sample Type	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID						
Sampled Date	17.06.08	17.06.08	17.06.08	17.06.08	17.06.08						
Sample Received Date	19.06.08	19.06.08	19.06.08	19.06.08	19.06.08						
Batch	3	3	3	3	3						
Sample Number(s)	214-215	216-217	218-219	220-221	222-223						
PAHs											
2-Chloronaphthalene	-	-	<1	<1	<1					TM176	<1 ug/l
2-Methylnaphthalene	-	-	<1	<1	<1					TM176	<1 ug/l
Phthalates											
Bis(2-ethylhexyl) phthalate	-	-	<2	<2	<2					TM176	<2 ug/l
Butylbenzyl phthalate	-	-	<1	<1	<1					TM176	<1 ug/l
Di-n-butyl phthalate	-	-	<1	1	<1					TM176	<1 ug/l
Di-n-Octyl phthalate	-	-	<5	<5	<5					TM176	<5 ug/l
Diethyl phthalate	-	-	<1	<1	<1					TM176	<1 ug/l
Dimethyl phthalate	-	-	<1	<1	<1					TM176	<1 ug/l
Other Semi-volatiles											
1,2-Dichlorobenzene	-	-	<1	<1	<1					TM176	<1 ug/l
1,2,4-Trichlorobenzene	-	-	<1	<1	<1					TM176	<1 ug/l
1,3-Dichlorobenzene	-	-	<1	<1	<1					TM176	<1 ug/l
1,4-Dichlorobenzene	-	-	<1	<1	<1					TM176	<1 ug/l
2-Nitroaniline	-	-	<1	<1	<1					TM176	<1 ug/l
2,4-Dinitrotoluene	-	-	<1	<1	<1					TM176	<1 ug/l
2,6-Dinitrotoluene	-	-	<1	<1	<1					TM176	<1 ug/l
3-Nitroaniline	-	-	<1	<1	<1					TM176	<1 ug/l
4-Bromophenylphenylether	-	-	<1	<1	<1					TM176	<1 ug/l
4-Chloroaniline	-	-	<1	<1	<1					TM176	<1 ug/l
4-Chlorophenylphenylether	-	-	<1	<1	<1					TM176	<1 ug/l
4-Nitroaniline	-	-	<1	<1	<1					TM176	<1 ug/l
Azobenzene	-	-	<1	<1	<1					TM176	<1 ug/l
Bis(2-chloroethoxy)methane	-	-	<1	<1	<1					TM176	<1 ug/l
Bis(2-chloroethyl)ether	-	-	<1	<1	<1					TM176	<1 ug/l
Carbazole	-	-	<1	<1	<1					TM176	<1 ug/l
Dibenzofuran	-	-	<1	<1	<1					TM176	<1 ug/l
Hexachlorobenzene	-	-	<1	<1	<1					TM176	<1 ug/l

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Job Number: 08/09998/02/01 **Matrix:** LIQUID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	BH2	WS1	WS4	WS16	WS19					Method Code	LoD/Units
Depth (m)											
Sample Type	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID						
Sampled Date	17.06.08	17.06.08	17.06.08	17.06.08	17.06.08						
Sample Received Date	19.06.08	19.06.08	19.06.08	19.06.08	19.06.08						
Batch	3	3	3	3	3						
Sample Number(s)	**214-215**	**216-217**	**218-219**	**220-221**	**222-223**						
Other Semi-volatiles (cont)											
Hexachlorobutadiene	-	-	<1	<1	<1					TM176	<1 ug/l
Hexachlorocyclopentadiene	-	-	<1	<1	<1					TM176	<1 ug/l
Hexachloroethane	-	-	<1	<1	<1					TM176	<1 ug/l
Isophorone	-	-	<1	<1	<1					TM176	<1 ug/l
N-nitrosodi-n-propylamine	-	-	<1	<1	<1					TM176	<1 ug/l
Nitrobenzene	-	-	<1	<1	<1					TM176	<1 ug/l

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Job Number: 08/09998/02/01 **Matrix:** LIQUID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	BH2	WS1	WS4	WS16	WS19					Method Code	LoD/Units
Depth (m)											
Sample Type	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID						
Sampled Date	17.06.08	17.06.08	17.06.08	17.06.08	17.06.08						
Sample Received Date	19.06.08	19.06.08	19.06.08	19.06.08	19.06.08						
Batch	3	3	3	3	3						
Sample Number(s)	214-215	216-217	218-219	220-221	222-223						
Volatile Organic Compounds											
Dichlorodifluoromethane	-	-	<1	<1	<1					TM208#	<1 ug/l
Chloromethane	-	-	<1	<1	<1					TM208#	<1 ug/l
Vinyl Chloride	-	-	<1	<1	<1					TM208#	<1 ug/l
Bromomethane	-	-	<2	<2	<2					TM208#	<2 ug/l
Chloroethane	-	-	<2	<2	<2					TM208#	<2 ug/l
Trichlorofluoromethane	-	-	<2	<2	<2					TM208#	<2 ug/l
trans-1-2-Dichloroethene	-	-	<2	<2	<2					TM208#	<2 ug/l
Dichloromethane	-	-	<3	<3	<3					TM208#	<3 ug/l
Carbon Disulphide	-	-	<2	<2	<2					TM208#	<2 ug/l
1.1-Dichloroethene	-	-	<1	<1	<1					TM208#	<1 ug/l
1.1-Dichloroethane	-	-	<1	<1	<1					TM208#	<1 ug/l
Methyl Tertiary Butyl Ether	-	-	<2	<2	<2					TM208#	<2 ug/l
cis-1-2-Dichloroethene	-	-	<2	<2	<2					TM208#	<2 ug/l
Bromochloromethane	-	-	<2	<2	<2					TM208#	<2 ug/l
Chloroform	-	-	<2	<2	<2					TM208#	<2 ug/l
2.2-Dichloropropane	-	-	<1	<1	<1					TM208	<1 ug/l
1.2-Dichloroethane	-	-	<4	<4	<4					TM208#	<4 ug/l
1.1.1-Trichloroethane	-	-	<1	<1	<1					TM208#	<1 ug/l
1.1-Dichloropropene	-	-	<1	<1	<1					TM208#	<1 ug/l
Benzene	-	-	<1	<1	<1					TM208#	<1 ug/l
Carbontetrachloride	-	-	<1	<1	<1					TM208#	<1 ug/l
Dibromomethane	-	-	<3	<3	<3					TM208#	<3 ug/l
1.2-Dichloropropane	-	-	<3	<3	<3					TM208#	<3 ug/l
Bromodichloromethane	-	-	<1	<1	<1					TM208#	<1 ug/l
Trichloroethene	-	-	<2	<2	<2					TM208#	<2 ug/l
cis-1-3-Dichloropropene	-	-	<2	<2	<2					TM208#	<2 ug/l
trans-1-3-Dichloropropene	-	-	<3	<3	<3					TM208#	<3 ug/l
1.1.2-Trichloroethane	-	-	<2	<2	<2					TM208#	<2 ug/l
Toluene	-	-	<1	<1	<1					TM208#	<1 ug/l
1.3-Dichloropropane	-	-	<2	<2	<2					TM208#	<2 ug/l

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Job Number: 08/09998/02/01 **Matrix:** LIQUID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	BH2	WS1	WS4	WS16	WS19					Method Code	LoD/Units
Depth (m)											
Sample Type	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID						
Sampled Date	17.06.08	17.06.08	17.06.08	17.06.08	17.06.08						
Sample Received Date	19.06.08	19.06.08	19.06.08	19.06.08	19.06.08						
Batch	3	3	3	3	3						
Sample Number(s)	214-215	216-217	218-219	220-221	222-223						
Volatile Organic Compounds (cont)											
Dibromochloromethane	-	-	<2	<2	<2					TM208#	<2 ug/l
1.2-Dibromoethane	-	-	<2	<2	<2					TM208#	<2 ug/l
Tetrachloroethene	-	-	<2	<2	<2					TM208#	<2 ug/l
1.1.1.2-Tetrachloroethane	-	-	<1	<1	<1					TM208#	<1 ug/l
Chlorobenzene	-	-	<4	<4	<4					TM208#	<4 ug/l
Ethylbenzene	-	-	<2	<2	<2					TM208#	<2 ug/l
p/m-Xylene	-	-	<2	<2	<2					TM208#	<2 ug/l
Bromoform	-	-	<3	<3	<3					TM208#	<3 ug/l
Styrene	-	-	<1	<1	<1					TM208#	<1 ug/l
1.1.2.2-Tetrachloroethane	-	-	<5	<5	<5					TM208#	<5 ug/l
o-Xylene	-	-	<1	<1	<1					TM208#	<1 ug/l
1.2.3-Trichloropropane	-	-	<9	<9	<9					TM208#	<9 ug/l
Isopropylbenzene	-	-	<2	<2	<2					TM208#	<2 ug/l
Bromobenzene	-	-	<1	<1	<1					TM208#	<1 ug/l
2-Chlorotoluene	-	-	<2	<2	<2					TM208#	<2 ug/l
Propylbenzene	-	-	<3	<3	<3					TM208#	<3 ug/l
4-Chlorotoluene	-	-	<2	<2	<2					TM208#	<2 ug/l
1.2.4-Trimethylbenzene	-	-	<1	<1	<1					TM208#	<1 ug/l
4-Isopropyltoluene	-	-	<3	<3	<3					TM208#	<3 ug/l
1.3.5-Trimethylbenzene	-	-	<1	<1	<1					TM208#	<1 ug/l
1.2-Dichlorobenzene	-	-	<3	<3	<3					TM208#	<3 ug/l
1.4-Dichlorobenzene	-	-	<1	<1	<1					TM208#	<1 ug/l
sec-Butylbenzene	-	-	<1	<1	<1					TM208#	<1 ug/l
tert-Butylbenzene	-	-	<2	<2	<2					TM208#	<2 ug/l
1.3-Dichlorobenzene	-	-	<2	<2	<2					TM208#	<2 ug/l
n-Butylbenzene	-	-	<2	<2	<2					TM208#	<2 ug/l
1.2-Dibromo-3-chloropropane	-	-	<10	<10	<10					TM208#	<10 ug/l
1.2.4-Trichlorobenzene	-	-	<2	<2	<2					TM208#	<2 ug/l
Naphthalene	-	-	<4	<4	<4					TM208#	<4 ug/l
1.2.3-Trichlorobenzene	-	-	<3	<3	<3					TM208#	<3 ug/l

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Job Number: 08/09998/02/01 **Matrix:** LIQUID
Client: Geotechnics Ltd **Location:** Co-operative Academy
Client Ref. No.: PN081814 **Client Contact:** Stewart Garnet

Sample Identity	BH2	WS1	WS4	WS16	WS19					Method Code	LoD/Units
Depth (m)											
Sample Type	LIQUID	LIQUID	LIQUID	LIQUID	LIQUID						
Sampled Date	17.06.08	17.06.08	17.06.08	17.06.08	17.06.08						
Sample Received Date	19.06.08	19.06.08	19.06.08	19.06.08	19.06.08						
Batch	3	3	3	3	3						
Sample Number(s)	**214-215**	**216-217**	**218-219**	**220-221**	**222-223**						
Volatile Organic Compounds (cont)											
Hexachlorobutadiene	-	-	<3	<3	<3					TM208[#]	<3 ug/l

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CEN 2:1 ONE STAGE BATCH TEST

WAC ANALYTICAL RESULTS REF:CEN12457-1

Mass Sample taken (kg) =	0.20068	Moisture Content Ratio (%) =	15.05
Mass of dry sample (kg) =	0.175	Dry Matter Content Ratio (%) =	86.92
Particle Size <4mm =	>95%		

Job Number	**200809998**	**Landfill Waste Acceptance Criteria Limits**		
Batch	**2**			
Sample Number(s)	**161-162**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Sampled Date	**-**			
Sample Identity	**BH 3**			
Depth (m)	**0.20**			
Solid Waste Analysis				
Total Organic Carbon (%)	-	-	-	-
Loss on Ignition (%)	-	-	-	-
Sum of BTEX (mg/kg)	-	-	-	-
Sum of 7 PCBs (mg/kg)	-	-	-	-
Mineral Oil (mg/kg)	-	-	-	-
PAH Sum of 17(mg/kg)	-	-	-	-
pH (pH Units)	7.89	-	-	-
ANC to pH 7 (mol/kg)	-	-	-	-
ANC to pH 4 (mol/kg)	-	-	-	-

Eluate Analysis	**Conc^{n} in 2:1 eluate**		**2:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg**		
	C_2		**A_2**				
	mg/l		**mg/kg**				
Arsenic	<0.00075		<0.0015		-	-	-
Barium	-		-		-	-	-
Cadmium	<0.00022		<0.00044		-	-	-
Chromium	<0.001		<0.002		-	-	-
Copper	0.0019		0.0038		-	-	-
Mercury	<0.00001		<0.00002		-	-	-
Molybdenum	-		-		-	-	-
Nickel	<0.0015		<0.003		-	-	-
Lead	0.0004		0.0008		-	-	-
Antimony	-		-		-	-	-
Selenium	<0.001		<0.002		-	-	-
Zinc	<0.005		<0.01		-	-	-
Chloride	-		-		-	-	-
Fluoride	-		-		-	-	-
Sulphate as SO_4	19		38		-	-	-
Total Dissolved Solids	-		-		-	-	-
Phenols Monohydric	<0.35		<0.7		-	-	-
Dissolved Organic Carbon	-		-		-	-	-

Leach Test Information		
Date Prepared	02/07/08	-
pH (pH Units)	6.832	-
Conductivity (µS/cm)	51.3	-
Temperature (^{o}C)	20.7	-
Volume Leachant (Litres)	0.324	-
Volume of Eluate VE1 (Litres)	-	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

ALcontrol Laboratories Analytical Services

CEN 2:1 ONE STAGE BATCH TEST

WAC ANALYTICAL RESULTS REF:CEN12457-1

Mass Sample taken (kg) =	0.25672	Moisture Content Ratio (%) =	46.60
Mass of dry sample (kg) =	0.175	Dry Matter Content Ratio (%) =	68.21
Particle Size <4mm =	>95%		

Job Number	**200809998**	**Landfill Waste Acceptance Criteria Limits**		
Batch	**4**			
Sample Number(s)	**228-231**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Sampled Date	**-**			
Sample Identity	**WS 16**			
Depth (m)	**0.50**			
Solid Waste Analysis				
Total Organic Carbon (%)	12	-	-	-
Loss on Ignition (%)	-	-	-	-
Sum of BTEX (mg/kg)	-	-	-	-
Sum of 7 PCBs (mg/kg)	-	-	-	-
Mineral Oil (mg/kg)	-	-	-	-
PAH Sum of 17(mg/kg)	-	-	-	-
pH (pH Units)	6.26	-	-	-
ANC to pH 7 (mol/kg)	-	-	-	-
ANC to pH 4 (mol/kg)	-	-	-	-

Eluate Analysis	**Conc^{n} in 2:1 eluate**		**2:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg**		
	C_2		**A_2**				
	mg/l		**mg/kg**				
Arsenic	0.0041		0.0083		-	-	-
Barium	-		-		-	-	-
Cadmium	0.00033		0.00066		-	-	-
Chromium	0.002		0.004		-	-	-
Copper	0.012		0.024		-	-	-
Mercury	<0.00001		<0.00002		-	-	-
Molybdenum	-		-		-	-	-
Nickel	0.0071		0.014		-	-	-
Lead	0.0006		0.0012		-	-	-
Antimony	-		-		-	-	-
Selenium	0.004		0.008		-	-	-
Zinc	0.062		0.12		-	-	-
Chloride	-		-		-	-	-
Fluoride	-		-		-	-	-
Sulphate as SO_4	170		340		-	-	-
Total Dissolved Solids	-		-		-	-	-
Phenols Monohydric	<0.35		<0.7		-	-	-
Dissolved Organic Carbon	-		-		-	-	-

Leach Test Information		
Date Prepared	10/07/08	-
pH (pH Units)	7.344	-
Conductivity (µS/cm)	662	-
Temperature (^{o}C)	22.0	-
Volume Leachant (Litres)	0.268	-
Volume of Eluate VE1 (Litres)	-	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

ALcontrol Laboratories Analytical Services

CEN 2:1 ONE STAGE BATCH TEST

WAC ANALYTICAL RESULTS REF:CEN12457-1

Mass Sample taken (kg) =	-	Moisture Content Ratio (%) =	14.35
Mass of dry sample (kg) =	0.175	Dry Matter Content Ratio (%) =	87.45
Particle Size <4mm =	>95%		

Job Number	**200809998**	**Landfill Waste Acceptance Criteria Limits**		
Batch	**1**			
Sample Number(s)	**72-73**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Sampled Date	**-**			
Sample Identity	**WS7**			
Depth (m)	**0.7**			
Solid Waste Analysis				
Total Organic Carbon (%)	-	-	-	-
Loss on Ignition (%)	-	-	-	-
Sum of BTEX (mg/kg)	-	-	-	-
Sum of 7 PCBs (mg/kg)	-	-	-	-
Mineral Oil (mg/kg)	-	-	-	-
PAH Sum of 17(mg/kg)	-	-	-	-
pH (pH Units)	-	-	-	-
ANC to pH 7 (mol/kg)	-	-	-	-
ANC to pH 4 (mol/kg)	-	-	-	-

Eluate Analysis	**Conc^{n} in 2:1 eluate**		**2:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg**		
	C_2		**A_2**				
	mg/l		**mg/kg**				
Arsenic	NDP		-		-	-	-
Barium	-		-		-	-	-
Cadmium	NDP		-		-	-	-
Chromium	NDP		-		-	-	-
Copper	NDP		-		-	-	-
Mercury	NDP		-		-	-	-
Molybdenum	-		-		-	-	-
Nickel	NDP		-		-	-	-
Lead	NDP		-		-	-	-
Antimony	-		-		-	-	-
Selenium	NDP		-		-	-	-
Zinc	NDP		-		-	-	-
Chloride	-		-		-	-	-
Fluoride	-		-		-	-	-
Sulphate as SO_4	NDP		-		-	-	-
Total Dissolved Solids	-		-		-	-	-
Phenols Monohydric	NDP		-		-	-	-
Dissolved Organic Carbon	-		-		-	-	-

Leach Test Information		
Date Prepared	-	-
pH (pH Units)	-	-
Conductivity (µS/cm)	-	-
Temperature (^{o}C)	-	-
Volume Leachant (Litres)	-	-
Volume of Eluate VE1 (Litres)	-	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

ALcontrol Laboratories Analytical Services

CEN 10:1 CUMULATIVE TWO STAGE BATCH TEST

WAC ANALYTICAL RESULTS REF:CEN12457-3

Mass Sample taken (kg) =	0.21161	Moisture Content Ratio (%) =	20.87
Mass of dry sample (kg) =	0.175	Dry Matter Content Ratio (%) =	82.73
Particle Size <4mm =	>95%		

Job Number	**200809998**	**Landfill Waste Acceptance Criteria Limits**		
Batch	**4**			
Sample Number(s)	**224-227**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Sampled Date	**-**			
Sample Identity	**WS 10**			
Depth (m)	**0.50**			
Solid Waste Analysis				
Total Organic Carbon (%)	3.2	3	5	6
Loss on Ignition (%)	4.5	-	-	10
Sum of BTEX (mg/kg)	-	6	-	-
Sum of 7 PCBs (mg/kg)	<0.003	1	-	-
Mineral Oil (mg/kg)	160	500	-	-
PAH Sum of 17(mg/kg)	-	100	-	-
pH (pH Units)	8.01	-	>6	-
ANC to pH 6 (mol/kg)	0.04	-	to be evaluated	to be evaluated
ANC to pH 4 (mol/kg)	0.40	-	to be evaluated	to be evaluated

Eluate Analysis	**Conc^{n} in 2:1 eluate**	**Conc^{n} in 8:1 eluate**	**2:1 conc^{n} leached**	**Cumulative conc^{n} leached**	**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg**		
	C_2	**C_8**	**A_2**	**$A_{2\text{-}10}$**			
	mg/l		**mg/kg**				
Arsenic	<0.00075	0.00089	<0.0015	0.0079	0.5	2	25
Barium	0.051	0.026	0.1	0.29	20	100	300
Cadmium	<0.00022	<0.00022	<0.00044	<0.0022	0.04	1	5
Chromium	0.002	<0.001	<0.002	<0.01	0.5	10	70
Copper	0.0069	0.0049	0.014	0.051	2	50	100
Mercury	<0.00001	<0.00001	<0.00002	<0.0001	0.01	0.2	2
Molybdenum	0.019	0.007	0.04	0.08	0.5	10	30
Nickel	0.0021	<0.0015	0.004	<0.015	0.4	10	40
Lead	0.0013	0.0007	0.003	0.008	0.5	10	50
Antimony	0.0024	<0.00075	0.0048	<0.0075	0.06	0.7	5
Selenium	<0.001	0.001	<0.002	0.01	0.1	0.5	7
Zinc	<0.005	<0.005	<0.01	<0.05	4	50	200
Chloride	2	<1	4	<10	800	15000	25000
Fluoride	1.0	0.9	2	9	10	150	500
Sulphate as SO_4	16	5	32	63	1000	20000	50000
Total Dissolved Solids	130	57	260	660	4000	60000	100000
Phenols Monohydric	0.01	<0.01	<0.02	<0.1	1	-	-
Dissolved Organic Carbon	9	4	18	46	500	800	1000

Leach Test Information		
Date Prepared	11/07/08	13/07/08
pH (pH Units)	7.947	7.74
Conductivity (µS/cm)	221	88.9
Temperature (^{o}C)	21.8	20.5
Volume Leachant (Litres)	0.313	1.4
Volume of Eluate VE1 (Litres)	0.2	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Stated limits are for guidance only and ALcontrol cannot be held responsible for any discrepencies with current legislation

ALcontrol Laboratories Analytical Services

CEN 2:1 ONE STAGE BATCH TEST

WAC ANALYTICAL RESULTS REF:CEN12457-1

Mass Sample taken (kg) =	0.20068	Moisture Content Ratio (%) =	15.05
Mass of dry sample (kg) =	0.175	Dry Matter Content Ratio (%) =	86.92
Particle Size <4mm =	>95%		

Job Number	**200809998**	**Landfill Waste Acceptance Criteria Limits**		
Batch	**2**			
Sample Number(s)	**161-162**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Sampled Date	**-**			
Sample Identity	**BH 3**			
Depth (m)	**0.20**			
Solid Waste Analysis				
Total Organic Carbon (%)	-	-	-	-
Loss on Ignition (%)	-	-	-	-
Sum of BTEX (mg/kg)	-	-	-	-
Sum of 7 PCBs (mg/kg)	-	-	-	-
Mineral Oil (mg/kg)	-	-	-	-
PAH Sum of 17(mg/kg)	-	-	-	-
pH (pH Units)	-	-	-	-
ANC to pH 7 (mol/kg)	-	-	-	-
ANC to pH 4 (mol/kg)	-	-	-	-

Eluate Analysis	**Conc^{n} in 2:1 eluate**		**2:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg**		
	C_2		**A_2**				
	mg/l		**mg/kg**				
Boron Dissolved (1 Step CEN 2:1)	<0.02		<0.04		-	-	-
Sulphide (1 Step CEN 2:1)	<0.50		<1		-	-	-
Hexavalent Chromium (1 Step CEN 2:1)	<0.03		<0.06		-	-	-
Thiocyanate (1 Step CEN 2:1)	<0.05		<0.1		-	-	-
Total Cyanide (1 Step CEN 2:1)	<0.05		<0.1		-	-	-
Free Cyanide (1 Step CEN 2:1)	<0.05		<0.1		-	-	-
Free Sulphur (1 Step CEN 2:1)	<0.05		<0.1		-	-	-
GRO (C4-C12) (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
MTBE (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Benzene (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Toluene (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Ethyl benzene (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
m & p Xylene (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
o Xylene (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aliphatics C5-C6 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aliphatics >C6-C8 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aliphatics >C8-C10 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aliphatics >C10-C12 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-

Leach Test Information		
Date Prepared	02/07/08	-
pH (pH Units)	6.832	-
Conductivity (µS/cm)	51.3	-
Temperature (^{o}C)	20.7	-
Volume Leachant (Litres)	0.324	-
Volume of Eluate VE1 (Litres)	-	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

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ALcontrol Laboratories Analytical Services

CEN 2:1 ONE STAGE BATCH TEST

WAC ANALYTICAL RESULTS REF:CEN12457-1

Mass Sample taken (kg) =	0.20068	Moisture Content Ratio (%) =	15.05
Mass of dry sample (kg) =	0.175	Dry Matter Content Ratio (%) =	86.92
Particle Size <4mm =	>95%		

Job Number	**200809998**	**Landfill Waste Acceptance Criteria Limits**		
Batch	**2**			
Sample Number(s)	**161-162**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Sampled Date	**-**			
Sample Identity	**BH 3**			
Depth (m)	**0.20**			
Solid Waste Analysis				
Total Organic Carbon (%)	-	-	-	-
Loss on Ignition (%)	-	-	-	-
Sum of BTEX (mg/kg)	-	-	-	-
Sum of 7 PCBs (mg/kg)	-	-	-	-
Mineral Oil (mg/kg)	-	-	-	-
PAH Sum of 17(mg/kg)	-	-	-	-
pH (pH Units)	-	-	-	-
ANC to pH 7 (mol/kg)	-	-	-	-
ANC to pH 4 (mol/kg)	-	-	-	-

Eluate Analysis	**Conc^{n} in 2:1 eluate**		**2:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg**		
	C_2		**A_2**				
	mg/l		**mg/kg**				
Aliphatics >C12-C16 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aliphatics >C16-C21 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aliphatics >C21-C35 (1 Step CEN 2:1)	0.24		0.48		-	-	-
Total Aliphatics C5-C35 (1 Step CEN 2:1)	0.24		0.48		-	-	-
Aromatics C6-C7 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aromatics >C7-C8 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aromatics >EC8-EC10 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aromatics >EC10-EC12 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aromatics >EC12-EC16 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aromatics >EC16-EC21 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aromatics >EC21-EC35 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Total Aromatics C6-C35 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
TPH Aliphatics & Aromatics C5-C35 (1 Step CEN 2:1)	0.24		0.48		-	-	-
Naphthalene (1 Step CEN 2:1)	<0.0001		<0.0002		-	-	-
Acenaphthylene (1 Step CEN 2:1)	<0.000011		<0.000022		-	-	-
Acenaphthene (1 Step CEN 2:1)	<0.000015		<0.00003		-	-	-
Fluorene (1 Step CEN 2:1)	<0.000014		<0.000028		-	-	-
Phenanthrene (1 Step CEN 2:1)	<0.000022		<0.000044		-	-	-

Leach Test Information		
Date Prepared	02/07/08	-
pH (pH Units)	6.832	-
Conductivity (µS/cm)	51.3	-
Temperature (^{o}C)	20.7	-
Volume Leachant (Litres)	0.324	-
Volume of Eluate VE1 (Litres)	-	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

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CEN 2:1 ONE STAGE BATCH TEST

WAC ANALYTICAL RESULTS REF:CEN12457-1

Mass Sample taken (kg) =	0.20068	Moisture Content Ratio (%) =	15.05
Mass of dry sample (kg) =	0.175	Dry Matter Content Ratio (%) =	86.92
Particle Size <4mm =	>95%		

Job Number	**200809998**	**Landfill Waste Acceptance Criteria Limits**		
Batch	**2**			
Sample Number(s)	**161-162**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Sampled Date	**-**			
Sample Identity	**BH 3**			
Depth (m)	**0.20**			
Solid Waste Analysis				
Total Organic Carbon (%)	-	-	-	-
Loss on Ignition (%)	-	-	-	-
Sum of BTEX (mg/kg)	-	-	-	-
Sum of 7 PCBs (mg/kg)	-	-	-	-
Mineral Oil (mg/kg)	-	-	-	-
PAH Sum of 17(mg/kg)	-	-	-	-
pH (pH Units)	-	-	-	-
ANC to pH 7 (mol/kg)	-	-	-	-
ANC to pH 4 (mol/kg)	-	-	-	-

Eluate Analysis	**Conc^{n} in 2:1 eluate**		**2:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg**		
	C_2		**A_2**				
	mg/l		**mg/kg**				
Anthracene (1 Step CEN 2:1)	<0.000015		<0.00003		-	-	-
Fluoranthene (1 Step CEN 2:1)	0.000017		0.000034		-	-	-
Pyrene (1 Step CEN 2:1)	<0.000015		<0.00003		-	-	-
Benz(a)anthracene (1 Step CEN 2:1)	<0.000017		<0.000034		-	-	-
Chrysene (1 Step CEN 2:1)	<0.000013		<0.000026		-	-	-
Benzo(b)fluoranthene (1 Step CEN 2:1)	<0.000023		<0.000046		-	-	-
Benzo(k)fluoranthene (1 Step CEN 2:1)	<0.000027		<0.000054		-	-	-
Benzo(a)pyrene (1 Step CEN 2:1)	<0.000009		<0.000018		-	-	-
Indeno(123cd)pyrene (1 Step CEN 2:1)	<0.000014		<0.000028		-	-	-
Dibenzo(ah)anthracene (1 Step CEN 2:1)	<0.000016		<0.000032		-	-	-
Benzo(ghi)perylene (1 Step CEN 2:1)	<0.000016		<0.000032		-	-	-
PAH 16 Total (1 Step CEN 2:1)	<0.0001		<0.0002		-	-	-
					-	-	-
					-	-	-
					-	-	-
					-	-	-
					-	-	-
					-	-	-

Leach Test Information		
Date Prepared	02/07/08	-
pH (pH Units)	6.832	-
Conductivity (µS/cm)	51.3	-
Temperature (^{o}C)	20.7	-
Volume Leachant (Litres)	0.324	-
Volume of Eluate VE1 (Litres)	-	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

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ALcontrol Laboratories Analytical Services

CEN 2:1 ONE STAGE BATCH TEST

WAC ANALYTICAL RESULTS REF:CEN12457-1

Mass Sample taken (kg) =	0.25672	Moisture Content Ratio (%) =	46.60
Mass of dry sample (kg) =	0.175	Dry Matter Content Ratio (%) =	68.21
Particle Size <4mm =	>95%		

Job Number	**200809998**	**Landfill Waste Acceptance Criteria Limits**		
Batch	**4**			
Sample Number(s)	**228-231**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Sampled Date	**-**			
Sample Identity	**WS 16**			
Depth (m)	**0.50**			
Solid Waste Analysis				
Total Organic Carbon (%)	-	-	-	-
Loss on Ignition (%)	-	-	-	-
Sum of BTEX (mg/kg)	-	-	-	-
Sum of 7 PCBs (mg/kg)	-	-	-	-
Mineral Oil (mg/kg)	-	-	-	-
PAH Sum of 17(mg/kg)	-	-	-	-
pH (pH Units)	-	-	-	-
ANC to pH 7 (mol/kg)	-	-	-	-
ANC to pH 4 (mol/kg)	-	-	-	-

Eluate Analysis	**Conc^{n} in 2:1 eluate**		**2:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg**		
	C_2		**A_2**				
	mg/l		**mg/kg**				
Boron Dissolved (1 Step CEN 2:1)	0.15		0.30		-	-	-
Sulphide (1 Step CEN 2:1)	<0.50		<1		-	-	-
Hexavalent Chromium (1 Step CEN 2:1)	<0.03		<0.06		-	-	-
Thiocyanate (1 Step CEN 2:1)	<0.05		<0.1		-	-	-
Total Cyanide (1 Step CEN 2:1)	<0.05		<0.1		-	-	-
Free Cyanide (1 Step CEN 2:1)	<0.05		<0.1		-	-	-
Free Sulphur (1 Step CEN 2:1)	<0.05		<0.1		-	-	-
GRO (C4-C12) (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
MTBE (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Benzene (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Toluene (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Ethyl benzene (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
m & p Xylene (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
o Xylene (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aliphatics C5-C6 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aliphatics >C6-C8 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aliphatics >C8-C10 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aliphatics >C10-C12 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-

Leach Test Information		
Date Prepared	10/07/08	-
pH (pH Units)	7.344	-
Conductivity (µS/cm)	662	-
Temperature (^{o}C)	22.0	-
Volume Leachant (Litres)	0.268	-
Volume of Eluate VE1 (Litres)	-	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

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ALcontrol Laboratories Analytical Services

CEN 2:1 ONE STAGE BATCH TEST

WAC ANALYTICAL RESULTS REF:CEN12457-1

Mass Sample taken (kg) =	0.25672	Moisture Content Ratio (%) =	46.60
Mass of dry sample (kg) =	0.175	Dry Matter Content Ratio (%) =	68.21
Particle Size <4mm =	>95%		

Job Number	**200809998**			**Landfill Waste Acceptance Criteria Limits**		
Batch	**4**					
Sample Number(s)	**228-231**			**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Sampled Date	**-**					
Sample Identity	**WS 16**					
Depth (m)	**0.50**					
Solid Waste Analysis						
Total Organic Carbon (%)	-			-	-	-
Loss on Ignition (%)	-			-	-	-
Sum of BTEX (mg/kg)	-			-	-	-
Sum of 7 PCBs (mg/kg)	-			-	-	-
Mineral Oil (mg/kg)	-			-	-	-
PAH Sum of 17(mg/kg)	-			-	-	-
pH (pH Units)	-			-	-	-
ANC to pH 7 (mol/kg)	-			-	-	-
ANC to pH 4 (mol/kg)	-			-	-	-

Eluate Analysis	**Conc^{n} in 2:1 eluate**		**2:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg**		
	C_2		**A_2**				
	mg/l		**mg/kg**				
Aliphatics >C12-C16 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aliphatics >C16-C21 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aliphatics >C21-C35 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Total Aliphatics C5-C35 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aromatics C6-C7 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aromatics >C7-C8 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aromatics >EC8-EC10 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aromatics >EC10-EC12 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aromatics >EC12-EC16 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aromatics >EC16-EC21 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Aromatics >EC21-EC35 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Total Aromatics C6-C35 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
TPH Aliphatics & Aromatics C5-C35 (1 Step CEN 2:1)	<0.01		<0.02		-	-	-
Naphthalene (1 Step CEN 2:1)	NDP		NDP		-	-	-
Acenaphthylene (1 Step CEN 2:1)	NDP		NDP		-	-	-
Acenaphthene (1 Step CEN 2:1)	NDP		NDP		-	-	-
Fluorene (1 Step CEN 2:1)	NDP		NDP		-	-	-
Phenanthrene (1 Step CEN 2:1)	NDP		NDP		-	-	-

Leach Test Information		
Date Prepared	10/07/08	-
pH (pH Units)	7.344	-
Conductivity (µS/cm)	662	-
Temperature (^{o}C)	22.0	-
Volume Leachant (Litres)	0.268	-
Volume of Eluate VE1 (Litres)	-	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Supplemental Report

ALcontrol Laboratories Analytical Services

CEN 2:1 ONE STAGE BATCH TEST

WAC ANALYTICAL RESULTS REF:CEN12457-1

Mass Sample taken (kg) =	0.25672	Moisture Content Ratio (%) =	46.60
Mass of dry sample (kg) =	0.175	Dry Matter Content Ratio (%) =	68.21
Particle Size <4mm =	>95%		

Job Number	**200809998**	**Landfill Waste Acceptance Criteria Limits**		
Batch	**4**			
Sample Number(s)	**228-231**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Sampled Date	**-**			
Sample Identity	**WS 16**			
Depth (m)	**0.50**			
Solid Waste Analysis				
Total Organic Carbon (%)	-	-	-	-
Loss on Ignition (%)	-	-	-	-
Sum of BTEX (mg/kg)	-	-	-	-
Sum of 7 PCBs (mg/kg)	-	-	-	-
Mineral Oil (mg/kg)	-	-	-	-
PAH Sum of 17(mg/kg)	-	-	-	-
pH (pH Units)	-	-	-	-
ANC to pH 7 (mol/kg)	-	-	-	-
ANC to pH 4 (mol/kg)	-	-	-	-

Eluate Analysis	**Conc^{n} in 2:1 eluate**		**2:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg**		
	C_2		**A_2**				
	mg/l		**mg/kg**				
Anthracene (1 Step CEN 2:1)	NDP		NDP		-	-	-
Fluoranthene (1 Step CEN 2:1)	NDP		NDP		-	-	-
Pyrene (1 Step CEN 2:1)	NDP		NDP		-	-	-
Benz(a)anthracene (1 Step CEN 2:1)	NDP		NDP		-	-	-
Chrysene (1 Step CEN 2:1)	NDP		NDP		-	-	-
Benzo(b)fluoranthene (1 Step CEN 2:1)	NDP		NDP		-	-	-
Benzo(k)fluoranthene (1 Step CEN 2:1)	NDP		NDP		-	-	-
Benzo(a)pyrene (1 Step CEN 2:1)	NDP		NDP		-	-	-
Indeno(123cd)pyrene (1 Step CEN 2:1)	NDP		NDP		-	-	-
Dibenzo(ah)anthracene (1 Step CEN 2:1)	NDP		NDP		-	-	-
Benzo(ghi)perylene (1 Step CEN 2:1)	NDP		NDP		-	-	-
PAH 16 Total (1 Step CEN 2:1)	NDP		NDP		-	-	-
					-	-	-
					-	-	-
					-	-	-
					-	-	-
					-	-	-
					-	-	-

Leach Test Information		
Date Prepared	10/07/08	-
pH (pH Units)	7.344	-
Conductivity (µS/cm)	662	-
Temperature (^{o}C)	22.0	-
Volume Leachant (Litres)	0.268	-
Volume of Eluate VE1 (Litres)	-	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Supplemental Report

ALcontrol Laboratories Analytical Services

CEN 2:1 ONE STAGE BATCH TEST

WAC ANALYTICAL RESULTS REF:CEN12457-1

Mass Sample taken (kg) =	-	Moisture Content Ratio (%) =	14.35
Mass of dry sample (kg) =	0.175	Dry Matter Content Ratio (%) =	87.45
Particle Size <4mm =	>95%		

Job Number	**200809998**	**Landfill Waste Acceptance Criteria Limits**		
Batch	**1**			
Sample Number(s)	**72-73**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Sampled Date	**-**			
Sample Identity	**WS7**			
Depth (m)	**0.7**			
Solid Waste Analysis				
Total Organic Carbon (%)	-	-	-	-
Loss on Ignition (%)	-	-	-	-
Sum of BTEX (mg/kg)	-	-	-	-
Sum of 7 PCBs (mg/kg)	-	-	-	-
Mineral Oil (mg/kg)	-	-	-	-
PAH Sum of 17(mg/kg)	-	-	-	-
pH (pH Units)	-	-	-	-
ANC to pH 7 (mol/kg)	-	-	-	-
ANC to pH 4 (mol/kg)	-	-	-	-

Eluate Analysis	**Conc^{n} in 2:1 eluate**		**2:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg**		
	C_2		**A_2**				
	mg/l		**mg/kg**				
Boron Dissolved (1 Step CEN 2:1)	NDP				-	-	-
Sulphide (1 Step CEN 2:1)	NDP				-	-	-
Hexavalent Chromium (1 Step CEN 2:1)	NDP				-	-	-
Thiocyanate (1 Step CEN 2:1)	NDP				-	-	-
Total Cyanide (1 Step CEN 2:1)	NDP				-	-	-
Free Cyanide (1 Step CEN 2:1)	NDP				-	-	-
Free Sulphur (1 Step CEN 2:1)	NDP				-	-	-
GRO (C4-C12) (1 Step CEN 2:1)	NDP				-	-	-
MTBE (1 Step CEN 2:1)	NDP				-	-	-
Benzene (1 Step CEN 2:1)	NDP				-	-	-
Toluene (1 Step CEN 2:1)	NDP				-	-	-
Ethyl benzene (1 Step CEN 2:1)	NDP				-	-	-
m & p Xylene (1 Step CEN 2:1)	NDP				-	-	-
o Xylene (1 Step CEN 2:1)	NDP				-	-	-
Aliphatics C5-C6 (1 Step CEN 2:1)	NDP				-	-	-
Aliphatics >C6-C8 (1 Step CEN 2:1)	NDP				-	-	-
Aliphatics >C8-C10 (1 Step CEN 2:1)	NDP				-	-	-
Aliphatics >C10-C12 (1 Step CEN 2:1)	NDP				-	-	-

Leach Test Information		
Date Prepared	-	-
pH (pH Units)	-	-
Conductivity (µS/cm)	-	-
Temperature (^{o}C)	-	-
Volume Leachant (Litres)	-	-
Volume of Eluate VE1 (Litres)	-	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Supplemental Report

ALcontrol Laboratories Analytical Services

CEN 2:1 ONE STAGE BATCH TEST

WAC ANALYTICAL RESULTS REF:CEN12457-1

Mass Sample taken (kg) =	-	Moisture Content Ratio (%) =	14.35
Mass of dry sample (kg) =	0.175	Dry Matter Content Ratio (%) =	87.45
Particle Size <4mm =	>95%		

Job Number	**200809998**			**Landfill Waste Acceptance Criteria Limits**		
Batch	**1**					
Sample Number(s)	**72-73**			**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Sampled Date	**-**					
Sample Identity	**WS7**					
Depth (m)	**0.7**					
Solid Waste Analysis						
Total Organic Carbon (%)	-			-	-	-
Loss on Ignition (%)	-			-	-	-
Sum of BTEX (mg/kg)	-			-	-	-
Sum of 7 PCBs (mg/kg)	-			-	-	-
Mineral Oil (mg/kg)	-			-	-	-
PAH Sum of 17(mg/kg)	-			-	-	-
pH (pH Units)	-			-	-	-
ANC to pH 7 (mol/kg)	-			-	-	-
ANC to pH 4 (mol/kg)	-			-	-	-

Eluate Analysis	**Conc^{n} in 2:1 eluate**		**2:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg**		
	C_2		**A_2**				
	mg/l		**mg/kg**				
Aliphatics >C12-C16 (1 Step CEN 2:1)	ndp				-	-	-
Aliphatics >C16-C21 (1 Step CEN 2:1)	ndp				-	-	-
Aliphatics >C21-C35 (1 Step CEN 2:1)	ndp				-	-	-
Total Aliphatics C5-C35 (1 Step CEN 2:1)	ndp				-	-	-
Aromatics C6-C7 (1 Step CEN 2:1)	NDP				-	-	-
Aromatics >C7-C8 (1 Step CEN 2:1)	NDP				-	-	-
Aromatics >EC8-EC10 (1 Step CEN 2:1)	NDP				-	-	-
Aromatics >EC10-EC12 (1 Step CEN 2:1)	NDP				-	-	-
Aromatics >EC12-EC16 (1 Step CEN 2:1)	ndp				-	-	-
Aromatics >EC16-EC21 (1 Step CEN 2:1)	ndp				-	-	-
Aromatics >EC21-EC35 (1 Step CEN 2:1)	ndp				-	-	-
Total Aromatics C6-C35 (1 Step CEN 2:1)	ndp				-	-	-
TPH Aliphatics & Aromatics C5-C35 (1 Step CEN 2:1)	ndp				-	-	-
Naphthalene (1 Step CEN 2:1)	NDP				-	-	-
Acenaphthylene (1 Step CEN 2:1)	NDP				-	-	-
Acenaphthene (1 Step CEN 2:1)	NDP				-	-	-
Fluorene (1 Step CEN 2:1)	NDP				-	-	-
Phenanthrene (1 Step CEN 2:1)	NDP				-	-	-

Leach Test Information		
Date Prepared	-	-
pH (pH Units)	-	-
Conductivity (µS/cm)	-	-
Temperature (^{o}C)	-	-
Volume Leachant (Litres)	-	-
Volume of Eluate VE1 (Litres)	-	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Supplemental Report

ALcontrol Laboratories Analytical Services

CEN 2:1 ONE STAGE BATCH TEST

WAC ANALYTICAL RESULTS REF:CEN12457-1

Mass Sample taken (kg) =	-	Moisture Content Ratio (%) =	14.35
Mass of dry sample (kg) =	0.175	Dry Matter Content Ratio (%) =	87.45
Particle Size <4mm =	>95%		

Job Number	**200809998**	**Landfill Waste Acceptance Criteria Limits**		
Batch	**1**			
Sample Number(s)	**72-73**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Sampled Date	**-**			
Sample Identity	**WS7**			
Depth (m)	**0.7**			
Solid Waste Analysis				
Total Organic Carbon (%)	-	-	-	-
Loss on Ignition (%)	-	-	-	-
Sum of BTEX (mg/kg)	-	-	-	-
Sum of 7 PCBs (mg/kg)	-	-	-	-
Mineral Oil (mg/kg)	-	-	-	-
PAH Sum of 17(mg/kg)	-	-	-	-
pH (pH Units)	-	-	-	-
ANC to pH 7 (mol/kg)	-	-	-	-
ANC to pH 4 (mol/kg)	-	-	-	-

Eluate Analysis	**Conc^{n} in 2:1 eluate**		**2:1 conc^{n} leached**		**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg**		
	C_2		**A_2**				
	mg/l		**mg/kg**				
Anthracene (1 Step CEN 2:1)	NDP				-	-	-
Fluoranthene (1 Step CEN 2:1)	NDP				-	-	-
Pyrene (1 Step CEN 2:1)	NDP				-	-	-
Benz(a)anthracene (1 Step CEN 2:1)	NDP				-	-	-
Chrysene (1 Step CEN 2:1)	NDP				-	-	-
Benzo(b)fluoranthene (1 Step CEN 2:1)	NDP				-	-	-
Benzo(k)fluoranthene (1 Step CEN 2:1)	NDP				-	-	-
Benzo(a)pyrene (1 Step CEN 2:1)	NDP				-	-	-
Indeno(123cd)pyrene (1 Step CEN 2:1)	NDP				-	-	-
Dibenzo(ah)anthracene (1 Step CEN 2:1)	NDP				-	-	-
Benzo(ghi)perylene (1 Step CEN 2:1)	NDP				-	-	-
PAH 16 Total (1 Step CEN 2:1)	NDP				-	-	-
					-	-	-
					-	-	-
					-	-	-
					-	-	-
					-	-	-
					-	-	-

Leach Test Information		
Date Prepared	-	-
pH (pH Units)	-	-
Conductivity (µS/cm)	-	-
Temperature (^{o}C)	-	-
Volume Leachant (Litres)	-	-
Volume of Eluate VE1 (Litres)	-	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Supplemental Report

ALcontrol Laboratories Analytical Services

CEN 10:1 CUMULATIVE TWO STAGE BATCH TEST

WAC ANALYTICAL RESULTS REF:CEN12457-3

Mass Sample taken (kg) =	0.21161	Moisture Content Ratio (%) =	20.87
Mass of dry sample (kg) =	0.175	Dry Matter Content Ratio (%) =	82.73
Particle Size <4mm =	>95%		

Job Number	**200809998**	**Landfill Waste Acceptance Criteria Limits**		
Batch	**4**			
Sample Number(s)	**224-227**	**Inert Waste Landfill**	**Stable Non-reactive Hazardous Waste in Non-Hazardous Landfill**	**Hazardous Waste Landfill**
Sampled Date	**-**			
Sample Identity	**WS 10**			
Depth (m)	**0.50**			
Solid Waste Analysis				
Total Organic Carbon (%)	-	-	-	-
Loss on Ignition (%)	-	-	-	-
Sum of BTEX (mg/kg)	-	-	-	-
Sum of 7 PCBs (mg/kg)	-	-	-	-
Mineral Oil (mg/kg)	-	-	-	-
PAH Sum of 17(mg/kg)	-	-	-	-
pH (pH Units)	-	-	-	-
ANC to pH 7 (mol/kg)	-	-	-	-
ANC to pH 4 (mol/kg)	-	-	-	-

Eluate Analysis	**Conc^{n} in 2:1 eluate**	**Conc^{n} in 8:1 eluate**	**2:1 conc^{n} leached**	**Cumulative conc^{n} leached**	**Limit values for compliance leaching test using BS EN 12457-3 at L/S 10 l/kg**		
	C_2	**C_8**	**A_2**	**A_{2-10}**			
	mg/l		**mg/kg**				
Boron Dissolved (CEN 10:1C) (ICP-MS)	0.02	<0.02	<0.04	<0.2	-	-	-
					-	-	-
					-	-	-
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Leach Test Information		
Date Prepared	11/07/08	13/07/08
pH (pH Units)	7.947	7.74
Conductivity (µS/cm)	221	88.9
Temperature (^{o}C)	21.8	20.5
Volume Leachant (Litres)	0.313	1.4
Volume of Eluate VE1 (Litres)	0.2	

Solid Results are expressed on a dry weight basis, after correction for moisture content where applicable

Stated limits are for guidance only and ALcontrol cannot be held responsible for any discrepencies with current legislation

Supplemental Report

ALcontrol Laboratories Analytical Services
Table Of Results - Appendix

Job Number: 08/09998/02/01
Client: Geotechnics Ltd
Client Ref. No.: PN081814

Report Key :

Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03×10^{-7}

NDP	No Determination Possible	*	Subcontracted test
NFD	No Fibres Detected	»	Result previously reported (Incremental reports only)
#	ISO 17025 accredited	M	MCERTS Accredited
PFD	Possible Fibres Detected	EC	Equivalent Carbon (Aromatics C8-C35)

Note: Method detection limits are not always achievable due to various circumstances beyond our control.

Summary of Method Codes contained within report :

Method No.	Reference	Description	ISO 17025 Accredited	MCERTS Accredited	Wet/Dry Sample [1]	Surrogate Corrected
TM001	In - house Method	Screening of Soils for Fibres			WET	
TM018	BS 1377: Part 3 1990	Determination of Loss on Ignition	✓	✓	WET	
TM061	Method for the Determination of EPH,Massachusetts Dept.of EP, 1998	Determination of Extractable Petroleum Hydrocarbons by GC-FID (C10-C40)	✓		DRY	
TM062	MEWAM BOOK 124 1988.HMSO/ Method 17.7, Second Site property, March 2003	Determination of Phenolic compounds by HPLC with electro-chemical detection			NA	
TM062	MEWAM BOOK 124 1988.HMSO/ Method 17.7, Second Site property, March 2003	Determination of Phenolic compounds by HPLC with electro-chemical detection	✓		NA	
TM062	MEWAM BOOK 124 1988.HMSO/ Method 17.7, Second Site property, March 2003	Determination of Phenolic compounds by HPLC with electro-chemical detection	✓	✓	WET	
TM068	ASTM D-1552	Total sulphur determination by combustion method	✓		DRY	
TM074	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS. MCERTS Accreditation on Soils for Naphthalene except when Kerosene present.	✓		DRY	
TM074	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS. MCERTS Accreditation on Soils for Naphthalene except when Kerosene present.	✓	✓	DRY	
TM083	Method 3111, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 7610	Determination of Sodium and Potassium by Flame Photometer			NA	
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)			WET	
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)	✓		WET	
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)	✓	✓	WET	
TM090	Method 5310, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 415.1 & 9060	Determination of Total Organic Carbon/Total Inorganic Carbon in Water and Waste Water			NA	

[1] Applies to Solid samples only. **DRY** indicates samples have been dried at 35°C. **NA** = not applicable.

ALcontrol Laboratories Analytical Services
Table Of Results - Appendix

Job Number: 08/09998/02/01
Client: Geotechnics Ltd
Client Ref. No.: PN081814

Report Key :

Results expressed as (e.g.) 1.03E-07 is equivalent to $1.03x10^{-7}$

NDP	No Determination Possible	*	Subcontracted test
NFD	No Fibres Detected	»	Result previously reported (Incremental reports only)
#	ISO 17025 accredited	M	MCERTS Accredited
PFD	Possible Fibres Detected	EC	Equivalent Carbon (Aromatics C8-C35)

Note: Method detection limits are not always achievable due to various circumstances beyond our control.

Summary of Method Codes contained within report :

Method No.	Reference	Description	ISO 17025 Accredited	MCERTS Accredited	Wet/Dry Sample [1]	Surrogate Corrected
TM097	Modified: US EPA Method 325.1 & 325.2	Determination of Chloride using the Kone Analyser			NA	
TM097	Modified: US EPA Method 325.1 & 325.2	Determination of Chloride using the Kone Analyser	✓		NA	
TM098	Method 4500E, AWWA/APHA, 20th Ed., 1999	Determination of Sulphate using the Kone Analyser			NA	
TM098	Method 4500E, AWWA/APHA, 20th Ed., 1999	Determination of Sulphate using the Kone Analyser	✓		NA	
TM098	Method 4500E, AWWA/APHA, 20th Ed., 1999	Determination of Sulphate using the Kone Analyser	✓	✓	DRY	
TM099	BS 2690: Part 7:1968 / BS 6068: Part2.11:1984	Determination of Ammonium in Water Samples using the Kone Analyser	✓		NA	
TM101	Method 4500B & C, AWWA/APHA, 20th Ed., 1999	Determination of Sulphide in soil and water samples using the Kone Analyser			NA	
TM104	Method 4500F, AWWA/APHA, 20th Ed., 1999	Determination of Fluoride using the Kone Analyser			NA	
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS			WET	
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS	✓		WET	
TM116	Modified: US EPA Method 8260, 8120, 8020, 624, 610 & 602	Determination of Volatile Organic Compounds by Headspace / GC-MS	✓	✓	WET	
TM123	BS 2690: Part 121:1981	The Determination of Total Dissolved Solids in Water			NA	
TM129	Method 3120B, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 3050B	Determination of Metal Cations by IRIS Emission Spectrometer			DRY	
TM129	Method 3120B, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 3050B	Determination of Metal Cations by IRIS Emission Spectrometer	✓	✓	DRY	

[1] Applies to Solid samples only. **DRY** indicates samples have been dried at 35°C. **NA** = not applicable.

ALcontrol Laboratories Analytical Services
Table Of Results - Appendix

Job Number: 08/09998/02/01
Client: Geotechnics Ltd
Client Ref. No.: PN081814

Report Key :

Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03×10^{-7}

NDP	No Determination Possible	*	Subcontracted test
NFD	No Fibres Detected	»	Result previously reported (Incremental reports only)
#	ISO 17025 accredited	M	MCERTS Accredited
PFD	Possible Fibres Detected	EC	Equivalent Carbon (Aromatics C8-C35)

Note: Method detection limits are not always achievable due to various circumstances beyond our control.

Summary of Method Codes contained within report :

Method No.	Reference	Description	ISO 17025 Accredited	MCERTS Accredited	Wet/Dry Sample [1]	Surrogate Corrected
TM132	In - house Method	ELTRA CS800 Operators Guide	✓	✓	DRY	
TM133	BS 1377: Part 3 1990	Determination of pH in Soil and Water using the GLpH pH Meter	✓		NA	
TM133	BS 1377: Part 3 1990	Determination of pH in Soil and Water using the GLpH pH Meter	✓	✓	WET	
TM136	Method 17.10, Second Site property, March 2003	Determination of Sulphur by HPLC			NA	
TM136	Method 17.10, Second Site property, March 2003	Determination of Sulphur by HPLC	✓		NA	
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser			NA	
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser	✓		WET	
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS			NA	
TM152	Method 3125B, AWWA/APHA, 20th Ed., 1999	Analysis of Aqueous Samples by ICP-MS	✓		NA	
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the "Skalar SANS+ System" Segmented Flow Analyser			WET	
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the "Skalar SANS+ System" Segmented Flow Analyser	✓		NA	
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the "Skalar SANS+ System" Segmented Flow Analyser	✓	✓	WET	
TM157		Determination of SVOC in Soils by GC-MS extracted by sonication in DCM/Acetone			WET	
TM168		Determination of WHO12 and EC7 Polychlorinated Biphenyl Congeners by GC-MS in Soils			DRY	

[1] Applies to Solid samples only. **DRY** indicates samples have been dried at 35°C. **NA** = not applicable.

ALcontrol Laboratories Analytical Services
Table Of Results - Appendix

Job Number: 08/09998/02/01
Client: Geotechnics Ltd
Client Ref. No.: PN081814

Report Key :

Results expressed as (e.g.) 1.03E-07 is equivalent to $1.03x10^{-7}$

NDP	No Determination Possible	*	Subcontracted test
NFD	No Fibres Detected	»	Result previously reported (Incremental reports only)
#	ISO 17025 accredited	M	MCERTS Accredited
PFD	Possible Fibres Detected	EC	Equivalent Carbon (Aromatics C8-C35)

Note: Method detection limits are not always achievable due to various circumstances beyond our control.

Summary of Method Codes contained within report :

Method No.	Reference	Description	ISO 17025 Accredited	MCERTS Accredited	Wet/Dry Sample [1]	Surrogate Corrected
TM173		Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID	✓		DRY	
TM174		Determination of Speciated Extractable Petroleum Hydrocarbons in Waters by GC-FID			NA	
TM176		Determination of SVOCs in Water by GCMS			NA	
TM178	Modified: US EPA Method 8100	Determination of Polynuclear Aromatic Hydrocarbons (PAH) by GC-MS in Waters			NA	
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique	✓		WET	
TM182		Determination of Acid Neutralisation Capacity (ANC) Using Autotitration	✓		DRY	
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry			NA	
TM183	BS EN 23506:2002, (BS 6068-2.74:2002) ISBN 0 580 38924 3	Determination of Trace Level Mercury in Waters and Leachates by PSA Cold Vapour Atomic Fluorescence Spectrometry	✓		NA	
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters			NA	
TM208	Modified: US EPA Method 8260b & 624	Determination of Volatile Organic Compounds by Headspace / GC-MS in Waters	✓		NA	
TM213	In-house Method	Rapid Determination of PAHs by GC-FID			WET	
TM61/89		see TM061 and TM089 for details			WET	

[1] Applies to Solid samples only. **DRY** indicates samples have been dried at 35°C. **NA** = not applicable.

ALcontrol Laboratories Analytical Services
Table Of Results - Appendix

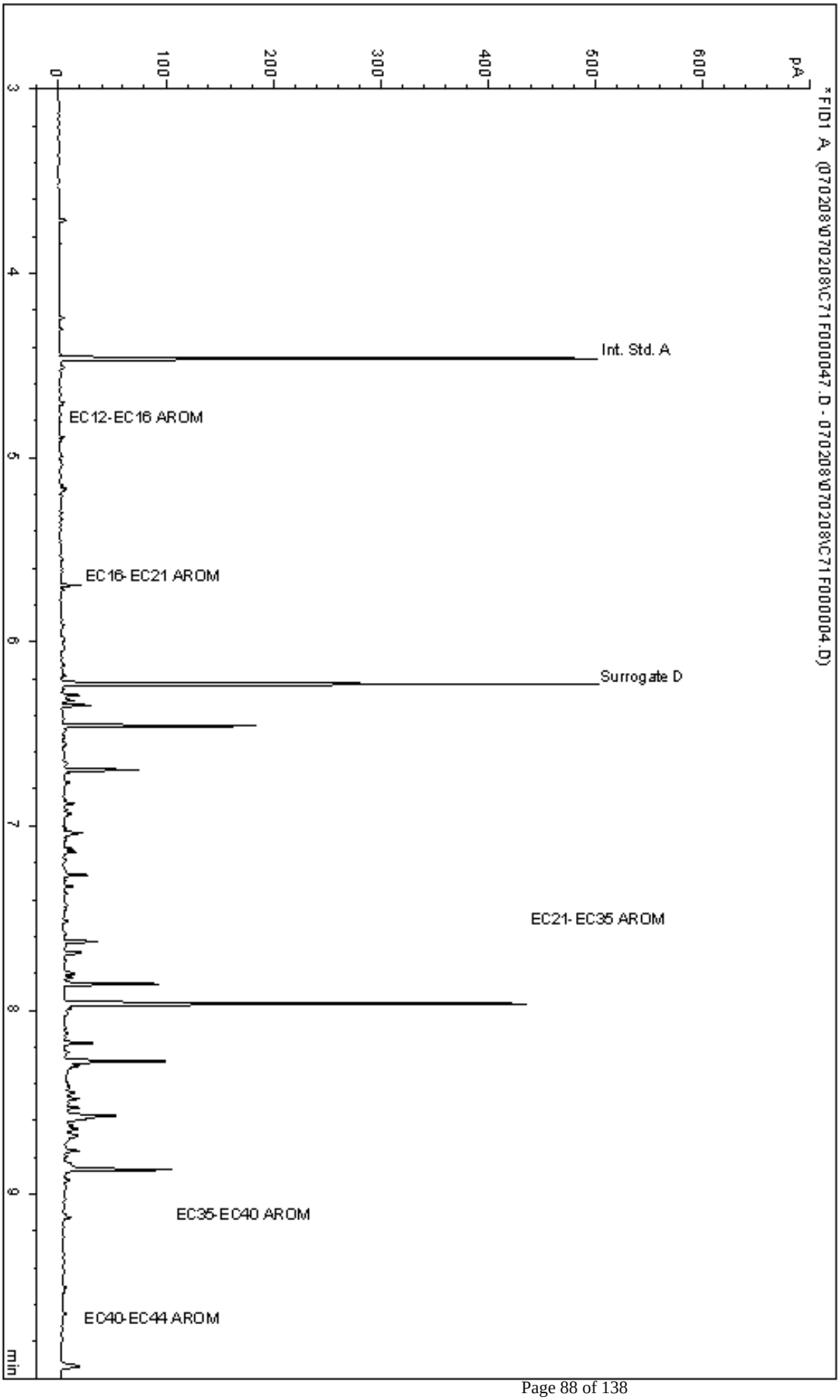
Job Number: 08/09998/02/01
Client: Geotechnics Ltd
Client Ref. No.: PN081814

Summary of Coolbox temperatures

Batch No.	Coolbox Temperature (°C)
1	8.3
2	16
3	12
4	19

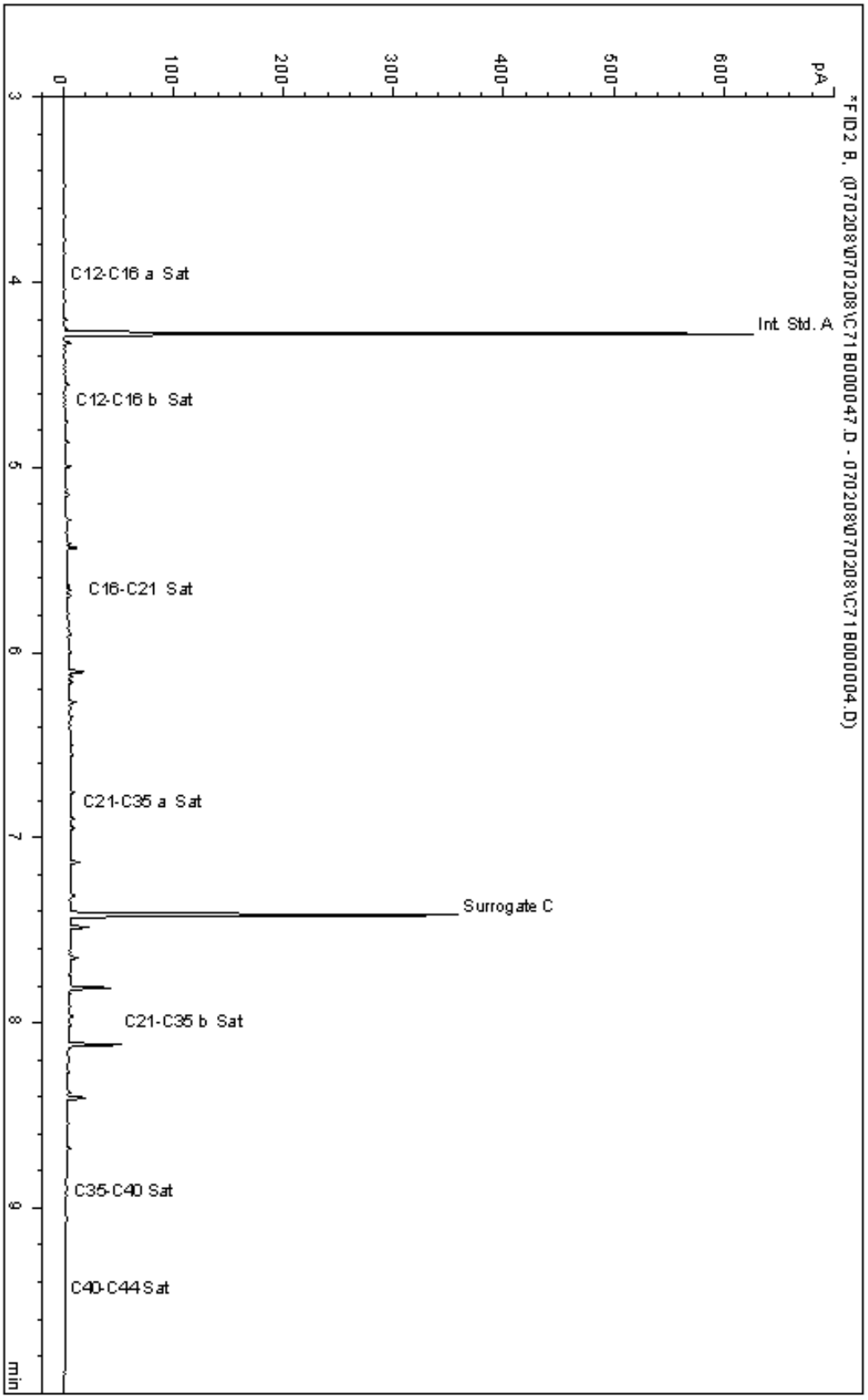
Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 200809998-66/S
Date Acquired : 03/07/08 04:41:47
Units : ppb
Dilution :
CF : 1000
Multiplier : 0.998



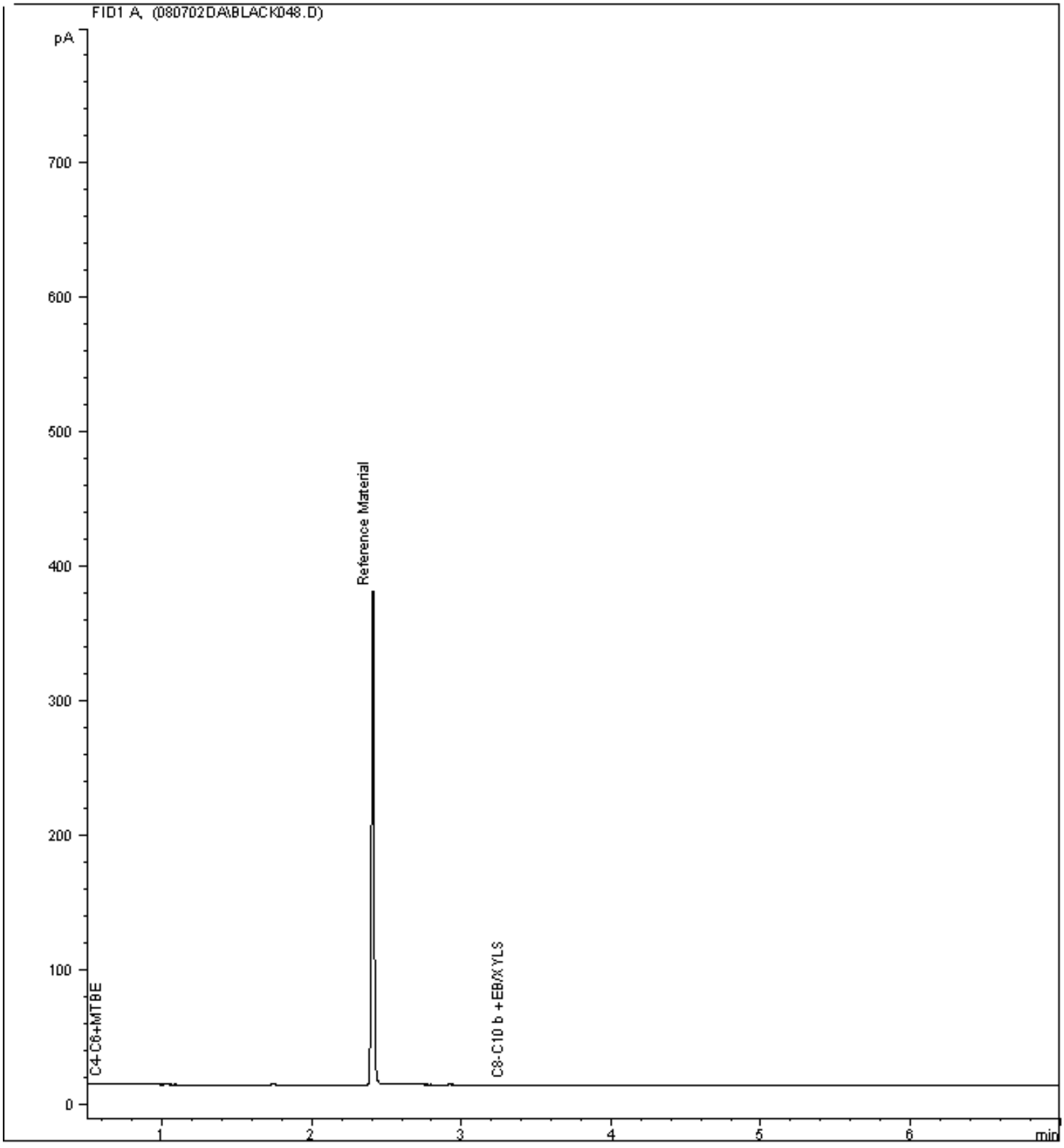
Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

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Date Acquired : 03/07/08 04:41:47
Units : ppb
Dilution :
CF : 1000
Multiplier : 0.998



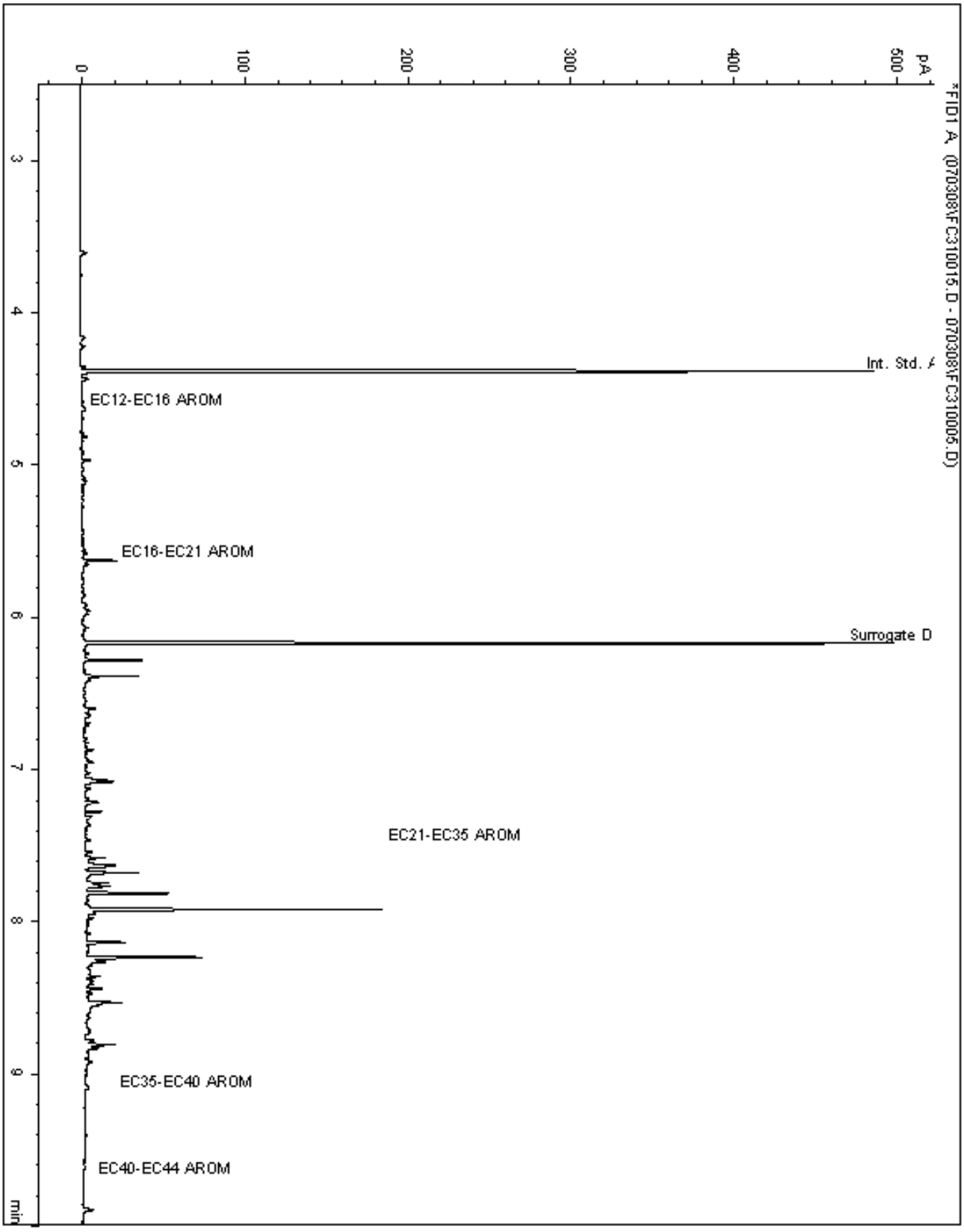
ALcontrol Geochem Analytical Services
Gasoline Range Organics

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Units : ppb
Dilution : 1



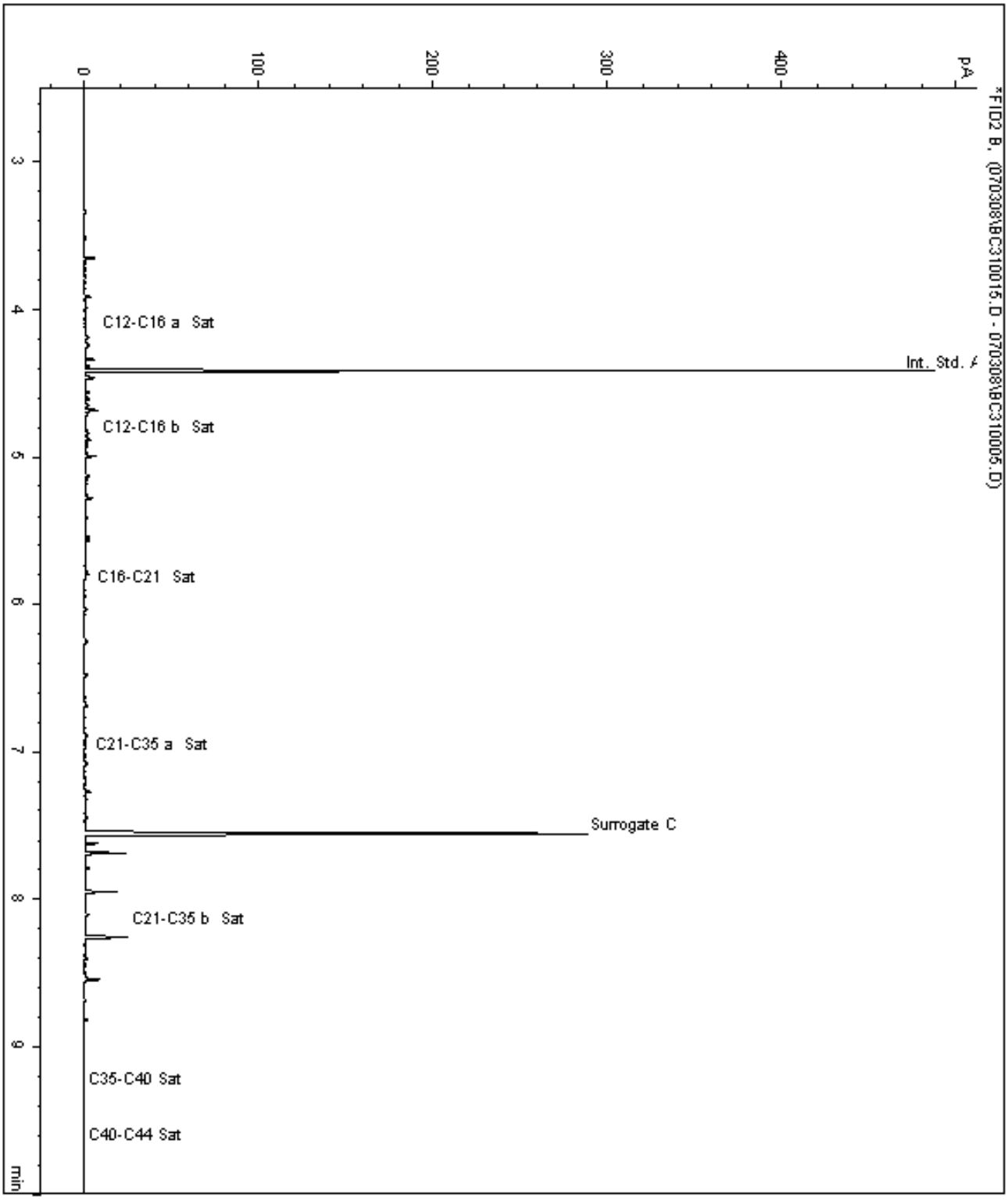
Alcontrol Analytical Services
Speciated TPH - AROM (C12 - C40)

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Units : ppb
Dilution:



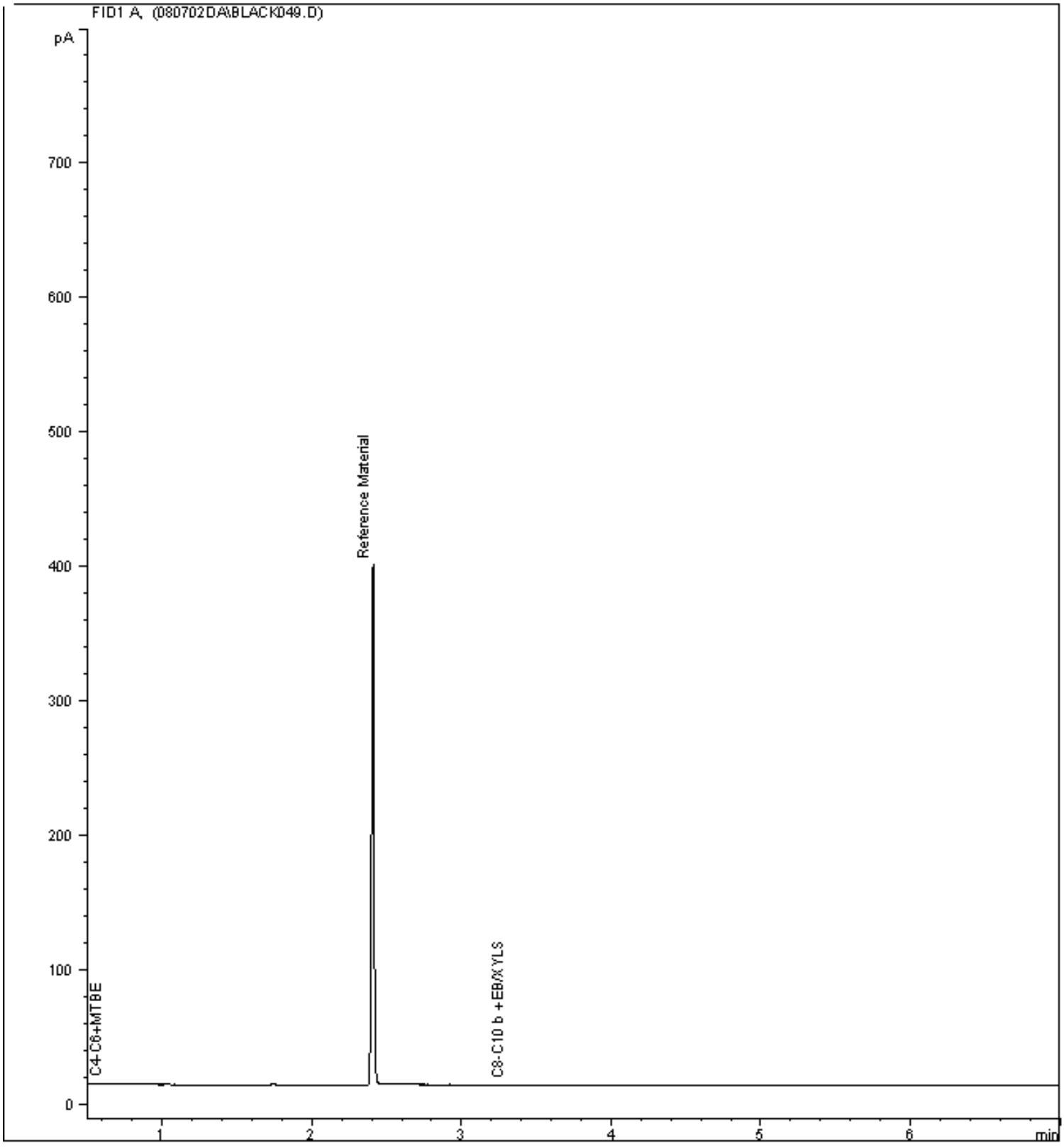
Alcontrol Analytical Services
Speciated TPH - SATS (C12 - C40)

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Dilution:



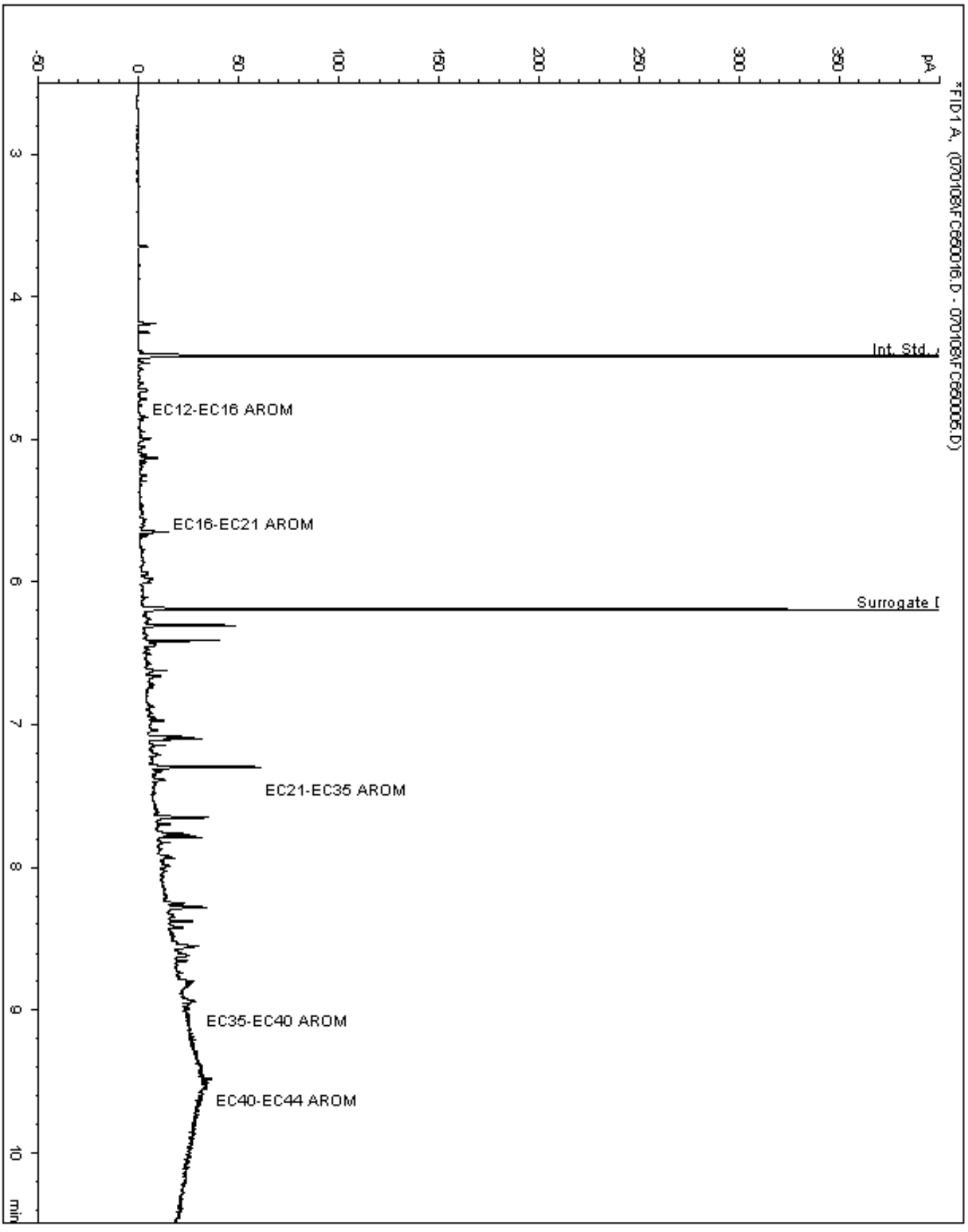
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Gasoline Range Organics

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Units : ppb
Dilution : 1



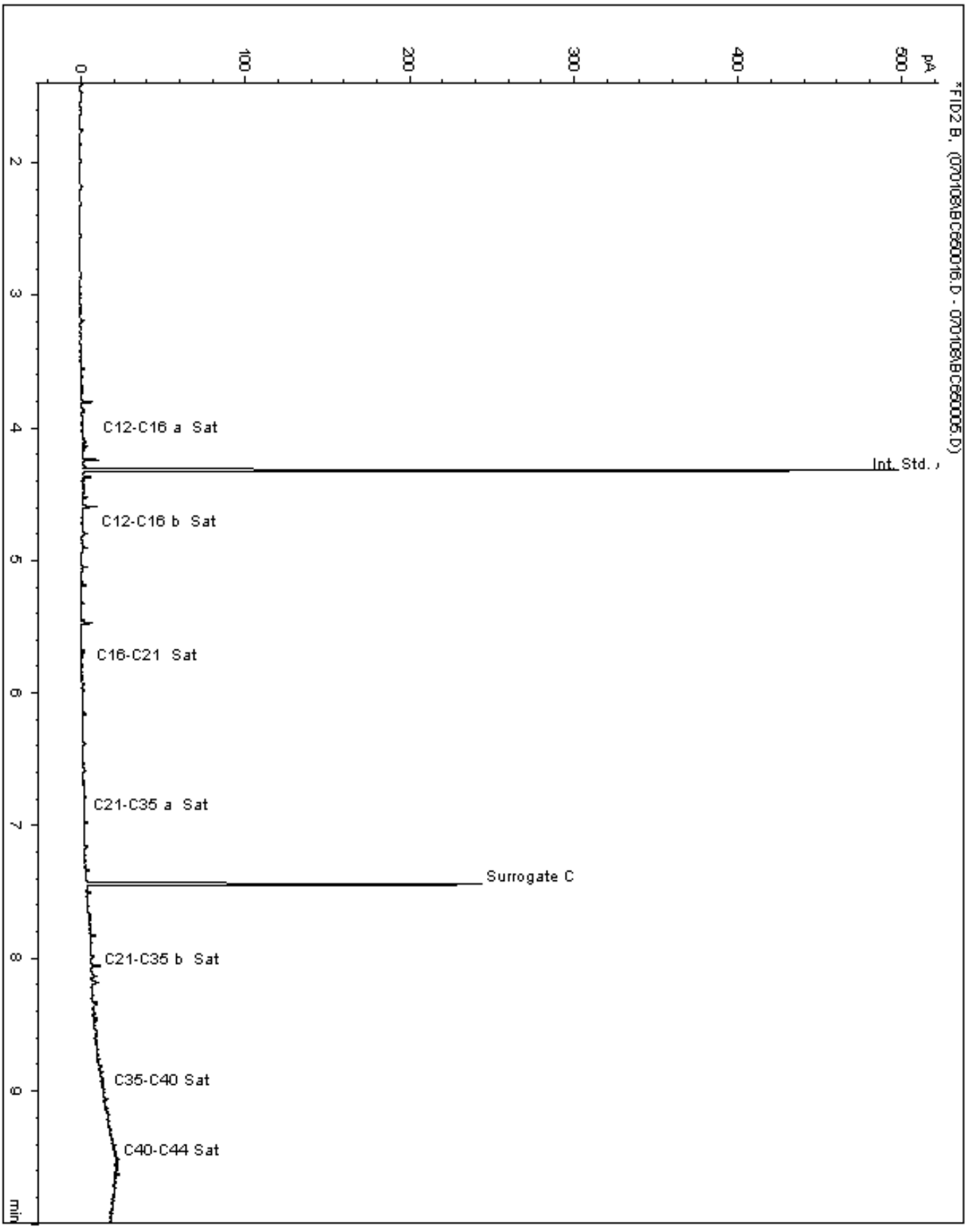
Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

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Units : ppb
Dilution :
CF : 1000
Multiplier : 1.005



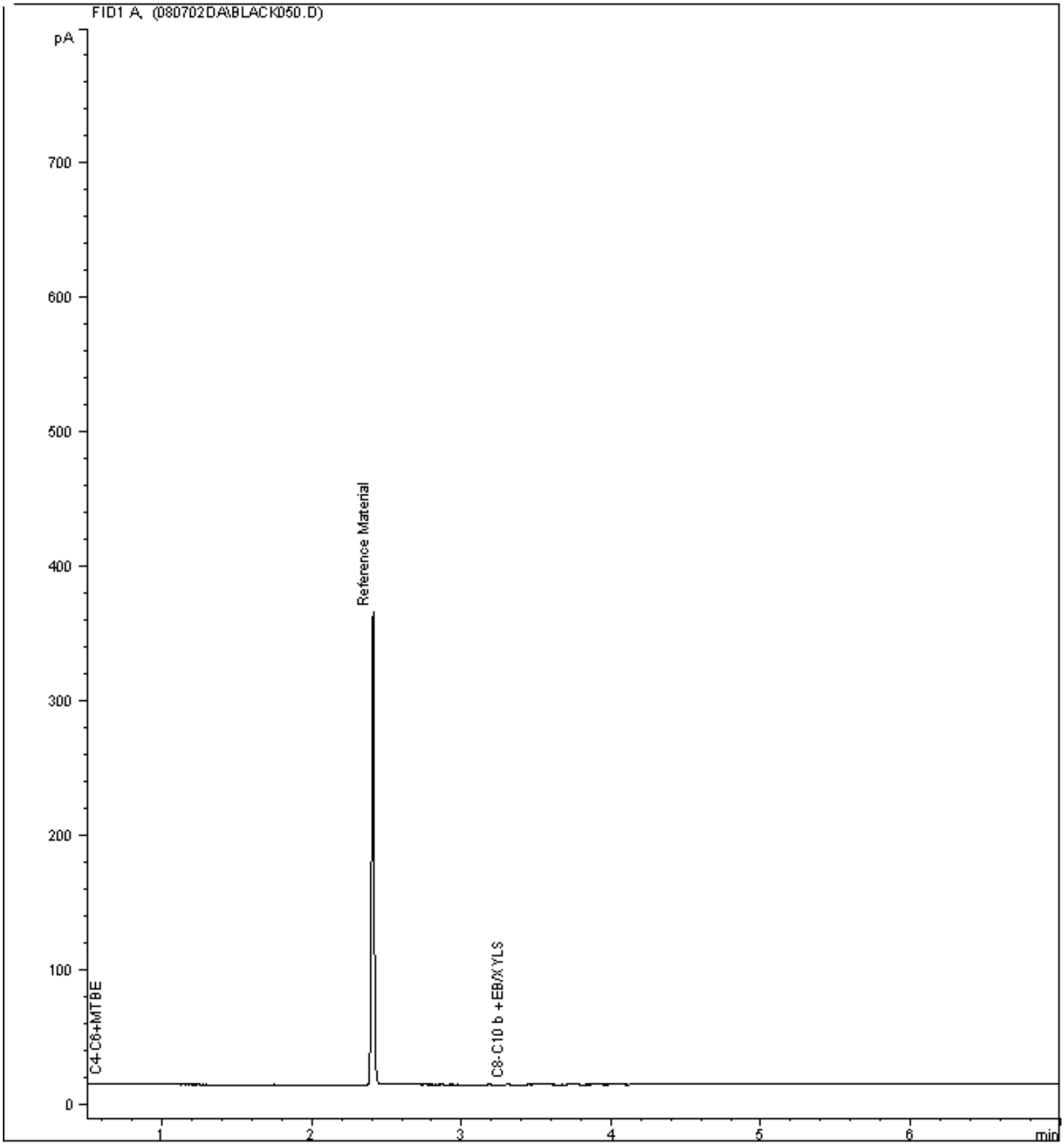
Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 200809998-82/S
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Units : ppb
Dilution :
CF : 1000
Multiplier : 1.005



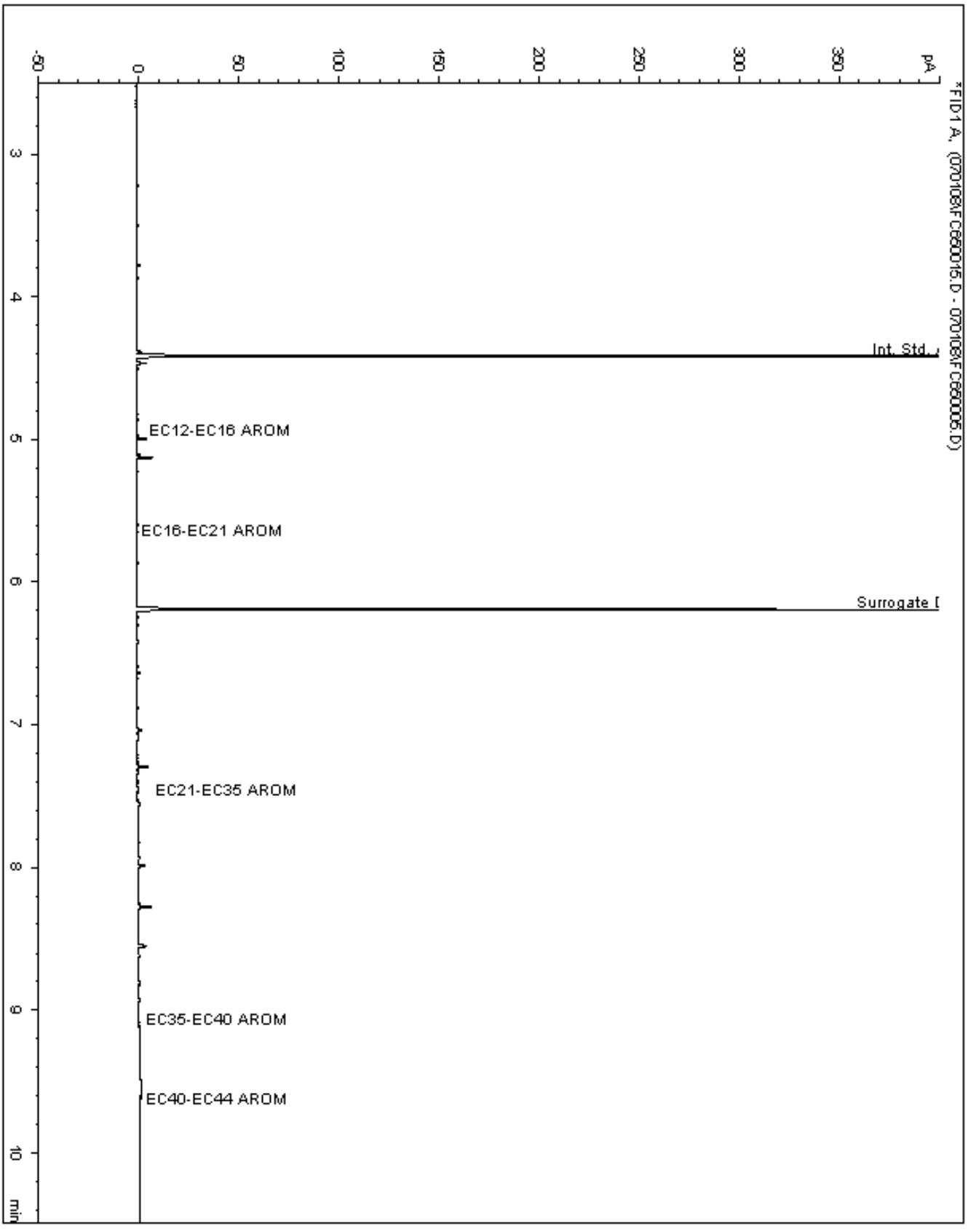
ALcontrol Geochem Analytical Services
Gasoline Range Organics

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Units : ppb
Dilution : 1



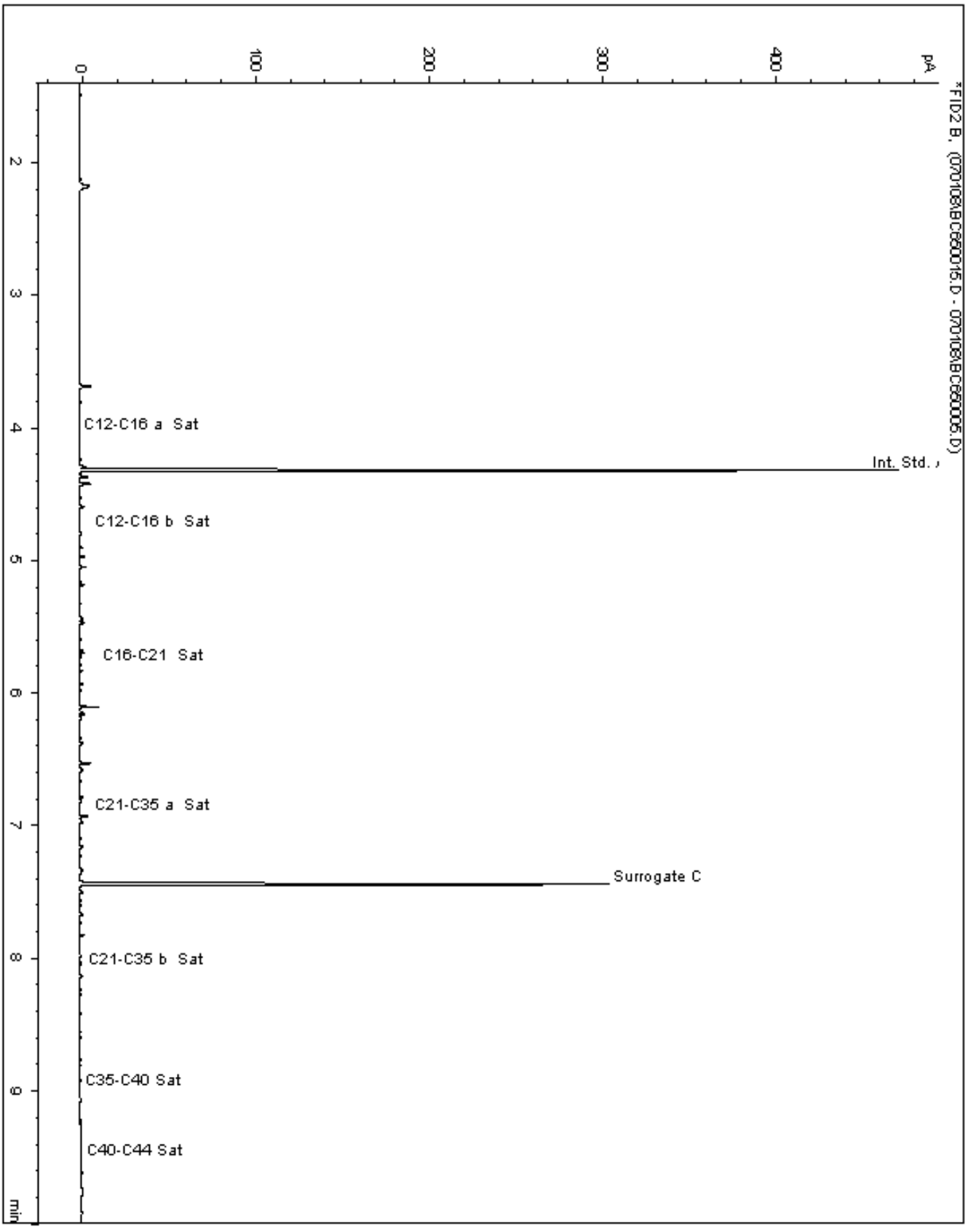
Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 200809998-93/S
Date Acquired : 02/07/08 23:27:10 PM
Units : ppb
Dilution :
CF : 1000
Multiplier : 0.999



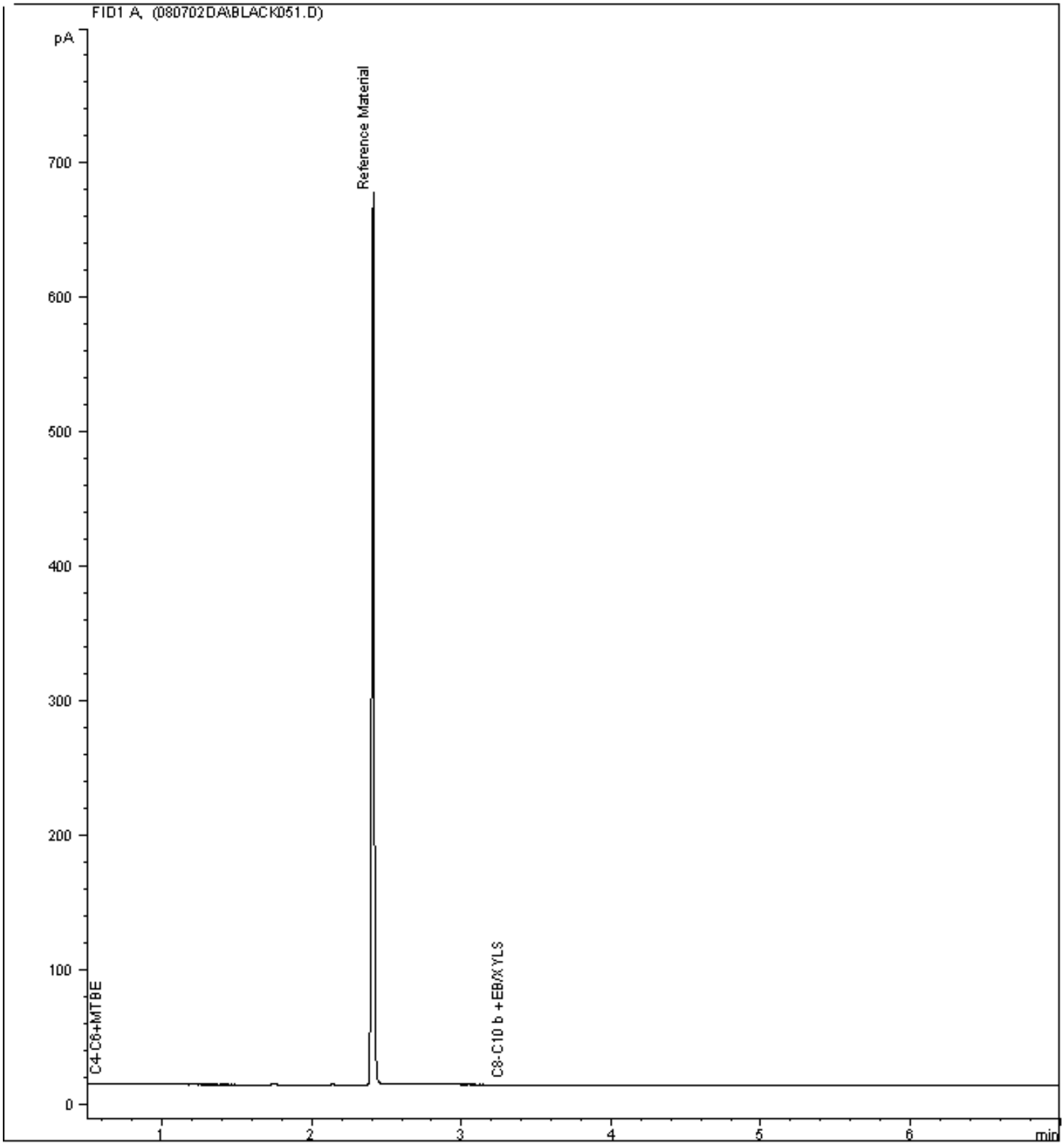
Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 200809998-93/S
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Dilution :
CF : 1000
Multiplier : 0.999



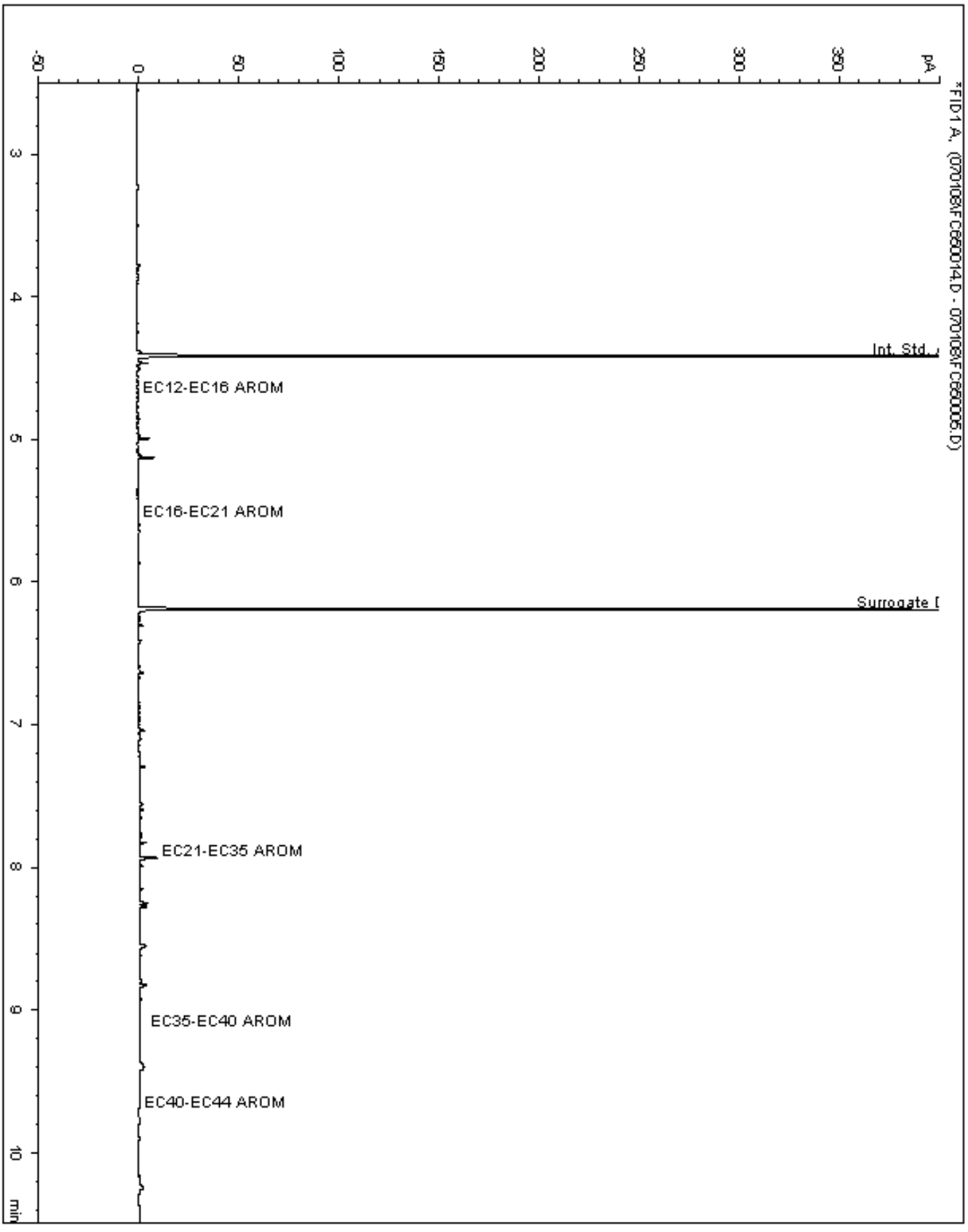
ALcontrol Geochem Analytical Services
Gasoline Range Organics

Sample Identity : 200809998-94/S
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Dilution : 1



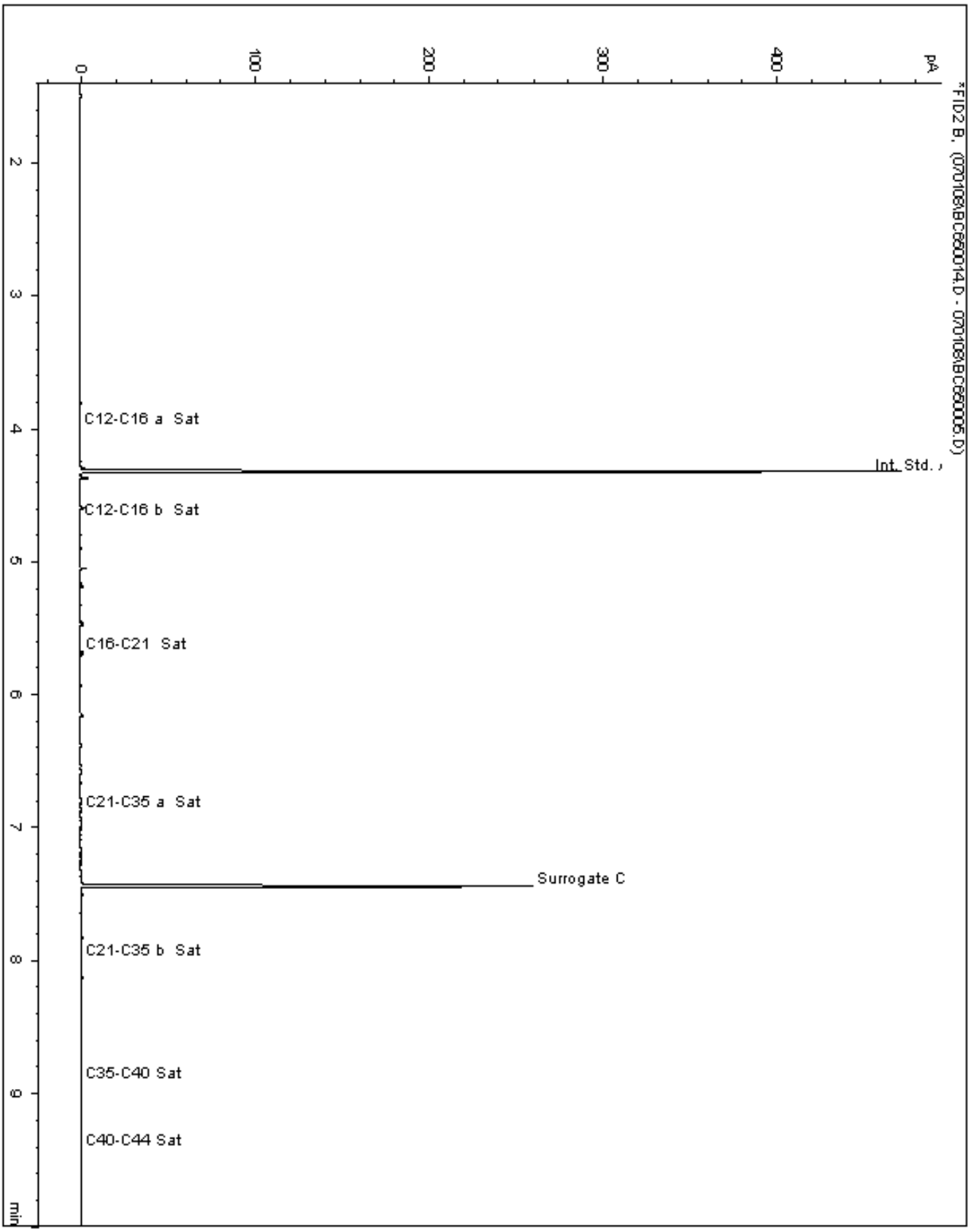
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Speciated TPH - AROM (C12 - C40)

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Multiplier : 0.997



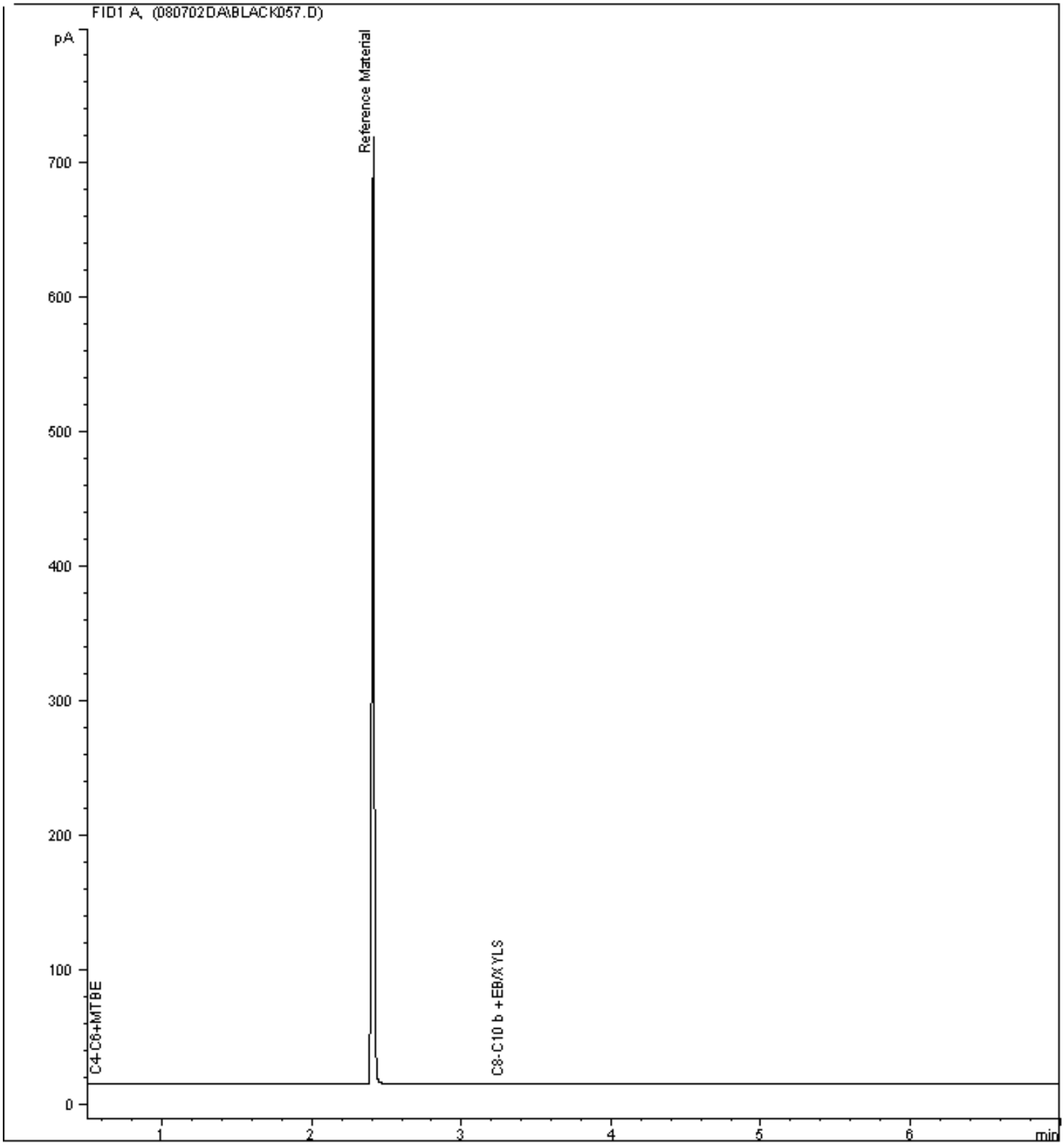
Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

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CF : 1000
Multiplier : 0.997



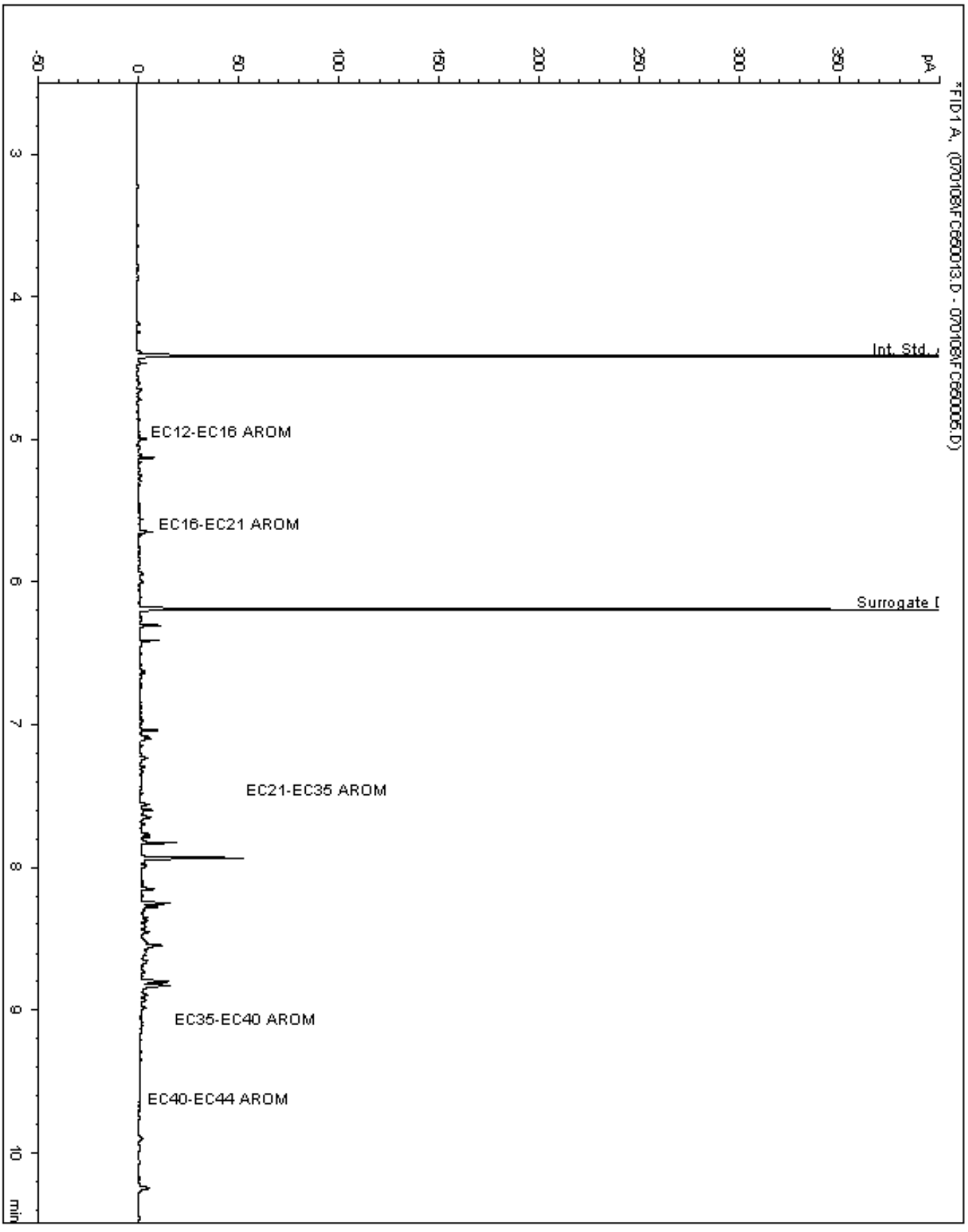
ALcontrol Geochem Analytical Services
Gasoline Range Organics

Sample Identity : 200809998-99/S
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Dilution : 1



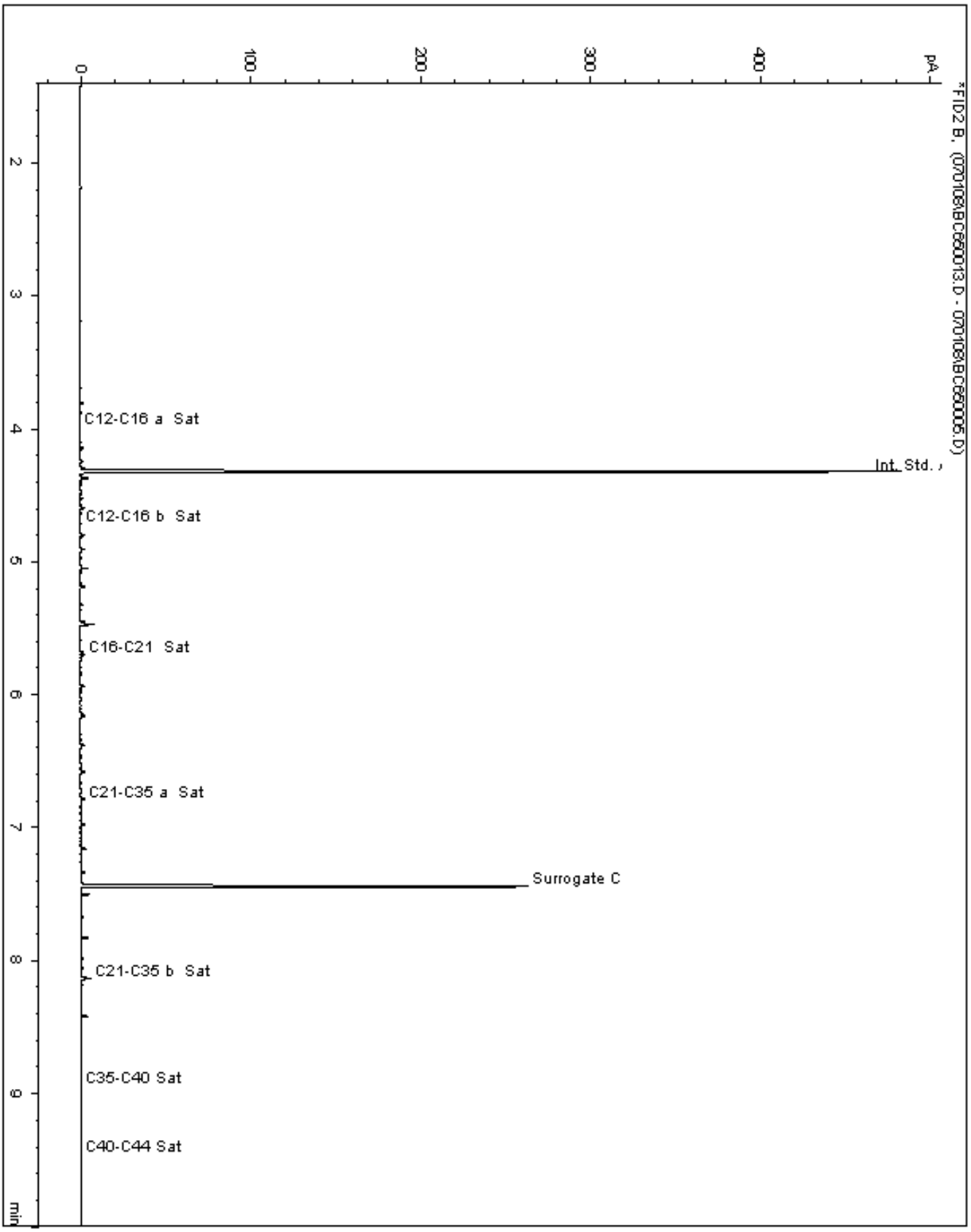
Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 200809998-120/S
Date Acquired : 02/07/08 08:59:39 PM
Units : ppb
Dilution :
CF : 1000
Multiplier : 1.004



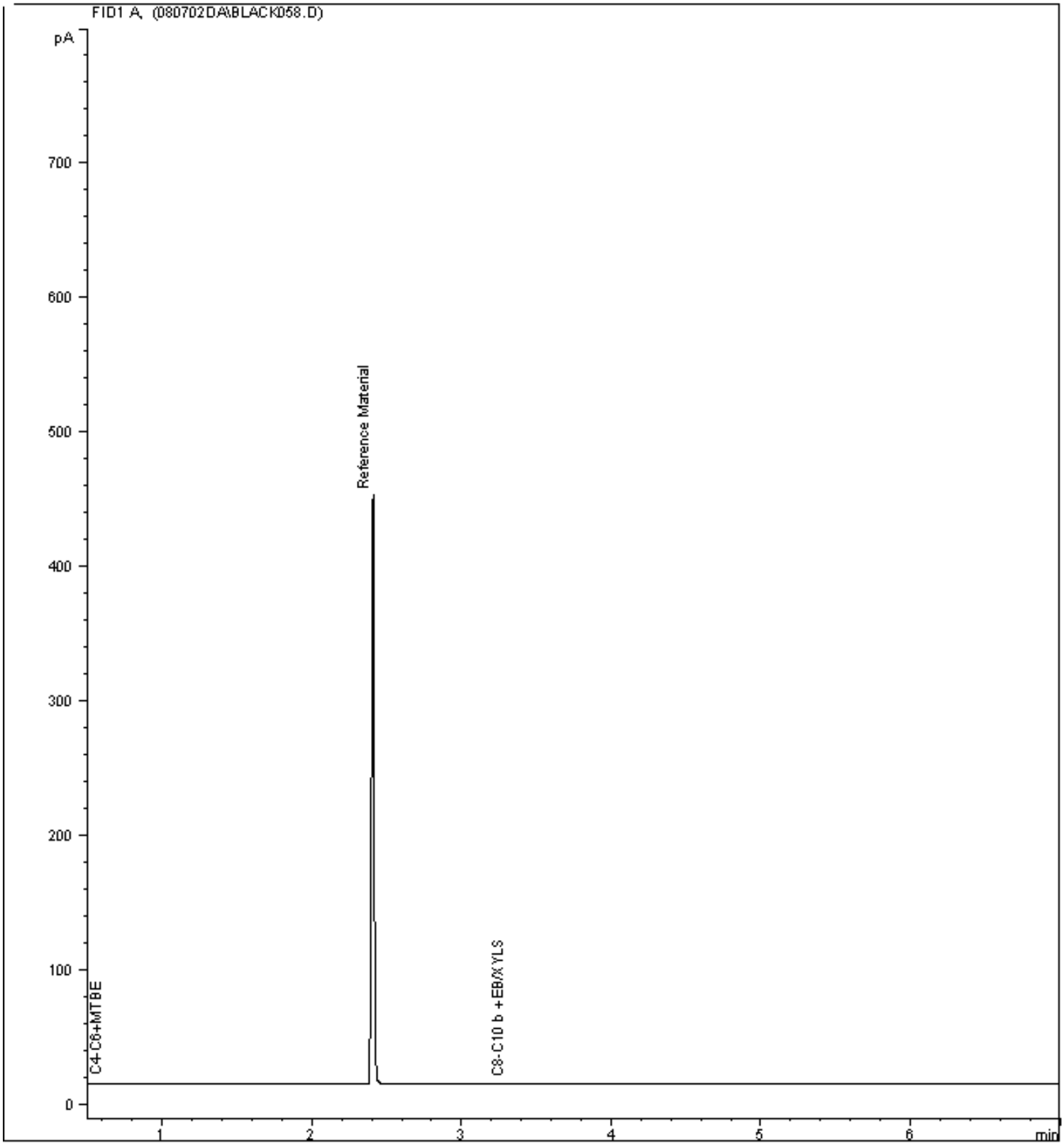
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Speciated TPH - SATS (C12 - C40)

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Multiplier : 1.004



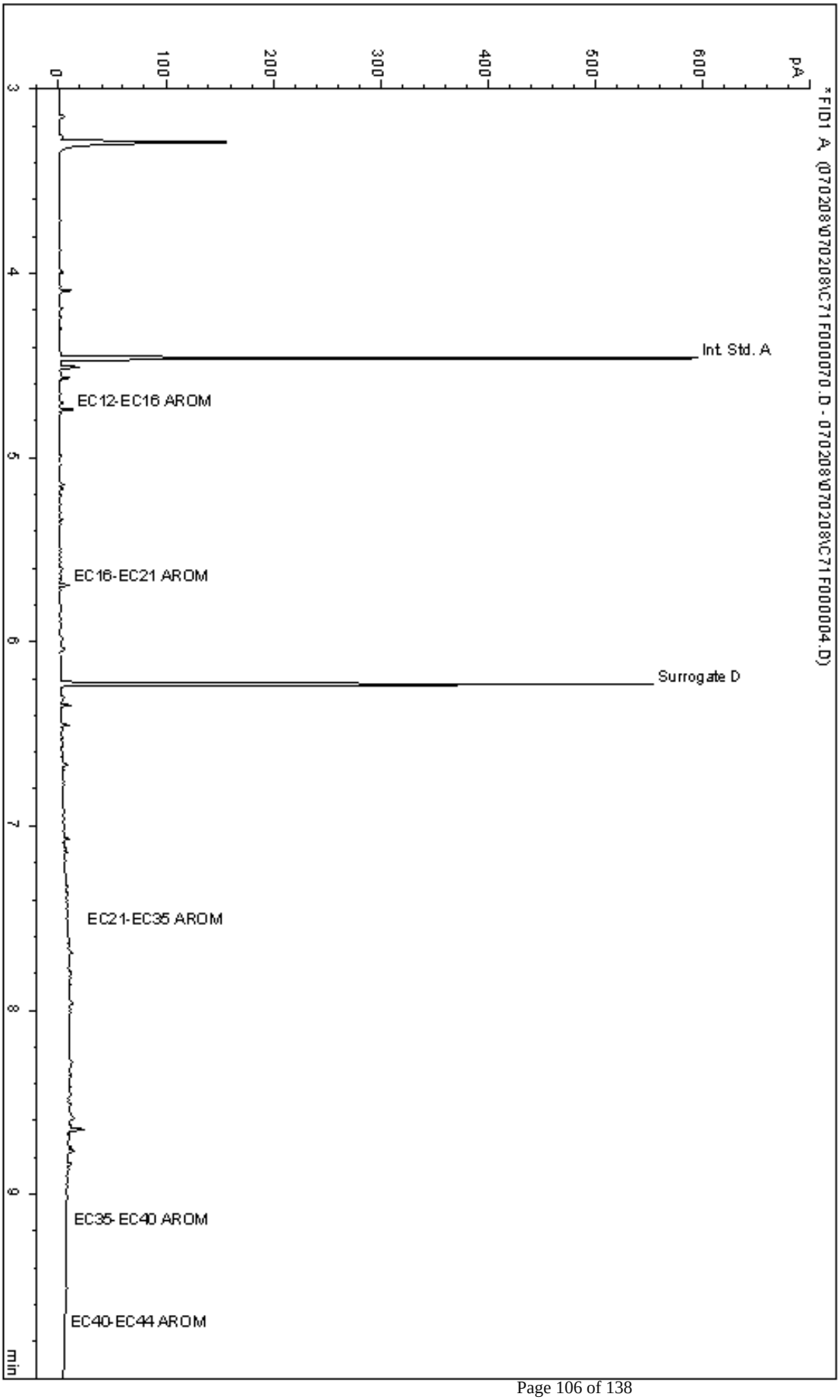
ALcontrol Geochem Analytical Services
Gasoline Range Organics

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Dilution : 1



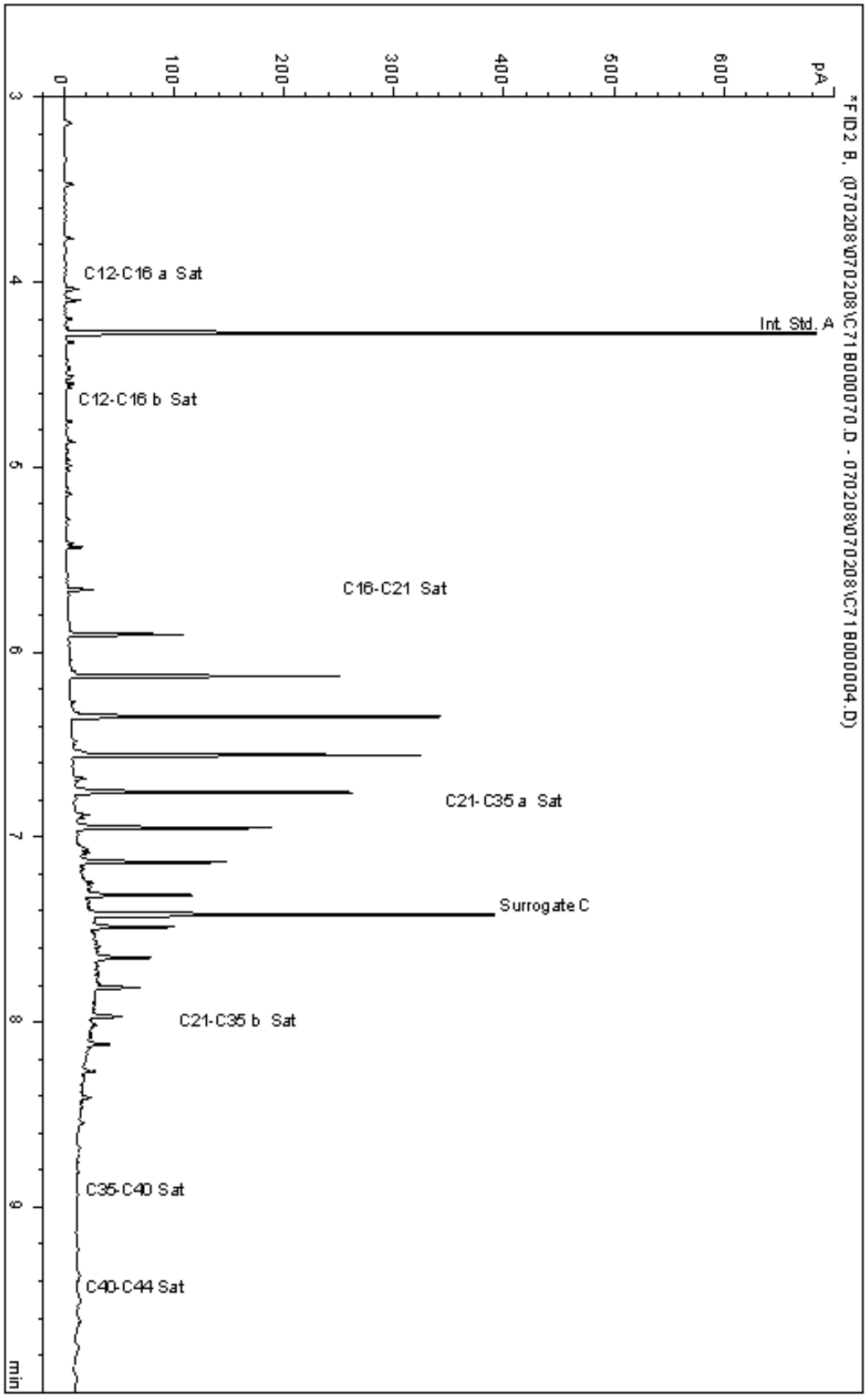
Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 200809998-130/S
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Units : ppb
Dilution :
CF : 1000
Multiplier : 1.004



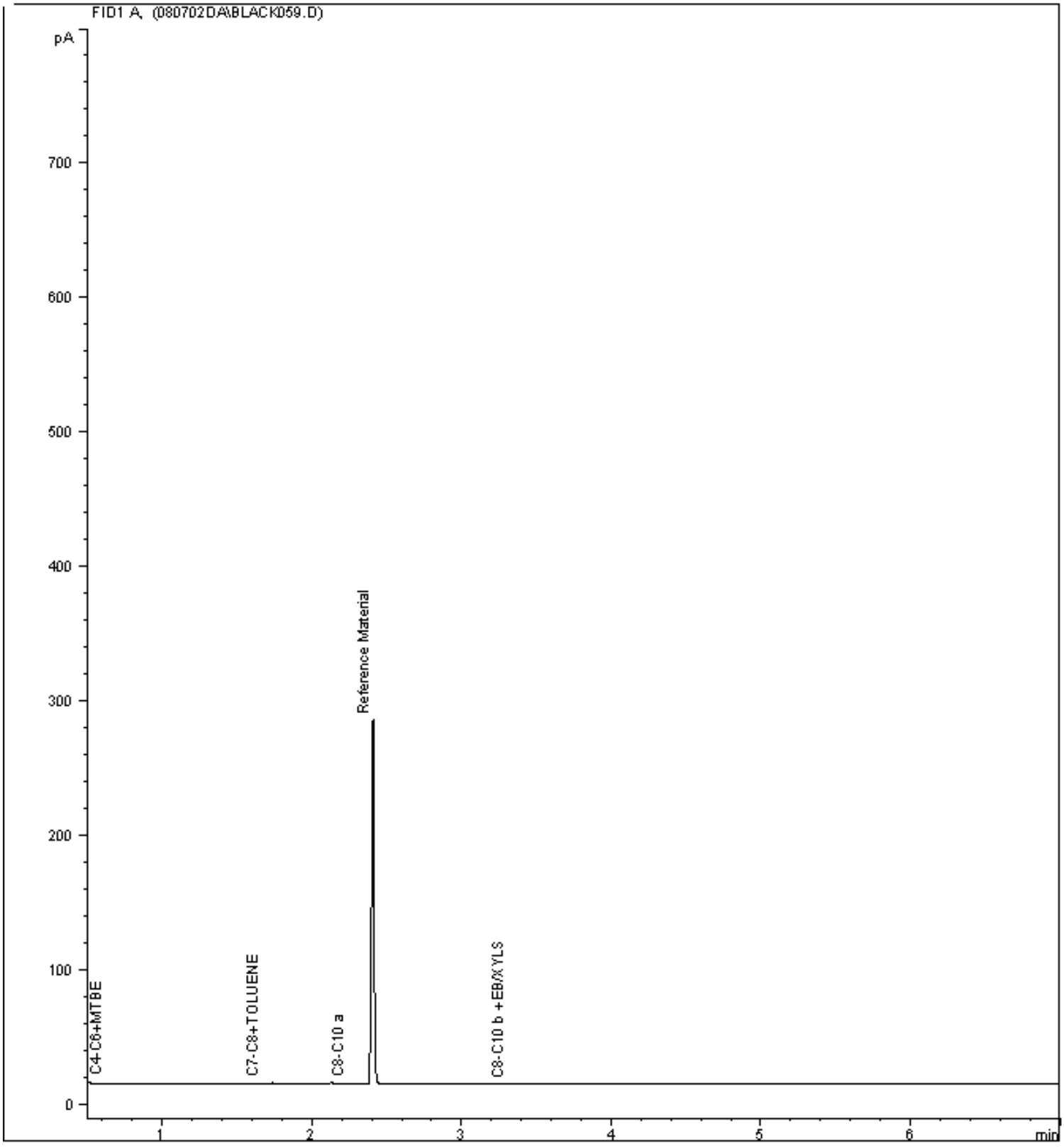
Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

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Multiplier : 1.004



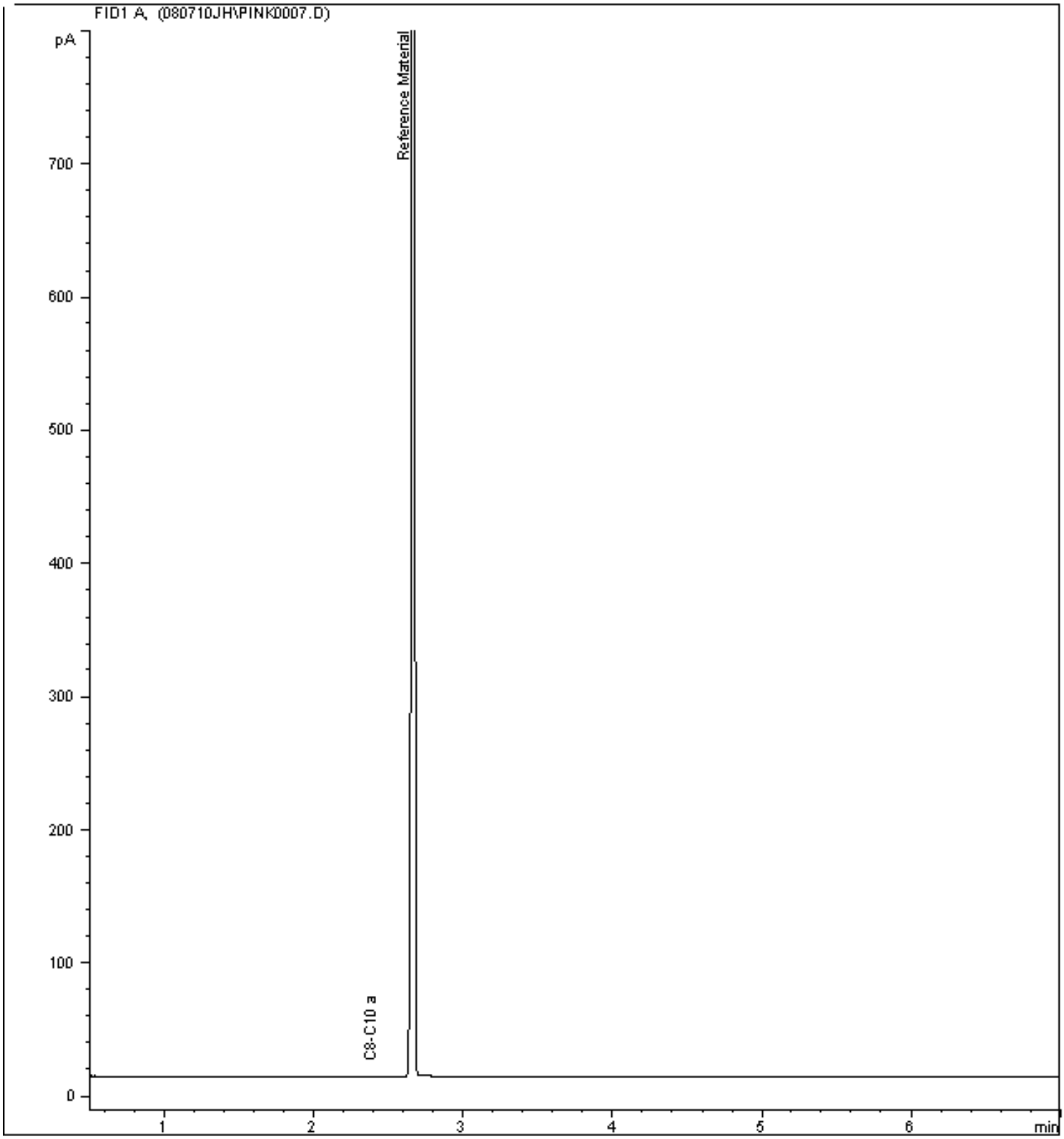
ALcontrol Geochem Analytical Services
Gasoline Range Organics

Sample Identity : 200809998-131/S
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Units : ppb
Dilution : 1



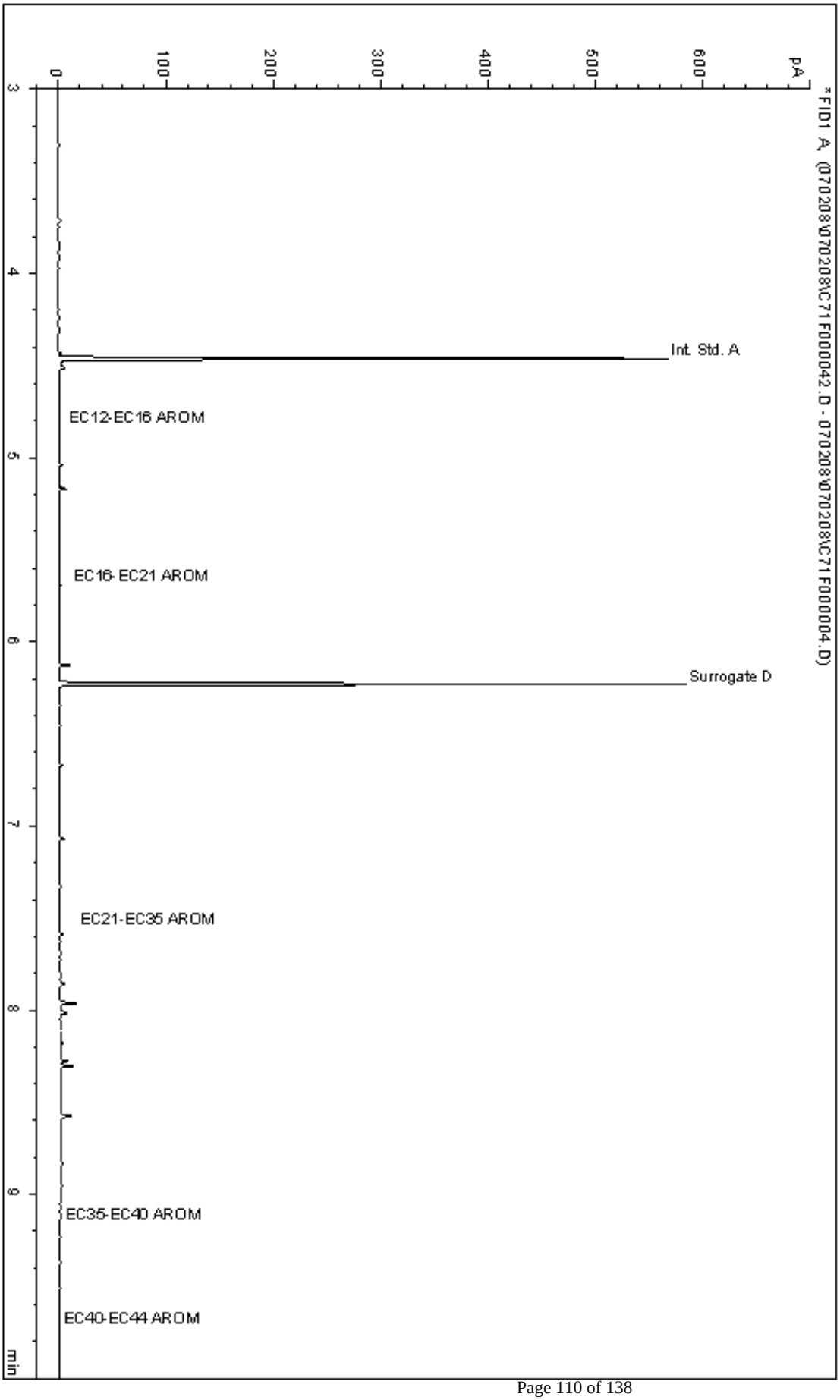
ALcontrol Geochem Analytical Services
Gasoline Range Organics

Sample Identity : 200809998-162/N
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Dilution : 1



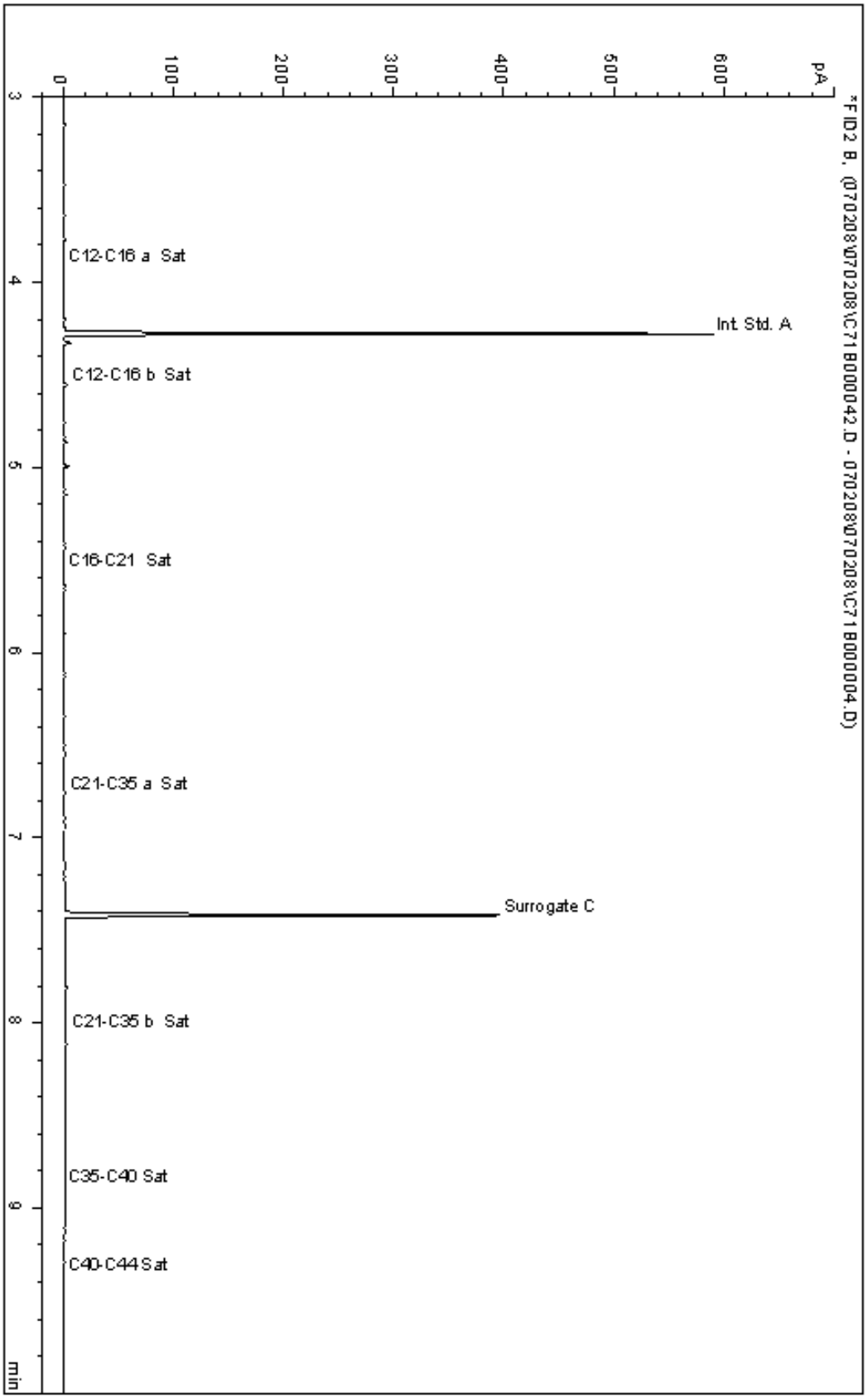
Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 200809998-204/S
Date Acquired : 03/07/08 03:41:42
Units : ppb
Dilution :
CF : 1000
Multiplier : 1.002



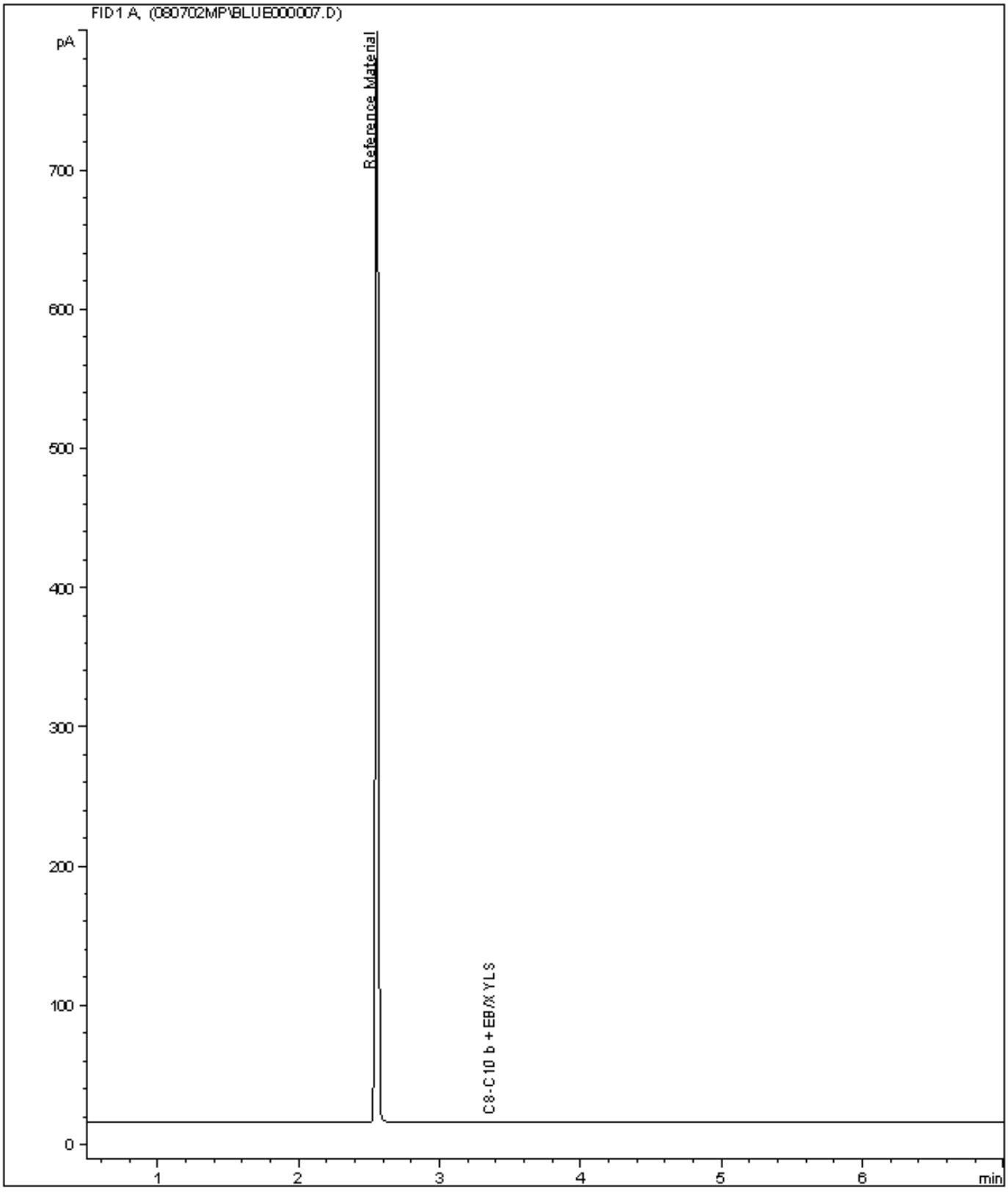
Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

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Multiplier : 1.002



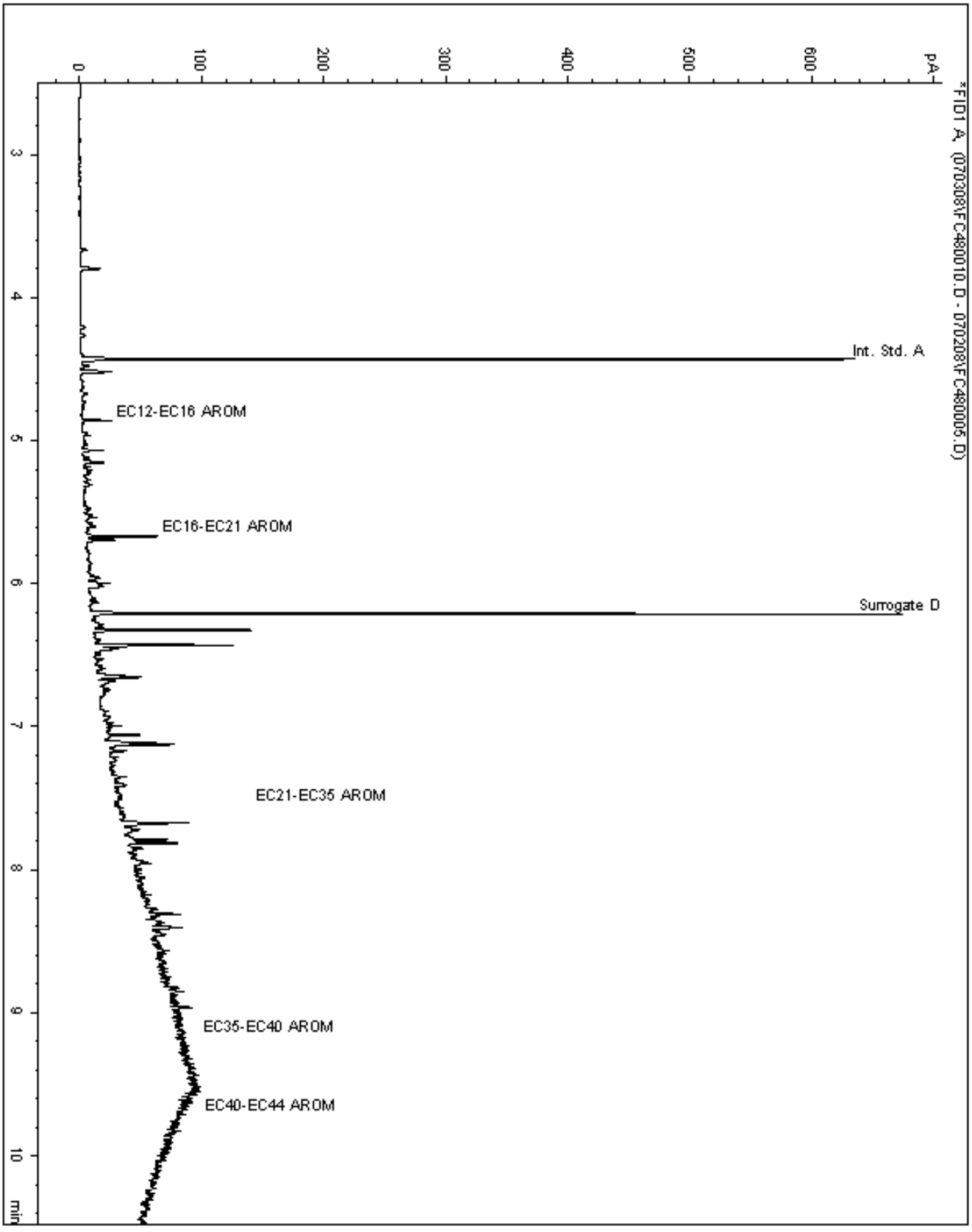
ALcontrol Geochem Analytical Services
Gasoline Range Organics

Sample Identity : 200809998-205/S
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Dilution : 1



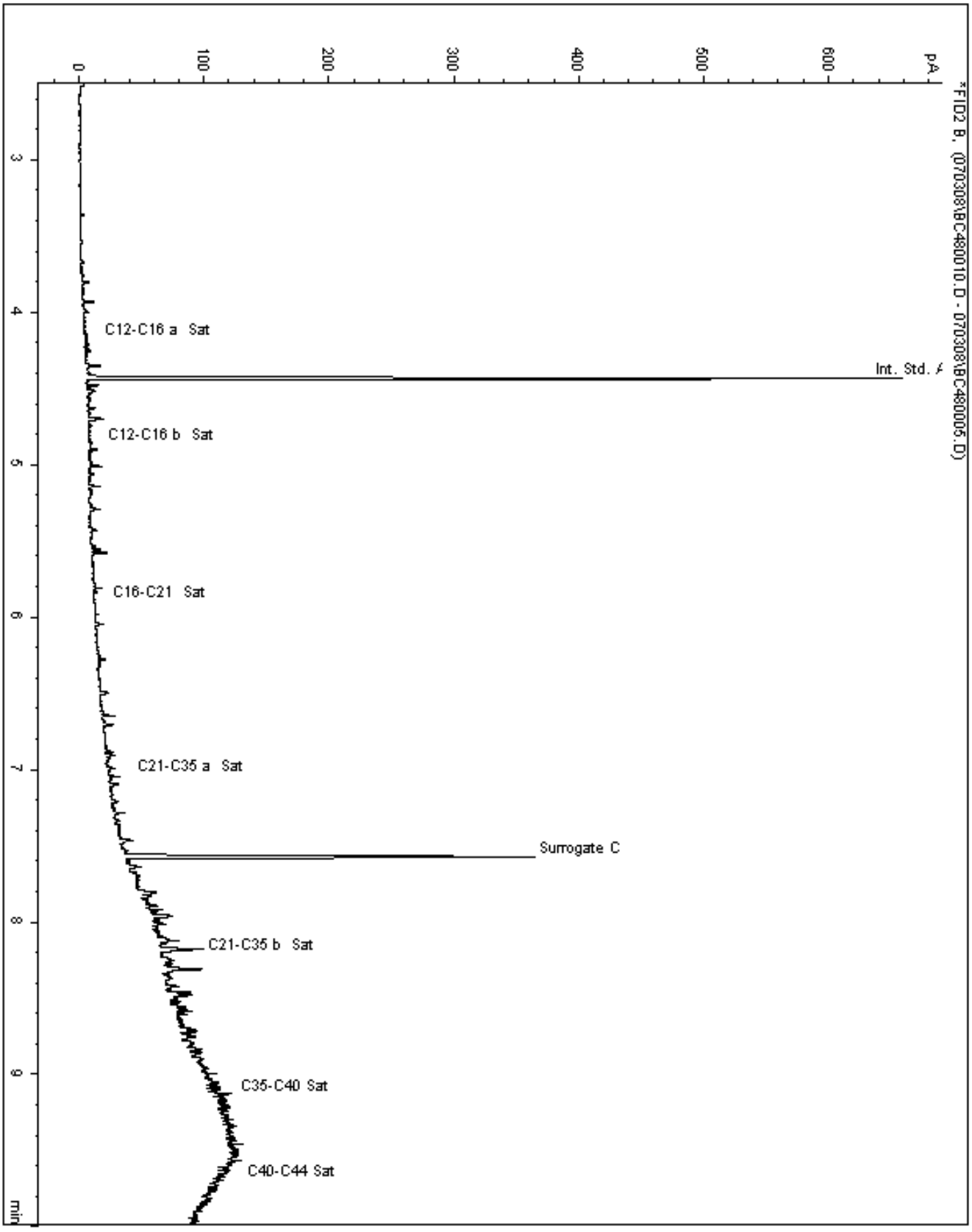
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Speciated TPH - AROM (C12 - C40)

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Dilution :
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Multiplier : 0.995



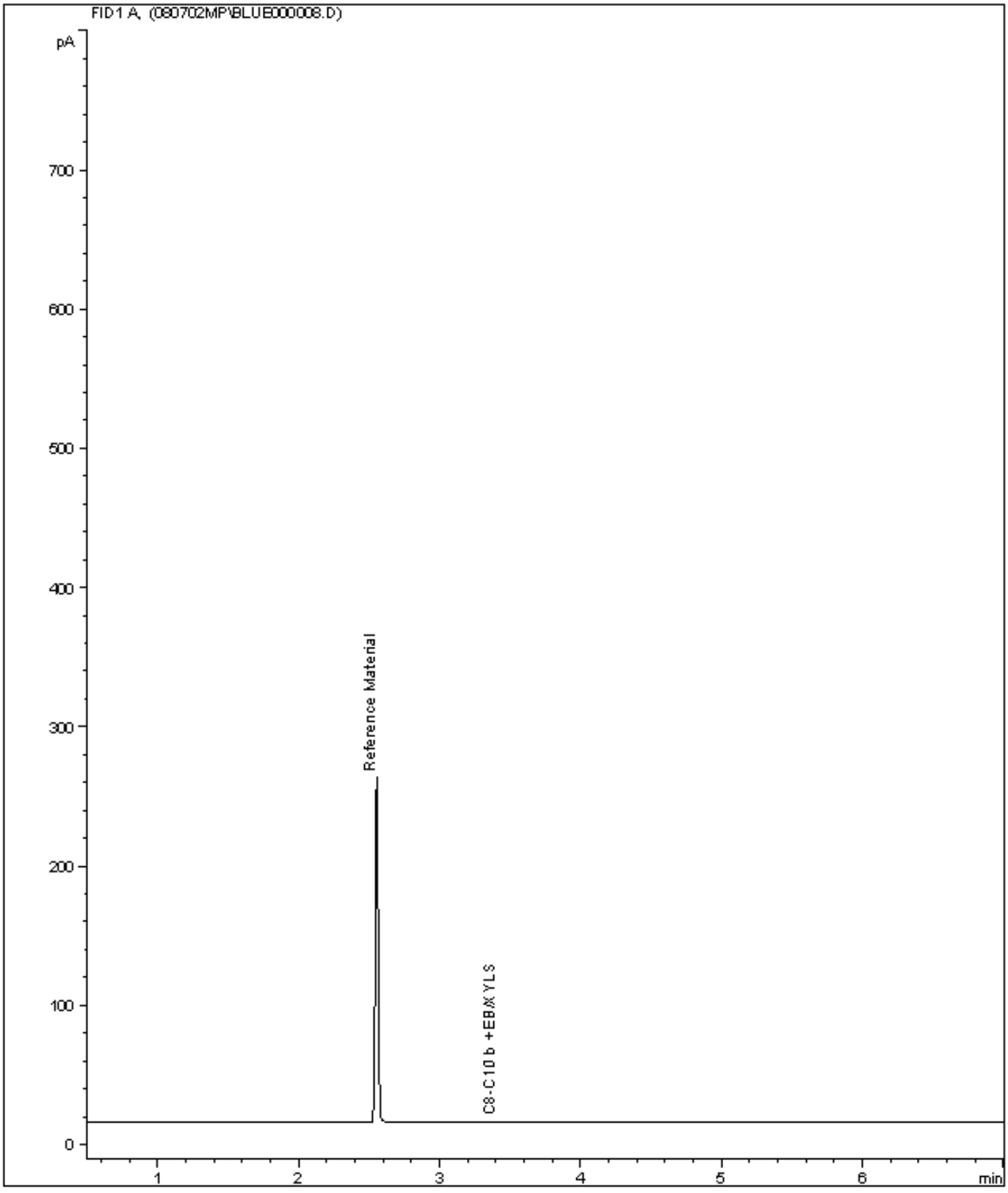
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Speciated TPH - SATS (C12 - C40)

Sample Identity: 200809998-212/S
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Dilution :
CF : 1000
Multiplier : 0.995



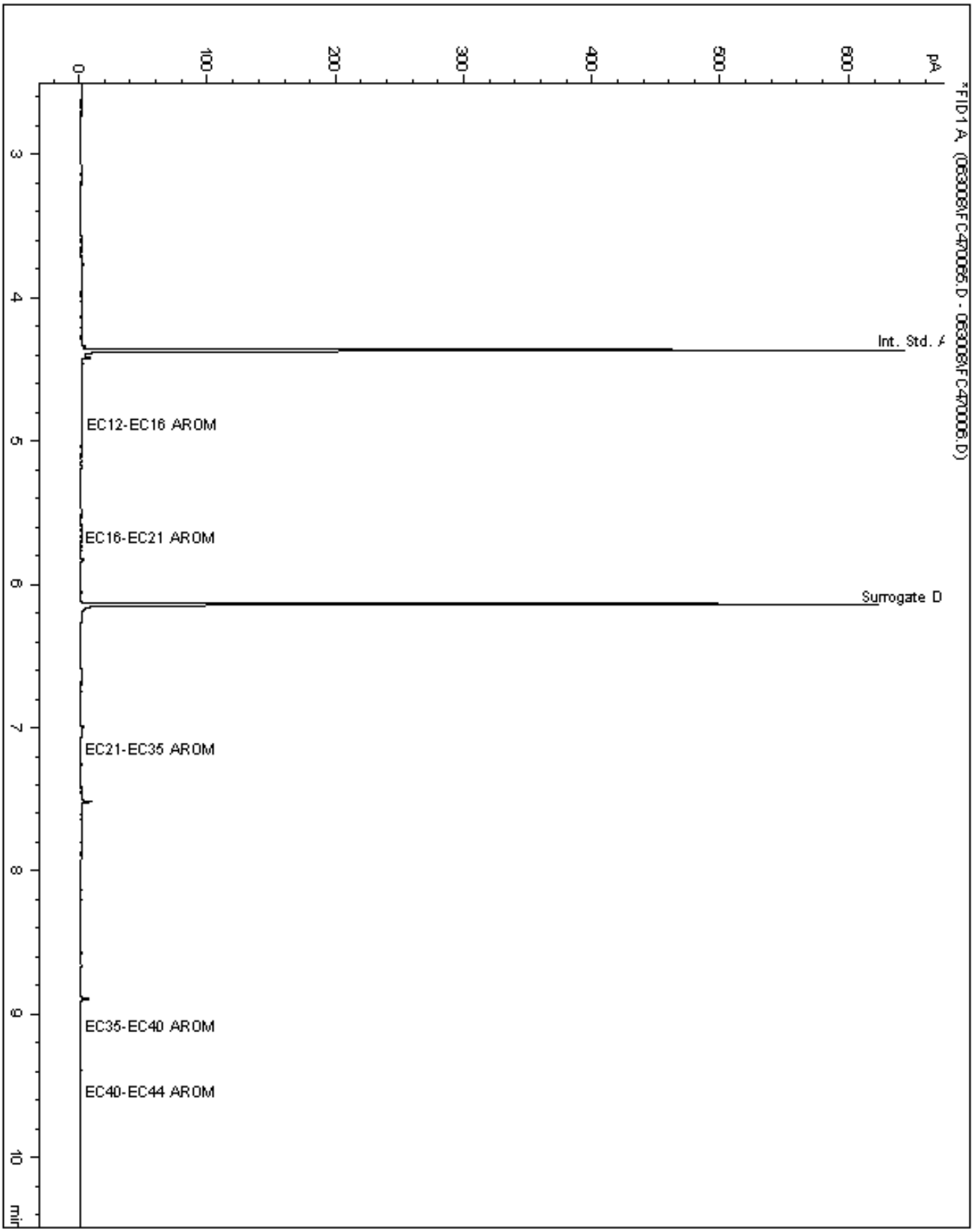
ALcontrol Geochem Analytical Services
Gasoline Range Organics

Sample Identity : 200809998-213/S
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Dilution : 1



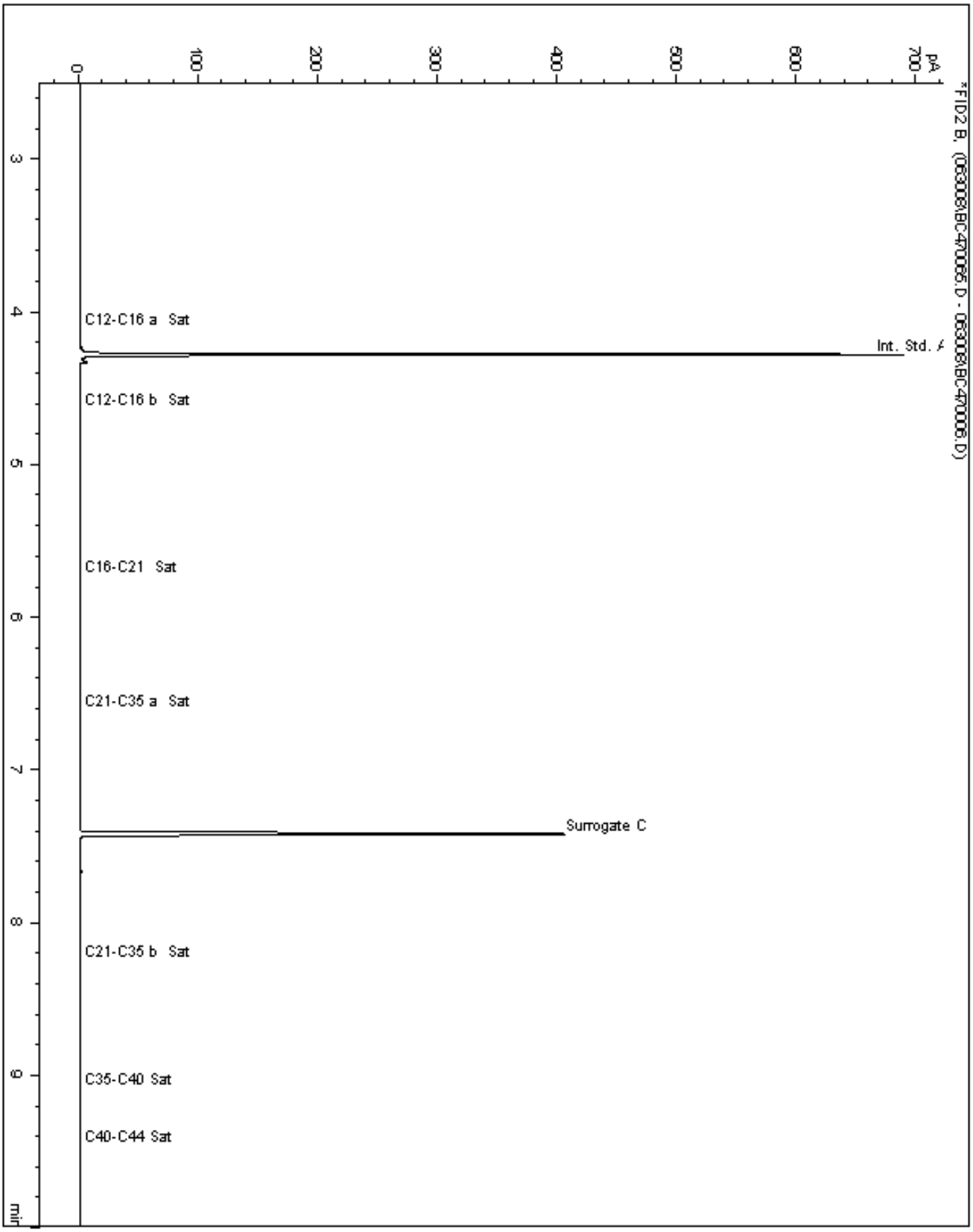
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Speciated TPH - AROM (C12 - C40)

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Multiplier : 0.017



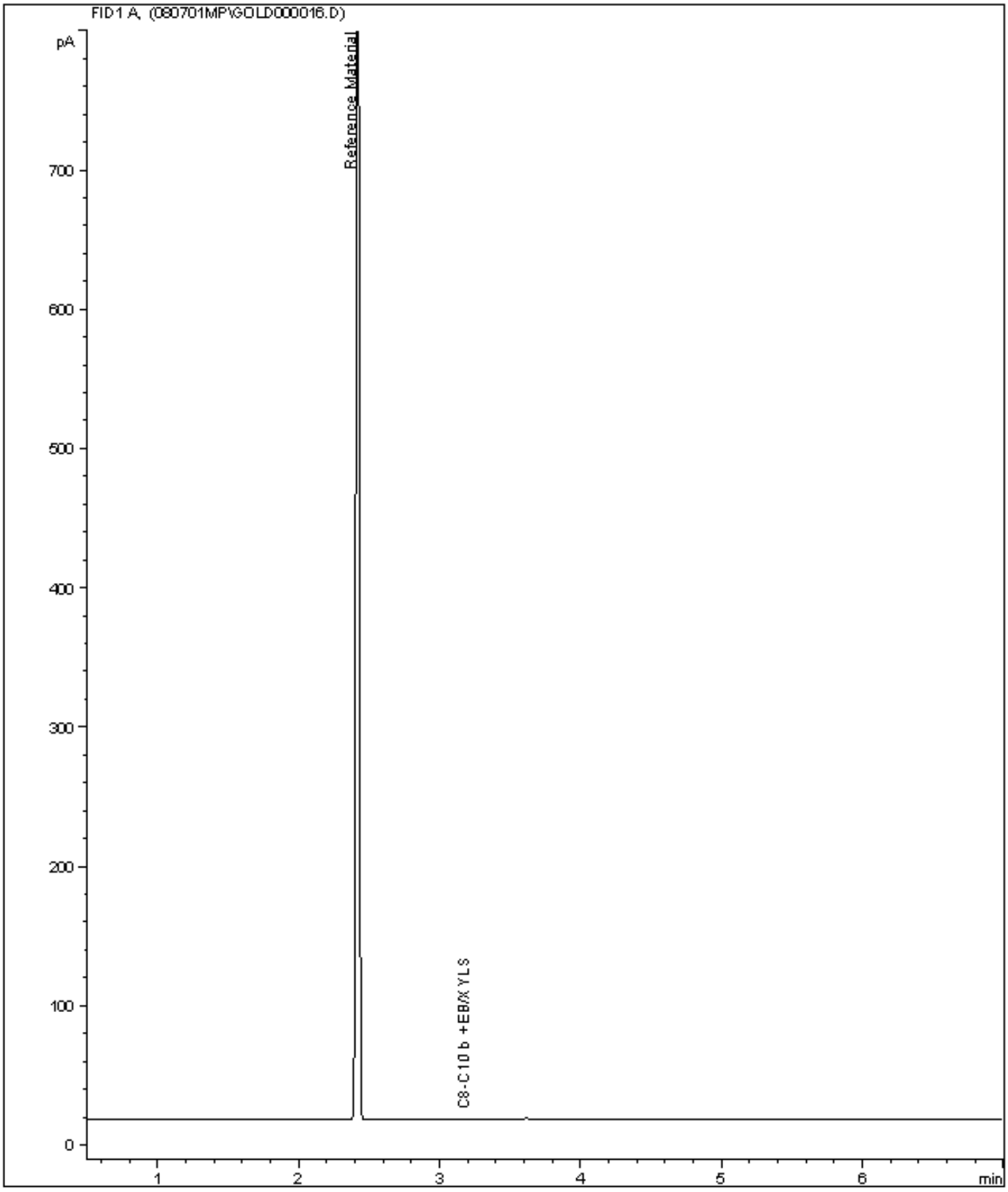
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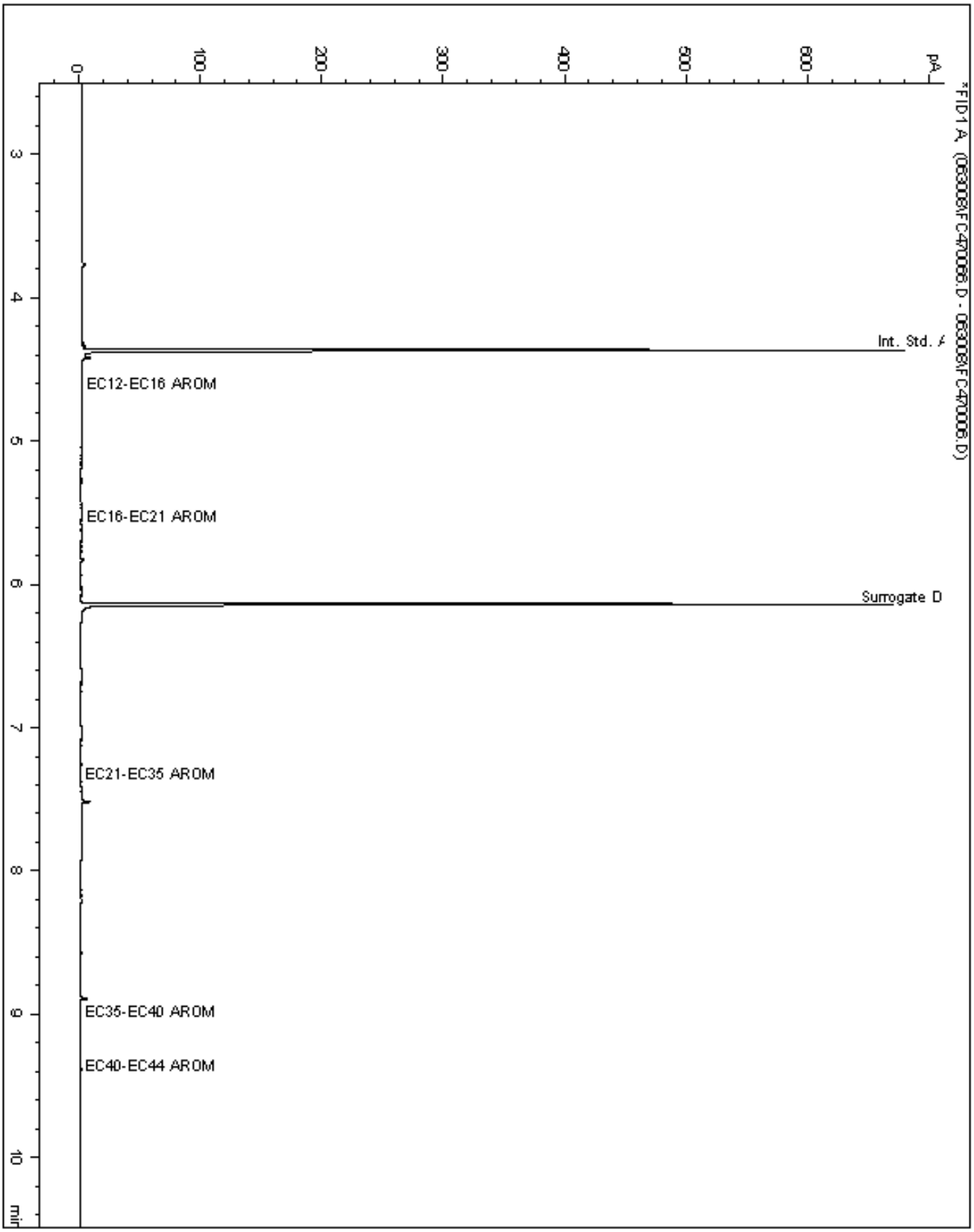
ALcontrol Geochem Analytical Services
Gasoline Range Organics

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Units : ppb
Dilution : 1



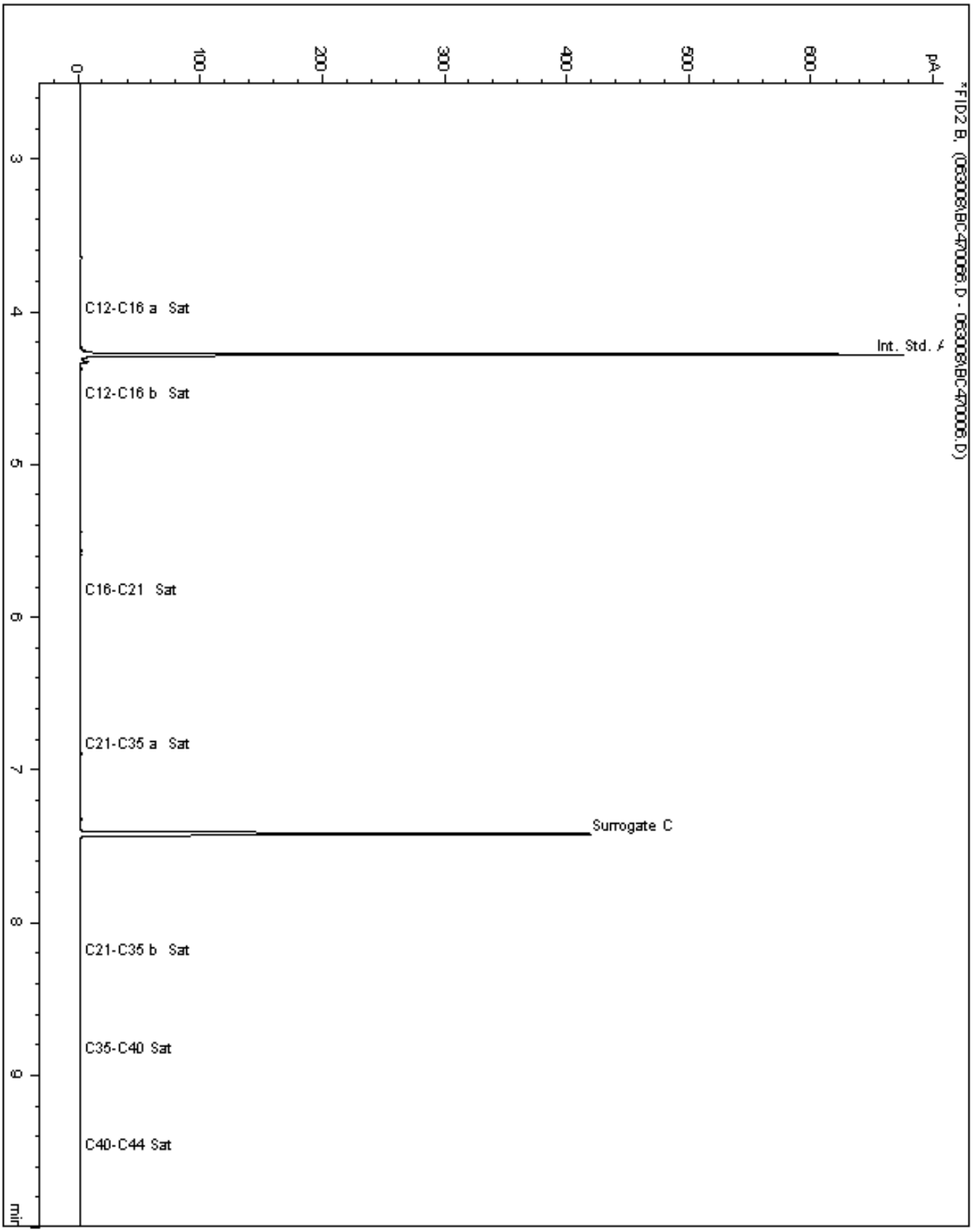
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Speciated TPH - AROM (C12 - C40)

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Dilution :
CF : 1000
Multiplier : 0.017



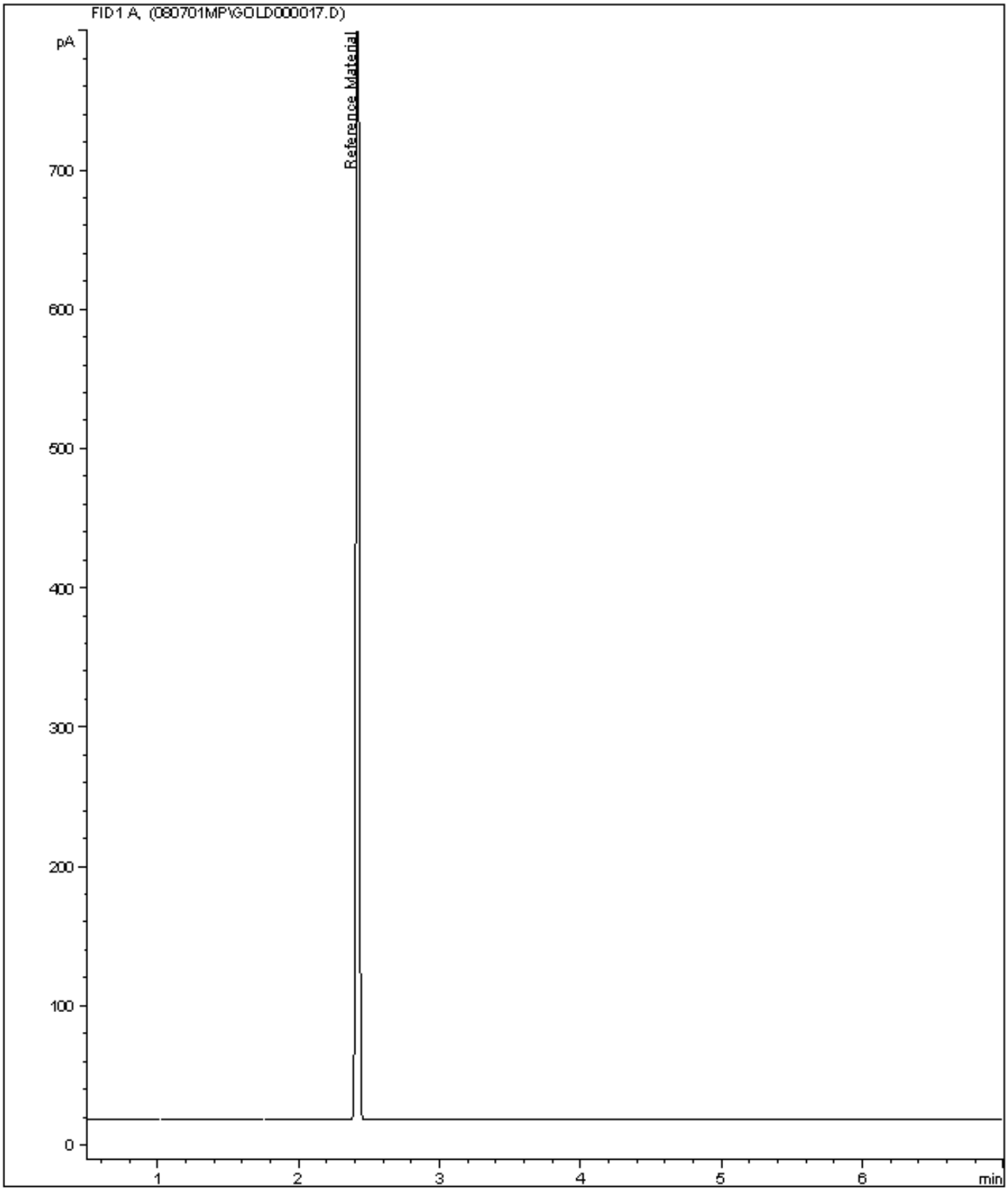
Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

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Multiplier : 0.017



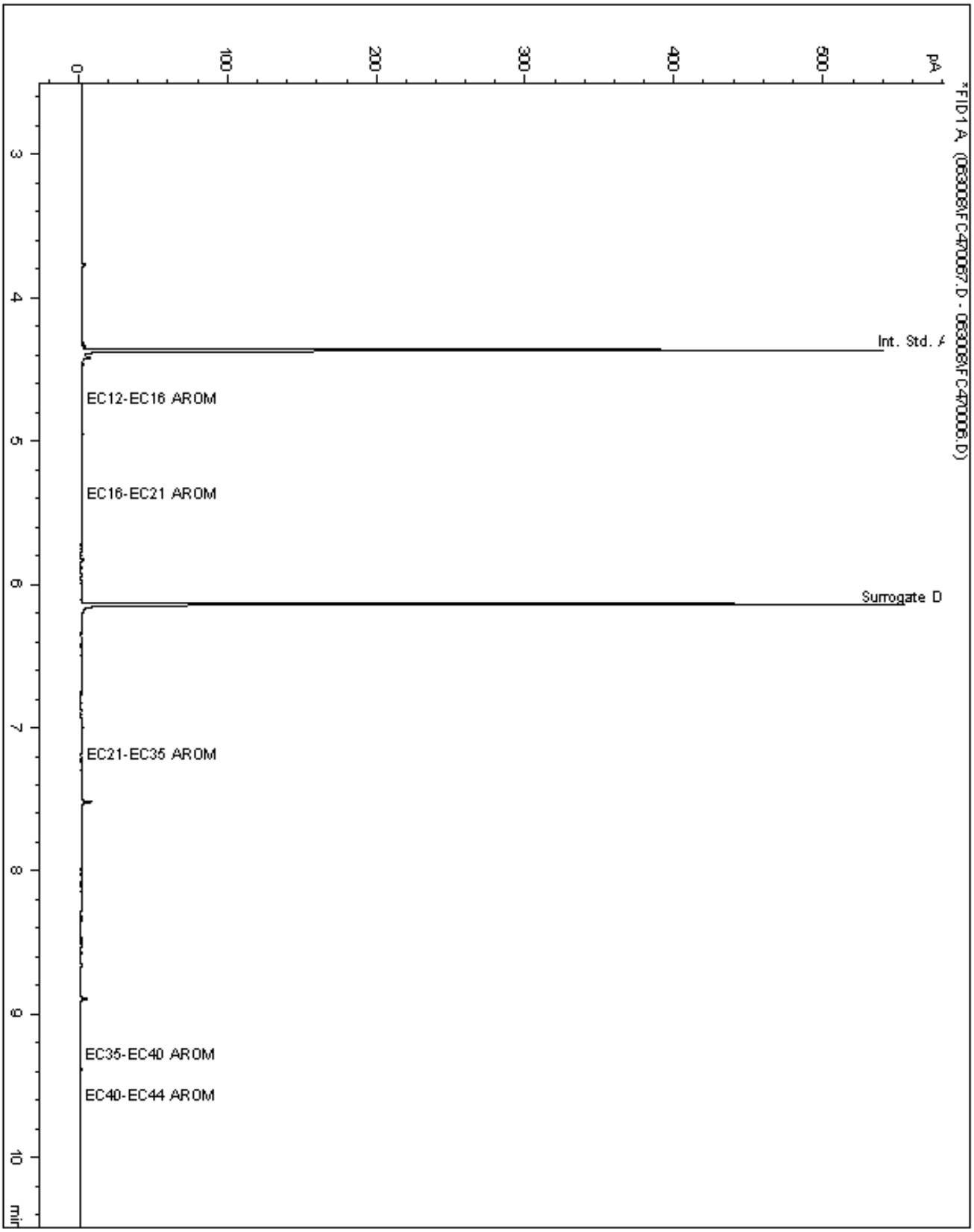
ALcontrol Geochem Analytical Services
Gasoline Range Organics

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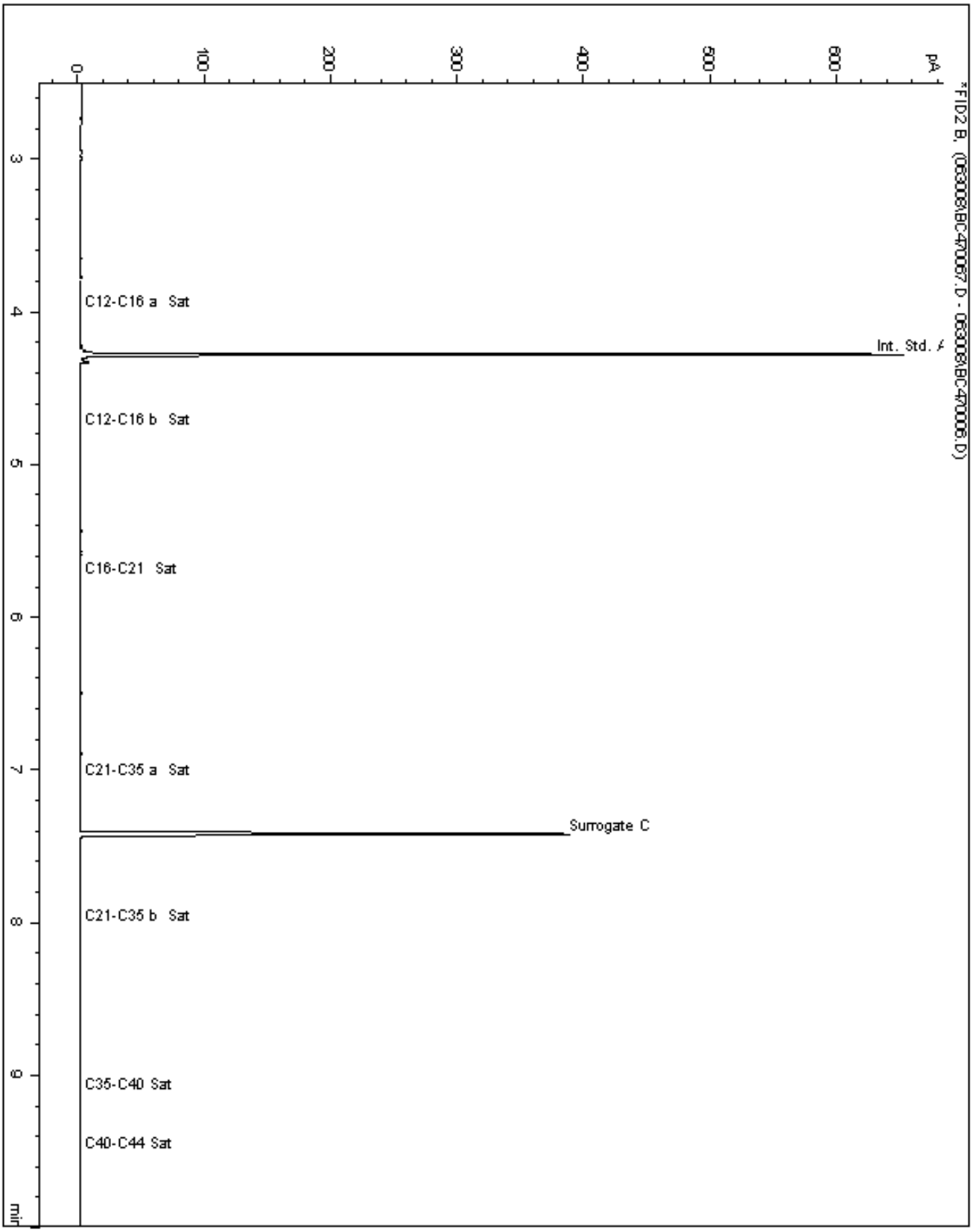
Alcontrol/Geochem Analytical Services
Speciated TPH - AROM (C12 - C40)

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Multiplier : 0.017



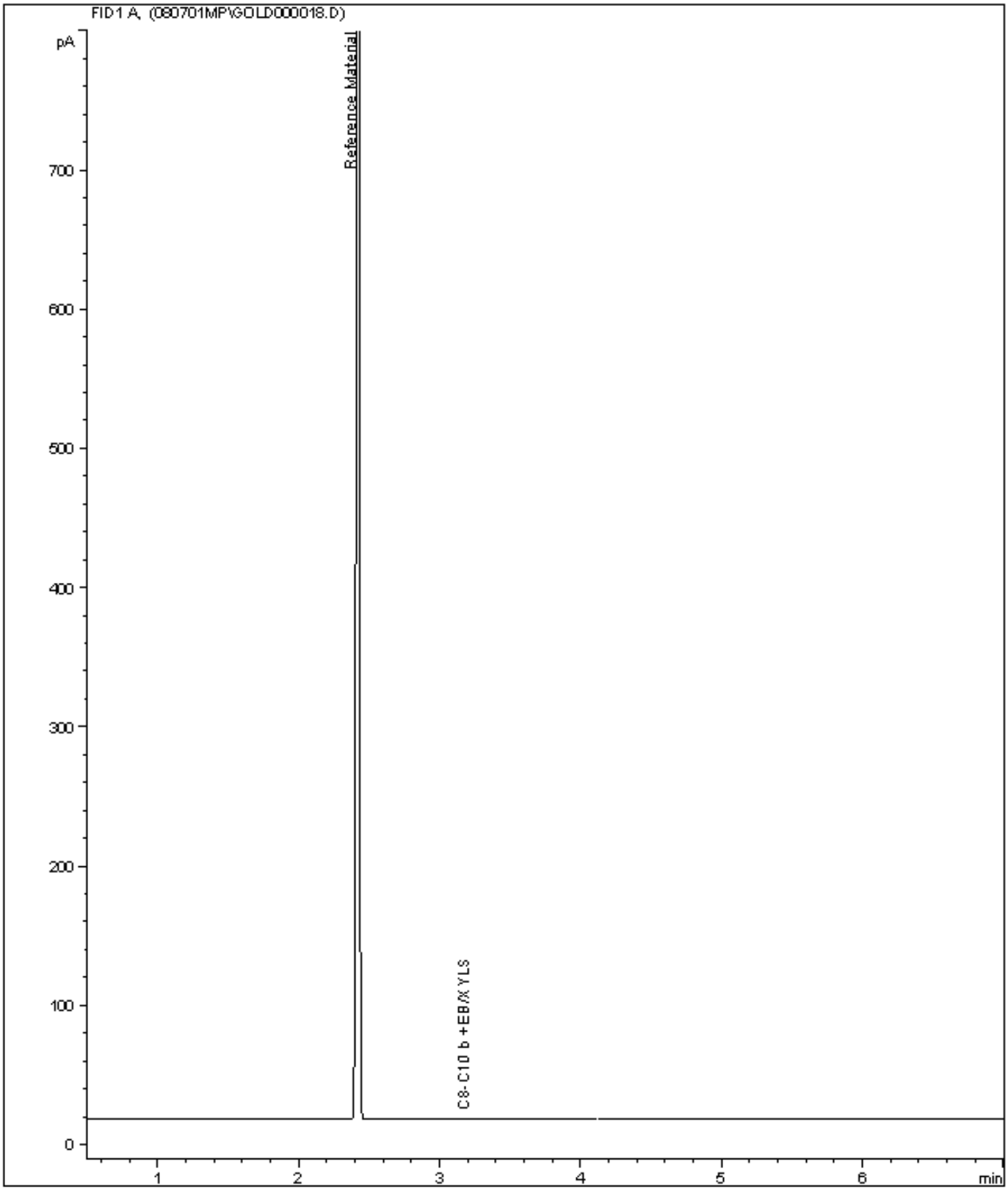
Alcontrol/Geochem Analytical Services
Speciated TPH - SATS (C12 - C40)

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Multiplier : 0.017



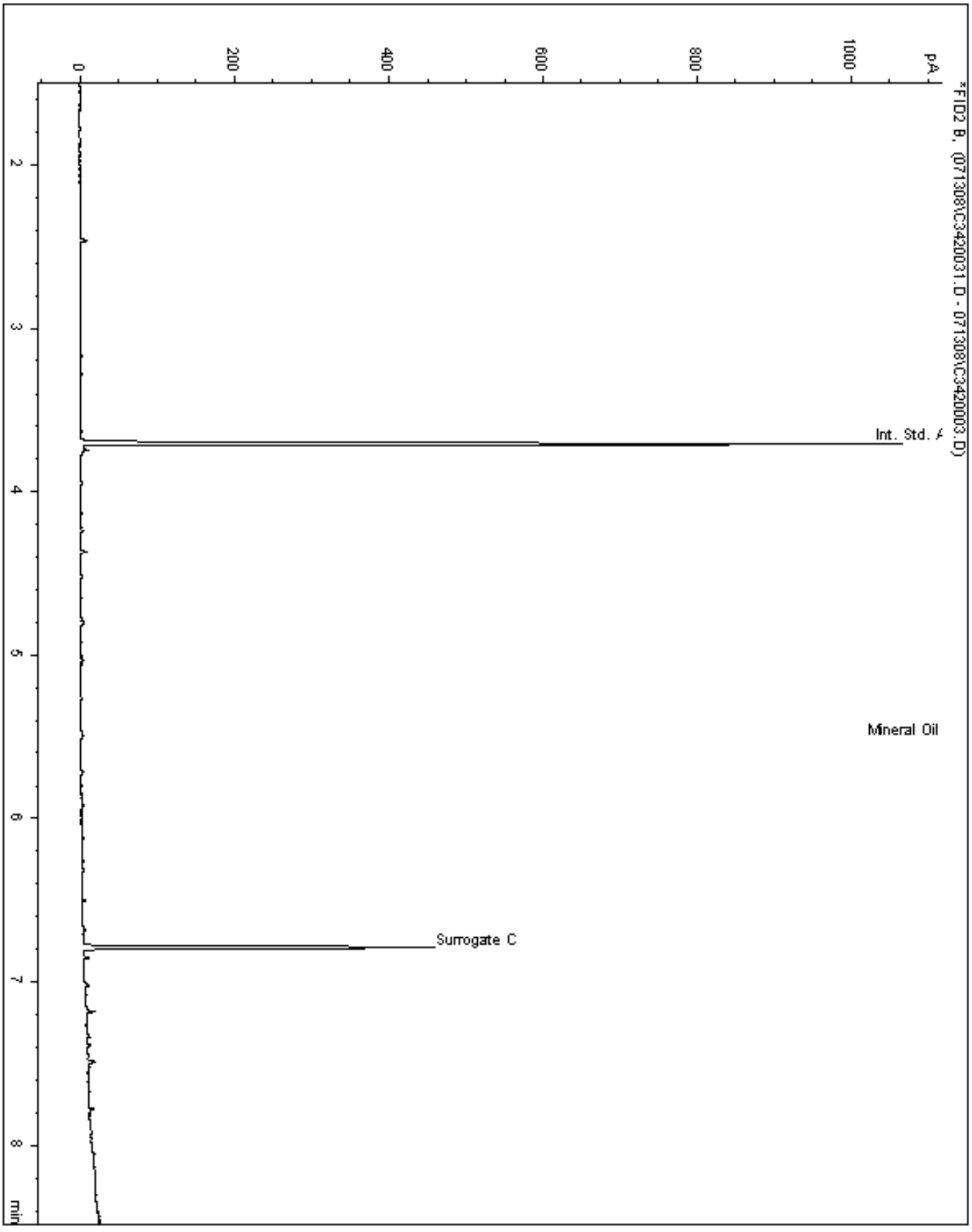
ALcontrol Geochem Analytical Services
Gasoline Range Organics

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Date Acquired : 01/07/08 21:01:23
Units : ppb
Dilution : 1



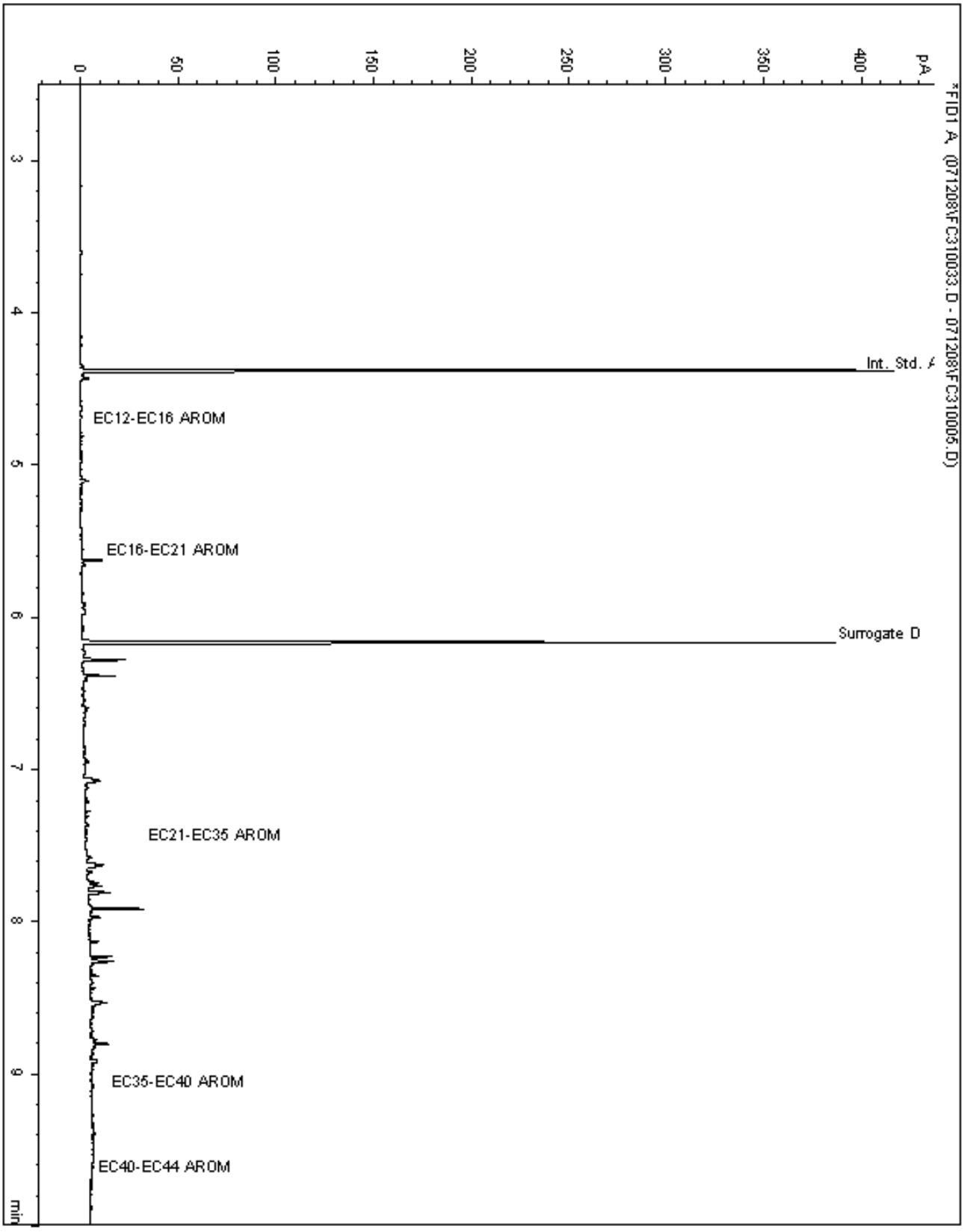
Alcontrol Laboratories
Mineral Oil Range Organics (C10 - C40)

Sample Identity : 200809998-226/S
Date Acquired : 14/07/08 06:19:28 PM
Units : mg/kg
Sample Multiplier : 0.999
Dilution :



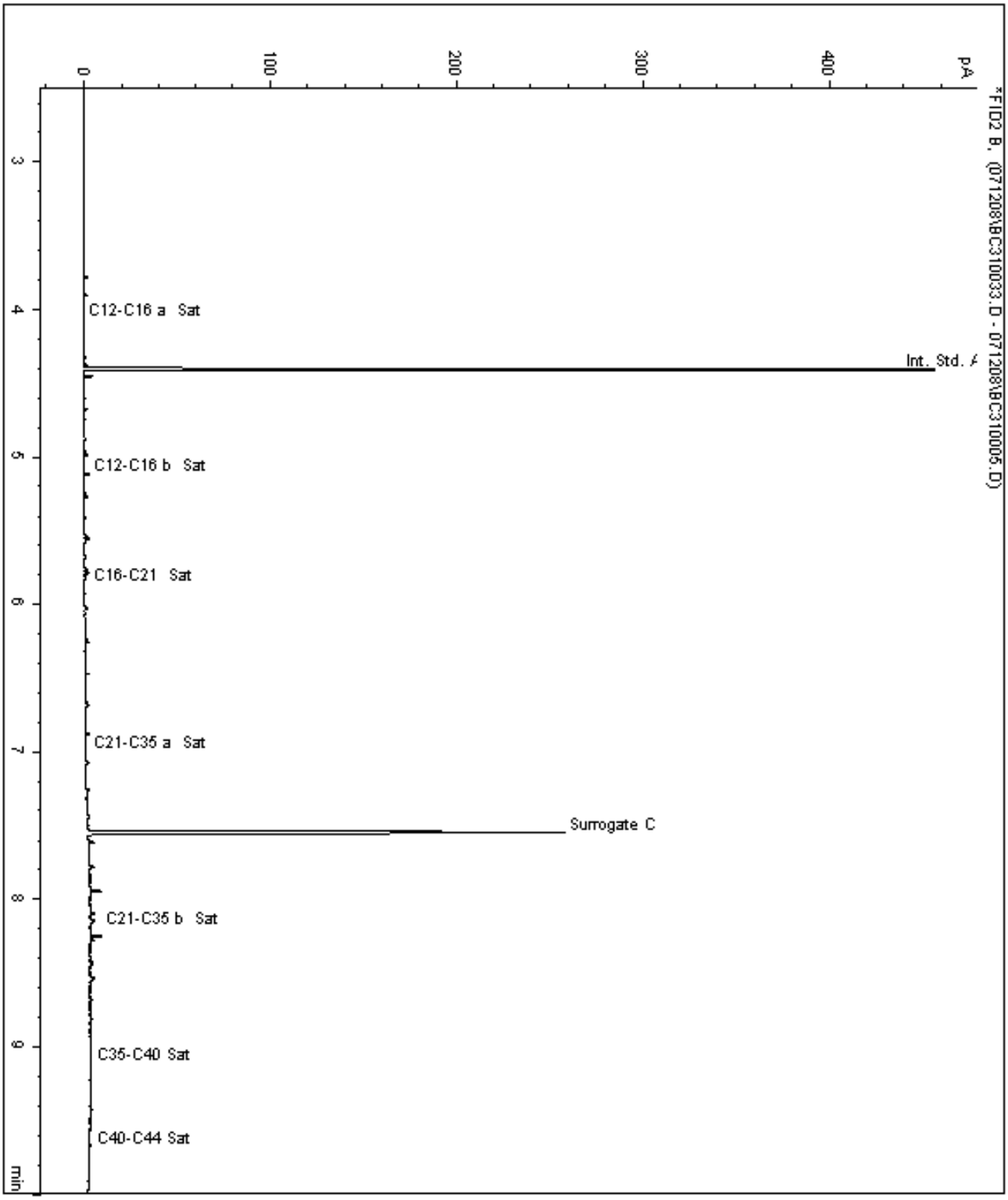
Alcontrol Analytical Services
Speciated TPH - AROM (C12 - C40)

Sample Identity: 200809998-226/S
Date Acquired : 13/07/08 13:14:27 PM
Units : ppb
Dilution:



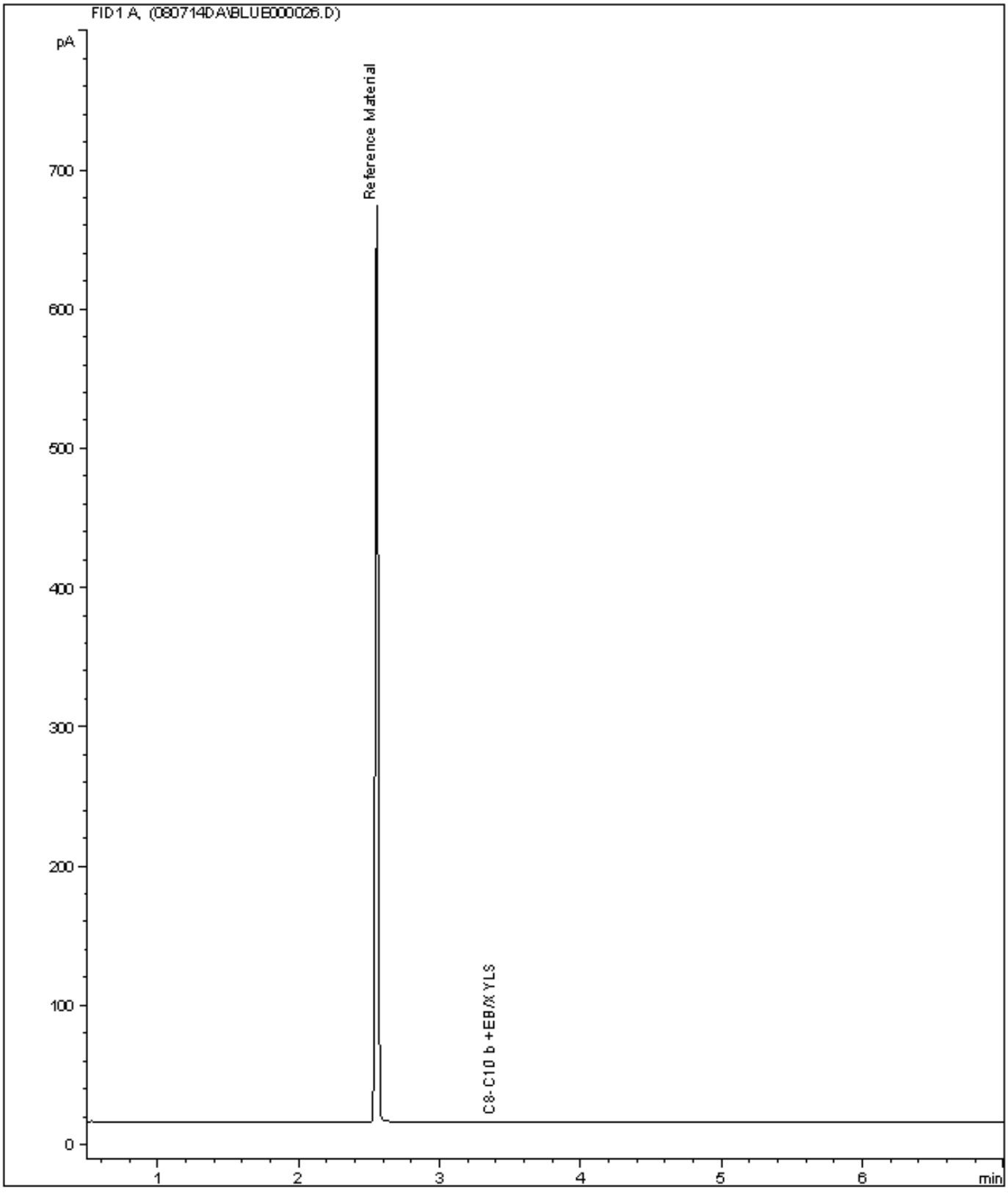
Alcontrol Analytical Services
Speciated TPH - SATS (C12 - C40)

Sample Identity: 200809998-226/S
Date Acquired : 13/07/08 13:14:26 PM
Units : ppb
Dilution:



ALcontrol Geochem Analytical Services
Gasoline Range Organics

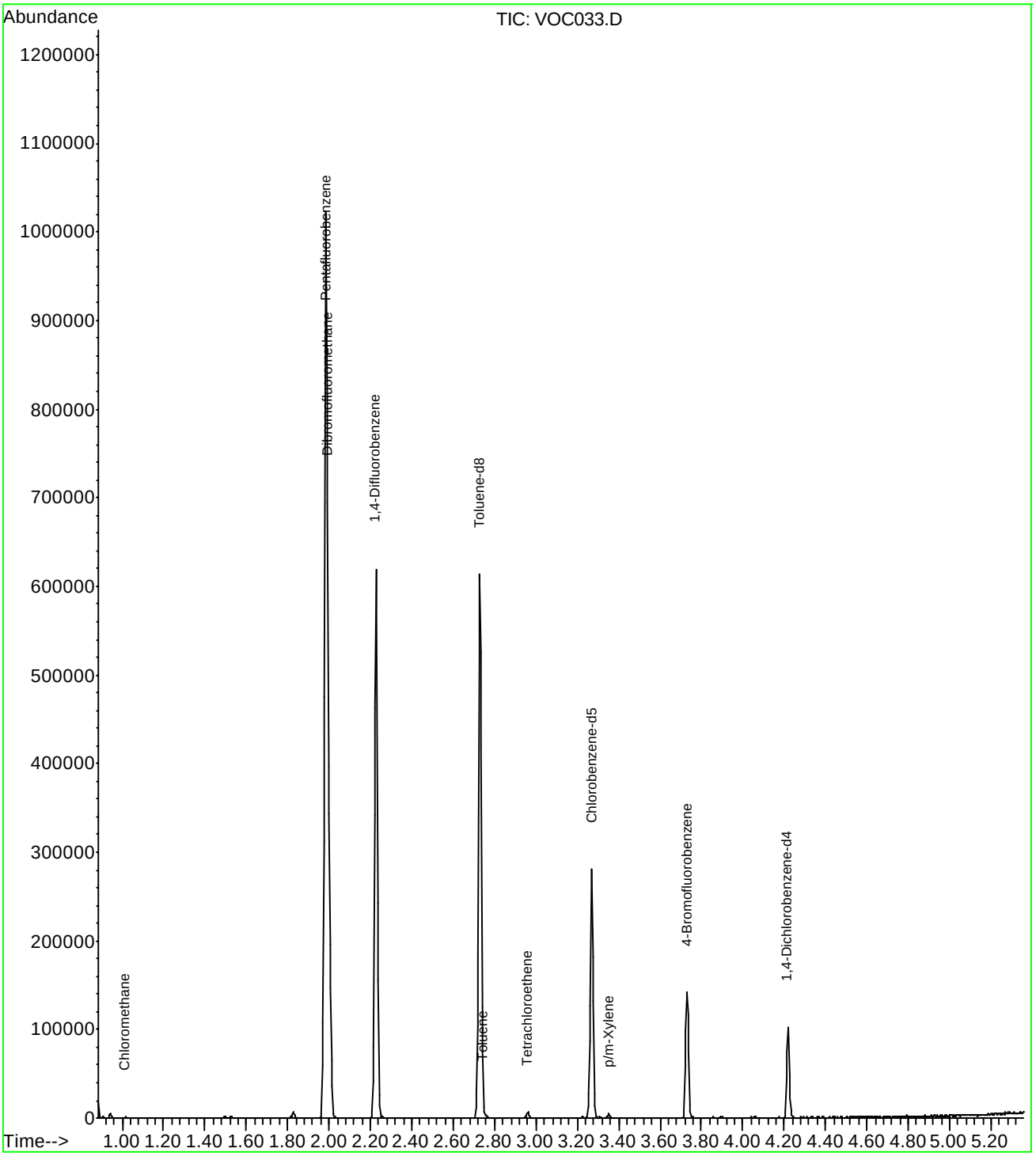
Sample Identity : 200809998-227/S
Date Acquired : 14/07/08 20:20:56
Units : ppb
Dilution : 1



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\070108
Data File : VOC033.D
Acq On : 1 Jul 2008 21:28
Operator : Alcontrol Labs
Sample : 200809998-067
Misc : /soil
ALS Vial : 33 Sample Multiplier: 2

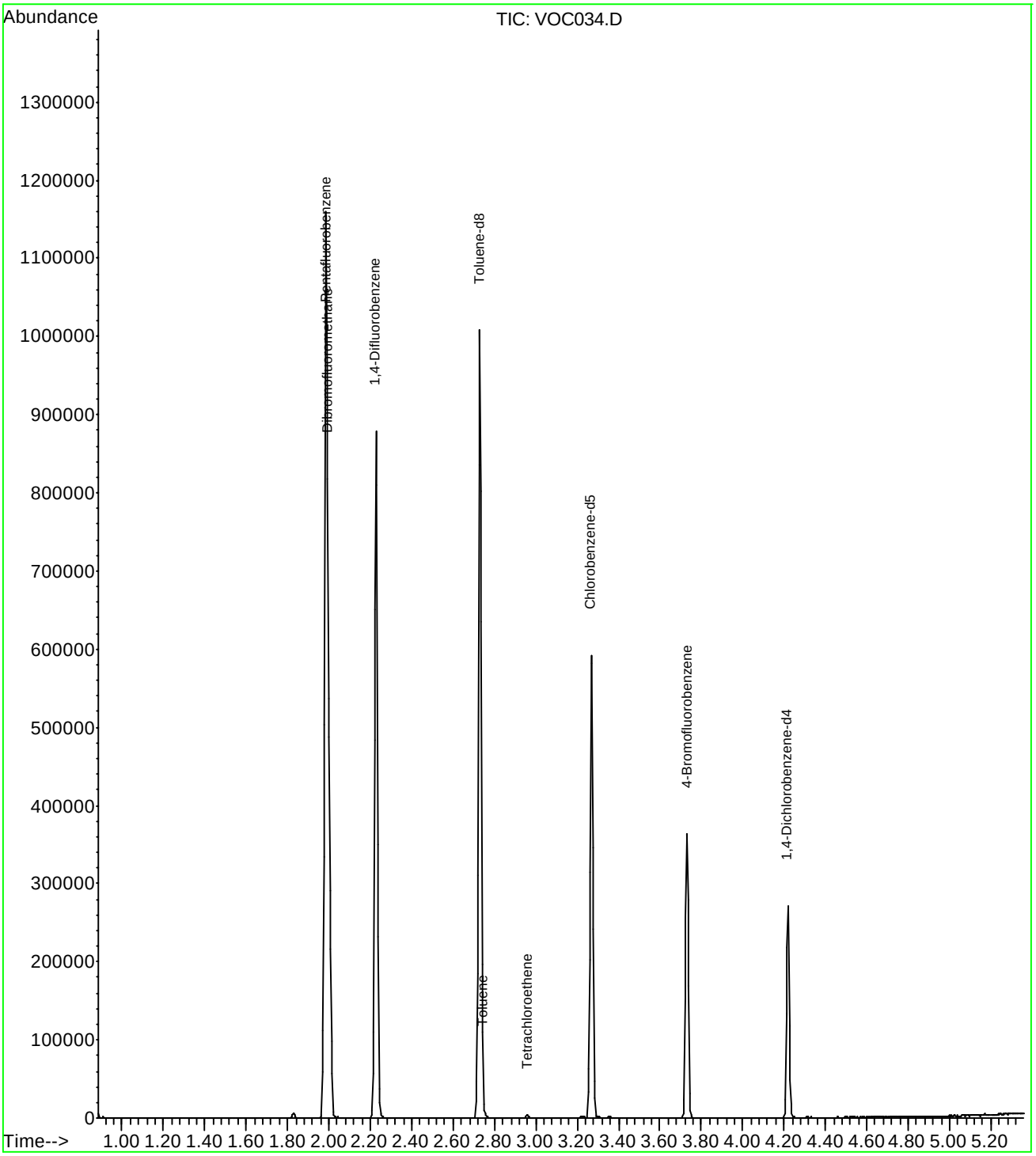
Quant Time: Jul 02 08:41:28 2008
Quant Method : C:\MSDCHEM\1\METHODS\FASTVOC2.M
Quant Title : Volatile Organic Compounds (EPA 624/8260)
QLast Update : Wed Jul 02 08:06:41 2008
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\070108
Data File : VOC034.D
Acq On : 1 Jul 2008 21:39
Operator : Alcontrol Labs
Sample : 200809998-075
Misc : /soil
ALS Vial : 34 Sample Multiplier: 2

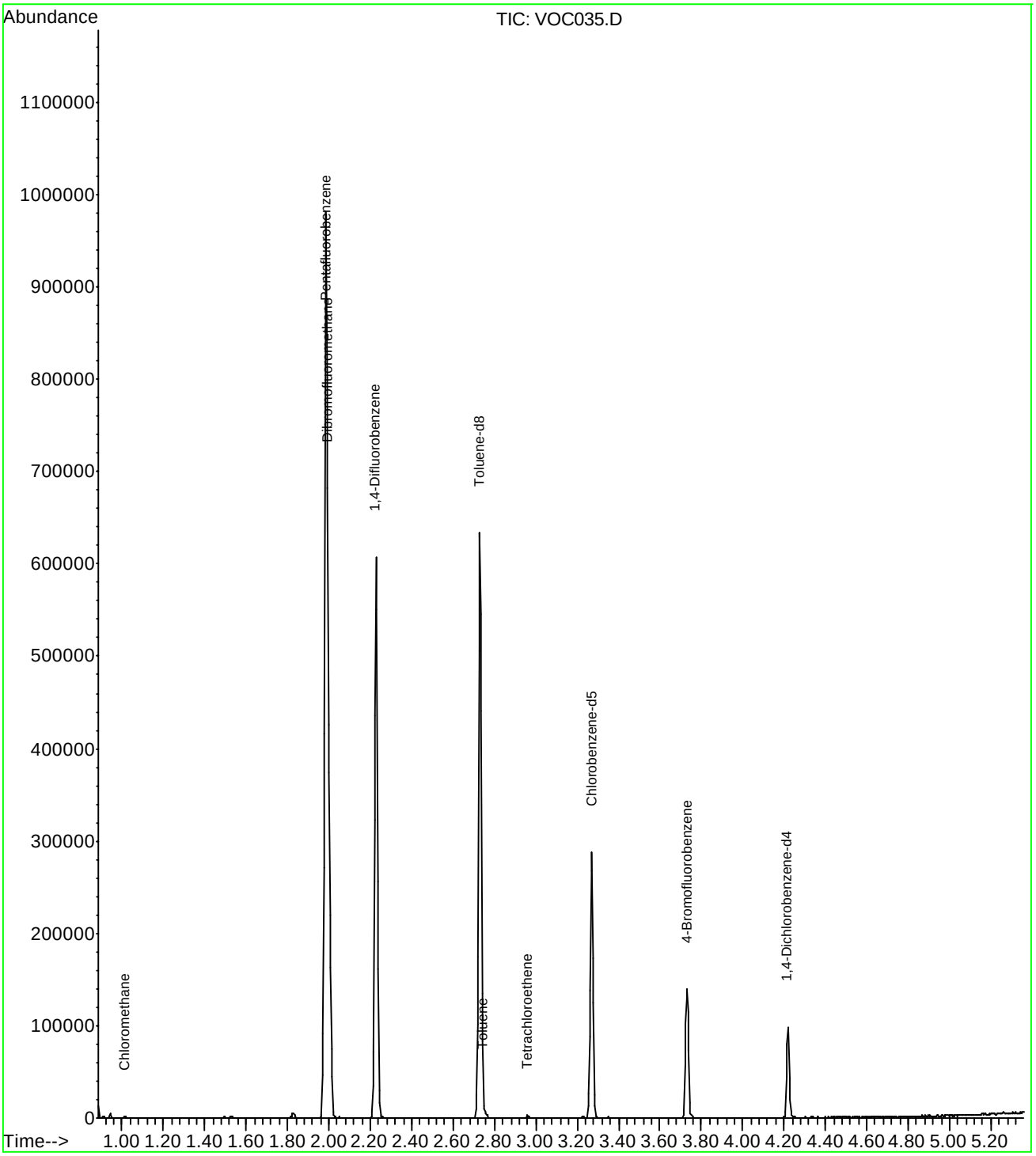
Quant Time: Jul 02 08:08:03 2008
Quant Method : C:\MSDCHEM\1\METHODS\FASTVOC2.M
Quant Title : Volatile Organic Compounds (EPA 624/8260)
QLast Update : Wed Jul 02 08:06:41 2008
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\070108
Data File : VOC035.D
Acq On : 1 Jul 2008 21:50
Operator : Alcontrol Labs
Sample : 200809998-094
Misc : /soil
ALS Vial : 35 Sample Multiplier: 2

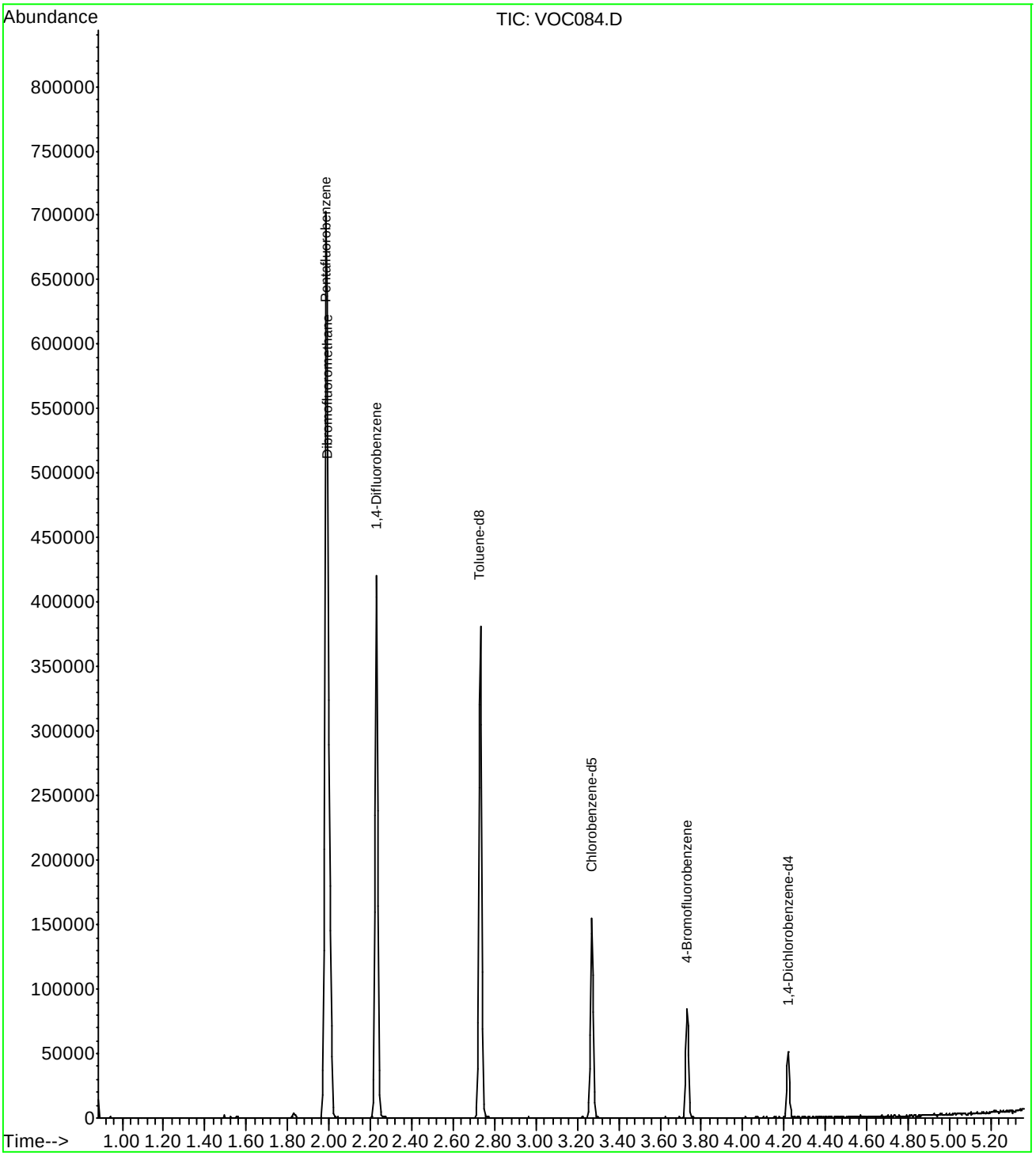
Quant Time: Jul 02 08:41:49 2008
Quant Method : C:\MSDCHEM\1\METHODS\FASTVOC2.M
Quant Title : Volatile Organic Compounds (EPA 624/8260)
QLast Update : Wed Jul 02 08:06:41 2008
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\070208
Data File : VOC084.D
Acq On : 4 Jul 2008 2:23
Operator : Alcontrol Labs
Sample : 200809998-213
Misc : /soil
ALS Vial : 84 Sample Multiplier: 2

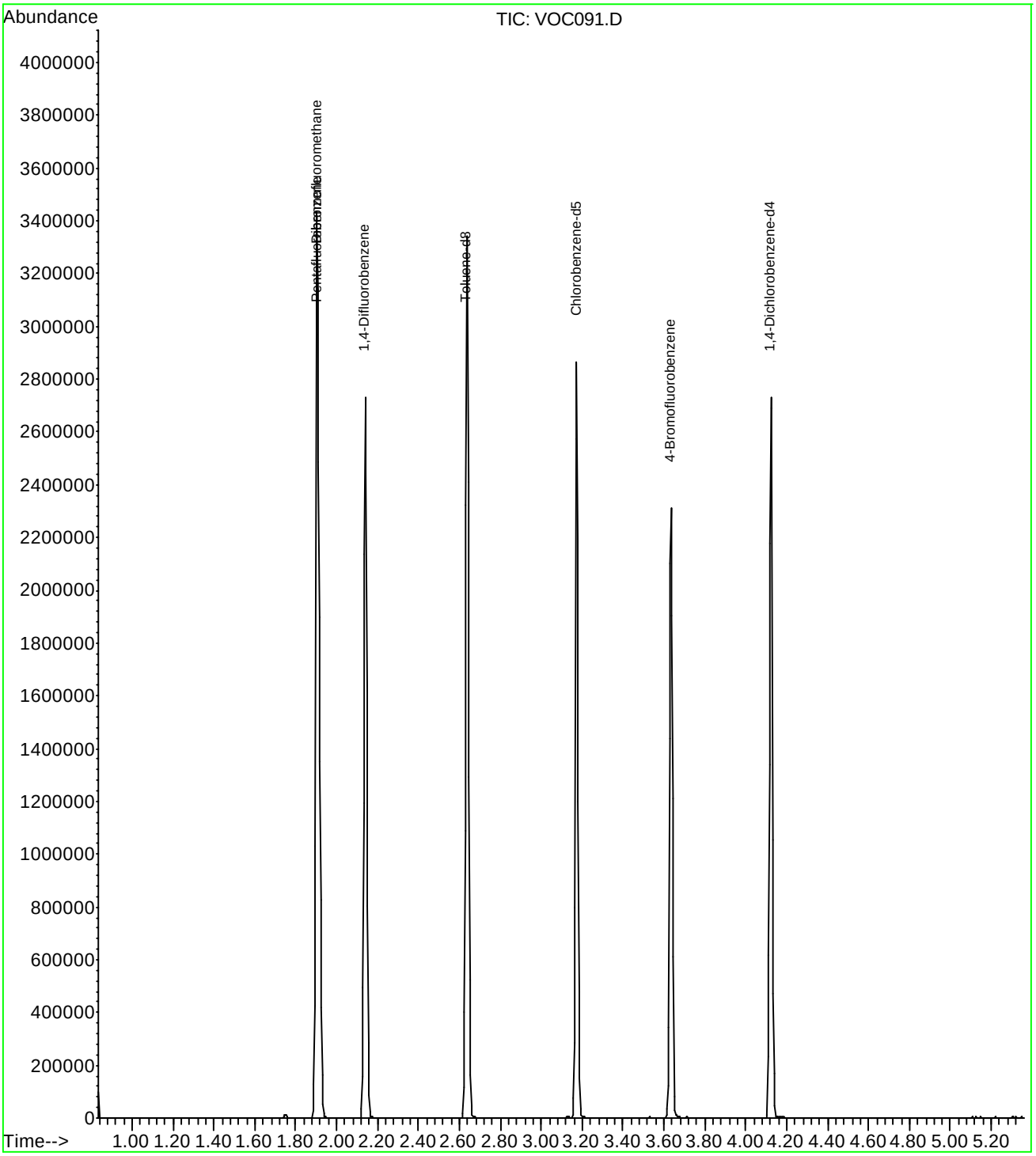
Quant Time: Jul 04 07:56:25 2008
Quant Method : C:\MSDCHEM\1\METHODS\FASTVOC2.M
Quant Title : Volatile Organic Compounds (EPA 624/8260)
QLast Update : Fri Jul 04 07:20:54 2008
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\070108
Data File : VOC091.D
Acq On : 2 Jul 2008 16:44
Operator : Alcontrol Labs
Sample : 200809998-219
Misc : /water
ALS Vial : 91 Sample Multiplier: 1

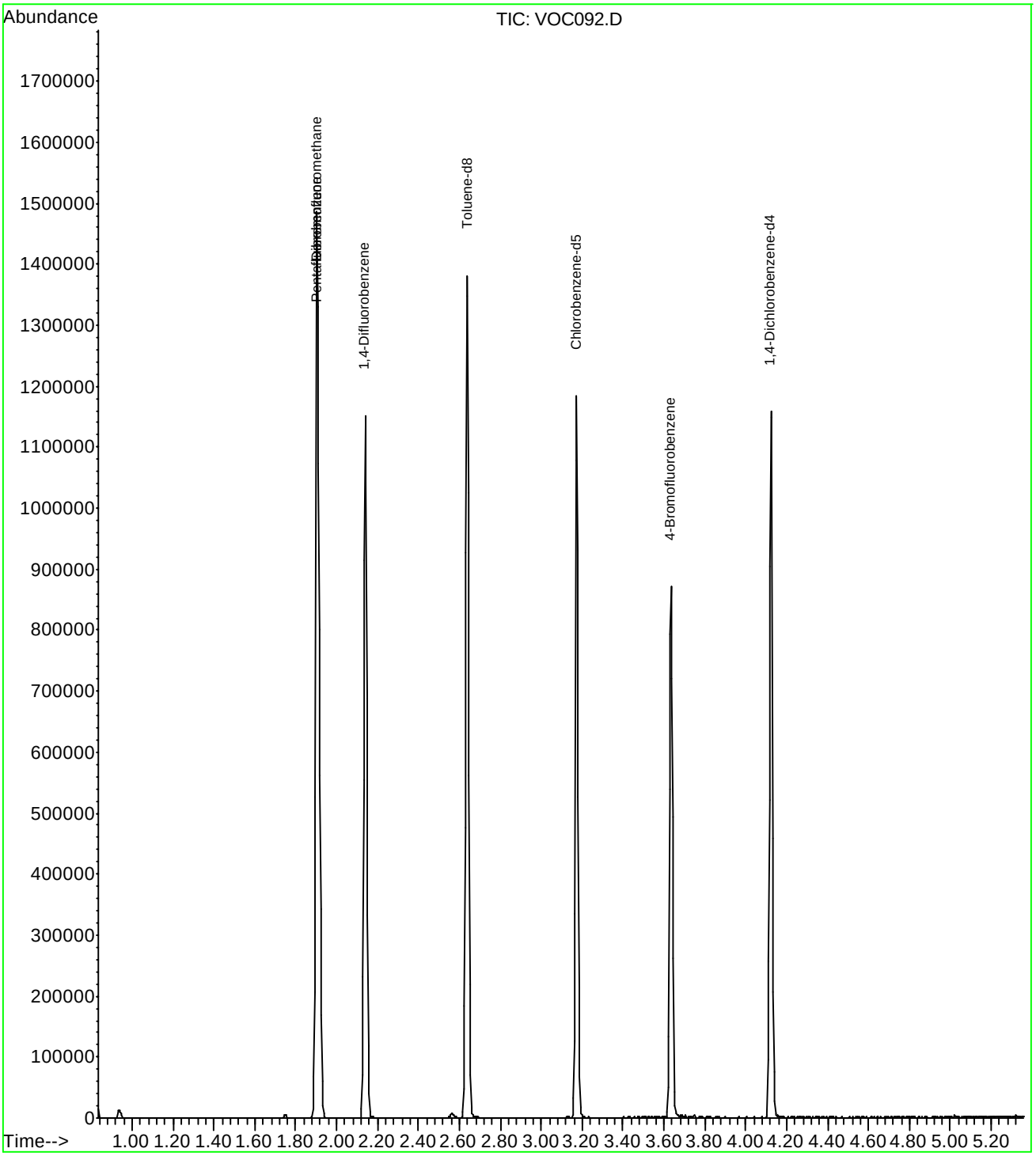
Quant Time: Jul 03 07:59:58 2008
Quant Method : C:\MSDCHEM\1\METHODS\VOCWATER.M
Quant Title : Volatile Organic Compounds (EPA 624/8260)
QLast Update : Wed Jul 02 11:11:07 2008
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\070108
Data File : VOC092.D
Acq On : 2 Jul 2008 16:55
Operator : Alcontrol Labs
Sample : 200809998-221
Misc : /water
ALS Vial : 92 Sample Multiplier: 1

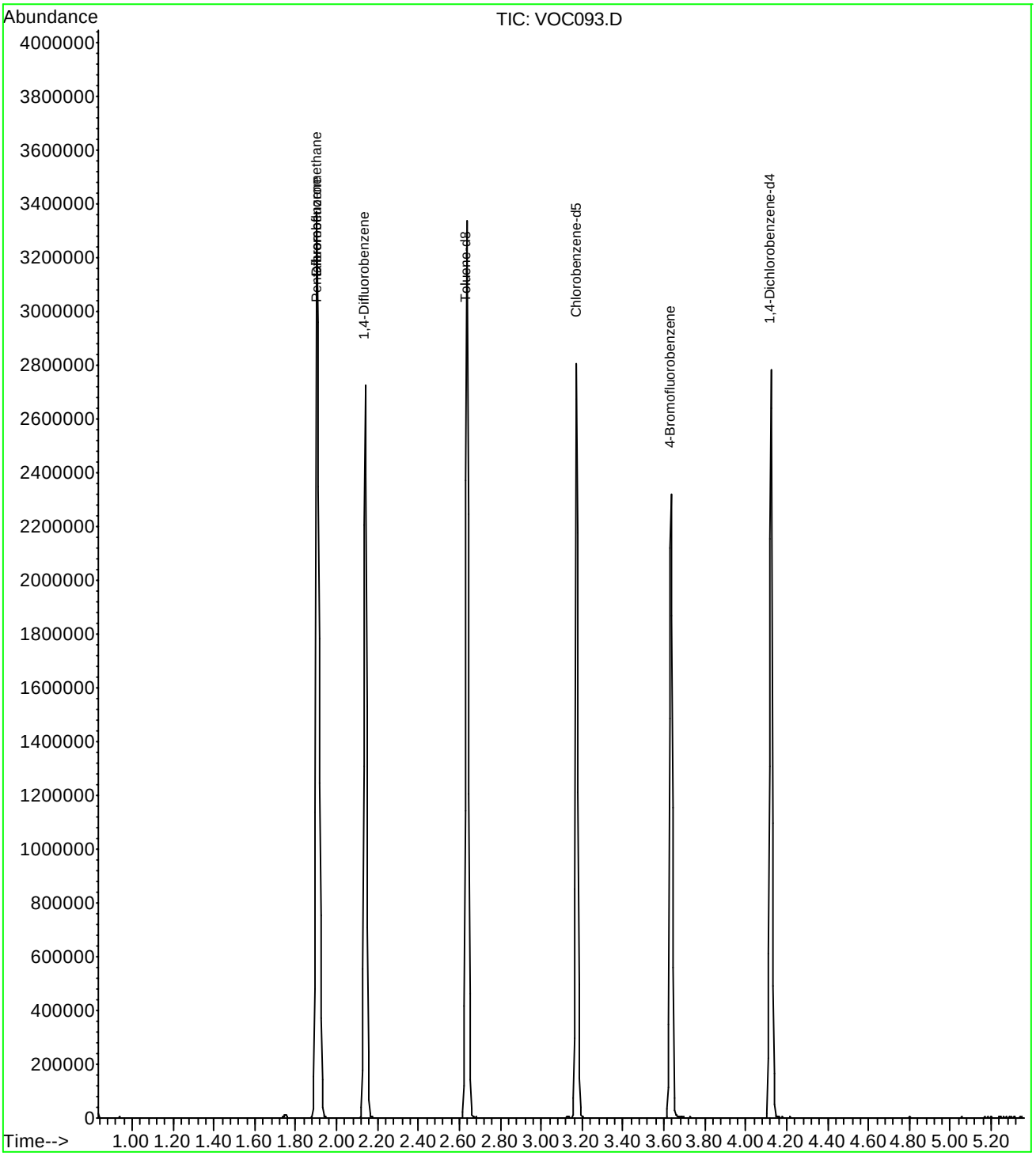
Quant Time: Jul 03 08:00:03 2008
Quant Method : C:\MSDCHEM\1\METHODS\VOCWATER.M
Quant Title : Volatile Organic Compounds (EPA 624/8260)
QLast Update : Wed Jul 02 11:11:07 2008
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\MSDCHEM\1\DATA\070108
Data File : VOC093.D
Acq On : 2 Jul 2008 17:05
Operator : Alcontrol Labs
Sample : 200809998-223
Misc : /water
ALS Vial : 93 Sample Multiplier: 1

Quant Time: Jul 03 08:00:08 2008
Quant Method : C:\MSDCHEM\1\METHODS\VOCWATER.M
Quant Title : Volatile Organic Compounds (EPA 624/8260)
QLast Update : Wed Jul 02 11:11:07 2008
Response via : Initial Calibration



APPENDIX

APPENDIX

1. Results are expressed on a dry weight basis (dried at 35°C) for all soil analyses except for the following:
   NRA Leach tests, flash point, ammonium as NH_4 by the BRE method, VOC TICS, SVOC TICS, TOF-MS SCAN/SEARCH and TOF-MS TICS.
2. Samples will be run in duplicate upon request, but an additional charge may be incurred.
3. If sufficient sample is received a sub sample will be retained free of charge for 30 days after analysis is completed (e-mailed) for both soil jars, tubs and volatile jars. All waters and vials will be discarded 10 days after the analysis is completed (e-mailed). All material removed during a fibre screen and analysed for the presence of asbestos will be retained for a period of 6 months after the analysis date. All samples received and not scheduled will be disposed of one month after the date of receipt unless we are instructed to the contrary. Once the initial period has expired, a storage charge will be applied for each month or part thereof until the client cancels the request for sample storage. ALcontrol Laboratories reserve the right to charge for samples received and stored but not analysed.
4. With respect to turnaround, we will always endeavour to meet client requirements wherever possible, but turnaround times cannot be absolutely guaranteed due to so many variables beyond our control.
5. We take responsibility for any test performed by sub-contractors (marked with an asterisk). We endeavour to use UKAS/MCERTS Accredited Laboratories, who either complete a quality questionnaire or are audited by ourselves. For some determinands there are no UKAS/MCERTS Accredited Laboratories, in this instance a laboratory with a known track record will be utilised.
6. When requested, the soil sample will be screened for the presence of fibres in-house and if no fibres are found will be reported as NFD – no fibres detected. If fibres are detected, they will be removed and analysed by our documented in house method based on HSG 248(2005). If a sample is suspected of containing asbestos, then further preparation and analysis will be suspended on that sample until the asbestos result is known. If asbestos is present, then no further analysis will be undertaken.
7. If no separate volatile sample is supplied by the client, the integrity of the data may be compromised if the laboratory is required to create a sub-sample from the bulk sample – similarly, if a headspace or sediment is present in the volatile sample. This will be flagged up as an invalid VOC on the test schedule or recorded on the log sheet.
8. If appropriate preserved bottles are not received preservation will take place on receipt. However, the integrity of the data may be compromised.
9. NDP – No determination possible due to insufficient/unsuitable sample.
10. Metals in water are performed on a filtered sample, and therefore represent dissolved metals – total metals must be requested separately.
11. A table containing the date of analysis for each parameter is not routinely included with the report, but is available upon request.
12. **Surrogate recoveries** – Currently the only analysis, which is surrogate corrected, is PAHs on soils.
    For EPH on soils the result is not surrogate corrected, but a percentage recovery is quoted.
13. **Product analyses** – Organic analyses on products can only be semi-quantitative due to the matrix effects and high dilution factors employed.
14. Phenols monohydric by HPLC include phenol, cresols (2-Methylphenol, 3-Methylphenol and 4-Methylphenol) and Xylenols (2,3 Dimethylphenol, 2,4 Dimethylphenol, 2,5 Dimethylphenol, 2,6 Dimethylphenol, 3,4 Dimethyphenol, 3,5 Dimethylphenol).
15. Total of 5 speciated phenols by HPLC includes Phenol, 2,3,5-Trimethyl Phenol, 2-Isopropylphenol, Cresols and Xylenols (as detailed in 14).
16. Stones/debris are not routinely removed. We always endeavour to take a representative sub sample from the received sample.
17. Our MCERTS accreditation for PAHs by GCMS applies to all product types apart from Kerosene, where naphthalene only is not accredited.
18. In certain circumstances the method detection limit may be elevated due to the sample being outside the calibration range. Other factors that may contribute to this include possible interferences. In both cases the sample would be diluted which would cause the method detection limit to be raised.
19. Mercury results quoted on soils will not include volatile mercury as the analysis is performed on a dried and crushed sample.
20. For the BSEN 12457-3 two batch process to allow the cumulative release to be calculated, the volume of the leachate produced is measured and filtered for all tests. We therefore cannot carry out any unfiltered analysis. The tests affected include volatiles GCFID/GCMS and all subcontracted analysis.
21. For all leachate preparations (NRA, DIN, TCLP, BSEN 12457-1, 2, 3) volatile loss may occur, as we do not employ zero headspace extraction.
22. We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials – whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample. Other coarse granular material such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.

Last updated July 2008

LIQUID MATRICES EXTRACTION SUMMARY			
ANALYSIS	**EXTRACTION SOLVENT**	**EXTRACTION METHOD**	**ANALYSIS**
PAH MS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
EPH	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
EPH CWG	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
MINERAL OIL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC FID
PCB 7 CONGENERS	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GC MS
PCB TOTAL	HEXANE	STIRRED EXTRACTION (STIR-BAR)	GS MS
SVOC	DCM	LIQUID/LIQUID SHAKEN SVOC	GC MS
FREE SULPHUR	DCM	SOLID PHASE EXTRACTION	HPLC
PEST OCP/OPP	DCM/EA	SOLID PHASE EXTRACTION	GC MS
TRIAZINE HERBS	DCM/EA	SOLID PHASE EXTRACTION	GC MS
PHENOLS MS	DCM	SOLID PHASE EXTRACTION	GC MS
TPH by INFRA RED (IR)	TCE	LIQUID/LIQUID EXTRACTION	HPLC
MINERAL OIL by IR	TCE	LIQUID/LIQUID EXTRACTION	HPLC
SAPONIFIABLE	TCE	LIQUID/LIQUID EXTRACTION	HPLC
UNSAPONIFIABLE	TCE	LIQUID/LIQUID EXTRACTION	HPLC
GLYCOLS	DCM	LIQUID/LIQUID EXTRACTION	EZ FLASH

SOLID MATRICES EXTRACTION SUMMARY				
ANALYSIS	**D/C OR WET**	**EXTRACTION SOLVENT**	**EXTRACTION METHOD**	**ANALYSIS**
Solvent Extractable Matter	D&C	DCM	SOXTHERM	GRAVIMETRIC
Cyclohexanes Ext. Matter	D&C	CYCLOHEXANE	SOXTHERM	GRAVIMETRIC
Thin Layer Chromatography	D&C	DCM	SOXTHERM	IATROSCAN
Elemental Sulphur	D&C	DCM	SOXTHERM	HPLC
Phenols by GCMS	WET	DCM	SOXTHERM	GC-MS
Herbicides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
Pesticides	D&C	HEXANE:ACETONE	SOXTHERM	GC-MS
EPH (DRO)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Min oil)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH (Cleaned up)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
EPH CWG by GC	D&C	HEXANE:ACETONE	END OVER END	GC-FID
PCB tot / PCB con	D&C	HEXANE:ACETONE	END OVER END	GC-MS
Polyaromatic Hydrocarbons (MS)	D&C	HEXANE:ACETONE	END OVER END	GC-MS
Polyaromatic Hydrocarbons (FID)	D&C	HEXANE:ACETONE	END OVER END	GC-FID
C8-C40 (C6-C40)EZ Flash	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Polyaromatic Hydrocarbons Rapid GC	WET	HEXANE:ACETONE	SHAKER	GC-EZ
Semi Volatile Organic compounds	WET	DCM:ACETONE	SONICATE	GC-MS

APPENDIX 6
Monitoring Results

FIELDWORK - *Insitu Gas Monitoring - Instrument Record*

Project **CO-OPERATIVE ACADEMY**

Project No **PN081814**

Borehole **BH1**

Client **LAING O'ROURKE CONSTRUCTION NORTH LTD**

Sheet No. **1 (1 of 2)**

Installation Details

Installation Type **Standpipe**
Depth to Base **15.00m**
Filter Zone **10.00 - 15.00m**
Date Installed **30 May 2008**

Diameter **50mm**
Cover Type **Flush lockable protective cover**
Ground Level

Date	Time	Depth to Water (m bgl)	Explosive Gas CH4 (% LEL)	Peak Explosive Gas CH4 (% VOL)	Carbon Dioxide CO2 (% VOL)	Oxygen O2 (% VOL)	Nitrogen N2 (% VOL)	Hydrogen Sulphide H2S (ppm)	Remarks
10-Jun-2008		15.00	0.0	0.0	0.0	21.5	78.4	0.0	
17-Jun-2008		DRY	3.80	0.50	5.5	2.80	91.1	0.0	
24-Jun-2008		DRY	0.0	0.0.	0.0	21.5	78.4	0.0	
30-Jun-2008		DRY	0.0	0.0	0.0	21.5	78.4	0.0	
29-Jul-2008		DRY	0.2	3.1	1.4	15.7	82.6	0.0	
18-Aug-2008		DRY	0.3	5.3	2.0	12.0	85.6	0.0	

Remarks

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FIELDWORK - *Insitu Gas Monitoring - Instrument Record*

Project **CO-OPERATIVE ACADEMY**

Client **LAING O'ROURKE CONSTRUCTION NORTH LTD**

Project No **PN081814**

Borehole **BH1**

Sheet No. **1 (2 of 2)**

Installation Details

Installation Type **Standpipe**
Depth to Base **15.00m**
Filter Zone **10.00 - 15.00m**
Date Installed **30 May 2008**

Diameter **50mm**
Cover Type **Flush lockable protective cover**
Ground Level

Date	Time	Carbon Monoxide CO (ppm)	Barometric Pressure (mBars)	Flow Rate (Peak/Stable) (l/hr)	Remarks
10-Jun-2008		0.0	1015	MAX	
17-Jun-2008		0.0	999	MAX	
24-Jun-2008		0.0	1004	-7.9	
30-Jun-2008		0.0	1008	MAX	
29-Jul-2008		0.0	999	+ve MAX	
18-Aug-2008		0.0	987	+ve MAX	

Remarks

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FIELDWORK - *Insitu Gas Monitoring - Instrument Record*

Project **CO-OPERATIVE ACADEMY**

Client **LAING O'ROURKE CONSTRUCTION NORTH LTD**

Project No **PN081814**

Borehole **BH2**

Sheet No. **1 (1 of 2)**

Installation Details

Installation Type **Standpipe**
Depth to Base **17.00m**
Filter Zone **11.50 - 17.00m**
Date Installed **30 May 2008**

Diameter **50mm**
Cover Type **Flush lockable protective cover**
Ground Level

Date	Time	Depth to Water (m bgl)	Explosive Gas CH4 (% LEL)	Peak Explosive Gas CH4 (% VOL)	Carbon Dioxide CO2 (% VOL)	Oxygen O2 (% VOL)	Nitrogen N2 (% VOL)	Hydrogen Sulphide H2S (ppm)	Remarks
10-Jun-2008		13.40	0.0	0.0	0.0	21.2	78.7	0.0	
17-Jun-2008		13.40	6.0	0.8	10.0	3.3	85.8	0.0	
24-Jun-2008		13.44	0.0	0.0	0.1	21.1	78.7	0.0	
30-Jun-2008		13.40	0.0	0.0	0.0	21.3	78.6	0.0	
7-Jul-2008		13.24	0.6	4.4	12.0	0.8	86.4	0.0	
15-Jul-2008		13.45	0.0	0.0	0.0	21.1	78.8	0.0	
29-Jul-2008		13.32	0.0	0.0	0.8	19.9	79.2	0.0	

Remarks

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FIELDWORK - *Insitu Gas Monitoring - Instrument Record*

Project **CO-OPERATIVE ACADEMY**

Project No **PN081814**

Borehole **BH2**

Client **LAING O'ROURKE CONSTRUCTION NORTH LTD**

Sheet No. **1 (2 of 2)**

Installation Details

Installation Type **Standpipe**
Depth to Base **17.00m**
Filter Zone **11.50 - 17.00m**
Date Installed **30 May 2008**

Diameter **50mm**
Cover Type **Flush lockable protective cover**
Ground Level

Date	Time	Carbon Monoxide CO (ppm)	Barometric Pressure (mBars)	Flow Rate (Peak/Stable) (l/hr)	Remarks
10-Jun-2008		0.0	1015	MAX	
17-Jun-2008		0.0	999	24.8	
24-Jun-2008		0.0	1004	4.6	
30-Jun-2008		0.0	1008	-ve MAX	
7-Jul-2008		0.0	985	14.6	
15-Jul-2008		0.0	1012	-ve MAX	
29-Jul-2008		0.0	999	5.3	

Remarks

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FIELDWORK - *Insitu Gas Monitoring - Instrument Record*

Project **CO-OPERATIVE ACADEMY**

Project No **PN081814**

Borehole **BH3**

Client **LAING O'ROURKE CONSTRUCTION NORTH LTD**

Sheet No. **1 (1 of 2)**

Installation Details

Installation Type **Standpipe**
Depth to Base **10.00m**
Filter Zone **8.00 - 10.00m**
Date Installed **30 May 2008**

Diameter **50mm**
Cover Type **Flush lockable protective cover**
Ground Level

Date	Time	Depth to Water (m bgl)	Explosive Gas CH4 (% LEL)	Peak Explosive Gas CH4 (% VOL)	Carbon Dioxide CO2 (% VOL)	Oxygen O2 (% VOL)	Nitrogen N2 (% VOL)	Hydrogen Sulphide H2S (ppm)	Remarks
10-Jun-2008		10.00	0.0	0.0	0.0	21.2	78.7	0.0	
17-Jun-2008		10.00	19.0	2.0	3.4	6.0	88.5	0.0	
24-Jun-2008		10.00	0.0	0.0	0.0	21.6	78.3	0.0	
30-Jun-2008		9.98	0.0	0.0	0.0	21.2	78.7	0.0	

Remarks

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FIELDWORK - *Insitu Gas Monitoring - Instrument Record*

Project **CO-OPERATIVE ACADEMY**

Project No **PN081814**

Borehole **BH3**

Client **LAING O'ROURKE CONSTRUCTION NORTH LTD**

Sheet No. **1 (2 of 2)**

Installation Details

Installation Type	**Standpipe**	Diameter	**50mm**
Depth to Base	**10.00m**	Cover Type	**Flush lockable protective cover**
Filter Zone	**8.00 - 10.00m**	Ground Level	
Date Installed	**30 May 2008**		

Date	Time	Carbon Monoxide CO (ppm)	Barometric Pressure (mBars)	Flow Rate (Peak/Stable) (l/hr)	Remarks
10-Jun-2008		**0.0**	**1015**	**MAX**	
17-Jun-2008		**0.0**	**999**	**27.3**	
24-Jun-2008		**0.0**	**1004**	**-0.21**	
30-Jun-2008		**0.0**	**1008**	**-ve MAX**	

Remarks

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Form 003/1

FIELDWORK - *Insitu Gas Monitoring - Instrument Record*

Project **CO-OPERATIVE ACADEMY**

Project No **PN081814**

Borehole **WS1**

Client **LAING O'ROURKE CONSTRUCTION NORTH LTD**

Sheet No. **1 (1 of 2)**

Installation Details

Installation Type **Standpipe**
Depth to Base **5.00m**
Filter Zone **1.00 - 5.00m**
Date Installed **30 May 2008**

Diameter **50mm**
Cover Type **Flush lockable protective cover**
Ground Level

Date	Time	Depth to Water (m bgl)	Explosive Gas CH4 (% LEL)	Peak Explosive Gas CH4 (% VOL)	Carbon Dioxide CO2 (% VOL)	Oxygen O2 (% VOL)	Nitrogen N2 (% VOL)	Hydrogen Sulphide H2S (ppm)	Remarks
10-Jun-2008		3.45	4.1	0.2	2.2	18.9	78.6	0.0	
17-Jun-2008		3.35	5.7	0.3	2.1	19.6	77.9	0.0	
24-Jun-2008		3.44	2.7	0.1	1.9	19.8	78.1	0.0	
30-Jun-2008		2.60	0.2	4.2	1.9	16.0	81.8	0.0	
7-Jul-2008		2.04	1.4	27.9	1.5	15.5	81.5	0.0	
15-Jul-2008		2.40	0.0	0.9	2.2	13.3	84.4	0.0	
29-Jul-2008		3.14	17.0	MAX	8.1	4.2	70.6	0.0	

Remarks

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FIELDWORK - *Insitu Gas Monitoring - Instrument Record*

Project **CO-OPERATIVE ACADEMY**

Client **LAING O'ROURKE CONSTRUCTION NORTH LTD**

Project No **PN081814**

Borehole **WS1**

Sheet No. **1 (2 of 2)**

Installation Details

Installation Type **Standpipe**
Depth to Base **5.00m**
Filter Zone **1.00 - 5.00m**
Date Installed **30 May 2008**

Diameter **50mm**
Cover Type **Flush lockable protective cover**
Ground Level

Date	Time	Carbon Monoxide CO (ppm)	Barometric Pressure (mBars)	Flow Rate (Peak/Stable) (l/hr)	Remarks
10-Jun-2008		0.0	1015	0.0	
17-Jun-2008		0.0	999	0.0	
24-Jun-2008		0.0	1004	0.0	
30-Jun-2008		0.0	1008	0.0	
7-Jul-2008		0.0	985	0.3	
15-Jul-2008		0.0	1012	0.0	
29-Jul-2008		0.0	999	0.0	

Remarks

geotechnics

Co-Operative Academy

Project No: PN081814

SINCLAIR KNIGHT MERZ

Hole No.: WS4

Date	Depth to Base (m)	Depth to Water (m bgl)	Explosive Gas CH4 (% LEL)	Peak Explosive Gas CH4 (% VOL)	Carbon Dioxide CO2 (% VOL)	Oxygen O2 (%VOL)	Nitrogen N2 (% VOL)	Hydrogen Sulphide H2S (ppm)	Carbon Monoxide CO (ppm)	Barometric Pressure (l/hr)	Flow (l/hr)
10/06/2008	3.64	2.40	0.0	0.0	4.3	18.4	77.2	0.0	0.0	1015	0.0
17/06/2008	3.64	2.50	0.0	0.0	3.0	19.5	77.4	0.0	0.0	999	-0.1
24/06/2008	3.64	2.46	0.0	0.0	4.2	18.7	77.0	0.0	0.0	1004	0.0
30/06/2008	3.65	2.22	0.0	0.0	4.2	17.3	78.4	0.0	0.0	1008	0.0
07/07/2008	3.65	3.04	0.0	0.0	5.3	16.0	78.6	0.0	0.0	985	0.0
15/07/2008	3.65	2.32	0.0	0.0	4.8	16.6	78.5	0.0	0.0	1012	0.0
29/08/2008	3.65	2.27	0.0	0.0	5.6	17.0	77.3	0.0	0.0	999	0.0
18/08/2008	3.65	1.83	0.0	0.0	4.8	16.6	78.5	0.0	0.0	987	0.0

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Project No: PN081814

SINCLAIR KNIGHT MERZ

Hole No.: WS16

Date	Depth to Base (m)	Depth to Water (m bgl)	Explosive Gas CH4 (% LEL)	Peak Explosive Gas CH4 (% VOL)	Carbon Dioxide CO2 (% VOL)	Oxygen O2 (%VOL)	Nitrogen N2 (% VOL)	Hydrogen Sulphide H2S (ppm)	Carbon Monoxide CO (ppm)	Barometric Pressure (l/hr)	Flow (l/hr)
10/06/2008	3.87	2.2	0.0	0.0	2.5	19.9	77.5	0.0	0.0	1015	1.1
17/06/2008	3.87	2.26	0.0	0.0	1.6	20.7	77.6	0.0	0.0	999	0.0
24/062008	3.87	2.36	0.0	0.0	0.7	20.8	78.4	0.0	0.0	1004	0.0
30/06/2008	3.87	2.34	0.0	0.0	2.8	19.9	77.2	0.0	0.0	1008	0.0
07/07/2008	3.87	2.23	0.0	0.0	3.3	19.2	77.4	0.0	0.0	985	0.0
15/07/2008	3.88	2.3	0.0	0.0	2.9	19.1	77.9	0.0	0.0	1012	0.0
29/07/2008	3.88	2.27	0.0	0.0	2.8	19.2	77.9	0.0	0.0	999	0.0
18/08/2008	3.87	2.15	0.0	0.0	3.9	18.6	77.4	0.0	0.0	987	0.0

Co-Operative Academy

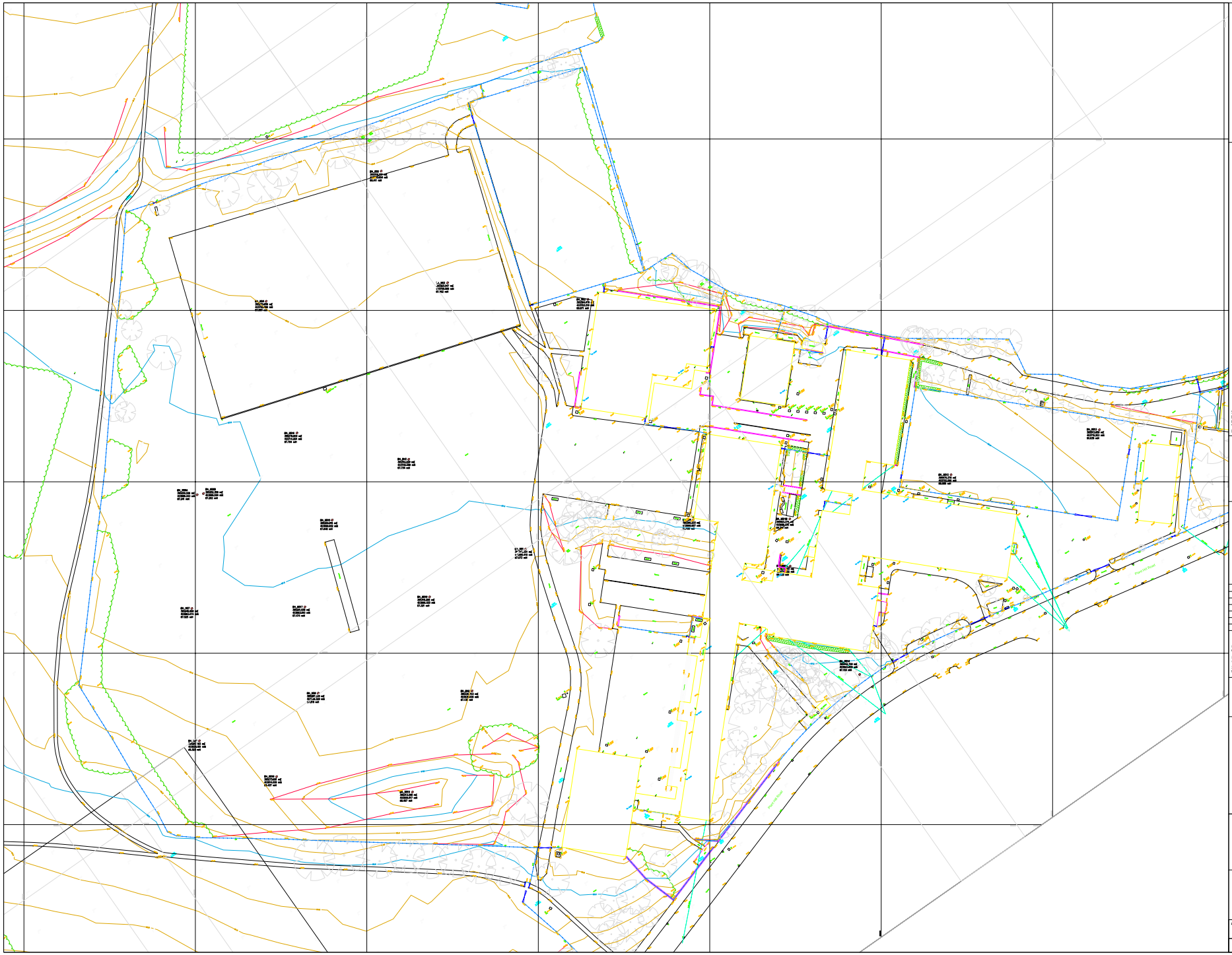
Project No: PN081814

SINCLAIR KNIGHT MERZ

Hole No.: WS19

Date	Depth to Base (m)	Depth to Water (m bgl)	Explosive Gas CH4 (% LEL)	Peak Explosive Gas CH4 (% VOL)	Carbon Dioxide CO2 (% VOL)	Oxygen O2 (%VOL)	Nitrogen N2 (% VOL)	Hydrogen Sulphide H2S (ppm)	Carbon Monoxide CO (ppm)	Barometric Pressure (l/hr)	Flow (l/hr)
17/06/2008	3.8	1.64	0.0	0.0	5.8	18.6	75.5	0.0	0.0	999	0.0
24/06/2008	3.24	1.33	0.0	0.0	7.1	15.8	77.0	0.0	0.0	1004	0.1
30/06/2008	3.74	1.02	0.0	0.0	7.8	16.0	76.1	0.0	0.0	1008	0.0
07/07/2008	3.24	0.95	0.0	0.0	8.6	14.1	77.2	0.0	0.0	985	1.9
15/07/2008	3.74	0.95	0.0	0.0	4.4	17.8	77.7	0.0	0.0	1012	-9.7
29/07/2008	3.2	1.08	0.0	0.0	9.3	12.3	78.3	0.0	0.0	999	0.0
18/08/2008	3.74	0.93	0	0	9.8	11.4	78.7	0.0	0.0	987.0	0.0

APPENDIX 7
Exploratory Hole Location Plan



Site Grid North

N
W E
S

Symbols/Abbreviations (Where Applicable):

- AV: AIR VALVE
- BB: BELISHA BEACON
- BH: BOREHOLE
- BM: BENCHMARK
- BOL: BOLLARD
- B/S: BUS STOP
- CAM: CAMERA
- CS: CABLE STAY
- CATV: C.A.T.V INSPECTION CHAMBER
- CBOX: ELECTRICITY BOX, CABLE BOX, ETC.
- CCTV: C.C.T.V CAMERA
- C.PIT: CATCH PIT
- EP: ELECTRICITY POLE
- ER: EARTH ROD
- FH: FIRE HYDRANT
- FP: FLAG POLE
- G: GULLY
- G: GULLY (ROUND)
- GV: GAS VALVE
- IC: INSPECTION COVER
- IC(R): INSPECTION COVER (ROUND)
- IL: INVERT LEVEL
- KO: KERB OUTLET
- LB: LETTER BOX
- LC: LIGHTING COLUMN
- LP: LAMP POST
- LP/BS: LAMP POST/BUS STOP
- MH: MANHOLE
- MH: MANHOLE (ROUND)
- MKR: MARKER
- P: POST
- RE: RODDING EYE
- R/S: ROAD SIGN
- S/P: SIGN POST
- SNP: STREET NAME PLATE
- ST: STOP TAP
- SV: STOP VALVE
- TCB: TELEPHONE CALL BOX
- TL: TRAFFIC LIGHT
- TP: TELEGRAPH POLE
- TP/EP: TELEGRAPH POLE/ELECTRIC POLE
- WO: WATER OUTLET
- WM: WATER METER
- GATE
- DEFINED POINT
- CONTROL POINT
- TREE (CONIFEROUS)
- TREE (DECIDUOUS)
- FOLIAGE
- HEDGE

SL 99.99m SOFFIT LEVEL
EL 99.99m EAVES LEVEL
RL 99.99m RIDGE LEVEL
TL 99.99m THRESHOLD LEVEL
DPC 99.99m DAMP PROOF COURSE LEVEL

FENCE DESCRIPTIONS:

- C/B: CLOSE BOARDED FENCE
- C/BARRIER: CRASH BARRIER
- C/P: CHESTNUT PALING FENCE
- CONC/P: CONCRETE PANEL FENCE
- I/R: IRON RAILING FENCE
- P/R: POST AND RAIL FENCE
- P/W: POST AND WIRE FENCE
- P/C: POST AND CHAIN FENCE
- S/PAL: STEEL PALISADE FENCE
- T/PAL: TIMBER PALISADE FENCE
- B/W: BARBED WIRE FENCE

Revision Information

Rev	Date	Description
A	17/06/08	BH W5% Moved to correct location

INFORMATION

1) Ordnance Survey co-ordinates and level are derived from OS5T403 and OS0M02, transformed from WGS84.

2) Only services located during this site survey are shown on this plan. Further investigation may be required to ascertain the full extent of the site services.

3) Copyright of this drawing remains the property of PM Surveys UK Ltd. Do not scale from this drawing. In the event of any discrepancy, refer query to PM Surveys UK Ltd.

NOTES

1) All co-ordinates and levels are related to notional grid.

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Project

Boreholes
Plant Hill School
Manchester

Project No	Sheet: A1	Surveyed By:	N. Lamprell
PMS08151	Scale: 1:500	Drawn By:	D.Shipton
		Approved By:	JMT
Dwg PMS08151-01		Issued:	11/06/08

APPENDIX 8
Investigation Techniques and General Notes

INVESTIGATION TECHNIQUES

INTRODUCTION

The following brief review of Ground Investigation techniques, generally used as part of most Site Investigations in the UK, summarises their methodology, advantages and limitations. Detailed descriptions of the techniques are available and can be provided on request. This review should be read in conjunction with the accompanying General Notes.

TRIAL PITS

The trial pit is amongst the most simple yet effective means of identifying shallow ground conditions on a site. Its advantages include simplicity, speed, potential accuracy and cost-effectiveness. The trial pit is most commonly formed using a backacting excavator which can typically determine ground conditions to some 4 metres below ground level. Hand excavation is often used to locate, expose and detail existing foundations, features or services. In general, it is difficult to extend pits significantly below the water table in predominantly granular soils, where flows can cause instability. Unless otherwise stated, the trial pits will not have been provided with temporary side support during their construction. Under such circumstances ground conditions to some 1.20 metres can be closely inspected, subject to stability assessment, but below this depth, entrance into the pit is not permitted in the absence of shoring and hence observations will have been made from ground surface and samples taken from the excavator bucket.

Trends in strata type, level and thickness can be determined, shear surfaces identified and the behaviour of plant, excavation sides and excavated materials can be related to the construction process. They are particularly valuable in land slip investigations. Some types of insitu test can be undertaken in such pits and large disturbed or block samples obtained.

CABLE PERCUSSION BORING

The light Cable Percussion technique of soft ground boring, typically at a diameter of 150mm, is a well established simple and flexible method of boring vertical holes and generally allows data to be obtained in respect of strata conditions other than rock. A tubular cutter (for cohesive soils) or shell with a flap valve (for granular soils) is repeatedly lifted and dropped using a winch and rope operating from an "A" frame. Soil which enters these tools is regularly removed and either sampled for subsequent examination or test, or laid to one side for backfilling. Steel casing will have been used to prevent collapse of the borehole sides where necessary. A degree of disturbance of soil and mixing of layers is inevitable and the presence of very thin layers of different soils within a particular stratum may not be identified. Changes in strata type can only be detected on recognition of a change in soil samples at surface, after the interface has been passed. For the foregoing reasons, depth measurements should not be considered to be more accurate than 0.10 metre.

In cohesive soils cylindrical samples are retrieved by driving or pushing in 100mm nominal diameter tubes. In soft soils, piston sampling or vane testing may be undertaken. In granular soils and often in cohesive materials, insitu Standard Penetration Tests (SPT's) are performed. The SPT records the number of standard blows required to drive a 50mm diameter open or cone ended probe for 300mm after an initial 150mm penetration. A modified method of recording is used in more dense strata. Small disturbed samples are obtained throughout.

The technique can determine ground conditions to depths in excess of 30 metres under suitable circumstances and usually causes less surface disturbance than trial pitting.

ROTARY DRILLING

Rotary Drilling to produce cores by rotating an annular diamond-impregnated tube or barrel into the ground is the technique most appropriate to the forming of site investigation boreholes through rock or other hard strata. It has the advantage of being able to be used vertically or at an angle. Core diameters of less than 100mm are most common for site investigation purposes. Core is normally retrieved in plastic lining tubes. A flushing fluid such as air, water or foam is used to cool the bit and carry cuttings to the surface.

Examination of cores allows detailed rock description and generally enables angled discontinuity surfaces to be observed. However, vertical holes do not necessarily reveal the presence of vertical or near-vertical fissures or joint discontinuities. The core type and/or techniques used. Where open hole rotary drilling is employed, descriptions of strata result from examination at surface of small particles ejected from the borehole in the flushing medium. In consequence, no indication of fissuring, bedding, consistency or degree of weathering can be obtained. Small scale plant can be used for auger drilling to limited depths where access is constrained.

Depths in excess of 60 metres can be achieved under suitable circumstances using rotary techniques, with minimal surface disturbance.

WINDOW SAMPLING

This technique involves the driving of an open-ended tube into the ground and retrieval of the soil which enters the tube. The term "window sample" arose from the original device which had a "window" or slot cut into the side of the tube through which samples were taken. This has now been superseded by the use of a thin-walled plastic liner within a sampler which has a solid wall. Diameters range from 36 to 86mm. Such samples can be used for qualitative logging, selection of samples for classification and chemical analysis and for obtaining a rudimentary assessment of strength.

Driving devices can be hand-held or machine mounted and the drive tubes are typically in 1m lengths. The hole formed is not cased, however, and hence the success of this technique is limited when soils and groundwater conditions are such that the sides of the hole collapse on withdrawal of the sampler. Obstructions within the ground, the density of the material or its strength can also limit the depth and rate of penetration of this light-weight investigation technique. Nevertheless, it is a valuable tool where access is constrained such as within buildings or on embankments. Depths of up to 8m can be achieved in suitable circumstances but depths of 4m to 6m are more common.

EXPLORATORY HOLE RECORDS

The data obtained by these techniques are generally presented on Trial Pit, Borehole, Drillhole or Window Sample Records. The descriptions of strata result from information gathered from a number of sources which may include published geological data, preliminary field observations and descriptions, insitu test results, laboratory test results and specimen descriptions. A key to the symbols and abbreviations used accompanies the records. The descriptions on the exploratory hole records accommodate but may not necessarily be identical to those on any preliminary records or the laboratory summaries.

The records show ground conditions at the exploratory hole locations. The degree to which they can be used to represent conditions between or beyond such holes, however, is a matter for geological interpretation rather than factual reporting and the associated uncertainties must be recognised.

DYNAMIC PROBING

This technique typically measures the number of blows of a standard weight falling over a standard height to advance a cone-ended rod over sequential standard distances (typically 100mm). Some devices measure the penetration of the probe per standard blow. It is essentially a profiling tool and is best used in conjunction with other investigation techniques where site-specific correlation can be used to delineate the distribution of soft or loose soils or the upper horizon of a dense or strong layer such as rock.

Both machine-driven and hand-driven equipment is available, the selection depending upon access restrictions and the depth of penetration required. It is particularly useful where access for larger equipment is not available, disturbance is to be minimised or where there are cost constraints. No samples are recovered and some techniques leave a sacrificial cone head in the ground. As with other lightweight techniques, progress is limited in strong or dense soils. The results are presented both numerically and graphically. Depths of up to 10m are commonly achieved in suitable circumstances.

The hand-driven DCP probing device has been calibrated by the TRL to provide a profile of CBR values over a range of depths of up to 1.50m.

INSTRUMENTATION

The most common form of instrument used in site investigation is either the standpipe or else the standpipe piezometer which can be installed in investigation holes. They are used to facilitate monitoring of groundwater levels and water sampling over a period of time following site work. Normally a standpipe would be formed using rigid plastic tubing which has been perforated or slotted over much of its length whilst a standpipe piezometer would have a filter tip which would be placed at a selected level and the hole sealed above and sometimes below to isolate the zone of interest. Groundwater levels are determined using an electronic "dipmeter" to measure the depth to the water surface from ground level. Piezometers can also be used to measure permeability. They are simple and inexpensive instruments for long term monitoring but response times can limit their use in tidal areas and access to the ground surface at each instrument is necessary. Remote reading requires more sophisticated hydraulic, electronic or pneumatic equipment.

Settlement can be monitored using surface or buried target plates whilst lateral movement over a range of depths is monitored using slip indicator or inclinometer equipment.

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GENERAL NOTES

1. *The report is prepared for the exclusive use of the Client named in the document and copyright subsists with Geotechnics Limited. Prior written permission must be obtained to reproduce all or part of the report. It is prepared on the understanding that its contents are only disclosed to parties directly involved in the current investigation, preparation and development of the site.*

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3. *The report and/or opinion is prepared for the specific purpose stated in the document and in relation to the nature and extent of proposals made available to Geotechnics Limited at that time. Re-consideration will be necessary should those details change. The recommendations should not be used for other schemes on or adjacent to the site without further reference to Geotechnics Limited.*

4. *The assessment of the significance of the factual data, where called for, is provided to assist the Client and his Engineer and/or Advisers in the preparation of their designs.*

5. *The report is based on the ground conditions encountered in the exploratory holes together with the results of field and laboratory testing in the context of the proposed development. The data from any commissioned desk study and site reconnaissance are also drawn upon. There may be special conditions appertaining to the site, however, which are not revealed by the investigation and which may not be taken into account in the report.*

6. *Methods of construction and/or design other than those proposed by the designers or referred to in the report may require consideration during the evolution of the proposals and further assessment of the geotechnical and any geoenvironmental data would be required to provide discussion and evaluations appropriate to these methods.*

7. *The accuracy of results reported depends upon the technique of measurement, investigation and test used and these values should not be regarded necessarily as characteristics of the strata as a whole (see accompanying notes on Investigation Techniques). Where such measurements are critical, the technique of investigation will need to be reviewed and supplementary investigation undertaken in accordance with the advice of the Company where necessary.*

8. *The samples selected for laboratory test are prepared and tested in accordance with the relevant Clauses of BS 1377 Parts 1 to 8, where appropriate, in Geotechnics Limited's UKAS accredited Laboratory, where possible. A list of tests is given.*

9. *Tests requiring the use of another laboratory having UKAS accreditation where possible are identified.*

10. *Any unavoidable variations from specified procedures are identified in the report.*

11. *Specimens are cut vertically, where this is relevant and can be identified, unless otherwise stated.*

12. *All the data required by the test procedures are recorded on individual test sheets but the results in the report are presented in summary form to aid understanding and assimilation for design purposes. Where all details are required, these can be made available.*

13. *Whilst the report may express an opinion on possible configurations of strata between or beyond exploratory holes, or on the possible presence of features based on either visual, verbal, written, cartographical, photographic or published evidence, this is for guidance only and no liability can be accepted for its accuracy.*

14. *Classification of materials as Made Ground is based on the inspection of retrieved samples or exposed excavations. Where it is obvious that foreign matter such as paper, plastic or metal is present, classification is clear. Frequently, however, for fill materials that arise from the adjacent ground or from the backfilling of excavations, their visual characteristics can closely resemble those of undisturbed ground. Other evidence such as site history, exploratory hole location or other tests may need to be drawn upon to provide clarification. For these reasons, classification of soils on the exploratory hole records as either Made Ground or naturally occurring strata, the boundary between them and any interpretation that this gives rise to should be regarded as provisional and subject to re-evaluation in the light of further data.*

15. *The classification of materials as Topsoil is generally based on visual description and should not be interpreted to mean that the material so described complies with the criteria for Topsoil used in BS 3882 (1994). Specific testing would be necessary where such definition is a requirement.*

16. *Ground conditions should be monitored during the construction of the works and the report should be re-evaluated in the light of these data by the supervising geotechnical engineers.*

17. *Any comments on groundwater conditions are based on observations made at the time of the investigation, unless specifically stated otherwise. It should be noted, however, that the observations are subject to the method and speed of boring, drilling or excavation and that groundwater levels will vary due to seasonal or other effects.*

18. *Any bearing capacities for conventional spread foundations which are given in the report and interpreted from the investigation are for bases at a minimum depth of 1m below finished ground level in naturally occurring strata and at broadly similar levels throughout individual structures, unless otherwise stated. The foundations should be designed in accordance with the good practice embodied in BS 8004:1986 - Foundations, supplemented for housing by NHBC Standards. Foundation design is an iterative process and bearing pressures may need adjustment or other measures may need to be taken in the context of final layouts and levels prior to finalisation of proposals.*

19. *Unless specifically stated, the investigation does not take account of the possible effects of mineral extraction or of gases from fill or natural sources within, below or outside the site.*

20. *The costs or economic viability of the proposals referred to in the report, or of the solutions put forward to any problems encountered, will depend on very many factors in addition to geotechnical or geoenvironmental considerations and hence their evaluation is outside the scope of the report.*

Appendix C Detailed Quantitative Risk Assessment

Modelled Exposure Pathways

Zone 1: School grounds

Exposure pathway	Land use	Pollutant linkage	Details
Ingestion of soil	School with landscaped areas and carpark	Y	Possible in landscaped areas
Dermal contact with soil (indoors)	School with landscaped areas and carpark	Y	Considered within exposure to outdoor dust
Dermal contact with soil (outdoors)	School with landscaped areas and carpark	Y	Possible in landscaped areas
Inhalation of dust outdoors	School with landscaped areas and carpark	Y	Possible in landscaped areas
Inhalation of dust indoors	School with landscaped areas and carpark	Y	Possible in landscaped areas
Inhalation of vapours outdoors	School with landscaped areas and carpark	Y	Possible in landscaped areas and areas of hard cover
Inhalation of vapours indoors	School with landscaped areas and carpark	Y	Possible within structures on site
Inhalation of groundwater vapours outdoors	School with landscaped areas and carpark	N	No shallow groundwater contamination present
Inhalation of groundwater vapours indoors	School with landscaped areas and carpark	N	No shallow groundwater contamination present

Zone 2:

Exposure pathway	Land use	Pollutant linkage	Details
Ingestion of soil			
Dermal contact with soil (indoors)			
Dermal contact with soil (outdoors)			
Inhalation of dust outdoors			
Inhalation of vapours outdoors			
Inhalation of vapours indoors			
Ingestion of vegetables			
Inhalation of groundwater vapours outdoors			
Inhalation of groundwater vapours indoors			

Zone 3:

Exposure pathway	Land use	Pollutant linkage	Details
Ingestion of soil			
Dermal contact with soil (indoors)			
Dermal contact with soil (outdoors)			
Inhalation of dust outdoors			
Inhalation of vapours outdoors			
Inhalation of vapours indoors			
Inhalation of groundwater vapours outdoors			
Inhalation of groundwater vapours indoors			

Human receptor exposure parameters

Commercial landuse

Parameter	Unit	Receptor	Value	Details
Age class	yrs	Female aged 16-65	16-65	Figure 2.2 SC050021/SR3
Body weight	kg	Female aged 16-65	70	Table 3.2 SC050021/Technical Review 1
Body height	m	Female aged 16-65	1.6	Table 3.7 SC050021/Technical Review 1
Respiration rate (average)	m3/hr	Female aged 16-65	0.6	Table 4.14 SC050021/Technical Review 1
Respiration rate (active)	m3/hr	Female aged 16-65	1.43	Table 4.13 SC050021/SR3 (moderate intensity)
Respiration rate (passive)	m3/hr	Female aged 16-65	0.28	Table 4.13 SC050021/SR3 (sedentary and passive)
Skin area	m2	Female aged 16-65	1.76	CLEA Briefing Note 1.1 (03/2005) Table 2
Fraction of exposed skin (indoors/outdoors)	-	Female aged 16-65	0.08	Table 4.7 SC050021/SR3
Exposed skin area indoors	cm2	Female aged 16-65	480	Table 4.7 SC050021/SR3
Exposed skin area outdoors	cm2	Female aged 16-65	480	Table 4.7 SC050021/SR3
Averaging time ingestion	days/yr	Female aged 16-65	230	Table 4.7 SC050021/SR3
averaging time dermal (indoor)	days/yr	Female aged 16-65	230	Table 4.7 SC050021/SR3
averaging time inhalation (indoor)	days/yr	Female aged 16-65	230	Table 4.7 SC050021/SR3
averaging time dermal (outdoor)	days/yr	Female aged 16-65	170	Table 4.7 SC050021/SR3
averaging time inhalation (outdoor)	days/yr	Female aged 16-65	170	Table 4.7 SC050021/SR3
Averaging time	yrs	Female aged 16-65	49	Figure 2.2 SC050021/SR3
Soil ingestion rate	mg/d	Female aged 16-65	50	Table 6.2 SC050021/SR3
Dermal adherence factor	mg/cm2	Female aged 16-65	0.14 (outdoor) 0.098 (indoor)	Table 8.1 SC050021/SR3 (assumes TF @0.7)
Exposure duration indoors	hrs/day	Female aged 16-65	8.3	Box 3.6 SC050021/SR3
Exposure duration outdoors	hrs/day	Female aged 16-65	0.7	Box 3.6 SC050021/SR3

Residential landuse

Parameter	Unit	Receptor	Value	Details
Age class	yrs	1-6 yr old female child	1-6	Figure 2.2 SC050021/SR3
Body weight	kg	1-6 yr old female child	13.3	Table 3.2 SC050021/Technical Review 1
Body height	m	1-6 yr old female child	0.9	Table 3.7 SC050021/Technical Review 1
Respiration rate (average)	m3/hr	1-6 yr old female child	0.49	Table 4.14 SC050021/SR3
Respiration rate (active)	m3/hr	1-6 yr old female child	1.16	Table 4.13 SC050021/SR3 (moderate intensity)
Respiration rate (passive)	m3/hr	1-6 yr old female child	0.24	Table 4.13 SC050021/SR3 (sedentary and passive)
Skin area	m2	1-6 yr old female child	1.76	CLEA Briefing Note 1.1 (03/2005) Table 2
Fraction of exposed skin (indoors)	-	1-6 yr old female child	0.33	Table 4.8 SC050021/SR3
Fraction of exposed skin (outdoors)	-	1-6 yr old female child	0.27	Table 4.8 SC050021/SR3
Exposed skin area indoors	cm2	1-6 yr old female child	700	Table 4.7 SC050021/SR3
Exposed skin area outdoors	cm2	1-6 yr old female child	500	Table 4.7 SC050021/SR3
Averaging time	yrs	1-6 yr old female child	6	Figure 2.2 SC050021/SR3
Averaging time ingestion	days/yr	1-6 yr old female child	334	Table 3.1 SC050021/SR3
averaging time dermal	days/yr	1-6 yr old female child	334	Table 3.1 SC050021/SR4
averaging time inhalation (indoor and outdoor)	days/yr	1-6 yr old female child	365	Table 3.1 SC050021/SR5
Soil ingestion rate	mg/d	1-6 yr old female child	100	Table 6.2 SC050021/SR3
Dermal adherence factor	mg/cm2	1-6 yr old female child	0.042(indoor) 1(outdoor)	Table 8.1 SC050021/SR3 (assumes TF @0.7)
Exposure duration indoors	hrs/day	1-6 yr old female child	21.7	Table 3.1 SC050021/SR3
Exposure duration outdoors	hrs/day	1-6 yr old female child	1	Table 3.1 SC050021/SR3
Dermal absorbtion fraction (ABSd)	-	1-6 yr old female child	0.1	p106 SC050021/SR3

School age child (age 10-16)

Parameter	Unit	Receptor	Value	Details
Age class	yrs	10-16 yr old	10-16	Assume age range from 10-16 in comprehensive school
Body weight	kg	10-16 yr old	46.1	Table 4.6 SC050021/SR3
Body height	m	10-16 yr old	1.49	Table 4.6 SC050021/SR3
Respiration rate (average)	m3/hr	10-16 yr old	0.55	Table 4.14 SC050021/SR3
Respiration rate (active)	m3/hr	10-16 yr old	1.41	Table 4.13 SC050021/SR3 (moderate intensity)
Respiration rate (passive)	m3/hr	10-16 yr old	0.31	Table 4.13 SC050021/SR3 (sedentary and passive)
Skin area	m2	10-16 yr old	0.58	CLEA Briefing Note 1.1 (03/2005) Appendix 1
Exposed skin fraction indoors	-	10-16 yr old	0.22	Table 4.8 SC050021/SR3
Exposed skin fraction outdoors	-	10-16 yr old	0.14	Table 4.8 SC050021/SR3
Exposed skin area indoors	cm2	10-16 yr old	1000	Table 4.7 SC050021/SR3
Exposed skin area outdoors	cm2	10-16 yr old	700	Table 4.7 SC050021/SR3
Averaging time	yrs	10-16 yr old	5	Assume 5 year duration in secondary school
Averaging time ingestion	days/yr	10-16 yr old	281 (outdoors) 197 (indoors)	Assume 12 weeks holiday taken (half of holidays and weekends spent at school)
averaging time dermal	days/yr	10-16 yr old	281 (outdoors) 197 (indoors)	Assume 12 weeks holiday taken (half of holidays and weekends spent at school)
averaging time inhalation (indoor and outdoor)	days/yr	10-16 yr old	100	Assume 12 weeks holiday taken (half of holidays and weekends spent at school)
Soil ingestion rate	mg/d	10-16 yr old	50	Table 6.2 SC050021/SR3
Dermal adherence factor	mg/cm2	10-16 yr old	0.042(indoor) 0.3(outdoor)	Table 8.1 SC050021/SR3
Exposure duration indoors	hrs/day	10-16 yr old	7	Assume majority of time spent indoors
Exposure duration outdoors	hrs/day	10-16 yr old	2	Assume time limited time spent outdoors, meeting parents etc
Dermal absorbtion fraction (ABSd)	-	1-6 yr old female child	0.1	p106 SC050021/SR3

School age child (age 10-18)

Parameter	Unit	Receptor	Value	Details
Age class	yrs	10-18 yr old	10-18	Assume age range from 10-18 in comprehensive school with 6th form
Body weight	kg	10-18 yr old	51.4	Table 4.6 SC050021/SR3
Body height	m	10-18 yr old	1.51	Table 4.6 SC050021/SR3
Respiration rate (average)	m3/hr	10-18 yr old	0.55	Table 4.14 SC050021/SR3
Respiration rate (active)	m3/hr	10-18 yr old	1.38	Table 4.13 SC050021/SR3 (moderate intensity)
Respiration rate (passive)	m3/hr	10-18 yr old	0.3	Table 4.13 SC050021/SR3 (sedentary and passive)
Skin area	m2	10-18 yr old	0.58	CLEA Briefing Note 1.1 (03/2005) Appendix 1
Exposed skin fraction indoors	-	10-18 yr old	0.24	Table 4.8 SC050021/SR3
Exposed skin fraction outdoors	-	10-18 yr old	0.17	Table 4.8 SC050021/SR3
Exposed skin area indoors	cm2	10-18 yr old	1236	Table 4.7 SC050021/SR3
Exposed skin area outdoors	cm2	10-18 yr old	901	Table 4.7 SC050021/SR3
Averaging time	yrs	10-18 yr old	7	Assume 5 year duration in secondary school plus 2 years in 6th form
Averaging time ingestion	days/yr	10-18 yr old	281	Assume 12 weeks holiday taken (half of holidays and weekends spent at scholo)
averaging time dermal	days/yr	10-18 yr old	281 (outdoors) 197 (indoors)	Assume 12 weeks holiday taken (half of holidays and weekends spent at scholo)
averaging time inhalation (indoor and outdoor)	days/yr	10-18 yr old	281 (outdoors) 197 (indoors)	Assume 12 weeks holiday taken (half of holidays and weekends spent at scholo)
Soil ingestion rate	mg/d	10-18 yr old	50	Table 6.2 SC050021/SR3
Dermal adherence factor	mg/cm2	10-18 yr old	0.042(indoor) 0.3(outdoor)	Table 8.1 SC050021/SR3
Exposure duration indoors	hrs/day	10-18 yr old	7	Assume majority of time spent indoors
Exposure duration outdoors	hrs/day	10-18 yr old	2	Assume time limited time spent outdoors, meeting parents etc
Dermal absorbtion fraction (ABSd)	-	10-18 yr old	0.1	p106 SC050021/SR3

Age class	weight	height
1	5.6	0.7
2	9.8	0.8
3	12.7	0.9
4	15.1	0.9
5	16.9	1
6	19.7	1.1
7	22.1	1.2
8	25.3	1.2
9	27.5	1.3
10	31.4	1.3
11	35.7	1.4
12	41.3	1.4
13	47.2	1.5
14	51.2	1.6
15	56.7	1.6
16	59	1.6
17	70	1.6

Age class	inhalation rate passive	inhalation rate active (moderate activity)
1	0.18	0.84
2	0.28	1.26
3	0.28	1.28
4	0.26	1.2
5	0.26	1.2
6	0.26	1.2
7	0.28	1.26
8	0.28	1.26
9	0.28	1.26
10	0.28	1.26
11	0.28	1.26
12	0.31	1.41
13	0.31	1.41
14	0.31	1.41
15	0.31	1.41
16	0.31	1.41
17	0.28	1.42

Indoor/outdoor air parameters

Commercial landuse

Parameter	Unit	Value	Details
Building area	m2	4.24E+02	Table 3.10 SC050021/SR3 (office pre 1970)
Building perimeter	m	8.24E+01	Table 3.10 SC050021/SR3 (office pre 1970)
Building volume/area ratio	ratio	6.4	Table 3.10 SC050021/SR3 (office pre 1970)
Air exchange rate	units per day	24	Table 3.10 SC050021/SR3 (office pre 1970)
Height of living space	m	6.4	Table 3.10 SC050021/SR3 (office pre 1970)
Foundation thickness	m	0.15	Table 3.10 SC050021/SR3 (office pre 1970)
Pressure differential (indoor:outdoor)	pa	4.4	Table 3.10 SC050021/SR3 (office pre 1970)
Crack width	m	0.002	CLEA default (2mm)
Fraction cracks	fraction	3.90E-04	Based on area of total cracks given in Table 3.10 SC050021/SR3
Air content cracks	fraction	0.31	Assume same as soil
Water content cracks	fraction	0.15	Assume same as soil

Residential landuse

Parameter	Unit	Value	Details
Building area	m2	2.80E+01	Table 3.3 SC050021/SR3 (small terraced house)
Building perimeter	m	2.12E+01	Table 3.3 SC050021/SR3 (small terraced house)
Building volume/area ratio	ratio	4.8	Table 3.3 SC050021/SR3 (small terraced house)
Air exchange rate	units per day	12	Table 3.3 SC050021/SR3 (small terraced house)
Height of living space	m	4.8	Table 3.3 SC050021/SR3 (small terraced house)
Foundation thickness	m	0.15	Table 3.3 SC050021/SR3 (small terraced house)
Pressure differential (indoor:outdoor)	pa	3.1	Table 3.3 SC050021/SR3 (small terraced house)
Crack width	m	0.002	CLEA default (2mm)
Fraction cracks	fraction	1.40E-03	Based on area of total cracks given in Table 3.3 SC050021/SR9
Air content cracks	fraction	0.31	Assume same as soil
Water content cracks	fraction	0.15	Assume same as soil

User defined

Parameter	Unit	Value	Details
Building area	m2	4.50E+02	Measured from structural plans
Building perimeter	m	9.00E+01	Measured from structural plans
Building volume/area ratio	ratio	4.8	Table 3.3 SC050021/SR3 (small terraced house)
Air exchange rate	units per day	12	Table 3.3 SC050021/SR3 (small terraced house)
Height of living space	m	4.8	Table 3.3 SC050021/SR3 (small terraced house)
Foundation thickness	m	0.15	Table 3.3 SC050021/SR3 (small terraced house)
Pressure differential (indoor:outdoor)	pa	3	Table 3.3 SC050021/SR3 (small terraced house)
Crack width	m	0.002	CLEA default (2mm)
Fraction cracks	fraction	1.20E-03	Based on area of total cracks given in Table 3.3 SC050021/SR9
Air content cracks	fraction	0.31	Assume same as soil
Water content cracks	fraction	0.15	Assume same as soil

Q/Cwind (input for RBCA to caculate PEF)

	Mean annual air dispersion factor (g m2 s per kg m3)							
	Receptor height = 0.8m				Receptor height = 1.6m			
	Source area (ha)				Source area (ha)			
	0.01	0.05	0.5	2	0.01	0.05	0.5	2
Default value	2.40E+03	5.00E+02	1.20E+02	6.80E+01	1.90E+04	2.00E+03	2.80E+02	1.20E+02

Indoor dust correction factor (resuspended particles)

	IDcr	PEF	TFDL
Residential	0.00E+00		4.20E-06
Commercial	1.23E-03	8.60E-09	7.00E-06
school child 10-18	9.86E-01	6.90E-06	7.00E-06

Parameter	Unit	Soil type	Value	Details
TF (soil to dust transport factor)	g-g	Sand	0.7	P58 SC050021/SR3
DL (dust loading factor residential)	g m3	Sand	6.00E-06	P115 SC050021/SR3
DL (dust loading factor commercial)	g m3	Sand	1.00E-05	P115 SC050021/SR3

Soil and groundwater properties (all zones)

Commercial landuse

Parameter	Unit	Soil type	Value	Details
Porosity (total)	fraction	Sand	0.54	Table 4.4 SC050021/SR3
Porosity (air filled)	fraction	Sand	0.3	Table 4.4 SC050021/SR3
Porosity (water filled)	fraction	Sand	0.24	Table 4.4 SC050021/SR3
Dry Bulk Density	g/cm3	Sand	1.18	Table 4.4 SC050021/SR3
Van Genuchten shape parameter	dimensionless	Sand	0.35	Table 4.4 SC050021/SR3
Residual soil water content	fraction	Sand	0.07	Table 4.4 SC050021/SR3
Soil permeability	m/d	Sand	6.36	Table 4.4 SC050021/SR3
Vapour permeability	m2	Sand	7.20E-12	Table 4.4 SC050021/SR3
Fraction of organic carbon	fraction	Sand	0.0058	Assume 1% SOM
Soil temperature	K	Sand	283	Table 4.4 SC050021/SR3
Thickness of soil profile	m	Sand	0.5	Default value
Affected soil area	m2	Sand	170,343	From site plan
Length of affected soil parallel to wind	m	Sand	300	From site plan
Depth to groundwater	m	Sand	NA	None present

Residential Landuse

Parameter	Unit	Soil type	Value	Details
Porosity (total)	fraction	Sand	0.54	Table 4.4 SC050021/SR3
Porosity (air filled)	fraction	Sand	0.3	Table 4.4 SC050021/SR3
Porosity (water filled)	fraction	Sand	0.24	Table 4.4 SC050021/SR3
Dry Bulk Density	g/cm3	Sand	1.18	Table 4.4 SC050021/SR3
Van Genuchten shape parameter	dimensionless	Sand	0.35	Table 4.4 SC050021/SR3
Residual soil water content	fraction	Sand	0.07	Table 4.4 SC050021/SR3
Soil permeability	m/d	Sand	6.36	Table 4.4 SC050021/SR3
Vapour permeability	m2	Sand	7.20E-12	Table 4.4 SC050021/SR3
Fraction of organic carbon	fraction	Sand	0.0058	Assume 1% SOM
Soil temperature	K	Sand	283	Table 4.4 SC050021/SR3
Thickness of soil profile	m	Sand	0.5	Default value
Affected soil area	m2	Made ground (CLEA sandy soil default)	2,922	From site plan
Length of affected soil parallel to wind	m	Made ground (CLEA sandy soil default)	50	From site plan
Depth to groundwater	m	Made ground (CLEA sandy soil default)	NA	None present

User defined

Parameter	Unit	Soil type	Value	Details
Porosity (total)	fraction	Sand	0.54	Table 4.4 SC050021/SR3
Porosity (air filled)	fraction	Sand	0.3	Table 4.4 SC050021/SR3
Porosity (water filled)	fraction	Sand	0.24	Table 4.4 SC050021/SR3
Dry Bulk Density	g/cm3	Sand	1.18	Table 4.4 SC050021/SR3
Van Genuchten shape parameter	dimensionless	Sand	0.35	Table 4.4 SC050021/SR3
Residual soil water content	fraction	Sand	0.07	Table 4.4 SC050021/SR3
Soil permeability	m/d	Sand	6.36	Table 4.4 SC050021/SR3
Vapour permeability	m2	Sand	7.20E-12	Table 4.4 SC050021/SR3
Fraction of organic carbon	fraction	Sand	0.0058	Assume 1% SOM
Soil temperature	K	Sand	283	Table 4.4 SC050021/SR3
Thickness of soil profile	m	Sand	0.5	Default value
Affected soil area	m2	Made ground (CLEA sandy soil default)	1,125	From site plan
Length of affected soil parallel to wind	m	Made ground (CLEA sandy soil default)	30	From site plan
Depth to groundwater	m	Made ground (CLEA sandy soil default)	NA	None present

Exposure frequency adjustment for inhalation pathways

PARAMETERS	VALUE	UNIT	JUSTIFICATIONS
Ref chem tox value (residential indoor air CLR 10)			
Respiration Rate (active)	0.435	m^3/hour	Default value from Table 5.9 (CLR10)
Respiration Rate (passive)	0.1592	m^3/hour	Default value from Table 5.9 (CLR10)
Inhalation Time (active)	2.67	hours/day	Table 4.9 from CLR 10
Inhalation Time (passive)	18	hours/day	Table 4.9 from CLR 10
Repiration volume	3.98	m^3/day	Calculated using equations 5.7
Body Weight	14.5	kg	A time averaged body weight for 0 to 6 years old
Residential indoors			
Respiration Rate (active)	1.16	m^3/hour	Table 4.14 SC050021/SR3
Respiration Rate (passive)	0.24	m^3/hour	Table 4.14 SC050021/SR3
Respiration Rate (average)	11.85	m^3/day	Table 4.14 SC050021/SR3
Inhalation Time (total)	22	hours/day	Table 3.1 SC050021/SR3
Repiration volume	10.71	m^3/day	Calculated using equations 5.7
Body Weight	13.3	kg	Table 3.2 SC050021/SR3
Residential outdoors			
Respiration Rate (active)	1.16	m^3/hour	Table 4.14 SC050021/SR3
Respiration Rate (passive)	0.24	m^3/hour	Table 4.14 SC050021/SR3
Respiration Rate (average)	11.85	m^3/day	Table 4.14 SC050021/SR3
Inhalation Time (total)	1	hours/day	Table 3.1 SC050021/SR3
Repiration volume	0.49	m^3/day	Calculated using equations 5.7
Body Weight	13.3	kg	Table 3.2 SC050021/SR3
Commercial indoors			
Respiration Rate (active)	1.43	m^3/hour	Table 4.14 SC050021/SR3
Respiration Rate (passive)	0.28	m^3/hour	Table 4.14 SC050021/SR3
Respiration Rate (average)	14.8	m^3/hour	Table 4.14 SC050021/SR3
Inhalation Time (total)	8.3	hours/day	Table 3.1 SC050021/SR3
Repiration volume	5.12	m^3/day	Calculated using equations 5.7
Body Weight	70	kg	Table 3.2 SC050021/SR3
Commercial outdoors			
Respiration Rate (active)	1.43	m^3/hour	Table 4.14 SC050021/SR3
Respiration Rate (passive)	0.28	m^3/hour	Table 4.14 SC050021/SR3
Respiration Rate (average)	14.8	m^3/hour	Table 4.14 SC050021/SR3
Inhalation Time (total)	0.7	hours/day	Table 3.1 SC050021/SR3
Repiration volume	0.43	m^3/day	Calculated using equations 5.7
Body Weight	70	kg	Table 3.2 SC050021/SR3

User defined indoors			
Respiration Rate (active)	1.38	m^3/hour	Table 4.14 SC050021/SR3
Respiration Rate (passive)	0.4	m^3/hour	Table 4.14 SC050021/SR3
Inhalation time (active)	2	hours/day	Table 4.14 SC050021/SR3
Inhalation Time (passive)	5	hours/day	Table 4.14 SC050021/SR3
Repiration volume	4.76	m^3/day	Calculated using equations 5.7
Body Weight	51.4	kg	Table 3.2 SC050021/SR3
User Defined outdoors			
Respiration Rate (active)	1.38	m^3/hour	Table 4.14 SC050021/SR3
Respiration Rate (passive)	0.4	m^3/hour	Table 4.14 SC050021/SR3
Inhalation time (active)	2	hours/day	Table 4.14 SC050021/SR3
Inhalation Time (passive)	0	hours/day	Table 4.14 SC050021/SR3
Repiration volume	2.76	m^3/day	Calculated using equations 5.7
Body Weight	51.4	kg	Table 3.2 SC050021/SR3

CLEA default exposure parameters			
Receptor	**Indoor inhalation (dust and vapours)**	**outdoor inhalation (dust and vapours)**	**Unit**
Residential	365	365	days
Commercial	230	170	days
school age child (10-18)	197	281	days

Adjusted exposure parameters			
Receptor	**Indoor inhalation (dust and vapours)**	**outdoor inhalation (dust and vapours)**	**Unit**
Residential	1071.255331	49.4	days
Commercial	61.3	3.8	days
school age child (10-18)	66.46530317	54.97145259	days

Default value for female receptor

Age class	inhalation rate (m3 d)
1	8.5
2	13.3
3	12.7
4	12.2
5	12.2
6	12.2
7	12.4
8	12.4
9	12.4
10	12.4
11	12.4
12	13.4
13	13.4
14	13.4
15	13.4
16	13.4
17	14.8
18	12

Soil/Leachate partitioning Coefficient (conversion from kd)

PARAMETERS	ABBREVIATION	UNIT	DATA SOURCE
Henry's law Constant	H	-	Litterature search
Organic carbon partition coefficient	Koc	l/kg	Litterature search
Octanol-water partition coefficient	Kow	-	Litterature search
Soil/Leachate partitoning coefficient (CLR10 derivation)	Kswα	kg/l	Calculated
Soil/Leachate partitoning coefficient (RBCA derivation)	Kswβ	kg/l	Calculated
Volumetric Water content	θws	fraction	Medium specific
Volumetric air content	θas	fraction	Medium specific
Bulk density	ρ	g/cm3	Medium specific
Fraction of Organic Carbon	Foc	SOM/100	Medium specific
Correction Factor	CF	-	Calculated

PARAMETERS	ABBREVIATION	UNIT	VALUE								DATA SOURCE
			sand	sandy loam	silt loam	sandy clay loam	clay loam	sily clay loam	silty clay	clay	
Volumetric Water content	θws	fraction	0.24	0.33	0.44	0.37	0.42	0.46	0.51	0.47	Table 4.4 SC050021/SR3
Volumetric air content	θas	fraction	0.3	0.2	0.14	0.16	0.14	0.12	0.12	0.12	Table 4.4 SC050021/SR3
Bulk density	ρ	g/cm3	1.18	1.21	1.09	1.2	1.14	1.07	0.94	1.07	Table 4.4 SC050021/SR3
Fraction of Organic Carbon	Foc	SOM/100	0.0058	0.0058	0.0058	0.0058	0.0058	0.0058	0.0058	0.0058	Lowest Foc used in CLEA SGV derivation

Determinand	Kaw	log KOC	KOC	Kd	log KOW	Ksw
Acenaphthene	0.00644335	3.6	3981.071706	23.09021589	4.1512	23.36400818
Acenaphthylene	0.00473898	3.84	6918.309709	40.12619631	3.9362	40.39970689
Aldrin	0.0070669	4.68	47863.00923	277.6054535	6.7488	277.8793489
Anthracene	0.00461427	4.37	23442.28815	135.9652713	4.345	136.2387613
Antimony	0	1.653213	45	0.261	0	0.533727273
Arsenic	0	1.39794	25	0.145	0.679	0.417727273
Atrazine	1.09329E-07	2.20412	160	0.928	2.8175	1.200727291
Azinphos-methyl (guthion)	8.8E-11	2.4	251.1886432	1.45689413	2.5	1.729621403
Azobenzene	**0.001888748**	**4.725985**	**53208.9829**	**308.6121008**	**4.767721047**	**308.8851403**
Benz-a-anthracene	0.00013926	5.55	354813.3892	2057.917658	5.521	2058.190408
Benzo-a-pyrene	4.69741E-05	5.98	954992.586	5538.956999	6.109	5539.229734
Benzo-b-fluoranthene	0.00049886	6.08	1202264.435	6973.133721	6.109	6973.406531
Benzo-g,h,i-perylene	5.8198E-06	6.2	1584893.192	9192.380516	6.697	9192.653245
Benzo-k-fluoranthene	4.44799E-07	6.09	1230268.771	7135.558871	6.109	7135.831598
Biphenyl, 1,1-	0.012471	3.71	5128.61384	29.74596027	3.757	30.02074887
Bis (2-chloro-ethyl) ether	0.000889598	1.19	15.48816619	0.089831364	1.5572	0.362705678
Bis (2-ethyl-hexyl) phthalate	0.00045727	5.833333	681292.0691	3951.494001	8.3918	3951.766803
Bis (chloroethoxy) methane	0.001247675	2.486675	306.6728049	1.778702268	2.52939498	2.051635768
Boron	0	-	#VALUE!	#VALUE!	-	#VALUE!
Bromobenzene	0.083816344	2.38412	242.1699258	1.40458557	2.91163052	1.69116784
Bromodichloromethane	0.1317769	1.74	54.95408739	0.318733707	1.6105	0.613242285
Bromoform	0.02556555	1.94	87.096359	0.505158882	1.7895	0.782111866
Bromomethane	0.590294	1.02	10.47128548	0.060733456	1.176	0.431029985
Bromophenyl phenylether, 4-	0.009662198	5.161775	145136.0959	841.7893559	5.250758328	842.0636803
Butyl benzyl phthalate	7.93987E-05	4.138176	13746	79.7268	4.8445	79.9995404
Butylbenzene, n-	0.557	3.48	3019.95172	17.51571998	4.29	17.78051337
Butylbenzene, sec-	0.507	3.32	2089.296131	12.11791756	4.09	12.47444648
Butylbenzene, tert-	0.856	3.39	2454.708916	14.23731171	4.18	14.65152659
Cadmium	0	1.176091	15	0.087	-0.071	0.359727273
Carbazole	0.003375484	3.39	2454.708916	14.23731171	3.2308	14.51059691
Carbon disulfide	0.6131575	1.72	52.48074602	0.304388327	1.94	0.678463947
Carbon tetrachloride	1.197216	2.27	186.2087137	1.080010539	2.4421	1.550624754
Chloro-3-methylphenol, 4-	1.40079E-05	2.943726	878.4686716	5.095118295	2.994350232	5.367847883
Chloroaniline, p-	4.86369E-05	1.82	66.0693448	0.3832022	1.7205	0.655937512
Chlorobenzene	0.1816609	2.33	213.796209	1.240018012	2.6375	1.54277188
Chlorobromomethane (bromochloromethane)	0.036897799	1.439221	27.46290518	0.15945885	1.318361992	0.438284932
Chloroethane	0.212007	1.25	17.7827941	0.103140206	1.5776	0.410909958
Chloroform	0.1525619	1.67	46.77351413	0.271286382	1.521	0.569230498
Chloromethane	1.438322	0.778	5.997910763	0.034787882	1.0865	0.545254329
Chloronaphthalene, 1-	0.006332584	3.975677	9455.328502	54.84090531	4.044147123	55.11467929
Chloronaphthalene, 2-	0.02544084	3.93	8511.380382	49.36600622	3.8135	49.64293859
Chlorophenol, 2-	0.000739946	2.456366	286	1.6588	2.1573	1.931649578
Chlorophenyl phenylether, 4-	0.012991679	4.117308	13101.12162	75.98650539	5.037928442	76.26138004
Chlorotoluene, p- (4-chlorotoluene)	0.133476406	2.695761	496.319558	2.878653436	3.305166548	3.173442925
Chlorpyrifos	0.000172931	3.7	5011.872336	29.06885955	4.6582	29.34161541
Chromium (III) (total chromium)	0	3.079181	1200	6.96	0	7.232727273
Chromium (VI)	0	1.146128	14	0.0812	0	0.353927273
Chrysene	5.02997E-05	5.49	309029.5433	1792.371351	5.521	1792.644086
Cobalt	0	1.653213	45	0.261	0	0.533727273
Copper	0	1.60206	40	0.232	-0.571	0.504727273
Cumene	0.606922	3.54	3467.368505	20.11073733	3.449	20.48378228
Cyanide	0	0.995635	9.9	0.05742	-0.8928	0.330147273
Cymene (isopropyltoluene)	0.466	3.36	2290.867653	13.28703239	4.14	13.63678445
DDE	0.00087297	5.04	109647.8196	635.9573538	5.9956	636.2302253
DDT	0.002232309	5.137803	137341.9271	796.5831771	6.7945	796.8562733
Dibenz-a,h-anthracene	4.65584E-07	6.28	1905460.718	11051.67216	6.697	11051.94489
Dibenzofuran	0.005282986	3.928762	8487.143383	49.22543162	3.996420691	49.49903211
Dibromo-3-chloropropane, 1,2-	0.008314	2.23	169.8243652	0.984981318	2.6822	1.259082806
Dibromochloromethane	0.03254931	1.8	63.09573445	0.36595526	1.7	0.644062584
Dichlorobenzene, 1,2-	0.087297	2.84	691.8309709	4.012619631	3.282	4.29977616
Dichlorobenzene, 1,3-	0.195	2.23	169.8243652	0.984981318	3.28	1.289939996
Dichlorobenzene, 1,4-	0.1168117	2.81	645.654229	3.744794528	3.282	4.03682952
Dichlorodifluoromethane	16.66957	2.11	128.8249552	0.74718474	1.8155	3.775212839
Dichloroethane, 1,1-	0.2394432	1.5	31.6227766	0.183412104	1.7581	0.495716765
Dichloroethane, 1,2-	0.0532096	1.24	17.37800829	0.100792448	1.8316	0.382314696
Dichloroethylene, cis-1,2-	0.1874807	1.462398	29	0.1682	1.86	0.471915818
Dichloroethylene, trans-1,2	0.3899266	1.7	50.11872336	0.290688596	2.07	0.627866546
Dichlorophenol, 2,4-	0.000131361	1.857332	72	0.4176	2.8018	0.690348985
Dichloropropane, 1,2-	0.1168117	1.77	58.88436554	0.341529302	2.2492	0.633564312
Dichloropropane, 1,3-	0.055194688	2.097105	125.0560768	0.725325245	2.23209	1.007175607
Dichloropropane, 2,2-	0.339352168	2.192176	155.6597583	0.902826598	2.364133822	1.231645139
Dichloropropene, 1,1-	1.818840538	2.314262	206.1872775	1.195886209	2.823414401	1.769248282
Dichloropropene, 1,3-cis	0.0915	1.65	44.66835922	0.259076483	1.53	0.546927723
Dichloropropene, 1,3-trans	0.0915	1.65	44.66835922	0.259076483	1.53	0.546927723
Dieldrin	0.000110992	4.33	21379.6209	124.0018012	5.4478	124.2745468
Diethyl phthalate	1.87065E-05	2.18	151.3561248	0.877865524	2.6456	1.150595889
Dimethoate	2.57734E-09	0.63	4.265795188	0.024741612	0.2781	0.297468885
Dimethyl phenol, 2,4-	0.00008314	2.07	117.4897555	0.681440582	2.6074	0.954181597
Dimethylphthalate	0.000024	1.5	31.6227766	0.183412104	1.66	0.456143344
Di-n-butyl phthalate	5.94451E-05	4.53	33884.41561	196.5296106	4.61	196.8023477
Dinitrotoluene, 2,6-	3.10528E-05	1.62	41.68693835	0.241784242	2.1757	0.514516648
Di-n-octyl phthalate	0.002776876	7.92	83176377.11	482422.9872	8.5388	482423.2604
Diphenyl oxide	0.01754108	4.178192	15072.72803	87.42182255	4.250164662	87.69744917
Diuron	3.04283E-08	2.63	426.5795188	2.474161209	2.6726	2.746888487
Endrin	4.94683E-05	3.97	9332.543008	54.12874945	5.4478	54.4014849
Ethylene dibromide	0.02934842	1.73	53.70317964	0.311478442	2.0106	0.589056693
Fluoranthene	0.000387848	4.69	48977.88194	284.0717152	4.933	284.3445066
Fluorene	0.002643852	3.88	7585.77575	43.99749935	4.0155	44.27066362
Heptachlor	0.02440159	4.07	11748.97555	68.14405819	6.2065	68.42081878
Hexachlorobenzene	0.02223995	4.45	28183.82931	163.46621	5.86	163.7426133
Hexachlorobutadiene	0.993523	3.84	6918.309709	40.12619631	4.7172	40.56314226
Hexachlorocyclohexane, alpha	0.00028226	3.12	1318.256739	7.645889084	4.2586	7.918663011
Hexachlorocyclohexane, beta	1.43832E-05	3.14	1380.384265	8.006228735	4.2586	8.278956385
Hexachlorocyclohexane, delta	0.000177	3.93	8511.380382	49.36600622	4	49.63876274
Hexachlorocyclohexane, gamma	0.000140922	3.04	1096.478196	6.359573538	4.2586	6.632324103
Hexachlorocyclopentadiene	0.715004	3.98	9549.92586	55.38956999	4.6253	55.78047974
Hexachloroethane	0.1617073	3.26	1819.700859	10.55426498	4.0348	10.85372073
Indeno-1,2,3-cd-pyrene	2.8517E-06	6.54	3467368.505	20110.73733	6.697	20111.01005
Isodrin	0.091303492	6.837488	6878404.918	39894.74852	6.819715975	39895.03634
Isophorone	0.000257318	1.48	30.1995172	0.1751572	2.6179	0.447927004
Lead (inorganic)	0	1	10	0.058	0.729	0.330727273
Manganese	0	1.7	50.11872336	0.290688596	0	0.563415868
Mercury	0.473898	-1.39794	0.04	0.000232	-0.471	0.351289521
Methyl naphthalene, 1-	0.0164	3.36	2290.867653	13.28703239	3.72	13.5624704
Methylene chloride	0.0910383	1.07	11.74897555	0.068144058	1.3405	0.355918984
Methylnaphthalene, 2-	0.018466436	3.635	4315.190768	25.02810646	3.7163	25.30388603
Naphthalene	0.02003674	3.19	1548.816619	8.98313639	3.169	9.25917552
Nickel	0	1.20412	16	0.0928	-0.571	0.365527273
Nitroaniline, 2-	0.000020785	1.43	26.91534804	0.156109019	2.0185	0.428839727
Nitroaniline, 3-	2.31021E-07	1.595669	39.41570873	0.228611111	1.62298	0.501338422
Nitroaniline, 4-	3.32726E-08	1.050937	11.24441275	0.065217594	1.068826835	0.337944872
Nitrophenol, 2-	2.21028E-05	1.32	20.89296131	0.121179176	2.349	0.393910102
Nitrophenol, 4-	3.23984E-08	0.5	3.16227766	0.01834121	1.72642	0.291068489
Nitrosodi-n-propylamine, n-	9.35325E-05	1.295	19.72422736	0.114400519	1.3528	0.387143251
Nitrosodiphenylamine	0.00020785	2.52	331.1311215	1.920560505	3.1614	2.193322133
Parathion	2.36949E-05	3.748188	5600	32.48	3.7309	32.75273119
Pentachlorophenol	1.16398E-05	2.612784	410	2.378	4.7353	2.650729197
Phenanthrene	0.0054041	4.15	14125.37545	81.92717759	4.345	82.2007981
Phenol	2.47342E-05	1.24	17.37800829	0.100792448	1.5128	0.373523809
Polybrominated biphenyls (solid)	0.000162123	3.33	2137.96209	12.40018012	6.39	12.67293419
Propylbenzene, n-	0.424	3.03	1071.519305	6.21481197	3.73	6.557621888
Pyrene	0.00045727	4.58	38018.93963	220.5098499	4.933	220.7826527
Selenium	0	0.342423	2.2	0.01276	0.239	0.285487273
Simazine	2.47757E-07	2.47308	297.2213483	1.72388382	2.64	1.996611134
Styrene	0.1143175	2.88	758.577575	4.399749935	2.895	4.691372662
Tetrachloroethane, 1,1,1,2-	0.099768	2.98	954.992586	5.538956999	2.9332	5.82817485
Tetrachloroethane, 1,1,2,2-	0.01546404	1.89	77.62471166	0.450223328	2.1926	0.72550664
Tetrachloroethylene	0.764888	2.190332	155	0.899	2.9654	1.298155041
Thallium	0	1.64	43.65158322	0.253179183	-	0.525906455
TPH - Aliph >C06-C08	48.11424433	3.6	3981.071706	23.09021589	3.63	31.31571082
TPH - Aliph >C08-C10	78.54930121	4.5	31622.7766	183.4121043	1.0865	196.6681871
TPH - Aliph >C10-C12	122.2667856	5.4	251188.6432	1456.89413	4.044147123	1477.376244
TPH - Aliph >C12-C16	520.9361792	6.7	5011872.336	29068.85955	3.8135	29155.23743
TPH - Aliph >C16-C21	4899.404766	8.8	630957344.5	3659552.598	2.47	3660362.69
TPH - Aliph >C21-C34	7258.377431	8.8	630957344.5	3659552.598	2.1573	3660752.603
TPH - Arom >C05-C07	0.232323065	1.9	79.43282347	0.460710376	2.07	0.771838156
TPH - Arom >C07-C08	0.277264942	2.4	251.1886432	1.45689413	2.1	1.775450319
TPH - Arom >C08-C10	0.479662005	3.2	1584.893192	9.192380516	5.037928442	9.544390765
TPH - Arom >C10-C12	0.135104798	3.4	2511.886432	14.5689413	2.20959631	14.86399995
TPH - Arom >C12-C16	0.051195452	3.7	5011.872336	29.06885955	3.46	29.35004888
TPH - Arom >C16-C21	0.013260497	4.2	15848.93192	91.92380516	3.2	92.19872425
TPH - Arom >C21-C35	0.000659852	5.1	125892.5412	730.1767388	3.305166548	730.4495752
Trichlorobenzene, 1,2,3-	0.038	3.95	8912.509381	51.69255441	4.02	51.97156268
Trichlorobenzene, 1,2,4-	0.0590294	3.22	1659.586907	9.625604063	3.9265	9.908088261
Trichloroethane, 1,1,1-	0.715004	2.04	109.6478196	0.635957354	2.6792	1.026867106
Trichloroethane, 1,1,2-	0.03795341	1.7	50.11872336	0.290688596	2.0121	0.569689159
Trichloroethylene	0.428171	1.97	93.32543008	0.541287494	2.4731	0.884786833
Trichlorofluoromethane	4.03229	2.13	134.8962883	0.782398472	2.1288	1.72161996
Trichlorophenol, 2,4,5-	0.00017792	2.474216	298	1.7294	3.4483	2.001156681

$$K_{sw} = \frac{\theta_w + (K_d \rho_s) + (K_{aw} \theta_a)}{\rho_s}$$

RBCA output (user defined receptor)

Tier 1 Soil RBSL - secondary school child HQ

Contaminant	Units	Ingestion	Dermal Indoor	Dermal Outdoor	Soil Vapours Outdoor	Soil Vapours Indoor	Dust outdoors	Dust indoors	Soil HQ
Acenaphthene		6.4E-5	5.1E-6	3.8E-5	2.63E-06	3.79E-07	2.38E-08	4.54E-08	1.5E-8
Acenaphthylene		6.4E-5	5.1E-6	3.8E-5	1.16E-06	1.68E-07	2.38E-08	4.54E-08	1.4E-8
Aldrin		6.5E+0	9.2E-1	6.9E+0	7.72E-03	1.12E-03	2.43E-03	4.63E-03	6.1E-4
Anthracene		1.3E-5	1.0E-6	7.6E-6	4.94E-08	7.17E-09	4.74E-09	9.05E-09	2.1E-9
Antimony		9.6E-3	4.5E-3	3.4E-2			3.57E-06	6.81E-06	#VALUE!
Arsenic		2.0E-3	1.9E-4	1.4E-3			1.42E-04	2.72E-04	#VALUE!
Atrazine		6.5E+0	9.2E-1	6.9E+0	4.07E-06	3.54E-06	9.99E-07	1.91E-06	4.9E-7
Azinphos-methyl (guthion)		2.6E-3	3.6E-4	2.7E-3	1.84E-06	1.85E-06	9.53E-07	1.82E-06	3.7E-7
Azobenzene		8.5E-3	1.2E-3	8.9E-3	8.90E-06	1.30E-06	3.09E-06	5.90E-06	7.3E-7
Benz-a-anthracene		5.6E-3	4.4E-4	3.3E-3	2.11E-05	4.38E-06	5.90E-04	1.13E-03	3.6E-6
Benzo-a-pyrene		3.8E-2	3.1E-3	2.3E-2	1.88E-05	6.20E-06	4.07E-03	7.78E-03	4.6E-6
Benzo-b-fluoranthene		5.4E-3	4.3E-4	3.2E-3	9.08E-06	1.54E-06	5.74E-04	1.10E-03	1.3E-6
Benzo-g,h,i-perylene		1.3E-4	1.0E-5	7.6E-5	2.23E-10	1.86E-10	4.74E-08	9.05E-08	1.0E-10
Benzo-k-fluoranthene		3.8E-3	3.1E-4	2.3E-3	2.33E-07	2.02E-07	4.07E-04	7.78E-04	1.1E-7
Biphenyl, 1,1-		7.7E-5	1.1E-5	8.1E-5	8.70E-04	1.24E-04	3.85E-06	7.34E-06	1.9E-6
Bis (2-chloro-ethyl) ether		8.5E-2	7.5E-3	5.6E-2	1.20E-01	1.80E-02	3.30E-05	6.30E-05	2.2E-5
Bis (2-ethyl-hexyl) phthalate		1.5E-4	5.7E-5	4.3E-4	3.89E-08	6.03E-09	9.99E-07	1.91E-06	5.2E-9
Bis (chloroethoxy) methane		8.5E-2	1.2E-2	8.9E-2	1.23E-02	1.82E-03	3.30E-05	6.30E-05	2.1E-5
Boron		4.3E-5	3.4E-6	2.5E-5			2.50E-07	4.78E-07	#VALUE!
Bromobenzene		1.9E-4	1.7E-5	1.3E-4	1.78E-02	2.53E-03	4.74E-07	9.05E-07	3.0E-7
Bromodichloromethane		1.9E-2	1.4E-3	1.0E-2	1.60E-01	2.28E-02	1.77E-06	3.37E-06	1.2E-6
Bromoform		6.1E-4	7.2E-5	5.3E-4	6.82E-04	9.81E-05	1.10E-07	2.10E-07	7.2E-8
Bromomethane		2.7E-3	2.4E-4	1.8E-3	1.83E+00	2.60E-01	9.99E-07	1.91E-06	6.5E-7
Bromophenyl phenylether, 4-		1.2E+0	1.6E-1	1.2E+0	1.70E-03	2.43E-04	3.30E-04	6.30E-04	1.1E-4
Butyl benzyl phthalate		7.7E-6	8.9E-7	6.6E-6	2.15E-07	6.41E-08	1.04E-06	1.98E-06	4.3E-8
Butylbenzene, n-		9.6E-5	1.4E-5	1.0E-4	3.13E-04	4.46E-05	1.85E-08	3.53E-08	1.2E-8
Butylbenzene, sec-		9.6E-5	8.5E-6	6.3E-5	4.15E-04	5.90E-05	1.85E-08	3.53E-08	1.2E-8
Butylbenzene, tert-		9.6E-5	8.5E-6	6.3E-5	1.17E-03	1.66E-04	3.57E-08	6.81E-08	2.3E-8
Cadmium		1.5E-3	4.4E-3	3.2E-2			3.00E-04	5.73E-04	#VALUE!
Carbazole		1.5E-3	1.6E-4	1.2E-3	4.97E-05	7.23E-06	5.71E-07	1.09E-06	3.5E-7
Carbon disulfide		3.8E-5	4.3E-6	3.2E-5	6.41E-02	9.12E-03	4.99E-08	9.53E-08	3.2E-8
Carbon tetrachloride		5.5E-4	6.0E-5	4.4E-4	9.41E-02	1.34E-02	1.42E-07	2.72E-07	9.3E-8
Chloro-3-methylphenol, 4-		3.8E-5	5.5E-6	4.0E-5	3.94E-08	1.74E-08	1.42E-08	2.72E-08	5.3E-9
Chloroaniline, p-		9.6E-4	1.4E-4	1.0E-3	6.12E-05	1.99E-05	9.44E-07	1.80E-06	5.9E-7
Chlorobenzene		1.9E-5	4.4E-6	3.3E-5	9.34E-07	1.33E-07	9.99E-12	1.91E-11	6.6E-12
Chlorobromomethane (bromochloromethane)		9.6E-5	8.5E-6	6.3E-5					#VALUE!
Chloroethane		2.2E-4	2.0E-5	1.5E-4	7.16E-04	1.02E-04	4.92E-10	9.40E-10	3.2E-10
Chloroform		1.3E-4	4.5E-5	3.4E-4	2.05E-02	2.91E-03	4.99E-08	9.53E-08	3.3E-8
Chloromethane		1.0E-3	8.9E-5	6.6E-4	9.44E-01	1.34E-01	1.80E-07	3.43E-07	1.2E-7
Chloronaphthalene, 1-		4.8E-5	3.8E-6	2.8E-5	2.25E-07	3.22E-08	3.58E-09	6.84E-09	2.2E-9
Chloronaphthalene, 2-		4.8E-5	3.8E-6	2.8E-5	1.07E-06	1.53E-07	3.58E-09	6.84E-09	2.3E-9
Chlorophenol, 2-		1.3E-3	1.1E-4	8.4E-4	1.96E-05	3.07E-06	9.53E-08	1.82E-07	6.1E-8
Chlorophenyl phenylether, 4-		1.2E+0	1.6E-1	1.2E+0	2.60E-02	3.72E-03	3.30E-04	6.30E-04	2.0E-4
Chlorotoluene, p- (4-chlorotoluene)		1.9E-4	1.7E-5	1.3E-4	5.50E-01	7.83E-02	1.92E-05	3.67E-05	6.6E-6
Chlorpyrifos		3.8E-3	5.5E-4	4.0E-3	7.09E-05	1.24E-05	2.50E-05	4.77E-05	6.3E-6
Chromium (III) (total chromium)		3.0E-4	1.6E-3	1.2E-2			3.00E-04	5.73E-04	#VALUE!
Chromium (VI)		3.0E-4	8.4E-4	6.2E-3			3.00E-04	5.73E-04	#VALUE!
Chrysene		3.8E-3	3.1E-4	2.3E-3	3.69E-06	1.28E-06	4.07E-04	7.78E-04	9.4E-7
Cobalt		2.7E-3	2.4E-4	1.8E-3			1.02E-06	1.94E-06	#VALUE!
Copper		9.6E-5	1.2E-5	8.9E-5			4.99E-06	9.53E-06	#VALUE!
Cumene		3.8E-5	3.4E-10	2.5E-9	2.29E-04	3.26E-05	1.25E-08	2.38E-08	2.9E-10
Cyanide		2.9E-4	4.0E-5	3.0E-4			3.19E-07	6.08E-07	#VALUE!
Cymene (isopropyltoluene)		3.8E-5	3.4E-6	2.5E-5	3.11E-04	4.43E-05	1.66E-08	3.17E-08	1.1E-8
DDE		1.3E-1	1.3E-2	9.8E-2	9.37E-06	1.57E-06	4.85E-05	9.27E-05	1.3E-6
DDT		1.3E-1	1.3E-2	9.8E-2	1.78E-05	2.69E-06	4.85E-05	9.27E-05	2.2E-6
Dibenz-a,h-anthracene		1.9E-1	1.5E-2	1.1E-1	7.02E-06	6.06E-06	2.04E-02	3.89E-02	3.3E-6
Dibenzofuran		1.9E-3	2.7E-4	2.0E-3	3.97E-05	5.70E-06	7.11E-07	1.36E-06	4.3E-7
Dibromo-3-chloropropane, 1,2-		1.2E-1	1.6E-2	1.2E-1	2.97E-02	4.24E-03	4.99E-06	9.53E-06	3.3E-6
Dibromochloromethane		1.8E-4	2.1E-5	1.6E-4	3.27E-02	4.68E-03	2.39E-06	4.57E-06	1.4E-6
Dichlorobenzene, 1,2-		9.0E-6	7.9E-7	5.9E-6	1.15E-04	1.64E-05	8.31E-09	1.59E-08	5.4E-9
Dichlorobenzene, 1,3-		1.3E-4	1.1E-5	8.4E-5	7.17E-02	1.02E-02	6.22E-07	1.19E-06	3.9E-7
Dichlorobenzene, 1,4-		3.6E-5	2.8E-6	2.1E-5	1.48E-04	2.11E-05	7.47E-09	1.43E-08	4.9E-9
Dichlorodifluoromethane		1.9E-5	5.9E-6	4.4E-5	6.06E-02	8.63E-03	2.50E-08	4.77E-08	1.6E-8
Dichloroethane, 1,1-		1.9E-5	1.4E-6	1.0E-5	5.93E-03	8.44E-04	1.03E-08	1.96E-08	6.7E-9
Dichloroethane, 1,2-		6.4E-3	4.5E-4	3.4E-3	6.91E-01	9.84E-02	2.38E-06	4.54E-06	1.6E-6
Dichloroethylene, cis-1,2-		5.5E-4	3.9E-5	2.9E-4	1.01E-01	1.44E-02	2.08E-07	3.97E-07	1.4E-7
Dichloroethylene, trans-1,2		2.3E-4	1.6E-5	1.2E-4	5.13E-02	7.31E-03	8.31E-08	1.59E-07	5.4E-8
Dichlorophenol, 2,4-		1.3E-3	1.1E-4	8.2E-4	4.78E-05	1.14E-05	4.74E-07	9.05E-07	3.0E-7
Dichloropropane, 1,2-		2.7E-4	2.6E-5	2.0E-4	2.50E-01	3.56E-02	1.25E-06	2.38E-06	7.9E-7
Dichloropropane, 1,3-		7.7E-3	6.8E-4	5.1E-3	2.05E-02	2.91E-03	4.00E-07	7.63E-07	2.6E-7
Dichloropropane, 2,2-		5.2E-3	4.6E-4	3.4E-3	3.10E-01	4.41E-02	1.25E-06	2.38E-06	8.2E-7
Dichloropropene, 1,1-		7.7E-3	6.8E-4	5.1E-3	3.64E-01	5.18E-02	4.00E-07	7.63E-07	2.6E-7
Dichloropropene, 1,3-cis		4.2E-2	3.7E-3	2.7E-2	1.49E-01	2.12E-02	7.47E-07	1.43E-06	4.9E-7
Dichloropropene, 1,3-trans		7.7E-3	6.8E-4	5.1E-3	7.97E-02	1.13E-02	4.00E-07	7.63E-07	2.6E-7
Dieldrin		6.2E+0	8.7E-1	6.5E+0	3.03E-04	8.98E-05	2.28E-03	4.36E-03	6.6E-5
Diethyl phthalate		1.9E-5	1.5E-6	1.1E-5	9.95E-06	5.12E-06	1.04E-06	1.98E-06	3.9E-7
Dimethoate		1.9E-3	2.7E-4	2.0E-3	4.23E-05	3.75E-05	7.11E-07	1.36E-06	4.6E-7
Dimethyl phenol, 2,4-		1.9E-4	2.7E-5	2.0E-4	2.03E-05	4.70E-06	2.93E-07	5.60E-07	1.8E-7
Dimethylphthalate		4.8E-6	3.8E-7	2.8E-6	7.11E-05	2.39E-05	1.04E-06	1.98E-06	2.1E-7
Di-n-butyl phthalate		7.4E-5	5.2E-6	3.9E-5	1.53E-07	4.32E-08	9.99E-07	1.91E-06	3.2E-8
Dinitrotoluene, 2,6-		1.9E-3	1.6E-4	1.2E-3	1.59E-03	6.41E-04	3.35E-05	6.40E-05	1.8E-5
Di-n-octyl phthalate		1.9E-4	1.5E-5	1.1E-4	5.72E-11	8.43E-12	6.92E-08	1.32E-07	7.3E-12
Diphenyl oxide		6.2E-4	8.8E-5	6.5E-4	7.13E-05	1.02E-05	7.11E-07	1.36E-06	4.4E-7
Diuron		1.9E-3	2.7E-4	2.0E-3	7.50E-07	6.58E-07	4.99E-07	9.53E-07	1.7E-7
Endrin		1.9E-2	2.7E-3	2.0E-2	8.51E-06	3.54E-06	4.99E-05	9.53E-05	2.3E-6
Ethylene dibromide		2.9E-1	2.6E-2	1.9E-1	9.35E-01	1.35E-01	6.00E-05	1.15E-04	3.9E-5
Fluoranthene		9.6E-5	7.7E-6	5.7E-5	1.45E-08	2.48E-09	3.57E-08	6.81E-08	1.9E-9
Fluorene		9.6E-5	7.7E-6	5.7E-5	7.38E-07	1.08E-07	3.57E-08	6.81E-08	1.9E-8
Heptachlor		1.7E+0	1.7E-1	1.3E+0	2.43E-02	3.48E-03	6.41E-04	1.22E-03	3.7E-4
Hexachlorobenzene		2.4E-2	3.4E-3	2.5E-2	9.26E-04	1.32E-04	1.33E-05	2.54E-05	8.1E-6
Hexachlorobutadiene		1.9E-2	2.7E-3	2.0E-2	2.86E-02	4.07E-03	2.20E-06	4.19E-06	1.4E-6
Hexachlorocyclohexane, alpha		2.4E+0	1.8E-1	1.3E+0	5.00E-03	1.17E-03	8.95E-04	1.71E-03	3.6E-4
Hexachlorocyclohexane, beta		6.9E-1	5.4E-2	4.0E-1	2.29E-04	1.56E-04	2.56E-04	4.90E-04	6.0E-5
Hexachlorocyclohexane, delta		6.9E-1	9.8E-2	7.3E-1	4.13E-04	7.59E-05	2.56E-04	4.90E-04	4.6E-5
Hexachlorocyclohexane, gamma		4.8E-1	3.5E-2	2.6E-1	1.34E-04	4.08E-05	3.57E-05	6.81E-05	1.3E-5
Hexachlorocyclopentadiene		6.4E-4	9.1E-5	6.7E-4	4.88E-02	6.94E-03	2.50E-05	4.77E-05	1.3E-5
Hexachloroethane		1.1E-3	1.5E-4	1.1E-3	1.43E-04	2.05E-05	4.00E-07	7.63E-07	2.6E-7
Indeno-1,2,3-cd-pyrene		8.9E-3	7.1E-4	5.3E-3	2.15E-07	1.72E-07	9.44E-04	1.80E-03	9.5E-8
Isodrin		6.5E+1	9.2E+0	6.9E+1	1.78E-02	2.54E-03	2.43E-02	4.63E-02	1.9E-3
Isophorone		7.3E-5	1.0E-5	7.7E-5	1.38E-04	2.28E-05	2.17E-07	4.14E-07	1.4E-7
Lead (inorganic)		1.1E-3	5.0E-4	3.7E-3			3.96E-07	7.57E-07	#VALUE!
Manganese		1.9E-4	2.3E-4	1.7E-3			7.11E-08	1.36E-07	#VALUE!
Mercury		3.5E-3	3.5E-3	2.6E-2	2.51E-03	3.57E-04	9.53E-07	1.82E-06	6.2E-7
Methyl naphthalene, 1-		5.5E-5	4.4E-6	3.2E-5	1.49E-05	2.12E-06	2.04E-08	3.89E-08	1.3E-8
Methylene chloride		6.4E-4	4.8E-5	3.6E-4	9.44E-04	1.34E-04	1.66E-09	3.17E-09	1.1E-9
Methylnaphthalene, 2-		9.6E-4	7.7E-5	5.7E-4	1.51E-04	2.16E-05	3.46E-07	6.61E-07	2.2E-7
Naphthalene		3.8E-5	3.1E-6	2.3E-5	4.44E-04	6.34E-05	3.61E-07	6.89E-07	2.2E-7
Nickel		7.7E-4	1.4E-3	1.0E-2			3.00E-04	1.96E-07	#VALUE!
Nitroaniline, 2-		1.3E-2	1.8E-3	1.3E-2	1.52E-04	5.60E-05	2.04E-06	3.89E-06	1.3E-6
Nitroaniline, 3-		1.6E-3	2.3E-4	1.7E-3	1.00E-04	8.65E-05	4.74E-06	9.05E-06	2.9E-6
Nitroaniline, 4-		1.6E-3	2.3E-4	1.7E-3	1.36E-04	1.20E-04	2.99E-06	5.71E-06	1.9E-6
Nitrophenol, 2-		1.9E-3	2.7E-4	2.0E-3	1.33E-04	4.83E-05	1.25E-06	2.38E-06	8.0E-7
Nitrophenol, 4-		1.9E-3	1.4E-4	1.0E-3	2.60E-04	2.28E-04	3.71E-06	7.08E-06	2.3E-6
Nitrosodi-n-propylamine, n-		5.4E-1	1.5E-1	1.1E+0	2.91E-01	6.50E-02	9.99E-04	1.91E-03	6.4E-4
Nitrosodiphenylamine		3.8E-4	1.1E-4	7.9E-4	4.61E-06	8.94E-07	1.40E-07	2.67E-07	8.2E-8
Parathion		6.4E-4	9.1E-5	6.7E-4	2.44E-05	1.30E-05	9.99E-05	1.91E-04	6.8E-6
Pentachlorophenol		1.3E-2	1.2E-3	8.9E-3	1.47E-06	6.63E-07	3.42E-07	6.52E-07	1.5E-7
Phenanthrene		1.3E-4	1.0E-5	7.6E-5	9.85E-07	1.42E-07	4.74E-08	9.05E-08	2.5E-8
Phenol		1.1E-6	8.9E-8	6.6E-7	6.27E-08	2.08E-08	4.19E-10	8.00E-10	2.7E-10
Polybrominated biphenyls (solid)		3.8E-1	2.9E-2	2.2E-1		2.77E+23	9.99E-06	1.91E-05	#VALUE!
Propylbenzene, n-		9.6E-5	8.5E-6	6.3E-5	4.89E-04	6.95E-05	1.25E-08	2.38E-08	8.2E-9
Pyrene		1.3E-4	1.0E-5	7.6E-5	2.63E-08	4.58E-09	4.74E-08	9.05E-08	3.5E-9
Selenium		2.1E-4	3.0E-5	2.2E-4			7.93E-08	1.51E-07	#VALUE!
Simazine		4.6E-2	6.5E-3	4.8E-2	4.48E-05	3.86E-05	1.71E-05	3.27E-05	7.3E-6
Styrene		3.8E-4	3.4E-5	2.5E-4	3.28E-04	4.66E-05	1.92E-08	3.67E-08	1.3E-8
Tetrachloroethane, 1,1,1,2-		1.3E-4	1.2E-5	8.7E-5	5.85E-04	8.32E-05	4.92E-08	9.40E-08	3.2E-8
Tetrachloroethane, 1,1,2,2-		1.3E-4	1.3E-5	1.0E-4	9.75E-04	1.39E-04	4.92E-08	9.40E-08	3.2E-8
Tetrachloroethylene		5.5E-5	3.9E-6	2.9E-5	2.07E-03	2.94E-04	4.33E-09	8.26E-09	2.8E-9
Thallium		5.5E-2	3.9E-3	2.9E-2			2.04E-05	3.89E-05	#VALUE!
TPH - Aliph >C06-C08		7.7E-7	6.8E-8	5.1E-7	4.03E-04	5.74E-05	2.71E-10	5.18E-10	1.8E-10
TPH - Aliph >C08-C10		3.8E-5	3.4E-6	2.5E-5	1.89E-03	2.69E-04	4.99E-09	9.53E-09	3.3E-9
TPH - Aliph >C10-C12		3.8E-5	5.5E-6	4.0E-5	3.90E-04	5.55E-05	4.99E-09	9.53E-09	3.3E-9
TPH - Aliph >C12-C16		3.8E-5	5.5E-6	4.0E-5	8.42E-05	1.20E-05	4.99E-09	9.53E-09	3.3E-9
TPH - Aliph >C16-C21		1.9E-6	2.7E-7	2.0E-6	6.31E-06	8.97E-07	4.99E-09	9.53E-09	3.2E-9
TPH - Aliph >C21-C34		1.9E-6	2.7E-7	2.0E-6	9.34E-06	1.33E-06	4.99E-09	9.53E-09	3.2E-9
TPH - Arom >C05-C07		1.9E-5	2.7E-6	2.0E-5	4.82E-03	6.86E-04	1.25E-08	2.38E-08	8.2E-9
TPH - Arom >C07-C08		1.9E-5	1.4E-6	1.0E-5	2.08E-03	2.96E-04	1.25E-08	2.38E-08	8.1E-9
TPH - Arom >C08-C10		9.6E-5	8.5E-6	6.3E-5	1.21E-03	1.72E-04	2.50E-08	4.77E-08	1.6E-8
TPH - Arom >C10-C12		9.6E-5	1.4E-5	1.0E-4	2.17E-04	3.09E-05	2.50E-08	4.77E-08	1.6E-8
TPH - Arom >C12-C16		9.6E-5	1.4E-5	1.0E-4	4.14E-05	5.89E-06	2.50E-08	4.77E-08	1.6E-8
TPH - Arom >C16-C21		1.3E-4	1.0E-5	7.6E-5	3.40E-06	4.85E-07	2.50E-08	4.77E-08	1.6E-8
TPH - Arom >C21-C35		1.3E-4	1.0E-5	7.6E-5	2.15E-08	3.25E-09	2.50E-08	4.77E-08	2.4E-9
Trichlorobenzene, 1,2,3-		5.0E-4	7.1E-5	5.3E-4	4.29E-05	6.11E-06	9.99E-08	1.91E-07	6.5E-8
Trichlorobenzene, 1,2,4-		5.0E-4	3.6E-5	2.7E-4	1.72E-04	2.45E-05	9.99E-08	1.91E-07	6.5E-8
Trichloroethane, 1,1,1-		1.3E-6	1.0E-7	7.5E-7	3.12E-04	4.43E-05	4.83E-10	9.22E-10	3.2E-10
Trichloroethane, 1,1,2-		4.4E-3	3.8E-4	2.9E-3	1.23E-01	1.76E-02	1.60E-06	3.05E-06	1.0E-6
Trichloroethylene		1.5E-4	1.0E-5	7.8E-5	2.59E-02	3.68E-03	5.50E-08	1.05E-07	3.6E-8
Trichlorofluoromethane		1.3E-5	4.0E-6	2.9E-5	1.60E-02	2.28E-03	7.11E-09	1.36E-08	4.7E-9
Trichlorophenol, 2,4,5-		1.3E-2	1.8E-3	1.3E-2	3.46E-06	7.33E-07	1.15E-07	2.20E-07	6.7E-8
Trichlorophenol, 2,4,6-		1.2E-4	1.6E-5	1.2E-4	2.58E-05	4.53E-06	2.14E-07	4.08E-07	1.3E-7
Trichloropropane, 1,2,3-		1.5E-1	1.4E-2	1.0E-1	2.59E-01	3.70E-02	5.71E-05	1.09E-04	3.7E-5
Trimethylbenzene, 1,2,3-		7.7E-5	5.6E-6	4.2E-5	2.01E-02	2.86E-03	8.31E-07	1.59E-06	4.9E-7
Trimethylbenzene, 1,2,4-		7.7E-5	6.8E-6	5.1E-5	1.63E-02	2.32E-03	8.31E-07	1.59E-06	5.0E-7

Tier 1 Soil RBSL - Secondary school child RBSL

Contaminant	Units	Ingestion	Dermal Indoor	Dermal Outdoor	Soil Vapours Outdoor	Soil Vapours Indoor	Dust outdoors	Dust indoors	Soil RBSL
Acenaphthene		15593.26	195926.5	26380	379963.1	2641186	42071799	22037609	#REF!
Acenaphthylene		15593.26	195926.5	26380	859464.2	5961149	42071799	22037609	#REF!
Aldrin		0.153334	1.082366	0.145732	129.5026	891.8938	412.0533	215.8375	#REF!
Anthracene		77966.28	979632.7	131900	20256326	1.4E+08	2.11E+08	1.1E+08	#REF!
Antimony		103.955	220.1422	29.64045	#VALUE!	#VALUE!	280157.7	146749.3	#REF!
Arsenic		499.7838	5228.377	703.9608	#VALUE!	#VALUE!	7018.385	3676.297	#REF!
Atrazine		0.153334	1.082366	0.145732	245889.6	282689.8	1001251	524464.8	#REF!
Azinphos-methyl (guthion)		389.8314	2751.777	370.5057	542936	539981.3	1049388	549679.5	#REF!
Azobenzene		118.1189	833.7885	112.2632	112306.8	768795	323481.1	169442.5	#REF!
Benz-a-anthracene		179.3224	2253.155	303.3701	47463.44	228452	1694.425	887.5559	#REF!
Benzo-a-pyrene		25.98876	326.5442	43.96667	53278.43	161191.8	245.4991	128.5947	#REF!
Benzo-b-fluoranthene		184.5202	2318.464	312.1634	110114.1	650749.6	1742.562	912.7705	#REF!
Benzo-g,h,i-perylene		7796.628	97963.27	13190	4.48E+09	5.36E+09	21084037	11044019	#REF!
Benzo-k-fluoranthene		259.8876	3265.442	439.6667	4282948	4961544	2454.991	1285.947	#REF!
Biphenyl, 1,1-		12994.38	91725.9	12350.19	1148.951	8046.519	259940.2	136159.1	#REF!
Bis (2-chloro-ethyl) ether		11.81189	133.4062	17.96212	8.306685	55.70071	30326.35	15885.23	#REF!
Bis (2-ethyl-hexyl) phthalate		6497.19	17427.92	2346.536	25683950	1.66E+08	1001251	524464.8	#REF!
Bis (chloroethoxy) methane		11.81189	83.37885	11.22632	81.32608	550.3301	30326.35	15885.23	#REF!
Boron		23389.88	297191.9	40014.61	#VALUE!	#VALUE!	3995377	2092816	1.39E+04
Bromobenzene		5197.752	58704.58	7904.121	56.28673	395.4431	2108404	1104402	#REF!
Bromodichloromethane		51.97752	719.1311	96.82549	6.255747	43.928	566091.9	296524.4	#REF!
Bromoform		1650.286	13979.03	1882.169	1466.038	10195.93	9107534	4770613	#REF!
Bromomethane		363.8426	4109.32	553.2885	0.54729	3.846774	1001251	524464.8	#REF!
Bromophenyl phenylether, 4-		0.866725	6.118118	0.823758	589.296	4120.036	3032.635	1588.523	#REF!
Butyl benzyl phthalate		129943.8	1119056	150672.3	4654811	15590344	962741.4	504293.1	#REF!
Butylbenzene, n-		10395.5	73380.72	9880.152	3192.211	22437.96	54106067	28341273	#REF!
Butylbenzene, sec-		10395.5	117409.2	15808.24	2411.01	16946.79	54106067	28341273	#REF!
Butylbenzene, tert-		10395.5	117409.2	15808.24	857.8807	6030.205	28015775	14674930	#REF!
Cadmium		649.719	229.3148	30.87547	#VALUE!	#VALUE!	3331.085	1744.854	#REF!
Carbazole		649.719	6420.813	864.5133	20105.63	138398.9	1752189	917813.5	#REF!
Carbon disulfide		25988.76	231149.3	31122.48	15.60334	109.6776	20025021	10489297	#REF!
Carbon tetrachloride		1819.213	16694.11	2247.734	10.62517	74.68743	7018385	3676297	#REF!
Chloro-3-methylphenol, 4-		25988.76	183451.8	24700.38	25366278	57495884	70183848	36762968	#REF!
Chloroaniline, p-		1039.55	7338.072	988.0152	16335.2	50174.94	1059016	554722.4	#REF!
Chlorobenzene		51977.52	227480.2	30628.47	1071098	7527381	1E+11	5.24E+10	#REF!
Chlorobromomethane (bromochloromethane)		10395.5	117409.2	15808.24	#VALUE!	#VALUE!	#VALUE!	#VALUE!	
Chloroethane		4483.061	50632.7	6817.305	1395.854	9810.745	2.03E+09	1.06E+09	#REF!
Chloroform		7796.628	22014.22	2964.045	48.85659	343.3535	20025021	10489297	#REF!
Chloromethane		999.2678	11285.96	1519.567	1.058956	7.443868	5564645	2914814	#REF!
Chloronaphthalene, 1-		20791.01	261235.4	35173.34	4447640	31017624	2.79E+08	1.46E+08	#REF!
Chloronaphthalene, 2-		20791.01	261235.4	35173.34	930321.5	6528203	2.79E+08	1.46E+08	#REF!
Chlorophenol, 2-		779.6628	8805.687	1185.618	50905.81	325372.8	10493881	5496795	#REF!
Chlorophenyl phenylether, 4-		0.866725	6.118118	0.823758	38.42686	269.0809	3032.635	1588.523	#REF!
Chlorotoluene, p- (4-chlorotoluene)		5197.752	58704.58	7904.121	1.816972	12.76803	52084.31	27282.26	#REF!
Chlorpyrifos		259.8876	1834.518	247.0038	14104.45	80466.97	40050.04	20978.59	#REF!
Chromium (III) (total chromium)		3378.539	620.0671	83.48728	#VALUE!	#VALUE!	3331.085	1744.854	#REF!
Chromium (VI)		3378.539	1192.437	160.5525	#VALUE!	#VALUE!	3331.085	1744.854	#REF!
Chrysene		259.8876	3265.442	439.6667	271115.4	782449.7	2454.991	1285.947	#REF!
Cobalt		363.8426	4109.32	553.2885	#VALUE!	#VALUE!	981996.2	514379	#REF!
Copper		10395.5	83654.02	11263.37	#VALUE!	#VALUE!	200250.2	104893	#REF!
Cumene		25988.76	2.94E+09	3.95E+08	4368.724	30708.02	80196359	42007616	#REF!
Cyanide		3508.483	24765.99	3334.551	#VALUE!	#VALUE!	3138537	1643996	1.60E+03
Cymene (isopropyltoluene)		25988.76	293522.9	39520.61	3210.532	22566.38	60171337	31518320	#REF!
DDE		7.640695	75.50876	10.16668	106700.5	635775	20602.67	10791.87	#REF!
DDT		7.640695	75.50876	10.16668	56195.9	371359.3	20602.67	10791.87	#REF!
Dibenz-a,h-anthracene		5.197752	65.30884	8.793335	142420	164967.7	49.09981	25.71895	#REF!
Dibenzofuran		519.7752	3669.036	494.0076	25201.61	175465.7	1405602	736267.9	#REF!
Dibromo-3-chloropropane, 1,2-		8.667251	61.18118	8.237576	33.69729	235.7473	200250.2	104893	#REF!
Dibromochloromethane		5561.595	47110.42	6343.057	30.61383	213.801	417829.8	218863.2	#REF!
Dichlorobenzene, 1,2-		111491.8	1259213	169543.4	8674.746	60947.8	1.2E+08	63036639	#REF!
Dichlorobenzene, 1,3-		7796.628	88056.87	11856.18	13.94951	98.035	1607778	842169.5	#REF!
Dichlorobenzene, 1,4-		27807.97	353328.2	47572.93	6745.796	47401.47	1.34E+08	70096743	#REF!
Dichlorodifluoromethane		51977.52	168775.7	22724.35	16.49141	115.9269	40050042	20978594	1.44E+01
Dichloroethane, 1,1-		51977.52	733807.2	98801.52	168.5939	1184.862	97236881	50933604	#REF!
Dichloroethane, 1,2-		155.9326	2201.422	296.4045	1.446534	10.16123	420718	220376.1	#REF!
Dichloroethylene, cis-1,2-		1819.213	25683.25	3458.053	9.903304	69.59312	4813707	2521466	#REF!
Dichloroethylene, trans-1,2		4418.089	62373.61	8398.129	19.47623	136.8858	12034267	6303664	#REF!
Dichlorophenol, 2,4-		779.6628	9025.829	1215.259	20929.91	88097.69	2108404	1104402	#REF!
Dichloropropane, 1,2-		3638.426	38011.21	5117.919	4.001207	28.116	801963.6	420076.2	#REF!
Dichloropropane, 1,3-		129.9438	1467.614	197.603	48.85159	343.1211	2503128	1311162	#REF!
Dichloropropane, 2,2-		191.0174	2157.393	290.4765	3.225936	22.67399	801963.6	420076.2	#REF!
Dichloropropene, 1,1-		129.9438	1467.614	197.603	2.74419	19.28998	2503128	1311162	#REF!
Dichloropropene, 1,3-cis		24.0396	271.5087	36.55656	6.709403	47.14344	1338211	700967.4	#REF!
Dichloropropene, 1,3-trans		129.9438	1467.614	197.603	12.54981	88.17506	2503128	1311162	#REF!
Dieldrin		0.16243	1.146574	0.154377	3294.934	11140.94	438.0473	229.4534	#REF!
Diethyl phthalate		51977.52	660426.5	88921.36	100552.2	195342	962741.4	504293.1	#REF!
Dimethoate		519.7752	3669.036	494.0076	23658.05	26667.44	1405602	736267.9	#REF!
Dimethyl phenol, 2,4-		5197.752	36690.36	4940.076	49241.91	212702.1	3408105	1785198	#REF!
Dimethylphthalate		207910.1	2641706	355685.5	14064.06	41895.07	962741.4	504293.1	#REF!
Di-n-butyl phthalate		13514.16	190789.9	25688.39	6515631	23166753	1001251	524464.8	#REF!
Dinitrotoluene, 2,6-		519.7752	6237.361	839.8129	630.0679	1559.631	29844.98	15633.09	#REF!
Di-n-octyl phthalate		5197.752	66042.65	8892.136	1.75E+10	1.19E+11	14441121	7564397	#REF!
Diphenyl oxide		1611.303	11374.01	1531.424	14022.79	98292.15	1405602	736267.9	#REF!
Diuron		519.7752	3669.036	494.0076	1333672	1519682	2002502	1048930	#REF!
Endrin		51.97752	366.9036	49.40076	117464	282456.9	20025.02	10489.3	#REF!
Ethylene dibromide		3.469499	39.18531	5.276001	1.069167	7.42763	16655.43	8724.271	#REF!
Fluoranthene		10395.5	130617.7	17586.67	69183741	4.03E+08	28015775	14674930	#REF!
Fluorene		10395.5	130617.7	17586.67	1355152	9225959	28015775	14674930	#REF!
Heptachlor		0.57695	5.864587	0.789622	41.20119	287.2463	1559.641	816.9548	#REF!
Hexachlorobenzene		41.58202	293.5229	39.52061	1079.55	7573.968	75093.83	39334.86	#REF!
Hexachlorobutadiene		51.97752	366.9036	49.40076	34.94343	245.6264	455376.7	238530.6	#REF!
Hexachlorocyclohexane, alpha		0.413221	5.658754	0.761908	200.0071	857.2188	1116.78	584.98	#REF!
Hexachlorocyclohexane, beta		1.442376	18.53047	2.494985	4373.02	6392.809	3899.103	2042.387	#REF!
Hexachlorocyclohexane, delta		1.442376	10.18158	1.370871	2421.697	13167.09	3899.103	2042.387	#REF!
Hexachlorocyclohexane, gamma		2.066106	28.29377	3.809539	7458.591	24489.34	28015.77	14674.93	#REF!
Hexachlorocyclopentadiene		1559.326	11007.11	1482.023	20.49239	144.017	40050.04	20978.59	#REF!
Hexachloroethane		927.7987	6549.23	881.8035	6980.68	48744.78	2503128	1311162	#REF!
Indeno-1,2,3-cd-pyrene		112.0116	1407.406	189.4964	4651627	5825820	1059.016	554.7224	#REF!
Isodrin		0.015333	0.108237	0.014573	56.06452	393.8828	41.20533	21.58375	#REF!
Isophorone		13644.1	96312.2	12967.7	7261.394	43894.96	4611531	2415564	#REF!
Lead (inorganic)		935.5954	1981.28	266.7641	#VALUE!	#VALUE!	2522382	1321248	1.88E+02
Manganese		5197.752	4402.843	592.8091	#VALUE!	#VALUE!	14056024	7362679	#REF!
Mercury		285.8764	282.5158	38.03858	398.0359	2797.542	1049388	549679.5	#REF!
Methyl naphthalene, 1-		18192.13	228581	30776.67	67158.18	470799.9	49099811	25718949	#REF!
Methylene chloride		1559.326	20913.51	2815.843	1058.829	7439.318	6.02E+08	3.15E+08	#REF!
Methylnaphthalene, 2-		1039.55	13061.77	1758.667	6613.048	46372.28	2888224	1512879	#REF!
Naphthalene		25988.76	326544.2	43966.67	2250.592	15780.79	2772695	1452364	#REF!
Nickel		1299.438	733.8072	98.80152	#VALUE!	#VALUE!	3331.085	5093360	#REF!
Nitroaniline, 2-		77.96628	550.3554	74.10114	6584.375	17847.88	490998.1	257189.5	#REF!
Nitroaniline, 3-		618.5325	4366.153	587.869	9983.407	11564.77	210840.4	110440.2	#REF!
Nitroaniline, 4-		618.5325	4366.153	587.869	7333.773	8350.12	334071.3	174989.7	#REF!
Nitrophenol, 2-		519.7752	3669.036	494.0076	7535.118	20710.42	801963.6	420076.2	#REF!
Nitrophenol, 4-		519.7752	7338.072	988.0152	3844.342	4376.656	269567.6	141202.1	#REF!
Nitrosodi-n-propylamine, n-		1.858196	6.558402	0.883039	3.432773	15.37961	1001.251	524.4648	#REF!
Nitrosodiphenylamine		2650.854	9356.042	1259.719	216947.4	1118775	7162796	3751941	#REF!
Parathion		1559.326	11007.11	1482.023	40902.05	77183.5	10012.51	5244.648	#REF!
Pentachlorophenol		77.96628	836.5402	112.6337	680388.3	1508588	2926734	1533051	#REF!
Phenanthrene		7796.628	97963.27	13190	1015150	7020237	21084037	11044019	#REF!
Phenol		883617.8	11227251	1511663	15938683	48079863	2.39E+09	1.25E+09	#REF!
Polybrominated biphenyls (solid)		2.598876	34.12204	4.594271	#VALUE!	3.62E-24	100125.1	52446.48	#REF!
Propylbenzene, n-		10395.5	117409.2	15808.24	2046.866	14387.01	80196359	42007616	#REF!
Pyrene		7796.628	97963.27	13190	37952930	2.18E+08	21084037	11044019	#REF!
Selenium		4677.977	33021.33	4446.068	#VALUE!	#VALUE!	12611912	6606240	#REF!
Simazine		21.70061	153.1823	20.62482	22337.72	25902.51	58438.4	30610.59	#REF!
Styrene		2598.876	29352.29	3952.061	3052.45	21448.96	52084310	27282257	#REF!
Tetrachloroethane, 1,1,1,2-		7536.74	85121.64	11460.98	1709.711	12013.18	20313844	10640585	#REF!
Tetrachloroethane, 1,1,2,2-		7536.74	74481.43	10028.35	1025.489	7188.123	20313844	10640585	#REF!
Tetrachloroethylene		18192.13	256832.5	34580.53	483.2296	3396.69	2.31E+08	1.21E+08	#REF!
Thallium		18.19213	256.8325	34.58053	#VALUE!	#VALUE!	49099.81	25718.95	#REF!
TPH - Aliph >C06-C08		1299438	14676145	1976030	2479.259	17428.06	3.69E+09	1.93E+09	2.16E+03
TPH - Aliph >C08-C10		25988.76	293522.9	39520.61	528.2984	3713.698	2E+08	1.05E+08	4.49E+02
TPH - Aliph >C10-C12		25988.76	183451.8	24700.38	2561.902	18009.01	2E+08	1.05E+08	1.89E+03
TPH - Aliph >C12-C16		25988.76	183451.8	24700.38	11877.27	83491.87	2E+08	1.05E+08	5.54E+03
TPH - Aliph >C16-C21		519775.2	3669036	494007.6	158583.2	1114768	2E+08	1.05E+08	8.74E+04
TPH - Aliph >C21-C34		519775.2	3669036	494007.6	107054.2	752542.8	2E+08	1.05E+08	6.71E+04
TPH - Arom >C05-C07		51977.52	366903.6	49400.76	207.4014	1457.688	80196359	42007616	#REF!
TPH - Arom >C07-C08		51977.52	711793	95837.47	481.3122	3382.921	80196359	42007616	#REF!
TPH - Arom >C08-C10		10395.5	117409.2	15808.24	826.3184	5808.163	40050042	20978594	#REF!
TPH - Arom >C10-C12		10395.5	73380.72	9880.152	4606.361	32371.09	40050042	20978594	#REF!
TPH - Arom >C12-C16		10395.5	73380.72	9880.152	24166.6	169748.1	40050042	20978594	#REF!
TPH - Arom >C16-C21		7796.628	97963.27	13190	294357.6	2063001	40050042	20978594	#REF!
TPH - Arom >C21-C35		7796.628	97963.27	13190	46446377	3.08E+08	40050042	20978594	#REF!
Trichlorobenzene, 1,2,3-		2001.135	14125.79	1901.929	23315.16	163681.9	10012511	5244648	#REF!
Trichlorobenzene, 1,2,4-		2001.135	27404.03	3689.743	5814.517	40798.02	10012511	5244648	#REF!
Trichloroethane, 1,1,1-		779662.8	9906398	1333820	3209.861	22562.49	2.07E+09	1.08E+09	#REF!
Trichloroethane, 1,1,2-		227.4017	2600.429	350.1279	8.111296	56.95235	626744.7	328294.8	#REF!
Trichloroethylene		6757.078	95394.94	12844.2	38.62319	271.4749	18195812	9531140	#REF!
Trichlorofluoromethane		77966.28	253163.5	34086.52	62.42039	438.7827	1.41E+08	73626795	5.45E+01
Trichlorophenol, 2,4,5-		77.96628	550.3554	74.10114	289223.6	1364252	8664673	4538638	#REF!
Trichlorophenol, 2,4,6-		8667.251	61181.18	8237.576	38799.88	220902.8	4678923	2450865	#REF!
Trichloropropane, 1,2,3-		6.49719	73.38072	9.880152	3.855602	27.02732	17521.89	9178.135	#REF!
Trimethylbenzene, 1,2,3-		12994.38	177948.3	23959.37	49.83921	350.2325	1203427	630366.4	#REF!
Trimethylbenzene, 1,2,4-		12994.38	146761.4	19760.3	61.42963	431.7141	1203427	630366.4	5.34E+01

RBCA output (commercial receptor)

Tier 1 Soil RBSL - Commercial

Contaminant	Units	Ingestion	Dermal Indoor	Dermal Outdoor	Soil Vapours Outdoor	Soil Vapours Indoor	Dust outdoors	Dust indoors	Veg uptake (leafy)	Soil HQ
Acenaphthene		3.8E-5	2.0E-5	1.5E-5	7.11E-07	4.14E-07	1.64E-09	2.67E-08		1.5E-9
Acenaphthylene		3.8E-5	2.0E-5	1.5E-5	4.73E-07	1.84E-07	1.64E-09	2.67E-08		1.5E-9
Aldrin		3.8E+0	3.7E+0	2.7E+0	1.23E-02	1.23E-03	1.68E-04	2.72E-03		1.4E-4
Anthracene		7.5E-6	4.0E-6	3.0E-6	4.35E-08	7.85E-09	3.28E-10	5.33E-09		2.9E-10
Antimony		5.6E-3	1.8E-2	1.3E-2			2.47E-07	4.01E-06		2.3E-7
Arsenic		1.2E-3	7.6E-4	5.6E-4			9.84E-06	1.60E-04		8.9E-6
Atrazine		3.8E+0	3.7E+0	2.7E+0	5.73E-06	3.87E-06	6.90E-08	1.12E-06		6.3E-8
Azinphos-methyl (guthion)		1.5E-3	1.4E-3	1.1E-3	4.30E-06	1.83E-06	6.58E-08	1.07E-06		5.9E-8
Azobenzene		5.0E-3	4.8E-3	3.5E-3	1.49E-05	1.42E-06	2.14E-07	3.47E-06		1.7E-7
Benz-a-anthracene		3.3E-3	1.8E-3	1.3E-3	3.17E-04	4.79E-06	4.08E-05	6.63E-04		4.2E-6
Benzo-a-pyrene		2.3E-2	1.2E-2	9.0E-3	7.86E-04	6.79E-06	2.81E-04	4.57E-03		6.6E-6
Benzo-b-fluoranthene		3.2E-3	1.7E-3	1.3E-3	2.05E-04	1.68E-06	3.96E-05	6.44E-04		1.6E-6
Benzo-g,h,i-perylene		7.5E-5	4.0E-5	3.0E-5	9.25E-09	2.04E-10	3.28E-09	5.33E-08		1.9E-10
Benzo-k-fluoranthene		2.3E-3	1.2E-3	9.0E-4	2.77E-05	2.21E-07	2.81E-05	4.57E-04		2.2E-7
Biphenyl, 1,1-		4.5E-5	4.3E-5	3.2E-5	1.65E-04	1.36E-04	2.66E-07	4.32E-06		2.4E-7
Bis (2-chloro-ethyl) ether		5.0E-2	3.0E-2	2.2E-2	5.66E-03	1.97E-02	2.28E-06	3.70E-05		2.1E-6
Bis (2-ethyl-hexyl) phthalate		9.0E-5	2.3E-4	1.7E-4	5.61E-07	6.60E-09	6.90E-08	1.12E-06		5.9E-9
Bis (chloroethoxy) methane		5.0E-2	4.8E-2	3.5E-2	1.81E-03	1.99E-03	2.28E-06	3.70E-05		2.1E-6
Boron		2.5E-5	1.3E-5	9.9E-6			1.73E-08	2.81E-07		1.6E-8
Bromobenzene		1.1E-4	6.8E-5	5.0E-5	2.61E-04	2.77E-03	3.28E-08	5.33E-07		3.1E-8
Bromodichloromethane		1.1E-2	5.5E-3	4.1E-3	1.51E-03	2.49E-02	1.22E-07	1.98E-06		1.1E-7
Bromoform		3.5E-4	2.8E-4	2.1E-4	2.46E-05	1.07E-04	7.59E-09	1.23E-07		7.1E-9
Bromomethane		1.6E-3	9.6E-4	7.1E-4	3.84E-03	2.85E-01	6.90E-08	1.12E-06		6.5E-8
Bromophenyl phenylether, 4-		6.7E-1	6.5E-1	4.8E-1	2.13E-03	2.66E-04	2.28E-05	3.70E-04		2.0E-5
Butyl benzyl phthalate		4.5E-6	3.5E-6	2.6E-6	1.34E-06	7.02E-08	7.18E-08	1.17E-06		3.3E-8
Butylbenzene, n-		5.6E-5	5.4E-5	4.0E-5	6.84E-06	4.88E-05	1.28E-09	2.08E-08		1.2E-9
Butylbenzene, sec-		5.6E-5	3.4E-5	2.5E-5	7.87E-06	6.46E-05	1.28E-09	2.08E-08		1.2E-9
Butylbenzene, tert-		5.6E-5	3.4E-5	2.5E-5	1.83E-05	1.82E-04	2.47E-09	4.01E-08		2.3E-9
Cadmium		9.0E-4	1.7E-2	1.3E-2			2.07E-05	3.37E-04		1.9E-5
Carbazole		9.0E-4	6.2E-4	4.6E-4	1.51E-05	7.91E-06	3.94E-08	6.41E-07		3.7E-8
Carbon disulfide		2.3E-5	1.7E-5	1.3E-5	1.61E-04	9.98E-03	3.45E-09	5.61E-08		3.2E-9
Carbon tetrachloride		3.2E-4	2.4E-4	1.8E-4	3.29E-04	1.47E-02	9.84E-09	1.60E-07		9.3E-9
Chloro-3-methylphenol, 4-		2.3E-5	2.2E-5	1.6E-5	6.74E-08	1.90E-08	9.84E-10	1.60E-08		8.7E-10
Chloroaniline, p-		5.6E-4	5.4E-4	4.0E-4	2.16E-05	2.18E-05	6.52E-08	1.06E-06		6.1E-8
Chlorobenzene		1.1E-5	1.7E-5	1.3E-5	8.68E-09	1.45E-07	6.90E-13	1.12E-11		6.5E-13
Chlorobromomethane (bromochloromethane)		5.6E-5	3.4E-5	2.5E-5						#VALUE!
Chloroethane		1.3E-4	7.8E-5	5.8E-5	1.69E-06	1.12E-04	3.40E-11	5.53E-10		3.2E-11
Chloroform		7.5E-5	1.8E-4	1.3E-4	9.09E-05	3.19E-03	3.45E-09	5.61E-08		3.2E-9
Chloromethane		5.9E-4	3.5E-4	2.6E-4	1.17E-03	1.47E-01	1.24E-08	2.02E-07		1.2E-8
Chloronaphthalene, 1-		2.8E-5	1.5E-5	1.1E-5	8.07E-08	3.53E-08	2.47E-10	4.02E-09		2.3E-10
Chloronaphthalene, 2-		2.8E-5	1.5E-5	1.1E-5	1.76E-07	1.68E-07	2.47E-10	4.02E-09		2.3E-10
Chlorophenol, 2-		7.5E-4	4.5E-4	3.3E-4	3.89E-06	3.36E-06	6.58E-09	1.07E-07		6.2E-9
Chlorophenyl phenylether, 4-		6.7E-1	6.5E-1	4.8E-1	8.33E-03	4.07E-03	2.28E-05	3.70E-04		2.1E-5
Chlorotoluene, p- (4-chlorotoluene)		1.1E-4	6.8E-5	5.0E-5	9.24E-03	8.57E-02	1.33E-06	2.16E-05		1.2E-6
Chlorpyrifos		2.3E-3	2.2E-3	1.6E-3	1.20E-04	1.36E-05	1.73E-06	2.80E-05		1.4E-6
Chromium (III) (total chromium)		1.7E-4	6.4E-3	4.7E-3			2.07E-05	3.37E-04		1.7E-5
Chromium (VI)		1.7E-4	3.3E-3	2.5E-3			2.07E-05	3.37E-04		1.7E-5
Chrysene		2.3E-3	1.2E-3	9.0E-4	1.10E-04	1.40E-06	2.81E-05	4.57E-04		1.3E-6
Cobalt		1.6E-3	9.6E-4	7.1E-4			7.04E-08	1.14E-06		6.6E-8
Copper		5.6E-5	4.7E-5	3.5E-5			3.45E-07	5.61E-06		3.2E-7
Cumene		2.3E-5	1.4E-9	1.0E-9	4.80E-06	3.56E-05	8.62E-10	1.40E-08		3.4E-10
Cyanide		1.7E-4	1.6E-4	1.2E-4			2.20E-08	3.58E-07		2.1E-8
Cymene (isopropyltoluene)		2.3E-5	1.4E-5	1.0E-5	6.47E-06	4.85E-05	1.15E-09	1.87E-08		1.1E-9
DDE		7.7E-2	5.2E-2	3.9E-2	6.06E-05	1.72E-06	3.35E-06	5.45E-05		1.1E-6
DDT		7.7E-2	5.2E-2	3.9E-2	8.36E-05	2.95E-06	3.35E-06	5.45E-05		1.5E-6
Dibenz-a,h-anthracene		1.1E-1	6.1E-2	4.5E-2	1.08E-03	6.64E-06	1.41E-03	2.29E-02		6.6E-6
Dibenzofuran		1.1E-3	1.1E-3	8.0E-4	1.51E-05	6.24E-06	4.92E-08	7.99E-07		4.6E-8
Dibromo-3-chloropropane, 1,2-		6.7E-2	6.5E-2	4.8E-2	1.09E-03	4.64E-03	3.45E-07	5.61E-06		3.2E-7
Dibromochloromethane		1.1E-4	8.4E-5	6.2E-5	7.95E-04	5.12E-03	1.65E-07	2.69E-06		1.5E-7
Dichlorobenzene, 1,2-		5.2E-6	3.1E-6	2.3E-6	2.78E-06	1.80E-05	5.74E-10	9.33E-09		5.4E-10
Dichlorobenzene, 1,3-		7.5E-5	4.5E-5	3.3E-5	6.00E-04	1.12E-02	4.30E-08	6.98E-07		4.0E-8
Dichlorobenzene, 1,4-		2.1E-5	1.1E-5	8.3E-6	2.99E-06	2.31E-05	5.16E-10	8.39E-09		4.9E-10
Dichlorodifluoromethane		1.1E-5	2.3E-5	1.7E-5	1.11E-04	9.44E-03	1.73E-09	2.80E-08		1.6E-9
Dichloroethane, 1,1-		1.1E-5	5.4E-6	4.0E-6	2.22E-05	9.24E-04	7.11E-10	1.15E-08		6.7E-10
Dichloroethane, 1,2-		3.8E-3	1.8E-3	1.3E-3	3.64E-03	1.08E-01	1.64E-07	2.67E-06		1.5E-7
Dichloroethylene, cis-1,2-		3.2E-4	1.5E-4	1.1E-4	4.12E-04	1.57E-02	1.44E-08	2.33E-07		1.4E-8
Dichloroethylene, trans-1,2		1.3E-4	6.4E-5	4.7E-5	1.86E-04	8.00E-03	5.74E-09	9.33E-08		5.4E-9
Dichlorophenol, 2,4-		7.5E-4	4.4E-4	3.2E-4	1.35E-05	1.24E-05	3.28E-08	5.33E-07		3.1E-8
Dichloropropane, 1,2-		1.6E-4	1.0E-4	7.7E-5	1.59E-03	3.89E-02	8.62E-08	1.40E-06		8.1E-8
Dichloropropane, 1,3-		4.5E-3	2.7E-3	2.0E-3	2.57E-04	3.19E-03	2.76E-08	4.49E-07		2.6E-8
Dichloropropane, 2,2-		3.1E-3	1.8E-3	1.4E-3	1.77E-03	4.83E-02	8.62E-08	1.40E-06		8.1E-8
Dichloropropene, 1,1-		4.5E-3	2.7E-3	2.0E-3	1.08E-03	5.67E-02	2.76E-08	4.49E-07		2.6E-8
Dichloropropene, 1,3-cis		2.4E-2	1.5E-2	1.1E-2	9.49E-04	2.32E-02	5.16E-08	8.39E-07		4.9E-8
Dichloropropene, 1,3-trans		4.5E-3	2.7E-3	2.0E-3	5.07E-04	1.24E-02	2.76E-08	4.49E-07		2.6E-8
Dieldrin		3.6E+0	3.5E+0	2.6E+0	2.37E-03	9.83E-05	1.58E-04	2.56E-03		5.8E-5
Diethyl phthalate		1.1E-5	6.0E-6	4.4E-6	9.14E-06	5.60E-06	7.18E-08	1.17E-06		6.4E-8
Dimethoate		1.1E-3	1.1E-3	8.0E-4	1.57E-05	4.08E-05	4.92E-08	7.99E-07		4.6E-8
Dimethyl phenol, 2,4-		1.1E-4	1.1E-4	8.0E-5	6.94E-06	5.15E-06	2.03E-08	3.29E-07		1.9E-8
Dimethylphthalate		2.8E-6	1.5E-6	1.1E-6	2.44E-05	2.61E-05	7.18E-08	1.17E-06		6.0E-8
Di-n-butyl phthalate		4.3E-5	2.1E-5	1.5E-5	1.11E-06	4.73E-08	6.90E-08	1.12E-06		2.7E-8
Dinitrotoluene, 2,6-		1.1E-3	6.4E-4	4.7E-4	6.56E-04	7.02E-04	2.31E-06	3.76E-05		2.1E-6
Di-n-octyl phthalate		1.1E-4	6.0E-5	4.4E-5	5.66E-09	9.23E-12	4.78E-09	7.77E-08		9.2E-12
Diphenyl oxide		3.6E-4	3.5E-4	2.6E-4	2.03E-05	1.11E-05	4.92E-08	7.99E-07		4.6E-8
Diuron		1.1E-3	1.1E-3	8.0E-4	1.74E-06	7.20E-07	3.45E-08	5.61E-07		3.1E-8
Endrin		1.1E-2	1.1E-2	8.0E-3	5.86E-05	3.88E-06	3.45E-06	5.61E-05		1.7E-6
Ethylene dibromide		1.7E-1	1.0E-1	7.5E-2	2.13E-02	1.47E-01	4.15E-06	6.74E-05		3.9E-6
Fluoranthene		5.6E-5	3.0E-5	2.2E-5	6.46E-08	2.72E-09	2.47E-09	4.01E-08		1.2E-9
Fluorene		5.6E-5	3.0E-5	2.2E-5	4.61E-07	1.19E-07	2.47E-09	4.01E-08		2.3E-9
Heptachlor		1.0E+0	6.8E-1	5.0E-1	1.12E-02	3.81E-03	4.43E-05	7.20E-04		4.1E-5
Hexachlorobenzene		1.4E-2	1.4E-2	1.0E-2	3.16E-04	1.45E-04	9.20E-07	1.50E-05		8.6E-7
Hexachlorobutadiene		1.1E-2	1.1E-2	8.0E-3	7.13E-04	4.46E-03	1.52E-07	2.47E-06		1.4E-7
Hexachlorocyclohexane, alpha		1.4E+0	7.0E-1	5.2E-1	6.02E-03	1.28E-03	6.19E-05	1.01E-03		5.5E-5
Hexachlorocyclohexane, beta		4.1E-1	2.1E-1	1.6E-1	6.89E-04	1.71E-04	1.77E-05	2.88E-04		1.5E-5
Hexachlorocyclohexane, delta		4.1E-1	3.9E-1	2.9E-1	9.25E-04	8.31E-05	1.77E-05	2.88E-04		1.4E-5
Hexachlorocyclohexane, gamma		2.8E-1	1.4E-1	1.0E-1	1.97E-04	4.47E-05	2.47E-06	4.01E-05		2.2E-6
Hexachlorocyclopentadiene		3.8E-4	3.6E-4	2.7E-4	3.14E-03	7.60E-03	1.73E-06	2.80E-05		1.6E-6
Hexachloroethane		6.3E-4	6.1E-4	4.5E-4	2.15E-05	2.25E-05	2.76E-08	4.49E-07		2.6E-8
Indeno-1,2,3-cd-pyrene		5.2E-3	2.8E-3	2.1E-3	4.05E-05	1.88E-07	6.52E-05	1.06E-03		1.9E-7
Isodrin		3.8E+1	3.7E+1	2.7E+1	5.92E-02	2.78E-03	1.68E-03	2.72E-02		9.9E-4
Isophorone		4.3E-5	4.1E-5	3.0E-5	1.55E-05	2.49E-05	1.50E-08	2.43E-07		1.4E-8
Lead (inorganic)		6.3E-4	2.0E-3	1.5E-3			2.74E-08	4.45E-07		2.6E-8
Manganese		1.1E-4	9.0E-4	6.7E-4			4.92E-09	7.99E-08		4.6E-9
Mercury		2.0E-3	1.4E-2	1.0E-2	1.39E-04	3.91E-04	6.58E-08	1.07E-06		6.2E-8
Methyl naphthalene, 1-		3.2E-5	1.7E-5	1.3E-5	1.57E-06	2.33E-06	1.41E-09	2.29E-08		1.3E-9
Methylene chloride		3.8E-4	1.9E-4	1.4E-4	3.56E-06	1.47E-04	1.15E-10	1.87E-09		1.1E-10
Methylnaphthalene, 2-		5.6E-4	3.0E-4	2.2E-4	2.06E-05	2.36E-05	2.39E-08	3.89E-07		2.2E-8
Naphthalene		2.3E-5	1.2E-5	9.0E-6	3.60E-05	6.94E-05	2.49E-08	4.05E-07		2.3E-8
Nickel		4.5E-4	5.4E-3	4.0E-3			2.07E-05	3.37E-04		1.9E-5
Nitroaniline, 2-		7.5E-3	7.2E-3	5.3E-3	5.00E-05	6.13E-05	1.41E-07	2.29E-06		1.3E-7
Nitroaniline, 3-		9.5E-4	9.1E-4	6.7E-4	6.20E-05	9.46E-05	3.28E-07	5.33E-06		3.1E-7
Nitroaniline, 4-		9.5E-4	9.1E-4	6.7E-4	5.75E-05	1.31E-04	2.07E-07	3.36E-06		1.9E-7
Nitrophenol, 2-		1.1E-3	1.1E-3	8.0E-4	3.66E-05	5.29E-05	8.62E-08	1.40E-06		8.1E-8
Nitrophenol, 4-		1.1E-3	5.4E-4	4.0E-4	8.84E-05	2.50E-04	2.56E-07	4.16E-06		2.4E-7
Nitrosodi-n-propylamine, n-		3.1E-1	6.0E-1	4.5E-1	4.85E-02	7.12E-02	6.90E-05	1.12E-03		6.5E-5
Nitrosodiphenylamine		2.2E-4	4.2E-4	3.1E-4	2.28E-06	9.78E-07	9.65E-09	1.57E-07		9.0E-9
Parathion		3.8E-4	3.6E-4	2.7E-4	1.40E-04	1.42E-05	6.90E-06	1.12E-04		4.2E-6
Pentachlorophenol		7.5E-3	4.7E-3	3.5E-3	2.01E-06	7.26E-07	2.36E-08	3.84E-07		2.1E-8
Phenanthrene		7.5E-5	4.0E-5	3.0E-5	6.15E-07	1.56E-07	3.28E-09	5.33E-08		3.0E-9
Phenol		6.6E-7	3.5E-7	2.6E-7	1.46E-08	2.28E-08	2.89E-11	4.70E-10		2.7E-11
Polybrominated biphenyls (solid)		2.3E-1	1.2E-1	8.6E-2		1.61E+23	6.90E-07	1.12E-05		6.5E-7
Propylbenzene, n-		5.6E-5	3.4E-5	2.5E-5	7.02E-06	7.61E-05	8.62E-10	1.40E-08		8.1E-10
Pyrene		7.5E-5	4.0E-5	3.0E-5	1.01E-07	5.01E-09	3.28E-09	5.33E-08		1.9E-9
Selenium		1.3E-4	1.2E-4	8.9E-5			5.48E-09	8.90E-08		5.2E-9
Simazine		2.7E-2	2.6E-2	1.9E-2	7.87E-05	4.23E-05	1.18E-06	1.92E-05		1.1E-6
Styrene		2.3E-4	1.4E-4	1.0E-4	7.13E-06	5.10E-05	1.33E-09	2.16E-08		1.2E-9
Tetrachloroethane, 1,1,1,2-		7.8E-5	4.7E-5	3.4E-5	1.53E-05	9.11E-05	3.40E-09	5.53E-08		3.2E-9
Tetrachloroethane, 1,1,2,2-		7.8E-5	5.3E-5	3.9E-5	1.97E-05	1.52E-04	3.40E-09	5.53E-08		3.2E-9
Tetrachloroethylene		3.2E-5	1.5E-5	1.1E-5	8.51E-06	3.22E-04	2.99E-10	4.86E-09		2.8E-10
Thallium		3.2E-2	1.5E-2	1.1E-2			1.41E-06	2.29E-05		1.3E-6
TPH - Aliph >C06-C08		4.5E-7	2.7E-7	2.0E-7	9.40E-07	6.28E-05	1.87E-11	3.04E-10		1.8E-11
TPH - Aliph >C08-C10		2.3E-5	1.4E-5	1.0E-5	8.74E-06	2.95E-04	3.45E-10	5.61E-09		3.2E-10
TPH - Aliph >C10-C12		2.3E-5	2.2E-5	1.6E-5	3.97E-06	6.08E-05	3.45E-10	5.61E-09		3.2E-10
TPH - Aliph >C12-C16		2.3E-5	2.2E-5	1.6E-5	1.84E-06	1.31E-05	3.45E-10	5.61E-09		3.2E-10
TPH - Aliph >C16-C21		1.1E-6	1.1E-6	8.0E-7	5.05E-07	9.82E-07	3.45E-10	5.61E-09		3.2E-10
TPH - Aliph >C21-C34		1.1E-6	1.1E-6	8.0E-7	6.14E-07	1.45E-06	3.45E-10	5.61E-09		3.2E-10
TPH - Arom >C05-C07		1.1E-5	1.1E-5	8.0E-6	2.20E-05	7.51E-04	8.62E-10	1.40E-08		8.1E-10
TPH - Arom >C07-C08		1.1E-5	5.6E-6	4.1E-6	1.45E-05	3.24E-04	8.62E-10	1.40E-08		8.1E-10
TPH - Arom >C08-C10		5.6E-5	3.4E-5	2.5E-5	1.56E-05	1.88E-04	1.73E-09	2.80E-08		1.6E-9
TPH - Arom >C10-C12		5.6E-5	5.4E-5	4.0E-5	6.62E-06	3.38E-05	1.73E-09	2.80E-08		1.6E-9
TPH - Arom >C12-C16		5.6E-5	5.4E-5	4.0E-5	2.89E-06	6.45E-06	1.73E-09	2.80E-08		1.6E-9
TPH - Arom >C16-C21		7.5E-5	4.0E-5	3.0E-5	8.28E-07	5.31E-07	1.73E-09	2.80E-08		1.6E-9
TPH - Arom >C21-C35		7.5E-5	4.0E-5	3.0E-5	6.59E-08	3.55E-09	1.73E-09	2.80E-08		1.1E-9
Trichlorobenzene, 1,2,3-		2.9E-4	2.8E-4	2.1E-4	5.88E-06	6.69E-06	6.90E-09	1.12E-07		6.5E-9
Trichlorobenzene, 1,2,4-		2.9E-4	1.4E-4	1.1E-4	1.18E-05	2.68E-05	6.90E-09	1.12E-07		6.5E-9
Trichloroethane, 1,1,1-		7.5E-7	4.0E-7	3.0E-7	1.10E-06	4.85E-05	3.34E-11	5.42E-10		3.1E-11
Trichloroethane, 1,1,2-		2.6E-3	1.5E-3	1.1E-3	1.26E-03	1.92E-02	1.10E-07	1.79E-06		1.0E-7
Trichloroethylene		8.7E-5	4.2E-5	3.1E-5	1.07E-04	4.03E-03	3.80E-09	6.17E-08		3.6E-9
Trichlorofluoromethane		7.5E-6	1.6E-5	1.2E-5	3.04E-05	2.49E-03	4.92E-10	7.99E-09		4.6E-10
Trichlorophenol, 2,4,5-		7.5E-3	7.2E-3	5.3E-3	1.80E-06	8.02E-07	7.97E-09	1.30E-07		7.4E-9
Trichlorophenol, 2,4,6-		6.7E-5	6.5E-5	4.8E-5	6.67E-06	4.96E-06	1.48E-08	2.40E-07		1.4E-8
Trichloropropane, 1,2,3-		9.0E-2	5.4E-2	4.0E-2	1.09E-02	4.05E-02	3.94E-06	6.41E-05		3.7E-6
Trimethylbenzene, 1,2,3-		4.5E-5	2.2E-5	1.6E-5	3.67E-04	3.13E-03	5.74E-08	9.33E-07		5.4E-8
Trimethylbenzene, 1,2,4-		4.5E-5	2.7E-5	2.0E-5	3.31E-04	2.54E-03	5.74E-08	9.33E-07		5.4E-8

Tier 1 Soil RBSL - Commercial

Contaminant	Units	Ingestion	Dermal Indoor	Dermal Outdoor	Soil Vapours Outdoor	Soil Vapours Indoor	Dust outdoors	Dust indoors	Veg uptake (leafy)	Soil RBSL
Acenaphthene		2.7E+4	4.9E+4	6.7E+4	1.4E+6	2.4E+6	6.1E+8	3.7E+7		1.35E+04
Acenaphthylene		2.7E+4	4.9E+4	6.7E+4	2.1E+6	5.4E+6	6.1E+8	3.7E+7		1.36E+04
Aldrin		2.6E-1	2.7E-1	3.7E-1	8.1E+1	8.1E+2	6.0E+3	3.7E+2		9.80E-02
Anthracene		1.3E+5	2.5E+5	3.3E+5	2.3E+7	1.3E+8	3.1E+9	1.9E+8		6.85E+04
Antimony		1.8E+2	5.6E+1	7.5E+1	#VALUE!	#VALUE!	4.1E+6	2.5E+5		2.71E+01
Arsenic		8.5E+2	1.3E+3	1.8E+3	#VALUE!	#VALUE!	1.0E+5	6.3E+3		3.76E+02
Atrazine		2.6E-1	2.7E-1	3.7E-1	1.7E+5	2.6E+5	1.4E+7	8.9E+5		9.82E-02
Azinphos-methyl (guthion)		6.7E+2	6.9E+2	9.4E+2	2.3E+5	5.5E+5	1.5E+7	9.3E+5		2.49E+02
Azobenzene		2.0E+2	2.1E+2	2.8E+2	6.7E+4	7.0E+5	4.7E+6	2.9E+5		7.55E+01
Benz-a-anthracene		3.1E+2	5.7E+2	7.7E+2	3.2E+3	2.1E+5	2.5E+4	1.5E+3		1.36E+02
Benzo-a-pyrene		4.4E+1	8.2E+1	1.1E+2	1.3E+3	1.5E+5	3.6E+3	2.2E+2		2.03E+01
Benzo-b-fluoranthene		3.2E+2	5.8E+2	7.9E+2	4.9E+3	5.9E+5	2.5E+4	1.6E+3		1.42E+02
Benzo-g,h,i-perylene		1.3E+4	2.5E+4	3.3E+4	1.1E+8	4.9E+9	3.1E+8	1.9E+7		6.88E+03
Benzo-k-fluoranthene		4.4E+2	8.2E+2	1.1E+3	3.6E+4	4.5E+6	3.6E+4	2.2E+3		2.05E+02
Biphenyl, 1,1-		2.2E+4	2.3E+4	3.1E+4	6.1E+3	7.4E+3	3.8E+6	2.3E+5		2.35E+03
Bis (2-chloro-ethyl) ether		2.0E+1	3.4E+1	4.6E+1	1.8E+2	5.1E+1	4.4E+5	2.7E+4		7.90E+00
Bis (2-ethyl-hexyl) phthalate		1.1E+4	4.4E+3	5.9E+3	1.8E+6	1.5E+8	1.4E+7	8.9E+5		2.05E+03
Bis (chloroethoxy) methane		2.0E+1	2.1E+1	2.8E+1	5.5E+2	5.0E+2	4.4E+5	2.7E+4		7.35E+00
Boron		4.0E+4	7.5E+4	1.0E+5	#VALUE!	#VALUE!	5.8E+7	3.6E+6		2.06E+04
Bromobenzene		8.9E+3	1.5E+4	2.0E+4	3.8E+3	3.6E+2	3.1E+7	1.9E+6		3.07E+02
Bromodichloromethane		8.9E+1	1.8E+2	2.5E+2	6.6E+2	4.0E+1	8.2E+6	5.0E+5		2.12E+01
Bromoform		2.8E+3	3.5E+3	4.8E+3	4.1E+4	9.3E+3	1.3E+8	8.1E+6		1.02E+03
Bromomethane		6.2E+2	1.0E+3	1.4E+3	2.6E+2	3.5E+0	1.4E+7	8.9E+5		3.43E+00
Bromophenyl phenylether, 4-		1.5E+0	1.5E+0	2.1E+0	4.7E+2	3.8E+3	4.4E+4	2.7E+3		5.54E-01
Butyl benzyl phthalate		2.2E+5	2.8E+5	3.8E+5	7.4E+5	1.4E+7	1.4E+7	8.6E+5		7.51E+04
Butylbenzene, n-		1.8E+4	1.9E+4	2.5E+4	1.5E+5	2.0E+4	7.8E+8	4.8E+7		4.86E+03
Butylbenzene, sec-		1.8E+4	3.0E+4	4.0E+4	1.3E+5	1.5E+4	7.8E+8	4.8E+7		5.33E+03
Butylbenzene, tert-		1.8E+4	3.0E+4	4.0E+4	5.5E+4	5.5E+3	4.1E+8	2.5E+7		3.18E+03
Cadmium		1.1E+3	5.8E+1	7.8E+1	#VALUE!	#VALUE!	4.8E+4	3.0E+3		3.19E+01
Carbazole		1.1E+3	1.6E+3	2.2E+3	6.6E+4	1.3E+5	2.5E+7	1.6E+6		5.01E+02
Carbon disulfide		4.4E+4	5.8E+4	7.9E+4	6.2E+3	1.0E+2	2.9E+8	1.8E+7		9.81E+01
Carbon tetrachloride		3.1E+3	4.2E+3	5.7E+3	3.0E+3	6.8E+1	1.0E+8	6.3E+6		6.36E+01
Chloro-3-methylphenol, 4-		4.4E+4	4.6E+4	6.3E+4	1.5E+7	5.3E+7	1.0E+9	6.3E+7		1.66E+04
Chloroaniline, p-		1.8E+3	1.9E+3	2.5E+3	4.6E+4	4.6E+4	1.5E+7	9.4E+5		6.47E+02
Chlorobenzene		8.9E+4	5.7E+4	7.8E+4	1.2E+8	6.9E+6	1.4E+12	8.9E+10		2.40E+04
Chlorobromomethane (bromochloromethane)		1.8E+4	3.0E+4	4.0E+4	#VALUE!	#VALUE!	#VALUE!	#VALUE!		#VALUE!
Chloroethane		7.7E+3	1.3E+4	1.7E+4	5.9E+5	9.0E+3	2.9E+10	1.8E+9		2.63E+03
Chloroform		1.3E+4	5.6E+3	7.5E+3	1.1E+4	3.1E+2	2.9E+8	1.8E+7		2.73E+02
Chloromethane		1.7E+3	2.8E+3	3.9E+3	8.5E+2	6.8E+0	8.1E+7	5.0E+6		6.69E+00
Chloronaphthalene, 1-		3.6E+4	6.6E+4	8.9E+4	1.2E+7	2.8E+7	4.0E+9	2.5E+8		1.83E+04
Chloronaphthalene, 2-		3.6E+4	6.6E+4	8.9E+4	5.7E+6	6.0E+6	4.0E+9	2.5E+8		1.82E+04
Chlorophenol, 2-		1.3E+3	2.2E+3	3.0E+3	2.6E+5	3.0E+5	1.5E+8	9.3E+6		6.49E+02
Chlorophenyl phenylether, 4-		1.5E+0	1.5E+0	2.1E+0	1.2E+2	2.5E+2	4.4E+4	2.7E+3		5.51E-01
Chlorotoluene, p- (4-chlorotoluene)		8.9E+3	1.5E+4	2.0E+4	1.1E+2	1.2E+1	7.5E+5	4.6E+4		1.05E+01
Chlorpyrifos		4.4E+2	4.6E+2	6.3E+2	8.4E+3	7.4E+4	5.8E+5	3.6E+4		1.62E+02
Chromium (III) (total chromium)		5.8E+3	1.6E+2	2.1E+2	#VALUE!	#VALUE!	4.8E+4	3.0E+3		8.59E+01
Chromium (VI)		5.8E+3	3.0E+2	4.1E+2	#VALUE!	#VALUE!	4.8E+4	3.0E+3		1.58E+02
Chrysene		4.4E+2	8.2E+2	1.1E+3	9.1E+3	7.1E+5	3.6E+4	2.2E+3		2.02E+02
Cobalt		6.2E+2	1.0E+3	1.4E+3	#VALUE!	#VALUE!	1.4E+7	8.7E+5		3.04E+02
Copper		1.8E+4	2.1E+4	2.9E+4	#VALUE!	#VALUE!	2.9E+6	1.8E+5		6.92E+03
Cumene		4.4E+4	7.4E+8	1.0E+9	2.1E+5	2.8E+4	1.2E+9	7.1E+7		1.59E+04
Cyanide		6.0E+3	6.2E+3	8.5E+3	#VALUE!	#VALUE!	4.5E+7	2.8E+6		2.25E+03
Cymene (isopropyltoluene)		4.4E+4	7.4E+4	1.0E+5	1.5E+5	2.1E+4	8.7E+8	5.4E+7		9.90E+03
DDE		1.3E+1	1.9E+1	2.6E+1	1.6E+4	5.8E+5	3.0E+5	1.8E+4		5.95E+00
DDT		1.3E+1	1.9E+1	2.6E+1	1.2E+4	3.4E+5	3.0E+5	1.8E+4		5.95E+00
Dibenz-a,h-anthracene		8.9E+0	1.6E+1	2.2E+1	9.3E+2	1.5E+5	7.1E+2	4.4E+1		4.11E+00
Dibenzofuran		8.9E+2	9.3E+2	1.3E+3	6.6E+4	1.6E+5	2.0E+7	1.3E+6		3.30E+02
Dibromo-3-chloropropane, 1,2-		1.5E+1	1.5E+1	2.1E+1	9.1E+2	2.2E+2	2.9E+6	1.8E+5		5.38E+00
Dibromochloromethane		9.5E+3	1.2E+4	1.6E+4	1.3E+3	2.0E+2	6.0E+6	3.7E+5		1.62E+02
Dichlorobenzene, 1,2-		1.9E+5	3.2E+5	4.3E+5	3.6E+5	5.6E+4	1.7E+9	1.1E+8		3.18E+04
Dichlorobenzene, 1,3-		1.3E+4	2.2E+4	3.0E+4	1.7E+3	9.0E+1	2.3E+7	1.4E+6		8.39E+01
Dichlorobenzene, 1,4-		4.8E+4	8.9E+4	1.2E+5	3.3E+5	4.3E+4	1.9E+9	1.2E+8		1.50E+04
Dichlorodifluoromethane		8.9E+4	4.3E+4	5.8E+4	9.0E+3	1.1E+2	5.8E+8	3.6E+7		1.04E+02
Dichloroethane, 1,1-		8.9E+4	1.9E+5	2.5E+5	4.5E+4	1.1E+3	1.4E+9	8.7E+7		1.03E+03
Dichloroethane, 1,2-		2.7E+2	5.6E+2	7.5E+2	2.7E+2	9.3E+0	6.1E+6	3.7E+5		8.46E+00
Dichloroethylene, cis-1,2-		3.1E+3	6.5E+3	8.8E+3	2.4E+3	6.4E+1	7.0E+7	4.3E+6		5.98E+01
Dichloroethylene, trans-1,2		7.6E+3	1.6E+4	2.1E+4	5.4E+3	1.3E+2	1.7E+8	1.1E+7		1.19E+02
Dichlorophenol, 2,4-		1.3E+3	2.3E+3	3.1E+3	7.4E+4	8.0E+4	3.1E+7	1.9E+6		6.49E+02
Dichloropropane, 1,2-		6.2E+3	9.6E+3	1.3E+4	6.3E+2	2.6E+1	1.2E+7	7.1E+5		2.45E+01
Dichloropropane, 1,3-		2.2E+2	3.7E+2	5.0E+2	3.9E+3	3.1E+2	3.6E+7	2.2E+6		7.91E+01
Dichloropropane, 2,2-		3.3E+2	5.4E+2	7.4E+2	5.7E+2	2.1E+1	1.2E+7	7.1E+5		1.78E+01
Dichloropropene, 1,1-		2.2E+2	3.7E+2	5.0E+2	9.2E+2	1.8E+1	3.6E+7	2.2E+6		1.49E+01
Dichloropropene, 1,3-cis		4.1E+1	6.9E+1	9.3E+1	1.1E+3	4.3E+1	1.9E+7	1.2E+6		1.35E+01
Dichloropropene, 1,3-trans		2.2E+2	3.7E+2	5.0E+2	2.0E+3	8.1E+1	3.6E+7	2.2E+6		4.52E+01
Dieldrin		2.8E-1	2.9E-1	3.9E-1	4.2E+2	1.0E+4	6.3E+3	3.9E+2		1.04E-01
Diethyl phthalate		8.9E+4	1.7E+5	2.3E+5	1.1E+5	1.8E+5	1.4E+7	8.6E+5		2.65E+04
Dimethoate		8.9E+2	9.3E+2	1.3E+3	6.4E+4	2.5E+4	2.0E+7	1.3E+6		3.27E+02
Dimethyl phenol, 2,4-		8.9E+3	9.3E+3	1.3E+4	1.4E+5	1.9E+5	4.9E+7	3.0E+6		3.20E+03
Dimethylphthalate		3.6E+5	6.7E+5	9.0E+5	4.1E+4	3.8E+4	1.4E+7	8.6E+5		1.75E+04
Di-n-butyl phthalate		2.3E+4	4.8E+4	6.5E+4	9.0E+5	2.1E+7	1.4E+7	8.9E+5		1.22E+04
Dinitrotoluene, 2,6-		8.9E+2	1.6E+3	2.1E+3	1.5E+3	1.4E+3	4.3E+5	2.7E+4		2.76E+02
Di-n-octyl phthalate		8.9E+3	1.7E+4	2.3E+4	1.8E+8	1.1E+11	2.1E+8	1.3E+7		4.61E+03
Diphenyl oxide		2.8E+3	2.9E+3	3.9E+3	4.9E+4	9.0E+4	2.0E+7	1.3E+6		9.99E+02
Diuron		8.9E+2	9.3E+2	1.3E+3	5.7E+5	1.4E+6	2.9E+7	1.8E+6		3.33E+02
Endrin		8.9E+1	9.3E+1	1.3E+2	1.7E+4	2.6E+5	2.9E+5	1.8E+4		3.32E+01
Ethylene dibromide		5.9E+0	9.9E+0	1.3E+1	4.7E+1	6.8E+0	2.4E+5	1.5E+4		1.95E+00
Fluoranthene		1.8E+4	3.3E+4	4.5E+4	1.5E+7	3.7E+8	4.1E+8	2.5E+7		9.16E+03
Fluorene		1.8E+4	3.3E+4	4.5E+4	2.2E+6	8.4E+6	4.1E+8	2.5E+7		9.12E+03
Heptachlor		9.9E-1	1.5E+0	2.0E+0	8.9E+1	2.6E+2	2.3E+4	1.4E+3		4.54E-01
Hexachlorobenzene		7.1E+1	7.4E+1	1.0E+2	3.2E+3	6.9E+3	1.1E+6	6.7E+4		2.63E+01
Hexachlorobutadiene		8.9E+1	9.3E+1	1.3E+2	1.4E+3	2.2E+2	6.6E+6	4.1E+5		2.84E+01
Hexachlorocyclohexane, alpha		7.1E-1	1.4E+0	1.9E+0	1.7E+2	7.8E+2	1.6E+4	9.9E+2		3.79E-01
Hexachlorocyclohexane, beta		2.5E+0	4.7E+0	6.3E+0	1.5E+3	5.8E+3	5.6E+4	3.5E+3		1.28E+00
Hexachlorocyclohexane, delta		2.5E+0	2.6E+0	3.5E+0	1.1E+3	1.2E+4	5.6E+4	3.5E+3		9.23E-01
Hexachlorocyclohexane, gamma		3.5E+0	7.1E+0	9.7E+0	5.1E+3	2.2E+4	4.1E+5	2.5E+4		1.90E+00
Hexachlorocyclopentadiene		2.7E+3	2.8E+3	3.8E+3	3.2E+2	1.3E+2	5.8E+5	3.6E+4		8.50E+01
Hexachloroethane		1.6E+3	1.7E+3	2.2E+3	4.6E+4	4.5E+4	3.6E+7	2.2E+6		5.79E+02
Indeno-1,2,3-cd-pyrene		1.9E+2	3.6E+2	4.8E+2	2.5E+4	5.3E+6	1.5E+4	9.4E+2		8.86E+01
Isodrin		2.6E-2	2.7E-2	3.7E-2	1.7E+1	3.6E+2	6.0E+2	3.7E+1		9.81E-03
Isophorone		2.3E+4	2.4E+4	3.3E+4	6.4E+4	4.0E+4	6.7E+7	4.1E+6		6.44E+03
Lead (inorganic)		1.6E+3	5.0E+2	6.8E+2	#VALUE!	#VALUE!	3.7E+7	2.2E+6		2.44E+02
Manganese		8.9E+3	1.1E+3	1.5E+3	#VALUE!	#VALUE!	2.0E+8	1.3E+7		5.96E+02
Mercury		4.9E+2	7.1E+1	9.6E+1	7.2E+3	2.6E+3	1.5E+7	9.3E+5		3.71E+01
Methyl naphthalene, 1-		3.1E+4	5.8E+4	7.8E+4	6.4E+5	4.3E+5	7.1E+8	4.4E+7		1.51E+04
Methylene chloride		2.7E+3	5.3E+3	7.1E+3	2.8E+5	6.8E+3	8.7E+9	5.4E+8		1.17E+03
Methylnaphthalene, 2-		1.8E+3	3.3E+3	4.5E+3	4.9E+4	4.2E+4	4.2E+7	2.6E+6		8.81E+02
Naphthalene		4.4E+4	8.2E+4	1.1E+5	2.8E+4	1.4E+4	4.0E+7	2.5E+6		6.69E+03
Nickel		2.2E+3	1.9E+2	2.5E+2	#VALUE!	#VALUE!	4.8E+4	3.0E+3		9.80E+01
Nitroaniline, 2-		1.3E+2	1.4E+2	1.9E+2	2.0E+4	1.6E+4	7.1E+6	4.4E+5		4.97E+01
Nitroaniline, 3-		1.1E+3	1.1E+3	1.5E+3	1.6E+4	1.1E+4	3.1E+6	1.9E+5		3.72E+02
Nitroaniline, 4-		1.1E+3	1.1E+3	1.5E+3	1.7E+4	7.6E+3	4.8E+6	3.0E+5		3.68E+02
Nitrophenol, 2-		8.9E+2	9.3E+2	1.3E+3	2.7E+4	1.9E+4	1.2E+7	7.1E+5		3.23E+02
Nitrophenol, 4-		8.9E+2	1.9E+3	2.5E+3	1.1E+4	4.0E+3	3.9E+6	2.4E+5		4.15E+02
Nitrosodi-n-propylamine, n-		3.2E+0	1.7E+0	2.2E+0	2.1E+1	1.4E+1	1.4E+4	8.9E+2		6.73E-01
Nitrosodiphenylamine		4.5E+3	2.4E+3	3.2E+3	4.4E+5	1.0E+6	1.0E+8	6.4E+6		1.04E+03
Parathion		2.7E+3	2.8E+3	3.8E+3	7.1E+3	7.1E+4	1.4E+5	8.9E+3		7.84E+02
Pentachlorophenol		1.3E+2	2.1E+2	2.9E+2	5.0E+5	1.4E+6	4.2E+7	2.6E+6		6.35E+01
Phenanthrene		1.3E+4	2.5E+4	3.3E+4	1.6E+6	6.4E+6	3.1E+8	1.9E+7		6.84E+03
Phenol		1.5E+6	2.8E+6	3.8E+6	6.9E+7	4.4E+7	3.5E+10	2.1E+9		7.61E+05
Polybrominated biphenyls (solid)		4.4E+0	8.6E+0	1.2E+1	#VALUE!	6.2E-24	1.4E+6	8.9E+4		6.19E-24
Propylbenzene, n-		1.8E+4	3.0E+4	4.0E+4	1.4E+5	1.3E+4	1.2E+9	7.1E+7		5.05E+03
Pyrene		1.3E+4	2.5E+4	3.3E+4	9.9E+6	2.0E+8	3.1E+8	1.9E+7		6.87E+03
Selenium		8.0E+3	8.3E+3	1.1E+4	#VALUE!	#VALUE!	1.8E+8	1.1E+7		3.00E+03
Simazine		3.7E+1	3.9E+1	5.2E+1	1.3E+4	2.4E+4	8.5E+5	5.2E+4		1.39E+01
Styrene		4.4E+3	7.4E+3	1.0E+4	1.4E+5	2.0E+4	7.5E+8	4.6E+7		1.93E+03
Tetrachloroethane, 1,1,1,2-		1.3E+4	2.1E+4	2.9E+4	6.6E+4	1.1E+4	2.9E+8	1.8E+7		3.77E+03
Tetrachloroethane, 1,1,2,2-		1.3E+4	1.9E+4	2.5E+4	5.1E+4	6.6E+3	2.9E+8	1.8E+7		2.92E+03
Tetrachloroethylene		3.1E+4	6.5E+4	8.8E+4	1.2E+5	3.1E+3	3.3E+9	2.1E+8		2.57E+03
Thallium		3.1E+1	6.5E+1	8.8E+1	#VALUE!	#VALUE!	7.1E+5	4.4E+4		1.69E+01
TPH - Aliph >C06-C08		2.2E+6	3.7E+6	5.0E+6	1.1E+6	1.6E+4	5.3E+10	3.3E+9		1.55E+04
TPH - Aliph >C08-C10		4.4E+4	7.4E+4	1.0E+5	1.1E+5	3.4E+3	2.9E+9	1.8E+8		2.86E+03
TPH - Aliph >C10-C12		4.4E+4	4.6E+4	6.3E+4	2.5E+5	1.6E+4	2.9E+9	1.8E+8		8.01E+03
TPH - Aliph >C12-C16		4.4E+4	4.6E+4	6.3E+4	5.4E+5	7.6E+4	2.9E+9	1.8E+8		1.33E+04
TPH - Aliph >C16-C21		8.9E+5	9.3E+5	1.3E+6	2.0E+6	1.0E+6	2.9E+9	1.8E+8		2.22E+05
TPH - Aliph >C21-C34		8.9E+5	9.3E+5	1.3E+6	1.6E+6	6.9E+5	2.9E+9	1.8E+8		1.97E+05
TPH - Arom >C05-C07		8.9E+4	9.3E+4	1.3E+5	4.5E+4	1.3E+3	1.2E+9	7.1E+7		1.25E+03
TPH - Arom >C07-C08		8.9E+4	1.8E+5	2.4E+5	6.9E+4	3.1E+3	1.2E+9	7.1E+7		2.79E+03
TPH - Arom >C08-C10		1.8E+4	3.0E+4	4.0E+4	6.4E+4	5.3E+3	5.8E+8	3.6E+7		3.13E+03
TPH - Arom >C10-C12		1.8E+4	1.9E+4	2.5E+4	1.5E+5	3.0E+4	5.8E+8	3.6E+7		5.24E+03
TPH - Arom >C12-C16		1.8E+4	1.9E+4	2.5E+4	3.5E+5	1.6E+5	5.8E+8	3.6E+7		6.27E+03
TPH - Arom >C16-C21		1.3E+4	2.5E+4	3.3E+4	1.2E+6	1.9E+6	5.8E+8	3.6E+7		6.81E+03
TPH - Arom >C21-C35		1.3E+4	2.5E+4	3.3E+4	1.5E+7	2.8E+8	5.8E+8	3.6E+7		6.87E+03
Trichlorobenzene, 1,2,3-		3.4E+3	3.6E+3	4.8E+3	1.7E+5	1.5E+5	1.4E+8	8.9E+6		1.26E+03
Trichlorobenzene, 1,2,4-		3.4E+3	6.9E+3	9.4E+3	8.5E+4	3.7E+4	1.4E+8	8.9E+6		1.72E+03
Trichloroethane, 1,1,1-		1.3E+6	2.5E+6	3.4E+6	9.1E+5	2.1E+4	3.0E+10	1.8E+9		1.96E+04
Trichloroethane, 1,1,2-		3.9E+2	6.6E+2	8.9E+2	7.9E+2	5.2E+1	9.1E+6	5.6E+5		3.89E+01
Trichloroethylene		1.2E+4	2.4E+4	3.3E+4	9.3E+3	2.5E+2	2.6E+8	1.6E+7		2.33E+02
Trichlorofluoromethane		1.3E+5	6.4E+4	8.6E+4	3.3E+4	4.0E+2	2.0E+9	1.3E+8		3.91E+02
Trichlorophenol, 2,4,5-		1.3E+2	1.4E+2	1.9E+2	5.6E+5	1.2E+6	1.3E+8	7.7E+6		4.99E+01
Trichlorophenol, 2,4,6-		1.5E+4	1.5E+4	2.1E+4	1.5E+5	2.0E+5	6.8E+7	4.2E+6		5.21E+03
Trichloropropane, 1,2,3-		1.1E+1	1.9E+1	2.5E+1	9.1E+1	2.5E+1	2.5E+5	1.6E+4		4.25E+00
Trimethylbenzene, 1,2,3-		2.2E+4	4.5E+4	6.1E+4	2.7E+3	3.2E+2	1.7E+7	1.1E+6		2.80E+02
Trimethylbenzene, 1,2,4-		2.2E+4	3.7E+4	5.0E+4	3.0E+3	3.9E+2	1.7E+7	1.1E+6		3.38E+02

GAC Commercial landuse

contaminant	TF (indoor dust inhalation	GAC (ldcr)	GAC ingestion	GAC dermal indoors	GAC dermal outdoors	GAC dust inhalation indoors	GAC dust inhalation outdoors	GAC vapour inhalation indoors	GAC vapour inhalation outdoors	Combined GAC without veg uptake
	0.7	1.22E-03								
Acenaphthene	0.7	3.05E+10	26660.86957	49433.69565	66880.88235	26231000.28	608933935	2412829.362	1406266.005	1.35E+04
Acenaphthylene	0.7	3.05E+10	26660.86957	49433.69565	66880.88235	26231000.28	608933935	5445749.091	2115001.178	1.36E+04
Aldrin	0.7	2.99E+05	0.262165217	0.273088768	0.369473039	256.9077372	5963.929615	814.7807073	81.24892217	9.80E-02
Anthracene	0.7	1.53E+11	133304.3478	247168.4783	334404.4118	131455127.2	3051636882	12746066.6	2298574.94	6.85E+04
Antimony	0.7	2.03E+08	177.7391304	55.54347826	75.14705882	174673.2513	4054914.761	#VALUE!	#VALUE!	2.71E+01
Arsenic	0.7	5.09E+06	854.5150502	1319.157609	1784.742647	4375.835057	101581.8853	#VALUE!	#VALUE!	3.67E+02
Atrazine	0.7	7.26E+08	0.262165217	0.273088768	0.369473039	624261.7914	14491791.59	258274.8249	174496.9074	9.82E-02
Azinphos-methyl (guthion)	0.7	7.61E+08	666.5217391	694.2934783	939.3382353	654274.3776	15188512.34	545867.0313	232773.6367	2.49E+02
Azobenzene	0.7	2.35E+08	201.956087	210.3709239	284.6194853	201684.5788	4681963.436	702325.154	67036.17826	7.55E+01
Benz-a-anthracene	0.7	1.23E+06	306.6	568.4875	769.1301471	1056.443032	24524.57038	208700.1382	3154.218479	1.31E+02
Benzo-a-pyrene	0.7	1.78E+05	44.43478261	82.38949275	111.4681373	153.0641892	3553.275822	147255.2214	1272.042471	1.95E+01
Benzo-b-fluoranthene	0.7	1.26E+06	315.4869565	584.9653986	791.4237745	1086.455618	25221.29113	594485.8187	4872.108538	1.37E+02
Benzo-g,h,i-perylene	0.7	1.53E+10	13330.43478	24716.84783	33440.44118	13145512.72	305163688.2	4899912936	108059612.4	6.87E+03
Benzo-k-fluoranthene	0.7	1.78E+06	444.3478261	823.8949275	1114.681373	1530.641892	35532.75822	4532682.78	36064.86911	1.97E+02
Biphenyl, 1,1-	0.7	1.88E+08	22217.3913	23143.11594	31311.27451	162067.9651	3762292.047	7350.818751	6078.388172	2.34E+03
Bis (2-chloro-ethyl) ether	0.7	2.20E+07	20.1956087	33.65934783	45.53911765	18907.92926	438934.0721	50.88483982	176.532545	7.90E+00
Bis (2-ethyl-hexyl) phthalate	0.7	7.26E+08	11108.69565	4397.192029	5949.142157	624261.7914	14491791.59	151406345.6	1783625.616	2.05E+03
Bis (chloroethoxy) methane	0.7	2.20E+07	20.1956087	21.03709239	28.46194853	18907.92926	438934.0721	502.7487111	552.364818	7.35E+00
Boron	0.7	2.20E+09	39991.30435	74983.69565	101448.5294	2491044.649	57827822.2	#VALUE!	#VALUE!	2.06E+04
Bromobenzene	0.7	1.53E+09	8886.956522	14811.5942	20039.21569	1314551.272	30516368.82	361.2531655	3831.604791	3.07E+02
Bromodichloromethane	0.7	4.10E+08	88.86956522	181.442029	245.4803922	352948.0129	8193436.013	40.12998552	661.8879445	2.12E+01
Bromoform	0.7	6.60E+09	2821.608696	3527.01087	4771.838235	5678381.295	131819565.8	9314.386366	40641.94978	1.02E+03
Bromomethane	0.7	7.26E+08	622.0869565	1036.811594	1402.745098	624261.7914	14491791.59	3.514183212	260.3639825	3.43E+00
Bromophenyl phenylether, 4-	0.7	2.20E+06	1.4819	1.543645833	2.088462012	1890.792926	43893.40721	3763.818237	470.1949811	5.54E-01
Butyl benzyl phthalate	0.7	6.98E+08	222173.913	282346.0145	381997.549	600251.7225	13934414.99	14242405.18	744573.1362	7.24E+04
Butylbenzene, n-	0.7	3.92E+10	17773.91304	18514.49275	25049.01961	33734146.81	783114122.3	20497.97928	146173.8723	4.86E+03
Butylbenzene, sec-	0.7	3.92E+10	17773.91304	29623.18841	40078.43137	33734146.81	783114122.3	15481.57646	127035.0218	5.33E+03
Butylbenzene, tert-	0.7	2.03E+10	17773.91304	29623.18841	40078.43137	17467325.13	405491476.1	5508.834579	54527.52131	3.18E+03
Cadmium	0.7	2.41E+06	1110.869565	57.85778986	78.27818627	2076.87096	48213.07586	#VALUE!	#VALUE!	3.18E+01
Carbazole	0.7	1.27E+09	1110.869565	1620.018116	2191.789216	1092458.135	25360635.28	126432.9077	66016.21403	5.01E+02
Carbon disulfide	0.7	1.45E+10	44434.78261	58320.65217	78904.41176	12485235.83	289835831.7	100.1949062	6217.211799	9.81E+01
Carbon tetrachloride	0.7	5.09E+09	3110.434783	4212.047101	5698.651961	4375835.057	101581885.3	68.22997852	3037.296484	6.36E+01
Chloro-3-methylphenol, 4-	0.7	1.45E+10	44434.78261	46286.23188	62622.54902	43758350.57	1015818853	52524862.42	14840455.71	1.66E+04
Chloroaniline, p-	0.7	7.68E+08	1777.391304	1851.449275	2504.901961	660276.8948	15327856.49	45836.84485	46260.92323	6.46E+02
Chlorobenzene	0.7	7.26E+13	88869.56522	57394.92754	77651.96078	62426179144	1.44918E+12	6876565.802	115182612.8	2.40E+04
Chlorobromomethane (bromochloromethane)	0.7	#VALUE!	17773.91304	29623.18841	40078.43137	#VALUE!	#VALUE!	#VALUE!	#VALUE!	#VALUE!
Chloroethane	0.7	1.47E+12	7665	12775	17283.82353	12665311.35	294016156.4	8962.513475	592264.5927	2.63E+03
Chloroform	0.7	1.45E+10	13330.43478	5554.347826	7514.705882	12485235.83	289835831.7	313.6672496	11001.41168	2.73E+02
Chloromethane	0.7	4.03E+09	1708.517391	2847.528986	3852.539216	3469454.956	80540918.63	6.800274987	853.80327	6.69E+00
Chloronaphthalene, 1-	0.7	2.02E+11	35547.82609	65911.5942	89174.5098	174072999.5	4040980346	28335846.65	12394232.02	1.83E+04
Chloronaphthalene, 2-	0.7	2.02E+11	35547.82609	65911.5942	89174.5098	174072999.5	4040980346	5963775.713	5668540.932	1.82E+04
Chlorophenol, 2-	0.7	7.61E+09	1333.043478	2221.73913	3005.882353	6542740.776	151885123.4	297241.1554	2570070.8579	6.49E+02
Chlorophenyl phenylether, 4-	0.7	2.20E+06	1.4819	1.543645833	2.088462012	1890.792926	43893.40721	245.8162479	120.0683874	5.51E-01
Chlorotoluene, p- (4-chlorotoluene)	0.7	3.78E+07	8886.956522	14811.5942	20039.21569	32473.61819	753851.8508	11.66410713	108.2002805	1.05E+01
Chlorpyrifos	0.7	2.90E+07	444.3478261	462.8623188	626.2254902	24970.47166	579671.6635	73509.80967	8359.505287	1.62E+02
Chromium (III) (total chromium)	0.7	2.41E+06	5776.521739	156.4474638	211.6642157	2076.87096	48213.07586	#VALUE!	#VALUE!	8.48E+01
Chromium (VI)	0.7	2.41E+06	5776.521739	300.8605072	407.0465686	2076.87096	48213.07586	#VALUE!	#VALUE!	1.55E+02
Chrysene	0.7	1.78E+06	444.3478261	823.8949275	1114.681373	1530.641892	35532.75822	714799.314	9074.095263	1.94E+02
Cobalt	0.7	7.12E+08	622.0869565	1036.811594	1402.745098	612256.757	14213103.29	#VALUE!	#VALUE!	3.04E+02
Copper	0.7	1.45E+08	17773.91304	21106.52174	28555.88235	124852.3583	2898358.317	#VALUE!	#VALUE!	6.80E+03
Cumene	0.7	5.81E+10	44434.78261	740579710.1	100196784	50000968.49	1160736768	28053.01543	208187.9225	1.59E+04
Cyanide	0.7	2.28E+09	5998.695652	6248.641304	8454.044118	1956820.615	45422615.86	#VALUE!	#VALUE!	2.24E+03
Cymene (isopropyltoluene)	0.7	4.36E+10	44434.78261	74057.97101	100196.0784	37515732.66	870900936.7	20615.29549	154591.0407	9.90E+03
DDE	0.7	1.49E+07	13.06382609	19.05141304	25.77544118	12845.38686	298196.4807	580805.937	16490.98167	5.95E+00
DDT	0.7	1.49E+07	13.06382609	19.05141304	25.77544118	12845.38686	298196.4807	339251.6172	11967.8356	5.95E+00
Dibenz-a,h-anthracene	0.7	3.56E+04	8.886956522	16.47789855	22.29362745	30.61263785	710.6551644	150707.9691	930.0686384	3.95E+00
Dibenzofuran	0.7	1.02E+09	888.6956522	925.7246377	1252.45098	876367.5149	20344245.88	160295.0097	66198.24111	3.30E+02
Dibromo-3-chloropropane, 1,2-	0.7	1.45E+08	14.819	15.43645833	20.8846201	124852.3583	2898358.317	215.3646734	913.6600267	5.38E+00
Dibromochloromethane	0.7	3.03E+08	9509.043478	11886.30435	16081.47059	2605092476	6047536.105	195.3157699	1257.940287	1.62E+02
Dichlorobenzene, 1,2-	0.7	8.72E+10	190625.2174	317708.6957	429841.1765	75031465.32	1741801873	55678.26377	359367.7002	3.18E+04
Dichlorobenzene, 1,3-	0.7	1.17E+09	13330.43478	22217.3913	30058.82353	1002420.377	23270363.03	865.6870211	8399.4011	8.39E+01
Dichlorobenzene, 1,4-	0.7	9.70E+10	47545.21739	89147.28261	120611.0294	83434989.43	1936883683	43303.14681	334179.3757	1.50E+04
Dichlorodifluoromethane	0.7	2.90E+10	88869.56522	42583.33333	57612.7451	24970471.66	579671663.5	105.9038994	9039.228968	1.04E+02
Dichloroethane, 1,1-	0.7	7.05E+10	88869.56522	185144.9275	250490.1961	60625423.98	1407375914	1082.41917	45033.66009	1.03E+03
Dichloroethane, 1,2-	0.7	3.05E+08	266.6086957	555.4347826	751.4705882	262310.0028	6089339.35	9.282807149	257070.8579	8.46E+00
Dichloroethylene, cis-1,2-	0.7	3.49E+09	3110.434783	6480.072464	8767.156863	3001258.613	69672074.94	63.5761144	2428.458249	5.98E+01
Dichloroethylene, trans-1,2	0.7	8.72E+09	7553.913043	15737.31884	21291.66667	7503146.532	174180187.3	125.0506626	5384.718943	1.19E+02
Dichlorophenol, 2,4-	0.7	1.53E+09	1333.043478	2277.282609	3081.029412	13145512.72	305163688.2	80480.78591	73885.94294	6.49E+02
Dichloropropane, 1,2-	0.7	5.81E+08	6220.869565	9590.507246	12975.39216	5000096.849	116073676.8	25.68510258	630.0478493	2.45E+01
Dichloropropane, 1,3-	0.7	1.81E+09	222.173913	370.2898551	500.9803922	1560654.479	36229478.97	313.4546687	3889.390479	7.31E+01
Dichloropropane, 2,2-	0.7	5.81E+08	326.5956522	544.326087	736.4411765	5000096.849	116073676.8	20.71360316	565.7256717	1.78E+01
Dichloropropene, 1,1-	0.7	1.81E+09	222.173913	370.2898551	500.9803922	1560654.479	36229478.97	17.62217324	921.8266022	1.49E+01
Dichloropropene, 1,3-cis	0.7	9.70E+08	41.10217391	68.50362319	92.68137255	834349.8943	19368836.83	43.0674321	1053.913228	1.35E+01
Dichloropropene, 1,3-trans	0.7	1.81E+09	222.173913	370.2898551	500.9803922	1560654.479	36229478.97	80.55147081	1971.336083	4.52E+01
Dieldrin	0.7	3.18E+05	0.277717391	0.288288949	0.391390931	273.1145338	6340.158815	10177.03848	422.5571457	1.04E-01
Diethyl phthalate	0.7	6.98E+08	88869.56522	166630.4348	225441.1765	600251.7225	13934414.99	178452.887	109433.8523	2.62E+04
Dimethoate	0.7	1.02E+09	888.6956522	925.7246377	1252.45098	876367.5149	20344245.88	24511.82717	63651.40771	3.27E+02
Dimethyl phenol, 2,4-	0.7	2.47E+09	8886.956522	9257.246377	12524.5098	2124891.098	49327829.06	194311.967	144086.9831	3.20E+03
Dimethylphthalate	0.7	6.98E+08	355478.2609	666521.7391	901764.7059	600251.7225	13934414.99	38272.854	40927.09061	1.73E+04
Di-n-butyl phthalate	0.7	7.26E+08	23106.08696	48137.68116	65127.45098	624261.7914	14491791.59	21163764.57	898360.7473	1.22E+06
Dinitrotoluene, 2,6-	0.7	2.16E+07	888.6956522	1573.731884	2129.166667	18607.8034	431966.8646	1424.786106	1525.212808	2.74E+02
Di-n-octyl phthalate	0.7	1.05E+10	8886.956522	16663.04348	22544.11765	9003775.838	209016224.8	1.08315E+11	176754632	4.61E+03
Diphenyl oxide	0.7	1.02E+09	2754.956522	2869.746377	3882.598039	876367.5149	20344245.88	89793.82522	49370.82438	9.98E+02
Diuron	0.7	1.45E+08	888.6956522	925.7246377	1252.45098	124852.3583	2898358.317	1387.73	5754.66204	3.33E+02
Endrin	0.7	1.45E+07	88.86956522	92.57246377	125.245098	12485.23583	289835.8317	258035.7488	17058.48625	3.31E+01
Ethylene dibromide	0.7	1.21E+07	5.932043478	9.88673913	13.37617647	10384.3548	241065.3793	6.785437702	46.93556485	1.95E+00
Fluoranthene	0.7	2.03E+10	17773.91304	32955.7971	44587.2549	17467325.13	405491476.1	367925510.6	15484767.88	9.16E+03
Fluorene	0.7	2.03E+10	17773.91304	32955.7971	44587.2549	17467325.13	405491476.1	84282833.19	2167187.992	9.12E+03
Heptachlor	0.7	0.986452174	1.479678261	2.001917647	972.4077905	225737522	5239.4	262.4103984	89.15974847	4.53E-01
Hexachlorobenzene	0.7	5.44E+07	71.09566217	74.05797101	100.1960784	46819.63436	1086884.369	6919.124267	3166.828483	2.63E+01
Hexachlorobutadiene	0.7	3.30E+08	88.86956522	92.57246377	125.24509	283919.0648	6590978.289	224.3895992	1403.037216	2.84E+01
Hexachlorocyclohexane, alpha	0.7	8.10E+05	0.706513043	1.427745109	1.931655147	696.2919981	16163.92139	783.1036895	166.2294865	3.78E-01
Hexachlorocyclohexane, beta	0.7	2.83E+06	2.466130435	4.675372283	6.325503676	2431.019476	56434.3807	5840.092676	1452.359406	1.28E+00
Hexachlorocyclohexane, delta	0.7	2.83E+06	2.466130435	2.56888587	3.47555147	2431.019476	56434.3807	12028.66924	980.7951006	9.23E-01
Hexachlorocyclohexane, gamma	0.7	2.03E+07	3.532565217	7.138725543	9.658275735	17467.32513	405491.4761	22371.99731	5084.300983	1.90E+00
Hexachlorocyclopentadiene	0.7	2.90E+07	2666.086957	2777.173913	3757.352941	24970.47166	579671.6635	131.5653347	318.6393423	8.49E+01
Hexachloroethane	0.7	1.81E+09	1586.321739	1652.418478	2235.625	1560654.479	36229478.97	44530.30907	46493.48786	5.79E+02
Indeno-1,2,3-cd-pyrene	0.7	1.47E+06	191.513913	355.0987138	480.4276716	660.2758446	15327.85648	153227.8164	24686.1286	8.52E+01
Isodrin	0.7	2.99E+04	0.026216522	0.027308877	0.036947304	25.69077372	596.3929615	359.8277329	16.90526873	9.81E-03
Isophorone	0.7	3.34E+09	23328.26087	24300.27174	32876.83824	2875205.751	66745847.79	40099.81466	64362.5856	6.44E+03
Lead (inorganic)	0.7	1.83E+09	1599.652174	499.8913043	676.3235294	1572659.513	36508167.27	#VALUE!	#VALUE!	2.44E+02
Manganese	0.7	1.02E+10	8886.956522	1110.869565	1502.941176	8763675.149	203442458.8	#VALUE!	#VALUE!	5.96E+02
Mercury	0.7	1.47E+08	488.7826087	71.2807971	96.43872549	654274.3776	15188512.34	2555.666491	7188.37244	3.71E+01
Methyl naphthalene, 1-	0.7	3.56E+10	31104.34783	57672.64493	78027.69608	30612837.85	710655164.4	430094.6432	638690.2216	1.51E+04
Methylene chloride	0.7	4.36E+11	2666.086957	5276.630435	7138.970588	375157326.6	8709009367	6796.116893	280742.5081	1.17E+03
Methylnaphthalene, 2-	0.7	2.09E+09	1777.391304	3295.57971	4458.72549	1800755.188	41803244.99	42362.93897	48609.056	8.81E+02
Naphthalene	0.7	2.01E+09	44434.78261	82389.49275	111468.1373	1728724.961	40131115.16	14416.38162	27784.36464	6.69E+03
Nickel	0.7	2.41E+06	2221.73913	185.1449275	250.4901961	2076.87096	48213.07586	#VALUE!	#VALUE!	9.67E+01
Nitroaniline, 2-	0.7	3.56E+08	133.3043478	138.8586957	187.8676471	306128.3785	7106551.644	16304.76944	19998.51608	4.97E+01
Nitroaniline, 3-	0.7	1.53E+08	1057.547826	1101.612319	1490.416667	131455.1272	3051636.882	10565.67217	16135.30278	3.72E+02
Nitroaniline, 4-	0.7	2.42E+08	1057.547826	1101.612319	1490.416667	208287.3477	4835242.001	7632.104203	17398.29248	3.68E+02
Nitrophenol, 2-	0.7	5.81E+08	888.6956522	925.7246377	1252.45098	500009.849	11607367.68	18913.81958	27341.52742	3.23E+02
Nitrophenol, 4-	0.7	1.95E+08	888.6956522	1851.449275	2504.901961	168070.4823	3901636.197	4000.386912	11315.09698	4.15E+02
Nitrosodi-n-propylamine, n-	0.7	7.26E+05	3.177086957	1.65473278	2.238756127	624.2617914	14491.79155	14.04989104	20.62030074	6.72E-01
Nitrosodiphenylamine	0.7	5.19E+09	4532.347826	2360.597826	3193.75	4465872.816	103672047.5	1022045.952	438449.7501	1.04E+03
Parathion	0.7	7.26E+06	2666.086957	2777.173913	3757.352941	6242.617914	144917.9155	70510.25018	7117.792474	7.56E+02
Pentachlorophenol	0.7	2.12E+08	133.3043478	211.0652174	285.5588235	1824765.237	42360621.56	1378157.507	496329.9677	6.35E+01
Phenanthrene	0.7	1.53E+10	13330.43478	24716.84783	33440.44118	13145512.72	305163688.2	6413267.876	1627208.768	6.84E+03
Phenol	0.7	1.73E+12	1510782.609	2832717.391	3832500	1488624227	34557349165	43922924.19	6861312.9	7.61E+05
Polybrominated biphenyls (solid)	0.7	7.26E+07	4.443478261	8.60923913	11.64779412	62426.17914	1449179.155	6.1925E-24	#VALUE!	6.19E-24
Propylbenzene, n-	0.7	5.81E+10	17773.91304	29623.18841	40078.43137	50000968.49	1160736768	13143.11394	142502.6649	5.05E+03
Pyrene	0.7	1.53E+10	13330.43478	24716.84783	33440.44118	13145512.72	305163688.2	199418701.8	9949492.74	6.87E+03
Selenium	0.7	9.14E+09	7998.26087	8331.521739	11272.05882	7863297.566	182540836.3	#VALUE!	#VALUE!	2.99E+03
Simazine	0.7	4.24E+07	37.10304348	38.64900362	52.28982843	36435.27956	845818.9897	23664.19997	12706.97159	1.39E+01
Styrene	0.7	3.78E+10	4443.478261	7405.797101	10019.60784	32473618.19	753851850.8	19594.48548	140242.1466	1.93E+03
Tetrachloroethane, 1,1,1,2-	0.7	1.47E+10	12886.08696	21476.81159	29058.86275	12665311.35	294016156.2	10912.62017	65547.81238	3.71E+03
Tetrachloroethane, 1,1,2,2-	0.7	1.47E+10	12886.08696	18792.21014	25424.7549	12665311.35	294016156.2	6566.639627	50764.7556	2.92E+03
Tetrachloroethylene	0.7	1.68E+11	31104.34783	64800.72464	87671.56863	144060413.4	3344259597	3103.01333	117527.0925	2.57E+03
Thallium	0.7	3.56E+07	31.10434783	64.80072464	87.67156863	30612.83785	710655.1644	#VALUE!	#VALUE!	1.69E+01
TPH - Aliph >C06-C08	0.7	2.67E+12	2221739.13	3702898.551	5009803.922	2299964097	53368809402	15921.23815	1063446.36	1.55E+04
TPH - Aliph >C08-C10	0.7	1.45E+11	44434.78261	74057.97101	100196.0784	12485235.83	289835831.7	3392.612761	114400.1321	2.86E+03
TPH - Aliph >C10-C12	0.7	1.45E+11	44434.78261	46286.23188	62622.54902	12485235.83	289835831.7	16451.9609	251923.2065	8.01E+03
TPH - Aliph >C12-C16	0.7	1.45E+11	44434.78261	46286.23188	62622.54902	12485235.83	289835831.7	76273.19335	542431.9368	1.33E+04
TPH - Aliph >C16-C21	0.7	1.45E+11	888695.6522	925724.6377	1252450.98	12485235.83	289835831.7	1018385.815	1982053.819	2.22E+05
TPH - Aliph >C21-C34	0.7	1.45E+11	888695.6522	925724.6377	1252450.98	12485235.83	289835831.7	687478.1834	1628503.633	1.97E+05
TPH - Arom >C06-C07	0.7	5.81E+11	88869.56522	92572.46377	125245.098	50000968.49	1160736768	1331.687146	453611.1066	1.25E+03
TPH - Arom >C07-C08	0.7	5.81E+10	88869.56522	179590.5797	242975.4902	50000968.49	1160736768	3090.435076	69102.08373	2.79E+03
TPH - Arom >C08-C10	0.7	2.90E+10	17773.91304	29623.18841	40078.43137	24970471.66	579671663.5	5305.99167	63984.62099	3.13E+03
TPH - Arom >C10-C12	0.7	2.90E+10	17773.91304	18514.49275	25049.01961	24970471.66	579671663.5	29572.29312	151070.9113	5.24E+03
TPH - Arom >C12-C16	0.7	2.90E+10	17773.91304	18514.49275	25049.01961	24970471.66	579671663.5	155071.7345	346026.7235	6.27E+03
TPH - Arom >C16-C21	0.7	2.90E+10	13330.43478	24716.84783	33440.44118	24970471.66	579671663.5	1884634.554	1207645.585	6.81E+03
TPH - Arom >C21-C35	0.7	2.90E+10	13330.43478	24716.84783	33440.44118	24970471.66	579671663.5	281454758.8	15169727.72	6.87E+03
Trichlorobenzene, 1,2,3-	0.7	7.26E+09	3421.478261	3564.039855	4821.936275	6242617.914	144917915.9	149529.9628	169938.4208	1.26E+03
Trichlorobenzene, 1,2,4-	0.7	7.26E+09	3421.478261	6914.237319	9354.556373	6242617.914	144917915.9	372701.6278	84865.20731	1.72E+03
Trichloroethane, 1,1,1-	0.7	1.73E+10	13330.43478	2429456.522	3381617.647	12905411203	299588922.3	20611.7394	906604.4793	1.98E+04
Trichloroethane, 1,1,2-	0.7	4.54E+08	388.8043478	656.107337	887.6746324	390763.8714	9071304.157	52.0282665	793.0327397	3.89E+01
Trichloroethylene	0.7	1.32E+10	11553.04348	24068.84058	32563.72549	11344757.56	263360443.3	248.0032119	9324.176656	2.33E+02
Trichlorofluoromethane	0.7	1.02E+11	133304.3478	63875	86419.11765	87636751.49	2034424588	400.8456803	32945.42048	3.91E+02
Trichlorophenol, 2,4,5-	0.7	6.28E+09	133.3043478	138.8586957	187.8676471	5402265.503	125409734.9	1246299.37	556793.655	4.99E+01
Trichlorophenol, 2,4,6-	0.7	3.39E+05	14819	15436.45833	20884.6201	2917223.372	67721256.84	201803.5906	149861.2568	5.20E+03
Trichloropropane, 1,2,3-	0.7	1.27E+07	11.10869565	18.51449275	25.04901961	10924.58135	253606.3528	24.69054214	91.41920114	4.25E+00
Trimethylbenzene, 1,2,3-	0.7	8.72E+08	22217.3913	44897.64493	60743.87255	750314.6532	17418018.73	319.9515044	2723.931865	2.80E+02
Trimethylbenzene, 1,2,4-	0.7	8.72E+08	22217.3913	37028.9855	50098.03922	750314.6532	17418018.73	394.3882048	3024.124832	3.38E+02

GAC User defined receptor

contaminant	TF (indoor dust inhalation)	GAC (ldcr)	GAC ingestion	GAC dermal indoors	GAC dermal outdoors	GAC dust inhalation indoors	GAC dust inhalation outdoors	GAC vapour inhalation indoors	GAC vapour inhalation outdoors	Combined GAC without veg uptake	GAC (hardcover)
	0.7	9.86E-01									
Acenaphthene	0.7	2.24E+07	15593.25603	195926.5309	26380.00482	15426326.35	42071799.14	2641185.949	379963.131	9.07E+03	3.32E+05
Acenaphthylene	0.7	2.24E+07	15593.25603	195926.5309	26380.00482	15426326.35	42071799.14	5961149.217	859464.1779	9.21E+03	7.51E+05
Aldrin	0.7	2.19E+02	0.153333684	1.082365667	0.145732236	151.0862169	412.0533188	891.8938302	129.5026242	6.98E-02	1.13E+02
Anthracene	0.7	1.12E+08	77966.28013	979632.6544	131900.0241	77308134.35	210840366.4	139524326.4	20256326.07	4.65E+04	1.77E+07
Antimony	0.7	1.49E+05	103.9550402	220.1421695	29.64045485	102724.5073	280157.7472	#VALUE!	#VALUE!	2.09E+01	
Arsenic	0.7	3.73E+03	499.783847	5228.376526	703.9608027	2573.40776	7018.3848	#VALUE!	#VALUE!	2.27E+02	
Atrazine	0.7	5.32E+05	0.153333684	1.082365667	0.145732236	367125.3869	1001251.055	282689.799	245889.6408	6.99E-02	1.32E+05
Azinphos-methyl (guthion)	0.7	5.58E+05	389.8314007	2751.777119	370.5056857	384775.6459	1049388.125	539981.2593	542936.0274	1.77E+02	2.71E+05
Azobenzene	0.7	1.72E+05	118.1189144	833.7884671	112.2632228	118609.7404	323481.1101	768795.0462	112306.8492	5.38E+01	9.80E+04
Benz-a-anthracene	0.7	9.00E+02	179.3224443	2253.155105	303.3700554	621.2891162	1694.424862	228452.0365	47463.43897	7.90E+01	3.93E+04
Benzo-a-pyrene	0.7	1.30E+02	25.98876004	326.5442181	43.9666747	90.01632082	245.4990568	161191.7848	53278.42972	1.15E+01	4.00E+04
Benzo-b-fluoranthene	0.7	9.26E+02	184.5201963	2318.463949	312.1633904	638.9393752	1742.561932	650749.5781	110114.0518	8.14E+01	9.42E+04
Benzo-g,h,i-perylene	0.7	1.12E+07	7796.628013	97963.26544	13190.00241	7730813.435	21084036.64	5363549481	4477047600	4.66E+03	2.44E+09
Benzo-k-fluoranthene	0.7	1.30E+03	259.8876004	3265.442181	439.666747	900.1632082	2454.990568	4961544.4	4282948.143	1.15E+02	2.30E+06
Biphenyl, 1,1-	0.7	1.38E+05	12994.38002	91725.90397	12350.18952	95311.39852	259940.1778	8046.519276	1148.950886	8.44E+02	1.01E+03
Bis (2-chloro-ethyl) ether	0.7	1.61E+04	11.81189144	133.4061547	17.96211564	11119.66316	30326.35407	55.70070915	8.306684777	3.49E+00	7.23E+00
Bis (2-ethyl-hexyl) phthalate	0.7	5.32E+05	6497.190011	17427.92175	2346.536009	367125.3869	1001251.055	165735847.4	25683950.14	1.55E+03	2.22E+07
Bis (chloroethoxy) methane	0.7	1.61E+04	11.81189144	83.37884671	11.22632228	11119.66316	30326.35407	550.3301435	81.32608499	5.00E+00	7.09E+01
Boron	0.7	2.12E+06	23389.88404	297191.9289	40014.61405	1464971.496	3995376.806	#VALUE!	#VALUE!	1.38E+04	
Bromobenzene	0.7	1.12E+06	5197.752009	58704.57854	7904.121294	773081.3435	2108403.664	395.443079	56.28673247	4.85E+01	4.93E+01
Bromodichloromethane	0.7	3.01E+05	51.97752009	719.1310871	96.82548585	207567.0457	566091.9427	43.92799645	6.255747406	4.68E+00	5.48E+00
Bromoform	0.7	4.84E+06	1650.286263	13979.02777	1882.168883	3339429	9107533.636	10195.92585	1466.037576	5.03E+02	1.28E+03
Bromomethane	0.7	5.32E+05	363.8426406	4109.320498	553.2884906	367125.3869	1001251.055	3.846774364	0.547289701	4.78E-01	4.79E-01
Bromophenyl phenylether, 4-	0.7	1.61E+03	0.866725147	6.118117795	0.823757641	1111.966316	3032.635407	4120.035914	589.2960275	3.94E-01	5.16E+02
Butyl benzyl phthalate	0.7	5.12E+05	129943.8002	1119056.028	150672.3122	353005.1797	962741.3991	15590344.04	4654811.463	4.69E+04	3.58E+06
Butylbenzene, n-	0.7	2.88E+07	10395.50402	73380.72318	9880.151617	19838891.1	54106066.63	22437.96118	3192.210669	1.76E+03	2.79E+03
Butylbenzene, sec-	0.7	2.88E+07	10395.50402	117409.1571	15808.24259	19838891.1	54106066.63	16946.79296	2411.009876	1.56E+03	2.11E+03
Butylbenzene, tert-	0.7	1.49E+07	10395.50402	117409.1571	15808.24259	10272450.73	28015774.72	6030.20493	857.880743	6.67E+02	7.51E+02
Cadmium	0.7	1.77E+03	649.7190011	229.3147599	30.8754738	1221.397922	3331.085241	#VALUE!	#VALUE!	2.50E+01	
Carbazole	0.7	9.31E+05	649.7190011	6420.813278	864.5132665	642469.427	1752189.346	138398.8558	20105.63034	3.43E+02	1.76E+04
Carbon disulfide	0.7	1.06E+07	25988.76004	231149.278	31122.4776	7342507.737	20025021.1	109.67759	15.60334367	1.36E+01	1.37E+01
Carbon tetrachloride	0.7	3.73E+06	1819.213203	16694.11452	2247.734493	2573407.76	7018384.8	74.68743393	10.62516777	9.21E+00	9.30E+00
Chloro-3-methylphenol, 4-	0.7	3.73E+07	25988.76004	183451.8079	24700.37904	25734077.6	70183848	57495883.7	25366277.98	1.18E+04	1.76E+07
Chloroaniline, p-	0.7	5.63E+05	1039.550402	7338.072318	988.0151617	388305.6977	1059015.539	50174.94359	16335.20029	4.55E+02	1.23E+04
Chlorobenzene	0.7	5.32E+10	51977.52009	227480.2418	30628.47001	36712538687	1.00125E+11	7527381.306	1071098.277	1.74E+04	9.38E+05
Chlorobromomethane (bromochloromethane)	0.7	#VALUE!	10395.50402	117409.1571	15808.24259	#VALUE!	#VALUE!	#VALUE!	#VALUE!	5953.415932	
Chloroethane	0.7	1.08E+09	4483.061108	50632.69899	6817.304616	744840929.1	2031384352	9810.745117	1395.854233	8.28E+02	1.22E+03
Chloroform	0.7	1.06E+07	7796.628013	22014.21695	2964.045485	7342507.737	20025021.1	343.3534629	48.85659349	4.19E+01	4.28E+01
Chloromethane	0.7	2.96E+06	999.2678237	11285.95522	1519.567319	2040369.939	5564645.287	7.443868464	1.058956437	9.26E-01	9.27E-01
Chloronaphthalene, 1-	0.7	1.48E+08	20791.00804	261235.3745	35173.33976	102371502.1	279195005.8	31017624.49	4447639.949	1.24E+04	3.89E+06
Chloronaphthalene, 2-	0.7	1.48E+08	20791.00804	261235.3745	35173.33976	102371502.1	279195005.8	6528202.771	930321.5236	1.23E+04	8.14E+05
Chlorophenol, 2-	0.7	5.58E+06	779.6628013	8805.686781	1185.618194	3847756.459	10493881.25	325372.8301	50905.81383	4.42E+02	4.40E+04
Chlorophenyl phenylether, 4-	0.7	1.61E+03	0.866725147	6.118117795	0.823757641	1111.966316	3032.635407	269.0809438	38.42686296	3.90E-01	3.36E+01
Chlorotoluene, p- (4-chlorotoluene)	0.7	2.77E+04	5197.752009	58704.57854	7904.121294	19097.58022	52084.30969	12.7680279	1.816971705	1.59E+00	1.59E+00
Chlorpyrifos	0.7	2.13E+04	259.8876004	1834.518079	247.0037904	14685.01547	40050.0422	80466.96677	14104.44502	1.15E+02	1.20E+04
Chromium (III) (total chromium)	0.7	1.77E+03	3378.538806	620.0671108	83.48728117	1221.397922	3331.085241	#VALUE!	#VALUE!	6.42E+01	
Chromium (VI)	0.7	1.77E+03	3378.538806	1192.436752	160.5524638	1221.397922	3331.085241	#VALUE!	#VALUE!	1.11E+02	
Chrysene	0.7	1.30E+03	259.8876004	3265.442181	439.666747	900.1632082	2454.990568	782449.687	271115.4086	1.15E+02	2.01E+05
Cobalt	0.7	5.22E+05	363.8426406	4109.320498	553.2884906	360065.2833	981996.2271	#VALUE!	#VALUE!	2.08E+02	
Copper	0.7	1.06E+05	10395.50402	83654.02442	11263.37284	73425.07737	200250.211	#VALUE!	#VALUE!	4.45E+03	
Cumene	0.7	4.26E+07	25988.76004	2935228927	395206064.7	29405331.47	80196358.55	30708.02449	4368.724359	3.33E+03	3.82E+03
Cyanide	0.7	1.67E+06	3508.482606	24765.99407	3334.551171	1150796.886	3138536.961	#VALUE!	#VALUE!	1.59E+03	
Cymene (isopropyltoluene)	0.7	3.20E+07	25988.76004	293522.8927	39520.60647	22062823.73	60171337.45	22566.38048	3210.531889	2.36E+03	2.81E+03
DDE	0.7	1.09E+04	7.640695453	75.50876415	10.16667601	7554.310845	20602.66594	635775.0229	106700.4896	4.12E+00	9.14E+04
DDT	0.7	1.09E+04	7.640695453	75.50876415	10.16667601	7554.310845	20602.66594	371359.3363	56195.89526	4.12E+00	4.88E+04
Dibenz-a,h-anthracene	0.7	2.61E+01	5.197752009	65.30884363	8.79333494	18.00326416	49.09981136	164967.7197	142420.0294	2.30E+00	7.64E+04
Dibenzofuran	0.7	7.47E+05	519.7752009	3669.036159	494.0075809	515387.5623	1405602.443	175465.746	25201.61367	2.34E+02	2.20E+04
Dibromo-3-chloropropane, 1,2-	0.7	1.06E+05	8.667251475	61.18117795	8.237576411	73425.07737	200250.211	235.747321	33.69728589	3.48E+00	2.95E+01
Dibromochloromethane	0.7	2.22E+05	5561.59465	47110.42428	6343.057338	153204.248	417829.7672	213.8009945	30.61382703	2.65E+01	2.68E+01
Dichlorobenzene, 1,2-	0.7	6.40E+07	111491.7806	1259213.21	169543.4018	44125647.46	120342674.9	60947.79589	8674.745922	6.78E+03	7.59E+03
Dichlorobenzene, 1,3-	0.7	8.54E+05	7796.628013	88056.86781	11856.18194	589518.6501	1607778.137	98.03500088	13.94951151	1.22E+01	1.22E+01
Dichlorobenzene, 1,4-	0.7	7.11E+07	27807.97325	353328.1821	47572.93004	49067719.98	133821054.5	47401.46647	6745.795668	4.36E+03	5.91E+03
Dichlorodifluoromethane	0.7	2.13E+07	51977.52009	168775.6633	22724.34872	14685015.47	40050042.2	115.9269215	16.49140508	1.44E+01	1.44E+01
Dichloroethane, 1,1-	0.7	5.17E+07	51977.52009	733807.2318	98801.51617	35653523.15	97236881.31	1184.86204	168.5939398	1.47E+02	1.48E+02
Dichloroethane, 1,2-	0.7	2.24E+05	155.9325603	2201.421695	296.4045485	154263.2635	420717.9914	10.16123364	1.446534288	1.25E+00	1.27E+00
Dichloroethylene, cis-1,2-	0.7	2.56E+06	1819.213203	25683.25311	3458.053066	1765025.898	4813706.996	69.59311782	9.903303775	8.60E+00	8.67E+00
Dichloroethylene, trans-1,2	0.7	6.40E+06	4418.089208	62373.6147	8398.128875	4412564.746	12034267.49	136.8857736	19.47622624	1.69E+01	1.71E+01
Dichlorophenol, 2,4-	0.7	1.12E+06	779.6628013	9025.828951	1215.258649	773081.3435	2108403.664	88097.69267	20929.91156	4.39E+02	1.69E+04
Dichloropropane, 1,2-	0.7	4.26E+05	3638.426406	38011.21461	5117.918538	294053.3147	801963.5855	28.11600475	4.001207009	3.50E+00	3.50E+00
Dichloropropane, 1,3-	0.7	1.33E+06	129.9438002	1467.614464	197.6030323	917813.4672	2503127.638	343.1211273	48.85159273	2.72E+01	4.28E+01
Dichloropropane, 2,2-	0.7	4.26E+05	191.0173863	2157.393261	290.4764576	294053.3147	801963.5855	22.67399009	3.225936152	2.75E+00	2.82E+00
Dichloropropene, 1,1-	0.7	1.33E+06	129.9438002	1467.614464	197.6030323	917813.4672	2503127.638	19.28997935	2.74419009	2.33E+00	2.40E+00
Dichloropropene, 1,3-cis	0.7	7.11E+05	24.03960304	271.5086758	36.55656098	490677.1998	1338210.545	47.14344105	6.709403329	4.12E+00	5.87E+00
Dichloropropene, 1,3-trans	0.7	1.33E+06	129.9438002	1467.614464	197.6030323	917813.4672	2503127.638	88.17506246	12.54980517	9.57E+00	1.10E+01
Dieldrin	0.7	2.33E+02	0.16242975	1.1465738	0.154377369	160.6173568	438.0473366	11140.94339	3294.933817	7.40E-02	2.54E+03
Diethyl phthalate	0.7	5.12E+05	51977.52009	660426.5086	88921.36456	353005.1797	962741.3991	195342.0239	100552.1997	1.89E+04	6.64E+04
Dimethoate	0.7	7.47E+05	519.7752009	3669.036159	494.0075809	515387.5623	1405602.443	26667.44037	23658.05495	2.32E+02	1.25E+04
Dimethyl phenol, 2,4-	0.7	1.81E+06	5197.752009	36690.36159	4940.075809	1249638.336	3408104.553	212702.1093	49241.90605	2.23E+03	4.00E+04
Dimethylphthalate	0.7	5.12E+05	207910.0804	2641706.034	355685.4582	353005.1797	962741.3991	41895.07407	14064.05842	9.19E+03	1.05E+04
Di-n-butyl phthalate	0.7	5.32E+05	13514.15522	190789.8803	25688.39421	367125.3869	1001251.055	23166753.26	6515630.753	8.07E+03	5.09E+06
Dinitrotoluene, 2,6-	0.7	1.59E+04	519.7752009	6237.36147	839.8128875	10943.16057	29844.98337	1559.630986	630.0679163	1.76E+02	4.49E+02
Di-n-octyl phthalate	0.7	7.67E+06	5197.752009	66042.65086	8892.136456	5295077.695	14441120.99	1.18566E+11	17487894489	3.12E+03	1.52E+10
Diphenyl oxide	0.7	7.47E+05	1611.303123	11374.01209	1531.423501	515387.5623	1405602.443	98292.14725	14022.79128	6.91E+02	1.23E+04
Diuron	0.7	1.06E+06	519.7752009	3669.036159	494.0075809	734250.7737	2002502.11	1519681.766	1333672.318	2.37E+02	7.10E+05
Endrin	0.7	1.06E+04	51.97752009	366.9036159	49.40075809	7342.507737	20025.0211	282456.92	117464.0445	2.35E+01	8.30E+04
Ethylene dibromide	0.7	8.85E+03	3.469499466	39.18530618	5.276000964	6106.989609	16655.42621	7.42763022	1.069166531	6.36E-01	9.35E-01
Fluoranthene	0.7	1.49E+07	10395.50402	130617.6873	17586.66988	10272450.73	28015774.72	402746967.3	69183741.45	6.21E+03	5.90E+07
Fluorene	0.7	1.49E+07	10395.50402	130617.6873	17586.66988	10272450.73	28015774.72	9225958.521	1355151.845	6.18E+03	1.18E+06
Heptachlor	0.7	8.29E+02	0.576950473	5.864587396	0.789621717	571.8683911	1559.641067	287.2462981	41.20118606	3.12E-01	3.60E+01
Hexachlorobenzene	0.7	3.99E+04	41.58201607	293.5228927	39.52060647	27534.40402	75093.82913	7573.968212	1079.549996	1.86E+01	9.45E+02
Hexachlorobutadiene	0.7	2.42E+05	51.97752009	366.9036159	49.40075809	166971.45	455376.6818	245.6264135	34.94343321	1.33E+01	3.06E+01
Hexachlorocyclohexane, alpha	0.7	5.93E+02	0.413221285	5.658754468	0.761907892	409.4860084	1116.780023	857.2187637	200.007067	2.55E-01	1.62E+02
Hexachlorocyclohexane, beta	0.7	2.07E+03	1.442376182	18.53046712	2.494985287	1429.670978	3899.102667	6392.808819	4373.019621	8.70E-01	2.60E+03
Hexachlorocyclohexane, delta	0.7	2.07E+03	1.442376182	10.18157534	1.370871037	1429.670978	3899.102667	13167.09342	2421.697026	6.57E-01	2.05E+03
Hexachlorocyclohexane, gamma	0.7	1.49E+04	2.066106424	28.29377234	3.80953946	10272.45073	28015.77472	24489.34301	7458.590699	1.28E+00	5.72E+03
Hexachlorocyclopentadiene	0.7	2.13E+04	1559.325603	11007.10848	1482.022743	14685.01547	40050.0422	144.017044	20.49239246	1.75E+01	1.79E+01
Hexachloroethane	0.7	1.33E+06	927.7987336	6549.229543	881.8035319	917813.4672	2503127.638	48744.78423	6980.679908	3.95E+02	6.11E+03
Indeno-1,2,3-cd-pyrene	0.7	5.63E+02	112.0115558	1407.40558	189.4963679	388.3056977	1059.015539	5825820.217	4651626.567	4.95E+01	2.59E+06
Isodrin	0.7	2.19E+01	0.015333368	0.108236567	0.014573224	15.10862169	41.20533188	393.8828008	56.06451849	6.98E-03	4.91E+01
Isophorone	0.7	2.45E+06	13644.09902	96312.19917	12967.699	1690894.811	4611531.302	43894.96177	7261.394204	3.10E+03	6.23E+03
Lead (inorganic)	0.7	1.34E+06	935.5953616	1981.279526	266.7640937	924873.5708	2522382.466	#VALUE!	#VALUE!	1.88E+02	
Manganese	0.7	7.47E+06	5197.752009	4402.843391	592.809097	5153875.623	14056024.43	#VALUE!	#VALUE!	4.75E+02	
Mercury	0.7	5.58E+05	285.8763605	282.5157842	38.03858373	384775.6459	1049388.125	2797.541705	398.0359116	2.76E+01	3.48E+02
Methyl naphthalene, 1-	0.7	2.61E+07	18192.13203	228580.9527	30776.67229	18003264.16	49099811.36	470799.9027	67158.17533	9.18E+03	5.88E+04
Methylene chloride	0.7	3.20E+08	1559.325603	20913.50611	2815.843211	220628237.3	601713374.5	7439.317625	1058.829258	4.71E+02	9.27E+02
Methylnaphthalene, 2-	0.7	1.53E+06	1039.550402	13061.76873	1758.666988	1059015.539	2888224.197	46372.27615	6613.04752	5.61E+02	5.79E+03
Naphthalene	0.7	1.47E+06	25988.76004	326544.2181	43966.6747	1016654.917	2772695.23	15780.7852	2250.592494	1.74E+03	1.97E+03
Nickel	0.7	5.17E+06	1299.438002	733.8072318	98.80151617	3565352.315	3331.085241	#VALUE!	#VALUE!	7.97E+01	
Nitroaniline, 2-	0.7	2.61E+05	77.96628013	550.3554238	74.10113713	180032.6416	490998.1136	17847.88249	6584.374872	3.53E+01	4.81E+03
Nitroaniline, 3-	0.7	1.12E+05	618.5324891	4366.153029	587.8690212	77308.13435	210840.3664	11564.77486	9983.40663	2.66E+02	5.36E+03
Nitroaniline, 4-	0.7	1.78E+05	618.5324891	4366.153029	587.8690212	122492.7974	334071.2655	8350.120384	7333.773446	2.62E+02	3.90E+03
Nitrophenol, 2-	0.7	4.26E+05	519.7752009	3669.036159	494.0075809	294053.3147	801963.5855	20710.42338	7535.117951	2.27E+02	5.52E+03
Nitrophenol, 4-	0.7	1.43E+05	519.7752009	7338.072318	988.0151617	98841.45031	269567.5918	4376.656374	3844.342498	2.79E+02	2.05E+03
Nitrosodi-n-propylamine, n-	0.7	5.32E+02	1.858196343	6.558402134	0.883038551	367.1253869	1001.251055	15.37960661	3.432773308	4.58E-01	2.81E+00
Nitrosodiphenylamine	0.7	3.81E+06	2650.853525	9356.042205	1259.719331	2626358.537	7162796.01	1118775.085	216947.3811	7.79E+02	1.82E+05
Parathion	0.7	5.32E+03	1559.325603	11007.10848	1482.022743	3671.253869	10012.51055	77183.49826	40902.04831	4.99E+02	2.67E+04
Pentachlorophenol	0.7	1.56E+06	77.96628013	836.5402442	112.6337284	1073135.746	2926733.853	1508588.326	680388.3493	4.37E+01	4.69E+05
Phenanthrene	0.7	1.12E+07	7796.628013	97963.26544	13190.00241	7730813.435	21084036.64	7020236.861	1015149.785	4.64E+03	8.87E+05
Phenol	0.7	1.27E+09	883617.8415	11227250.65	1511663.197	875452845.6	2387598670	48079862.96	15938682.51	5.08E+05	1.20E+07
Polybrominated biphenyls (solid)	0.7	5.32E+04	2.598876004	34.12203628	4.594270502	36712.53869	100125.1055	3.61524E-24	#VALUE!	3.62E-24	
Propylbenzene, n-	0.7	4.26E+07	10395.50402	117409.1571	15808.24259	29405331.47	80196358.55	14387.012	2046.866293	1.38E+03	1.79E+03
Pyrene	0.7	1.12E+07	7796.628013	97963.26544	13190.00241	7730813.435	21084036.64	218292225.3	37952930.32	4.66E+03	3.23E+07
Selenium	0.7	6.70E+06	4677.976808	33021.32543	4446.068228	4624367.854	12611912.33	#VALUE!	#VALUE!	2.13E+03	
Simazine	0.7	3.11E+04	21.70061464	153.1822596	20.6248165	21427.41441	58438.40293	25902.51023	22337.72305	9.87E+00	1.20E+04
Styrene	0.7	2.77E+07	2598.876004	29352.28927	3952.060647	19097580.22	52084309.69	21448.9571	3052.450207	9.56E+02	2.67E+03
Tetrachloroethane, 1,1,1,2-	0.7	1.08E+07	7536.740413	85121.63888	11460.97588	7448409.291	20313843.52	12013.1765	1709.71098	1.11E+03	1.50E+03
Tetrachloroethane, 1,1,2,2-	0.7	1.08E+07	7536.740413	74481.43402	10028.35389	7448409.291	20313843.52	7188.122992	1025.488742	7.35E+02	8.97E+02
Tetrachloroethylene	0.7	1.23E+08	18192.13203	256832.5311	34580.53066	84721243.12	231057935.8	3396.69034	483.2295934	4.08E+02	4.23E+02
Thallium	0.7	2.61E+04	18.19213203	256.8325311	34.58053066	18003.26416	49099.81136	#VALUE!	#VALUE!	1.14E+01	
TPH - Aliph >C06-C08	0.7	1.96E+09	1299438.002	14676144.64	1976030.323	1352009838	3687299559	17428.06222	2479.259436	2.16E+03	2.17E+03
TPH - Aliph >C08-C10	0.7	1.06E+08	25988.76004	293522.8927	39520.60647	73425077.37	200250211	3713.697751	528.2983912	4.49E+02	4.63E+02
TPH - Aliph >C10-C12	0.7	1.06E+08	25988.76004	183451.8079	24700.37904	73425077.37	200250211	18009.01385	2561.902437	1.89E+03	2.24E+03
TPH - Aliph >C12-C16	0.7	1.06E+08	25988.76004	183451.8079	24700.37904	73425077.37	200250211	83491.87089	11877.27301	5.54E+03	1.04E+04
TPH - Aliph >C16-C21	0.7	1.06E+08	519775.2009	3669036.159	494007.5809	73425077.37	200250211	1114768.286	158583.1797	8.73E+04	1.39E+05
TPH - Aliph >C21-C34	0.7	1.06E+08	519775.2009	3669036.159	494007.5809	73425077.37	200250211	752542.7638	107054.1973	6.70E+04	9.37E+04
TPH - Arom >C05-C07	0.7	4.26E+07	51977.52009	366903.6159	49400.75809	29405331.47	80196358.55	1457.688364	207.4014253	1.80E+02	1.82E+02
TPH - Arom >C07-C08	0.7	4.26E+07	51977.52009	711793.0148	95837.47069	29405331.47	80196358.55	3382.921246	481.3121851	4.16E+02	4.21E+02
TPH - Arom >C08-C10	0.7	2.13E+07	10395.50402	117409.1571	15808.24259	14685015.47	40050042.2	5808.163419	826.3184389	6.45E+02	7.23E+02
TPH - Arom >C10-C12	0.7	2.13E+07	10395.50402	73380.72318	9880.151617	14685015.47	40050042.2	32371.08571	4606.360662	2.18E+03	4.03E+03
TPH - Arom >C12-C16	0.7	2.13E+07	10395.50402	73380.72318	9880.151617	14685015.47	40050042.2	169748.0945	24166.59821	3.87E+03	2.12E+04
TPH - Arom >C16-C21	0.7	2.13E+07	7796.628013	97963.26544	13190.00241	14685015.47	40050042.2	2063000.875	294357.5897	4.58E+03	2.58E+05
TPH - Arom >C21-C35	0.7	2.13E+07	7796.628013	97963.26544	13190.00241	14685015.47	40050042.2	308092301.3	46446377.13	4.66E+03	4.04E+07
Trichlorobenzene, 1,2,3-	0.7	5.32E+06	2001.134523	14125.78921	1901.929186	3671253.869	10012510.55	163681.8624	23315.15544	8.73E+02	2.04E+04
Trichlorobenzene, 1,2,4-	0.7	5.32E+06	2001.134523	27404.03107	3689.742622	3671253.869	10012510.55	40798.02062	5814.516509	9.96E+02	5.09E+03
Trichloroethane, 1,1,1-	0.7	1.10E+09	779662.8013	9906397.629	1333820.468	758961136.3	2069894008	22562.48585	3209.860885	2.79E+03	2.81E+03
Trichloroethane, 1,1,2-	0.7	3.33E+05	227.4016504	2600.429378	350.1278729	229806.372	626744.6508	56.95235115	8.111295622	6.73E+00	7.10E+00
Trichloroethylene	0.7	9.67E+06	6757.077612	95394.94013	12844.1971	6671797.896	18195812.44	271.4748535	38.62319172	3.35E+01	3.38E+01
Trichlorofluoromethane	0.7	7.47E+07	77966.28013	253163.495	34086.52308	51538756.23	140560244.3	438.7826989	62.42038701	5.45E+01	5.46E+01
Trichlorophenol, 2,4,5-	0.7	4.60E+06	77.96628013	550.3554238	74.10113713	3177046.617	8664672.592	1364252.427	289223.5813	3.55E+01	2.39E+05
Trichlorophenol, 2,4,6-	0.7	2.49E+06	8667.251475	61181.17795	8237.576411	1715605.173	4678923.2	220902.8205	38799.88019	3.51E+03	3.30E+04
Trichloropropane, 1,2,3-	0.7	9.31E+03	6.497190011	73.38072318	9.880151617	6424.69427	17521.89346	27.02731743	3.855602106	1.77E+00	3.37E+00
Trimethylbenzene, 1,2,3-	0.7	6.40E+05	12994.38002	177948.2537	23959.36767	441256.4746	1203426.749	350.2325284	49.8392073	4.34E+01	4.36E+01
Trimethylbenzene, 1,2,4-	0.7	6.40E+05	12994.38002	146761.4464	19760.30323	441256.4746	1203426.749	431.7141174	61.42963279	5.34E+01	5.38E+01

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CO-OPERATIVE ACADEMY, MANCHESTER

REMEDIATION STRATEGY

- Final
- July 2009

CO-OPERATIVE ACADEMY, MANCHESTER

REMEDIATION STRATEGY

- Final
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SINCLAIR KNIGHT MERZ

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1. Introduction

Sinclair Knight Merz was commissioned by Laing O'Rourke Northern Limited to prepare a remediation strategy for the site of the proposed Co-operative Academy (the 'Site'). SKM previously undertook a Phase II Geo-Environmental Investigation for the site in November 2008 (Ref. NE12105).

The report highlighted that remedial measures would be required at the site as part of the re-development. This strategy provides a summary of environmental information collated for the site, details of the remedial measures and validation proposals. The report should be read in conjunction with the SKM site investigation report.

The site forms part of the Manchester Building Schools for the Future (BSF) scheme. The scope of this remediation strategy requires appraisal and approval from Manchester City Council.

This report has been produced for Laing O'Rourke Northern Ltd. We confirm to all parties that we have exercised all the reasonable skill and care normally expected of environmental consultants in undertaking this commission.

1.1. Objectives

The remediation works are intended to ensure that the site is commensurate for its proposed end use post development. Post remediation any contamination remaining on site will not:

- Present a significant risk of significant harm to receptors.
- Is not causing or likely to cause significant pollution to controlled waters.

Specific objectives are as follows:

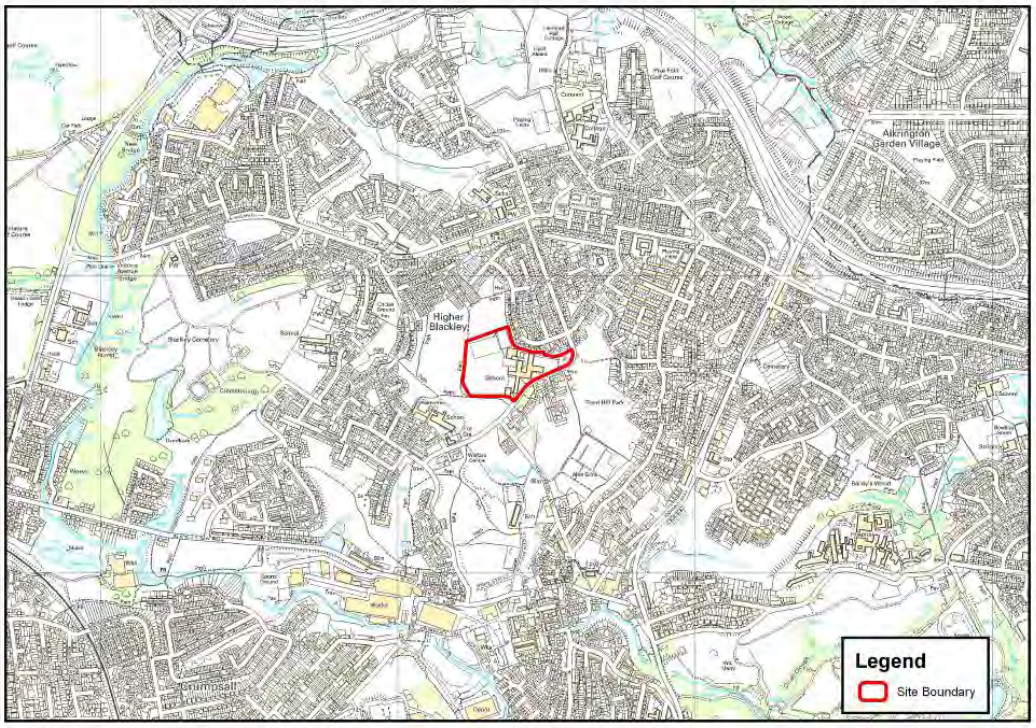
- Prevent receptors from ingestion of Made Ground deposits, dermal contact or inhalation of contaminant vapours.
- Protect receptors against ground gases.
- Protection of services from vapours and leachates.
- Minimise the creation of fugitive dust and control surface water run-off during construction. This will be dealt with as part of the contractor's construction management plans.

2. Background and Development Proposals

2.1. Site Description

The site is located approximately 6km north of Manchester City centre at National Grid Reference (NGR) 385400, 403700 and occupies an area of approximately 5 hectares. The site location is shown in **Figure 2-1** below.

- **Figure 2-1 - Site Location Plan**



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The site is bound by:

- Residential housing and recreational land to the north.
- Plant Hill Road, beyond which lies residential housing and Plant Hill Park to the east.
- Recreational land, beyond which lies residential housing to the west.
- Plant Hill Road (beyond which lies residential housing) and recreational land to the south.

Figure 2-2 shows the existing layout of the site, which is currently operating as Plant Hill High School. Existing playing fields are currently located to the west of the main buildings, with a Multi Use Games Area (MUGA) and tennis hard courts located to the north.

- **Figure 2-2 - Existing Site Layout**



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2.2. Development Proposals

Development proposals for the site comprise the construction of a new 2-3 storey school building within the central area of the site and subsequent demolition of the existing school building. A further new inclusion unit, to be located adjacent to the northeast corner of the new school building is also proposed, however this does not fall within the current development proposals and is therefore outside the SKM scope of works. It is understood that the sports hall and adult education centre are to be retained. The new school building will include flexible learning zones, standard classrooms for various departments, catering facilities, an assembly hall, administration and a post-16 facility amongst other accommodation required by Manchester City Council's brief. Provision has also been made for three new sports pitches, car parking areas and soft landscaping.

The proposed development layout is presented in **Appendix A**.

3. Site Condition Summary

A summary of the key findings of the SKM Phase II Geo-Environmental Investigation are highlighted below:

3.1. Ground conditions

The ground conditions at the site are in summary:

- Within the western area of the site, ground conditions were found to consist of Made Ground comprising landfill type materials in excess of 5.0m depth. Made Ground up to 7.5m in depth had previously been encountered during the GEA investigation undertaken in February 2007. Elsewhere across the site, the Made Ground was typically less than 2m in thickness. Glacial deposits comprising very soft to very stiff slightly sandy gravelly clays and silts interbedded with horizons of loose to dense slightly gravelly sands were proved to a maximum depth of 20.45m bgl.
- Groundwater observations during the site investigation indicated that groundwater beneath the site is likely to exist as perched, discontinuous systems within the Glacial drift. Groundwater is also anticipated to lie at depth within the Sherwood Sandstone although it is considered unlikely given the thickness of the drift deposits that a hydraulic link exists.

3.2. Soil and Groundwater Contamination

The findings of the soil assessment are summarised below:

- Initial screening of the soil chemical testing results recorded elevated soil contaminant concentrations for heavy metals, Polycyclic Aromatic Hydrocarbons (PAH's), Volatile and Semi-volatile Organic Compounds (VOC's and SVOC's) within the former landfill area. Elevated concentrations of arsenic, PAH and SVOC's were recorded within the proposed location of the new school building and elsewhere on site.
- Given the findings of the initial screening exercise, a detailed site specific risk assessment was undertaken. The risk assessment recorded no exceedances of the site specific target levels and as such there was not considered to be a risk to site end users in the location of the former landfill (proposed playing fields) or on the remainder of the site. However given the nature of the fill encountered and the requirement for the pitches to fulfil Sports England standards it was recommended that a minimal thickness of clean cover and a geo-textile should be incorporated across the playing field to minimise soil mixing.
- Soil leachate and groundwater analysis undertaken as part of the chemical analysis identified a limited number of exceedances of the relevant guideline thresholds. Risks to controlled waters are considered to be low.

3.3. Waste Classification

A full waste assessment has not been undertaken, however the limited analysis indicates materials from outside the landfill area are likely to be classed as either inert or non-hazardous.

It is likely that arisings from the former landfill area would also be classified as non-hazardous, however further testing would be required in order to confirm this.

3.4. Risks to Landscaping, Buried Concrete and Services

3.4.1. Landscaping

Elevated concentrations of phytotoxic contaminants were recorded in the area of the proposed sport pitches. In order for the pitches to conform with Sports England standards it is understood that 300mm of clean material will be imported for construction of the pitches.

Elevated levels of phytotoxic contaminants were not recorded within the remaining areas of proposed soft landscaping.

3.4.2. Concrete

Based on the pH and sulphate soil and groundwater concentrations recorded, Design Sulphate Class and Aggressive Chemical Environment for Concrete (ACEC) Classification of DS-1 and AC-1 were considered to be appropriate for proposed buried concrete outside the area of the landfill.

3.4.3. Services

Screening of the chemical analysis results according to United Utilities Contaminated Land Pipe Material Selection criteria recorded exceedances PAH against the action level of 5.0 mg/kg.

It was recommended that appropriate health and safety procedures should be enforced during the installation of pipes, and suitable materials for pipes that are not affected by the contaminant should be selected, for example ductile iron or copper. It should be noted that should ductile iron be selected all joints must be wrapped to avoid the rubber gasket being affected by elevated concentrations of PAH.

3.5. Ground Gas

Elevated levels of methane (up to 19.0%) and carbon dioxide (up to 12.0%) along with depressed levels of oxygen and high gas emission rates have been detected at the site. The ground gas composition presents potential liabilities to onsite receptors, including the proposed structures and

site users. The source of the gas is considered to be primarily associated with the land filled materials beneath the western part of the site, although Made Ground deposits may also present a subsidiary source.

The ground gas assessment concluded that in accordance with CIRIA guidance, Characteristic Situation 4 gas protection measures would be required for the new buildings at the site. The implications of this are discussed further in **Section 4.7**.

4. Remediation Strategy and Validation

4.1. Introduction

The following section details the works required to ensure that the site is in a condition commensurate with the proposed educational facility end use.

It was recommended that due to the nature of the fill encountered within the area of the former landfill and the requirement for the sports pitches, a capping layer of clean material should be installed across the area of the proposed sports pitches.

4.2. Regulatory Consultations

The remediation strategy will require approval from with Manchester City Council to confirm that the remediation is acceptable from a regulatory view point.

4.3. Earthworks

The earthworks will involve a three stage process with respect to the site development, comprising the following:

- A topsoil strip across the whole site area,
- A cut and fill operation to achieve the desired formation level,
- Emplacement of cover materials within areas of soft landscaping and turfed sports pitches.

4.3.1. Topsoil Strip and Re-use

It is understood that a topsoil site strip has been undertaken over all the areas proposed for cutting and filling in order to expose the underlying substrata. The following final volumes are anticipated for the topsoil strip:

Phase I (Under Building)

- *555m^3 based upon a 150mm strip*

Phase IA (Sports Pitch)

- *675m^3 based upon a 150mm strip*

Car Park

- *300m^3 based upon a 150mm strip*

Other Landscaping

- *1415m^3 based upon a 150mm strip*

It is understood that the excavated topsoil material is to be re-used on both the sports pitches and other areas of soft landscaping, as summarised below.

Pitch

- *1,350m^3 based upon a depth of 300mm*

Other Landscaping

- *1,415m^3 based upon a depth of 150mm*

4.3.2. Cut and Fill Operations and Reuse of Materials

Cut and fill activities are required to take place at the site for the purposes of altering ground level to the design formation level. A summary of the proposed cut and fill volumes required to achieve the formation level available at the time of writing are outlined below. It should be noted that the volumes outlined are approximate and subject to variations within the earthworks program. The volumes quoted are post topsoil strip and are therefore not inclusive of the volumes outlined above in **Section 4.3.1**.

Phase I – Building and Car Park Area

- *Cut = 3,242m^3*
- *Fill = 2,004m^3*
- ***Net balance = net cut–net fill = 3,242m^3 – 2,004m^3 = 1,238m^3***

Phase IA – Landscaped Areas

- *Cut = 20m^3*
- *Fill = 3,125m^3*
- ***Net balance = net cut–net fill = 20m^3- 3,125m^3 = -3,105m^3***

It is understood that materials generated as part of the cut operations are to be reused to form the capping layer across the sports pitch. In addition, pile arisings and materials generated through the excavation of foundations and drainage service runs are also to be reused across the site. A summary of the proposed reuse of materials is outlined in **Table 4-1** below:

- **Table 4-1 Proposals for material reuse**

Element	Volume (m^3)	Area to be reused
Building footprint material	*1238*	*Sports pitch*
Piling arising	*530*	*Sports pitch*
Foundations	*800*	*Bunding on hard play area*
Drainage	*250*	*Bunding on hard play area*

The materials to be re-used on site will require chemical testing for suitability for re-use as outlined in **Section 4.13**.

4.4. Cover System for Sports Pitches

Site investigation works undertaken within the area of the former landfill encountered fill containing significant quantities of anthropogenic materials including glass, metal and plastic. It was considered by SKM that due to the nature of the fill materials and the requirement for the sports pitches to fulfil Sports England standards, a capping layer comprising a minimum 300mm of clean material and a geo-textile membrane should be installed across the area of the proposed sports pitches.

It is understood that the cut and fill operations are to result in the emplacement of 300mm of inert material (re-used clay) across the sports pitches. This will be further capped with 250mm of topsoil and 50mm of topsoil mixed with 50% sand, providing a complete cover thickness of 600mm. It is considered that the clay capping will act to provide sufficient protection against the possibility of soil mixing between the land filled materials and the topsoil, therefore negating the requirement for a geo-textile membrane.

The materials to be re-used as part of the construction of the capping layer to the sports pitches will require chemical testing and screening for suitability.

4.5. Disposal of surplus material off site

The cut and fill operations have been designed as such to negate the requirement for off-site disposal of materials and it is therefore anticipated that minimal volumes of material will require removal from the site as part of the earthworks. It has also been assumed that there will be no provision for removal of arisings originating from the former landfill area.

A review of the chemical analysis results (including limited WAC testing) completed on samples taken from the site indicates that materials from outside the landfill area would generally be categorised as either non-hazardous or inert. Should any materials require removal from the site further specific Waste Acceptance Criteria (WAC) testing will be required to determine its waste classification and it would be advisable to undertake this prior to excavation of materials.

4.6. Temporary storage of materials on site

It is likely the earthworks will necessitate the temporary on site creation of stockpiles for various types / grades of material. Storage should take place in pre-designated areas of the site, the size of

such areas should be carefully considered such as to ensure that they are large enough to be able to accept the predicted volumes of materials expected to be kept there. The various stockpiles should be positioned at least 10m from each other. This is to ensure that mixing of site materials and imported materials does not occur. It is also recommended that geo-textile membranes are utilised to prevent mixing of materials.

4.7. Ground Gas

Ground gases have been identified at elevated levels at the site and gas mitigation measures will be required for the proposed new buildings as detailed below.

In accordance with CIRIA R149, Characteristic Situation 4 for commercial properties requires 3 to 4 of the following precautions with respect to ground gas:

- Reinforced concrete cast in situ floor slab (suspended, non suspended or raft),
- Proprietary gas membrane and passively ventilated or positively pressurised underfloor sub-space with monitoring facility,
- All joints and penetrations sealed,
- In ground venting wells or barriers.

It is understood that the proposed gas protection solution comprises an Alderburgh geo-composite venting blanket (Geo Void 26/60) with ground level vents at up to 8m centres. A lapped and welded Tuflex geotextile membrane will be incorporated beneath the suspended floor slab.

Details of the proposed gas protection measures are included in **Appendix B**. The final specification of the gas protection measures installed within the new structures will also be included within the remediation validation report.

4.8. Groundwater Treatment or Disposal

The main groundwater body is considered to be the sandstone aquifer at depth and this will not be affected by the earthworks. Superficial groundwater, potentially containing elevated levels of contaminants, was encountered within the Glacial deposits during the site investigation works. Given the proposed depth of the cut operations, it is considered unlikely that significant amounts of groundwater would be encountered during the bulk earthworks. It is understood however that four lift pits to be formed (to a depth of 2m below the finished floor level) within the building footprint, which may potentially encounter groundwater during excavation.

In the event that significant amounts of groundwater are encountered during the course of excavation works, water should be pumped out and temporarily stored in tanks on site. The water

will be sampled and analysed in order to determine appropriate disposal options. The contractor will need to consult with United Utilities prior to commencement in order to obtain a trade effluent consent. Providing the results of the chemical analysis meets the conditions of the consent the groundwater will be discharged to sewer at the appropriate discharge rate. If analysis demonstrates that the groundwater is not suitable for discharge to sewer then the groundwater will be tankered from site to an appropriate disposal facility. The results of any analysis and disposal outcomes will be confirmed and presented in the validation report.

4.9. Services

Contaminants including PAH's and phenols can have a deleterious effect on plastic pipes, as used for water and gas, as well as potentially migrating through the plastic and affecting the pipe contents.

Service channels associated with the new building are likely to be formed within natural strata and as such are unlikely to require specific protection measures given that contamination has not been recorded within natural materials. Clean backfill material will however still be required within such service channel excavations.

Where service channels are required to be formed within Made Ground materials, suitable protection will be provided. Any materials used as infill within service corridors will need to meet the United Utilities Contaminated Land Pipe Material Selection criteria values as well as the site specific target levels (SSTL's). The design measures should be agreed with the water supplier. It is anticipated that appropriate measures should include the installation of non-plastic drainage pipes (i.e. clay or concrete) with nitrile seals. Manhole chambers will require construction from sulphate resistant concrete as per recommendations provided within the Phase II site investigation report. Potable water pipes should be constructed of ductile iron or copper with all joints wrapped and suitably protected.

Consideration has also been given to materials used in construction of underground water storage tanks and associated pipework to be used as part of any grey water system, irrigation, or storm drainage (attenuation tanks). Plastic pipework is also unlikely to be suitable and tanks would be required to be constructed of HDPE plastic and protected by a suitable impermeable membrane.

4.10. Environmental Site Management

The works should be undertaken in accordance with BRE best practice guidance, which should include the following measures:

- Vehicles transporting materials to and from the site should be enclosed or sheeted.
- Movement of vehicles should be minimised where practicable.

- A wheel wash facility should be provided for heavy plant such as low loaders and haulage wagons entering and leaving the site to minimise the spread of unacceptable amounts of contaminated site material onto adjacent roadways.
- Local roads should be regularly cleaned.
- Dust suppression techniques such as damping down access roads and stockpiles with water should be considered during prolonged periods of dry weather to prevent excessive spread of dust.
- Except for the need to work at night in order to comply with specified constraints, normal working hours should be adhered to minimise potential noise disturbance to nearby residents.

4.11. Health & Safety

Construction workers should be made aware of the potential risks and suitable health and safety precautions should be adhered to during the earthworks and the remediation work required will be subject to the Construction (Design & Management) Regulations (2007). The Contractor will therefore develop a Health & Safety Plan for the works and shall comply with it throughout.

It is recommended that as a minimum the following precautions should be included during earthworks and remedial works to safeguard all site employees and the public:

- Protective clothing should be worn by site personnel, which should include boots, safety helmets, and gloves as a minimum. Provision of disposable gloves, disposable overalls, dust masks, eye protection and chemical resistant gloves for use where contact with potentially hazardous substances is predictable.
- Adequate ventilation must be provided for works in confined spaces and gas detection equipment should be made available for monitoring purposes to ensure that concentrations of hazardous gases including carbon dioxide, methane or hydrocarbon vapours do not accumulate in confined spaces.
- Clean areas of the site should be designated for eating and drinking to avoid hand / mouth contact.
- First aid, washing and toilet facilities should be provided.
- Unauthorised personnel should be prevented from gaining access to the site.

4.12. Validation

A validation exercise will be required to be undertaken as a means of assurance that the level of risk posed by the developed site will be minimal in the foreseeable future, and to confirm that the remedial measures discussed herewith are completed satisfactorily.

Validatory measures will also be required by the regulators to demonstrate that the site is in a condition commensurate with the proposed end use post development and consultation with regulatory authorities will be required to gain approval for the remedial strategy outlined in this report.

The validation exercise will include the following:

- Chemical testing of all site won materials re-used as part of the capping layer construction and within soft landscaped areas and comparison of results with set criteria;
- Chemical testing of all imported materials including; 6F2 to be used for the piling mat construction, sand for the sports pitches and service trench bedding materials;
- Comparison of pre and post cover system survey drawings to confirm thickness of cover systems installed;
- Construction quality assurance of engineered gas protection systems installed;
- Presentation of any waste management records from the site such that any exported materials or groundwater have been accounted for;
- Visual inspections of potable water and drainage service installations and chemical screening of materials laid within service trenches.

4.13. Confirmatory Testing

All recycled materials to be laid at formation level post completion of the site re-grade will require confirmatory testing to demonstrate their suitability for use and will need to meet the Site Specific Target Level's (SSTL's) summarised in **Section 4.13.2** of this report. Materials requiring testing are anticipated to include the following:

- Topsoil for the soft landscaping and turfed sports pitches,
- Natural clay materials to be used as part of the cover system for the sports pitches,
- Imported materials.

The proposed testing regime for materials specified for use at the site is as follows:

- first generation materials to be tested at a rate of one sample per 1,000m^3
- second generation materials to be tested at a rate of one sample per 250m^3

The thickness of the capping materials across the sports pitch will also be confirmed by comparing pre and post placement survey levels. Topographical survey drawings will therefore be undertaken for the site both after the earthworks operations and site re-grade (prior to emplacement of the cover system) and post placement of the cover system. SKM will also provide a limited watching brief during the earthworks to ensure cover materials are laid to the appropriate specification.

4.13.1. Contaminants of Concern

All materials to be re-used at the site will be tested for the following range of contaminants as a minimum:

- Heavy metals including: arsenic, cadmium, chromium, lead, nickel, mercury and zinc,
- Total cyanide, sulphate and pH,
- Phenols,
- Petroleum Hydrocarbons,
- Polycyclic Aromatic Hydrocarbons (PAHs),
- Asbestos.

4.13.2. Site Specific Target Levels

The site specific target levels (SSTLs) are based on the results of the detailed human health risk assessment carried out as part of the Phase II site investigation. Please refer to this report for details of the input parameters used to generate the SSTL's.

Site specific target levels are presented in **Table 4-1** below:

- **Table 4-1 Summary of Site Specific Target Levels**

Analyte	SSTL (mg/kg)
Arsenic	227
Boron	13,800
Cadmium	25
Chromium (Total)	64
Copper	4,450
Lead	450
Mercury	27.6
Nickel	79.7
Selenium	2,130
Zinc	7,670
Free Cyanide	1,590
TPH Aliphatics C6-C8	2,160
TPH Aliphatics C8-C10	449
TPH Aliphatics C10-C12	1,890
TPH Aliphatics C12-C16	5,540
TPH Aliphatics C16-C21	87,300
TPH Aliphatics C21-C35	67,000
TPH Aromatics C5-C7	180
TPH Aromatics C7-C8	416

Analyte	SSTL (mg/kg)
TPH Aromatics C8-C10	645
TPH Aromatics C10-C12	2,180
TPH Aromatics C12-C16	3,870
TPH Aromatics C16-C21	4,580
TPH Aromatics C21-C35	4,660
Benzene	0.067
Ethyl benzene	70.7
Toluene	15.2
Xylene	67.6
Acenapthene	9,070
Acenapthylene	9,210
Anthracene	46,500
Benz(a)anthracene	79
Benzo(a)pyrene	11.5
Benzo(b)fluoranthene	8.14
Benzo(k)fluoranthene	115
Benzo(ghi)perylene	4,660
Chrysene	115
Dibenzo(ah)anthracene	2.30
Fluoranthene	6,210
Indeno(123cd)pyrene	49.5
Naphthalene	1,740
Phenanthrene	4,640
Pyrene	4,660

Appendix A – Development Proposals

Basketball court 15 x 28m
Basketball court 15 x 28m
Basketball court 15 x 28m
Large football and hockey 91m x 55m
88.55 with capping layer
long jump
existing Sports Hall to be retained
88.65 with capping layer
Cricket square
87.250
for external soft levels see PLL's landscaping drawings
87.25 with capping layer
88.05 with caping layer
87.10 with capping layer
Large Football and hockey 90m x 50m
87.40 with capping layer
86.65 with capping layer
87.15 with capping layer
Path
88.9 0
88.400
87.76
path
maximum gradient of 1:20
87.800
87.250
gate
87.400
gate
1:40
proposed new main school building footprint
87.250
87.250
87.400
ground floor FFL
87.250
87.250
1:40
87.400
87.400
87.250
1:40
1:60 Crossfall
fire vehicle route
gate
gate
87.250
retaining wall approx 1100mm high
86.300
energy centre
service yard
1:20
1:60
subestation
re-cycling bins in lockable enclosure
maximum gradient of 1:20
gate
gate
gate
86.000
85.550
85.300
84.750
84.500
proposed main entrance
PLANT HILL ROAD
bus drop-off point
86.90
accessible car parking
87.500
87.000
90.45 with capping layer
90.20 with capping layer
89.65 with capping layer
area for potential car park expansion
existing Inclusion Unit to be demolished
existing registered public right of way, no.27 to be extinguished
existing Adult Education mobile; retained in new scheme
existing school buildings to be demolished
90.00 with capping layer
for external soft levels see PLL's landscaping drawings
89.65 [with capping layer]
89.30 with capping layer
constant 'straight line' level at fall required to link c/ 250 to back of pavement
87.500
to tie in with existing back of kerb line
gate
LONGTON ROAD
TWEEDALE AVE
PLANT HILL ROAD
JURBY AVENUE
Path

NB
For remainder of levels generated from cut & fill exercise and vehicular paving levels see SKM drawing 5008. For more accurate hard & soft landscaping layout and soft landscaping levels, refer to PLL drawing ref. 6002.

North Point.

0 m 10 m 30 m

N	-	-	-	-
M	-	-	-	-
L	-	-	-	-
K	-	-	-	-
J	-	-	-	-
H	-	-	-	-
G	-	-	-	-
F	-	-	-	-
E	14.08.08	CRITICAL HARD LANDSCAPE LEVELS AND GRADIENTS ADDED	RP	-
D	28.07.08	Planning submission	AA	IJ
C	26.06.08	STAGE C 2008 CPP ISSUE	RP	-
B	17.06.08	cycle parking added, service yard & parking amended, pedestrian refuge and cycle footway added	RP	-
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Rev.	Date	Revision Note	By	Check

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Job title
The Co-operative Academy of Manchester

Drawing title
Proposed Site Plan

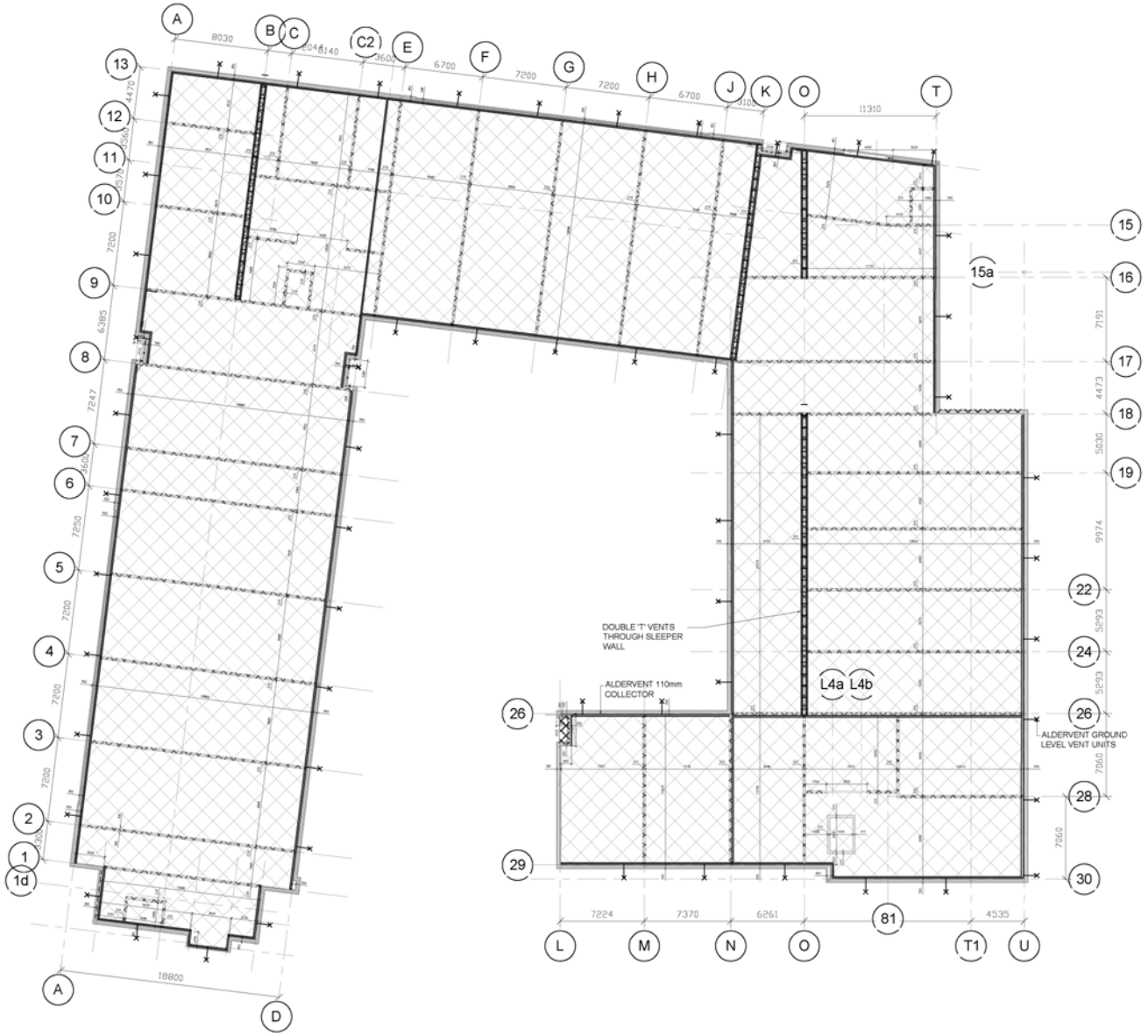
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FOR INFORMATION	-	-

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Appendix B – Gas Protection Measures



Notes :-

1. Gas venting layout overlaid onto SKM, Drawing Ref: PH_SKM_DR_G_14_AZ_00
2. For details, not relating to gas venting layout refer to SKM

Legend

Denotes Geo-void 26/60 laid on Type 1, well compacted single-sized stone. Underneath building throughout to engineers requirements.

INFORMATION ISSUE

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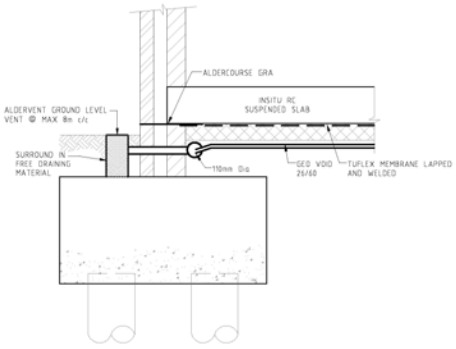
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PROJECT
THE CO-OPERATIVE ACADEMY OF MANCHESTER

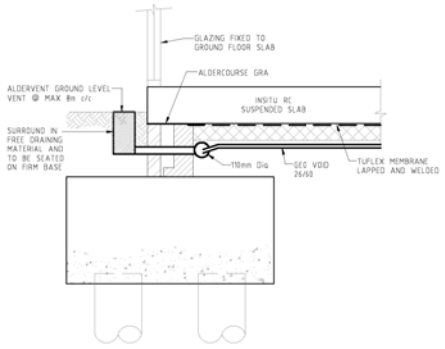
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TITLE
GAS VENT LAYOUT

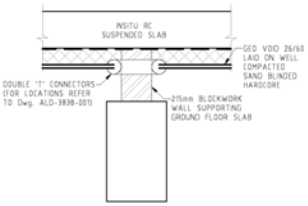
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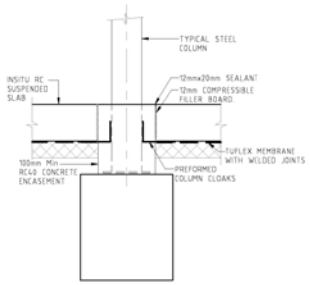
TYPICAL GAS PROTECTION
EDGE DETAIL



TYPICAL GAS PROTECTION
EDGE DETAIL FOR INSITU
SUSPENDED GROUND FLOOR



TYPICAL GAS PROTECTION
EDGE DETAIL



TYPICAL GAS PROTECTION
AT COLUMN LOCATION

Notes :-

1. Gas venting sections based onto SKM sections
2. For details, not relating to gas venting sections refer to SKM

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PROJECT
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TITLE
GAS VENT SECTIONS

SCALE	DRAWING No	AMDT
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CO-OPERATIVE ACADEMY, MANCHESTER

VALIDATION REPORT

- Draft
- November 2013

CO-OPERATIVE ACADEMY, MANCHESTER

VALIDATION REPORT

- Draft
- November 2013

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1. Introduction

Sinclair Knight Merz was commissioned by Laing O'Rourke Northern Limited to undertake validation works and prepare a validation report for the site of the proposed Co-operative Academy, Manchester (the 'Site'). SKM previously undertook a Phase II Geo-Environmental Investigation for the site in November 2008 (Ref: NE12015) and subsequently produced a Remediation Strategy Report (Ref. NE12105) in April 2009.

The SKM Remediation Strategy report outlined the remedial and validatory measures required at the site as part of the re-development. This report details the remedial measures and validation works undertaken and includes relevant environmental information collated for the site, in order to demonstrate that the site is commensurate with the proposed end use post development.

The report should be read in conjunction with the SKM site investigation and remediation strategy reports.

The site forms part of the Manchester Building Schools for the Future (BSF) scheme. The findings of this validation report require appraisal and approval from Manchester City Council.

This report has been produced for Laing O'Rourke Northern Ltd. We confirm to all parties that we have exercised all the reasonable skill and care normally expected of environmental consultants in undertaking this commission.

1.1. Objectives

The remediation works were intended to ensure that the site is commensurate for its proposed end use post development. Post remediation any contamination remaining on site will not:

- Present a significant risk of significant harm to receptors.
- Is not causing or likely to cause significant pollution to controlled waters.

Specific objectives were as follows:

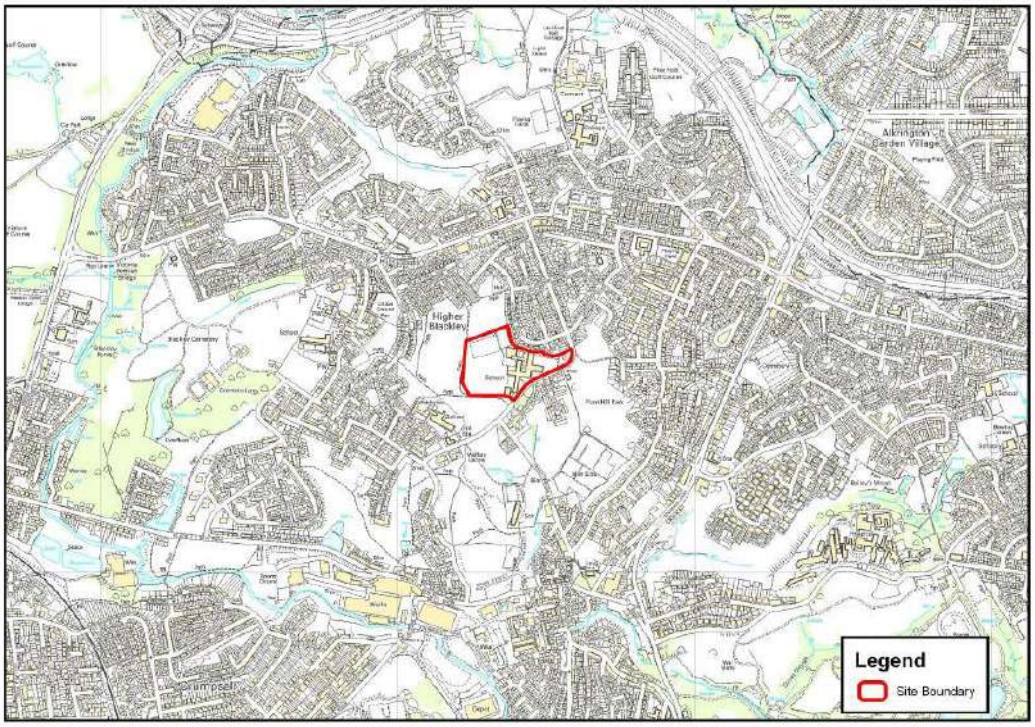
- Prevent receptors from ingestion of Made Ground deposits, dermal contact or inhalation of contaminant vapours.
- Protect receptors against ground gases.
- Protection of services from vapours and leachates.
- Minimise the creation of fugitive dust and control surface water run-off during construction. This will be dealt with as part of the contractor's construction management plans.

2. Background

2.1. Site Description

The site is located approximately 6km north of Manchester City centre at National Grid Reference (NGR) 385400, 403700 and occupies an area of approximately 5 hectares. The site location is shown in **Figure 2-1** below.

- **Figure 2-1 - Site Location Plan**



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The site is bound by:

- Residential housing and recreational land to the north.
- Plant Hill Road, beyond which lies residential housing and Plant Hill Park to the east.
- Recreational land, beyond which lies residential housing to the west.
- Plant Hill Road (beyond which lies residential housing) and recreational land to the south.

2.2. Development Overview

Phase 1 of the development scheme comprises the construction of a new 2/3 storey school building within the central area of the site. On completion of all internal works, the new school building will include flexible learning zones, standard classrooms for various departments, catering facilities, an assembly hall, administration and a post-16 facility amongst other accommodation required by Manchester City Council's brief. Phase 2 of the development comprises the demolition of existing school buildings and subsequent re-landscaping.

An additional new inclusion unit, located adjacent to the northeast corner of the new school has also been constructed.

The existing sports hall and adult education centre have been retained. To the west and north east of the school building, new grassed sports pitches have been developed and new areas of car parking and soft landscaping have also been created.

The as built layout of the school development site is presented in **Appendix A**.

2.3. Previous Works

The following works have previously been undertaken by SKM at the site:

- Phase II Geo-Environmental Investigation, November 2008
- Remediation Strategy, April 2009

The findings of the Phase II Geo-Environmental Investigation indicated that risks to human health and controlled waters were low and no further investigation or assessment was required at the site. However given the nature of shallow Made Ground, which includes anthropogenic materials including metal, glass and other material, the presence of a bound fragment of asbestos at depth and the requirement for the new sports pitches to conform to Sports England standards, specific remedial measures with respect to the sports pitches were recommended. The strategy for the proposed remedial measures was outlined in the SKM Remediation Strategy report.

2.4. Regulatory Consultation

The scope of the remediation strategy was approved by Simon Rogers from Manchester City Council in November 2010. The findings presented herewith will also require approval from MCC to confirm that remediation works undertaken at the site are acceptable from a regulatory view point.

3. Remediation Strategy

3.1. Introduction

The following section provides a summary of the requirements as specified by the SKM Remediation Strategy. The strategy was approved by Manchester City Council in November 2010.

3.2. Earthworks

The earthworks involved a three stage process with respect to the site development, comprising the following activities:

- A topsoil strip across the whole site area,
- A cut and fill operation to achieve the desired formation level,
- Emplacement of cover materials within areas of soft landscaping and turfed sports pitches.

As part of the site re-development, materials excavated by the earthworks (i.e. the topsoil strip and cut and fill operations) were to be reused elsewhere across the site. A summary of the material volumes and reuse proposals anticipated at the time of preparation of the Remediation Strategy is outlined below.

Topsoil

- *Total volume from site strip – **2,945m^3***
  - *1,350m^3 to be reused for the sports pitch, based upon a depth of 300mm,*
  - *1,415m^3 to be reused for other landscaping, based upon a depth of 150mm.*

It is understood that the remaining topsoil materials were stockpiled for use during the contractors compound reinstatement works.

Cut and fill materials

- *Total approximate volume generated by cut – **2,817m^3***
  - *2,567m^3 to be reused for the sports pitch*
  - *250m^3 to be reused for bunding on hard play area*

SKM provided a part time watching brief during the earthworks and it was specified within the Remediation Strategy that all materials proposed for re-use as part of the site development required testing to demonstrate suitability. The findings of the validation testing are discussed in **Section 4.2**.

It is noted that the volumes indicated at the time of writing the Remediation Strategy were subject to change during the course of the earthworks and the final volumes validated are highlighted in **Section 4.2.1**.

3.2.1. Cover System for Sports Pitches

As part of the remediation strategy, it was recommended that due to the nature of the fill encountered within the area of the former landfill and the requirement for the sports pitches, a capping layer of clean material should be installed across the area of the proposed sports pitches.

The specification for the capping layer was to comprise the emplacement of 300mm of inert material (re-used clay) across the sports pitches. To be further capped with 250mm of topsoil and 50mm of topsoil mixed with 50% sand, providing a complete cover thickness of 600mm. It is considered that the clay capping will act to provide sufficient protection against the possibility of soil mixing between the landfilled materials and the topsoil, therefore negating the requirement for a geo-textile membrane.

Materials reused within the cover system at the site required confirmatory testing, as outlined in **Section 3.3**. The thickness of the capping materials across the sports pitch also required confirmation by comparing pre and post placement survey levels.

3.2.2. Contractors Compound Reinstatement

Validation works were also undertaken with respect to the reinstatement of the former contractor's compound area at the site. The compound was created and utilised for the temporary accommodation of contractor's cabins and car parking during the construction works of the new Academy between 2008 and 2011.

The contractors compound is situated immediately south of the Co-op Academy school site on Tweedle Common, occupying an area of approximately 5000m^2.

As the reinstatement works involved raising the existing ground level, utilising excess cut materials generated as a result of the bulk earthworks described above, it is understood that planning approval was required by Manchester City Council (MCC). In order to facilitate the approval of the planning application, it was stipulated by MCC that an additional validation exercise would be required to provide the following information:

- *A detailed method statement.*
- *Photographic evidence at pertinent stages.*
- *Scaled depths noted.*
- *Any materials moved off site will require waste transfer paperwork.*

- *Any materials brought onto site will need to be suitable for use.*
- *Letter/Report of site completion plus photographs.*

The reinstatement of the contractor's compound comprised the following works:

- Removal of the existing tarmacadam surfacing and a near complete removal of the underlying 200mm hardcore. A nominal 50mm base layer of hardcore was left as a practical consideration to avoid risking the scraping off action penetrating into the fill material beneath.
- Installation of a 400mm subsoil layer, finished with a 100mm layer of seeded topsoil.

The subsoil and topsoil used for the reinstatement works was surplus material generated from the cut and fill exercise undertaken on the Academy site. Materials reused as part of the reinstatement required confirmatory testing, as outlined in **Section 3.3**.

The Method Statement for the works as provided by LOR is included in **Appendix D.**

Photographs of the works undertaken are included in **Appendix B.**

3.3. Confirmatory Testing

Materials used at the site require confirmatory testing to demonstrate their suitability for use and have been compared against the Site Specific Target Level's (SSTL's) summarised in **Table 3-1** of this report. Materials which required testing include the following:

- Topsoil for the soft landscaping and turfed sports pitches,
- Natural clay materials to be used as part of the cover system for the sports pitches,
- Imported materials.

The testing regime adopted for materials specified for use at the site is as follows:

- first generation materials to be tested at a rate of one sample per 1,000m^3
- second generation materials to be tested at a rate of one sample per 250m^3

The Site specific target levels (SSTL's) are presented in **Table 3-1** below:

- **Table 3-1 Summary of Site Specific Target Levels**

Analyte	SSTL (mg/kg)
Arsenic	227
Boron	13,800
Cadmium	25
Chromium (Total)	64
Copper	4,450

Analyte	SSTL (mg/kg)
Lead	450
Mercury	27.6
Nickel	79.7
Selenium	2,130
Zinc	7,670
Free Cyanide	1,590
TPH Aliphatics C6-C8	2,160
TPH Aliphatics C8-C10	449
TPH Aliphatics C10-C12	1,890
TPH Aliphatics C12-C16	5,540
TPH Aliphatics C16-C21	87,300
TPH Aliphatics C21-C35	67,000
TPH Aromatics C5-C7	180
TPH Aromatics C7-C8	416
TPH Aromatics C8-C10	645
TPH Aromatics C10-C12	2,180
TPH Aromatics C12-C16	3,870
TPH Aromatics C16-C21	4,580
TPH Aromatics C21-C35	4,660
Benzene	0.067
Ethyl benzene	70.7
Toluene	15.2
Xylene	67.6
Acenapthene	9,070
Acenapthylene	9,210
Anthracene	46,500
Benz(a)anthracene	79
Benzo(a)pyrene	11.5
Benzo(b)fluoranthene	8.14
Benzo(k)fluoranthene	115
Benzo(ghi)perylene	4,660
Chrysene	115
Dibenzo(ah)anthracene	2.30
Fluoranthene	6,210
Indeno(123cd)pyrene	49.5
Naphthalene	1,740
Phenanthrene	4,640
Pyrene	4,660

3.4. Ground Gas

The ground gas regime at the site was determined as Characteristic Situation 4 in accordance with CIRIA guidance, requiring 3 to 4 of the following gas mitigation measures:

- Reinforced concrete cast in situ floor slab (suspended, non suspended or raft),
- Proprietary gas membrane and passively ventilated or positively pressurised underfloor sub-space with monitoring facility,
- All joints and penetrations sealed,
- In ground venting wells or barriers.

The proposed gas protection solution comprised an Alderburgh geo-composite venting blanket (Geo Void 26/60) with ground level vents at up to 8m centres and a lapped and welded Tuflex geotextile membrane incorporated beneath the suspended floor slab.

3.5. Services

Protected services were specified where service channels required to be formed within Made Ground materials. Service channels formed within natural strata were required to be backfilled with clean material. Any materials used as infill within service corridors was required to meet the United Utilities Contaminated Land Pipe Material Selection criteria values as well as the site specific target levels (SSTL's).

3.6. Environmental Site Management

The following environmental monitoring and mitigation measures were recommended, in accordance with BRE best practice guidance:

- Vehicles transporting materials to and from the site should be enclosed or sheeted.
- Movement of vehicles should be minimised where practicable.
- A wheel wash facility should be provided for heavy plant such as low loaders and haulage wagons entering and leaving the site to minimise the spread of unacceptable amounts of contaminated site material onto adjacent roadways.
- Local roads should be regularly cleaned.
- Dust suppression techniques such as damping down access roads and stockpiles with water should be considered during prolonged periods of dry weather to prevent excessive spread of dust.
- Except for the need to work at night in order to comply with specified constraints, normal working hours should be adhered to minimise potential noise disturbance to nearby residents.

3.7. Groundwater Treatment or Disposal

It was recommended that in the event that significant amounts of groundwater were encountered during the course of excavation works, water should be pumped out and temporarily stored in tanks, prior to sampling and analysis in order to determine appropriate disposal options

Groundwater was not encountered in significant volumes during the construction works; as such the above validation measures were not required.

3.8. Summary of Validation Works

The validation exercise was undertaken as a means of assurance that the level of risk posed by the developed site will be minimal in the foreseeable future, and to confirm that the remedial measures outlined above were completed satisfactorily.

Validatory measures are also required by the regulators to demonstrate that the site is in a condition commensurate with the proposed end use post development and consultation with regulatory authorities will be required to gain approval for the remedial validation outlined in this report.

The validation exercise included the following:

- Chemical testing of all site won materials re-used as part of the capping layer construction and within soft landscaped areas and comparison of results with set criteria;
- Chemical testing of all imported materials including; 6F2 to be used for the piling mat construction, sand for the sports pitches and service trench bedding materials;
- Comparison of pre and post cover system survey drawings to confirm thickness of cover systems installed;
- Construction quality assurance of engineered gas protection systems installed;
- Presentation of any waste management records from the site such that any exported materials or groundwater have been accounted for;
- Visual inspections of potable water and drainage service installations and chemical screening of materials laid within service trenches.

4. Remediation Works & Validation Results

4.1. Introduction

The following section details the validation works undertaken at the site, as specified by the SKM remediation strategy.

The validation program was carried out between March 2009 and January 2010. Laboratory reports for all the validation testing undertaken are included in **Appendix C**.

4.2. Validation of Materials

As specified in the SKM remediation strategy, materials used as part of the site development have been tested and the results screened against the SSTL's. The following materials and their respective testing rates have been assessed as part of the validation works:

Cover Materials

- Topsoil (site won recycled) - 1 sample per 250m^3
- Clay subsoil (site won first generation) – 1 sample per 1000m^3

Imported Materials

- Topsoil (first generation) - 1 sample per 1000m^3
- Type 1 MOT (first generation) – *No testing data available*
- 6F2 (recycled) – *No testing data available*

With respect to the imported aggregates (i.e. Type 1 MOT and 6F2), LOR were unable to provide chemical testing certificates for these materials upon request.

Details of the validation and sampling works undertaken for the materials outlined above are indicated in **Tables 4-1** to **4-3**.

4.2.1. Sports Pitch Cover Materials

During the earthworks, excavated materials to be reused as cover for the sports pitch including topsoil and clay subsoil were stockpiled prior to be being laid. SKM visited the site to recover samples of the stockpiled materials to be reused as cover material. A site plan showing the stockpile sampling locations is included in **Appendix A**.

A summary of the materials, volumes and results of the chemical testing is provided in **Table 4-1** below:

- **Table 4-1 Summary of Validation Testing Results of Cover Materials**

Sample I.D	Material	Volume (m^3)	Imported / Site Won	Results Summary
Topsoil S1-12	Topsoil	3000	Site won	No exceedances of SSTL's recorded
Sub-base S1-5	Clay Sub-base	5000	Site won	No exceedances of SSTL's recorded

Based upon the volumes of stockpiled materials generated by the earthworks, 12 No. samples of topsoil and 5 No. samples of clay sub-soil were collected by SKM and analysed for the contaminants of concern for which SSTL's have been derived. No exceedances of the SSTL's were recorded.

4.2.2. Contractors Compound Reinstatement Materials

In order to confirm the chemical suitability of these materials, SKM Enviros undertook a sampling exercise at the site.

Sampling was undertaken in accordance with the agreed testing frequency as laid out in the Co-op Academy Remediation Strategy. The samples were analysed for the contaminants of concern outlined in the Remediation Strategy and the results compared against the Site Specific Target Level's (SSTL's).

Details of the materials tested and results of the chemical testing are provided in **Table 4-2** below:

- **Table 4-2 Summary of Validation Testing for Contractors Compound Reinstatement**

Sample I.D	Material	Volume (m^3)	Imported / Site Won	Results Summary
Subsoil S1-S8	Clay Sub-base	2000m^3	Site won	No exceedances of SSTL's recorded
Topsoil S1-S2	Topsoil	500m^3	Site won	No exceedances of SSTL's recorded

As noted above, no exceedances of the SSTL's were recorded. The results of the analysis are included in **Appendix C.**

4.2.3. Imported Materials

In order to assess the chemical suitability of imported materials, as agreed with MCC, chemical testing was undertaken for range of potential contaminants including metals, speciated hydrocarbons and PAH in accordance with the agreed testing frequencies.

It is understood that a total volume of 800m^3 of topsoil was imported to the site, sourced from Greentech Ltd, Dewsbury, W. Yorkshire, for soft landscaping purposes.

LOR also confirmed that a total of 2781m^3 6F2 and 5938m^3 Type 1 MOT was imported to the site during the construction works. As previously noted, no information has been supplied by LOR for imported aggregates.

Details of the available chemical testing data for imported materials provided by LOR are outlined in **Table 4-3** below.

- **Table 4-3 Summary of Validation Testing for Imported Materials**

Sample I.D	Material	Volume (m^3)	Imported / Site Won	Results Summary
Dewsbury	Topsoil	800m^3	Imported (First Generation)	No exceedances of SSTL's recorded

As noted above, no exceedances of the SSTL's were recorded for these materials. Copies of the chemical testing results are included in **Appendix C**.

4.2.4. Waste Tip Material

Approximately 180m^3 of Waste Tip material was excavated and stockpiled as part of the cut exercise on the sports pitch.

3 No. samples of the stockpiled Waste Tip material were also retrieved by SKM and analysed for the same range of determinands. Exceedances were recorded for lead and PAH (benzo(b)fluoranthene).

All Waste Tip materials excavated as part of the cut exercise for the sports pitch area were emplaced beneath the engineered cover system; therefore any potential pollutant linkage would be broken.

4.3. Gas Protection Measures

The as built gas protection measures are shown on the drawing included in **Appendix A** and comprise the following:

- Alderburgh gas ventilation layer beneath the slab area, with internal and perimeter collector pipes.
- Alderburgh Self Adhesive Waterproofing / Gas Membrane to walls of lift pits and service trenches.
- Methane resistant damp proof course around external perimeter of structure.

The ground gas protection measures were installed by Jim Ennis Construction Ltd in accordance with the method statement and installation checklist included in **Appendix D**. Photographs of the installed gas protection measures are included in **Appendix B**.

4.4. Discharge Consents

With respect to the site drainage scheme, as no alterations to the existing public sewer connection were made as part of the development works, United Utilities confirmed that the existing site discharge consent could be retained. Copies of this correspondence are included in **Appendix E.**

No groundwater was discharged to sewer as part of the construction works.

4.5. Services

LoR were not able to provide chemical testing results for the material used to backfill potable supply service trenches as the material was supplied independently by United Utilities. It is noted however that such services were constructed of WRc approved materials comprising DuraPipe Protecta-Line™ polyethylene pipes and as such are considered to provide adequate protection from any potential Made Ground contaminants. Literature on the selected materials used is included in **Appendix D**.

5. Conclusions

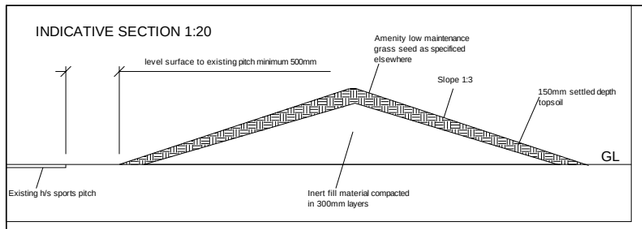
The information presented in this validation report indicates that the remediation works undertaken at the site have been completed satisfactorily and it is considered that the developed site is in condition commensurate with the end use.

A brief summary of the main findings of this report are outlined below:

- A topsoil strip and earthworks exercise was completed at the site as part of the enabling works in order to achieve the desired formation level for the new sports pitches. The sports pitches required a capping layer of 600mm thickness in order to break the pollutant pathway with the underlying landfill materials.
- A total volume of approximately 3,000m^3 site won topsoil and 5000m^3 subsoil was re-used as cover materials within areas of turfed sports pitches and also soft landscaping. The validation exercise confirmed that all materials used within the capping layer conformed to the SSTLs. The thickness of the capping materials across the sports pitch was confirmed by comparing pre and post placement survey levels.
- Chemical testing results for imported materials have been assessed against the SSTLs where provided by LOR. No exceedances of the screening criteria were recorded for the materials reviewed.
- Gas protection measures were installed within the new buildings in accordance with the recommendations outlined in the Remediation Strategy and warranted by Alderburgh.
- Significant groundwater break outs were not encountered during the enabling / construction works and no requirement for storage and / or disposal of contaminated groundwater was necessitated during the works.
- No alterations to the existing public sewer connection were made as part of the development works, United Utilities confirmed that the existing site discharge consent could be retained.
- Protected services were installed for potable water supply, comprising WRc approved materials.

Appendix A Drawings

INDICATIVE SECTION 1:20





KEY

91.50 x Existing Levels

87.50 Proposed Soft Levels

For proposed setting out ref EWA drawings 0161 0162 and 0163

PLINCKE

Co-op Academy

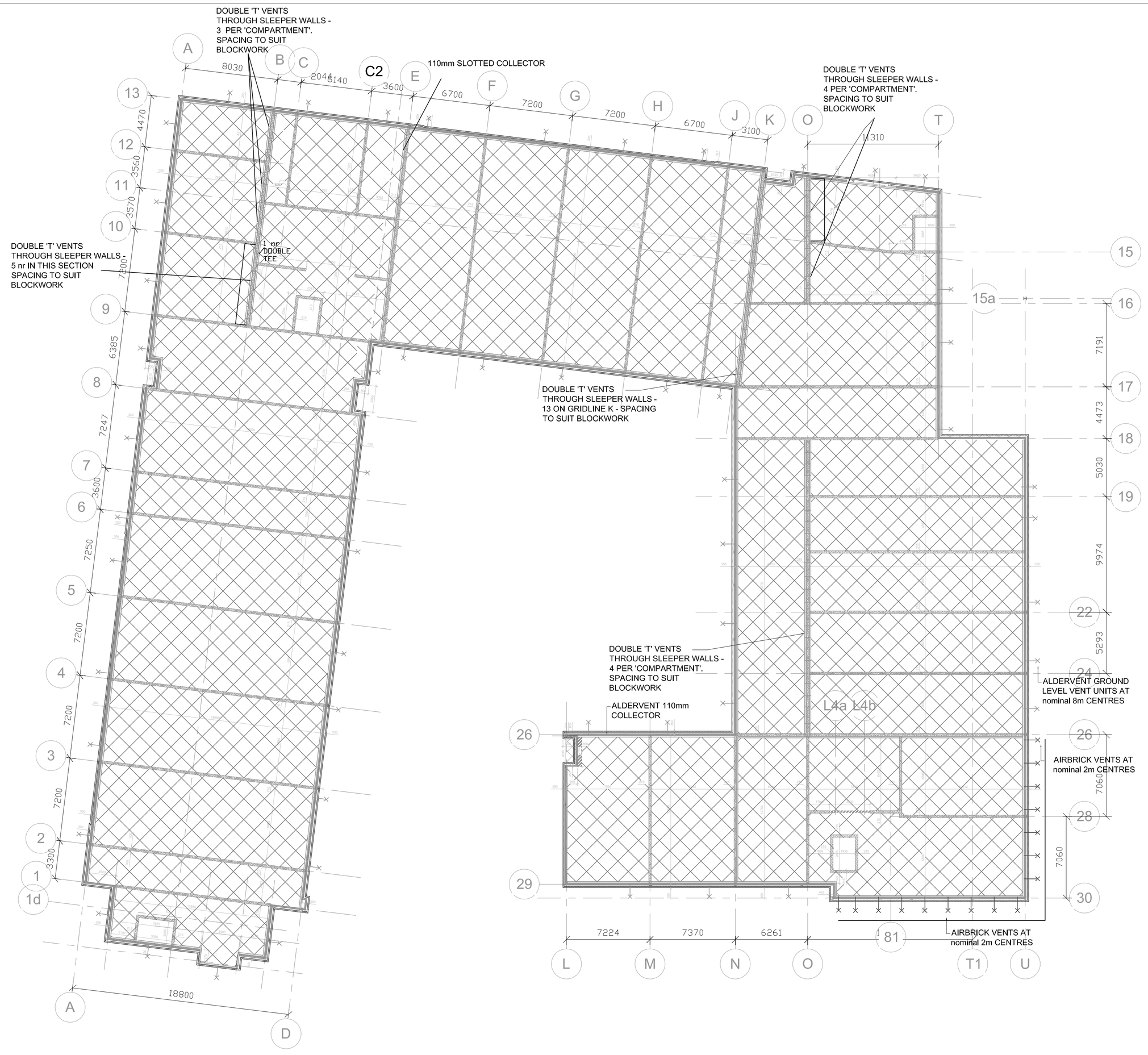
Soft Levels

1:200 @A0

CONSTRUCTION

19/08/05

2021-04-14



Notes : -

1. Gas venting layout overlaid onto SKM, Drawing Ref: PH_SKM_DR_G_14_AZ_00
2. For details, not relating to gas venting layout refer to SKM

Legend

Denotes Geo-vold 26/60 laid on Type 1 well compacted single-sized stone, underneath building throughout to engineers requirements.

3. The final positions of Ground level vents of face fix vents can be determined to suit site requirements. Any GL Vent can be moved up to 1m in either direction without consultation with Alderburgh Ltd. Face fix vents are at nominal 2m centres, and can be adjusted to suit masonry.

B	2.7.09	KD		GL vent positions adjusted; nr of airbrick vents inc, as per EWA
A	10.6.09	KD		nr of double tees indicated airbrick vents added
				GL vent positions adjusted

Construction issue

ALDERBURGH
Sladen Mill Halifax Road Littleborough OL15 0LB
tel: 01706 374416 fax: 01706 376785
e-mail technical@alderburgh.com

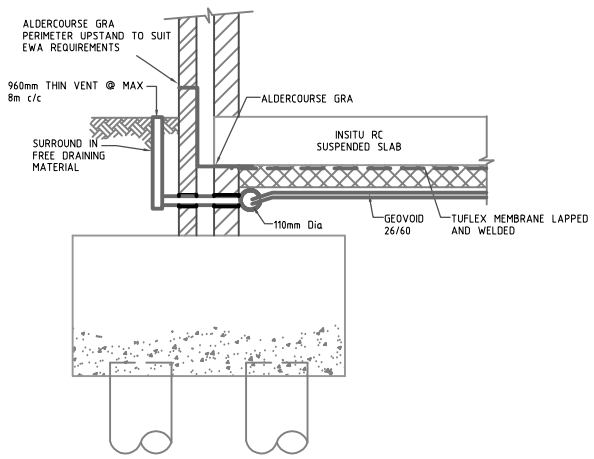
CLIENT Laing O'Rourke

PROJECT
THE CO-OPERATIVE ACADEMY OF MANCHESTER

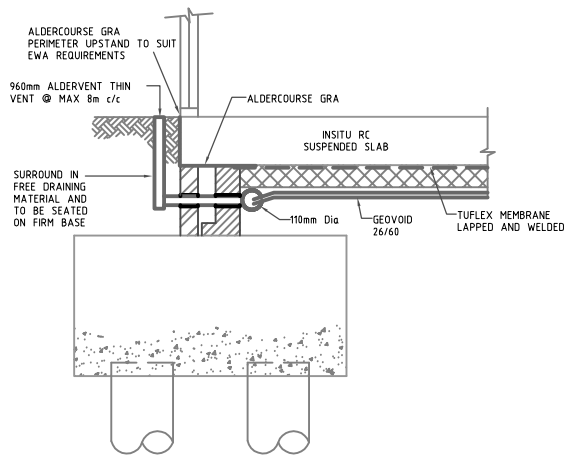
DRAWN BY SU | CHECKED BY KD

TITLE
GAS VENT LAYOUT

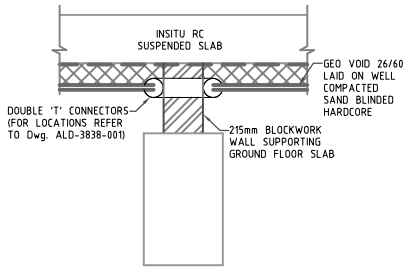
SCALE 1:200 | DRAWING No ALD-3838-001 | AMDT B



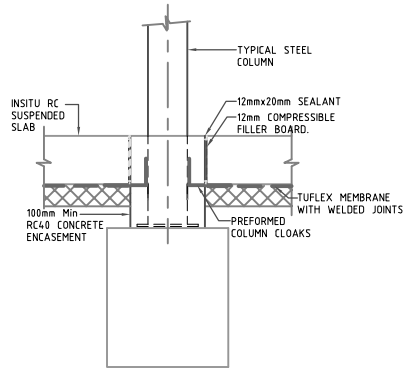
GAS PROTECTION
EDGE DETAIL



GAS PROTECTION
EDGE DETAIL FOR INSITU
SUSPENDED GROUND FLOOR



GAS VENTS THROUGH
SLEEPER WALLS



GAS PROTECTION AT
COLUMN LOCATIONS

Notes :-

1. Gas ventlng sections based on SKM sections
2. For detalls not relatlng to gas protectlon refer to SKM
3. Setting out of Thin vents to suit site requirements

A	6.7.09			GL Vents changed to Thin Vents to sult EWA requlrements
	6.7.09			perlmeter upstands shown to sult EWA requlrements

INFORMATION ISSUE

ALDERBURGH
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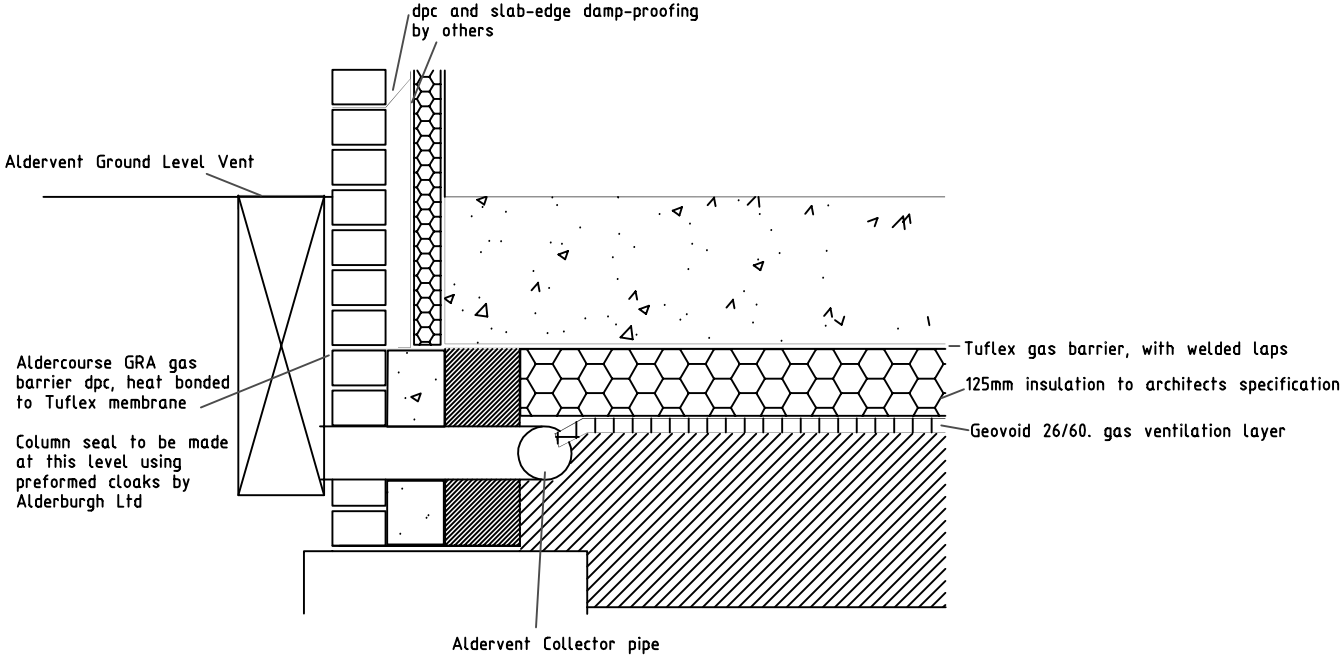
CLIENT JIM ENNIS CONSTRUCTION

PROJECT
THE CO-OPERATIVE
ACADEMY OF MANCHESTER

DRAWN BY SJ | CHECKED BY KD

TITLE
GAS VENT SECTIONS

SCALE nts | DRAWING No ALD-3838-002 | AMDT A



Notes

1. All Dimensions are in millimeters
2. Do not scale from this drawing

[illegible]	[illegible]	[illegible]		Submission to Ennis for comment

ALDERBURGH
Sladen Mill Halifax Road Littleborough OL15 0LB
tel: 01706 374416 fax: 01706 376785
e-mail technical@alderburgh.com

CLIENT Jim Ennis Construction

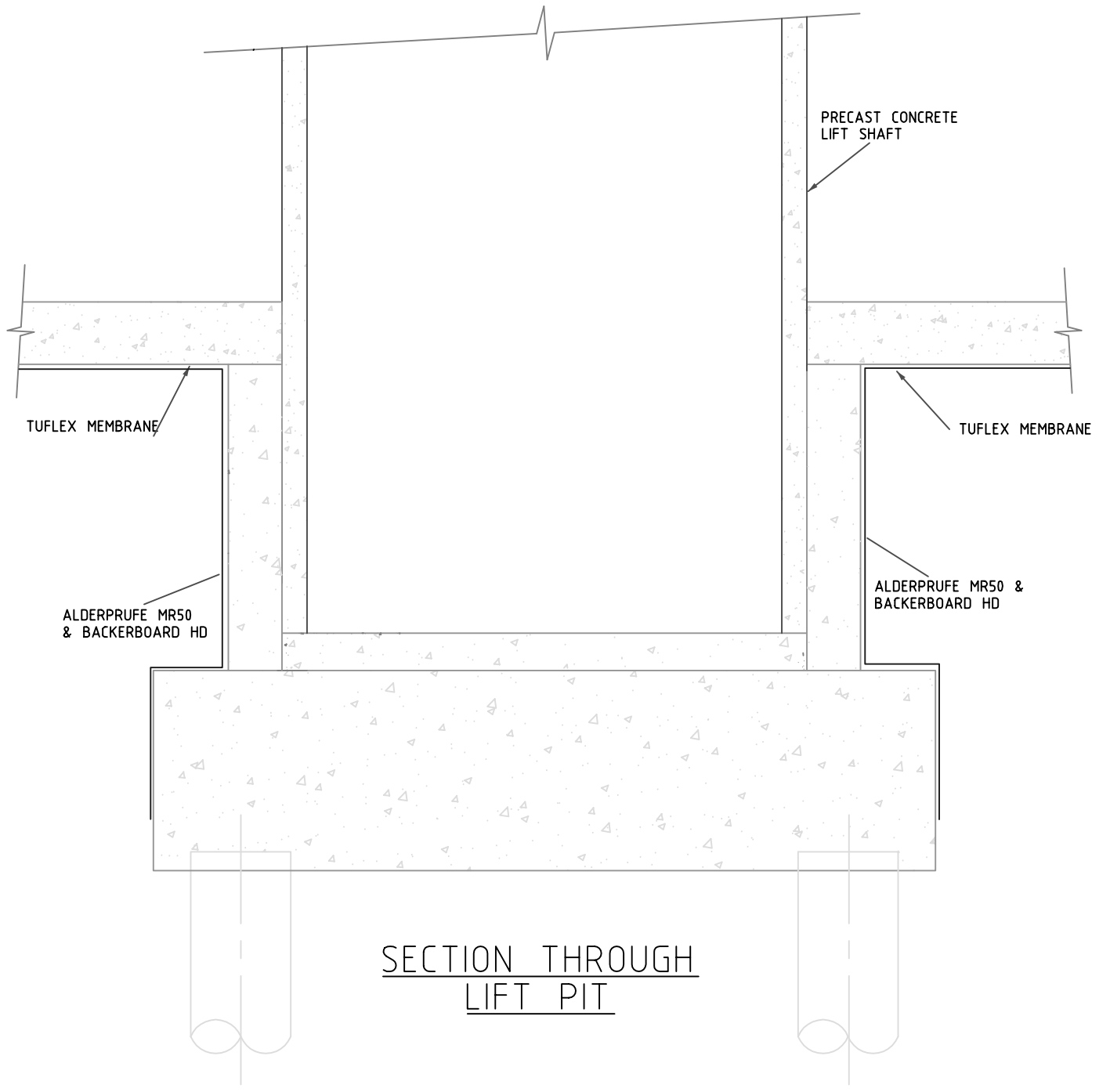
PROJECT
Cooperative Academy

DRAWN BY SU CHECKED BY KD

TITLE
Edge detail
Gas protection

SCALE	DRAWING No	AMDT
NTS	3838-003	

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SECTION THROUGH
LIFT PIT

Notes : -

ALDERBURGH
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e-mail technical@alderburgh.com

CLIENT Laing O'Rourke

PROJECT
Cooperative Academy

DRAWN BY SU | CHECKED BY KD

TITLE
Lift pit detail

SCALE NTS | DRAWING No ALD_3838_004 | AMDT

Co-op Site Visit 19/3/09

Stockpile sampling

10m

5m

affected material

150m

10m

Topsoil
3000m³
12 samples

Clay
Subsoil
± 5000m³
5 samples

3m

14m

8m

50m

Waste
Tip
180m³
4 samples

Path

Path

PLANT HILL ROAD

LONGTON ROAD

TREDALE AVE

JUBBY AVENUE

proposed main entrance

existing school buildings to be demolished

proposed new main school building footprint

existing Adult Education module retained in new scheme

existing Inclusion Unit to be demolished

existing registered public right of way, no.27 to be extinguished

area for potential classroom expansion

energy centre

gate

drop-off point

Disabled car parking

NB
For responses of levels generated from cut & fill quantities and vehicular paving levels see SKM drawing 5008. For more accurate hard & soft landscaping layout and soft landscaping levels, refer to PLL drawing ref. 6002.

ellis williams architects

ew

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This drawing must not be reproduced without permission.
This drawing must not be scaled. Dimensions are only to be taken where specified.

Job title: The Co-operative Academy of Manchester

Drawing title: Proposed Site Plan

Status	File Name	Initial Dig
FOR INFORMATION	-	-

Drawn by	date	Checked by	date	Scale at A1	Scale at A3
RP	18.06.09			1:500	1:1000

Job No.	CAD No.	Dwg No.	Revision
1461	AS(09)	A02	E

Auto Document No: PH_EW_DR_S_09_AZ_NS_0012

Appendix B Photographs



Plate 1 – Subsoil materials emplaced on sports pitches



Plate 2 – Stockpiled topsoil materials – playing field



Plate 3 – Segregated stockpiled waste tip materials – playing field



Plate 4 – Tarmaccadam strip - contractor's compound



Plate 5 – Tarmaccadam strip depth – contractors compound



Plate 6 – Contactors compound formation level following tarmaccadam strip



Plate 7 – Placement of subsoil materials in contractor's compound



Plate 8 – Confirmed topsoil depth in contractor's compound



Plate 9 – Finished formation level - contractor's compound



Plate 10 – Waste transfer notes for materials removed from contractor's compound



Plate 11 - Installation of gas resistant membrane beneath school building



Plate 12 – Installation of gas venting pipe work beneath school building

Appendix C Chemical Testing Results

ALcontrol Laboratories Analytical Services
Sample Descriptions

Job Number: 09/03948/02/01
Client: SKM Ltd
Client Ref : NE12105

Grain sizes

<0.063mm	Very Fine
0.1mm - 0.063mm	Fine
0.1mm - 2mm	Medium
2mm - 10mm	Coarse
>10mm	Very Coarse

Sample Identity	Depth (m)	Colour	Grain Size	Description	Batch
CLAY SUBSOIL S1	-	Brown	<0.063mm	Clay with some Stones	1
CLAY SUBSOIL S2	-	Brown	<0.063mm	Clay with some Stones	1
CLAY SUBSOIL S3	-	Brown	<0.063mm	Clay with some Stones	1
CLAY SUBSOIL S4	-	Brown	<0.063mm	Clay with some Stones	1
CLAY SUBSOIL S5	-	Brown	<0.063mm	Clay Loam	1
TOPSOIL S1	-	Dark Brown	0.1mm - 0.063mm	Clay Loam with some Stones	1
TOPSOIL S2	-	Dark Brown	0.1mm - 0.063mm	Silty Clay Loam with some Stones	1
TOPSOIL S3	-	Dark Brown	0.1mm - 0.063mm	Silt Loam with some Stones	1
TOPSOIL S4	-	Brown	0.1mm - 0.063mm	Silty Clay with some Stones	1
TOPSOIL S5	-	Brown	0.1mm - 0.063mm	Silty Clay with some Stones	1
TOPSOIL S6	-	Brown	0.1mm - 0.063mm	Silty Clay with some Stones	1
TOPSOIL S7	-	Brown	0.1mm - 0.063mm	Silty Clay with some Stones	1
TOPSOIL S8	-	Dark Brown	<0.063mm	Clay with some Vegetation	1
TOPSOIL S9	-	Dark Brown	0.1mm - 0.063mm	Silty Clay with some Vegetation	1
TOPSOIL S10	-	Dark Brown	0.1mm - 0.063mm	Silty Clay Loam with some Vegetation	1
TOPSOIL S11	-	Dark Brown	0.1mm - 0.063mm	Silty Clay with some Vegetation	1
TOPSOIL S12	-	Brown	0.1mm - 0.063mm	Silty Clay Loam with some Stones	1
WASTE TIP S1	-	Brown	0.1mm - 0.063mm	Silty Clay with some Stones	1
WASTE TIP S2	-	Brown	0.1mm - 0.063mm	Silty Clay Loam with some Stones	1
WASTE TIP S3	-	Brown	0.1mm - 0.063mm	Silty Clay Loam with some Stones	1

* These descriptions are only intended to act as a cross check if sample identities are questioned, and to provide a log of sample matrices with respect to MCERTS validation. They are not intended as full geological descriptions.

We are accredited to MCERTS for sand, clay and loam/topsoil, or any of these materials-whether these are derived from naturally occurring soil profiles, or from fill/made ground, as long as these materials constitute the major part of the sample.
Other coarse granular materials such as concrete, gravel and brick are not accredited if they comprise the major part of the sample.
[1] Sample Description supplied by client

Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
[M] MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 09/03948/02/01 **Matrix:** SOLID
Client: SKM Ltd **Location:** PLANT HILL SCHOOL
Client Ref. No.: NE12105 **Client Contact:** Steve Atkinson

Sample Identity	CLAY SUBSOIL S1	CLAY SUBSOIL S2	CLAY SUBSOIL S3	CLAY SUBSOIL S4	CLAY SUBSOIL S5	TOPSOIL S1	TOPSOIL S2	TOPSOIL S3	TOPSOIL S4	Method Code	LoD/Units
Depth (m)	-	-	-	-	-	-	-	-	-		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09		
Sample Received Date	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09		
Batch	1	1	1	1	1	1	1	1	1		
Sample Number(s)	**1-3**	**4-6**	**7-9**	**10-12**	**13-15**	**17-19**	**20-22**	**23-25**	**26-28**		
Total Sulphate	430	2000	240	210	260	490	900	660	580	TM129[#M]	<100 mg/kg
Boron Water Soluble	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	TM129[#M]	<3.5 mg/kg
Arsenic	4	6	4	4	5	11	11	12	10	TM129[#M]	<3.0 mg/kg
Cadmium	<0.2	<0.2	0.3	<0.2	<0.2	0.2	0.3	0.4	0.3	TM129	<0.2 mg/kg
Chromium	24	19	18	19	18	22	20	20	22	TM129[#M]	<4.5 mg/kg
Copper	22	22	21	19	22	48	61	59	54	TM129[#M]	<6 mg/kg
Lead	26	34	29	23	27	92	91	330	88	TM129[#M]	<2 mg/kg
Mercury	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	TM129[#M]	<0.4 mg/kg
Nickel	23	23	22	25	25	22	22	22	21	TM129[#M]	<0.9 mg/kg
Selenium	<3	<3	<3	<3	<3	<3	<3	<3	<3	TM129[#M]	<3 mg/kg
Zinc	71	73	79	64	77	140	140	160	130	TM129[#M]	<2.5 mg/kg
Easily Liberated Sulphide	<15	<15	<15	<15	<15	<15	<15	<15	<15	TM180[#]	<15 mg/kg
Hexavalent Chromium	<6.0	<3.0	<3.0	<3.0	<0.3	<3.0	<3.0	<6.0	<15.0	TM151[#]	<0.3 mg/kg
Phenols Monohydric	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	TM062[#M]	<0.15 mg/kg
Thiocyanate	<1	<1	<1	<1	<1	<1	1	1	1	TM153[#M]	<1 mg/kg
Total Cyanide	<1	<1	<1	<1	<1	<1	<1	<1	<1	TM153[#M]	<1 mg/kg
Free Cyanide	<1	<1	<1	<1	<1	<1	<1	<1	<1	TM153	<1 mg/kg
Asbestos Containing Material Screen	-	-	-	-	-	No ACM Detected	-	No ACM Detected	-	TM001	NONE
pH Value	8.11	8.15	8.34	7.19	8.30	7.39	7.18	7.52	7.26	TM133[#M]	<1.00 pH Units
Total Sulphur	0.05	0.11	0.03	0.03	0.07	0.10	0.08	0.07	0.08	TM132[#]	<0.01 %

All results expressed on a dry weight basis.

Date 03.04.2009

Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
[M] MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 09/03948/02/01 **Matrix:** SOLID
Client: SKM Ltd **Location:** PLANT HILL SCHOOL
Client Ref. No.: NE12105 **Client Contact:** Steve Atkinson

Sample Identity	CLAY SUBSOIL S1	CLAY SUBSOIL S2	CLAY SUBSOIL S3	CLAY SUBSOIL S4	CLAY SUBSOIL S5	TOPSOIL S1	TOPSOIL S2	TOPSOIL S3	TOPSOIL S4	Method Code	LoD/Units
Depth (m)	-	-	-	-	-	-	-	-	-		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09		
Sample Received Date	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09		
Batch	1	1	1	1	1	1	1	1	1		
Sample Number(s)	**1-3**	**4-6**	**7-9**	**10-12**	**13-15**	**17-19**	**20-22**	**23-25**	**26-28**		
GRO (C4-C12)	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
MTBE	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089[#]	<10 ug/kg
Benzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089[#M]	<10 ug/kg
Toluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089[#M]	<10 ug/kg
Ethyl benzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089[#M]	<10 ug/kg
m & p Xylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089[#M]	<10 ug/kg
o Xylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089[#M]	<10 ug/kg
Aliphatics C5-C6	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
Aliphatics >C6-C8	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
Aliphatics >C8-C10	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
Aliphatics >C10-C12	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
Aliphatics >C12-C16	2100	1500	<100	<100	72000	5400	4700	1300	9300	TM173[#]	<100 ug/kg
Aliphatics >C16-C21	1800	2300	2100	810	2600	5600	6000	4800	6300	TM173[#]	<100 ug/kg
Aliphatics >C21-C35	10000	8700	5400	4300	7100	21000	39000	34000	30000	TM173[#]	<100 ug/kg
Total Aliphatics C5-C35	14000	13000	7500	5100	82000	32000	50000	40000	45000	TM61/89	<100 ug/kg
Aromatics C6-C7	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
Aromatics >C7-C8	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
Aromatics >EC8-EC10	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
Aromatics >EC10-EC12	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
Aromatics >EC12-EC16	<100	4000	<100	<100	3400	2100	2300	3800	6400	TM173[#]	<100 ug/kg
Aromatics >EC16-EC21	5000	30000	2000	<100	5800	6400	12000	11000	29000	TM173[#]	<100 ug/kg
Aromatics >EC21-EC35	51000	120000	29000	26000	43000	80000	120000	100000	160000	TM173[#]	<100 ug/kg
Total Aromatics C6-C35	56000	160000	31000	26000	52000	89000	140000	120000	200000	TM61/89	<100 ug/kg
TPH (Aliphatics and Aromatics C5-C35)	70000	170000	38000	31000	130000	120000	190000	160000	240000	TM61/89	<100 ug/kg

All results expressed on a dry weight basis.

Date 03.04.2009

Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
[M] MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 09/03948/02/01 **Matrix:** SOLID
Client: SKM Ltd **Location:** PLANT HILL SCHOOL
Client Ref. No.: NE12105 **Client Contact:** Steve Atkinson

Sample Identity	CLAY SUBSOIL S1	CLAY SUBSOIL S2	CLAY SUBSOIL S3	CLAY SUBSOIL S4	CLAY SUBSOIL S5	TOPSOIL S1	TOPSOIL S2	TOPSOIL S3	TOPSOIL S4	Method Code	LoD/Units
Depth (m)	-	-	-	-	-	-	-	-	-		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09		
Sample Received Date	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09		
Batch	1	1	1	1	1	1	1	1	1		
Sample Number(s)	**1-3**	**4-6**	**7-9**	**10-12**	**13-15**	**17-19**	**20-22**	**23-25**	**26-28**		
PAH by GCMS											
Naphthalene-d8 -Surrogate Recovery	98	100	88	87	96	100	100	99	90	TM218[#M]	%
Acenaphthene-d10 -Surrogate Recovery	96	98	86	84	93	100	99	98	88	TM218[#M]	%
Phenanthrene-d10 -Surrogate Recovery	93	95	86	85	92	97	95	95	88	TM218[#M]	%
Chrysene-d12 -Surrogate Recovery	86	89	79	79	80	90	89	90	86	TM218[#M]	%
Perylene-d12 -Surrogate Recovery	87	89	85	87	87	89	89	91	97	TM218[#M]	%
Naphthalene	56	38	15	14	38	110	170	180	190	TM218[#M]	<9 ug/kg
Acenaphthylene	15	15	<12	<12	<12	29	46	45	42	TM218[#M]	<12 ug/kg
Acenaphthene	47	64	21	57	41	98	180	150	200	TM218[#M]	<8 ug/kg
Fluorene	49	63	18	84	44	66	130	120	150	TM218[#M]	<10 ug/kg
Phenanthrene	430	550	180	960	420	760	1400	1200	1400	TM218[#M]	<15 ug/kg
Anthracene	140	160	45	300	110	210	390	310	320	TM218[#M]	<16 ug/kg
Fluoranthene	700	840	260	1200	610	1400	2400	2000	2100	TM218[#M]	<17 ug/kg
Pyrene	610	720	240	990	530	1300	2200	1800	2000	TM218[#M]	<15 ug/kg
Benz(a)anthracene	350	360	120	430	270	650	1100	940	940	TM218[#M]	<14 ug/kg
Chrysene	400	400	120	470	250	780	1300	1100	1000	TM218[#M]	<10 ug/kg
Benzo(b)fluoranthene	450	420	110	350	200	850	1600	1300	1100	TM218[#M]	<15 ug/kg
Benzo(k)fluoranthene	210	140	63	210	110	320	500	440	580	TM218[#M]	<14 ug/kg
Benzo(a)pyrene	350	310	120	400	250	660	1200	1000	1300	TM218[#M]	<15 ug/kg
Indeno(123cd)pyrene	240	160	65	200	140	360	650	560	710	TM218[#M]	<18 ug/kg
Dibenzo(ah)anthracene	170	50	<23	63	41	100	180	150	190	TM218[#M]	<23 ug/kg
Benzo(ghi)perylene	310	220	86	250	180	480	860	720	820	TM218[#M]	<24 ug/kg
PAH 16 Total	4500	4500	1500	6000	3200	8100	14000	12000	13000	TM218[#M]	<118 ug/kg

All results expressed on a dry weight basis.

Date 03.04.2009

Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
[M] MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 09/03948/02/01 **Matrix:** SOLID
Client: SKM Ltd **Location:** PLANT HILL SCHOOL
Client Ref. No.: NE12105 **Client Contact:** Steve Atkinson

Sample Identity	TOPSOIL S5	TOPSOIL S6	TOPSOIL S7	TOPSOIL S8	TOPSOIL S9	TOPSOIL S10	TOPSOIL S11	TOPSOIL S12	WASTE TIP S1	Method Code	LoD/Units
Depth (m)	-	-	-	-	-	-	-	-	-		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09		
Sample Received Date	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09		
Batch	1	1	1	1	1	1	1	1	1		
Sample Number(s)	**29-31**	**32-34**	**35-36**	**37-39**	**40-42**	**43-44**	**45-47**	**48-50**	**51-53**		
Total Sulphate	720	570	780	620	730	1700	670	610	1400	TM129[#M]	<100 mg/kg
Boron Water Soluble	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	TM129[#M]	<3.5 mg/kg
Arsenic	14	12	8	9	12	10	11	11	19	TM129[#M]	<3.0 mg/kg
Cadmium	0.4	0.3	0.3	<0.2	0.3	<0.2	<0.2	0.3	0.6	TM129	<0.2 mg/kg
Chromium	23	20	21	23	21	22	28	20	25	TM129[#M]	<4.5 mg/kg
Copper	67	55	43	47	86	53	57	52	140	TM129[#M]	<6 mg/kg
Lead	130	100	85	91	140	140	94	90	160	TM129[#M]	<2 mg/kg
Mercury	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	TM129[#M]	<0.4 mg/kg
Nickel	22	21	19	22	21	24	21	20	43	TM129[#M]	<0.9 mg/kg
Selenium	<3	<3	<3	<3	<3	<3	<3	<3	<3	TM129[#M]	<3 mg/kg
Zinc	150	130	100	110	150	220	130	140	300	TM129[#M]	<2.5 mg/kg
Easily Liberated Sulphide	<15	<15	<15	<15	<15	<15	<15	<15	<15	TM180[#]	<15 mg/kg
Hexavalent Chromium	<6.0	<6.0	<15.0	<3.0	<6.0	<3.0	<3.0	<3.0	<3.0	TM151[#]	<0.3 mg/kg
Phenols Monohydric	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	<0.15	TM062[#M]	<0.15 mg/kg
Thiocyanate	3	1	3	1	1	<1	<1	<1	<1	TM153[#M]	<1 mg/kg
Total Cyanide	<1	<1	<1	<1	<1	<1	<1	<1	<1	TM153[#M]	<1 mg/kg
Free Cyanide	<1	<1	<1	<1	<1	<1	<1	<1	<1	TM153	<1 mg/kg
Asbestos Containing Material Screen	No ACM Detected	-	No ACM Detected	-	No ACM Detected	-	No ACM Detected	-	No ACM Detected	TM001	NONE
pH Value	7.83	6.94	6.77	7.13	6.96	7.82	7.40	7.87	7.49	TM133[#M]	<1.00 pH Units
Total Sulphur	0.09	0.07	0.06	0.07	0.08	0.12	0.08	0.71	0.15	TM132[#]	<0.01 %

All results expressed on a dry weight basis.

Date 03.04.2009

Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
[M] MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 09/03948/02/01 **Matrix:** SOLID
Client: SKM Ltd **Location:** PLANT HILL SCHOOL
Client Ref. No.: NE12105 **Client Contact:** Steve Atkinson

Sample Identity	TOPSOIL S5	TOPSOIL S6	TOPSOIL S7	TOPSOIL S8	TOPSOIL S9	TOPSOIL S10	TOPSOIL S11	TOPSOIL S12	WASTE TIP S1	Method Code	LoD/Units
Depth (m)	-	-	-	-	-	-	-	-	-		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09		
Sample Received Date	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09		
Batch	1	1	1	1	1	1	1	1	1		
Sample Number(s)	**29-31**	**32-34**	**35-36**	**37-39**	**40-42**	**43-44**	**45-47**	**48-50**	**51-53**		
GRO (C4-C12)	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
MTBE	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089[#]	<10 ug/kg
Benzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089[#M]	<10 ug/kg
Toluene	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089[#M]	<10 ug/kg
Ethyl benzene	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089[#M]	<10 ug/kg
m & p Xylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089[#M]	<10 ug/kg
o Xylene	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089[#M]	<10 ug/kg
Aliphatics C5-C6	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
Aliphatics >C6-C8	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
Aliphatics >C8-C10	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
Aliphatics >C10-C12	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
Aliphatics >C12-C16	3000	<100	<100	78000	86000	66000	100000	4000	5500	TM173[#]	<100 ug/kg
Aliphatics >C16-C21	9400	2600	1900	4200	5900	16000	6000	4900	14000	TM173[#]	<100 ug/kg
Aliphatics >C21-C35	54000	13000	18000	15000	27000	32000	19000	28000	85000	TM173[#]	<100 ug/kg
Total Aliphatics C5-C35	66000	15000	20000	97000	120000	110000	130000	37000	100000	TM61/89	<100 ug/kg
Aromatics C6-C7	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
Aromatics >C7-C8	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
Aromatics >EC8-EC10	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
Aromatics >EC10-EC12	<10	<10	<10	<10	<10	<10	<10	<10	<10	TM089	<10 ug/kg
Aromatics >EC12-EC16	7000	<100	1300	3700	4100	3400	6200	7100	3500	TM173[#]	<100 ug/kg
Aromatics >EC16-EC21	35000	5100	8200	9700	6300	9800	18000	39000	22000	TM173[#]	<100 ug/kg
Aromatics >EC21-EC35	210000	86000	120000	88000	62000	61000	100000	190000	170000	TM173[#]	<100 ug/kg
Total Aromatics C6-C35	250000	91000	130000	100000	73000	74000	130000	240000	190000	TM61/89	<100 ug/kg
TPH (Aliphatics and Aromatics C5-C35)	320000	110000	150000	200000	190000	190000	250000	270000	300000	TM61/89	<100 ug/kg

All results expressed on a dry weight basis.

Date 03.04.2009

Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
[M] MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 09/03948/02/01 **Matrix:** SOLID
Client: SKM Ltd **Location:** PLANT HILL SCHOOL
Client Ref. No.: NE12105 **Client Contact:** Steve Atkinson

Sample Identity	TOPSOIL S5	TOPSOIL S6	TOPSOIL S7	TOPSOIL S8	TOPSOIL S9	TOPSOIL S10	TOPSOIL S11	TOPSOIL S12	WASTE TIP S1	Method Code	LoD/Units
Depth (m)	-	-	-	-	-	-	-	-	-		
Sample Type	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID	SOLID		
Sampled Date	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09	19.03.09		
Sample Received Date	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09	24.03.09		
Batch	1	1	1	1	1	1	1	1	1		
Sample Number(s)	**29-31**	**32-34**	**35-36**	**37-39**	**40-42**	**43-44**	**45-47**	**48-50**	**51-53**		
PAH by GCMS											
Naphthalene-d8 -Surrogate Recovery	90	91	90	96	91	100	91	100	95	TM218[#M]	%
Acenaphthene-d10 -Surrogate Recovery	89	90	89	96	92	110	92	100	98	TM218[#M]	%
Phenanthrene-d10 -Surrogate Recovery	89	90	90	96	91	100	91	100	95	TM218[#M]	%
Chrysene-d12 -Surrogate Recovery	87	93	91	94	91	110	92	110	95	TM218[#M]	%
Perylene-d12 -Surrogate Recovery	99	110	100	93	90	110	93	110	95	TM218[#M]	%
Naphthalene	180	100	1100	94	290	120	140	180	580	TM218[#M]	<9 ug/kg
Acenaphthylene	52	94	51	<12	49	54	31	210	140	TM218[#M]	<12 ug/kg
Acenaphthene	230	150	770	46	160	130	120	2200	730	TM218[#M]	<8 ug/kg
Fluorene	170	160	450	32	140	110	87	2300	600	TM218[#M]	<10 ug/kg
Phenanthrene	1900	1900	3100	450	1800	1300	1000	14000	5200	TM218[#M]	<15 ug/kg
Anthracene	510	630	740	91	400	360	250	4700	1300	TM218[#M]	<16 ug/kg
Fluoranthene	3300	3700	4500	800	3000	2800	1900	19000	7500	TM218[#M]	<17 ug/kg
Pyrene	3000	3600	3700	750	2700	2400	1800	15000	6400	TM218[#M]	<15 ug/kg
Benz(a)anthracene	1400	2000	1600	370	1400	1300	940	7000	3300	TM218[#M]	<14 ug/kg
Chrysene	1400	1900	1500	400	1300	1500	900	6700	3400	TM218[#M]	<10 ug/kg
Benzo(b)fluoranthene	1300	1900	1600	420	1300	1900	890	8400	4400	TM218[#M]	<15 ug/kg
Benzo(k)fluoranthene	770	1100	830	210	610	640	460	2900	1500	TM218[#M]	<14 ug/kg
Benzo(a)pyrene	1900	3000	1900	400	1300	1500	1000	7100	3500	TM218[#M]	<15 ug/kg
Indeno(123cd)pyrene	970	1300	1000	250	710	770	550	3300	1800	TM218[#M]	<18 ug/kg
Dibenzo(ah)anthracene	260	390	250	74	210	210	160	910	520	TM218[#M]	<23 ug/kg
Benzo(ghi)perylene	1100	1700	1200	340	890	960	710	4000	2200	TM218[#M]	<24 ug/kg
PAH 16 Total	18000	24000	24000	4700	16000	16000	11000	98000	43000	TM218[#M]	<118 ug/kg

All results expressed on a dry weight basis.

Date 03.04.2009

Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
[M] MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 09/03948/02/01 **Matrix:** SOLID
Client: SKM Ltd **Location:** PLANT HILL SCHOOL
Client Ref. No.: NE12105 **Client Contact:** Steve Atkinson

Sample Identity	WASTE TIP S2	WASTE TIP S3								Method Code	LoD/Units
Depth (m)	-	-									
Sample Type	SOLID	SOLID									
Sampled Date	19.03.09	19.03.09									
Sample Received Date	24.03.09	24.03.09									
Batch	1	1									
Sample Number(s)	**54-56**	**57-59**									
Total Sulphate	2200	3000								TM129[#M]	<100 mg/kg
Boron Water Soluble	<3.5	<3.5								TM129[#M]	<3.5 mg/kg
Arsenic	40	43								TM129[#M]	<3.0 mg/kg
Cadmium	0.9	1.3								TM129	<0.2 mg/kg
Chromium	29	41								TM129[#M]	<4.5 mg/kg
Copper	180	360								TM129[#M]	<6 mg/kg
Lead	370	680								TM129[#M]	<2 mg/kg
Mercury	<0.4	<0.4								TM129[#M]	<0.4 mg/kg
Nickel	43	49								TM129[#M]	<0.9 mg/kg
Selenium	<3	<3								TM129[#M]	<3 mg/kg
Zinc	400	720								TM129[#M]	<2.5 mg/kg
Easily Liberated Sulphide	20	<15								TM180[#]	<15 mg/kg
Hexavalent Chromium	<3.0	<3.0								TM151[#]	<0.3 mg/kg
Phenols Monohydric	<0.15	<0.15								TM062[#M]	<0.15 mg/kg
Thiocyanate	1	<1								TM153[#M]	<1 mg/kg
Total Cyanide	1	2								TM153[#M]	<1 mg/kg
Free Cyanide	<1	<1								TM153	<1 mg/kg
Asbestos Containing Material Screen	-	-								TM001	NONE
pH Value	7.48	7.43								TM133[#M]	<1.00 pH Units
Total Sulphur	0.21	0.28								TM132[#]	<0.01 %

All results expressed on a dry weight basis.

Date 03.04.2009

Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
[M] MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 09/03948/02/01 **Matrix:** SOLID
Client: SKM Ltd **Location:** PLANT HILL SCHOOL
Client Ref. No.: NE12105 **Client Contact:** Steve Atkinson

Sample Identity	WASTE TIP S2	WASTE TIP S3								Method Code	LoD/Units
Depth (m)	-	-									
Sample Type	SOLID	SOLID									
Sampled Date	19.03.09	19.03.09									
Sample Received Date	24.03.09	24.03.09									
Batch	1	1									
Sample Number(s)	**54-56**	**57-59**									
GRO (C4-C12)	<10	<10								TM089	<10 ug/kg
MTBE	<10	<10								TM089[#]	<10 ug/kg
Benzene	<10	<10								TM089[#M]	<10 ug/kg
Toluene	<10	<10								TM089[#M]	<10 ug/kg
Ethyl benzene	<10	<10								TM089[#M]	<10 ug/kg
m & p Xylene	<10	<10								TM089[#M]	<10 ug/kg
o Xylene	<10	<10								TM089[#M]	<10 ug/kg
Aliphatics C5-C6	<10	<10								TM089	<10 ug/kg
Aliphatics >C6-C8	<10	<10								TM089	<10 ug/kg
Aliphatics >C8-C10	<10	<10								TM089	<10 ug/kg
Aliphatics >C10-C12	<10	<10								TM089	<10 ug/kg
Aliphatics >C12-C16	7400	11000								TM173[#]	<100 ug/kg
Aliphatics >C16-C21	17000	34000								TM173[#]	<100 ug/kg
Aliphatics >C21-C35	130000	240000								TM173[#]	<100 ug/kg
Total Aliphatics C5-C35	160000	280000								TM61/89	<100 ug/kg
Aromatics C6-C7	<10	<10								TM089	<10 ug/kg
Aromatics >C7-C8	<10	<10								TM089	<10 ug/kg
Aromatics >EC8-EC10	<10	<10								TM089	<10 ug/kg
Aromatics >EC10-EC12	<10	<10								TM089	<10 ug/kg
Aromatics >EC12-EC16	21000	12000								TM173[#]	<100 ug/kg
Aromatics >EC16-EC21	73000	55000								TM173[#]	<100 ug/kg
Aromatics >EC21-EC35	660000	470000								TM173[#]	<100 ug/kg
Total Aromatics C6-C35	750000	530000								TM61/89	<100 ug/kg
TPH (Aliphatics and Aromatics C5-C35)	910000	810000								TM61/89	<100 ug/kg

All results expressed on a dry weight basis.

Date 03.04.2009

Validated ✓
Preliminary

ALcontrol Laboratories Analytical Services
Table Of Results

[#] ISO 17025 accredited
[M] MCERTS accredited
* Subcontracted test
» Shown on prev. report

Job Number: 09/03948/02/01 **Matrix:** SOLID
Client: SKM Ltd **Location:** PLANT HILL SCHOOL
Client Ref. No.: NE12105 **Client Contact:** Steve Atkinson

Sample Identity	WASTE TIP S2	WASTE TIP S3								Method Code	LoD/Units
Depth (m)	-	-									
Sample Type	SOLID	SOLID									
Sampled Date	19.03.09	19.03.09									
Sample Received Date	24.03.09	24.03.09									
Batch	1	1									
Sample Number(s)	**54-56**	**57-59**									
PAH by GCMS											
Naphthalene-d8 -Surrogate Recovery	92	100								TM218[#M]	%
Acenaphthene-d10 -Surrogate Recovery	96	99								TM218[#M]	%
Phenanthrene-d10 -Surrogate Recovery	92	94								TM218[#M]	%
Chrysene-d12 -Surrogate Recovery	92	88								TM218[#M]	%
Perylene-d12 -Surrogate Recovery	94	85								TM218[#M]	%
Naphthalene	780	650								TM218[#M]	<9 ug/kg
Acenaphthylene	130	140								TM218[#M]	<12 ug/kg
Acenaphthene	500	690								TM218[#M]	<8 ug/kg
Fluorene	410	520								TM218[#M]	<10 ug/kg
Phenanthrene	4100	5400								TM218[#M]	<15 ug/kg
Anthracene	1100	1600								TM218[#M]	<16 ug/kg
Fluoranthene	6500	9700								TM218[#M]	<17 ug/kg
Pyrene	5700	8400								TM218[#M]	<15 ug/kg
Benz(a)anthracene	3100	4500								TM218[#M]	<14 ug/kg
Chrysene	3200	4500								TM218[#M]	<10 ug/kg
Benzo(b)fluoranthene	4500	5200								TM218[#M]	<15 ug/kg
Benzo(k)fluoranthene	1500	1900								TM218[#M]	<14 ug/kg
Benzo(a)pyrene	3500	4200								TM218[#M]	<15 ug/kg
Indeno(123cd)pyrene	1800	2200								TM218[#M]	<18 ug/kg
Dibenzo(ah)anthracene	600	640								TM218[#M]	<23 ug/kg
Benzo(ghi)perylene	2400	2800								TM218[#M]	<24 ug/kg
PAH 16 Total	40000	53000								TM218[#M]	<118 ug/kg

All results expressed on a dry weight basis.

Date 03.04.2009

ALcontrol Laboratories Analytical Services
Table Of Results - Appendix

Job Number: 09/03948/02/01
Client: SKM Ltd
Client Ref. No.: NE12105

Report Key :

Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03×10^{-7}

NDP	No Determination Possible	*	Subcontracted test
ACM	Asbestos Containing Materia	»	Result previously reported (Incremental reports only)
#	ISO 17025 accredited	M	MCERTS Accredited
		EC	Equivalent Carbon (Aromatics C8-C35)

Note: Method detection limits are not always achievable due to various circumstances beyond our control.

Summary of Method Codes contained within report :

Method No.	Reference	Description	ISO 17025 Accredited	MCERTS Accredited	Wet/Dry Sample [1]	Surrogate Corrected
TM001	In - house Method	Screening of Soils for Fibres			WET	
TM062	MEWAM BOOK 124 1988.HMSO/ Method 17.7, Second Site property, March 2003	Determination of Phenolic compounds by HPLC with electro-chemical detection	✓	✓	WET	
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)			WET	
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)	✓		WET	
TM089	Modified: US EPA Methods 8020 & 602	Determination of Gasoline Range Hydrocarbons (GRO) and BTEX (MTBE) compounds by Headspace GC-FID (C4-C12)	✓	✓	WET	
TM129	Method 3120B, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 3050B	Determination of Metal Cations by IRIS Emission Spectrometer			DRY	
TM129	Method 3120B, AWWA/APHA, 20th Ed., 1999 / Modified: US EPA Method 3050B	Determination of Metal Cations by IRIS Emission Spectrometer	✓	✓	DRY	
TM132	In - house Method	ELTRA CS800 Operators Guide	✓		DRY	
TM133	BS 1377: Part 3 1990;BS 6068-2.5	Determination of pH in Soil and Water using the GLpH pH Meter	✓	✓	WET	
TM151	Method 3500D, AWWA/APHA, 20th Ed., 1999	Determination of Hexavalent Chromium using Kone analyser	✓		WET	
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the "Skalar SANS+ System" Segmented Flow Analyser			WET	
TM153	Method 4500A,B,C, I, M AWWA/APHA, 20th Ed., 1999	Determination of Total Cyanide, Free (Easily Liberatable) Cyanide and Thiocyanate using the "Skalar SANS+ System" Segmented Flow Analyser	✓	✓	WET	
TM173		Determination of Speciated Extractable Petroleum Hydrocarbons in Soils by GC-FID	✓		DRY	
TM180	Sulphide in waters and waste waters 1991 ISBN 01 175 7186 SCA rec. 2007 (unpublished)'	The Determination Of Easily Liberated Sulphide In Soil Samples by Ion Selective Electrode Technique	✓		WET	

[1] Applies to Solid samples only. **DRY** indicates samples have been dried at 35°C. **NA** = not applicable.
WET indicates samples analysed as submitted.

ALcontrol Laboratories Analytical Services
Table Of Results - Appendix

Job Number: 09/03948/02/01
Client: SKM Ltd
Client Ref. No.: NE12105

Report Key :

Results expressed as (e.g.) 1.03E-07 is equivalent to 1.03×10^{-7}

NDP	No Determination Possible	*	Subcontracted test
ACM	Asbestos Containing Materia	»	Result previously reported (Incremental reports only)
#	ISO 17025 accredited	M	MCERTS Accredited
		EC	Equivalent Carbon (Aromatics C8-C35)

Note: Method detection limits are not always achievable due to various circumstances beyond our control.

Summary of Method Codes contained within report :

Method No.	Reference	Description	ISO 17025 Accredited	MCERTS Accredited	Wet/Dry Sample [1]	Surrogate Corrected
TM218		Microwave extraction - EPA method 3546	✓	✓	WET	
TM61/89		see TM061 and TM089 for details			WET	

[1] Applies to Solid samples only. **DRY** indicates samples have been dried at 35°C. **NA** = not applicable.
WET indicates samples analysed as submitted.

ALcontrol Laboratories Analytical Services
Table Of Results - Appendix

Job Number: 09/03948/02/01
Client: SKM Ltd
Client Ref. No.: NE12105

Summary of Coolbox temperatures

Batch No.	Coolbox Temperature (°C)
1	7.8

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Test Certificate

Client: Sinclair Knight Merz
Alberton House, St Mary's Parsonage, Manchester, M3 2WJ
Site: JL30278
Date Tested: 11/04/11, 12/04/11, 13/04/11, 14/04/11
Date Reported: 14 April, 2011
Date Received: 8 April, 2011
Sample Type: Solid

Certificate No: 11/0813/R/C1
File No: 11/0813/R
Client Ref: None Supplied

					Lab sample ref:	**B418375**	**B418376**	**B418377**	**B418378**	**B418379**
					Client sample ref:	**Topsoil S1**	**Topsoil S2**	**Subsoil S1**	**Subsoil S2**	**Subsoil S3**
					Sample matrix (see notes page):	**S**	**S**	**S**	**S**	**S**
Determinand	**Method**	**Units**	**ISO17025**	**MCERTS**	**LOD**					
Metals										
Arsenic	CTP11A 2	mg/kg	Y	Y	2	15	17	10	9	11
Boron (water soluble)	CTP12	mg/kg	N	N	1	<1	<1	<1	<1	1
Cadmium	CTP11A 0.5	mg/kg	Y	Y	0.5	<0.5	0.6	<0.5	<0.5	<0.5
Chromium (total)	CTP11A 3	mg/kg	Y	Y	3	16	17	23	23	22
Copper	CTP11A 3	mg/kg	Y	Y	3	50	76	33	27	34
Lead	CTP11A 1	mg/kg	Y	Y	1	133	146	41	45	52
Mercury	CTP11A 0.5	mg/kg	Y	Y	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel	CTP11A 2	mg/kg	Y	Y	2	16	18	24	20	23
Selenium	CTP11A 2	mg/kg	Y	Y	2	<2	<2	<2	<2	<2
Zinc	CTP11A 2	mg/kg	Y	Y	2	117	159	95	85	102
Sample Prep										
% Stones	Stones	% w/w	N/A	N/A	0	1.2	8.4	0.0	0.0	14.8
Moisture Content @ 35°	CTP01	% w/w	N/A	N/A	0.1	18.4	17.2	9.5	7.9	9.2
Sample Description^	SGP5		N/A	N/A		2A	2A	6	6	6A
Misc										
pH	CTP07		Y	Y		6.8	6.9	8.1	7.7	8.5
Sulphate (total)	CTP14	mg/kg	Y	Y	200	340	410	1700	1400	2700
Cyanide (total) M	CTP18c	mg/kg	Y	Y	10	<10	<10	<10	<10	<10
Phenols (screen) M	CTP20	mg/kg	Y	Y	1	<1	<1	<1	<1	<1
Asbestos Screen*	subcontract*		N	N/A		ND	ND	ND	ND	ND
PAH (USEPA16)										
Naphthalene M	GCM 501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene M	GCM 501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene M	GCM 501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	0.1	<0.1
Fluorene M	GCM 501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	0.1	<0.1
Phenanthrene M	GCM 501	mg/kg	Y	Y	0.1	0.5	0.6	1.0	1.1	0.8
Anthracene M	GCM 501	mg/kg	Y	Y	0.1	<0.1	0.1	0.4	0.4	0.3
Fluoranthene M	GCM 501	mg/kg	Y	Y	0.1	0.7	1.4	2.4	2.8	2.1
Pyrene M	GCM 501	mg/kg	Y	Y	0.1	0.7	1.3	2.1	2.4	1.9
Benz(a)anthracene M	GCM 501	mg/kg	Y	Y	0.1	0.5	0.7	1.0	1.2	0.9
Chrysene M	GCM 501	mg/kg	Y	Y	0.1	0.5	0.7	1.0	1.2	0.9
Benzo(b)fluoranthene M	GCM 501	mg/kg	Y	Y	0.1	0.4	0.7	0.8	1.1	0.7
Benzo(k)fluoranthene M	GCM 501	mg/kg	Y	Y	0.1	0.2	0.5	0.7	0.7	0.4
Benzo(a)pyrene M	GCM 501	mg/kg	Y	Y	0.1	0.5	0.6	0.9	1.2	0.8
Indeno(1,2,3-cd)pyrene M	GCM 501	mg/kg	Y	Y	0.1	0.2	0.4	0.4	0.7	0.4
Dibenz(a,h)anthracene M	GCM 501	mg/kg	Y	Y	0.1	<0.1	0.1	0.2	0.2	<0.1
Benzo(ghi)perylene M	GCM 501	mg/kg	Y	Y	0.1	0.2	0.4	0.6	0.8	0.4

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Test Certificate

Client: Sinclair Knight Merz
Alberton House, St Mary's Parsonage, Manchester, M3 2WJ
Site: JL30278
Date Tested: 11/04/11, 12/04/11, 13/04/11, 14/04/11
Date Reported: 14 April, 2011
Date Received: 8 April, 2011
Sample Type: Solid

Certificate No: 11/0813/R/C1
File No: 11/0813/R
Client Ref: None Supplied

					Lab sample ref:	**B418375**	**B418376**	**B418377**	**B418378**	**B418379**
					Client sample ref:	**Topsoil S1**	**Topsoil S2**	**Subsoil S1**	**Subsoil S2**	**Subsoil S3**
					Sample matrix (see notes page):	**S**	**S**	**S**	**S**	**S**
Determinand	**Method**	**Units**	**ISO17025**	**MCERTS**	**LOD**					
TPH Banded(Ali/Aro)										
>C5-C6 Aliphatic M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
>C6-C8 Aliphatic M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
>C8-C10 Aliphatic M	SOP05a	µg/kg	N	N	1000	<1000	<1000	<1000	<1000	<1000
>C10-C12 Aliphatic M	SOP05a	µg/kg	N	N	1000	<1000	<1000	<1000	<1000	<1000
>C12-C16 Aliphatic M	SOP05a	µg/kg	N	N	1000	<1000	<1000	1110	<1000	1540
>C16-C35 Aliphatic M	SOP05a	µg/kg	N	N	1000	4900	8210	75000	88600	81100
Total Aliphatics M	SOP05a	µg/kg	N	N	1000	4900	8210	76100	88600	82600
>C5-C6 Aromatic M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
>C6-C8 Aromatic M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
>C8-C10 Aromatic M	SOP05a	µg/kg	N	N	1000	<1000	<1000	<1000	<1000	<1000
>C10-C12 Aromatic M	SOP05a	µg/kg	N	N	1000	<1000	<1000	<1000	<1000	<1000
>C12-C16 Aromatic M	SOP05a	µg/kg	N	N	1000	<1000	<1000	1220	1190	<1000
>C16-C21 Aromatic M	SOP05a	µg/kg	N	N	1000	2940	2170	12600	9230	6720
>C21-C35 Aromatic M	SOP05a	µg/kg	N	N	1000	20500	15500	125000	114000	65600
Total Aromatics M	SOP05a	µg/kg	N	N	1000	23400	17600	139000	125000	72400
Methyl t-butyl ether M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
Benzene (VPH) M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
Toluene (VPH) M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
Ethylbenzene (VPH) M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
m&p-Xylene (VPH) M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
o-Xylene (VPH) M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
Total VPH M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
TPH M	SOP05a	µg/kg	N	N	1000	28300	25800	215000	213000	155000

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Test Certificate

Client: Sinclair Knight Merz
Alberton House, St Mary's Parsonage, Manchester, M3 2WJ
Site: JL30278
Date Tested: 11/04/11, 12/04/11, 13/04/11, 14/04/11
Date Reported: 14 April, 2011
Date Received: 8 April, 2011
Sample Type: Solid

Certificate No: 11/0813/R/C1
File No: 11/0813/R
Client Ref: None Supplied

					Lab sample ref:	**B418380**	**B418381**	**B418382**	**B418383**	**B418384**
					Client sample ref:	**Subsoil S4**	**Subsoil S5**	**Subsoil S6**	**Subsoil S7**	**Subsoil S8**
					Sample matrix (see notes page):	**S**	**S**	**S**	**S**	**S**
Determinand	**Method**	**Units**	**ISO17025**	**MCERTS**	**LOD**					
Metals										
Arsenic	CTP11A 2	mg/kg	Y	Y	2	10	9	10	9	14
Boron (water soluble)	CTP12	mg/kg	N	N	1	1	1	1	<1	3
Cadmium	CTP11A 0.5	mg/kg	Y	Y	0.5	<0.5	<0.5	<0.5	<0.5	0.8
Chromium (total)	CTP11A 3	mg/kg	Y	Y	3	24	22	25	22	18
Copper	CTP11A 3	mg/kg	Y	Y	3	34	29	32	26	37
Lead	CTP11A 1	mg/kg	Y	Y	1	58	44	58	30	99
Mercury	CTP11A 0.5	mg/kg	Y	Y	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Nickel	CTP11A 2	mg/kg	Y	Y	2	25	23	23	24	18
Selenium	CTP11A 2	mg/kg	Y	Y	2	<2	<2	<2	<2	<2
Zinc	CTP11A 2	mg/kg	Y	Y	2	104	93	118	72	130
Sample Prep										
% Stones	Stones	% w/w	N/A	N/A	0	0.0	0.0	9.9	4.1	30.0
Moisture Content @ 35°	CTP01	% w/w	N/A	N/A	0.1	11.4	11.8	10.0	7.9	18.0
Sample Description^	SGP5		N/A	N/A		6	6	6A	6A	4A
Misc										
pH	CTP07		Y	Y		8.5	8.3	8.3	8.0	7.5
Sulphate (total)	CTP14	mg/kg	Y	Y	200	2300	2900	2100	2300	2900
Cyanide (total) $_{M}$	CTP18c	mg/kg	Y	Y	10	<10	<10	<10	<10	<10
Phenols (screen) $_{M}$	CTP20	mg/kg	Y	Y	1	<1	<1	<1	<1	<1
Asbestos Screen*	subcontract*		N	N/A		ND	ND	ND	ND	ND
PAH (USEPA16)										
Naphthalene $_{M}$	GCM 501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene $_{M}$	GCM 501	mg/kg	Y	Y	0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene $_{M}$	GCM 501	mg/kg	Y	Y	0.1	0.1	<0.1	0.2	<0.1	<0.1
Fluorene $_{M}$	GCM 501	mg/kg	Y	Y	0.1	0.1	<0.1	0.2	<0.1	<0.1
Phenanthrene $_{M}$	GCM 501	mg/kg	Y	Y	0.1	1.4	0.7	1.3	0.3	0.5
Anthracene $_{M}$	GCM 501	mg/kg	Y	Y	0.1	0.6	0.3	0.4	<0.1	0.1
Fluoranthene $_{M}$	GCM 501	mg/kg	Y	Y	0.1	3.0	1.5	2.6	0.5	1.2
Pyrene $_{M}$	GCM 501	mg/kg	Y	Y	0.1	2.6	1.4	2.1	0.4	1.1
Benz(a)anthracene $_{M}$	GCM 501	mg/kg	Y	Y	0.1	1.2	0.7	1.0	0.2	0.6
Chrysene $_{M}$	GCM 501	mg/kg	Y	Y	0.1	1.0	0.6	1.0	0.2	0.6
Benzo(b)fluoranthene $_{M}$	GCM 501	mg/kg	Y	Y	0.1	1.0	0.7	0.9	0.2	0.6
Benzo(k)fluoranthene $_{M}$	GCM 501	mg/kg	Y	Y	0.1	0.6	0.2	0.4	0.1	0.2
Benzo(a)pyrene $_{M}$	GCM 501	mg/kg	Y	Y	0.1	1.1	0.6	0.9	0.2	0.5
Indeno(1,2,3-cd)pyrene $_{M}$	GCM 501	mg/kg	Y	Y	0.1	0.6	0.2	0.4	0.1	0.4
Dibenz(a,h)anthracene $_{M}$	GCM 501	mg/kg	Y	Y	0.1	0.2	<0.1	0.1	<0.1	0.1
Benzo(ghi)perylene $_{M}$	GCM 501	mg/kg	Y	Y	0.1	0.7	0.3	0.6	0.1	0.4

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Test Certificate

Client: Sinclair Knight Merz
Alberton House, St Mary's Parsonage, Manchester, M3 2WJ
Site: JL30278
Date Tested: 11/04/11, 12/04/11, 13/04/11, 14/04/11
Date Reported: 14 April, 2011
Date Received: 8 April, 2011
Sample Type: Solid

Certificate No: 11/0813/R/C1
File No: 11/0813/R
Client Ref: None Supplied

						Lab sample ref:	B418380	B418381	B418382	B418383	B418384
						Client sample ref:	Subsoil S4	Subsoil S5	Subsoil S6	Subsoil S7	Subsoil S8
						Sample matrix (see notes page):	S	S	S	S	S
Determinand	**Method**	**Units**	**ISO17025**	**MCERTS**	**LOD**						
TPH Banded(Ali/Aro)											
>C5-C6 Aliphatic M	SOP05	µg/kg	N	N	10	<10	12	<10	<10	<10
>C6-C8 Aliphatic M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
>C8-C10 Aliphatic M	SOP05a	µg/kg	N	N	1000	<1000	<1000	<1000	<1000	<1000
>C10-C12 Aliphatic M	SOP05a	µg/kg	N	N	1000	<1000	<1000	<1000	<1000	<1000
>C12-C16 Aliphatic M	SOP05a	µg/kg	N	N	1000	<1000	2720	1560	1090	1220
>C16-C35 Aliphatic M	SOP05a	µg/kg	N	N	1000	31000	64700	52600	46100	93500
Total Aliphatics M	SOP05a	µg/kg	N	N	1000	31000	67500	54100	4720	94800
>C5-C6 Aromatic M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
>C6-C8 Aromatic M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
>C8-C10 Aromatic M	SOP05a	µg/kg	N	N	1000	<1000	<1000	<1000	<1000	<1000
>C10-C12 Aromatic M	SOP05a	µg/kg	N	N	1000	<1000	<1000	<1000	<1000	<1000
>C12-C16 Aromatic M	SOP05a	µg/kg	N	N	1000	<1000	<1000	<1000	<1000	1460
>C16-C21 Aromatic M	SOP05a	µg/kg	N	N	1000	4850	7940	6890	6620	11000
>C21-C35 Aromatic M	SOP05a	µg/kg	N	N	1000	38000	63500	54000	57700	113000
Total Aromatics M	SOP05a	µg/kg	N	N	1000	42900	71400	60900	64300	126000
Methyl t-butyl ether M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
Benzene (VPH) M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
Toluene (VPH) M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
Ethylbenzene (VPH) M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
m&p-Xylene (VPH) M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
o-Xylene (VPH) M	SOP05	µg/kg	N	N	10	<10	<10	<10	<10	<10
Total VPH M	SOP05	µg/kg	N	N	10	<10	12	<10	<10	<10
TPH M	SOP05a	µg/kg	N	N	1000	73900	139000	115000	112000	220000

Notes

1. All analyses performed on the sample dried at 35ºC, except analyses suffixed with 'M'.
2. Analyses suffixed 'M' were performed on the sample as received and corrected for '% moisture at 35ºC' where applicable.
3. All results are expressed as dry weight.
4. MCERTS accreditation applicable to Sample Matrix 'S' only.
5. Natural stones (pebbles, gravels etc.) which do not pass a 2mm sieve are excluded from dried analyses.
6. Tests marked * indicate subcontracted analyses.
7. ND denotes None Detected.
8. The laboratory has tested the material/items supplied by the client as sampled in accordance with the client's own requirements.
9. ^Sample Description key: 1. - Sand, 2. Loam, 3. Clay, 4. Sandy loam, 5. Sandy clay, 6. Clayey loam, 7. Other.
   suffixed with: A - Stones, B - Construction rubble, C - Visible Hydrocarbons

Signed for, and on behalf of Exova (UK) Ltd.

Prepared by:

S Blemings
Account Manager

Approved by:

A Young
Laboratory Manager

0871

The contents of this document are governed by the terms and conditions overleaf.
Registered Office: Exova (UK) Ltd. Lochend Industrial Estate, Newbridge, Midlothian, EH28 8PL United Kingdom. Reg No. SC 70429

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Mr Matthew Wood
Green-tech Ltd
Sweethills Park
Nun Monkton
York, YO26 8ET

10th March 2011
Our Ref: TOHA/11/4083/1/LW
Your Ref: as below

Dear Sirs

Topsoil Analysis Report: Greentree Topsoil – Dewsbury

We have completed the analysis of the soil sample recently submitted and have pleasure reporting our findings.

The purpose of the analysis was to determine the suitability of the topsoil for general landscape purposes (trees, shrubs, amenity grass). In addition, this sample has been assessed to determine compliance with the requirements of the British Standard for Topsoil *(BS3882:2007 Specification for topsoil and requirements for use – Multipurpose Topsoil)*.

This report presents the results of analysis for the Dewsbury sample submitted to our offices on 28th February 2011. This report relates to the sample submitted and should be considered 'indicative' of the topsoil source. The report and results should therefore not be used by 3rd parties as a means of verification or validation testing, especially after the topsoil has left the Green-tech Ltd site.

SAMPLE EXAMINATION

The sample was described as a dark brown, slightly moist, friable, sandy loam with a moderately developed fine to medium granular structure*. The sample was slightly stony. No deleterious materials, roots or rhizomes of pernicious weeds were observed.

*This appraisal of soil structure was made from examination of a disturbed sample. Structure is a key soil characteristic that may only be accurately assessed by examination in an in-situ state.

ANALYTICAL SCHEDULE

The sample was submitted to a UKAS and MCERTS accredited laboratory for a range of physical and chemical tests to confirm the composition and fertility of the soil, and the absence of potential contaminants. The following parameters were determined:

- particle size analysis and stone content;
- pH and electrical conductivity values;
- major plant nutrients (N, P, K, Mg) and organic matter content;
- C:N ratio;
- heavy metals (As, Cd, Cr, Cr (VI), Cu, Pb, Hg, Ni, Se, Zn);
- soluble sulphate, elemental sulphur, acid volatile sulphide;
- total cyanide and total (mono) phenols;
- speciated total petroleum hydrocarbons (C5-C35);
- speciated PAHs (US EPA16 suite);
- asbestos, BTEX.

The results are presented on the attached Certificate of Analysis and an interpretation of the results is given below.

RESULTS OF ANALYSIS

Particle Size Analysis and Stone Content

The sample fell into the *sandy loam* texture class and would be considered suitable for a broad range of landscape applications, including tree and shrub planting, native transplants, turfing and seeding.

The stone content of the sample was low and, as such, stones will not restrict the use of the soils for planting, turfing or seeding purposes.

pH and Electrical Conductivity Values

The sample was slightly acid in reaction (pH 6.7), with a pH value that would be considered ideal for a range of general landscape applications, including the majority of tree and shrub species and grass cultivars used in commercial and domestic landscape. This pH value was also compliant with the *BS3882:2007*.

The electrical conductivity (salinity) value (water extract) was moderately high and acceptable for general landscaping. The calcium sulphate extract (*BS3882* requirement) slightly exceeded the maximum specified value in BS3882:2007 (2800 µS/cm). However, further testing found the sample to possess a low Exchangeable Sodium Percentage (ESP) value, indicating a low sodium risk and compliance with BS3882:2007 in this respect.

Organic Matter and Fertility Status

The sample was adequately supplied with organic matter and all major plant nutrients.

The C:N ratio of the sample was acceptable for general landscape purposes.

Potential Contaminants

With reference to BS3882:2007 Table 1: Notes 2, 3 and 4, there is a requirement to confirm levels of potential contaminants in relation to the topsoils proposed end use. This includes human health, environmental protection and metals considered toxic to plants. In the absence of site-specific criteria, the concentrations of the potential contaminants that affect human health have been assessed against the Soil Guideline Values (SGVs) for *residential* end-use, Contaminated Land Exposure Assessment (CLEA) (EA/DEFRA: 2009) and the CIEH/LQM Generic Assessment Criteria (2nd Edition, 2009), as well as professional judgement.

Of the potential contaminants determined, none was found at levels that would indicate significant contamination with respect to the proposed end use of this topsoil.

Phytotoxic Contaminants

Of the phytotoxic (toxic to plants) contaminants determined (copper, nickel, zinc), none was found at levels that exceeded the maximum permissible levels specified in *BS3882:2007* – Table 1.

CONCLUSION

The purpose of the analysis was to determine the suitability of the topsoil sample for general landscape purposes. The analysis has also been undertaken to determine the sample's compliance with the requirements of the British Standard for Topsoil *(BS3882:2007 Specification for topsoil and requirements for use – Multipurpose Topsoil).*

From the soil examination and laboratory analysis, the sample was described as a slightly acid, non-saline, sandy loam with a moderately developed fine to medium granular structure. The fertility status was moderately high and the sample was free from significant contamination with respect to the parameters determined.

Based on our findings, the topsoil would be considered suitable for a range of general landscape applications, including trees, shrubs and amenity grass, provided the physical condition of the soil is maintained.

The topsoil was also compliant with the requirements of the British Standard for Topsoil *(BS3882:2007 Specification for topsoil and requirements for use – Multipurpose Topsoil)*.

General Landscape Environments

Rootballed Trees

The most demanding planting environment is semi-mature, pit planted trees. Trees of this size and age have grown accustomed to optimum growing conditions in the nursery, and these need to be replicated when the rootballed or containerised tree is planted in the pit. In particular, aeration and drainage around the rootball are critical. Without these properties, trees will very quickly suffer and possibly die during their first few growing seasons after planting.

The topsoil can be used as backfill in tree pits to a maximum depth of 400mm, provided the topsoil is kept dry and non-plastic during planting.

Shrubs

Containerised shrubs are generally more tolerant of a wider range of soil-types, and they require less topsoil to root into than trees. The topsoil would be suited to a range of shrubs typically used in commercial and domestic landscaping.

Forestry Stock

Less demanding planting habitats include indigenous woodland planting, planted as small whips and feathered trees. The topsoil would be suitable for such planting environments.

Amenity Grass

This soil would be considered suitable for most amenity grass seeding and turfing.

Sports Pitches

This soil is suited for sports pitch construction given its high sand content. However, all materials to be used for sports pitch construction, including topsoil, should be carefully considered in relation to the required performance and standard of the sports pitch.

Domestic Gardens

The horticultural properties of the soil would be suitable for domestic garden applications. In addition, of the potential contaminants determined, none was found at levels that would be considered elevated. However, permissible levels for potential contaminants do vary from site to site. Therefore, the suitability of topsoil represented by this sample for any particular project or development should be confirmed by comparing the results against the site's specific assessment criteria.

RECOMMENDATIONS

Soil Handling Recommendations

It is important to maintain the physical condition of the soil and avoid structural damage during all phases of soil handling (e.g. respreading, cultivating, planting). As a consequence, soil handling operations should be carried out when soil is reasonably dry and non-plastic (friable) in consistency.

It is important to ensure that the soil is not unnecessarily compacted by trampling or trafficking by site machinery and soil handling should be stopped during and after heavy rainfall, and not continued until the soil is friable in consistency. If the soil is structurally damaged and compacted at any stage during the course of the soiling or landscaping works, it should be cultivated appropriately to relieve the compaction and to restore the soil's structure prior to any planting, turfing or seeding.

We hope this report meets with your approval and provides the necessary information. Please do not hesitate to contact the undersigned if we can be of further assistance.

Yours faithfully

Leila Wakeham
BSc MSc
Soil Scientist

Tim O'Hare
BSc MSc MISoilSci MBIAC CSci
Principal Consultant

For & on behalf of Tim O'Hare Associates LLP

TIM O'HARE ASSOCIATES
SOIL & LANDSCAPE CONSULTANCY

Client: **Green-tech Ltd**
Project: **Greentree Topsoil Analysis - Dewsbury**
Date: **March 2011**
Job Ref No: **TOHA/11/4083/LW**

Sample Reference		**Dewsbury**
Clay (<0.002mm)	%	14
Silt (0.002-0.063mm)	%	19
Sand (0.063-2.0mm)	%	67
Texture Class (UK Classification)	--	SL
Stones (2-20mm)	% DW	12
Stones (20-50mm)	% DW	2
Stones (>50mm)	% DW	0
pH Value (1:2.5 water extract)	units	6.7
Electrical Conductivity (1:2.5 water extract)	uS/cm	1950
Electrical Conductivity (1:2 CaSO4 extract)	uS/cm	2895
Exchangeable Sodium Percentage	%	3
Organic Matter (Walkley Black)	%	6.1
Total Nitrogen (Dumas)	%	0.27
C:N Ratio	:1	13
Extractable Phosphorus	mg/l	78
Extractable Potassium	mg/l	691
Extractable Magnesium	mg/l	243
Total Arsenic (As)	mg/kg	5
Total Cadmium (Cd)	mg/kg	0.4
Total Chromium (Cr)	mg/kg	48
Hexavalent Chromium	mg/kg	<1
Total Copper (Cu)	mg/kg	39
Total Lead (Pb)	mg/kg	45
Total Mercury (Hg)	mg/kg	0.18
Total Nickel (Ni)	mg/kg	13
Total Selenium (Se)	mg/kg	0.3
Total Zinc (Zn)	mg/kg	124
Water Soluble Boron (B)	mg/kg	3
Total Cyanide (CN)	mg/kg	<1
Total (mono) Phenols	mg/kg	<1
Elemental Sulphur (S)	mg/kg	<20
Acid Volatile Sulphide (S)	mg/kg	2
Water Soluble Sulphate (SO4)	mg/kg	1.1
Naphthalene	mg/kg	<0.4
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	<0.2
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	<0.2
Pyrene	mg/kg	<0.2
Benzo(a)anthracene	mg/kg	<0.1
Chrysene	mg/kg	<0.1
Benzo(b)fluoranthene	mg/kg	0.1
Benzo(k)fluoranthene	mg/kg	<0.1
Benzo(a)pyrene	mg/kg	<0.1
Indeno(1,2,3-cd)pyrene	mg/kg	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1
Total PAHs (sum USEPA16)	mg/kg	<2
Aliphatic TPH >C5-C6	mg/kg	<1
Aliphatic TPH >C6-C8	mg/kg	<2.5
Aliphatic TPH >C8-C10	mg/kg	<1.5
Aliphatic TPH >C10-C12	mg/kg	<2
Aliphatic TPH >C12-C16	mg/kg	<3
Aliphatic TPH >C16-C21	mg/kg	11.3
Aliphatic TPH >C21-C35	mg/kg	74.8
Aromatic TPH >C6-C7	mg/kg	<0.1
Aromatic TPH >C7-C8	mg/kg	<0.2
Aromatic TPH >C8-C10	mg/kg	<0.4
Aromatic TPH >C10-C12	mg/kg	7
Aromatic TPH >C12-C16	mg/kg	<15
Aromatic TPH >C16-C21	mg/kg	<15
Aromatic TPH >C21-C35	mg/kg	<35
TPH [C5-C35]	mg/kg	132
Asbestos	--	Absent
Benzene	µg/kg	< 1.0
Toluene	µg/kg	< 1.0
Ethylbenzene	µg/kg	< 1.0
p & m-xylene	µg/kg	< 1.0
o-xylene	µg/kg	< 1.0

SL = SANDY LOAM

Appendix D Performance & Specification Data

JIMENNIS Construction Ltd

INSTALLATION OF GAS/DPM MEMBRANE

LAING O'ROURKE

PROJECT: CO-OP ACADAMY MANCHESTER		PROJECT No. 809
AREA: Zone 4.	DATE: 08/7/09.	SHEET No. 048
GRID LINE: GL 'N' to 20 & 22.	LEVEL: 87.400	INTERIM/FINAL INSPECTION FINAL
WEATHER: OVERCAST BUT DRY.		

OPERATION	ACC	REJ	N/A	REMARKS
) Formation				
a) 95% Compaction tested/CBR/NDT			✓	NOT GROUND BEARING SLAB.
b) Free from debris	✓			
c) Correct level	✓			
) Gas/DPM Membrane				
Primer	✓			
b) Correct product	✓			
c) Correct laps	✓			
d) Double sided tape at joints			✓	HEAT WELDED
e) Girth tape along the joints			✓	" "
f) Checked for tears and rips	✓			
g) Sealing around service entry points	✓			
h) Lapping through the cavity	✓			
~~Protection Board~~ GAS MATT				
a) ~~Boards are butt jointed~~ IN DUCTS	✓			
b) ~~Joints are taped~~ DUCT POSITIONS	✓			
Photographic evidence				
uble sided tape at laps				
b) Girth tape along joints				
c) Service penetrations	✓			
d) Lapping through cavity	✓			
e) Protection board taped				

B-CONTRACTORS SIGNATURE	JECL SIGNATURE C.Nm.
TE:	DATE: 08/07/09.
NG O'ROURKE SIGNATURE 08/7/09	BUILDING CONTROL SIGNATURE
	DATE:

JIMENNIS Construction Ltd

INSTALLATION OF GAS/DPM MEMBRANE

LAING O'ROURKE

PROJECT:	CO-OPERATIVE ACADAMY MCR		PROJECT No. 809
AREA:	ZONE 1	DATE: 19/8/09	SHEET No. 063
GRID LINE:	GL'S 1 to 6.	LEVEL: 87.4 FSL	INTERIM/FINAL INSPECTION
WEATHER:	CLEAR & DRY.		

OPERATION	ACC	REJ	N/A	REMARKS
1) Formation				
a) 95% Compaction tested/CBR/NDT			✓	
b) Free from debris	✓			
c) Correct level	✓			
2) Gas/DPM Membrane				
a) Primer			✓	
b) Correct product	✓			
c) Correct laps	✓			
d) HEAT WELDED JOINTS	✓			
f) Checked for tears and rips	✓			
g) Sealing around service entry points	✓			
h) Lapping through the cavity	✓			
3) Protection Board				
a) Boards are butt jointed			✓	
b) Joints are taped			✓	
4) Photographic evidence				
a) Double sided tape at laps			✓	
b) Girth tape along joints			✓	
c) Service penetrations			✓	
d) Lapping through cavity			✓	
e) Protection board taped			✓	

SUB-CONTRACTORS SIGNATURE	JECL SIGNATURE C.Nm.
DATE:	DATE: 19/8/09.
LAING O'ROURKE SIGNATURE	BUILDING CONTROL SIGNATURE
DATE: 19/08/2009.	DATE:

JMENNIS Construction Ltd

INSTALLATION OF GAS/DPM MEMBRANE

LAING O'ROURKE

PROJECT: Co-operative Acadamy of Manchester		PROJECT No. 809
AREA: Zone 4 GL L to N	DATE: 14/8/09	SHEET No. 060
GRID LINE: 4 Lift Pit 1	LEVEL: 87.400 FSL	INTERIM/FINAL INSPECTION
WEATHER:		

OPERATION	ACC	REJ	N/A	REMARKS
) Formation				
a) 95% Compaction tested/CBR/NDT			✓	
b) Free from debris	✓			
c) Correct level	✓			
Gas/DPM Membrane				
) Primer			✓	
o) Correct product	✓			
c) Correct laps	✓			
d) HEATED WELDED	✓			
e) Joints				
f) Checked for tears and rips	✓			
g) Sealing around service entry points	✓			
h) Lapping through the cavity	✓			
Protection Board				
a) Boards are butt jointed			✓	
b) Joints are taped			✓	
Photographic evidence				
Double sided tape at laps			✓	
b) Girth tape along joints			✓	PHOTO EVIDENCE NOT
c) Service penetrations			✓	MANDATORY
f) Lapping through cavity			✓	
) Protection board taped			✓	

3-CONTRACTORS SIGNATURE	JECL SIGNATURE
E:	DATE:
NG O'ROURKE SIGNATURE	BUILDING CONTROL SIGNATURE
E: 14/08/09	DATE:

JMENNIS Construction Ltd

INSTALLATION OF GAS/DPM MEMBRANE

LAING O'ROURKE

OJECT: CO-OPERATIVE ACADAMY M/CR		PROJECT No. 809
EA: ZONE 2.	DATE: 05/08/09	SHEET No. 057
ID LINE: GL 6 to GL E	LEVEL: 87.400	INTERIM/FINAL INSPECTION
ATHER: CLEAR & DRY		

ERATION	ACC	REJ	N/A	REMARKS
Formation				
a) 95% Compaction tested/CBR/NDT			✓	
b) Free from debris	✓			
c) Correct level	✓			
Gas/DPM Membrane				
a) Primer			✓	
b) Correct product	✓			
c) Correct laps	✓			
d) JOINTS HEAT WELDED CORRECTLY	✓			
f) Checked for tears and rips	✓			
g) Sealing around service entry points	✓			
h) Lapping through the cavity	✓			
Protection Board				
a) Boards are butt jointed			✓	
b) Joints are taped			✓	
hotographic evidence				
Double sided tape at laps			✓	
Girth tape along joints			✓	
Service penetrations			✓	
Lapping through cavity			✓	
Protection board taped			✓	
			✓	

CONTRACTORS SIGNATURE	JECL SIGNATURE C. Nm.
:	DATE: 05/08/09.
O'ROURKE SIGNATURE	BUILDING CONTROL SIGNATURE
5/08/09	DATE:

JJ MENNIS Construction Ltd

INSTALLATION OF GAS/DPM MEMBRANE

LAING O'ROURKE

PROJECT: CO-OP ACADAMY M/C2		PROJECT No. 809
AREA: FLOOR SLAB (3)	DATE: 24/7/09	SHEET No. 54
GRID LINE: GL'S E to K.	LEVEL: 87.180	INTERIM/FINAL INSPECTION FINAL
WEATHER: HEAVY SHOWERS		

OPERATION	ACC	REJ	N/A	REMARKS
1) Formation				
a) 95% Compaction tested/CBR/NDT	✓			TIGHT
b) Free from debris	✓			
c) Correct level	✓			
2) Gas/DPM Membrane				
a) Primer			✓	
b) Correct product	✓			
c) Correct laps	✓			
d) Double sided tape at joints			✓	HEAT WELDED.
e) Girth tape along the joints			✓	
f) Checked for tears and rips	✓			
g) Sealing around service entry points	✓			
h) Lapping through the cavity	✓			
3) ~~Protection Board~~ GAS MATTING				
a) ~~Boards are~~ butt jointed	✓			
b) ~~Joints are taped~~ DUCTING OK.	✓			
4) Photographic evidence				
a) Double sided tape at laps			✓	
b) Girth tape along joints			✓	
c) Service penetrations			✓	
d) Lapping through cavity			✓	
e) Protection board taped			✓	

SUB-CONTRACTORS SIGNATURE	JECL SIGNATURE C. Nn.
DATE:	DATE: 24/7/09
LAING O'ROURKE SIGNATURE	BUILDING CONTROL SIGNATURE
24/7/09	DATE:

INSTALLATION OF GAS/DPM MEMBRANE

J MENNIS Construction Ltd

LAING O'ROURKE

PROJECT: CO-OP ACADAMY M/CR		PROJECT No. 809
AREA: ZONE 3.	DATE: 17/7/09	SHEET No. 051
GRID LINE: GL 20 to GL K.	LEVEL: 87.4	INTERIM/FINAL INSPECTION FINAL.
WEATHER: HEAVY SHOWERS THROUGHOUT		

OPERATION	ACC	REJ	N/A	REMARKS
1) **Formation**				
a) 95% Compaction tested/CBR/NDT			✓	SUSPENDED SLAB
b) Free from debris	✓			
c) Correct level	✓			
2) **Gas/DPM Membrane**				
a) Primer	✓			
b) Correct product	✓			
c) Correct laps	✓			
d) Double sided tape at joints				} HEAT WELDED.
e) Girth tape along the joints				
f) Checked for tears and rips	✓			
g) Sealing around service entry points	✓			
h) Lapping through the cavity	✓			
~~Protection Board~~ GAS MATT.				
a) ~~Boards are butt jointed~~ INTO VENTS	✓			
b) ~~Joints are taped~~ VENT POSITIONS	✓			
Photographic evidence				
) Double sided tape at laps				
b) Girth tape along joints				
c) Service penetrations	✓			
) Lapping through cavity	✓			
) Protection board taped	✓			

CONTRACTORS SIGNATURE	JECL SIGNATURE
:	DATE:
G O'ROURKE SIGNATURE	BUILDING CONTROL SIGNATURE
17/7/2009	DATE:

Manchester BSF
The Co-operative Academy of Manchester
REINSTATEMENT OF LAND BEING USED FOR CONTRACTOR'S COMPOUND TEMPORARY WORKS

D E S I G N & ACCESS S T A T E M E N T

in support of
Full Planning Submission





DO856/1

DURAPIPE

PROTECTA-LINE

TECHNICAL DATA

DURAPIPE

PROTECTA-LINE



GLYNWED pipesystems

Protecta-Line



Protecta-Line is a unique polyethylene pipe system developed specifically for carrying drinking water through contaminated brownfield land. With WRc approval there is total peace of mind that Protecta-Line provides the highest standards of safety demanded by customers, the water companies and legislation, combined with all the installation benefits of polyethylene pipe - a lightweight, flexible material that is fast and easy to install. It is also corrosion resistant.
With increasing development of brownfield sites and the need for developers to ensure water quality, Protecta-Line is the efficient option.

Developed by Glynwed *pipesystems*, a world leader in pipe system technology, Protecta-Line is a three layer composite pipe:
- the internal standard PE pipe for carrying the water
- an aluminium layer to stop the ingress of contaminants
- an external polyethylene protection layer
There are also intermediate polymeric tie layers.

A complete system

With both mechanical and electrofusion fittings, Protecta-Line is a complete system including couplers, joints, tees, elbows and tooling for the fitting of the accessories.

Specially designed mechanical couplings are faster to install as they eliminate the need for scraping.

The range covers ODs of 25mm to 180mm and is rated up to 16 bar. Available in coils and sticks suitable for joining with mechanical, electrofusion or butt fusion.

Control Boxes

Picador



Picador 2
53EZ0051

Operating mode	**Manual**
Input Specification	
Input voltage	110V ac (95V to 150V)
Input frequency	50Hz (40Hz to 70Hz)
Input current	1A to 30A
Input power	100VA to 3300VA (at 110V)
Power factor	0.75 (Nominal at 110V)
Power input plug	A, B, E, F or K
Output Specification	
Output voltage	39.5V
Output stability	±1.5%
Output current (continuous)	1A to 60A
Output current (short term)	99A
General Specification	
Weight	28kg
Dimensions	38cm high by 42cm diameter
Protection level	IP 54
Electromagnetic compatibility (CE)	
CE filter fitted as standard	

Picador 3
53EZ0052

Operating mode	**Manual**
Input Specification	
Input voltage	230V ac (95V to 150V)
Input frequency	50Hz (40Hz to 70Hz)
Input current	1A to 20A
Input power	100VA to 4600VA (at 230V)
Power factor	0.75 (Nominal at 230V)
Power input plug	C, D, G, H, J, L or N
Output Specification	
Output voltage	39.5V
Output stability	±1.5%
Output current (continuous)	1A to 60A
Output current (short term)	99A
General Specification	
Weight	28kg
Dimensions	38cm high by 42cm diameter
Protection level	IP 54
Electromagnetic compatibility (CE)	
CE filter fitted as standard	

Merlin



Merlin 2
53EZ0053

Operating mode	**Manual**
Input Specification	
Input Voltage:	110V ac (95V to 150V)
Input Frequency:	50Hz (40Hz to 70Hz)
Input Current:	1A to 30A
Input Power:	267VA to 3300VA (at 110V)
Power Factor:	0.75 (nominal at 110V)
Power Input Plug:	A B E F or K
Output Specification	
Output Voltage:	39.5V
Output Stability:	± 1.5%
Output Current (Cont):	1A to 60A
Output Current (Short Term):	99A
General Specification	
Weight:	28kg
Dimensions:	38cm high by 42cm diam
Protection Level:	IP54
Electromagnetic Compatibility(CE)	
CE filter fitted as standard	

Merlin 3
53EZ0054

Operating mode	**Manual**
Input Specification	
Input Voltage:	230V ac (190V to 290V)
Input Frequency:	50Hz (40Hz to 70Hz)
Input Current:	1A to 15A
Input Power:	267VA to 3300VA (230V)
Power Factor:	0.75 (nominal at 230V)
Power Input Plug:	C D G H J L or N
Output Specification	
Output Voltage:	39.5V
Output Stability:	± 1.5%
Output Current (Cont)	1A to 60A
Output Current (Short Term):	99A
General Specification	
Weight:	28kg
Dimensions:	38cm high by 42cm diam
Protection Level:	IP54
Electromagnetic Compatibility (CE)	
CE filter fitted as standard	

Clamps

MultiClamp

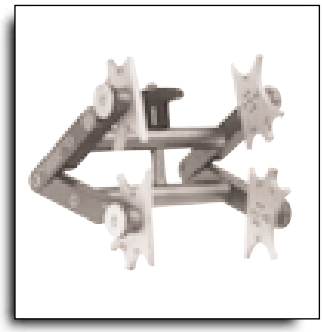


53MD2022

Style Code	**Size/mm Code**	**Options Code**
2 2-way clamp	63, 75, 90, 110, 125, 160, 180	2 Boxed and saw/guide

The MultiClamp has been designed to provide correct clamping and support for polyethylene pipework during electrofusion welding. The clamping arms are mounted on dovetail sliders to allow a variable working gap. The arms can rotate to permit elbows joints to be restrained.
Plastic inserts are employed to convert the MultiClamp for use on different pipe sizes, for example if the MultiClamp without inserts is suitable for 180mm pipe, to hold 125mm pipe a set of 180x125mm liners must be added.

SuperClamp



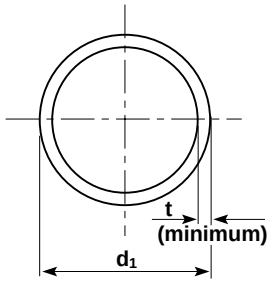
53MA0101

Size/mm Code	**Style Code**
25, 32, 40, 50, 63	01 Straight

The SuperClamp is designed to restrain the movement of small diameter pipe during the electrofusion process. The clamp consists of four rotatable plates with profiles cut out of them to allow the pipe to be held. This allows for quick and easy changing between different pipe diameters.

Pipe





Nominal OD mm	SDR	Approximate OD Min	Approximate OD Max	Mean Bore	Wall Thickness Min	Wall Thickness Max	Weight/m kg	Code
25	11	26.2	27.4	20.2	2.91	3.65	0.26	44 * 307
32	11	33.3	34.5	25.8	3.66	4.4	0.39	44 * 308
50	11	51.3	52.6	40.6	5.26	6.1	0.83	44 * 310
63	11	64.3	65.6	51.1	6.46	7.4	1.26	44 * 311
90	11	92	93.4	73.5	8.86	10.3	2.43	44 * 313
110	11	112	113.4	89.7	10.66	12.3	3.53	44 * 314
125	17	127	128.5	110.3	8.06	9.4	3.22	44 • 315
160	17	162.1	163.7	141.2	10.07	11.67	5.81	44 • 317
180	17	182.2	184.1	158.8	11.36	13	6.37	44 • 318

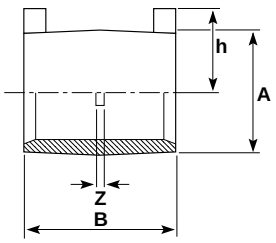
Use 653 for 125 and 180mm 6m SDR17 sticks

* for 50m coil use 659
for 100m coil use 660

• for 50m coil use 655
for 100m coil use 656

Couplers 39.5 volt



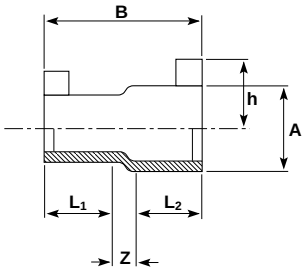


Size	A	B	h	Z	Weight kg	Fusion time secs	Cooling time mins	Code PE80	Code PE100
25	37	78	35	2	0.05	26	4	51 400 307	n/a
32	43	82	39	2	0.07	34	5	51 400 308	41 100 308
63	79	96	53	3	0.17	90	6	51 100 311	41 100 311
90	114	107	67	3	0.35	120	9	51 100 313	41 100 313
110	134	117	78	3	0.63	180	9	51 100 314	41 100 314
125	155	129	87	3	0.82	200	11	51 100 315	41 100 315
160	199	154	106	4	1.50	290	9	51 100 317	41 100 317
180*	224	168	116	4	1.90	280	13	51 100 318	41 100 318

* Cool time for PE 100 is 60 mins

Reducers



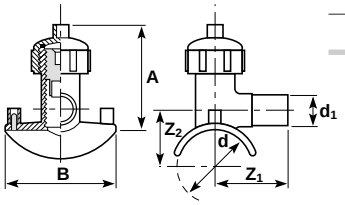


Size d1 x d2	A	B	L1	L2	h	Z	Weight kg	Fusion time secs	Cooling time mins	Code PE80	Code PE100
63 x 32	80	122	40	54	59	28	0.14	60	6	51 402 415	41 402 415
90 x 63	113	156	62	70	71	27	0.47	70	9	51 402 459	41 402 459
110 x 90	136	116	46	53	81	16	0.54	140	9	51 402 483	41 402 483
125 x 90	155	189	86	72	89	32	1.10	120	11	51 402 484	41 402 484
125 x 110	154	122	51	58	89	13	0.77	160	9	51 402 493	41 402 493
160 x 110	198	160	51	71	109	38	1.18	240	9	51 402 495	41 402 495
180 x 125	213	246	87	105	118	61	2.50	260	20	51 402 505	41 402 505

Tapping Tees

404



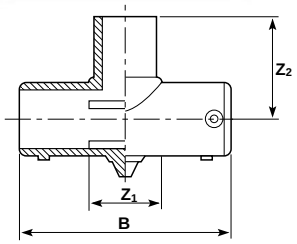


Size d	x	d1	A	B	Z1	Z2	Weight kg	Fusion time secs	Cooling time mins	Code
63	x	32	100	118	84	54	0.38	46	3	51 404 415
90	x	32	100	118	84	67	0.38	46	3	51 404 417
110	x	32	104	118	84	79	0.38	46	3	51 404 418
125	x	32	100	118	84	86	0.38	46	3	51 404 419
160	x	32	106	118	84	104	0.38	46	3	51 404 421
180	x	32	102	118	84	114	0.38	46	3	51 404 422

Tees

408



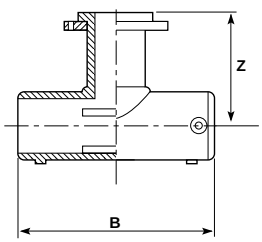


Size	B	Z1	Z2	Weight kg	Fusion time secs	Cooling time mins	Code PE80	Code PE100
63	169	59	120	0.37	60	6	51 408 311	41 408 311
90	219	89	160	0.91	120	8	51 408 313	41 408 313
110	239	95	165	1.54	180	14	51 408 314	41 408 314
125	264	108	190	2.12	240	17	51 408 315	41 408 315
160	314	140	227	3.75	300	17	51 408 317	41 408 317
180	383	165	241	5.30	300	20	51 408 318	41 408 318

Flanged Branch Tees

301



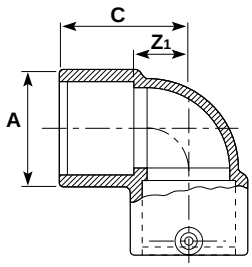


Size	B	Z	Weight kg	Code PE80	Code PE100
80mm PN16 flanged branch					
90	219	296	2.6	51 301 313	41 301 313
125	264	532	4.3	51 301 315	41 301 315
180	383	834	7.9	51 301 318	41 301 318
100mm PN16 flanged branch					
90	219	534	n/a	51 301 313	41 301 313
125	264	301	4.7	51 301 315	41 301 315
180	383	671	9.2	51 301 318	41 301 318
150mm PN16 flanged branch					
180	383	415	9.8	51 301 318	41 301 318

Elbows 90°

104

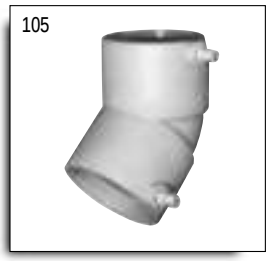


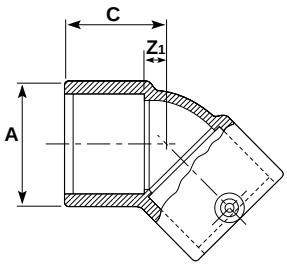


Size	A	C	Z	Weight kg	Fusion time secs	Cooling time mins	Code PE80	Code PE100
63	78	90	35	0.32	90	6	51 104 311	41 104 311
90	111	121	52	0.70	120	10	51 104 313	41 104 313
110	136	133	62	1.20	180	14	51 104 314	41 104 314
125	154	146	69	1.70	240	17	51 104 315	41 104 315
160	198	171	87	3.46	300	17	51 104 317	41 104 317
180	222	185	97	4.65	220	16	51 104 318	41 104 318

Elbows 45°

105





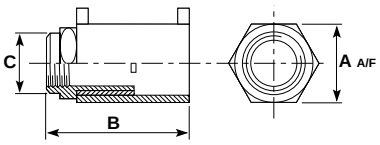
Size	A	C	Z	Weight kg	Fusion time secs	Cooling time mins	Code PE80	Code PE100
63	78	69	14.4	0.26	90	6	51 105 311	41 105 311
90	111	91	22	0.58	120	8	51 105 313	41 105 313
110	136	97	26	0.94	180	14	51 105 314	41 105 314
125	154	106	29	1.35	240	17	51 105 315	41 105 315
160	198	120	36	2.66	300	17	51 105 317	41 105 317
180	222	128	40	3.55	220	16	51 105 318	41 105 318

Transition Couplers

Black PE/Brass. Female BSP

394





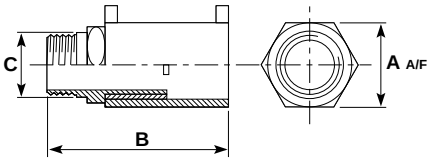
Size	A	B	C	Fusion time secs	Cooling time mins	Code
25 x 3/4"	30	96	30	26	4	50 394 307
32 x 1"	41	99	40	34	5	50 394 308
63 x 1 1/2"	65	128	63	90	6	50 394 628
63 x 2"	65	128	63	90	6	50 394 311

Transition Couplers
Black PE/Brass. Male BSP taper

395



Size	A	B	C	Fusion time secs	Cooling time mins	Code
25 x 3/4"	30	112	30	26	4	50 395 307
32 x 1"	41	117	40	34	5	50 395 308
32 x 1 1/2"	41	124	50	34	5	50 395 613
63 x 1 1/2"	65	150	63	90	6	50 395 628
63 x 2"	65	153	63	90	6	50 395 311

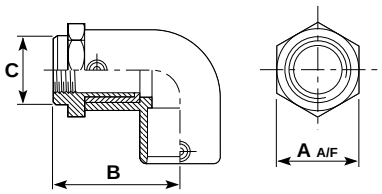


Transition Elbows 90°
Black PE/Brass. Female BSP

396



Size	A	B	C	Fusion time secs	Cooling time mins	Code
25 x 3/4"	30	77	30	22	3	50 396 307
32 x 1"	41	84	40	34	4	50 396 308
63 x 1 1/2"	65	119	63	90	6	50 396 328
63 x 2"	65	119	63	90	6	50 396 311

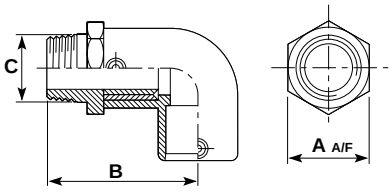


Transition Elbows 90°
Black PE/Brass. Male BSP taper

397



Size	A	B	C	Fusion time secs	Cooling time mins	Code
25 x 3/4"	30	90	30	22	3	50 397 307
32 x 1"	41	102	40	34	4	50 397 308
32 x 1 1/2"	41	109	50	34	4	50 397 613
63 x 1 1/2"	65	141	63	90	6	50 397 328
63 x 2"	65	144	63	90	6	50 397 311

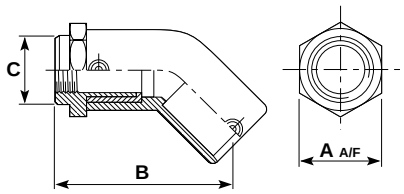


Transition Elbows 45°
Black PE/Brass. Female BSP

398



Size	A	B	C	Fusion time secs	Cooling time mins	Code
25 x 3/4"	30	68	30	22	3	50 398 307
32 x 1"	41	73	40	34	4	50 398 308
63 x 1 1/2"	65	101	63	90	6	50 398 628
63 x 2"	65	101	63	90	6	50 398 311

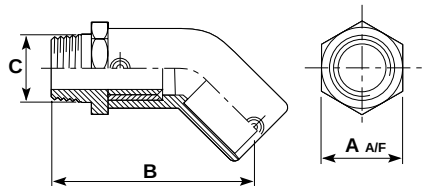


Transition Elbows 45°
Black PE/Brass. Male BSP taper

399

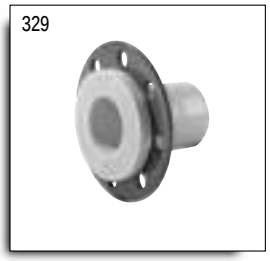


Size	A	B	C	Fusion time secs	Cooling time mins	Code
25 x 3/4"	30	81	30	22	3	50 399 307
32 x 1"	41	91	40	34	4	50 399 308
32 x 1 1/2"	41	98	50	34	4	50 399 613
63 x 1 1/2"	65	120	63	90	6	50 399 628
63 x 2"	65	123	63	90	6	50 399 311



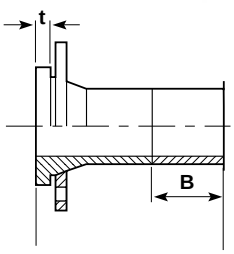
Stub flange assembly
with backing ring drilled to BS4504 PN16

329



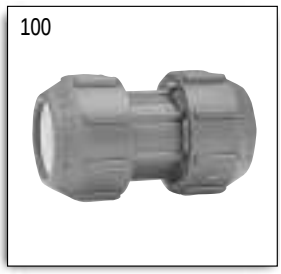
Size1		B	t	kg	Code PE80	Code PE100
90 x 80	PN16	136	17	1.66	51 329 313	41 329 313
110 x 100	PN16	136	18	2.15	51 329 314	41 329 314
125 x 100	PN16	179	25	2.4	51 329 315	41 329 315
160 x 150	PN16	179	25	4.45	51 329 317	41 329 317
180 x 150	PN16	175	30	4.56	51 329 318	41 329 318

328 information available on request



PE to PE Joiner

100



Size	Weight kg	Code
25mm x 25mm	0.115	44 100 307
32mm x 32mm	0.193	44 100 308
63mm x 63mm	0.699	44 100 311

PE to PE Reducing Joiner

114



Size	Weight kg	Code
32mm x 25mm	0.152	44 114 409
63mm x 32mm	0.780	44 114 415

PE to Copper Joiner

996



Size	Weight kg	Code
25mm x 15mm	0.115	44 996 005
25mm x 22mm	0.126	44 996 006
32mm x 28mm	0.208	44 996 007

Equal Tees

122



Size	Weight kg	Code
25mm	0.184	44 122 307
32mm	0.303	44 122 308
63mm	1.252	44 122 311

90° Elbows

115



Size	Weight kg	Code
25mm	0.131	44 115 307
32mm	0.217	44 115 308
63mm	0.904	44 115 311

End Connectors - PE x Male Iron BSP

151



Size	Weight kg	Code
25mm x 3/4"	0.066	44 151 608
32mm x 3/4"	0.084	44 151 611
32mm x 1"	0.110	44 151 612
63mm x 1 1/2"	0.387	44 151 628
63mm x 2"	0.392	44 151 629

End Connectors - PE x Female Iron BSP

101



Size	Weight kg	Code
25mm x 3/4"	0.075	44 101 608
32mm x 1"	0.116	44 101 612
63mm x 2"	0.432	44 101 629

Pipe Insert

105



Size	Weight kg	Code
32mm x 25mm	0.034	44 105 409
63mm x 32mm	0.152	44 105 415

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D0856/1 April 2001

INTRODUCTION

The Co-operative Academy construction project is due to be completed April 2011. The temporary contractor's compound established for the duration of the construction period is located offsite on a portion of amenity land (Tweedle Common, understood to be under the ownership of Manchester Property Services). At the end of the contract, the compound works are to be removed and the area reinstated back to as far as the original condition as practical.

The land on which the compound was establish is an area of previous use as landfill and a trial pit dug in one corner of the compound shows that the waste material contamination from the landfill is in close proximity to the surface topsoil strata.

PROPOSALS

Rather than remove their hardcore and asphalt topping to the compound and simply replace with a nominal thickness of new seeded topsoil, Laing O'Rourke as responsible contractors, propose to remove their temporary hard-surfacing material and replace with a total net positive build up of approx 500mm of subsoil and topsoil.

A nominal 50mm base layer of hardcore would be left as a practical consideration to avoid risking the scraping off action penetrating into the contaminated fill material beneath.
A 380/400mm layer of subsoil is to be spread over the area of previous temporary hard-surfacing.
100mm of topsoil, treated with a pre-emergent herbicide as required, will be spread as a further topping and seeded with an amenity grass seed mix.
Grass is to be cut once at 75mm high down to 35mm high and then handed over to MCC.
The pathway previously crossing the site will be reinstated to its previous condition.

The level variation around the perimeter of the affected area would be feathered into existing levels via grading out of the soil material in a perimeter margin strip beyond the area affected by the temporary works.

In this way Laings propose to remove the maximum of their temporary compound works as reasonably practical and in line with their corporate values as a responsible contractor return the affected area of Tweedle Common to a better condition than it was found; principally via means of a provision of deeper capping layer of non-contaminated material over the fill sub-strata than was originally found.

It is proposed that supporting information, such as that listed below, will be submitted as it becomes available as a means of demonstrating that a fully validated set of remedial measures have been undertaken;

- A detailed method statement.
- Photographic evidence at pertinent stages.
- Scaled depths noted.
- Waste transfer paperwork for any materials moved off site.
- Any materials brought onto site to be suitable for use.
- Letter/Report of site completion plus photographs.

Appendix E Regulatory Correspondence

Section 106

Fenton, Graham

From: Tan, Sybil (SKM) [SXTan@skm.co.uk]
Sent: 28 May 2009 10:59
To: Fenton, Graham
Cc: Yates, Richard
Subject: UU discharge - FW: Plant Hill High School, Plant Hill Road, Blackley, Manchester, M9 0WQ
Importance: High

Graham,

We did not need to complete section 106 application on this site.
And the email below is a confirmation on the discharge rates agreed.

Regards

Sybil Tan
BEng(Hons) CEng MICE
Project Engineer

Sinclair Knight Merz
Albeton House
St Mary's Parsonage
Manchester M3 2WJ
Work no: +44 (0)161 833 4883
Fax no: +44 (0) 161 833 4761

Sinclair Knight Merz
achieve outstanding client success
For further information, visit our website www.skmconsulting.com

From: Salim, Assif (SKM)
Sent: 18 March 2009 10:27
To: Foster, Pauline
Subject: RE: Plant Hill High School, Plant Hill Road, Blackley, Manchester, M9 0WQ

Hi Pauline,

I can confirm that we are accommodating the discharge rates stated by United Utilities and we are not making any physical changes to any of the existing connections therefore we don't need to complete the section 106 application.

Regards

Assif M. Salim
Graduate Civil Engineer

Sinclair Knight Merz
[illegible]
Email ASalim@skm.co.uk

Sinclair Knight Merz
[illegible]

From: Foster, Pauline [mailto:Pauline.Foster@uupic.co.uk]
Sent: 17 March 2009 12:10
To: Salim, Assif (SKM)
Subject: FW: Plant Hill High School, Plant Hill Road, Blackley, Manchester, M9 0WQ

Hi Assif,

Apologies for sounding vague earlier I was concentrating on a financial spreadsheet at the time!

I have your file saved as Plant Hill rather than Co-operative Academy and therefore the name didn't immediately ring any bells!

Further to my email below requesting the discharge rates are attenuated to 91 l/s at the 2 specified connection points, I have spoken to the network technician.

He has advised that providing the connections to the public sewer remain exactly the same, you do not need to complete the section 106 application.

However if any changes whatsoever are proposed (even if you want to replace the connection like-for-like) if you want to make any modifications within these manholes you will need to complete the 106 application.

Please could you confirm you will be able to accommodate this discharge rate and also whether you intend to complete the section 106 application?

Thanks, Pauline

From: Foster, Pauline
Sent: 10 March 2009 13:23
To: 'Salim, Assif (SKM)'
Subject: RE: Plant Hill High School, Plant Hill Road, Blackley, Manchester, M9 0WQ